

**BEFORE THE  
IDAHO PUBLIC UTILITIES COMMISSION**

**CASE NO. IPC-E-12-25**

**IDAHO POWER COMPANY**

**ATTACHMENT 1**

FIRM ENERGY SALES AGREEMENT

BETWEEN

IDAHO POWER COMPANY

AND

NEW ENERGY TWO, LLC

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FIRM ENERGY SALES AGREEMENT  
(10 aMW or Less)

Project Name: Swager Farms

Project Number: 31616130

THIS AGREEMENT, entered into on this 24<sup>th</sup> day of May 2010 between NEW ENERGY TWO, LLC, an Idaho limited liability company (Seller), and IDAHO POWER COMPANY, an Idaho corporation (Idaho Power), hereinafter sometimes referred to collectively as "Parties" or individually as "Party."

WITNESSETH:

WHEREAS, Seller will design, construct, own, maintain and operate an electric generation facility; and

WHEREAS, Seller wishes to sell, and Idaho Power is willing to purchase, firm electric energy produced by the Seller's Facility.

THEREFORE, In consideration of the mutual covenants and agreements hereinafter set forth, the Parties agree as follows:

ARTICLE I: DEFINITIONS

As used in this Agreement and the appendices attached hereto, the following terms shall have the following meanings:

- 1.1 "Base Energy" – Monthly Net Energy less than 110% of the monthly Net Energy Amount as specified in paragraph 6.2 of this Agreement.
- 1.2 "Commission" - The Idaho Public Utilities Commission.
- 1.3 "Contract Year" - The period commencing each calendar year on the same calendar date as the Operation Date and ending 364 days thereafter.
- 1.4 "Delay Liquidated Damages" – Damages payable to Idaho Power as calculated in paragraph 5.3, 5.4, 5.5, 5.6 and 5.8.

- 1.5 “Delay Period” – All days past the Scheduled Operation Date until the Seller’s Facility achieves the Operation Date.
- 1.6 “Delay Price” - The current month’s Mid-Columbia Market Energy Cost minus the current month’s All Hours Energy Price specified in paragraph 7.3 of this Agreement. If this calculation results in a value less than 0, the result of this calculation will be 0.
- 1.7 “Designated Dispatch Facility” - Idaho Power’s Systems Operations Group, or any subsequent group designated by Idaho Power.
- 1.8 “Facility” - That electric generation facility described in Appendix B of this Agreement.
- 1.9 “First Energy Date” - The day commencing at 00:01 hours, Mountain Time, following the day that Seller has satisfied the requirements of Article IV and the Seller begins delivering energy to Idaho Power’s system at the Point of Delivery.
- 1.10 “Heavy Load Hours” – The daily hours beginning at 7:00 am, ending at 11:00 pm Mountain Time, (16 hours) excluding all hours on all Sundays, New Years Day, Memorial Day, Independence Day, Labor Day, Thanksgiving and Christmas.
- 1.11 “Inadvertent Energy” – Electric energy Seller does not intend to generate. Inadvertent energy is more particularly described in paragraph 7.5 of this Agreement.
- 1.12 “Interconnection Facilities” - All equipment specified in Schedule 72.
- 1.13 “Initial Capacity Determination” – The process by which Idaho Power confirms that under normal or average design conditions the Facility will generate at no more than 10 average MW per month and is therefore eligible to be paid the published rates in accordance with Commission Order No. 29632.
- 1.14 “Light Load Hours” – The daily hours beginning at 11:00 pm, ending at 7:00 am Mountain Time (8 hours), plus all other hours on all Sundays, New Years Day, Memorial Day, Independence Day, Labor Day, Thanksgiving and Christmas.
- 1.15 “Losses” – The loss of electrical energy expressed in kilowatt hours (kWh) occurring as a result of the transformation and transmission of energy between the point where the Facility’s energy is metered and the point the Facility’s energy is delivered to the Idaho Power electrical system. The loss calculation formula will be as specified in Appendix B of this Agreement.

- 1.16 “Market Energy Reference Price” – Eighty-five percent (85%) of the Mid-Columbia Market Energy Cost.
- 1.17 “Material Breach” – A Default (paragraph 19.2.1) subject to paragraph 19.2.2.
- 1.18 “Maximum Capacity Amount” – The maximum capacity (MW) of the Facility will be as specified in Appendix B of this Agreement.
- 1.19 “Metering Equipment” - All equipment specified in Schedule 72, this Agreement and any additional equipment specified in Appendix B required to measure, record and telemeter bi directional power flows between the Seller's electric generation plant and Idaho Power's system.
- 1.20 “Mid- Columbia Market Energy Cost” – The monthly weighted average of the daily on-peak and off-peak Dow Jones Mid-Columbia Index (Dow Jones Mid-C Index) prices for non-firm energy. If the Dow Jones Mid-Columbia Index price is discontinued by the reporting agency, both Parties will mutually agree upon a replacement index, which is similar to the Dow Jones Mid-Columbia Index. The selected replacement index will be consistent with other similar agreements and a commonly used index by the electrical industry.
- 1.21 “Nameplate Capacity” –The full-load electrical quantities assigned by the designer to a generator and its prime mover or other piece of electrical equipment, such as transformers and circuit breakers, under standardized conditions, expressed in amperes, kilovolt-amperers, kilowatts, volts or other appropriate units. Usually indicated on a nameplate attached to the individual machine or device.
- 1.22 “Net Energy” – All of the electric energy produced by the Facility, less Station Use, less Losses, expressed in kilowatt hours (kWh). Subject to the terms of this Agreement, Seller commits to deliver all Net Energy to Idaho Power at the Point of Delivery for the full term of the Agreement. Net Energy does not include Inadvertent Energy.
- 1.23 “Operation Date” – The day commencing at 00:01 hours, Mountain Time, following the day that all requirements of paragraph 5.2 have been completed.
- 1.24 “Point of Delivery” – The location specified in Appendix B, where Idaho Power’s and the Seller’s electrical facilities are interconnected and the energy from this Facility is delivered to the Idaho Power electrical system.

- 1.25 “Prudent Electrical Practices” – Those practices, methods and equipment that are commonly and ordinarily used in electrical engineering and operations to operate electric equipment lawfully, safely, dependably, efficiently and economically.
- 1.26 “Scheduled Operation Date” – The date specified in Appendix B when Seller anticipates achieving the Operation Date. It is expected that the Scheduled Operation Date provided by the Seller shall be a reasonable estimate of the date that the Seller anticipates that the Seller’s Facility shall achieve the Operation Date.
- 1.27 “Schedule 72” – Idaho Power’s Tariff No 101, Schedule 72 or its successor schedules as approved by the Commission. The Seller shall be responsible to pay all costs of interconnection and integration of this Facility into the Idaho Power electrical system as specified within Schedule 72.
- 1.28 “Season” – The three periods identified in paragraph 6.2.1 of this Agreement.
- 1.29 “Special Facilities” - Additions or alterations of transmission and/or distribution lines and transformers as described in Schedule 72.
- 1.30 “Station Use” – Electric energy that is used to operate equipment that is auxiliary or otherwise related to the production of electricity by the Facility.
- 1.31 “Surplus Energy” – Is (1) Net Energy produced by the Seller’s Facility and delivered to the Idaho Power electrical system during the month which exceeds 110% of the monthly Net Energy Amount for the corresponding month specified in paragraph 6.2. or (2) If the Net Energy produced by the Seller’s Facility and delivered to the Idaho Power electrical system during the month is less than 90% of the monthly Net Energy Amount for the corresponding month specified in paragraph 6.2, then all Net Energy delivered by the Facility to the Idaho Power electrical system for that given month or (3) All Net Energy produced by the Seller’s Facility and delivered by the Facility to the Idaho Power electrical system prior to the Operation Date.
- 1.32 “Total Cost of the Facility” - The total cost of structures, equipment and appurtenances.

## ARTICLE II: NO RELIANCE ON IDAHO POWER

- 2.1 Seller Independent Investigation - Seller warrants and represents to Idaho Power that in entering into this Agreement and the undertaking by Seller of the obligations set forth herein, Seller has investigated and determined that it is capable of performing hereunder and has not relied upon the advice, experience or expertise of Idaho Power in connection with the transactions contemplated by this Agreement.
- 2.2 Seller Independent Experts - All professionals or experts including, but not limited to, engineers, attorneys or accountants, that Seller may have consulted or relied on in undertaking the transactions contemplated by this Agreement have been solely those of Seller.

## ARTICLE III: WARRANTIES

- 3.1 No Warranty by Idaho Power - Any review, acceptance or failure to review Seller's design, specifications, equipment or facilities shall not be an endorsement or a confirmation by Idaho Power and Idaho Power makes no warranties, expressed or implied, regarding any aspect of Seller's design, specifications, equipment or facilities, including, but not limited to, safety, durability, reliability, strength, capacity, adequacy or economic feasibility.
- 3.2 Qualifying Facility Status - Seller warrants that the Facility is a "Qualifying Facility," as that term is used and defined in 18 CFR 292.201 et seq. After initial qualification, Seller will take such steps as may be required to maintain the Facility's Qualifying Facility status during the term of this Agreement and Seller's failure to maintain Qualifying Facility status will be a Material Breach of this Agreement. Idaho Power reserves the right to review the Facility's Qualifying Facility status and associated support and compliance documents at anytime during the term of this Agreement.

## ARTICLE IV: CONDITIONS TO ACCEPTANCE OF ENERGY

- 4.1 Prior to the First Energy Date and as a condition of Idaho Power's acceptance of deliveries of energy from the Seller under this Agreement, Seller shall:

- 4.1.1 Submit proof to Idaho Power that all licenses, permits or approvals necessary for Seller's operations have been obtained from applicable federal, state or local authorities, including, but not limited to, evidence of compliance with Subpart B, 18 CFR 292.201 et seq. as a certified Qualifying Facility.
- 4.1.2 Opinion of Counsel - Submit to Idaho Power an Opinion Letter signed by an attorney admitted to practice and in good standing in the State of Idaho providing an opinion that Seller's licenses, permits and approvals as set forth in paragraph 4.1.1 above are legally and validly issued, are held in the name of the Seller and, based on a reasonable independent review, counsel is of the opinion that Seller is in substantial compliance with said permits as of the date of the Opinion Letter. The Opinion Letter will be in a form acceptable to Idaho Power and will acknowledge that the attorney rendering the opinion understands that Idaho Power is relying on said opinion. Idaho Power's acceptance of the form will not be unreasonably withheld. The Opinion Letter will be governed by and shall be interpreted in accordance with the legal opinion accord of the American Bar Association Section of Business Law (1991).
- 4.1.3 Initial Capacity Determination - Submit to Idaho Power such data as Idaho Power may reasonably require to perform the Initial Capacity Determination. Such data will include but not be limited to, Nameplate Capacity, equipment specifications, prime mover data, resource characteristics, normal and/or average operating design conditions and Station Use data. Upon receipt of this information, Idaho Power will review the provided data and if necessary, request additional data to complete the Initial Capacity Determination within a reasonable time.
- 4.1.3.1 If the Maximum Capacity specified in Appendix B of this Agreement and the cumulative manufacture Nameplate Capacity rating of the individual generation units at this Facility is less than 10 MW. The Seller shall submit detailed, manufacturer, verifiable data of the Nameplate Capacity ratings of the actual individual generation units to be installed at this Facility. Upon verification by Idaho Power that the data provided establishes the combined Nameplate Capacity rating of the generation units to

be installed at this Facility is less than 10 MW, it will be deemed that the Seller has satisfied the Initial Capacity Determination for this Facility.

- 4.1.4 Nameplate Capacity – Submit to Idaho Power manufacturer’s and engineering documentation that establishes the Nameplate Capacity of each individual generation unit that is included within this entire Facility. Upon receipt of this data, Idaho Power shall review the provided data and determine if the Nameplate Capacity specified is reasonable based upon the manufacturer’s specified generation ratings for the specific generation units.
- 4.1.5 Engineer’s Certifications - Submit an executed Engineer's Certification of Design & Construction Adequacy and an Engineer's Certification of Operations and Maintenance (O&M) Policy as described in Commission Order No. 21690. These certificates will be in the form specified in Appendix C but may be modified to the extent necessary to recognize the different engineering disciplines providing the certificates.
- 4.1.6 Insurance - Submit written proof to Idaho Power of all insurance required in Article XIII.
- 4.1.7 Interconnection – Provide written confirmation from Idaho Power’s delivery business unit that Seller has satisfied all interconnection requirements.
- 4.1.8 Network Resource Designation – The Seller’s Facility has been designated as a network resource capable of delivering firm energy up to the amount of the Maximum Capacity.
- 4.1.9 Written Acceptance – Request and obtain written confirmation from Idaho Power that all conditions to acceptance of energy have been fulfilled. Such written confirmation shall be provided within a commercially reasonable time following the Seller’s request and will not be unreasonably withheld by Idaho Power.

#### ARTICLE V: TERM AND OPERATION DATE

- 5.1 Term - Subject to the provisions of paragraph 5.2 below, this Agreement shall become effective on the date first written and shall continue in full force and effect for a period of 15 (*not to exceed 20 years*) Contract Years from the Operation Date.

5.2 Operation Date - The Operation Date may occur only after the Facility has achieved all of the following:

- a) Achieved the First Energy Date.
- b) Commission approval of this Agreement in a form acceptable to Idaho Power has been received.
- c) Seller has demonstrated to Idaho Power's satisfaction that the Facility is complete and able to provide energy in a consistent, reliable and safe manner.
- d) Seller has requested an Operation Date from Idaho Power in a written format.
- e) Seller has received written confirmation from Idaho Power of the Operation Date. This confirmation will not be unreasonably withheld by Idaho Power.

5.3 Operation Date Delay - Seller shall cause the Facility to achieve the Operation Date on or before the Scheduled Operation Date. Delays in the interconnection and transmission network upgrade study, design and construction process that **are not** Force Majeure events accepted by both Parties, **shall not** prevent Delay Liquidated Damages from being due and owing as calculated in accordance with this Agreement.

5.3.1 If the Operation Date occurs after the Scheduled Operation Date but on or prior to 90 days following the Scheduled Operation Date, Seller shall pay Idaho Power Delay Liquidated Damages calculated at the end of each calendar month after the Scheduled Operation Date as follows:

Delay Liquidated Damages are equal to ((Current month's Initial Year Net Energy Amount as specified in paragraph 6.2.1 divided by the number of days in the current month) multiplied by the number of days in the Delay Period in the current month) multiplied by the current month's Delay Price.

5.3.2 If the Operation Date does not occur within ninety (90) days following the Scheduled Operation Date the Seller shall pay Idaho Power Delay Liquidated Damages, in addition to those provided in paragraph 5.3.1, calculated as follows:

Forty five dollars (\$45) multiplied by the Maximum Capacity with the Maximum Capacity being measured in kW.

5.4 If Seller fails to achieve the Operation Date within ninety (90) days following the Scheduled Operation

Date, such failure will be a Material Breach and Idaho Power may terminate this Agreement at any time until the Seller cures the Material Breach. Additional Delay Liquidated Damages beyond those calculated in 5.3.1 and 5.3.2 will be calculated and payable using the Delay Liquidated Damage calculation described in 5.3.1 above for all days exceeding 90 days past the Scheduled Operation Date until such time as the Seller cures this Material Breach or Idaho Power terminates this Agreement.

- 5.5 Seller shall pay Idaho Power any calculated Delay Damages or Delay Liquidated Damages within 7 days of when Idaho Power calculates and presents any Delay Damages or Delay Liquidated Damages billings to the Seller. Seller's failure to pay these damages within the specified time will be a Material Breach of this Agreement and Idaho Power shall draw funds from the Delay Security provided by the Seller in an amount equal to the calculated Delay Damages or Delay Liquidated Damages.
- 5.6 The Parties agree that the damages Idaho Power would incur due to delay in the Facility achieving the Operation Date on or before the Scheduled Operation Date would be difficult or impossible to predict with certainty, and that the Delay Liquidated Damages are an appropriate approximation of such damages.
- 5.7 Prior to the Seller executing this Agreement, the Seller shall have agreed to and executed a Letter of Understanding with Idaho Power that contains at minimum the following requirements:
- a) Seller has filed for interconnection and is in compliance with all payments and requirements of the interconnection process
  - b) Seller has received and accepted an interconnection feasibility study for this Facility.
  - c) Seller has provided all information required to enable Idaho Power to file an initial transmission capacity request.
  - d) Results of the initial transmission capacity request are known and acceptable to the Seller.
  - e) Seller acknowledges responsibility for all interconnection costs and any costs associated with acquiring adequate firm transmission capacity to enable the project to be classified as an Idaho Power firm network resource.

f) If the Facility is located outside of the Idaho Power service territory, in addition to the above requirements, the Seller must provide evidence that the Seller has acquired firm transmission capacity from all required transmitting entities to deliver the Facility's energy to an acceptable point of delivery on the Idaho Power electrical system.

5.8 Within thirty (30) days of the date of a final non-appealable order as specified in Article XXI approving this Agreement the Seller shall post liquid security ("Delay Security") in a form as described in Appendix D equal to or exceeding the amount calculated in paragraph 5.8.1.

5.8.1 Delay Security The greater of forty five (\$45) multiplied by the Maximum Capacity with the Maximum Capacity being measured in kW or the sum of three month's estimated revenue. Where the estimated three months of revenue is the estimated revenue associated with the first three full months following the estimated Scheduled Operation Date, the estimated kWh of energy production as specified in paragraph 6.2.1 for those three months multiplied by the All Hours Energy Price specified in paragraph 7.3 for each of those three months.

5.8.1.1 In the event (a) Seller provides Idaho Power with certification that (1) a generation interconnection agreement specifying a schedule that will enable this Facility to achieve the Operation Date no later than the Scheduled Operation Date has been completed and the Seller has paid all required interconnection costs or (2) a generation interconnection agreement is substantially complete and all material costs of interconnection have been identified and agreed upon and the Seller is in compliance with all terms and conditions of the generation interconnection agreement, the Delay Security calculated in accordance with paragraph 5.8.1 will be reduced by ten percent (10%).

5.8.1.2 If the Seller has received a reduction in the calculated Delay Security as specified in paragraph 5.8.1.1 and subsequently (1) at Seller's request, the generation interconnection agreement specified in paragraph 5.8.1.1 is revised and as a result the Facility will not achieve its Operation Date by the Scheduled Operation Date or (2) if the Seller does not maintain compliance with the generation interconnection agreement,

the full amount of the Delay Security as calculated in paragraph 5.8.1 will be subject to reinstatement and will be due and owing within 5 business days from the date Idaho Power requests reinstatement. Failure to timely reinstate the Delay Security will be a Material Breach of this Agreement.

- 5.8.2 Idaho Power shall release any remaining security posted hereunder after all calculated Delay Damages and/or Delay Liquidated Damages are paid in full to Idaho Power and the earlier of (1) 30 days after the Operation Date has been achieved or (2) 60 days after the Agreement has been terminated.

#### ARTICLE VI: PURCHASE AND SALE OF NET ENERGY

- 6.1 Delivery and Acceptance of Net Energy - Except when either Party's performance is excused as provided herein, Idaho Power will purchase and Seller will sell all of the Net Energy to Idaho Power at the Point of Delivery. All Inadvertent Energy produced by the Facility will also be delivered by the Seller to Idaho Power at the Point of Delivery. At no time will the total amount of Net Energy and/or Inadvertent Energy produced by the Facility and delivered by the Seller to the Point of Delivery exceed the Maximum Capacity Amount.
- 6.2 Net Energy Amounts - Seller intends to produce and deliver Net Energy in the following monthly amounts:

6.2.1 Initial Year Monthly Net Energy Amounts:

	<u>Month</u>	<u>kWh</u>
Season 1	March	648,000
	April	648,000
	May	648,000
Season 2	July	648,000
	August	648,000
	November	648,000
	December	648,000
Season 3	June	648,000
	September	648,000
	October	648,000
	January	648,000
	February	648,000

6.2.2 Ongoing Monthly Net Energy Amounts - Seller shall initially provide Idaho Power with one year of monthly generation estimates (Initial Year Monthly Net Energy Amounts) and beginning at the end of month nine and every three months thereafter provide Idaho Power with an additional three months of forward generation estimates beyond those generation estimates previously provided. This information will be provided to Idaho Power by written notice in accordance with paragraph 25.1, no later than 5:00 PM of the 5<sup>th</sup> day following the end of the previous month. If the Seller does not provide the Ongoing Monthly Net Energy Amounts in a timely manner, Idaho Power will use the most recent 3 months of the Initial Year Monthly Net Energy Amounts specified in paragraph 6.2.1 for the next 3 months of monthly Net Energy amounts.

6.2.3 Seller's Adjustment of Net Energy Amount

6.2.3.1 No later than the Operation Date, by written notice given to Idaho Power in accordance with paragraph 25.1, the Seller may revise all of the previously provided Initial Year Monthly Net Energy Amounts.

6.2.3.2 Beginning with the end of the 9th month after the Operation Date and at the end of every third month thereafter: (1) the Seller may not revise the immediate next three

months of previously provided Net Energy Amounts, (2) but by written notice given to Idaho Power in accordance with paragraph 25.1, no later than 5:00 PM of the 5<sup>th</sup> day following the end of the previous month, the Seller may revise all other previously provided Net Energy Amounts. Failure to provide timely written notice of changed amounts will be deemed to be an election of no change.

6.2.4 Idaho Power Adjustment of Net Energy Amount – If Idaho Power is excused from accepting the Seller’s Net Energy as specified in paragraph 12.2.1 or if the Seller declares a Suspension of Energy Deliveries as specified in paragraph 12.3.1 and the Seller’s declared Suspension of Energy Deliveries is accepted by Idaho Power, the Net Energy Amount as specified in paragraph 6.2 for the specific month in which the reduction or suspension under paragraph 12.2.1 or 12.3.1 occurs will be reduced in accordance with the following:

Where:

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NEA = Current Month’s Net Energy Amount (Paragraph 6.2)

SGU = a.) If Idaho Power is excused from accepting the Seller’s Net Energy as specified in paragraph 12.2.1 this value will be equal to the percentage of curtailment as specified by Idaho Power multiplied by the TGU as defined below.

b.) If the Seller declares a Suspension of Energy Deliveries as specified in paragraph 12.3.1 this value will be the sum of the individual generation units size ratings as specified in Appendix B that are impacted by the circumstances causing the Seller to declare a Suspension of Energy Deliveries.

TGU = Sum of all of the individual generator ratings of the generation units at this Facility as specified in Appendix B of this agreement.

RSH = Actual hours the Facility’s Net Energy deliveries were either reduced or suspended under paragraph 12.2.1 or 12.3.1

TH = Actual total hours in the current month

Resulting formula being:

$$\text{Adjusted Net Energy Amount} = \text{NEA} - \left( \left( \text{TGU} \times \text{NEA} \right) \times \left( \text{TH} \right) \right)$$

This Adjusted Net Energy Amount will be used in applicable Surplus Energy calculations for only the specific month in which Idaho Power was excused from accepting the Seller's Net Energy or the Seller declared a Suspension of Energy.

- 6.3 Unless excused by an event of Force Majeure, Seller's failure to deliver Net Energy in any Contract Year in an amount equal to at least ten percent (10%) of the sum of the Initial Year Net Energy Amounts as specified in paragraph 6.2 shall constitute an event of default.

ARTICLE VII: PURCHASE PRICE AND METHOD OF PAYMENT

- 7.1 Base Energy Heavy Load Purchase Price – For all Base Energy received during Heavy Load Hours, Idaho Power will pay the non-levelized energy price in accordance with Commission Order 30744, 30738 and adjusted in accordance with Commission Order 30415 for Heavy Load Hour Energy deliveries with seasonalization factors applied:

	Season 1 - (73.50 %)	Season 2 - (120.00 %)	Season 3 - (100.00 %)
<b>Year</b>	<b><u>Mills/kWh</u></b>	<b><u>Mills/kWh</u></b>	<b><u>Mills/kWh</u></b>
2010	57.98	94.67	78.89
2011	59.54	97.21	81.01
2012	61.22	99.95	83.29
2013	62.62	102.23	85.19
2014	64.05	104.57	87.14
2015	65.52	106.97	89.14
2016	67.10	109.55	91.29
2017	68.63	112.05	93.38
2018	70.29	114.77	95.64
2019	71.91	117.40	97.83
2020	73.56	120.10	100.08
2021	75.26	122.87	102.39
2022	76.99	125.70	104.75
2023	78.78	128.61	107.18
2024	80.60	131.59	109.66
2025	82.47	134.65	112.21
2026	84.75	138.37	115.31
2027	87.10	142.21	118.51

2028	89.53	146.17	121.81
2029	92.03	150.25	125.21
2030	94.60	154.45	128.71
2031	96.69	157.85	131.55

7.2 Base Energy Light Load Purchase Price – For all Base Energy received during Light Load Hours, Idaho Power will pay the non-levelized energy price in accordance with Commission Order 30744, 30738 and adjusted in accordance with Commission Order 30415 for Light Load Hour Energy deliveries with seasonalization factors applied :

Year	Season 1 - (73.50 %)	Season 2 - (120.00 %)	Season 3 - (100.00 %)
	<u>Mills/kWh</u>	<u>Mills/kWh</u>	<u>Mills/kWh</u>
2010	52.63	85.93	71.61
2011	54.19	88.47	73.73
2012	55.87	91.21	76.01
2013	57.27	93.49	77.91
2014	58.70	95.83	79.86
2015	60.17	98.23	81.86
2016	61.75	100.81	84.01
2017	63.28	103.32	86.10
2018	64.94	106.03	88.36
2019	66.56	108.66	90.55
2020	68.21	111.36	92.80
2021	69.90	114.13	95.11
2022	71.64	116.97	97.47
2023	73.42	119.88	99.90
2024	75.25	122.86	102.38
2025	77.12	125.91	104.93
2026	79.40	129.64	108.03
2027	81.75	133.48	111.23
2028	84.18	137.43	114.53
2029	86.68	141.51	117.93
2030	89.25	145.71	121.43
2031	91.33	149.12	124.27

7.3 All Hours Energy Price – The price to be used in the calculation of the Surplus Energy Price and Delay Damage Price shall be the non-levelized energy price in accordance with Commission Order 30744 and 30738 with seasonalization factors applied:

Year	Season 1 - (73.50 %)	Season 2 - (120.00 %)	Season 3 - (100.00 %)
	<u>Mills/kWh</u>	<u>Mills/kWh</u>	<u>Mills/kWh</u>
2010	55.60	90.78	75.65
2011	57.16	93.32	77.77
2012	58.84	96.06	80.05
2013	60.24	98.34	81.95
2014	61.67	100.68	83.90
2015	63.14	103.08	85.90
2016	64.72	105.66	88.05
2017	66.25	108.17	90.14
2018	67.91	110.88	92.40
2019	69.53	113.51	94.59
2020	71.18	116.21	96.84
2021	72.87	118.98	99.15
2022	74.61	121.82	101.51
2023	76.39	124.72	103.94
2024	78.22	127.71	106.42
2025	80.09	130.76	108.97
2026	82.37	134.49	112.07
2027	84.72	138.32	115.27
2028	87.15	142.28	118.57
2029	89.64	146.36	121.97
2030	92.22	150.56	125.47
2031	94.30	153.97	128.31

7.4 Surplus Energy Price - For all Surplus Energy, Idaho Power shall pay to the Seller the current month's Market Energy Reference Price or the All Hours Energy Price specified in paragraph 7.3, whichever is lower.

7.5 Inadvertent Energy –

7.5.1 Inadvertent Energy is electric energy produced by the Facility, expressed in kWh, which the Seller delivers to Idaho Power at the Point of Delivery that exceeds 10,000 kW multiplied by the hours in the specific month in which the energy was delivered. (For example January contains 744 hours. 744 hours times 10,000 kW = 7,440,000 kWh. Energy delivered in January in excess of 7,440, 000 kWh in this example would be Inadvertent Energy.)

7.5.2 Although Seller intends to design and operate the Facility to generate no more than 10 average MW and therefore does not intend to generate Inadvertent Energy, Idaho Power

will accept Inadvertent Energy that does not exceed the Maximum Capacity Amount but will not purchase or pay for Inadvertent Energy.

- 7.6 Payment Due Date – Undisputed Energy payments, less any payments due to Idaho Power will be disbursed to the Seller within 30 days of the date which Idaho Power receives and accepts the documentation of the monthly Net Energy actually delivered to Idaho Power as specified in Appendix A.
- 7.7 Continuing Jurisdiction of the Commission .This Agreement is a special contract and, as such, the rates, terms and conditions contained in this Agreement will be construed in accordance with Idaho Power Company v. Idaho Public Utilities Commission and Afton Energy, Inc., 107 Idaho 781, 693 P.2d 427 (1984), Idaho Power Company v. Idaho Public Utilities Commission, 107 Idaho 1122, 695 P.2d 1 261 (1985), Afton Energy, Inc. v. Idaho Power Company, 111 Idaho 925, 729 P.2d 400 (1986), Section 210 of the Public Utilities Regulatory Policies Act of 1978 and 18 CFR §292.303-308

#### ARTICLE VIII: ENVIRONMENTAL ATTRIBUTES

- 8.1 Seller retains ownership under this Agreement of Green Tags and Renewable Energy Certificates (RECs), or the equivalent environmental attributes, directly associated with the production of energy from the Seller's Facility sold to Idaho Power.

#### ARTICLE IX: FACILITY AND INTERCONNECTION

- 9.1 Design of Facility - Seller will design, construct, install, own, operate and maintain the Facility and any Seller-owned Interconnection Facilities so as to allow safe and reliable generation and delivery of Net Energy and Inadvertent Energy to the Idaho Power Point of Delivery for the full term of the Agreement.

#### ARTICLE X: METERING AND TELEMETRY

- 10.1 Metering - Idaho Power shall, for the account of Seller, provide, install, and maintain Metering Equipment to be located at a mutually agreed upon location to record and measure power flows to Idaho Power in accordance with this Agreement and Schedule 72. The Metering Equipment will be at the

location and the type required to measure, record and report the Facility's Net Energy, Station Use, Inadvertent Energy and maximum energy deliveries (kW) at the Point of Delivery in a manner to provide Idaho Power adequate energy measurement data to administer this Agreement and to integrate this Facility's energy production into the Idaho Power electrical system.

- 10.2 Telemetry – Idaho Power will install, operate and maintain at Seller's expense communications and telemetry equipment which will be capable of providing Idaho Power with continuous instantaneous telemetry of Seller's Net Energy and Inadvertent Energy produced and delivered to the Idaho Power Point of Delivery to Idaho Power's Designated Dispatch Facility.

#### ARTICLE XI - RECORDS

- 11.1 Maintenance of Records - Seller shall maintain at the Facility or such other location mutually acceptable to the Parties adequate total generation, Net Energy, Station Use, Inadvertent Energy and maximum generation (kW) records in a form and content acceptable to Idaho Power.
- 11.2 Inspection - Either Party, after reasonable notice to the other Party, shall have the right, during normal business hours, to inspect and audit any or all generation, Net Energy, Station Use, Inadvertent Energy and maximum generation (kW) records pertaining to the Seller's Facility.

#### ARTICLE XII: OPERATIONS

- 12 .1 Communications - Idaho Power and the Seller shall maintain appropriate operating communications through Idaho Power's Designated Dispatch Facility in accordance with Appendix A of this Agreement.
- 12 .2 Energy Acceptance –
- 12.2.1 Idaho Power shall be excused from accepting and paying for Net Energy or accepting Inadvertent Energy which would have otherwise been produced by the Facility and delivered by the Seller to the Point of Delivery, if it is prevented from doing so by an event of Force Majeure, or temporary disconnection of the Facility in accordance with Schedule 72. If, for reasons other than an event of Force Majeure, a temporary disconnection under Schedule 72 exceeds twenty (20) days, beginning with the twenty-first day of such interruption, curtailment

or reduction, Seller will be deemed to be delivering Net Energy at a rate equivalent to the pro rata daily average of the amounts specified for the applicable month in paragraph 6.2. Idaho Power will notify Seller when the interruption, curtailment or reduction is terminated.

12.2.2 If, in the reasonable opinion of Idaho Power, Seller's operation of the Facility or Interconnection Facilities is unsafe or may otherwise adversely affect Idaho Power's equipment, personnel or service to its customers, Idaho Power may temporarily disconnect the Facility from Idaho Power's transmission/distribution system as specified within Schedule 72 or take such other reasonable steps as Idaho Power deems appropriate.

12.2.3 Under no circumstances will the Seller deliver Net Energy and/or Inadvertent Energy from the Facility to the Point of Delivery in an amount that exceeds the Maximum Capacity Amount. Seller's failure to limit deliveries to the Maximum Capacity Amount will be a Material Breach of this Agreement.

12.2.4 If Idaho Power is unable to accept the energy from this Facility and is not excused from accepting the Facility's energy, Idaho Power's damages shall be limited to only the value of the estimated energy that Idaho Power was unable to accept. Idaho Power will have no responsibility to pay for any other costs, lost revenue or consequential damages the Facility may incur.

### 12.3 Seller Declared Suspension of Energy Deliveries

12.3.1 If the Seller's Facility experiences a forced outage due to equipment failure which is not caused by an event of Force Majeure or by neglect, disrepair or lack of adequate preventative maintenance of the Seller's Facility, Seller may, after giving notice as provided in paragraph 12.3.2 below, temporarily suspend all deliveries of Net Energy to Idaho Power from the Facility or from individual generation unit(s) within the Facility impacted by the forced outage for a period of not less than 48 hours to correct the forced outage condition ("Declared Suspension of Energy Deliveries"). The Seller's Declared Suspension of Energy Deliveries will begin at the start of the next full hour following the Seller's telephone notification as specified in paragraph 12.3.2 and will continue for the time as specified (not less than 48 hours) in the written

notification provided by the Seller. In the month(s) in which the Declared Suspension of Energy occurred, the Net Energy Amount will be adjusted as specified in paragraph 6.2.4.

12.3.2 If the Seller desires to initiate a Declared Suspension of Energy Deliveries as provided in paragraph 12.3.1, the Seller will notify the Designated Dispatch Facility by telephone. The beginning hour of the Declared Suspension of Energy Deliveries will be at the earliest the next full hour after making telephone contact with Idaho Power. The Seller will, within 24 hours after the telephone contact, provide Idaho Power a written notice in accordance with XXIV that will contain the beginning hour and duration of the Declared Suspension of Energy Deliveries and a description of the conditions that caused the Seller to initiate a Declared Suspension of Energy Deliveries. Idaho Power will review the documentation provided by the Seller to determine Idaho Power's acceptance of the described forced outage as qualifying for a Declared Suspension of Energy Deliveries as specified in paragraph 12.3.1. Idaho Power's acceptance of the Seller's forced outage as an acceptable forced outage will be based upon the clear documentation provided by the Seller that the forced outage is not due to an event of Force Majeure or by neglect, disrepair or lack of adequate preventative maintenance of the Seller's Facility.

12.4 Scheduled Maintenance – On or before January 31 of each calendar year, Seller shall submit a written proposed maintenance schedule of significant Facility maintenance for that calendar year and Idaho Power and Seller shall mutually agree as to the acceptability of the proposed schedule. The Parties' determination as to the acceptability of the Seller's timetable for scheduled maintenance will take into consideration Prudent Electrical Practices, Idaho Power system requirements and the Seller's preferred schedule. Neither Party shall unreasonably withhold acceptance of the proposed maintenance schedule.

12.5 Maintenance Coordination - The Seller and Idaho Power shall, to the extent practical, coordinate their respective line and Facility maintenance schedules such that they occur simultaneously.

12.6 Contact Prior to Curtailment - Idaho Power will make a reasonable attempt to contact the Seller prior to exercising its rights to interrupt interconnection or curtail deliveries from the Seller's Facility. Seller understands that in the case of emergency circumstances, real time operations of the electrical system,

and/or unplanned events Idaho Power may not be able to provide notice to the Seller prior to interruption, curtailment, or reduction of electrical energy deliveries to Idaho Power.

ARTICLE XIII: INDEMNIFICATION AND INSURANCE

- 13.1 Indemnification - Each Party shall agree to hold harmless and to indemnify the other Party, its officers, agents, affiliates, subsidiaries, parent company and employees against all loss, damage, expense and liability to third persons for injury to or death of person or injury to property, proximately caused by the indemnifying Party's (a) construction, ownership, operation or maintenance of, or by failure of, any of such Party's works or facilities used in connection with this Agreement or (b) negligent or intentional acts, errors or omissions. The indemnifying Party shall, on the other Party's request, defend any suit asserting a claim covered by this indemnity. The indemnifying Party shall pay all documented costs, including reasonable attorney fees that may be incurred by the other Party in enforcing this indemnity.
- 13.2 Insurance - During the term of this Agreement, Seller shall secure and continuously carry the following insurance coverage:
- 13.2.1 Comprehensive General Liability Insurance for both bodily injury and property damage with limits equal to \$1,000,000, each occurrence, combined single limit. The deductible for such insurance shall be consistent with current Insurance Industry Utility practices for similar property.
- 13.2.2 The above insurance coverage shall be placed with an insurance company with an A.M. Best Company rating of A- or better and shall include:
- (a) An endorsement naming Idaho Power as an additional insured and loss payee as applicable; and
  - (b) A provision stating that such policy shall not be canceled or the limits of liability reduced without sixty (60) days' prior written notice to Idaho Power.
- 13.3 Seller to Provide Certificate of Insurance - As required in paragraph 4.1.5 herein and annually thereafter, Seller shall furnish Idaho Power a certificate of insurance, together with the endorsements required therein, evidencing the coverage as set forth above.

13.4 Seller to Notify Idaho Power of Loss of Coverage - If the insurance coverage required by paragraph 13.2 shall lapse for any reason, Seller will immediately notify Idaho Power in writing. The notice will advise Idaho Power of the specific reason for the lapse and the steps Seller is taking to reinstate the coverage. Failure to provide this notice and to expeditiously reinstate or replace the coverage will constitute a Material Breach of this Agreement.

#### ARTICLE XIV: FORCE MAJEURE

14.1 As used in this Agreement, "Force Majeure" or "an event of Force Majeure" means any cause beyond the control of the Seller or of Idaho Power which, despite the exercise of due diligence, such Party is unable to prevent or overcome. Force Majeure includes, but is not limited to, acts of God, fire, flood, storms, wars, hostilities, civil strife, strikes and other labor disturbances, earthquakes, fires, lightning, epidemics, sabotage, or changes in law or regulation occurring after the effective date, which, by the exercise of reasonable foresight such party could not reasonably have been expected to avoid and by the exercise of due diligence, it shall be unable to overcome. If either Party is rendered wholly or in part unable to perform its obligations under this Agreement because of an event of Force Majeure, both Parties shall be excused from whatever performance is affected by the event of Force Majeure, provided that:

- (1) The non-performing Party shall, as soon as is reasonably possible after the occurrence of the Force Majeure, give the other Party written notice describing the particulars of the occurrence.
- (2) The suspension of performance shall be of no greater scope and of no longer duration than is required by the event of Force Majeure.
- (3) No obligations of either Party which arose before the occurrence causing the suspension of performance and which could and should have been fully performed before such occurrence shall be excused as a result of such occurrence.

#### ARTICLE XV: LIABILITY; DEDICATION

- 15.1 Limitation of Liability. Nothing in this Agreement shall be construed to create any duty to, any standard of care with reference to, or any liability to any person not a Party to this Agreement. Neither party shall be liable to the other for any indirect, special, consequential, nor punitive damages, except as expressly authorized by this Agreement. Consequential damages will include, but not be limited to, the value of renewable energy certificates and, if the Facility is fueled by gas produced by an anaerobic digester system, any diminution or loss of anaerobic activity due to the inability of Idaho Power to accept energy from the Facility.
- 15.2 Dedication. No undertaking by one Party to the other under any provision of this Agreement shall constitute the dedication of that Party's system or any portion thereof to the Party or the public or affect the status of Idaho Power as an independent public utility corporation or Seller as an independent individual or entity.

#### ARTICLE XVI: SEVERAL OBLIGATIONS

- 16.1 Except where specifically stated in this Agreement to be otherwise, the duties, obligations and liabilities of the Parties are intended to be several and not joint or collective. Nothing contained in this Agreement shall ever be construed to create an association, trust, partnership or joint venture or impose a trust or partnership duty, obligation or liability on or with regard to either Party. Each Party shall be individually and severally liable for its own obligations under this Agreement.

#### ARTICLE XVII: WAIVER

- 17.1 Any waiver at any time by either Party of its rights with respect to a default under this Agreement or with respect to any other matters arising in connection with this Agreement shall not be deemed a waiver with respect to any subsequent default or other matter.

ARTICLE XVIII: CHOICE OF LAWS AND VENUE

- 18.1 This Agreement shall be construed and interpreted in accordance with the laws of the State of Idaho without reference to its choice of law provisions.
- 18.2 Venue for any litigation arising out of or related to this Agreement will lie in the District Court of the Fourth Judicial District of Idaho in and for the County of Ada.

ARTICLE XIX: DISPUTES AND DEFAULT

- 19.1 Disputes - All disputes related to or arising under this Agreement, including, but not limited to, the interpretation of the terms and conditions of this Agreement, will be submitted to the Commission for resolution.
- 19.2 Notice of Default
- 19.2.1 Defaults. If either Party fails to perform any of the terms or conditions of this Agreement (an "event of default"), the nondefaulting Party shall cause notice in writing to be given to the defaulting Party, specifying the manner in which such default occurred. If the defaulting Party shall fail to cure such default within the sixty (60) days after service of such notice, or if the defaulting Party reasonably demonstrates to the other Party that the default can be cured within a commercially reasonable time but not within such sixty (60) day period and then fails to diligently pursue such cure, then, the nondefaulting Party may, at its option, terminate this Agreement and/or pursue its legal or equitable remedies.
- 19.2.2 Material Breaches – The notice and cure provisions in paragraph 19.2.1 do not apply to defaults identified in this Agreement as Material Breaches. Material Breaches must be cured as expeditiously as possible following occurrence of the breach.
- 19.3 Security for Performance - Prior to the Operation Date and thereafter for the full term of this Agreement, Seller will provide Idaho Power with the following:
- 19.3.1 Insurance - Evidence of compliance with the provisions of paragraph 13.2. If Seller fails to comply, such failure will be a Material Breach and may only be cured by Seller supplying evidence that the required insurance coverage has been replaced or reinstated;

- 19.3.2 Engineer's Certifications - Every three (3) years after the Operation Date, Seller will supply Idaho Power with a Certification of Ongoing Operations and Maintenance (O&M) from a Registered Professional Engineer licensed in the State of Idaho, which Certification of Ongoing O & M shall be in the form specified in Appendix C. Seller's failure to supply the required certificate will be an event of default. Such a default may only be cured by Seller providing the required certificate; and
- 19.3.3 Licenses and Permits - During the full term of this Agreement, Seller shall maintain compliance with all permits and licenses described in paragraph 4.1.1 of this Agreement. In addition, Seller will supply Idaho Power with copies of any new or additional permits or licenses. At least every fifth Contract Year, Seller will update the documentation described in Paragraph 4.1.1. If at any time Seller fails to maintain compliance with the permits and licenses described in paragraph 4.1.1 or to provide the documentation required by this paragraph, such failure will be an event of default and may only be cured by Seller submitting to Idaho Power evidence of compliance from the permitting agency.

#### ARTICLE XX: GOVERNMENTAL AUTHORIZATION

- 20.1 This Agreement is subject to the jurisdiction of those governmental agencies having control over either Party of this Agreement.

#### ARTICLE XXI: COMMISSION ORDER

- 21.1 This Agreement shall become finally effective upon the Commission's approval of all terms and provisions hereof without change or condition and declaration that all payments to be made to Seller hereunder shall be allowed as prudently incurred expenses for ratemaking purposes.

#### ARTICLE XXII: SUCCESSORS AND ASSIGNS

- 22.1 This Agreement and all of the terms and provisions hereof shall be binding upon and inure to the benefit of the respective successors and assigns of the Parties hereto, except that no assignment hereof by either

Party shall become effective without the written consent of both Parties being first obtained. Such consent shall not be unreasonably withheld. Notwithstanding the foregoing, any party which Idaho Power may consolidate, or into which it may merge, or to which it may convey or transfer substantially all of its electric utility assets, shall automatically, without further act, and without need of consent or approval by the Seller, succeed to all of Idaho Power's rights, obligations and interests under this Agreement. This article shall not prevent a financing entity with recorded or secured rights from exercising all rights and remedies available to it under law or contract. Idaho Power shall have the right to be notified by the financing entity that it is exercising such rights or remedies.

#### ARTICLE XXIII: MODIFICATION

- 23.1 No modification to this Agreement shall be valid unless it is in writing and signed by both Parties and subsequently approved by the Commission.

#### ARTICLE XXIV: TAXES

- 24.1 Each Party shall pay before delinquency all taxes and other governmental charges which, if failed to be paid when due, could result in a lien upon the Facility or the Interconnection Facilities.

#### ARTICLE XXV: NOTICES

- 25.1 All written notices under this Agreement shall be directed as follows and shall be considered delivered when faxed, e-mailed and confirmed with deposit in the U.S. Mail, first-class, postage prepaid, as follows:

To Seller:

Original document to:

Laura Knothe, PE  
New Energy Two, LLC  
8720 Vic Lane  
Middleton ID 83644

Telephone:

Cell: (208) 890-8783

FAX: (208) 585-9016

E-mail: [laura@thenewenergycompany.com](mailto:laura@thenewenergycompany.com)

To Idaho Power:

Original document to:

Vice President, Power Supply  
Idaho Power Company  
PO Box 70  
Boise, Idaho 83707  
Email: [LGgrow@idahopower.com](mailto:LGgrow@idahopower.com)

Copy of document to:

Cogeneration and Small Power Production  
Idaho Power Company  
PO Box 70  
Boise, Idaho 83707  
E-mail: [rallphin@idahopower.com](mailto:rallphin@idahopower.com)

Either Party may change the contact person and/or address information listed above, by providing written notice from an authorized person representing the Party.

ARTICLE XXVI: ADDITIONAL TERMS AND CONDITIONS

26.1 This Agreement includes the following appendices, which are attached hereto and included by reference:

Appendix A	-	Generation Scheduling and Reporting
Appendix B	-	Facility and Point of Delivery
Appendix C	-	Engineer's Certifications
Appendix D	-	Forms of Liquid Security

ARTICLE XXVII: SEVERABILITY

27.1 The invalidity or unenforceability of any term or provision of this Agreement shall not affect the validity or enforceability of any other terms or provisions and this Agreement shall be construed in all other respects as if the invalid or unenforceable term or provision were omitted.

ARTICLE XXVIII: COUNTERPARTS

28.1 This Agreement may be executed in two or more counterparts, each of which shall be deemed an original but all of which together shall constitute one and the same instrument.

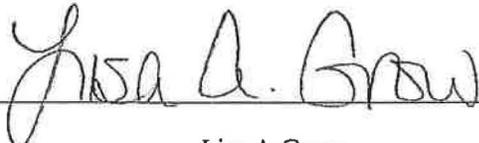
ARTICLE XXIX: ENTIRE AGREEMENT

29.1 This Agreement constitutes the entire Agreement of the Parties concerning the subject matter hereof and supersedes all prior or contemporaneous oral or written agreements between the Parties concerning the subject matter hereof.

IN WITNESS WHEREOF, The Parties hereto have caused this Agreement to be executed in their respective names on the dates set forth below:

Idaho Power Company

New Energy Two, LLC

By   
Lisa A Grow  
Sr. Vice President, Power Supply

By   
Laura Knothe, PE

Dated 5.24.10  
"Idaho Power"

Dated 5/21/10  
"Seller"

APPENDIX A

A -1 MONTHLY POWER PRODUCTION AND SWITCHING REPORT

At the end of each month the following required documentation will be submitted to:

Idaho Power Company  
Attn: Cogeneration and Small Power Production  
PO Box 70  
Boise, Idaho 83707

The meter readings required on this report will be the readings on the Idaho Power Meter Equipment measuring the Facility's total energy production and Station Usage delivered to Idaho Power and the maximum generated energy (kW) as recorded on the Metering Equipment and/or any other required energy measurements to adequately administer this Agreement. This document shall be the document to enable Idaho Power to begin the energy payment calculation and payment process. The meter readings on this report shall not be used to calculate the actual payment, but instead will be a check of the automated meter reading information that will be gathered as described in item A-2 below:

**Idaho Power Company**

**Cogeneration and Small Power Production**

**MONTHLY POWER PRODUCTION AND SWITCHING REPORT**

Month \_\_\_\_\_ Year \_\_\_\_\_

Project Name \_\_\_\_\_ Project Number: \_\_\_\_\_  
 Address \_\_\_\_\_ Phone Number: \_\_\_\_\_  
 City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

	<u>Facility Output</u>	<u>Station Usage</u>	<u>Station Usage</u>	<u>Metered Maximum Generation</u>
Meter Number: _____				
End of Month kWh Meter Reading: _____				kW
Beginning of Month kWh Meter: _____				
Difference: _____				
Times Meter Constant: _____				<u>Net Generation</u>
kWh for the Month: _____	-	-	=	
Metered Demand: _____				

**Breaker Opening Record**

<u>Date</u>	<u>Time</u>	<u>Meter</u>

*	<u>Reason</u>

**Breaker Closing Record**

<u>Date</u>	<u>Time</u>	<u>Meter</u>

- \* **Breaker Opening Reason Codes**
- 1 Lack of Adequate Prime Mover
  - 2 Forced Outage of Facility
  - 3 Disturbance of IPCo System
  - 4 Scheduled Maintenance
  - 5 Testing of Protection Systems
  - 6 Cause Unknown
  - 7 Other (Explain)

I hereby certify that the above meter readings are true and correct as of Midnight on the last day of the above month and that the switching record is accurate and complete as required by the Firm Energy Sales Agreement to which I am a Party.

\_\_\_\_\_  
Signature Date

## A-2 AUTOMATED METER READING COLLECTION PROCESS

Monthly, Idaho Power will use the provided Metering and Telemetry equipment and processes to collect the meter reading information from the Idaho Power provided Metering Equipment that measures the Net Energy and energy delivered to supply Station Use for the Facility recorded at 12:00 AM (Midnight) of the last day of the month..

The meter information collected will include but not be limited to energy production, Station Use, the maximum generated power (kW) and any other required energy measurements to adequately administer this Agreement.

## A-3 ROUTINE REPORTING

Once the Facility has achieved its Operation Date and has operated in a reliable and consistent manner for a reasonable period of time, the Parties may mutually agree to modify this Routine Reporting requirement.

### Idaho Power Contact Information

#### Daily Energy Production Reporting

Call daily by 10 a.m., 1-800-356-4328 or 1-800-635-1093 and leave the following information:

- Project Identification - Project Name and Project Number
- Current Meter Reading
- Estimated Generation for the current day
- Estimated Generation for the next day

#### Planned and Unplanned Project outages

Call 1-800-345-1319 and leave the following information:

- Project Identification - Project Name and Project Number
- Approximate time outage occurred
- Estimated day and time of project coming back online

Seller's Contact Information

24-Hour Project Operational Contact

Name: Jay Kesting  
Telephone Number: (208) 947-4519  
Cell Phone: (208) 559-4244

Project On-site Contact information

Name: Kurt Standley  
Telephone Number: (208) 280-1166

APPENDIX B

FACILITY AND POINT OF DELIVERY

Project Name: Swager Farms

Project Number: 31616130

B-1 DESCRIPTION OF FACILITY

*(Must include the Nameplate Capacity rating and VAR capability (both leading and lagging) of all generation units to be included in the Facility.)*

The facility consists of an anaerobic digester, gen sets and waste handling equipment. The total nameplate capacity of the three generators is 2000 kW.

*Var Capability (Both leading and lagging) ) Leading is .98 Lagging is .8*

B-2 LOCATION OF FACILITY

Near: Buhl, ID

Sections: 21 Township: 10S Range: 15E Clover Quadrangle County: Twin Falls ID.

Description of Interconnection Location: Near 1707 E 3800 N, Buhl, ID 83316

Nearest Idaho Power Substation: Clover Substation

B-3 SCHEDULED FIRST ENERGY AND OPERATION DATE

Seller has selected September 1, 2011 as the Scheduled First Energy Date.

Seller has selected October 1, 2012 as the Scheduled Operation Date.

In making these selections, Seller recognizes that adequate testing of the Facility and completion of all requirements in paragraph 5.2 of this Agreement must be completed prior to the project being granted an Operation Date.

B-4 MAXIMUM CAPACITY AMOUNT:

This value will be 2 MW which is consistent with the value provided by the Seller to Idaho Power in accordance with Schedule 72. This value is the maximum energy (MW) that potentially could be delivered by the Seller's Facility to the Idaho Power electrical system at any moment in time.

B-5 POINT OF DELIVERY

"Point of Delivery" means, unless otherwise agreed by both Parties, the point of where the Sellers Facility's energy is delivered to the Idaho Power electrical system. Schedule 72 will determine the specific Point of Delivery for this Facility. The Point of Delivery identified by Schedule 72 will become an integral part of this Agreement.

B-6 LOSSES

If the Idaho Power Metering equipment is capable of measuring the exact energy deliveries by the Seller to the Idaho Power electrical system at the Point of Delivery, no Losses will be calculated for this Facility. If the Idaho Power Metering is unable to measure the exact energy deliveries by the Seller to the Idaho Power electrical system at the Point of Delivery, a Losses calculation will be established to measure the energy losses (kWh) between the Seller's Facility and the Idaho Power Point of Delivery. This loss calculation will be initially set at 2% of the kWh energy production recorded on the Facility generation metering equipment. At such time as Seller provides Idaho Power with the electrical equipment specifications (transformer loss specifications, conductor sizes, etc) of all of the electrical equipment between the Facility and the Idaho Power electrical system, Idaho Power will configure a revised loss calculation formula to be agreed to by both parties and used to calculate the kWh Losses for the remaining term of the Agreement. If at any time during the term of this Agreement, Idaho Power determines that the loss calculation does not correctly reflect the actual kWh losses attributed to the electrical equipment between the Facility and the Idaho Power electrical system, Idaho Power may adjust the calculation and retroactively adjust the previous months kWh loss calculations.

#### B-7 METERING AND TELEMETRY

Schedule 72 will determine the specific metering and telemetry requirements for this Facility. At the minimum the Metering Equipment and Telemetry equipment must be able to provide and record hourly energy deliveries to the Point of Delivery and any other energy measurements required to administer this Agreement. These specifications will include but not be limited to equipment specifications, equipment location, Idaho Power provided equipment, Seller provided equipment, and all costs associated with the equipment, design and installation of the Idaho Power provided equipment. Seller will arrange for and make available at Seller's cost communication circuit(s) compatible with Idaho Power's communications equipment and dedicated to Idaho Power's use terminating at the Idaho Power facilities capable of providing Idaho Power with continuous instantaneous information on the Facilities energy production. Idaho Power provided equipment will be owned and maintained by Idaho Power, with total cost of purchase, installation, operation, and maintenance, including administrative cost to be reimbursed to Idaho Power by the Seller. Payment of these costs will be in accordance with Schedule 72 and the total metering cost will be included in the calculation of the Monthly Operation and Maintenance Charges specified in Schedule 72.

#### B-8 NETWORK RESOURCE DESIGNATION

Idaho Power cannot accept or pay for generation from this Facility until a Network Resource Designation ("NRD") application has been accepted by Idaho Power's delivery business unit. Federal Energy Regulatory Commission ("FERC") Rules require Idaho Power to prepare and submit the NRD. Because much of the information Idaho Power needs to prepare the NRD is specific to the Seller's Facility, Idaho Power's ability to file the NRD in a timely manner is contingent upon timely receipt of the required information from the Seller. Prior to Idaho Power beginning the process to enable Idaho Power to submit a request for NRD status for this Facility, the Seller shall have completed all requirements as specified in Paragraph 5.7 of this Agreement. **Seller's failure to provide complete and accurate information in a timely manner can significantly impact Idaho Power's ability and**

**cost to attain the NRD designation for the Seller's Facility and the Seller shall bear the costs of any of these delays that are a result of any action or inaction by the Seller.**

APPENDIX C

ENGINEER'S CERTIFICATION

OF

OPERATIONS & MAINTENANCE POLICY

The undersigned \_\_\_\_\_, on behalf of himself and \_\_\_\_\_, hereinafter collectively referred to as "Engineer," hereby states and certifies to the Seller as follows:

1. That Engineer is a Licensed Professional Engineer in good standing in the State of Idaho.
2. That Engineer has reviewed the Energy Sales Agreement, hereinafter "Agreement," between Idaho Power as Buyer, and \_\_\_\_\_ as Seller, dated \_\_\_\_\_.
3. That the cogeneration or small power production project which is the subject of the Agreement and this Statement is identified as IPCo Facility No. \_\_\_\_\_ and is hereinafter referred to as the "Project."
4. That the Project, which is commonly known as the \_\_\_\_\_ Project, is located in Section \_\_\_\_\_ Township \_\_\_\_\_ Range \_\_\_\_\_, Boise Meridian, \_\_\_\_\_ County, Idaho.
5. That Engineer recognizes that the Agreement provides for the Project to furnish electrical energy to Idaho Power for a \_\_\_\_\_ year period.
6. That Engineer has substantial experience in the design, construction and operation of electric power plants of the same type as this Project.
7. That Engineer has no economic relationship to the Design Engineer of this Project.
8. That Engineer has reviewed and/or supervised the review of the Policy for Operation and Maintenance ("O&M") for this Project and it is his professional opinion that, provided said Project has been designed and built to appropriate standards, adherence to said O&M Policy will result in the Project's producing at or near the design electrical output, efficiency and plant factor for a fifteen (15) year period.
9. That Engineer recognizes that Idaho Power, in accordance with paragraph 5.2 of the Agreement, is relying on Engineer's representations and opinions contained in this Statement.

10. That Engineer certifies that the above statements are complete, true and accurate to the best of his knowledge and therefore sets his hand and seal below.

By \_\_\_\_\_

(P.E. Stamp)

Date \_\_\_\_\_

APPENDIX C

ENGINEER'S CERTIFICATION

OF

ONGOING OPERATIONS AND MAINTENANCE

The undersigned \_\_\_\_\_, on behalf of himself and \_\_\_\_\_ hereinafter collectively referred to as "Engineer," hereby states and certifies to the Seller as follows:

1. That Engineer is a Licensed Professional Engineer in good standing in the State of Idaho.
2. That Engineer has reviewed the Energy Sales Agreement, hereinafter "Agreement," between Idaho Power as Buyer, and \_\_\_\_\_ as Seller, dated \_\_\_\_\_.
3. That the cogeneration or small power production project which is the subject of the Agreement and this Statement is identified as IPCo Facility No. \_\_\_\_\_ and hereinafter referred to as the "Project".
4. That the Project, which is commonly known as the \_\_\_\_\_ Project, is located in Section \_\_\_\_\_ Township \_\_\_\_\_ Range \_\_\_\_\_, Boise Meridian, \_\_\_\_\_ County, Idaho.
5. That Engineer recognizes that the Agreement provides for the Project to furnish electrical energy to Idaho Power for a fifteen (15) year period.
6. That Engineer has substantial experience in the design, construction and operation of electric power plants of the same type as this Project.
7. That Engineer has no economic relationship to the Design Engineer of this Project.

8. That Engineer has made a physical inspection of said Project, its operations and maintenance records since the last previous certified inspection. It is Engineer's professional opinion, based on the Project's appearance, that its ongoing O&M has been substantially in accordance with said O&M Policy; that it is in reasonably good operating condition; and that if adherence to said O&M Policy continues, the Project will continue producing at or near its design electrical output, efficiency and plant factor for the remaining \_\_\_\_\_ years of the Agreement.

9. That Engineer recognizes that Idaho Power, in accordance with paragraph 5.2 of the Agreement, is relying on Engineer's representations and opinions contained in this Statement.

10. That Engineer certifies that the above statements are complete, true and accurate to the best of his knowledge and therefore sets his hand and seal below.

By \_\_\_\_\_

(P.E. Stamp)

Date \_\_\_\_\_

APPENDIX C

ENGINEER'S CERTIFICATION  
OF  
DESIGN & CONSTRUCTION ADEQUACY

The undersigned \_\_\_\_\_, on behalf of himself and \_\_\_\_\_ hereinafter collectively referred to as "Engineer", hereby states and certifies to Idaho Power as follows:

1. That Engineer is a Licensed Professional Engineer in good standing in the State of Idaho.
2. That Engineer has reviewed the Firm Energy Sales Agreement, hereinafter "Agreement", between Idaho Power as Buyer, and \_\_\_\_\_ as Seller, dated \_\_\_\_\_.
3. That the cogeneration or small power production project, which is the subject of the Agreement and this Statement, is identified as IPCo Facility No \_\_\_\_\_ and is hereinafter referred to as the "Project".
4. That the Project, which is commonly known as the \_\_\_\_\_ Project, is located in Section \_\_\_\_\_ Township \_\_\_\_\_ Range \_\_\_\_\_, Boise Meridian, \_\_\_\_\_ County, Idaho.
5. That Engineer recognizes that the Agreement provides for the Project to furnish electrical energy to Idaho Power for a fifteen (15) year period.
6. That Engineer has substantial experience in the design, construction and operation of electric power plants of the same type as this Project.
7. That Engineer has no economic relationship to the Design Engineer of this Project and has made the analysis of the plans and specifications independently.
8. That Engineer has reviewed the engineering design and construction of the Project, including the civil work, electrical work, generating equipment, prime mover conveyance system, Seller furnished Interconnection Facilities and other Project facilities and equipment.

9. That the Project has been constructed in accordance with said plans and specifications, all applicable codes and consistent with Prudent Electrical Practices as that term is described in the Agreement.

10. That the design and construction of the Project is such that with reasonable and prudent operation and maintenance practices by Seller, the Project is capable of performing in accordance with the terms of the Agreement and with Prudent Electrical Practices for a \_\_\_\_\_ year period.

11. That Engineer recognizes that Idaho Power, in accordance with paragraph 5.2 of the Agreement, in interconnecting the Project with its system, is relying on Engineer's representations and opinions contained in this Statement.

12. That Engineer certifies that the above statements are complete, true and accurate to the best of his knowledge and therefore sets his hand and seal below.

By \_\_\_\_\_  
(P.E. Stamp)

Date \_\_\_\_\_

## APPENDIX D

### FORMS OF LIQUID SECURITY

The Seller shall provide Idaho Power with commercially reasonable security instruments such as Cash Escrow Security, Guarantee or Letter of Credit as those terms are defined below or other forms of liquid financial security that would provide readily available cash to Idaho Power to satisfy the Delay Security requirement within this Agreement.

For the purpose of this Appendix D, the term "Credit Requirements" shall mean acceptable financial creditworthiness of the entity providing the security instrument in relation to the term of the obligation in the reasonable judgment of Idaho Power, provided that any guarantee and/or letter of credit issued by any other entity with a short-term or long-term investment grade credit rating by Standard & Poor's Corporation or Moody's Investor Services, Inc. shall be deemed to have acceptable financial creditworthiness.

1. Cash Escrow Security – Seller shall deposit funds in an escrow account established by the Seller in a banking institution acceptable to both Parties equal to the Delay Security.
2. Guarantee or Letter of Credit Security – Seller shall post and maintain in an amount equal to the Delay Security: (a) a guaranty from a party that satisfies the Credit Requirements, in a form acceptable to Idaho Power at its discretion, or (b) a Letter of Credit in a form acceptable to Idaho Power, in favor of Idaho Power. The Letter of Credit will be issued by a financial institution acceptable to both parties.

**BEFORE THE  
IDAHO PUBLIC UTILITIES COMMISSION**

**CASE NO. IPC-E-12-25**

**IDAHO POWER COMPANY**

**ATTACHMENT 2**



RECEIVED  
6/2/09  
RB

**MECHANICAL**

- Heating
- Ventilation
- Air Conditioning
- Plumbing
- Radiant Heating
- Refrigeration

- design, sales & installation
- preventative maintenance
- service & repair

**ARCHITECTURAL METALS**

- Flashing
- Metal Roofing
- Metal Siding

- design, fabrication & installation

**METAL FABRICATION**

- Structural
- Stairs, Railings
- Stainless Steel
- Specialty Fabrication
- Custom Product Manufacturing

- design, fabrication & installation

**FOOD SERVICE**

- Commercial Kitchens
- Institutional Kitchens
- Restaurant Kitchens

- design, fabrication & installation

**FOOD PROCESSING EQUIPMENT**

- Food Manufacturing Equip.
- Sorting & Sizing
- Washing & Conveying
- Packaging
- Custom Equipment

- design, fabrication, sales & installation

**BIOGAS DIGESTERS**

- design, fabrication sales & installation

6920 Salashan Pkwy, A-102  
 P.O. Box 2708  
 Ferndale, WA 98248  
 Office: 360.366.9900  
 Fax: 360.366.5800  
 corporate@andgar.com  
 http://www.andgar.com

May 27, 2009

Idaho Power Company  
 1221 W. Idaho Street  
 Boise, ID 83702

ATTN: Rowena Bishop

RE: Swager Farms #268

Dear Rowena,

Due to project uncertainties, we are no longer willing to proceed with the Facility Study for the Swager Farms project #268. We may want to pursue this project again in the future but feel that it is not in our best interest to do so at this time. Thank you for your work on this so far. We look forward to working with you more in the near future.

Sincerely,

Eric Powell  
 ANDGAR CORPORATION

**BEFORE THE  
IDAHO PUBLIC UTILITIES COMMISSION**

**CASE NO. IPC-E-12-25**

**IDAHO POWER COMPANY**

**ATTACHMENT 3**

**SMALL GENERATOR INTERCONNECTION REQUEST  
(Application Form)**

**Transmission Provider: IDAHO POWER COMPANY**

Designated Contact Person: Rowena Bishop  
Address: 1221 W. Idaho Street, Boise ID 83702  
Telephone Number: 208-388-2658  
Fax: 208-388-6647  
E-Mail Address: rbishop@idahopower.com

An Interconnection Request is considered complete when it provides all applicable and correct information required below.

**Preamble and Instructions**

An Interconnection Customers who request interconnection must submit this Interconnection Request by hand delivery, mail, e-mail, or fax to the Transmission Provider.

**Processing Fee or Deposit:**

If the Interconnection Request is submitted under the Fast Track Process, the non-refundable processing fee is \$500.

If the Interconnection Request is submitted under the Study Process, whether a new submission or an Interconnection Request that did not pass the Fast Track Process, the Interconnection Customer shall submit to the Transmission Provider a deposit not to exceed \$1,000 towards the cost of the feasibility study.

**Interconnection Customer Information**

Legal Name of the Interconnection Customer (or, if an individual, individual's name)

Name: Andgar Corporation

Contact Person: Kyle Juergens

Mailing Address: PO Box 2708 6920 Salashan Pkwy A-102

City: Ferndale State: WA Zip: 98248

Facility Location (if different from above): 3772 N 1700 E Buhl, ID 83316

Telephone (Day): (360) 366-9900 Telephone (Evening): \_\_\_\_\_

Fax: (360) 366-5800 E-Mail Address: kylej@andgar.com

Alternative Contact Information (if different from the Interconnection Customer)

Contact Name: \_\_\_\_\_

Title: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

Telephone (Day): \_\_\_\_\_ Telephone (Evening): \_\_\_\_\_

Fax: \_\_\_\_\_ E-Mail Address: \_\_\_\_\_

Application is for:  New Small Generating Facility  
 Capacity addition to Existing Small Generating Facility

If capacity addition to existing facility, please describe: \_\_\_\_\_

\_\_\_\_\_

Will the Small Generating Facility be used for any of the following?

Net Metering? Yes \_\_\_ No \_\_\_  
To Supply Power to the Interconnection Customer? Yes \_\_\_ No \_\_\_  
To Supply Power to Others? Yes  No \_\_\_ To utility

For installations at locations with existing electric service to which the proposed Small Generating Facility will interconnect, provide:

\_\_\_\_\_ (Local Electric Service Provider\*)

\_\_\_\_\_ (Existing Account Number\*)

[\*To be provided by the Interconnection Customer if the local electric service provider is different from the Transmission Provider]

Contact Name: \_\_\_\_\_

Title: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

Telephone (Day): \_\_\_\_\_ Telephone (Evening): \_\_\_\_\_

Fax: \_\_\_\_\_ E-Mail Address: \_\_\_\_\_

Requested Point of Interconnection: See Aerial Drawing

Interconnection Customer's Requested In-Service Date: 9/5/2010

**Small Generating Facility Information**

Data apply only to the Small Generating Facility, not the Interconnection Facilities.

Energy Source:  Solar  Wind  Hydro  Hydro Type (e.g. Run-of-River): \_\_\_\_\_  
Diesel  Natural Gas  Fuel Oil  Other (state type) Biogas

Prime Mover:  Fuel Cell  Recip Engine  Gas Turb  Steam Turb  
 Microturbine  PV  Other

Type of Generator:  Synchronous  Induction  Inverter

Generator Nameplate Rating: 750 kW (Typical) Generator Nameplate kVAR: 938

Interconnection Customer or Customer-Site Load: \_\_\_\_\_ kW (if none, so state)

Typical Reactive Load (if known): \_\_\_\_\_

Maximum Physical Export Capability Requested: 1,500 kW

List components of the Small Generating Facility equipment package that are currently certified:

Equipment Type	Certifying Entity
1. _____	_____
2. _____	_____
3. _____	_____
4. _____	_____
5. _____	_____

Is the prime mover compatible with the certified protective relay package?  Yes  No

Generator (or solar collector)  
Manufacturer, Model Name & Number: Stamford PI 7360 (see attached)  
Version Number: \_\_\_\_\_

Nameplate Output Power Rating in kW: (Summer) 710 (Winter) 710  
Nameplate Output Power Rating in kVA: (Summer) 888 (Winter) 888

Individual Generator Power Factor  
Rated Power Factor: Leading: \_\_\_\_\_ Lagging: .8

Total Number of Generators in wind farm to be interconnected pursuant to this  
Interconnection Request: \_\_\_\_\_ Elevation: \_\_\_\_\_  Single phase  Three phase

Inverter Manufacturer, Model Name & Number (if used): \_\_\_\_\_

List of adjustable set points for the protective equipment or software: \_\_\_\_\_

Note: A completed Power Systems Load Flow data sheet must be supplied with the Interconnection Request.

**Small Generating Facility Characteristic Data (for inverter-based machines)**

Max design fault contribution current: \_\_\_\_\_ Instantaneous \_\_\_ or RMS? \_\_\_

Harmonics Characteristics: \_\_\_\_\_

Start-up requirements: \_\_\_\_\_

**Small Generating Facility Characteristic Data (for rotating machines)**

RPM Frequency: 1200

(\*) Neutral Grounding Resistor (If Applicable): \_\_\_\_\_

Synchronous Generators: *See Attached*

Direct Axis Synchronous Reactance,  $X_d$ : \_\_\_\_\_ P.U.

Direct Axis Transient Reactance,  $X'_d$ : \_\_\_\_\_ P.U.

Direct Axis Subtransient Reactance,  $X''_d$ : \_\_\_\_\_ P.U.

Negative Sequence Reactance,  $X_2$ : \_\_\_\_\_ P.U.

Zero Sequence Reactance,  $X_0$ : \_\_\_\_\_ P.U.

KVA Base: \_\_\_\_\_

Field Volts: \_\_\_\_\_

Field Amperes: \_\_\_\_\_

Induction Generators:

Motoring Power (kW): \_\_\_\_\_

$I_2^2 t$  or K (Heating Time Constant): \_\_\_\_\_

Rotor Resistance,  $R_r$ : \_\_\_\_\_

Stator Resistance,  $R_s$ : \_\_\_\_\_

Stator Reactance,  $X_s$ : \_\_\_\_\_

Rotor Reactance,  $X_r$ : \_\_\_\_\_

Magnetizing Reactance,  $X_m$ : \_\_\_\_\_

Short Circuit Reactance,  $X_d''$ : \_\_\_\_\_

Exciting Current: \_\_\_\_\_

Temperature Rise: \_\_\_\_\_

Frame Size: \_\_\_\_\_

Design Letter: \_\_\_\_\_

Reactive Power Required in Vars (No Load): \_\_\_\_\_

Reactive Power Required in Vars (Full Load): \_\_\_\_\_

Total Rotating Inertia, H: \_\_\_\_\_ Per Unit on kVA Base

Note: Please contact the Transmission Provider prior to submitting the Interconnection Request to determine if the specified information above is required.

Excitation and Governor System Data for Synchronous Generators Only

Provide appropriate IEEE model block diagram of excitation system, governor system and power system stabilizer (PSS) in accordance with the regional reliability council criteria. A PSS may be determined to be required by applicable studies. A copy of the manufacturer's block diagram may not be substituted.

Interconnection Facilities Information

Will a transformer be used between the generator and the point of common coupling? Yes  No  *utility side*

Will the transformer be provided by the Interconnection Customer? Yes  No

Transformer Data (If Applicable, for Interconnection Customer-Owned Transformer):

Is the transformer: \_\_\_\_\_ single phase \_\_\_\_\_ three phase? Size: \_\_\_\_\_ kVA  
Transformer Impedance: \_\_\_\_\_ % on \_\_\_\_\_ kVA Base

If Three Phase:

Transformer Primary: \_\_\_\_\_ Volts \_\_\_\_\_ Delta \_\_\_\_\_ Wye \_\_\_\_\_ Wye Grounded  
Transformer Secondary: \_\_\_\_\_ Volts \_\_\_\_\_ Delta \_\_\_\_\_ Wye \_\_\_\_\_ Wye Grounded  
Transformer Tertiary: \_\_\_\_\_ Volts \_\_\_\_\_ Delta \_\_\_\_\_ Wye \_\_\_\_\_ Wye Grounded

Transformer Fuse Data (If Applicable, for Interconnection Customer-Owned Fuse):

(Attach copy of fuse manufacturer's Minimum Melt and Total Clearing Time-Current Curves)

Manufacturer: \_\_\_\_\_ Type: \_\_\_\_\_ Size: \_\_\_\_\_ Speed: \_\_\_\_\_

Interconnecting Circuit Breaker (if applicable):

Manufacturer: ABB Type: E2  
Load Rating (Amps): 1600 Interrupting Rating (Amps): 35KA Trip Speed (Cycles): 70ms

Interconnection Protective Relays (If Applicable):

If Microprocessor-Controlled:

*Beckwith M3410A (see attached)*

List of Functions and Adjustable Setpoints for the protective equipment or software:

Setpoint Function	Minimum	Maximum
1. _____	_____	_____
2. _____	_____	_____
3. _____	_____	_____
4. _____	_____	_____
5. _____	_____	_____
6. _____	_____	_____

If Discrete Components:

(Enclose Copy of any Proposed Time-Overcurrent Coordination Curves)

Manufacturer: \_\_\_\_\_ Type: \_\_\_\_\_ Style/Catalog No.: \_\_\_\_\_ Proposed Setting: \_\_\_\_\_  
Manufacturer: \_\_\_\_\_ Type: \_\_\_\_\_ Style/Catalog No.: \_\_\_\_\_ Proposed Setting: \_\_\_\_\_  
Manufacturer: \_\_\_\_\_ Type: \_\_\_\_\_ Style/Catalog No.: \_\_\_\_\_ Proposed Setting: \_\_\_\_\_  
Manufacturer: \_\_\_\_\_ Type: \_\_\_\_\_ Style/Catalog No.: \_\_\_\_\_ Proposed Setting: \_\_\_\_\_  
Manufacturer: \_\_\_\_\_ Type: \_\_\_\_\_ Style/Catalog No.: \_\_\_\_\_ Proposed Setting: \_\_\_\_\_

Current Transformer Data (If Applicable):

(Enclose Copy of Manufacturer's Excitation and Ratio Correction Curves)

Manufacturer: PLYS  
Type: A-1200 Accuracy Class: \_\_\_\_\_ Proposed Ratio Connection: 1200:5

Manufacturer: \_\_\_\_\_  
Type: \_\_\_\_\_ Accuracy Class: \_\_\_\_\_ Proposed Ratio Connection: \_\_\_\_\_

Potential Transformer Data (If Applicable):

Manufacturer: \_\_\_\_\_  
Type: \_\_\_\_\_ Accuracy Class: \_\_\_\_\_ Proposed Ratio Connection: \_\_\_\_\_

Manufacturer: \_\_\_\_\_  
Type: \_\_\_\_\_ Accuracy Class: \_\_\_\_\_ Proposed Ratio Connection: \_\_\_\_\_

**General Information**

Enclose copy of site electrical one-line diagram showing the configuration of all Small Generating Facility equipment, current and potential circuits, and protection and control schemes. This one-line diagram must be signed and stamped by a licensed Professional Engineer if the Small Generating Facility is larger than 50 kW. Is One-Line Diagram Enclosed?  Yes  No

Enclose copy of any site documentation that indicates the precise physical location of the proposed Small Generating Facility (e.g., USGS topographic map or other diagram or documentation).

Proposed location of protective interface equipment on property (include address if different from the Interconnection Customer's address) \_\_\_\_\_

Enclose copy of any site documentation that describes and details the operation of the protection and control schemes. Is Available Documentation Enclosed?  Yes  No

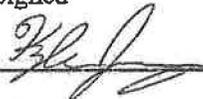
Enclose copies of schematic drawings for all protection and control circuits, relay current circuits, relay potential circuits, and alarm/monitoring circuits (if applicable).  
Are Schematic Drawings Enclosed?  Yes  No

**Applicant Signature**

I hereby certify that, to the best of my knowledge, all the information provided in this Interconnection Request is true and correct.

For Interconnection Customer:

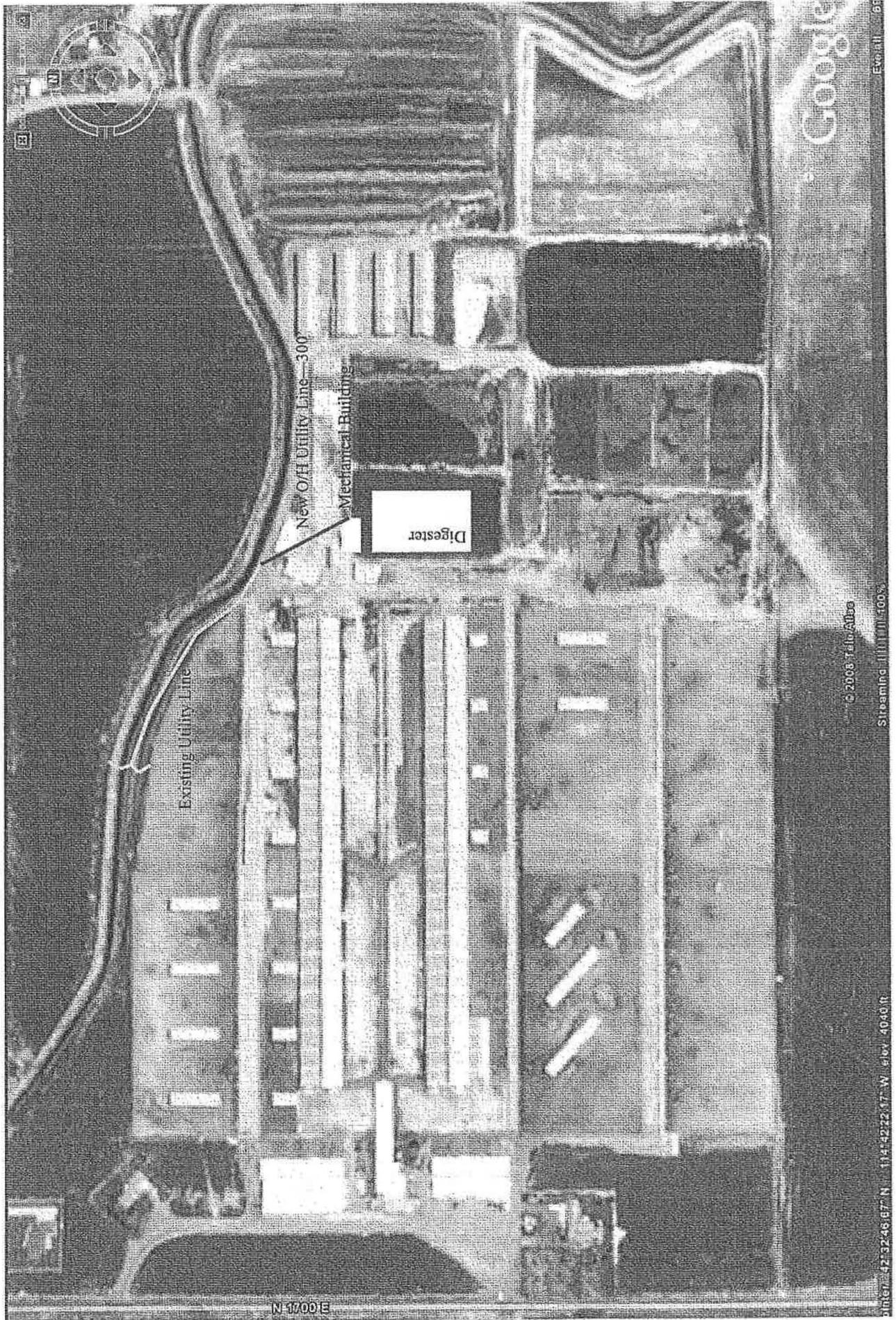
Signed

 \_\_\_\_\_ Date: 9/5/08

Printed

Kyle Juergens

Swager Farms— 3772 N 1700 E Buhl, ID 83316



N 1700 E

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Streaming 1:100,000

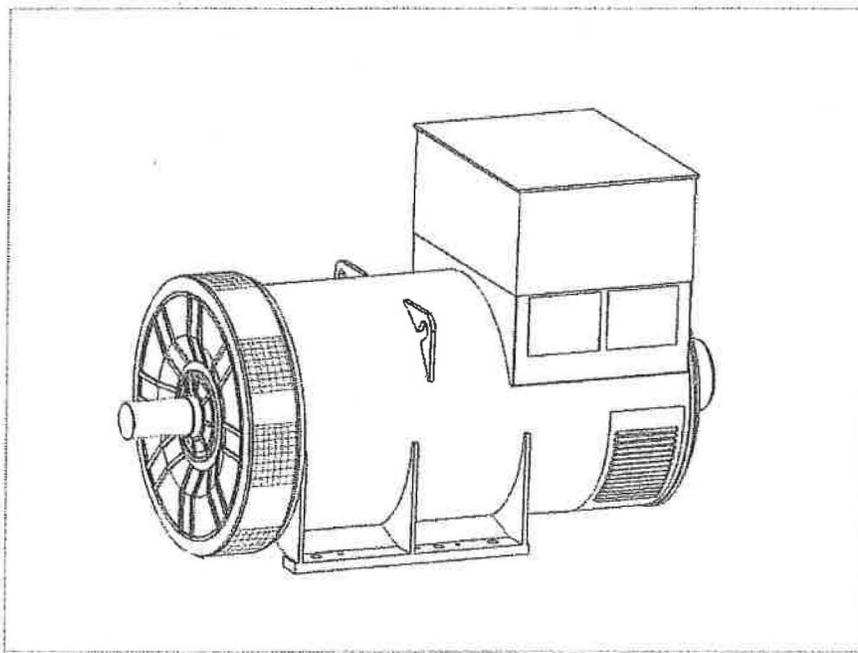
Google

Eye Ball



# STAMFORD<sup>®</sup>

## PI736D - Technical Data Sheet



**SPECIFICATIONS & OPTIONS****STANDARDS**

Newage Stamford industrial generators meet the requirements of BS EN 60034 and the relevant sections of other national and international standards such as BS5000, VDE 0530, NEMA MG1-32, IEC60034, CSA C22.2-100, AS1359.

Other standards and certifications can be considered on request.

**DESCRIPTION**

The STAMFORD PE range of synchronous ac generators are brushless with a rotating field. They are separately excited by the STAMFORD Permanent Magnet Generator (PMG). This is a shaft mounted, high frequency, pilot exciter which provides a constant supply of clean power via the Automatic Voltage Regulator (AVR) to the main exciter. The main exciter output is fed to the main rotor, through a full wave bridge rectifier, protected by surge suppression.

**VOLTAGE REGULATORS**

The PE range of generators, complete with a PMG, are available with one of two AVRs. Each AVR has soft start voltage build up and built in protection against sustained over-excitation, which will de-excite the generator after a minimum of 8 seconds.

Underspeed protection (UFRO), is also provided on both AVRs. The UFRO will reduce the generator output voltage proportional to the speed of the generator below a pre-settable level.

The MX341 AVR is two phase sensed with a voltage regulation of  $\pm 1\%$ . (see the note on regulation).

The MX321 AVR is 3 phase rms sensed with a voltage regulation of 0.5% rms (see the note on regulation). The UFRO circuit has adjustable slope and dwell, for controlled recovery from step loads. An over voltage protection circuit will shutdown the output device of the AVR, it can also trip an optional excitation circuit breaker if required. As an option, short circuit current limiting is available with the addition of current transformers.

Both the MX341 and the MX321 need a generator mounted current transformer to provide quadrature droop characteristics for load sharing during parallel operation. Provision is also made for the connection of the STAMFORD power factor controller, for embedded applications, and a remote voltage trimmer.

**WINDINGS & ELECTRICAL PERFORMANCE**

All generator stators are wound to 2/3 pitch. This eliminates triplen (3rd, 9th, 15th ...) harmonics on the voltage waveform and is found to be the optimum design for trouble-free supply of non-linear loads. The 2/3 pitch design avoids excessive neutral currents sometimes seen with higher winding pitches. A fully connected damper winding reduces oscillations during paralleling. This winding, with the 2/3 pitch and carefully selected pole and tooth designs, ensures very low levels of voltage waveform distortion.

**TERMINALS & TERMINAL BOX**

Standard generators feature a main stator with 6 ends brought out to the terminals, which are mounted on the frame at the non-drive end of the generator. A sheet steel terminal box contains the AVR and provides ample space for the customers' wiring and gland arrangements. It has removable panels for easy access.

**SHAFT & KEYS**

All generator rotors are dynamically balanced to better than BS6861:Part 1 Grade 2.5 for minimum vibration in operation. Two bearing generators are balanced with a half key.

**INSULATION/IMPREGNATION**

The insulation system is class 'H', and meets the requirements of UL1446.

All wound components are impregnated with materials and processes designed specifically to provide the high build required for static windings and the high mechanical strength required for rotating components.

**QUALITY ASSURANCE**

Generators are manufactured using production procedures having a quality assurance level to BS EN ISO 9001.

**NOTE ON REGULATION**

The stated voltage regulation may not be maintained in the presence of certain radio transmitted signals. Any change in performance will fall within the limits of Criteria 'B' of EN 61000-6-2:2001. At no time will the steady-state voltage regulation exceed 2%.

Note: Continuous development of our products entitles us to change specification details without notice, therefore they must not be regarded as binding.

Front cover drawing is typical of the product range.

**PI736D**

**STAMFORD**

**WINDING 312**

CONTROL SYSTEM	SEPARATELY EXCITED BY P.M.G.		
A.V.R.	MX341	MX321	
VOLTAGE REGULATION	± 1%	± 0.5 %	With 4% ENGINE GOVERNING
SUSTAINED SHORT CIRCUIT	REFER TO SHORT CIRCUIT DECREMENT CURVES (page 7)		

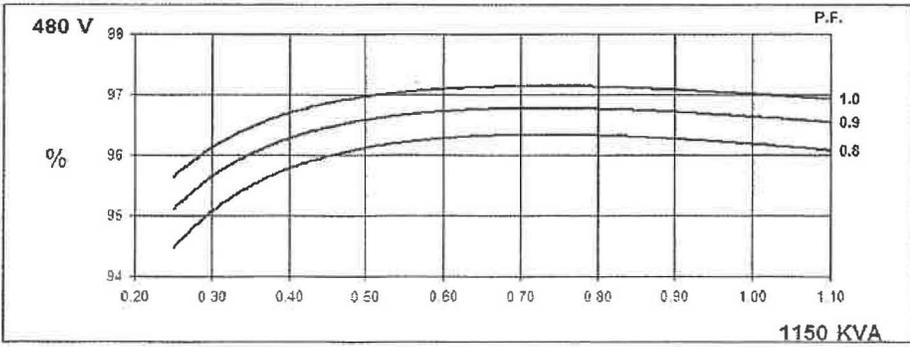
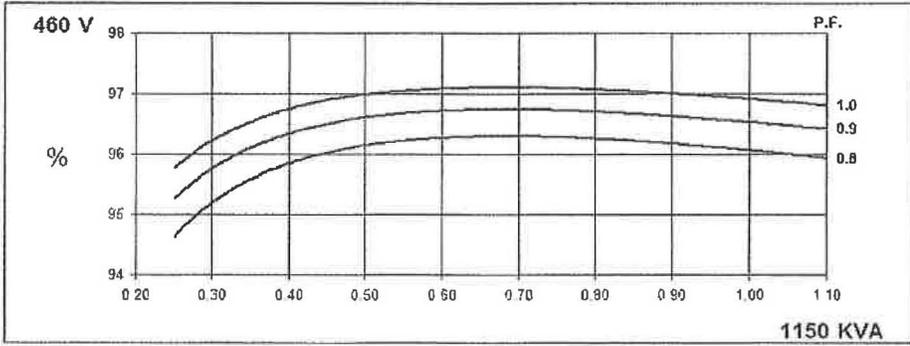
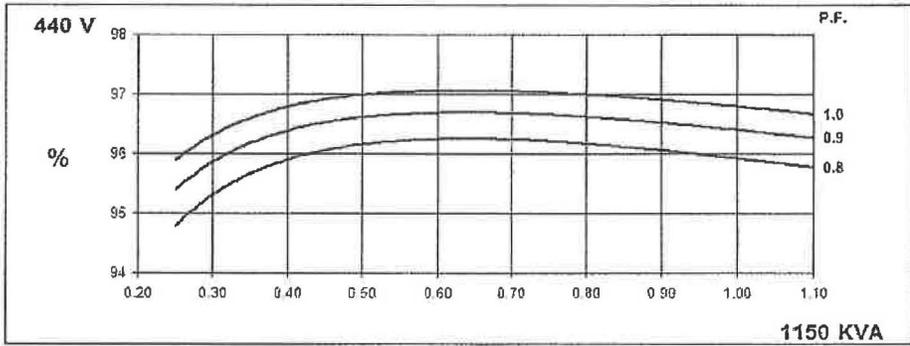
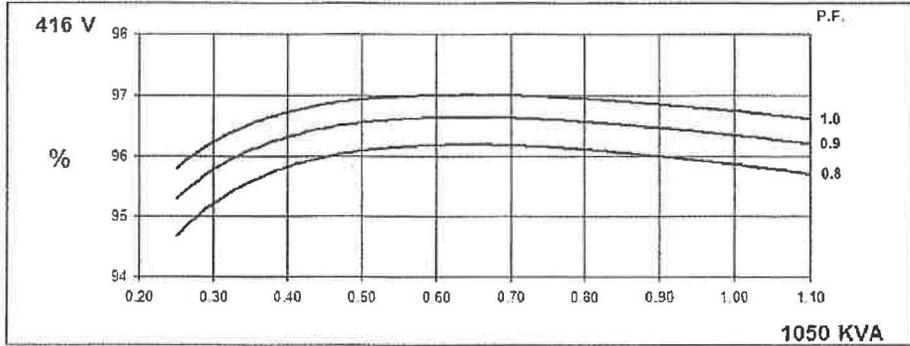
INSULATION SYSTEM	CLASS H							
PROTECTION	IP23							
RATED POWER FACTOR	0.8							
STATOR WINDING	DOUBLE LAYER LAP							
WINDING PITCH	TWO THIRDS							
WINDING LEADS	6							
MAIN STATOR RESISTANCE	0.0018 Ohms PER PHASE AT 22°C STAR CONNECTED							
MAIN ROTOR RESISTANCE	2.69 Ohms at 22°C							
EXCITER STATOR RESISTANCE	17 Ohms at 22°C							
EXCITER ROTOR RESISTANCE	0.1 Ohms PER PHASE AT 22°C							
R.F.I. SUPPRESSION	BS EN 61000-6-2 & BS EN 61000-6-4, VDE 0875G, VDE 0875N. refer to factory for others							
WAVEFORM DISTORTION	NO LOAD < 1.5% NON-DISTORTING BALANCED LINEAR LOAD < 5.0%							
MAXIMUM OVERSPEED	1500 Rev/Min							
BEARING DRIVE END	BALL. 6228 C3							
BEARING NON-DRIVE END	BALL. 6319 C3							
	1 BEARING				2 BEARING			
WEIGHT COMP. GENERATOR	3233 kg				3182 kg			
WEIGHT WOUND STATOR	1368 kg				1368 kg			
WEIGHT WOUND ROTOR	1548 kg				1486 kg			
WR <sup>2</sup> INERTIA	53.5789 kgm <sup>2</sup>				52.578 kgm <sup>2</sup>			
SHIPPING WEIGHTS In a crate	3350kg				3372kg			
PACKING CRATE SIZE	194 x 105 x 154(cm)				194 x 105 x 154(cm)			
	50 Hz				60 Hz			
TELEPHONE INTERFERENCE	THF<2%				TIF<50			
COOLING AIR	1.79 m <sup>3</sup> /sec 3793 cfm				2.3 m <sup>3</sup> /sec 4874 cfm			
VOLTAGE STAR	380/220	400/231	415/240	440/254	416/240	440/254	480/266	480/277
KVA BASE RATING FOR REACTANCE VALUES	920	920	920	920	1050	1150	1150	1150
X <sub>d</sub> DIR. AXIS SYNCHRONOUS	2.11	1.90	1.77	1.57	2.49	2.44	2.23	2.05
X' <sub>d</sub> DIR. AXIS TRANSIENT	0.16	0.14	0.13	0.12	0.18	0.18	0.16	0.15
X'' <sub>d</sub> DIR. AXIS SUBTRANSIENT	0.11	0.10	0.09	0.08	0.13	0.13	0.12	0.11
X <sub>q</sub> QUAD. AXIS REACTANCE	1.35	1.22	1.13	1.01	1.59	1.56	1.43	1.31
X'' <sub>q</sub> QUAD. AXIS SUBTRANSIENT	0.34	0.31	0.29	0.26	0.40	0.39	0.36	0.33
X <sub>L</sub> LEAKAGE REACTANCE	0.04	0.04	0.03	0.03	0.05	0.05	0.04	0.04
X <sub>2</sub> NEGATIVE SEQUENCE	0.20	0.18	0.17	0.15	0.23	0.23	0.21	0.19
X <sub>0</sub> ZERO SEQUENCE	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
REACTANCES ARE SATURATED				VALUES ARE PER UNIT AT RATING AND VOLTAGE INDICATED				
T' <sub>d</sub> TRANSIENT TIME CONST.	0.162s							
T'' <sub>d</sub> SUB-TRANSTIME CONST.	0.015s							
T' <sub>do</sub> O.C. FIELD TIME CONST.	2.17s							
T <sub>a</sub> ARMATURE TIME CONST.	0.0183s							
SHORT CIRCUIT RATIO	1/X <sub>d</sub>							

**60  
Hz**

**PI736D**  
Winding 312

**STAMFORD**

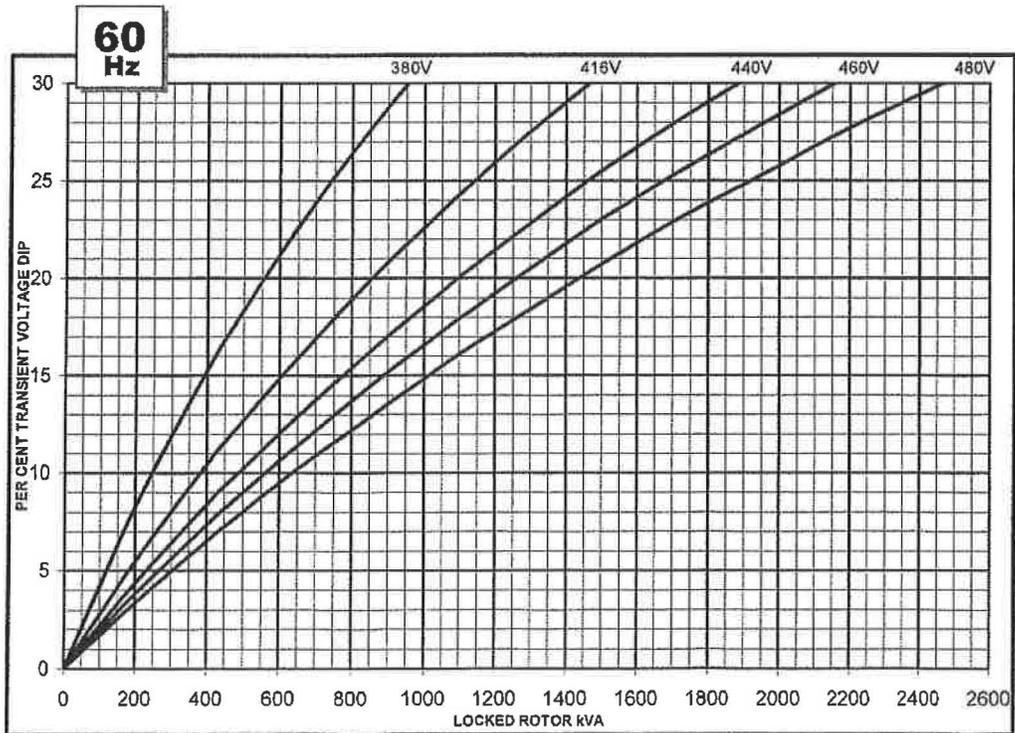
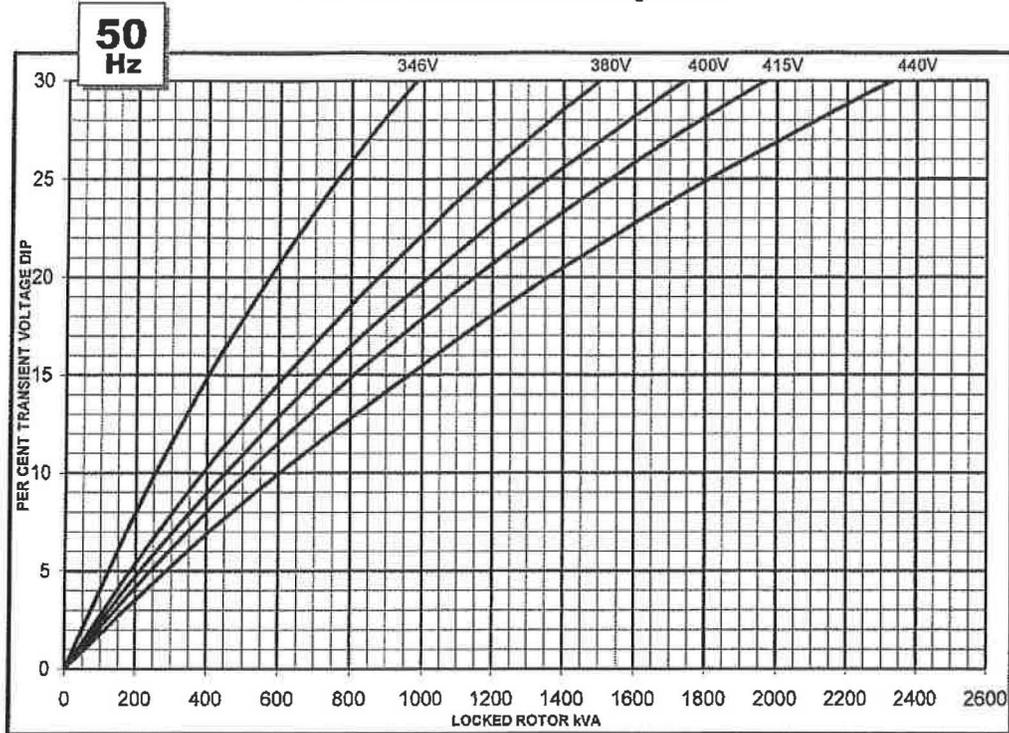
**THREE PHASE EFFICIENCY CURVES**



**PI736D**  
Winding 312

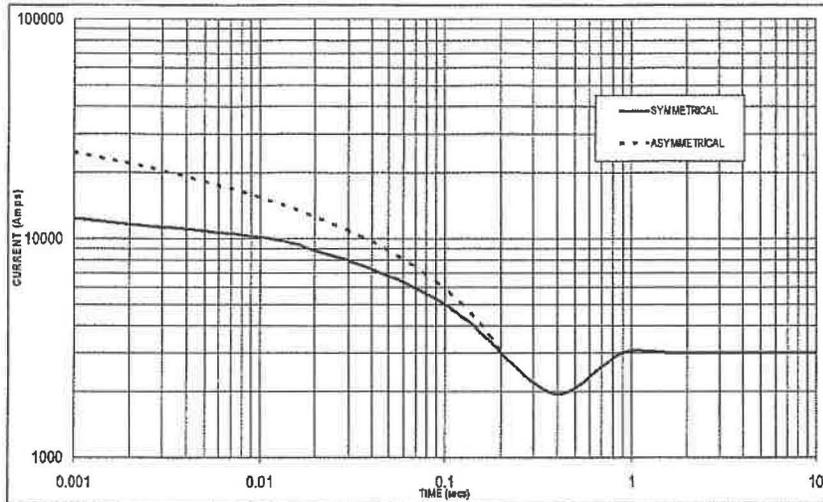
**STAMFORD**

**Locked Rotor Motor Starting Curve**



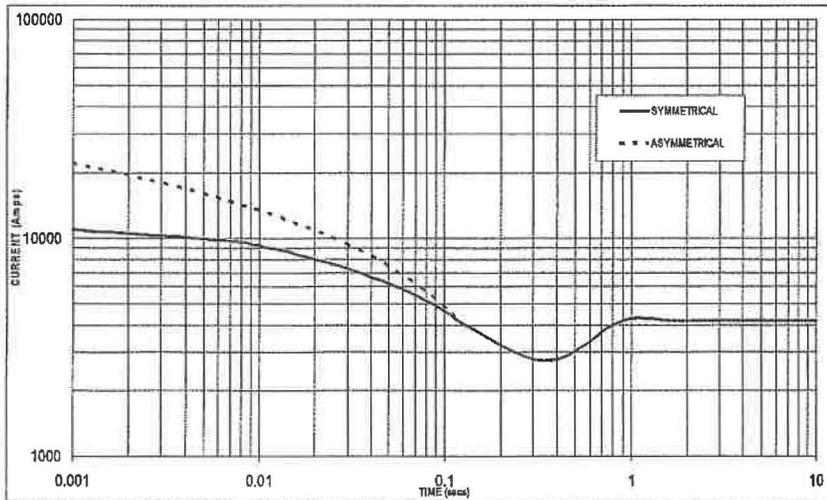
Three-phase Short Circuit Decrement Curve. No-load Excitation at Rated Speed  
Based on star (wye) connection.

**50  
Hz**



Sustained Short Circuit = 3,000 Amps

**60  
Hz**



Sustained Short Circuit = 4,200 Amps

**Note 1**

The following multiplication factors should be used to adjust the values from curve between time 0.001 seconds and the minimum current point in respect of nominal operating voltage :

50Hz		60Hz	
Voltage	Factor	Voltage	Factor
380v	x 1.00	416v	x 1.00
400v	x 1.05	440v	x 1.06
415v	x 1.09	460v	x 1.10
440v	x 1.16	480v	x 1.15

The sustained current value is constant irrespective of voltage level

**Note 2**

The following multiplication factor should be used to convert the values calculated in accordance with NOTE 1 to those applicable to the various types of short circuit :

	3-phase	2-phase L-L	1-phase L-N
Instantaneous	x 1.00	x 0.87	x 1.30
Minimum	x 1.00	x 1.80	x 3.20
Sustained	x 1.00	x 1.50	x 2.50
Max. sustained duration	10 sec.	5 sec.	2 sec.

All other times are unchanged

**Note 3**

Curves are drawn for Star (Wye) connected machines.

# PI736D

# STAMFORD

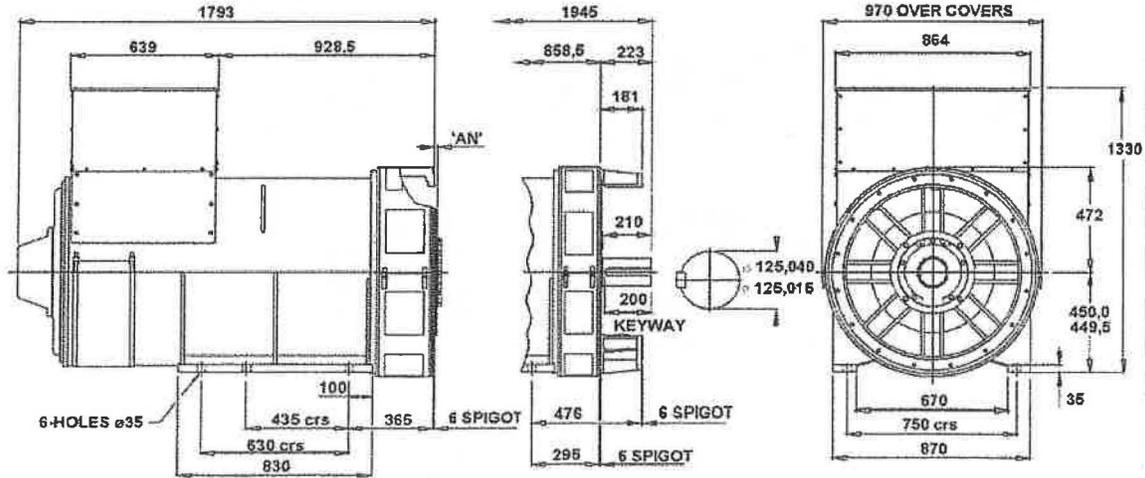
Winding 312 / 0.8 Power Factor

## RATINGS

Class - Temp Rise	Cont. F - 105/40°C				Cont. H - 125/40°C				Standby - 150/40°C				Standby - 163/27°C			
<b>50Hz</b> Star (V)	380	400	415	440	380	400	415	440	380	400	415	440	380	400	415	440
kVA	850	850	850	850	920	920	920	920	960	960	960	960	985	985	985	985
kW	680	680	680	680	736	736	736	736	768	768	768	768	788	788	788	788
Efficiency (%)	96.0	96.1	96.2	96.3	95.9	96.0	96.1	96.3	95.8	96.0	96.1	96.2	95.8	95.9	96.1	96.2
kW Input	708	708	707	706	767	767	766	764	802	800	799	798	823	822	820	819

Class - Temp Rise	Cont. F - 105/40°C				Cont. H - 125/40°C				Standby - 150/40°C				Standby - 163/27°C			
<b>60Hz</b> Star (V)	416	440	460	480	416	440	460	480	416	440	460	480	416	440	460	480
kVA	970	1065	1065	1065	1050	1150	1150	1150	1095	1200	1200	1200	1125	1230	1230	1230
kW	776	852	852	852	840	920	920	920	876	960	960	960	900	984	984	984
Efficiency (%)	96.0	96.0	96.2	96.2	95.9	95.9	96.1	96.2	95.8	95.9	96.0	96.1	95.7	95.8	96.0	96.1
kW Input	808	888	886	886	876	959	957	956	914	1001	1000	999	940	1027	1025	1024

## DIMENSIONS



COUPLING DISC	'AN'
S.A.E No 18	15,7
S.A.E No 21	0
S.A.E No 24	0

1-BRG ADAPTORS
S.A.E No 0
S.A.E No 00

2-BRG ADAPTORS
S.A.E No 0
S.A.E No 00

# STAMFORD

Barnack Road • Stamford • Lincolnshire • PE9 2NB  
 Tel: 00 44 (0)1780 484000 • Fax: 00 44 (0)1780 484100

# Intertie/Generator Protection Relay M-3410A

Integrated Protection System®



M-3410A Standard Panel



M-3410A Vertical Panel (Optional)



M-3410A Horizontal Panel (Optional)

- Facilitates standardization for small/medium intertie and generator protection applications
- Microprocessor-based relay provides 15 protective relay functions, including Sync-Check, 2 programmable outputs and 2 programmable inputs
- Relay voltage inputs can be directly connected (no VT required) for voltages 480 V or less
- Local and remote serial communications (MODBUS protocol) capability for monitoring and control functions

## M-3410A Intertie/Generator Protection Relay

### Protective Functions

- Sync-check with Phase Angle,  $\Delta V$  and  $\Delta F$  with dead line/dead bus options (25)
- Phase undervoltage (27) protection
- Ground undervoltage (27G) protection
- Dual-setpoint, single or three phase, directional power detection that can be selected as over/under power protection (32)
- Dual-zone, offset-mho loss-of-field for generator protection (40)
- Sensitive negative sequence overcurrent protection and alarm (46)
- Negative sequence overvoltage (47)
- Inverse time neutral overcurrent (51N)
- Phase overcurrent with voltage restraint/control (51V) protection
- Phase overvoltage (59) protection
- Ground overvoltage (59G) protection
- Peak overvoltage (59I) protection
- VT fuse-loss detection and blocking (60FL)
- Reconnect enable for intertie protection (79)
- Four-step over/under frequency (81) protection

### Standard Features

- 2 programmable outputs, 2 programmable inputs, and 1 self-test output
- Oscillographic recording (COMTRADE file format)
- Time-stamped sequence of events recording for 32 events
- Metering of Voltage, Current, real and reactive Power, Power Factor, Frequency, and Positive Sequence Impedance
- One RS-232 port (COM1) on front and one RS-232 or 485 port (COM2) on rear
- M-3810A IPScom® For Windows™ Communications Software
- M-3811A IPScom For Palm OS® Communications Software
- MODBUS protocol
- Supports both 50 and 60 Hz applications
- Accepts 1A or 5 A rated CT inputs
- Relay voltage inputs can be directly connected (no VT required) for voltages  $\leq 480$  V ac
- Continuous Self-Diagnostics

### Optional Features

- M-3801C IPSplot® Oscillograph Analysis Software
- Horizontal and Vertical panel mount versions available (see Figures 2 and 4)

## Tests and Standards

The M-3410A Generator/Intertie Protection Relay complies with the following type tests and standards:

### Voltage Withstand

#### Dielectric Withstand

All terminals except power supply and status input contacts, 2500 V ac/3500 V dc

Power Supply and Status Input Contacts:

IEC 60255-5 1,500 V dc for power supply voltages (12, 24, 48 V inputs)  
2500 V ac/3500 V dc for power supply voltages (120 V ac/125 V dc input)

■ **NOTE:** Digital data circuits (RS-232/485 communication ports) are excluded.

#### Impulse Voltage

Power Supply Input Voltages, 120 V ac/125 V dc:

IEC 60255-5 5,000 V pk, +/- polarity applied to each independent circuit to earth  
5,000 V pk, +/- polarity applied between independent circuits  
1.2  $\mu$ s by 50  $\mu$ s, 500 ohms impedance, three surges at every 5 second interval

■ **NOTE:** Digital data circuits (RS-232/485 communication ports) are excluded.

Power Supply Input Voltages, 12, 24, 48 V dc:

IEC 60255-5 3,000 V pk, +/- polarity applied to each independent circuit to earth  
3,000 V pk, +/- polarity applied between independent circuits  
1.2  $\mu$ s by 50  $\mu$ s, 500 ohms impedance, three surges at every 5 second interval

■ **NOTE:** Digital data circuits (RS-232/485 communication ports) are excluded.

#### Insulation Resistance

IEC 60255-5 > 40 Megaohms

■ **NOTE:** Digital data circuits (RS-232/485 communication ports) are excluded.

### Electrical Environment

#### Electrostatic Discharge Test

IEC 61000-4-2 Class 4 ( $\pm 8$  kV) - point contact discharge and air discharge

■ **NOTE:** Digital data circuits (RS-232/485 communication ports) are excluded.

#### Fast Transient Disturbance Test

IEC 61000-4-4 ( $\pm 2$  kV, 5 kHz) AC Power Supply Input  
( $\pm 1$  kV, 5 kHz) RS-232, RS-485 and ground

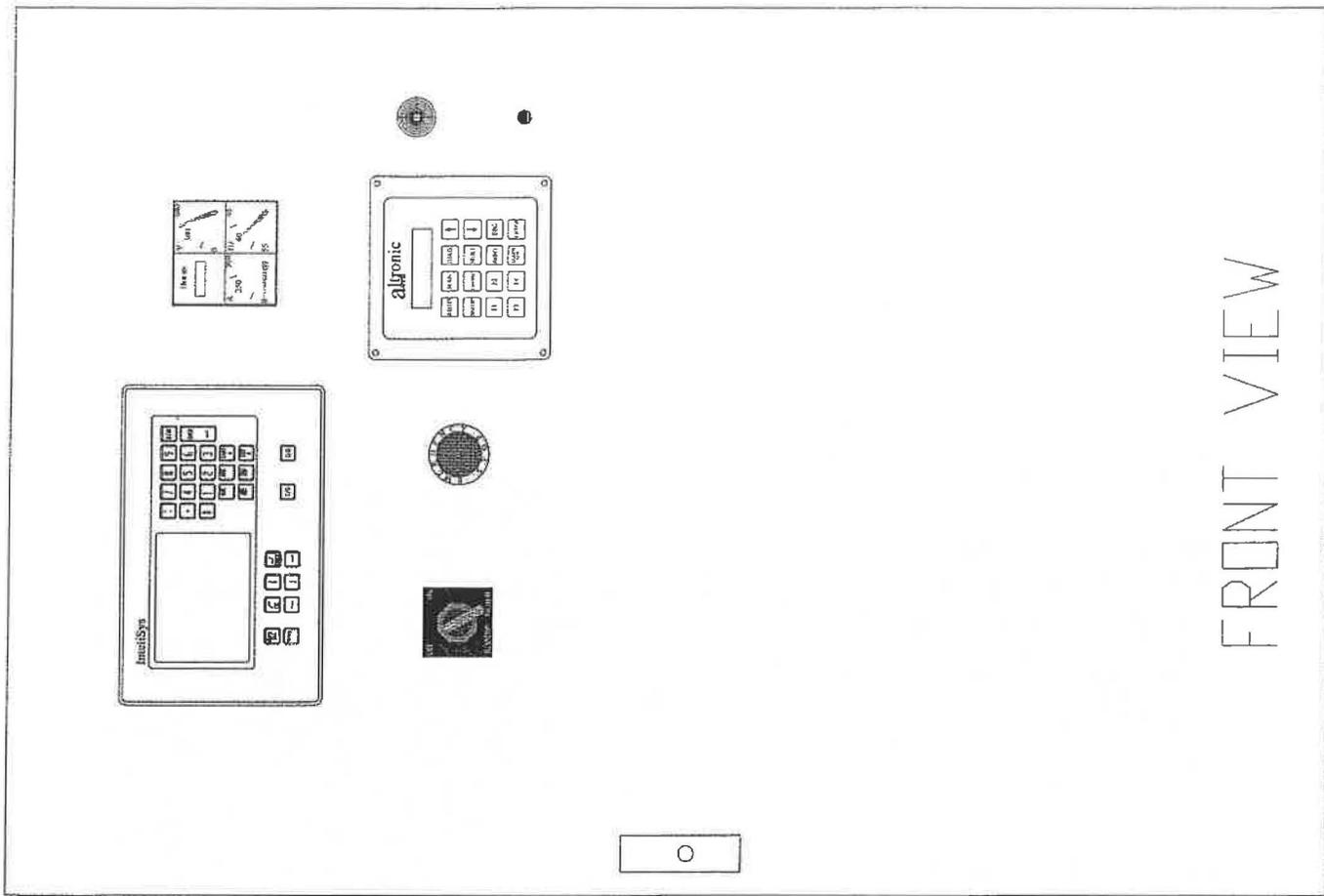
#### Surge

IEC 61000-4-5 ( $\pm 2$  kV, 1.2  $\mu$ s by 50  $\mu$ s line to ground) AC Power Supply Input  
( $\pm 1$  kV, 1.2  $\mu$ s by 50  $\mu$ s line to line) AC Power Supply Input  
( $\pm 1$  kV, 1.2  $\mu$ s by 50  $\mu$ s line to ground) RS-485 Port

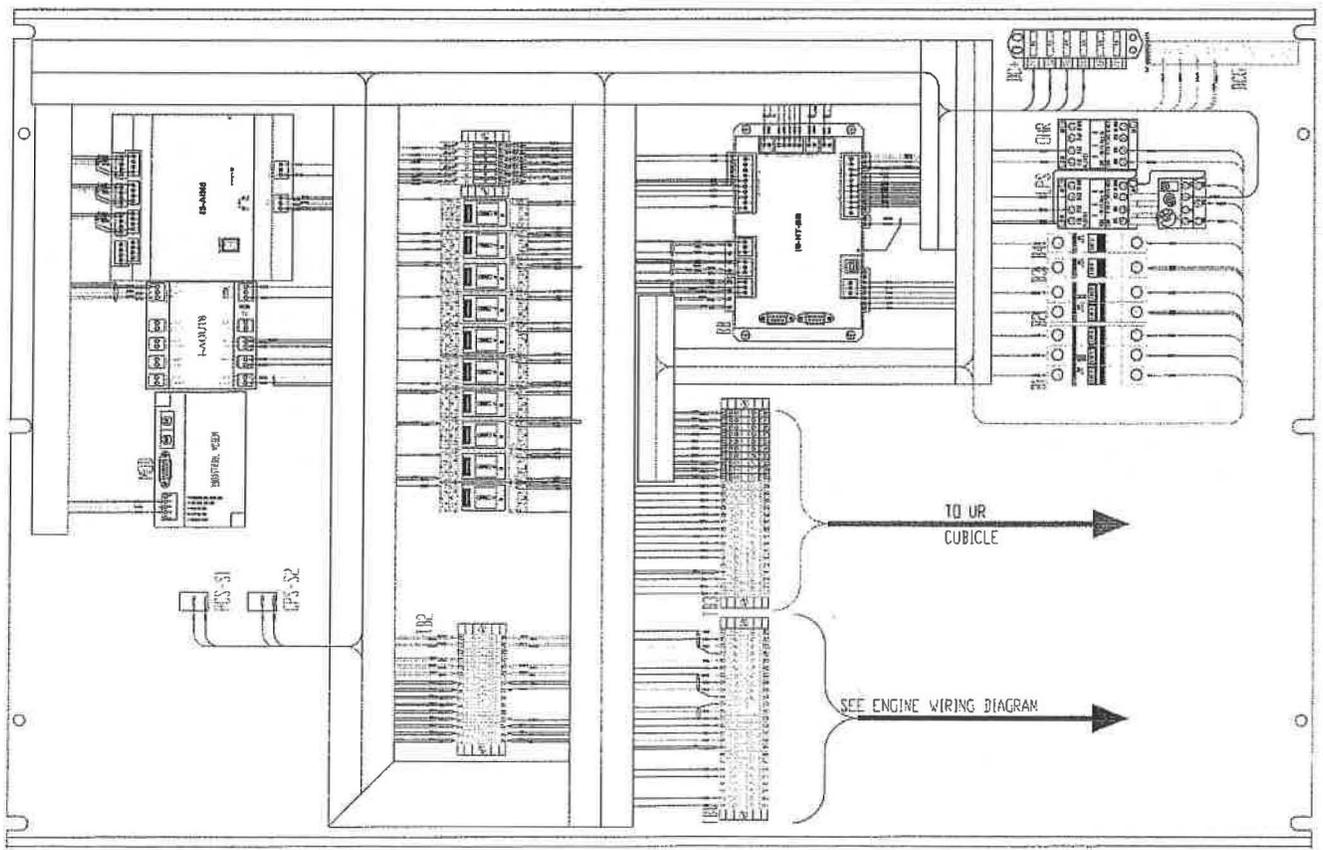
#### Surge Withstand Capability

ANSI/IEEE 2,500 V pk-pk Oscillatory each independent circuit to earth  
C37.90.1 2,500 V pk-pk Oscillatory between each independent circuit  
1989 5,000 V pk Fast Transient each independent circuit to earth  
5,000 V pk Fast Transient between each independent circuit

■ **NOTE:** Digital data circuits (RS-232/485 communication ports) are excluded.



FRONT VIEW

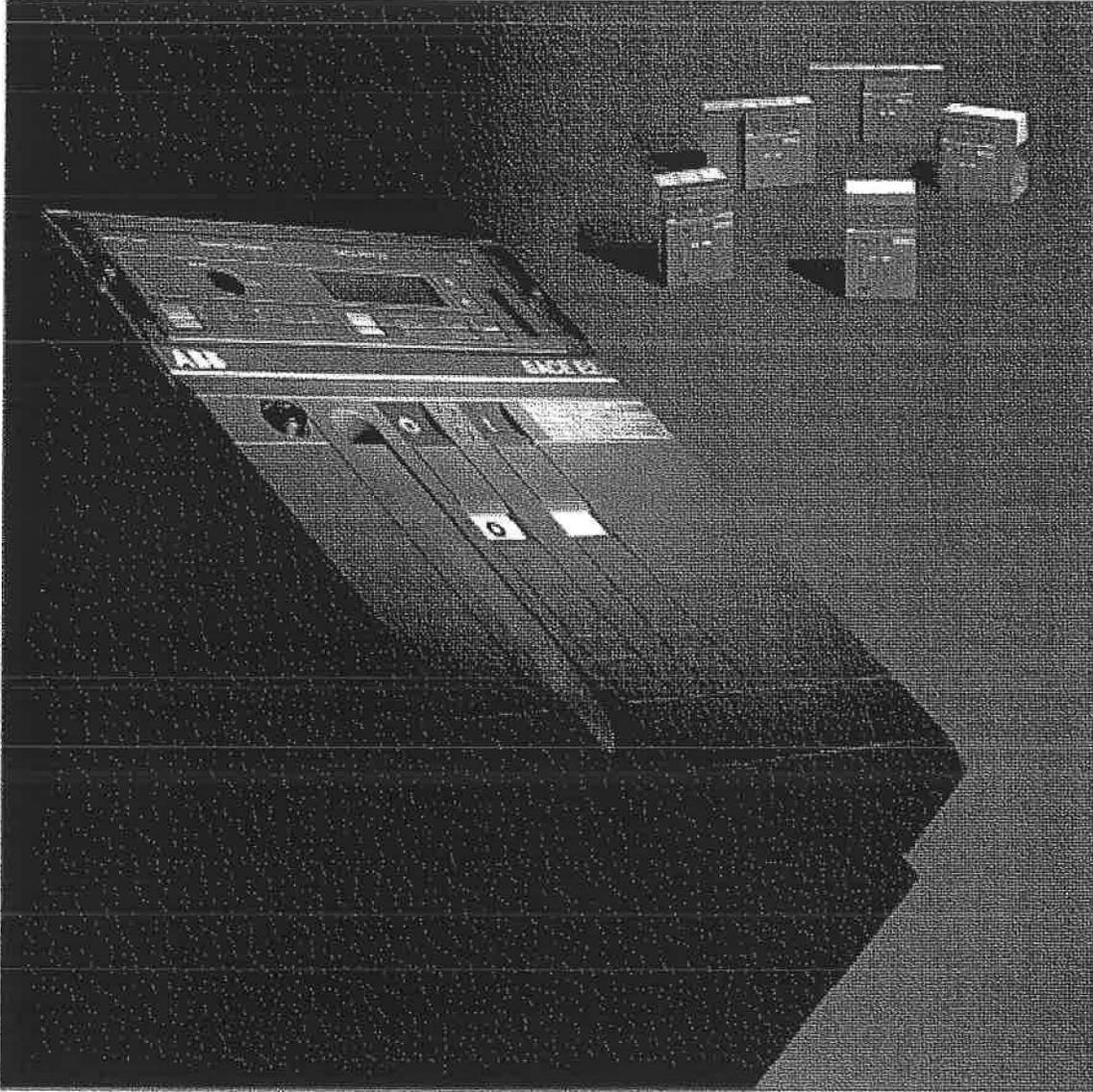


Istruzioni di installazione  
ed esercizio  
*Instructions for installation  
and service*

Istruzioni di installazione,  
di esercizio e di manutenzione  
per interruttori automatici aperti  
di bassa tensione  
*Installation, service and  
maintenance instructions for  
low voltage air circuit-breaker*

ITSCB 601933/001 it-en 6-97

## SACE Emax



**ABB SACE**

**ABB**

## 12. Unità di protezione PR111/LI - LSI - LSI G

### 12.1 Generalità

L'unità SACE PR111/P realizza le seguenti funzioni di protezione:

- L - protezione da sovraccarico a tempo lungo inverso
- S - protezione da corto circuito a tempo breve
- I - protezione da corto circuito istantaneo
- G - protezione da guasto a terra
- IInst - protezione a soglia fissa da corto circuito

Le unità SACE PR111 disponibili all'utente sono:

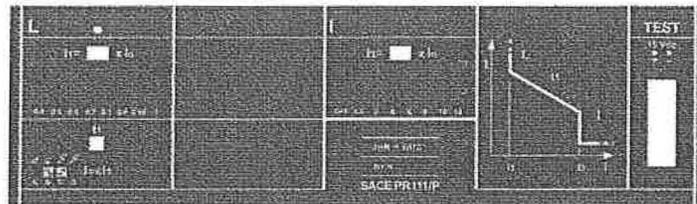
## 12. PR111/LI - LSI - LSI G protection unit

### 12.1 General

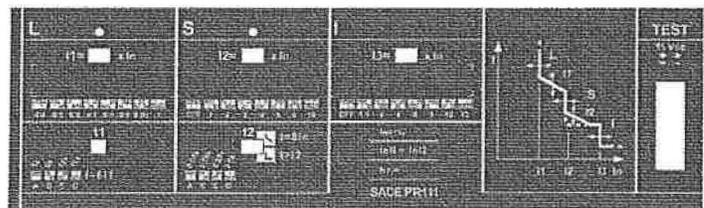
The SACE PR111/P unit carries out the following protection functions:

- L - protection against overload with inverse long time-delay
- S - protection against short-time short-circuit
- I - protection against instantaneous short-circuit
- G - protection against earth fault
- IInst - rapid protection against instantaneous short-circuit

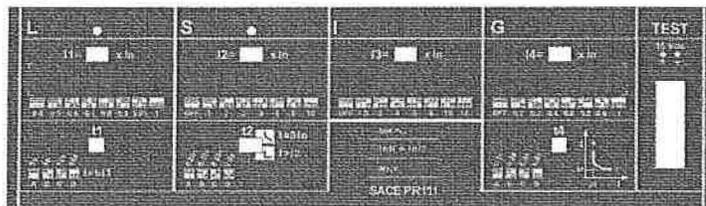
The SACE PR111 units available to the user are:



PR111/L+I+IInst



PR111/L+S+I+IInst



PR111/L+S+I+G+IInst

Fig. 47

Le protezioni possono essere realizzate in modo trifase o trifase con neutro a seconda del tipo di interruttore impiegato (tripolare, tetrapolare o tripolare con neutro esterno).

L'unità, è autoalimentata e garantisce il corretto funzionamento delle funzioni di protezione in presenza di una corrente maggiore o uguale al 18% del valore nominale del trasformatore amperometrico di fase (TA).

L'assieme sganciatore di protezione è così composto:

- 3 o 4 trasformatori di corrente (TA)
- unità di protezione SACE PR111
- un solenoide di apertura (SA) dello sganciatore di massima corrente che agisce direttamente sul comando dell'interruttore.

The protections can be made either in three-phase or three-phase with neutral mode, depending on the type of circuit-breaker used (three-pole, four-pole or three-pole with external neutral).

The unit is self-powered and ensures correct operation of the protection functions when there is a current higher than or equal to 18% of the rated phase current transformer value (CT).

The protection release assembly consists of the following:

- 3 or 4 current transformers (CT)
- SACE PR111 protection unit
- an opening solenoid (OS) of the overcurrent release which acts directly on the circuit-breaker operating mechanism.

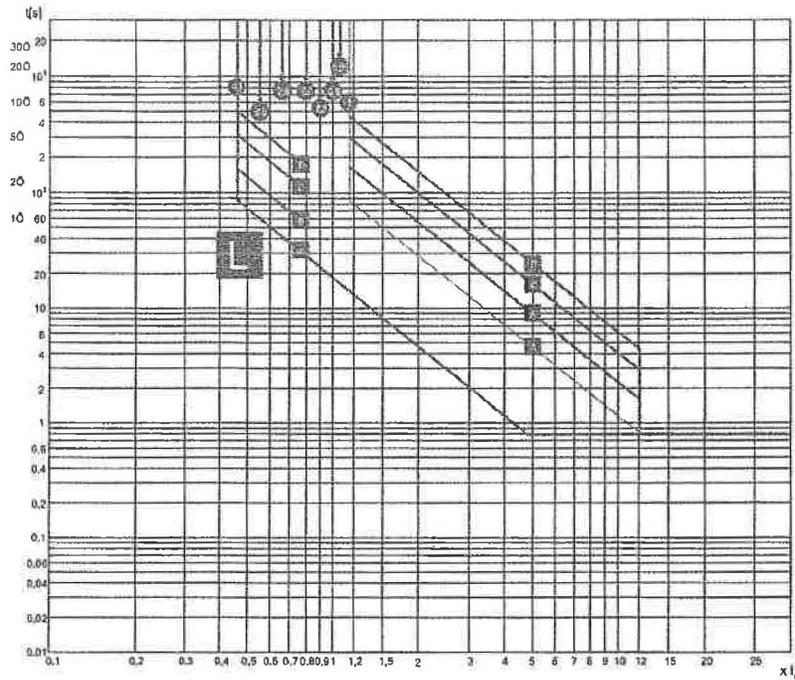
Mod. Rev.	M4379		Apparecchio Apparatus	SACE Emax	Scala Scale
			N° Doc. Doc. No.	601933/001	N° Pag. Sh. No. 52/100

12.8 Curve di intervento

12.8 Trip curves

12.8.1 Curve di Intervento protezione "L"

12.8.1 Trip curves of protection "L"



Tolleranza sulle soglie di intervento

$L = \pm$  Sgancio tra 1,05 e 1,3  $I_n$  (secondo le Norme IEC 947-2)  
 $I = \pm 20\%$

Trip threshold tolerance  
 $L =$  Release between 1.05 and 1.3  $I_n$  (in conformity with IEC 947-2 standards)  
 $I = \pm 20\%$

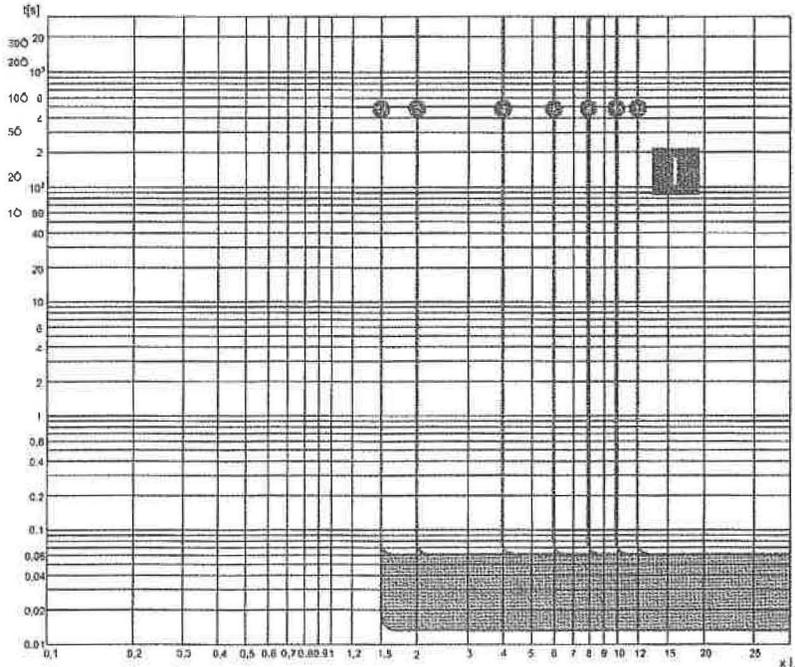
Tolleranza sui tempi di intervento

$L = \pm 10\%$  (20% per  $I > 2 \times I_n$ )  
 $I = \pm 20\%$

Trip time tolerances  
 $L = \pm 10\%$  (20% per  $I > 2 \times I_n$ )  
 $I = \pm 20\%$

12.8.2 Curve di Intervento protezione "I"

12.8.2 Trip curves of protection "I"



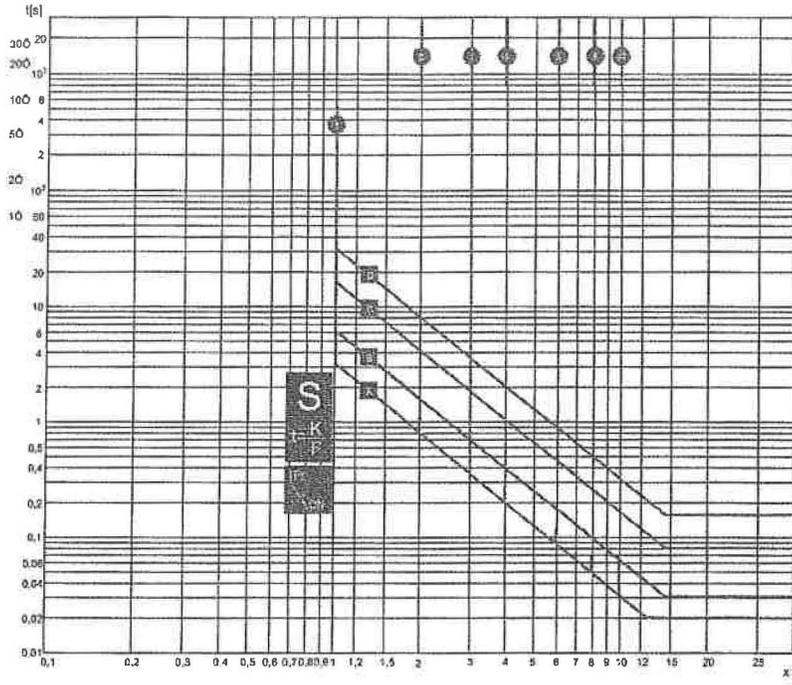
Legenda  
 $I_n$  = Corrente nominale dei trasformatori di corrente  
 $t$  = tempo di Intervento

Caption  
 $I_n$  = Rated current of current transformers  
 $t$  = trip time

Mod. Rev.	M4379		Apparecchio Apparatus	SACE Emax	Scala Scale
			N° Doc. Doc. No.	601933/001	N° Pag. Sh. No. 63/00

12.8.3 Curve di intervento protezione "S"

12.8.3 Trip curves of protection "S"

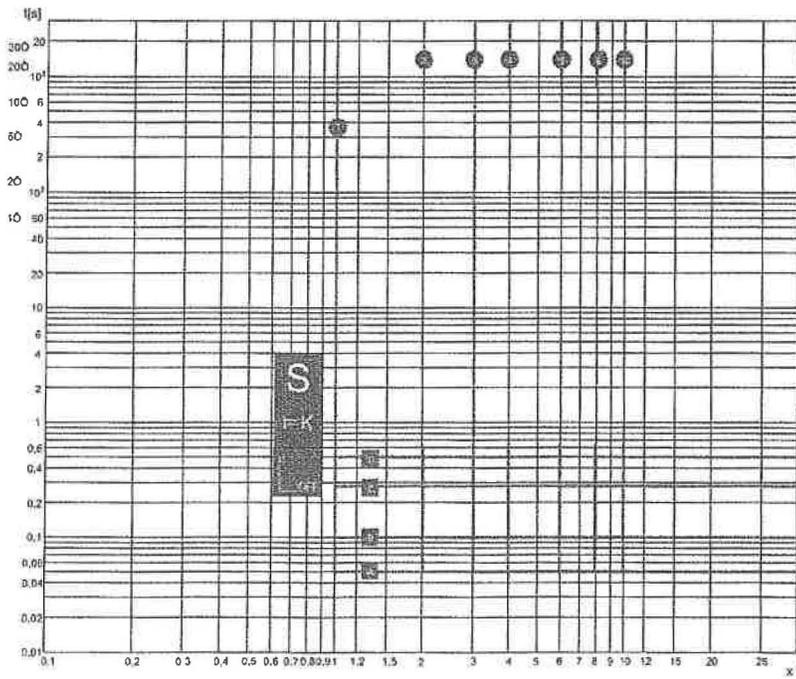


Tolleranza sulle soglie di intervento  
 $S = \pm 10\%$

Trip threshold tolerance  
 $S = \pm 10\%$

Tolleranza sui tempi di intervento  
 $S = \pm 20\%$

Trip time tolerances  
 $S = \pm 20\%$



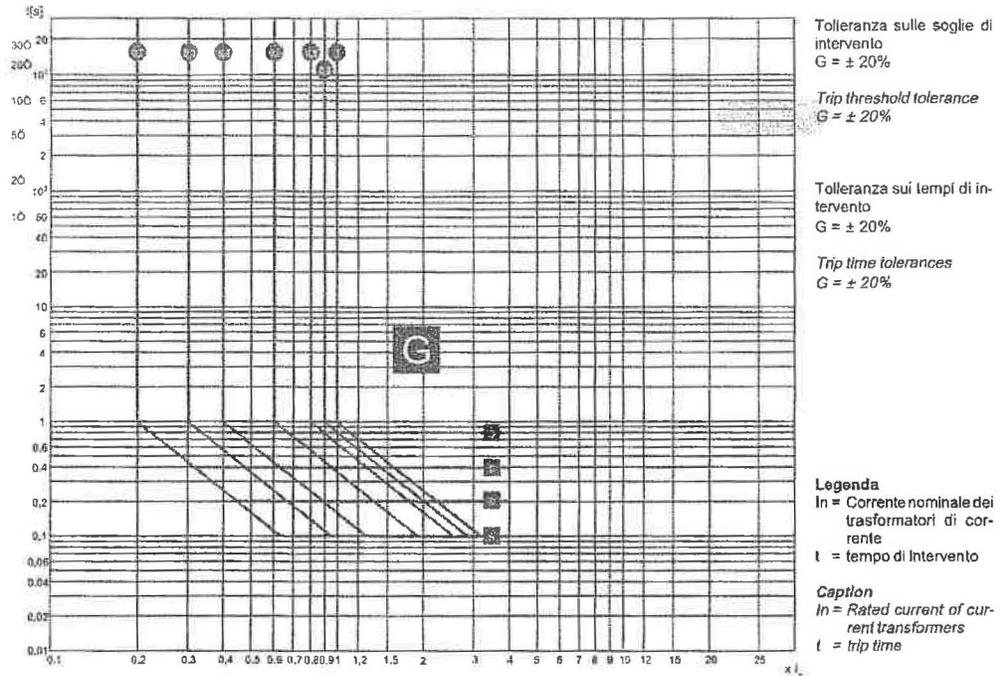
Legenda  
 $I_n$  = Corrente nominale dei trasformatori di corrente  
 $t$  = tempo di intervento

Caption  
 $I_n$  = Rated current of current transformers  
 $t$  = trip time

Mod. Rev.	M4379		Apparecchio Apparatus	SACE Emax	Scala Scale
			N° Doc. Doc. No.	601933/001	N° Pag. Sh. No. 64/100

12.8.4 Curve di intervento protezione "G"

12.8.4 Trip curves of protection "G"



Mod. Rev.	M4379		Apparecchio Apparatus	SACE Emax	Scala Scale
			N° Doc. Doc. No.	601933/001	N° Pag. Sh. No. 65/100

**BEFORE THE  
IDAHO PUBLIC UTILITIES COMMISSION**

**CASE NO. IPC-E-12-25**

**IDAHO POWER COMPANY**

**ATTACHMENT 4**



September 17, 2008

Kyle Juergens  
Andgar Corporation  
6920 Salashan Parkway A-102  
Ferndale, WA 98248  
Ph 360-366-9900

Re: Swager Farms- Project # 268

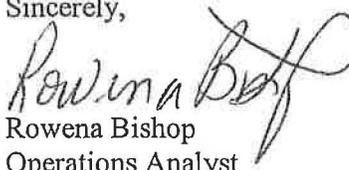
Dear Kyle:

Thank you for your Generator Interconnection application for the Swager Farms Project to be connected to the Idaho Power system at Twin Falls County, Idaho (see attached copy). Since we have received all of the required materials, this application is now considered complete. As you may be aware, we are required to post certain information to our OASIS (Open Access Same Time Information) website. Please refer to the website periodically to view a list of current projects at <http://oatioasis.com/ipco/index.html> under GENERATOR INTERCONNECTION INFORMATION folder, on the left side of the screen.

At this time, Idaho Power Company will assign a planning engineer for this project, and we will contact you in the near future to schedule a Scoping Meeting. For your review, I am attaching a copy of the standard Interconnection Feasibility Study Agreement that needs to be executed by you soon after our Scoping Meeting. Please feel free to contact me with your questions about the Generator Interconnection Process anytime.

I will forward this application to our T&D Planning Leader, Marc Patterson, who will be evaluating your request.

Sincerely,

  
Rowena Bishop  
Operations Analyst  
Ph 208-388-2658

Encl Application  
Standard Interconnection Feasibility Study Agreement

Cc: Marc Patterson/IPC

## Feasibility Study Agreement

**THIS AGREEMENT** is made and entered into this \_\_\_\_ day of \_\_\_\_\_ 2008 by and between \_\_\_\_\_, a \_\_\_\_\_ organized and existing under the laws of the State of \_\_\_\_\_, ("Interconnection Customer,") and Idaho Power Company a Corporation existing under the laws of the State of Idaho ("Transmission Provider"). Interconnection Customer and Transmission Provider each may be referred to as a "Party," or collectively as the "Parties."

### RECITALS

**WHEREAS**, Interconnection Customer is proposing to develop a Small Generating Facility or generating capacity addition to an existing Small Generating Facility consistent with the Interconnection Request completed by Interconnection Customer on 9/10/08, also known as Project # 268; and

**WHEREAS**, Interconnection Customer desires to interconnect the Small Generating Facility with the Transmission Provider's Transmission System; and

**WHEREAS**, Interconnection Customer has requested the Transmission Provider to perform a feasibility study to assess the feasibility of interconnecting the proposed Small Generating Facility with the Transmission Provider's Transmission System, and of any Affected Systems;

**NOW, THEREFORE**, in consideration of and subject to the mutual covenants contained herein the Parties agreed as follows:

- 1.0 When used in this Agreement, with initial capitalization, the terms specified shall have the meanings indicated or the meanings specified in the standard Small Generator Interconnection Procedures.
- 2.0 The Interconnection Customer elects and the Transmission Provider shall cause to be performed an interconnection feasibility study consistent the standard Small Generator Interconnection Procedures in accordance with the Open Access Transmission Tariff.
- 3.0 The scope of the feasibility study shall be subject to the assumptions set forth in Attachment A to this Agreement.
- 4.0 The feasibility study shall be based on the technical information provided by the Interconnection Customer in the Interconnection Request, as may be modified as the result of the scoping meeting. The Transmission Provider reserves the right to request additional technical information from the Interconnection Customer as may reasonably become necessary consistent with Good Utility Practice during the course of the feasibility study and as designated in accordance with the standard Small Generator Interconnection Procedures. If the Interconnection Customer modifies its Interconnection Request, the time to complete the feasibility study may be extended by agreement of the Parties.

- 5.0 In performing the study, the Transmission Provider shall rely, to the extent reasonably practicable, on existing studies of recent vintage. The Interconnection Customer shall not be charged for such existing studies; however, the Interconnection Customer shall be responsible for charges associated with any new study or modifications to existing studies that are reasonably necessary to perform the feasibility study.
- 6.0 The feasibility study report shall provide the following analyses for the purpose of identifying any potential adverse system impacts that would result from the interconnection of the Small Generating Facility as proposed:
- 6.1 Initial identification of any circuit breaker short circuit capability limits exceeded as a result of the interconnection;
  - 6.2 Initial identification of any thermal overload or voltage limit violations resulting from the interconnection;
  - 6.3 Initial review of grounding requirements and electric system protection; and
  - 6.4 Description and non-bonding estimated cost of facilities required to interconnect the proposed Small Generating Facility and to address the identified short circuit and power flow issues.
- 7.0 The feasibility study shall model the impact of the Small Generating Facility regardless of purpose in order to avoid the further expense and interruption of operation for reexamination of feasibility and impacts if the Interconnection Customer later changes the purpose for which the Small Generating Facility is being installed.
- 8.0 The study shall include the feasibility of any interconnection at a proposed project site where there could be multiple potential Points of Interconnection, as requested by the Interconnection Customer and at the Interconnection Customer's cost.
- 9.0 In lieu of Feasibility Study deposit, Interconnection Customer agrees that study funds will be drawn from the application fee for the performance of the Interconnection Feasibility Study.

Transmission Provider shall charge and Interconnection Customer shall pay the actual costs of the Interconnection Feasibility Study. Any difference between the deposit and the actual cost of the study shall be paid by or refunded to Interconnection Customer, as appropriate.

Small Gen Feasibility Study Agreement  
Swagger Farms Project # 268

- 10.0 Once the feasibility study is completed, a feasibility study report shall be prepared and transmitted to the Interconnection Customer. Barring unusual circumstances, the feasibility study must be completed and the feasibility study report transmitted within 30 business days of the Interconnection Customer's agreement to conduct a feasibility study.
- 11.0 Any study fees shall be based on the Transmission Provider's actual costs and will be invoiced to the Interconnection Customer after the study is completed and delivered and will include a summary of professional time.
- 12.0 The Interconnection Customer must pay any study costs that exceed the deposit without interest within 30 calendar days on receipt of the invoice or resolution of any dispute. If the deposit exceeds the invoiced fees, the Transmission Provider shall refund such excess within 30 calendar days of the invoice without interest.

**IN WITNESS WHEREOF**, the Parties have caused this Agreement to be duly executed by their duly authorized officers or agents on the day and year first above written.

**Transmission Provider:**  
Idaho Power Company – Delivery

**Interconnection Customer:**  
\_\_\_\_\_

Signed \_\_\_\_\_

Signed \_\_\_\_\_

Printed \_\_\_\_\_

Printed \_\_\_\_\_

Title \_\_\_\_\_

Title \_\_\_\_\_

Date \_\_\_\_\_

Date \_\_\_\_\_

**Attachment A to Feasibility Study Agreement**

**Assumptions Used in Conducting the Feasibility Study**

The feasibility study will be based upon the information set forth in the Interconnection Request and agreed upon in the scoping meeting held on \_\_\_\_\_:

- 1) Designation of Point of Interconnection and configuration to be studied.

\_\_\_\_\_

- 2) Designation of alternative Points of Interconnection and configuration.

\_\_\_\_\_

1) and 2) are to be completed by the Interconnection Customer. Other assumptions (listed below) are to be provided by the Interconnection Customer and the Transmission Provider.

**BEFORE THE  
IDAHO PUBLIC UTILITIES COMMISSION**

**CASE NO. IPC-E-12-25**

**IDAHO POWER COMPANY**

**ATTACHMENT 5**



LETTER OF TRANSMITTAL

TO: Idaho Power
Rowena Bishop
1221 W. Idaho Street
Boise, ID 83702

DATE: 9/18/2008
ATTN: Rowena Bishop
RE: Small Generator Interconnection Request
Project # 268

WE ARE SENDING YOU:

- Shop Drawings, Submittals, Specifications, Contract, Attached, Copy of Letter, Change Order, Plans, Details, Under separate cover via the following: Mail, Fax, UPS, Overnight, Other

Table with 3 columns: COPIES, DATE, DESCRIPTION. Row 1: 1, 9/18/2008, Small Generator Interconnection Request

THESE ARE TRANSMITTED AS CHECKED BELOW:

- For approval, For your use, As requested, For review, Approved as submitted, Returned for correction

REMARKS:

Rowena,

Attached an updated interconnection request. Please let us know if you have any questions.

Thanks,

Eric Powell
Andgar Corporation

COPY TO: File SIGNED: Eric Powell

**SMALL GENERATOR INTERCONNECTION REQUEST**  
**(Application Form)**

**Transmission Provider: IDAHO POWER COMPANY**

Designated Contact Person: Rowena Bishop  
Address: 1221 W. Idaho Street, Boise ID 83702  
Telephone Number: 208-388-2658  
Fax: 208-388-6647  
E-Mail Address: rbishop@idahopower.com

An Interconnection Request is considered complete when it provides all applicable and correct information required below.

**Preamble and Instructions**

An Interconnection Customers who request interconnection must submit this Interconnection Request by hand delivery, mail, e-mail, or fax to the Transmission Provider.

**Processing Fee or Deposit:**

If the Interconnection Request is submitted under the Fast Track Process, the non-refundable processing fee is \$500.

If the Interconnection Request is submitted under the Study Process, whether a new submission or an Interconnection Request that did not pass the Fast Track Process, the Interconnection Customer shall submit to the Transmission Provider a deposit not to exceed \$1,000 towards the cost of the feasibility study.

**Interconnection Customer Information**

Legal Name of the Interconnection Customer (or, if an individual, individual's name)

Name: Amgar Corporation

Contact Person: Kyle Tuergens

Mailing Address: P.O. Box 2708 6920 Salashan Pkwy A-102

City: Ferndale State: WA Zip: 98248

Facility Location (if different from above): 3772 N 1700 E Buhl, ID 83316

Telephone (Day): (360) 366-9900 Telephone (Evening): \_\_\_\_\_

Fax: (360) 366-5800 E-Mail Address: kylej@amgar.com

Alternative Contact Information (if different from the Interconnection Customer)

Contact Name: \_\_\_\_\_

Title: \_\_\_\_\_

Address: \_\_\_\_\_  
\_\_\_\_\_

Telephone (Day): \_\_\_\_\_ Telephone (Evening): \_\_\_\_\_

Fax: \_\_\_\_\_ E-Mail Address: \_\_\_\_\_

Application is for:  New Small Generating Facility  
 Capacity addition to Existing Small Generating Facility

If capacity addition to existing facility, please describe: \_\_\_\_\_  
\_\_\_\_\_

Will the Small Generating Facility be used for any of the following?

Net Metering? Yes \_\_\_ No \_\_\_  
To Supply Power to the Interconnection Customer? Yes \_\_\_ No \_\_\_  
To Supply Power to Others? Yes  No \_\_\_ To utility

For installations at locations with existing electric service to which the proposed Small Generating Facility will interconnect, provide:

\_\_\_\_\_  
(Local Electric Service Provider\*)

\_\_\_\_\_  
(Existing Account Number\*)

[\*To be provided by the Interconnection Customer if the local electric service provider is different from the Transmission Provider]

Contact Name: \_\_\_\_\_

Title: \_\_\_\_\_

Address: \_\_\_\_\_  
\_\_\_\_\_

Telephone (Day): \_\_\_\_\_ Telephone (Evening): \_\_\_\_\_

Fax: \_\_\_\_\_ E-Mail Address: \_\_\_\_\_

Requested Point of Interconnection: See Aerial Drawing

Interconnection Customer's Requested In-Service Date: 9/5/2010

**Small Generating Facility Information**

Data apply only to the Small Generating Facility, not the Interconnection Facilities.

Energy Source:  Solar  Wind  Hydro  Hydro Type (e.g. Run-of-River): \_\_\_\_\_  
Diesel  Natural Gas  Fuel Oil  Other (state type) Biogas

Prime Mover:  Fuel Cell  Recip Engine  Gas Turb  Steam Turb  
 Microturbine  PV  Other

Type of Generator:  Synchronous  Induction  Inverter

Generator Nameplate Rating: 100 kW (Typical) Generator Nameplate kVAR: 875

Interconnection Customer or Customer-Site Load: \_\_\_\_\_ kW (if none, so state)

Typical Reactive Load (if known): \_\_\_\_\_

Maximum Physical Export Capability Requested: 1200 kW

List components of the Small Generating Facility equipment package that are currently certified:

Equipment Type	Certifying Entity
1. _____	_____
2. _____	_____
3. _____	_____
4. _____	_____
5. _____	_____

Is the prime mover compatible with the certified protective relay package?  Yes  No

Generator (or solar collector)  
Manufacturer, Model Name & Number: Stamford PI 736 B (see attached)  
Version Number: \_\_\_\_\_

Nameplate Output Power Rating in kW: (Summer) 600 (Winter) 600  
Nameplate Output Power Rating in kVA: (Summer) 750 (Winter) 750

Individual Generator Power Factor  
Rated Power Factor: Leading: \_\_\_\_\_ Lagging: .8

Total Number of Generators in wind farm to be interconnected pursuant to this  
Interconnection Request: \_\_\_\_\_ Elevation: \_\_\_\_\_  Single phase  Three phase

Inverter Manufacturer, Model Name & Number (if used): \_\_\_\_\_

List of adjustable set points for the protective equipment or software: \_\_\_\_\_

Note: A completed Power Systems Load Flow data sheet must be supplied with the Interconnection Request.

**Small Generating Facility Characteristic Data (for inverter-based machines)**

Max design fault contribution current: \_\_\_\_\_ Instantaneous \_\_\_ or RMS? \_\_\_

Harmonics Characteristics: \_\_\_\_\_

Start-up requirements: \_\_\_\_\_

**Small Generating Facility Characteristic Data (for rotating machines)**

RPM Frequency: 1200

(\*) Neutral Grounding Resistor (If Applicable): \_\_\_\_\_

Synchronous Generators: *see attached*

Direct Axis Synchronous Reactance,  $X_d$ : 2.08 P.U.

Direct Axis Transient Reactance,  $X'_d$ : 0.15 P.U.

Direct Axis Subtransient Reactance,  $X''_d$ : 0.11 P.U.

Negative Sequence Reactance,  $X_2$ : 0.19 P.U.

Zero Sequence Reactance,  $X_0$ : 0.02 P.U.

KVA Base: 875

Field Volts: 480

Field Amperes: 948 @ .8 PF

Induction Generators:

Motoring Power (kW): \_\_\_\_\_

$I_2^2 t$  or K (Heating Time Constant): \_\_\_\_\_

Rotor Resistance,  $R_r$ : \_\_\_\_\_

Stator Resistance,  $R_s$ : \_\_\_\_\_

Stator Reactance,  $X_s$ : \_\_\_\_\_

Rotor Reactance,  $X_r$ : \_\_\_\_\_

Magnetizing Reactance,  $X_m$ : \_\_\_\_\_

Short Circuit Reactance,  $X_d''$ : \_\_\_\_\_

Exciting Current: \_\_\_\_\_

Temperature Rise: \_\_\_\_\_

Frame Size: \_\_\_\_\_

Design Letter: \_\_\_\_\_

Reactive Power Required in Vars (No Load): \_\_\_\_\_

Reactive Power Required in Vars (Full Load): \_\_\_\_\_

Total Rotating Inertia, H: \_\_\_\_\_ Per Unit on kVA Base

Note: Please contact the Transmission Provider prior to submitting the Interconnection Request to determine if the specified information above is required.

Excitation and Governor System Data for Synchronous Generators Only

Provide appropriate IEEE model block diagram of excitation system, governor system and power system stabilizer (PSS) in accordance with the regional reliability council criteria. A PSS may be determined to be required by applicable studies. A copy of the manufacturer's block diagram may not be substituted.

Interconnection Facilities Information

Will a transformer be used between the generator and the point of common coupling? Yes  No  *Utility Side*

Will the transformer be provided by the Interconnection Customer? Yes  No

Transformer Data (If Applicable, for Interconnection Customer-Owned Transformer):

Is the transformer:  single phase  three phase? Size: \_\_\_\_\_ kVA  
Transformer Impedance: \_\_\_\_\_ % on \_\_\_\_\_ kVA Base

If Three Phase:

Transformer Primary: \_\_\_\_\_ Volts  Delta  Wye  Wye Grounded  
Transformer Secondary: \_\_\_\_\_ Volts  Delta  Wye  Wye Grounded  
Transformer Tertiary: \_\_\_\_\_ Volts  Delta  Wye  Wye Grounded

Transformer Fuse Data (If Applicable, for Interconnection Customer-Owned Fuse):

(Attach copy of fuse manufacturer's Minimum Melt and Total Clearing Time-Current Curves)

Manufacturer: \_\_\_\_\_ Type: \_\_\_\_\_ Size: \_\_\_\_\_ Speed: \_\_\_\_\_

Interconnecting Circuit Breaker (if applicable):

Manufacturer: ABB Type: EZ  
Load Rating (Amps): 1600 Interrupting Rating (Amps): 35 KA Trip Speed (Cycles): 70ms

Interconnection Protective Relays (If Applicable):

If Microprocessor-Controlled:

*Beckwith M341DA (see attached)*

List of Functions and Adjustable Setpoints for the protective equipment or software:

Setpoint Function	Minimum	Maximum
1. _____	_____	_____
2. _____	_____	_____
3. _____	_____	_____
4. _____	_____	_____
5. _____	_____	_____
6. _____	_____	_____

If Discrete Components:

(Enclose Copy of any Proposed Time-Overcurrent Coordination Curves)

Manufacturer: \_\_\_\_\_ Type: \_\_\_\_\_ Style/Catalog No.: \_\_\_\_\_ Proposed Setting: \_\_\_\_\_  
Manufacturer: \_\_\_\_\_ Type: \_\_\_\_\_ Style/Catalog No.: \_\_\_\_\_ Proposed Setting: \_\_\_\_\_  
Manufacturer: \_\_\_\_\_ Type: \_\_\_\_\_ Style/Catalog No.: \_\_\_\_\_ Proposed Setting: \_\_\_\_\_  
Manufacturer: \_\_\_\_\_ Type: \_\_\_\_\_ Style/Catalog No.: \_\_\_\_\_ Proposed Setting: \_\_\_\_\_  
Manufacturer: \_\_\_\_\_ Type: \_\_\_\_\_ Style/Catalog No.: \_\_\_\_\_ Proposed Setting: \_\_\_\_\_

Current Transformer Data (If Applicable):

(Enclose Copy of Manufacturer's Excitation and Ratio Correction Curves)

Manufacturer: PCPS  
Type: A-1200 Accuracy Class: \_\_\_ Proposed Ratio Connection: 1200:5

Manufacturer: \_\_\_\_\_  
Type: \_\_\_\_\_ Accuracy Class: \_\_\_ Proposed Ratio Connection: \_\_\_\_\_

Potential Transformer Data (If Applicable):

Manufacturer: \_\_\_\_\_  
Type: \_\_\_\_\_ Accuracy Class: \_\_\_ Proposed Ratio Connection: \_\_\_\_\_

Manufacturer: \_\_\_\_\_  
Type: \_\_\_\_\_ Accuracy Class: \_\_\_ Proposed Ratio Connection: \_\_\_\_\_

**General Information**

Enclose copy of site electrical one-line diagram showing the configuration of all Small Generating Facility equipment, current and potential circuits, and protection and control schemes. This one-line diagram must be signed and stamped by a licensed Professional Engineer if the Small Generating Facility is larger than 50 kW. Is One-Line Diagram Enclosed?  Yes  No

Enclose copy of any site documentation that indicates the precise physical location of the proposed Small Generating Facility (e.g., USGS topographic map or other diagram or documentation).

Proposed location of protective interface equipment on property (include address if different from the Interconnection Customer's address) \_\_\_\_\_

Enclose copy of any site documentation that describes and details the operation of the protection and control schemes. Is Available Documentation Enclosed?  Yes  No

Enclose copies of schematic drawings for all protection and control circuits, relay current circuits, relay potential circuits, and alarm/monitoring circuits (if applicable).  
Are Schematic Drawings Enclosed?  Yes  No

**Applicant Signature**

I hereby certify that, to the best of my knowledge, all the information provided in this Interconnection Request is true and correct.

For Interconnection Customer:

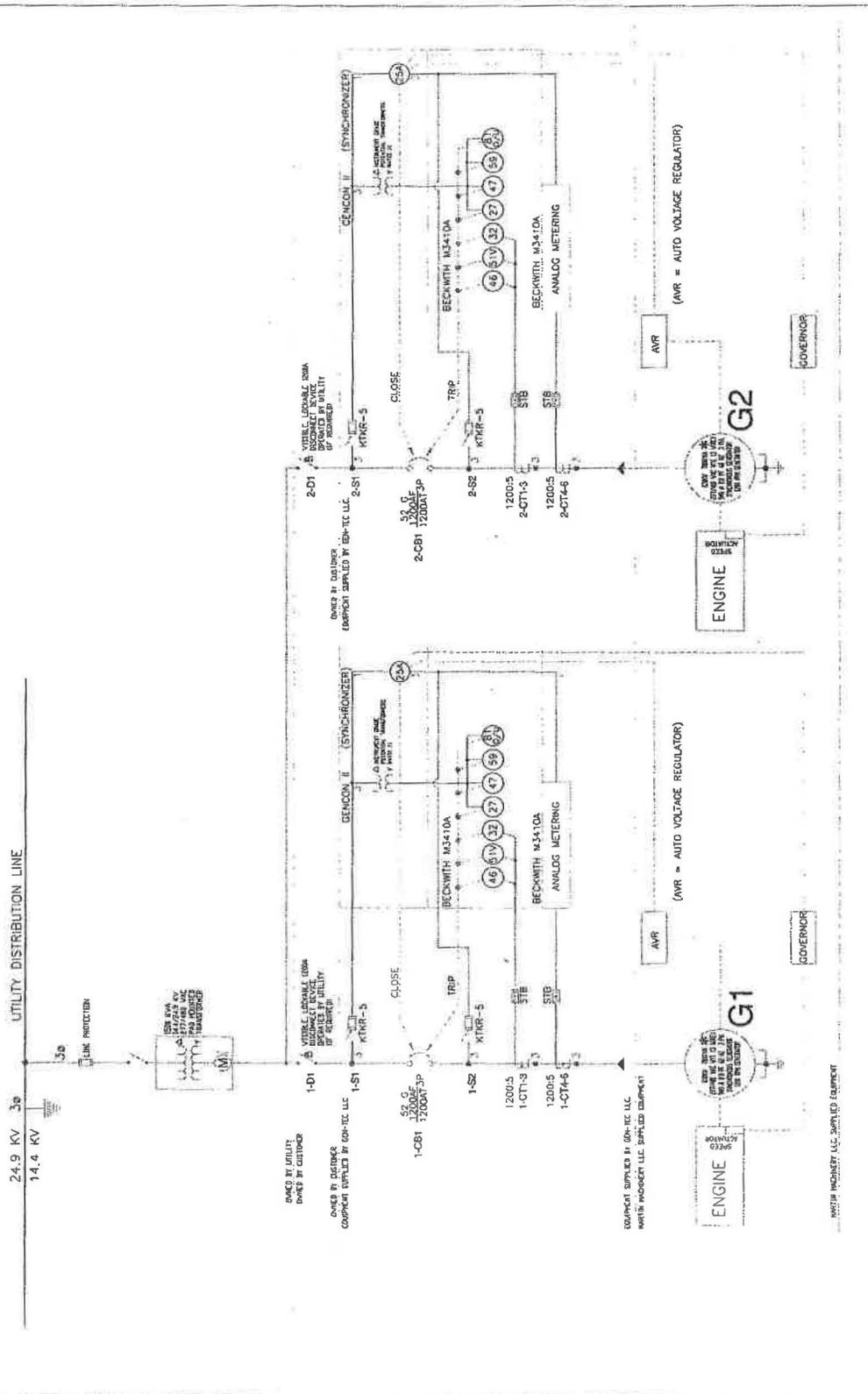
Signed

 \_\_\_\_\_ Date: 9/18/08

Printed

Kyle Jurgens

RELEVANT FUNCTIONS	
1	START
2	STOP
3	OVERLOAD
4	UNDERVOLTAGE
5	OVERVOLTAGE
6	TEMPERATURE
7	PHASE SEQUENCE
8	DIFFERENTIAL
9	LOCK



RELEVANT FUNCTIONS	
1	START
2	STOP
3	OVERLOAD
4	UNDERVOLTAGE
5	OVERVOLTAGE
6	TEMPERATURE
7	PHASE SEQUENCE
8	DIFFERENTIAL
9	LOCK

RELAY ELEMENT LEGEND/PRELIMINARY RELAY SETTINGS FOR G1 & G2

1. ALL SETTINGS ARE IN PERCENT UNLESS OTHERWISE SPECIFIED.

2. ALL SETTINGS ARE BASED ON THE RATED CURRENT OF THE RELAY.

3. ALL SETTINGS ARE BASED ON THE RATED VOLTAGE OF THE RELAY.

4. ALL SETTINGS ARE BASED ON THE RATED POWER OF THE RELAY.

5. ALL SETTINGS ARE BASED ON THE RATED ENERGY OF THE RELAY.

6. ALL SETTINGS ARE BASED ON THE RATED TIME OF THE RELAY.

7. ALL SETTINGS ARE BASED ON THE RATED SPEED OF THE RELAY.

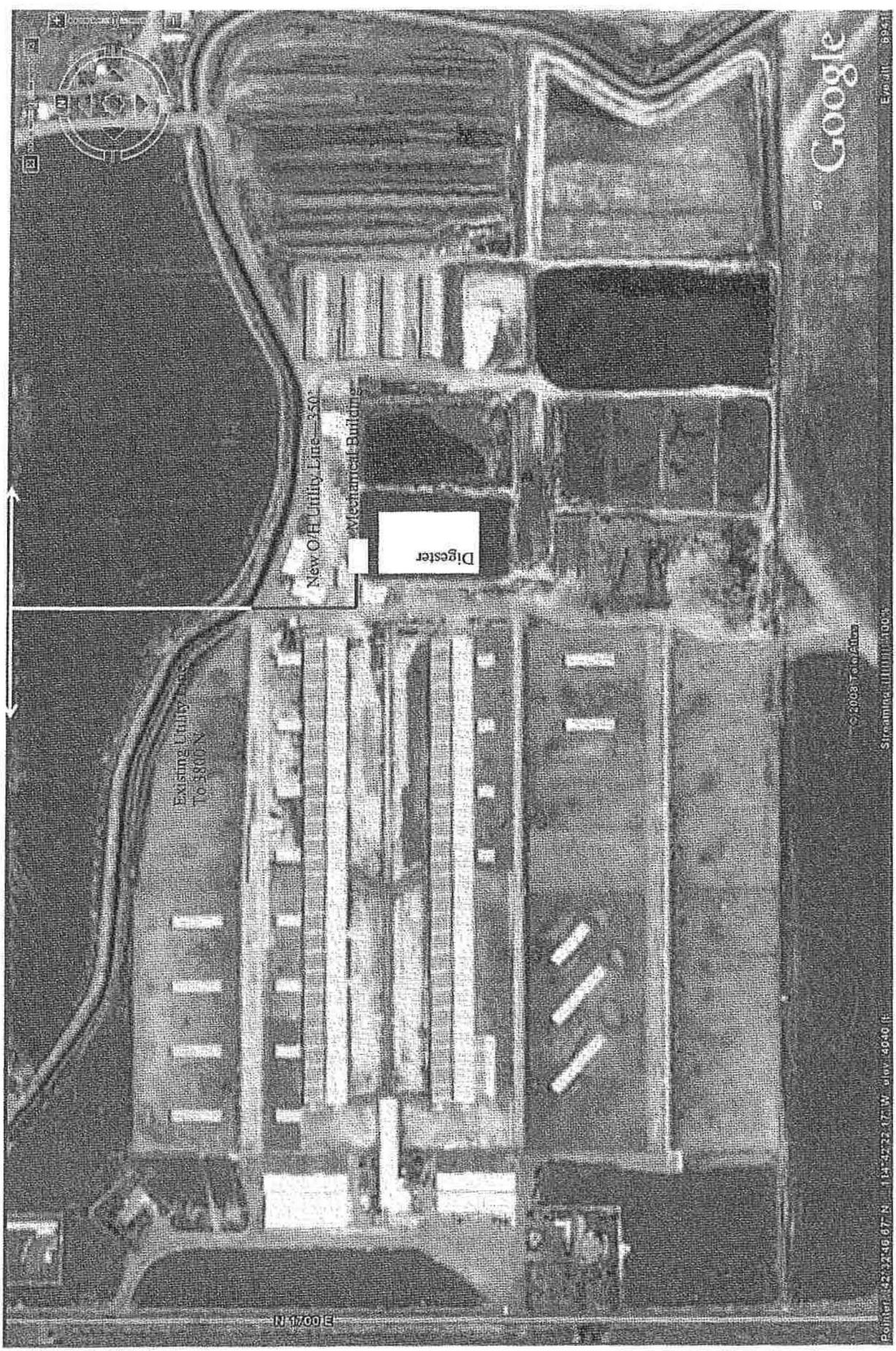
8. ALL SETTINGS ARE BASED ON THE RATED ACCURACY OF THE RELAY.

9. ALL SETTINGS ARE BASED ON THE RATED SENSITIVITY OF THE RELAY.

10. ALL SETTINGS ARE BASED ON THE RATED SELECTIVITY OF THE RELAY.

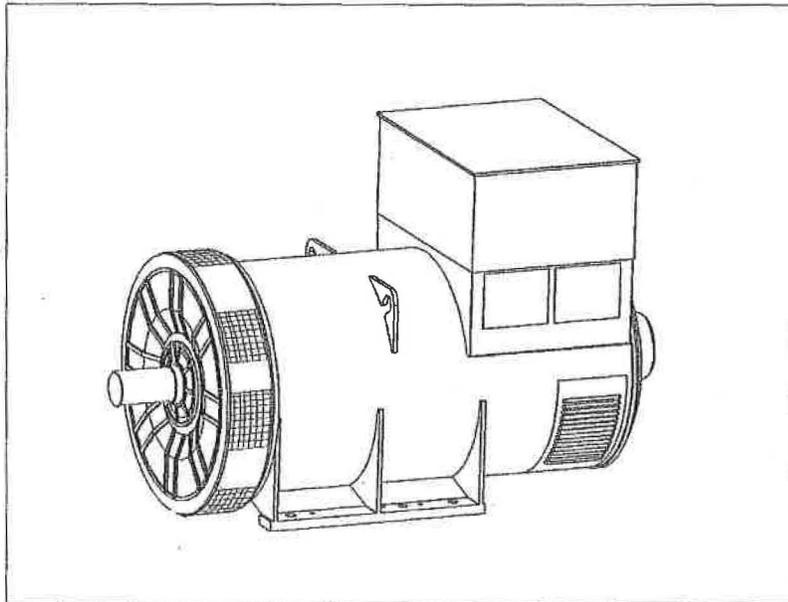
\* 600 KW & 750 KVA ON BIO FUEL

Swager Farms— 1707 E 3800 N Buhl, ID 83316





**PI736B - Technical Data Sheet**



# PI736B

## SPECIFICATIONS & OPTIONS



### STANDARDS

Newage Stamford industrial generators meet the requirements of BS EN 60034 and the relevant sections of other national and international standards such as BS5000, VDE 0530, NEMA MG1-32, IEC60034, CSA C22.2-100, AS1359.

Other standards and certifications can be considered on request.

### DESCRIPTION

The STAMFORD PI range of synchronous ac generators are brushless with a rotating field. They are separately excited by the STAMFORD Permanent Magnet Generator (PMG). This is a shaft mounted, high frequency, pilot exciter which provides a constant supply of clean power via the Automatic Voltage Regulator (AVR) to the main exciter. The main exciter output is fed to the main rotor, through a full wave bridge rectifier, protected by surge suppression.

### VOLTAGE REGULATORS

The PI range of generators, complete with a PMG, are available with one of two AVRs. Each AVR has soft start voltage build up and built in protection against sustained over-excitation, which will de-excite the generator after a minimum of 8 seconds.

Underspeed protection (UFRO), is also provided on both AVRs. The UFRO will reduce the generator output voltage proportional to the speed of the generator below a pre-settable level.

The **MX341 AVR** is two phase sensed with a voltage regulation of  $\pm 1\%$ . (see the note on regulation).

The **MX321 AVR** is 3 phase rms sensed with a voltage regulation of 0.5% rms (see the note on regulation). The UFRO circuit has adjustable slope and dwell, for controlled recovery from step loads. An over voltage protection circuit will shutdown the output device of the AVR, it can also trip an optional excitation circuit breaker if required. As an option, short circuit current limiting is available with the addition of current transformers.

Both the MX341 and the MX321 need a generator mounted current transformer to provide quadrature droop characteristics for load sharing during parallel operation. Provision is also made for the connection of the STAMFORD power factor controller, for embedded applications, and a remote voltage trimmer.

### WINDINGS & ELECTRICAL PERFORMANCE

All generator stators are wound to 2/3 pitch. This eliminates triplen (3rd, 9th, 15th ...) harmonics on the voltage waveform and is found to be the optimum design for trouble-free supply of non-linear loads. The 2/3 pitch design avoids excessive neutral currents sometimes seen with higher winding pitches. A fully connected damper winding reduces oscillations during paralleling. This winding, with the 2/3 pitch and carefully selected pole and tooth designs, ensures very low levels of voltage waveform distortion.

### TERMINALS & TERMINAL BOX

Standard generators feature a main stator with 6 ends brought out to the terminals, which are mounted on the frame at the non-drive end of the generator. A sheet steel terminal box contains the AVR and provides ample space for the customers' wiring and gland arrangements. It has removable panels for easy access.

### SHAFT & KEYS

All generator rotors are dynamically balanced to better than BS6861:Part 1 Grade 2.5 for minimum vibration in operation. Two bearing generators are balanced with a half key.

### INSULATION/IMPREGNATION

The insulation system is class 'H', and meets the requirements of UL1446.

All wound components are impregnated with materials and processes designed specifically to provide the high build required for static windings and the high mechanical strength required for rotating components.

### QUALITY ASSURANCE

Generators are manufactured using production procedures having a quality assurance level to BS EN ISO 9001.

### NOTE ON REGULATION

The stated voltage regulation may not be maintained in the presence of certain radio transmitted signals. Any change in performance will fall within the limits of Criteria 'B' of EN 61000-6-2:2001. At no time will the steady-state voltage regulation exceed 2%.

Note: Continuous development of our products entitles us to change specification details without notice, therefore they must not be regarded as binding.

Front cover drawing is typical of the product range.

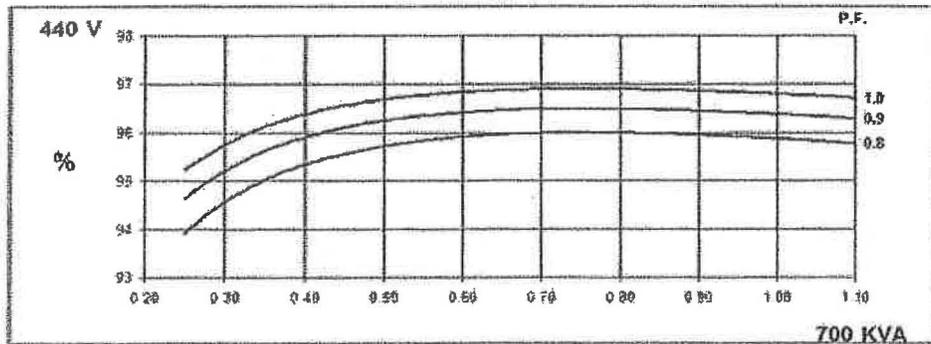
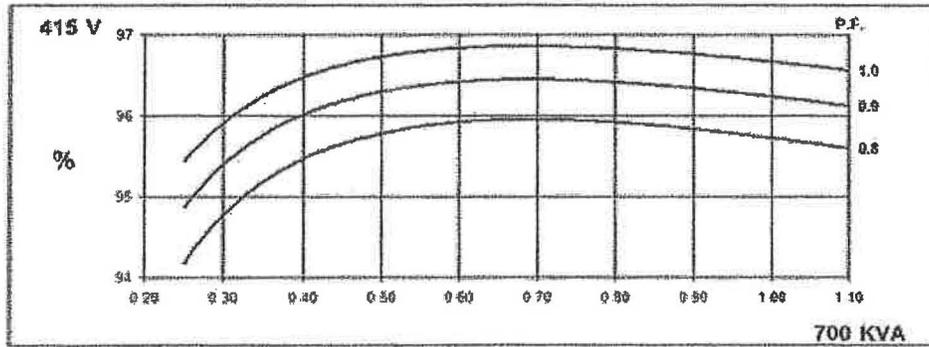
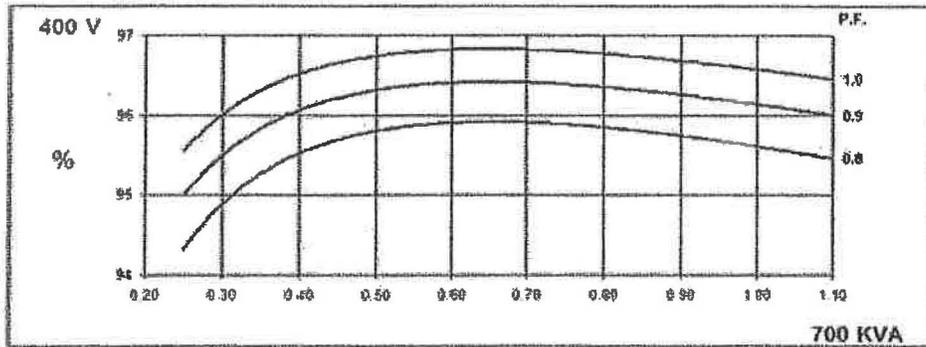
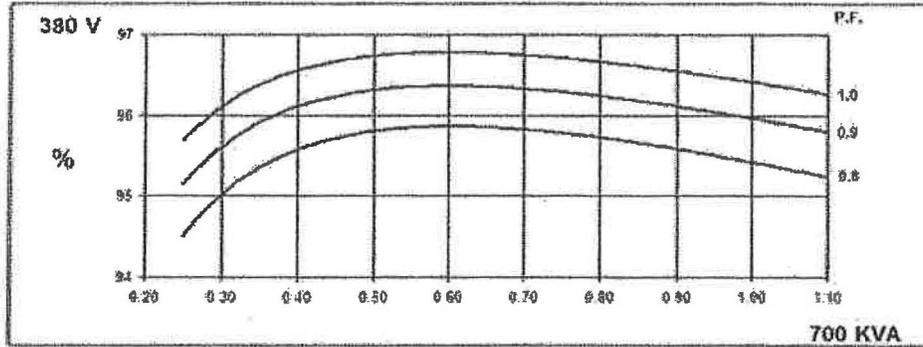


**50  
Hz**

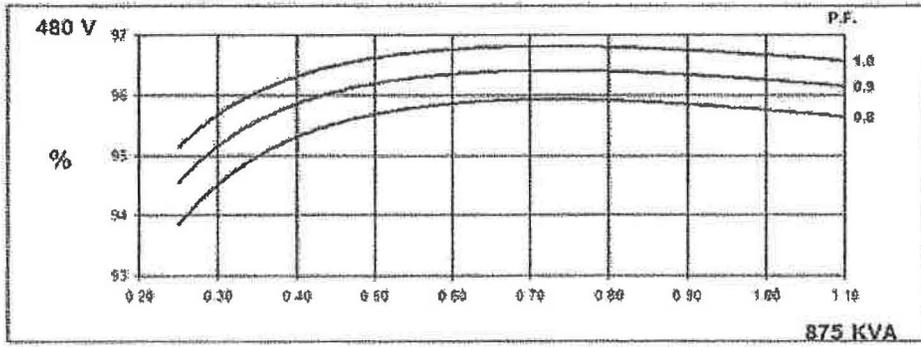
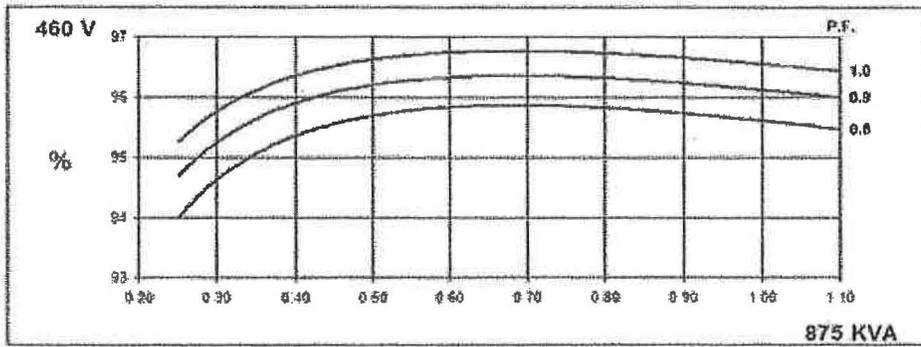
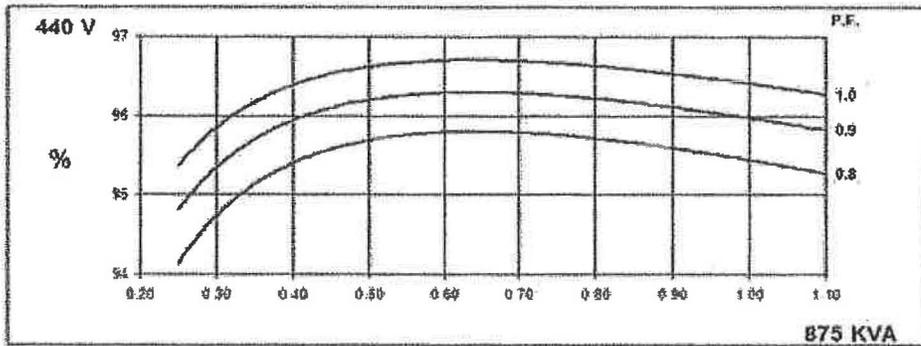
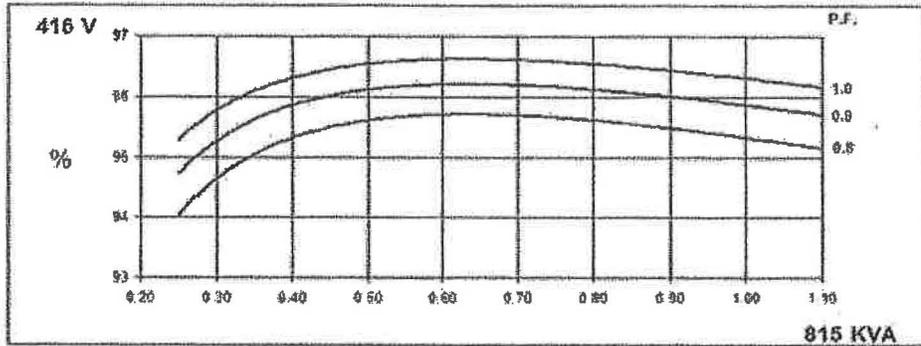
**PI736B**  
Winding 312

**STAMFORD**  
power generation

**THREE PHASE EFFICIENCY CURVES**



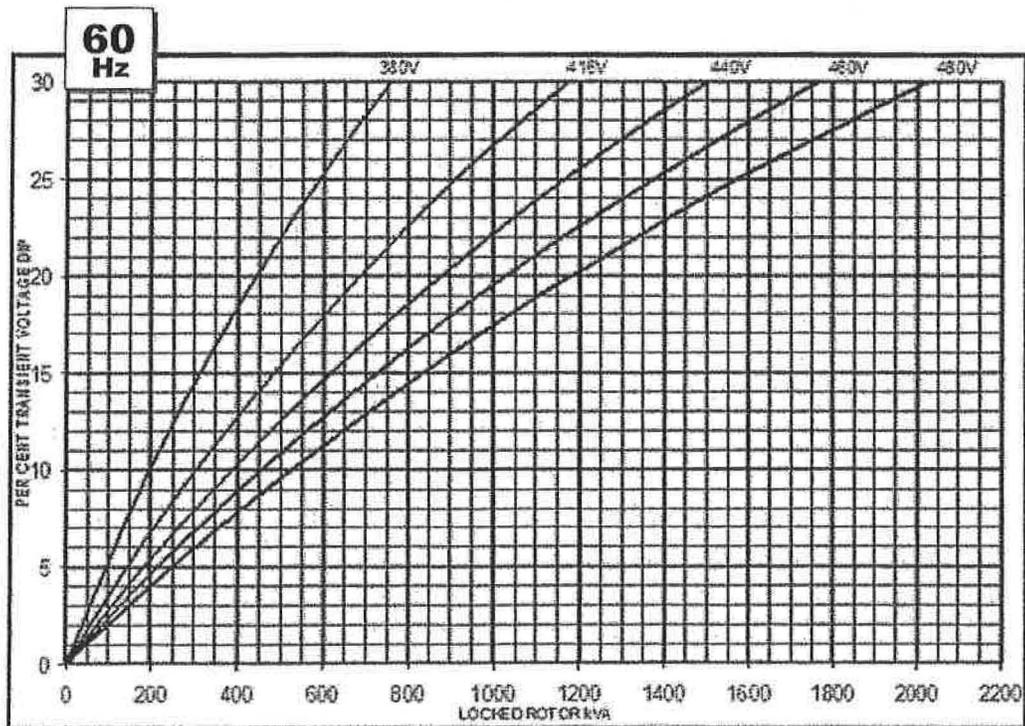
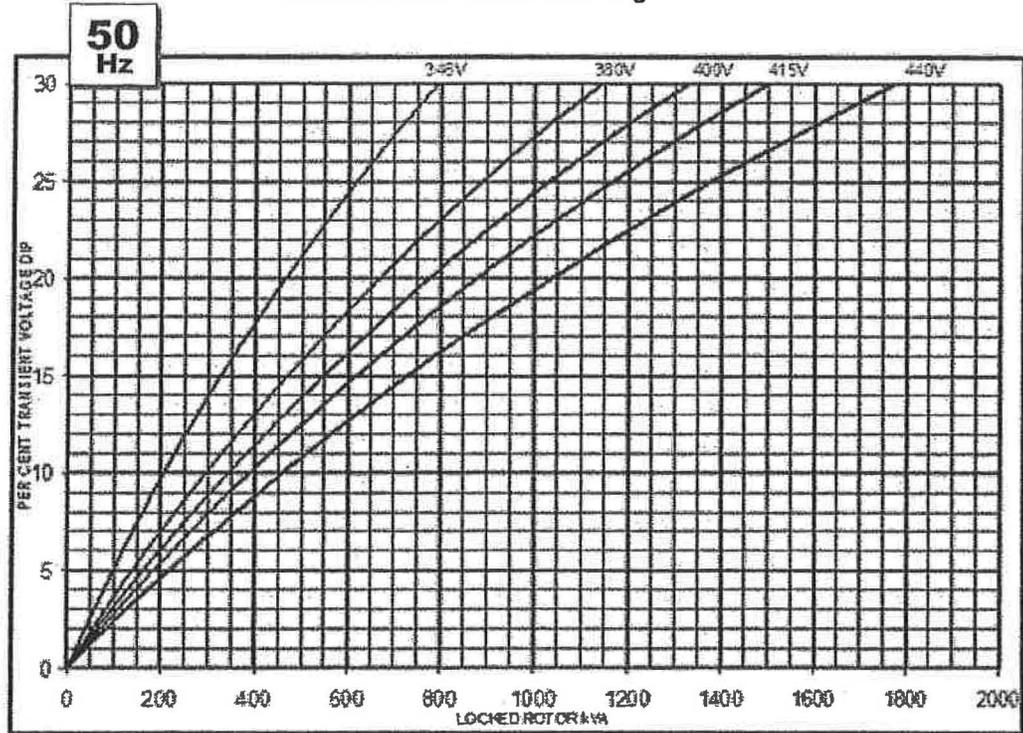
**THREE PHASE EFFICIENCY CURVES**



**PI736B**  
Winding 312

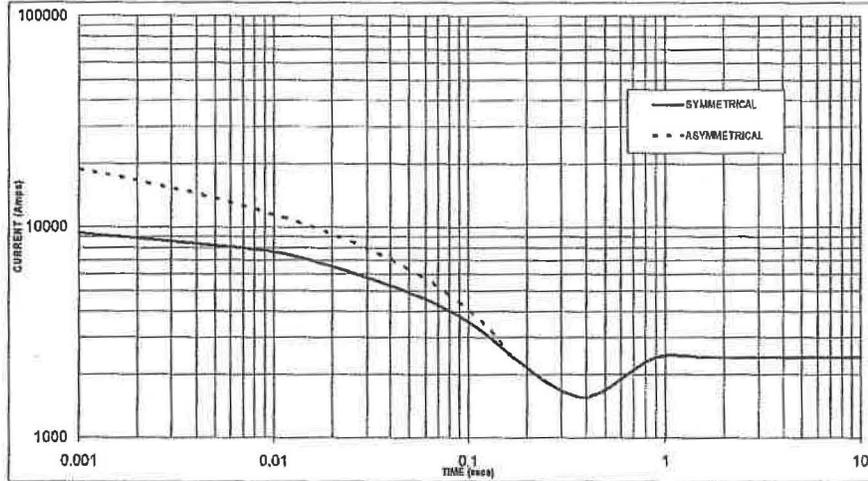


**Locked Rotor Motor Starting Curve**



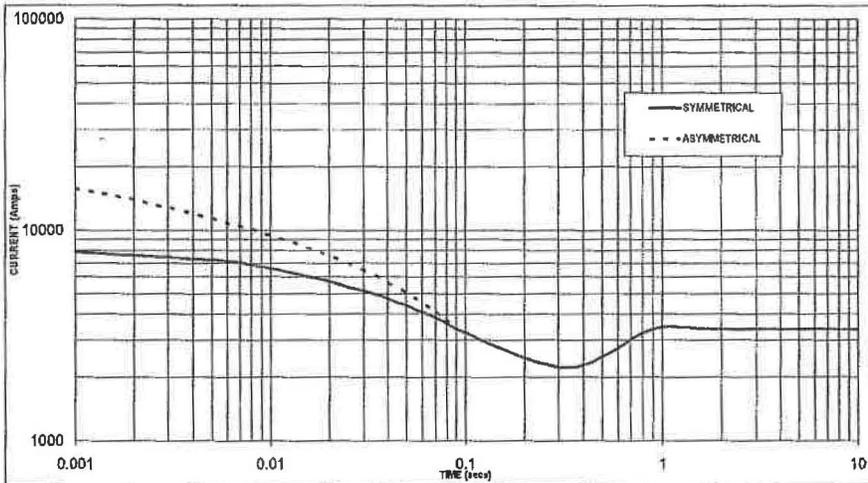
**Three-phase Short Circuit Decrement Curve. No-load Excitation at Rated Speed  
Based on star (wye) connection.**

**50  
Hz**



Sustained Short Circuit = 2,400 Amps

**60  
Hz**



Sustained Short Circuit = 3,400 Amps

**Note 1**

The following multiplication factors should be used to adjust the values from curve between time 0.001 seconds and the minimum current point in respect of nominal operating voltage :

50Hz		60Hz	
Voltage	Factor	Voltage	Factor
380v	x 1.00	416v	x 1.00
400v	x 1.05	440v	x 1.05
415v	x 1.09	460v	x 1.10
440v	x 1.16	480v	x 1.15

The sustained current value is constant irrespective of voltage level

**Note 2**

The following multiplication factor should be used to convert the values calculated in accordance with NOTE 1 to those applicable to the various types of short circuit :

	3-phase	2-phase L-L	1-phase L-N
Instantaneous	x 1.00	x 0.87	x 1.30
Minimum	x 1.00	x 1.80	x 3.20
Sustained	x 1.00	x 1.50	x 2.50
Max. sustained duration	10 sec.	5 sec.	2 sec.

All other times are unchanged

**Note 3**

Curves are drawn for Star (Wye) connected machines.

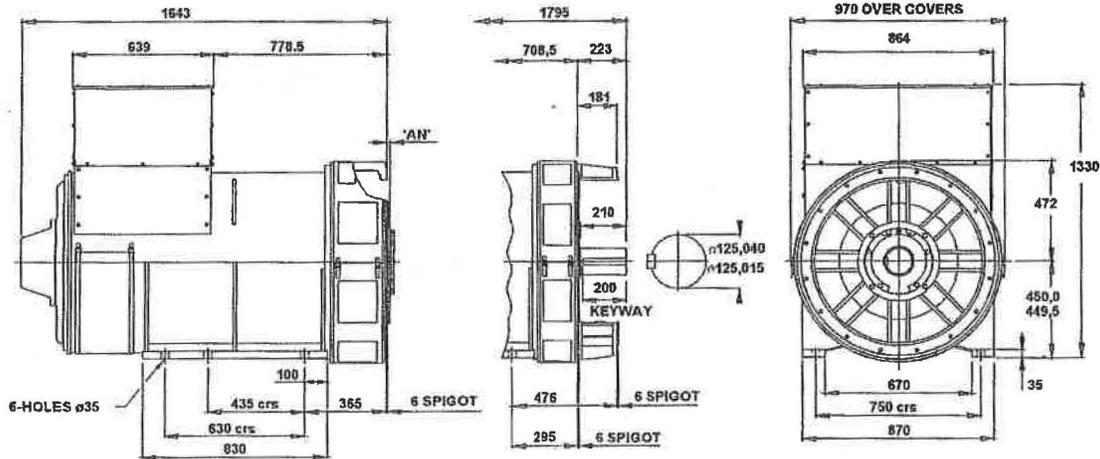
**PI736B**  
Winding 312 / 0.8 Power Factor



**RATINGS**

Class - Temp Rise	Cont. F - 105/40°C				Cont. H - 125/40°C				Standby - 150/40°C				Standby - 163/27°C			
<b>50Hz</b> Star (V)	380	400	415	440	380	400	415	440	380	400	415	440	380	400	415	440
kVA	650	650	650	650	700	700	700	700	730	730	730	730	750	750	750	750
kW	520	520	520	520	560	560	560	560	584	584	584	584	600	600	600	600
Efficiency (%)	95.5	95.7	95.8	95.9	95.4	95.6	95.7	95.9	95.3	95.5	95.7	95.8	95.3	95.5	95.6	95.8
kW Input	545	543	543	542	587	586	585	584	613	612	610	610	630	628	628	626
<b>60Hz</b> Star (V)	416	440	460	480	416	440	460	480	416	440	460	480	416	440	460	480
kVA	750	815	815	815	815	875	875	875	845	910	910	910	870	940	940	940
kW	600	652	652	652	652	700	700	700	676	728	728	728	696	752	752	752
Efficiency (%)	95.5	95.5	95.7	95.8	95.3	95.4	95.6	95.8	95.3	95.4	95.6	95.7	95.2	95.3	95.5	95.7
kW Input	628	683	681	681	684	734	732	731	709	763	762	761	731	789	787	786

**DIMENSIONS**



COUPLING DISC	'AN'
S.A.E No 18	15,7
S.A.E No 21	0
S.A.E No 24	0

1-BRG ADAPTORS
S.A.E No 0
S.A.E No 00

2-BRG ADAPTORS
S.A.E No 0
S.A.E No 00



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Website: [www.newage-avkseg.com](http://www.newage-avkseg.com)

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# Intertie/Generator Protection Relay M-3410A

Integrated Protection System®



M-3410A Standard Panel



M-3410A Vertical Panel (Optional)



M-3410A Horizontal Panel (Optional)

- Facilitates standardization for small/medium intertie and generator protection applications
- Microprocessor-based relay provides 15 protective relay functions, including Sync-Check, 2 programmable outputs and 2 programmable inputs
- Relay voltage inputs can be directly connected (no VT required) for voltages 480 V or less
- Local and remote serial communications (MODBUS protocol) capability for monitoring and control functions

## M-3410A Intertie/Generator Protection Relay

### Protective Functions

- Sync-check with Phase Angle,  $\Delta V$  and  $\Delta F$  with dead line/dead bus options (25)
- Phase undervoltage (27) protection
- Ground undervoltage (27G) protection
- Dual-setpoint, single or three phase, directional power detection that can be selected as over/under power protection (32)
- Dual-zone, offset-mho loss-of-field for generator protection (40)
- Sensitive negative sequence overcurrent protection and alarm (46)
- Negative sequence overvoltage (47)
- Inverse time neutral overcurrent (51N)
- Phase overcurrent with voltage restraint/control (51V) protection
- Phase overvoltage (59) protection
- Ground overvoltage (59G) protection
- Peak overvoltage (59I) protection
- VT fuse-loss detection and blocking (60FL)
- Reconnect enable for intertie protection (79)
- Four-step over/under frequency (81) protection

### Standard Features

- 2 programmable outputs, 2 programmable inputs, and 1 self-test output
- Oscillographic recording (COMTRADE file format)
- Time-stamped sequence of events recording for 32 events
- Metering of Voltage, Current, real and reactive Power, Power Factor, Frequency, and Positive Sequence Impedance
- One RS-232 port (COM1) on front and one RS-232 or 485 port (COM2) on rear
- M-3810A IPScom® For Windows™ Communications Software
- M-3811A IPScom For Palm OS® Communications Software
- MODBUS protocol
- Supports both 50 and 60 Hz applications
- Accepts 1A or 5 A rated CT inputs
- Relay voltage inputs can be directly connected (no VT required) for voltages  $\leq 480$  V ac
- Continuous Self-Diagnostics

### Optional Features

- M-3801C IPSplot® Oscillograph Analysis Software
- Horizontal and Vertical panel mount versions available (see Figures 2 and 4)

## Tests and Standards

The M-3410A Generator/Intertie Protection Relay complies with the following type tests and standards:

### Voltage Withstand

#### Dielectric Withstand

All terminals except power supply and status input contacts, 2500 V ac/3500 V dc

Power Supply and Status Input Contacts:

IEC 60255-5 1,500 V dc for power supply voltages (12, 24, 48 V inputs)  
2500 V ac/3500 V dc for power supply voltages (120 V ac/125 V dc input)

■ NOTE: Digital data circuits (RS-232/485 communication ports) are excluded.

#### Impulse Voltage

Power Supply Input Voltages, 120 V ac/125 V dc:

IEC 60255-5 5,000 V pk, +/- polarity applied to each independent circuit to earth  
5,000 V pk, +/- polarity applied between independent circuits  
1.2  $\mu$ s by 50  $\mu$ s, 500 ohms impedance, three surges at every 5 second interval

■ NOTE: Digital data circuits (RS-232/485 communication ports) are excluded.

Power Supply Input Voltages, 12, 24, 48 V dc:

IEC 60255-5 3,000 V pk, +/- polarity applied to each independent circuit to earth  
3,000 V pk, +/- polarity applied between independent circuits  
1.2  $\mu$ s by 50  $\mu$ s, 500 ohms impedance, three surges at every 5 second interval

■ NOTE: Digital data circuits (RS-232/485 communication ports) are excluded.

#### Insulation Resistance

IEC 60255-5 > 40 Megaohms

■ NOTE: Digital data circuits (RS-232/485 communication ports) are excluded.

### Electrical Environment

#### Electrostatic Discharge Test

IEC 61000-4-2 Class 4 ( $\pm 8$  kV) - point contact discharge and air discharge

■ NOTE: Digital data circuits (RS-232/485 communication ports) are excluded.

#### Fast Transient Disturbance Test

IEC 61000-4-4 ( $\pm 2$  kV, 5 kHz) AC Power Supply Input  
( $\pm 1$  kV, 5 kHz) RS-232, RS-485 and ground

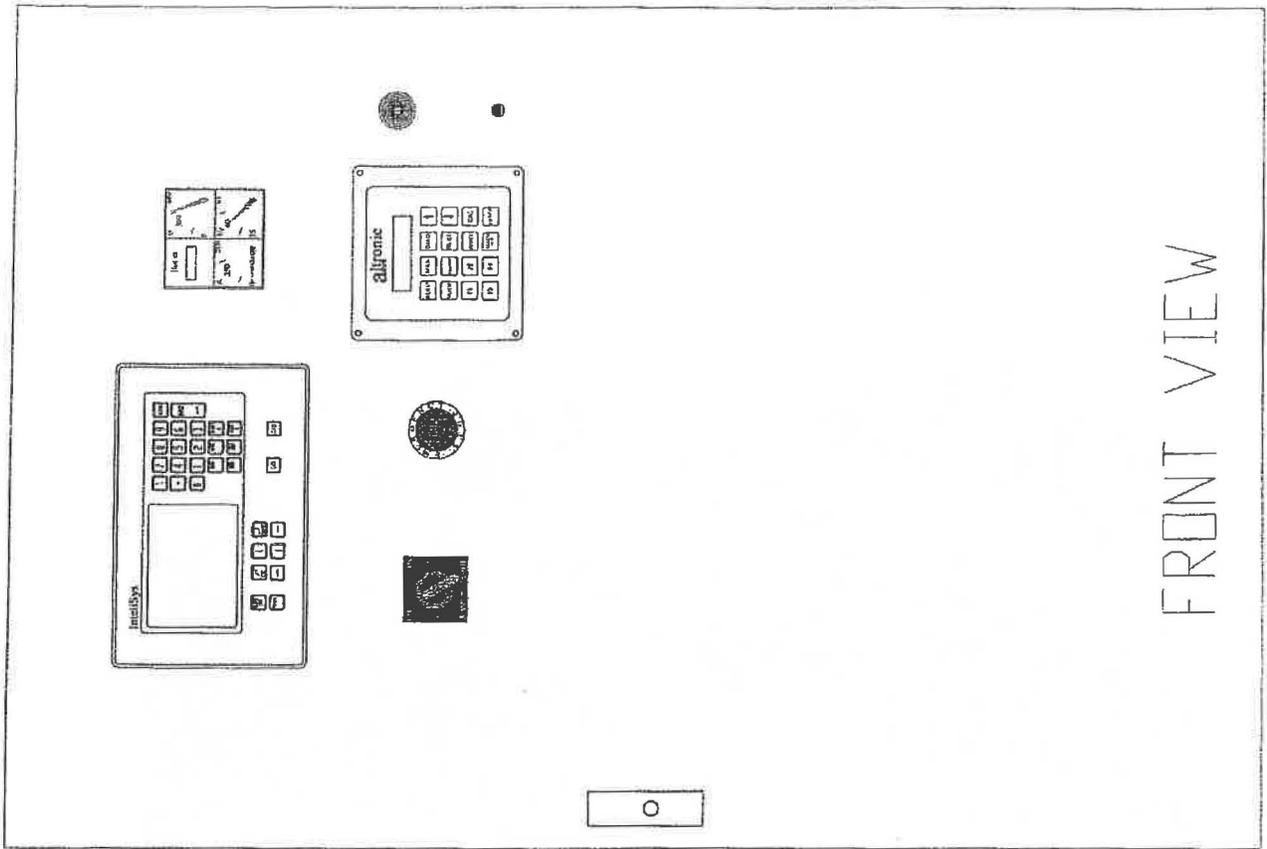
#### Surge

IEC 61000-4-5 ( $\pm 2$  kV, 1.2  $\mu$ s by 50  $\mu$ s line to ground) AC Power Supply Input  
( $\pm 1$  kV, 1.2  $\mu$ s by 50  $\mu$ s line to line) AC Power Supply Input  
( $\pm 1$  kV, 1.2  $\mu$ s by 50  $\mu$ s line to ground) RS-485 Port

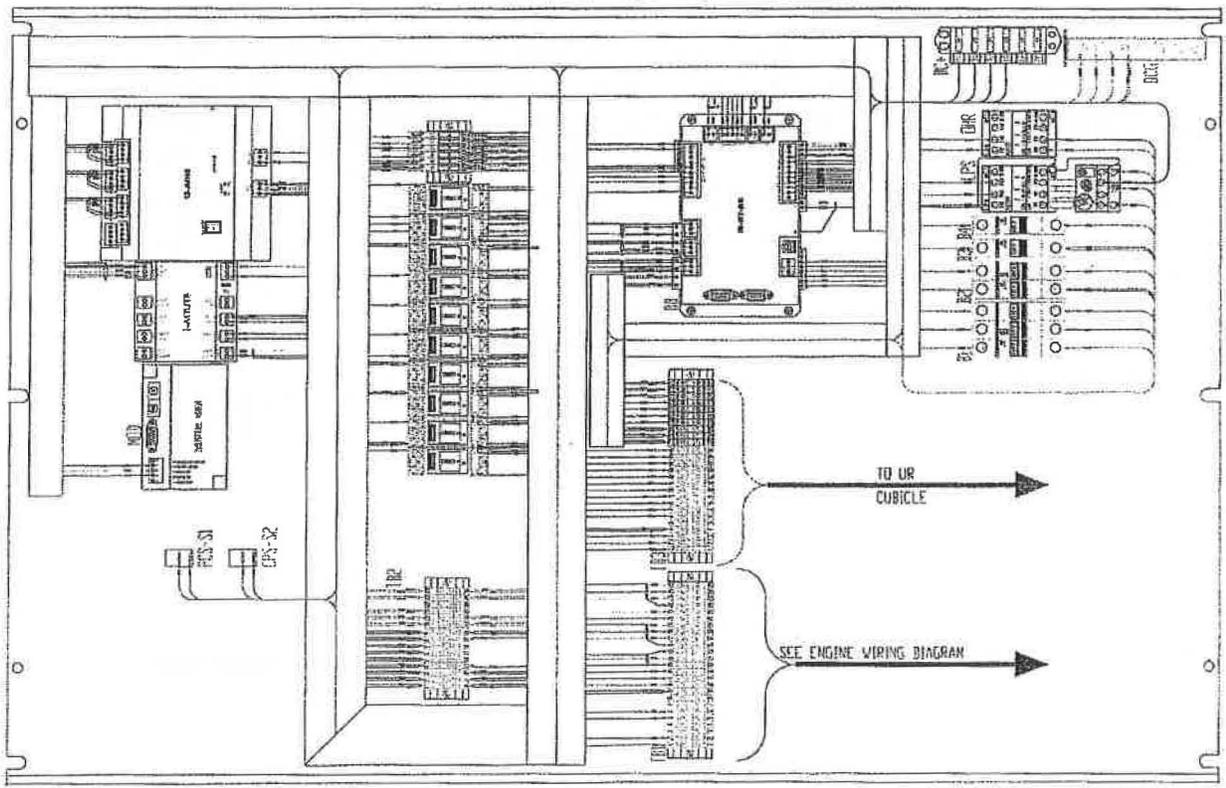
#### Surge Withstand Capability

ANSI/IEEE 2,500 V pk-pk Oscillatory each independent circuit to earth  
C37 90.1 2,500 V pk-pk Oscillatory between each independent circuit  
1989 5,000 V pk Fast Transient each independent circuit to earth  
5,000 V pk Fast Transient between each independent circuit

■ NOTE: Digital data circuits (RS-232/485 communication ports) are excluded.



FRONT VIEW

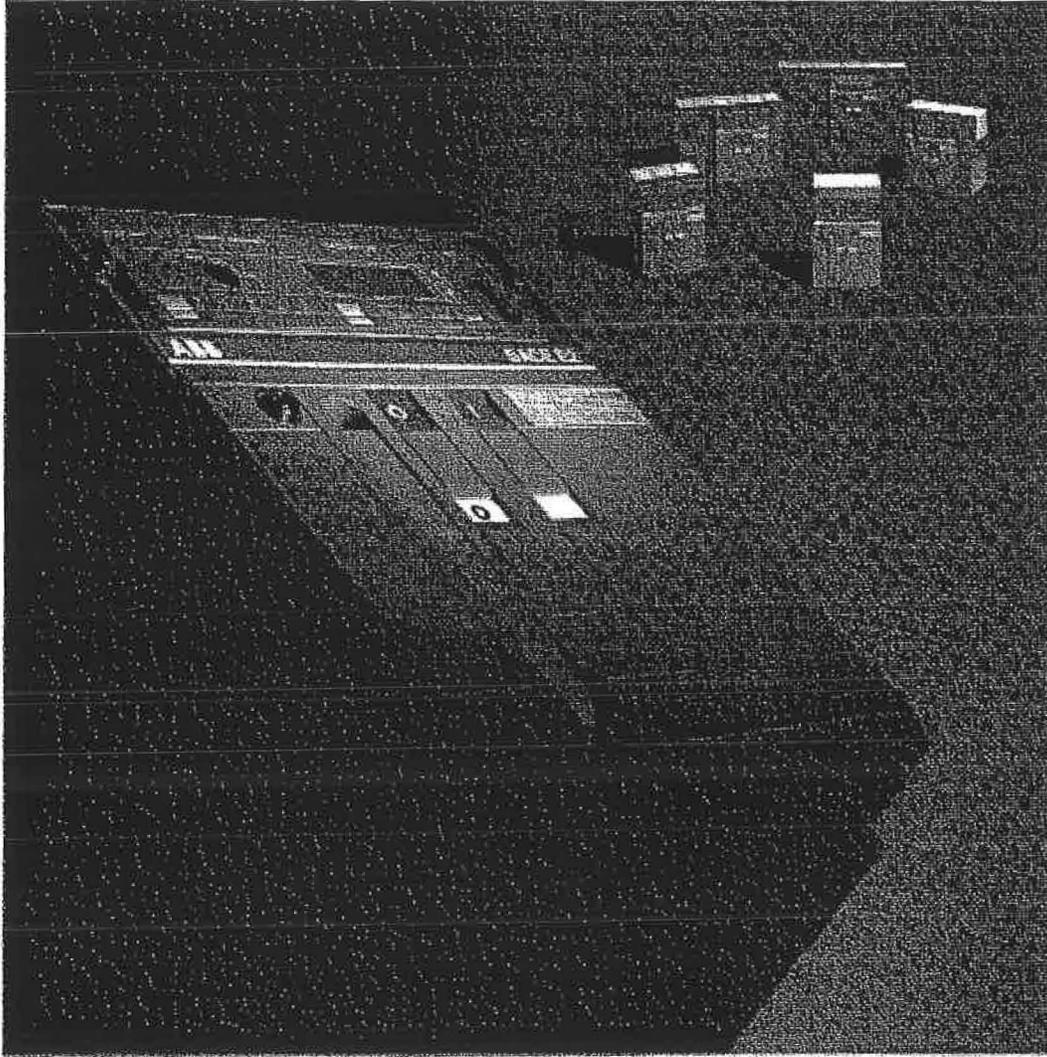


Istruzioni di installazione  
ed esercizio  
*Instructions for installation  
and service*

Istruzioni di installazione,  
di esercizio e di manutenzione  
per interruttori automatici aperti  
di bassa tensione  
*Installation, service and  
maintenance instructions for  
low voltage air circuit-breaker*

ITSCB 601933/001 it-en 6-97

## SACE Emax



**ABB SACE**

**ABB**

## 12. Unità di protezione PR111/LI - LSI - LSIG

### 12.1 Generalità

L'unità SACE PR111/P realizza le seguenti funzioni di protezione:

- L - protezione da sovraccarico a tempo lungo inverso
- S - protezione da corto circuito a tempo breve
- I - protezione da corto circuito istantaneo
- G - protezione da guasto a terra
- Inst - protezione e soglia fissa da corto circuito

Le unità SACE PR111 disponibili all'utente sono:

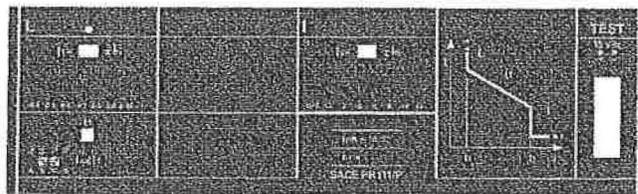
## 12. PR111/LI - LSI - LSIG protection unit

### 12.1 General

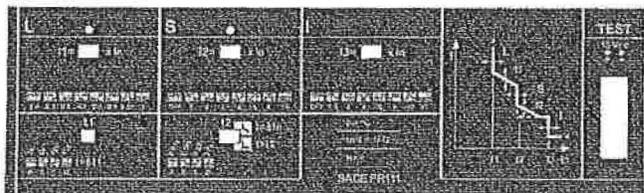
The SACE PR111/P unit carries out the following protection functions:

- L - protection against overload with inverse long time-delay
- S - protection against short-time short-circuit
- I - protection against instantaneous short-circuit
- G - protection against earth fault
- Inst - rapid protection against instantaneous short-circuit

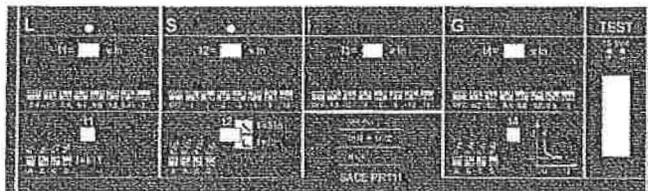
The SACE PR111 units available to the user are:



PR111/L+I+Inst



PR111/L+S+I+Inst



PR111/L+S+I+G+Inst

Fig. 47

Le protezioni possono essere realizzate in modo trifase o trifase con neutro a seconda del tipo di interruttore impiegato (tripolare, tetrapolare o tripolare con neutro esterno).

L'unità, è autoalimentata e garantisce il corretto funzionamento delle funzioni di protezione in presenza di una corrente maggiore o uguale al 18% del valore nominale del trasformatore amperometrico di fase (TA).

L'assieme sganciatore di protezione è così composto:

- 3 o 4 trasformatori di corrente (TA)
- unità di protezione SACE PR111
- un solenoide di apertura (SA) dello sganciatore di massima corrente che agisce direttamente sul comando dell'interruttore.

The protections can be made either in three-phase or three-phase with neutral mode, depending on the type of circuit-breaker used (three-pole, four-pole or three-pole with external neutral).

The unit is self-powered and ensures correct operation of the protection functions when there is a current higher than or equal to 18% of the rated phase current transformer value (CT).

The protection release assembly consists of the following:

- 3 or 4 current transformers (CT)
- SACE PR111 protection unit
- an opening solenoid (OS) of the overcurrent release which acts directly on the circuit-breaker operating mechanism.

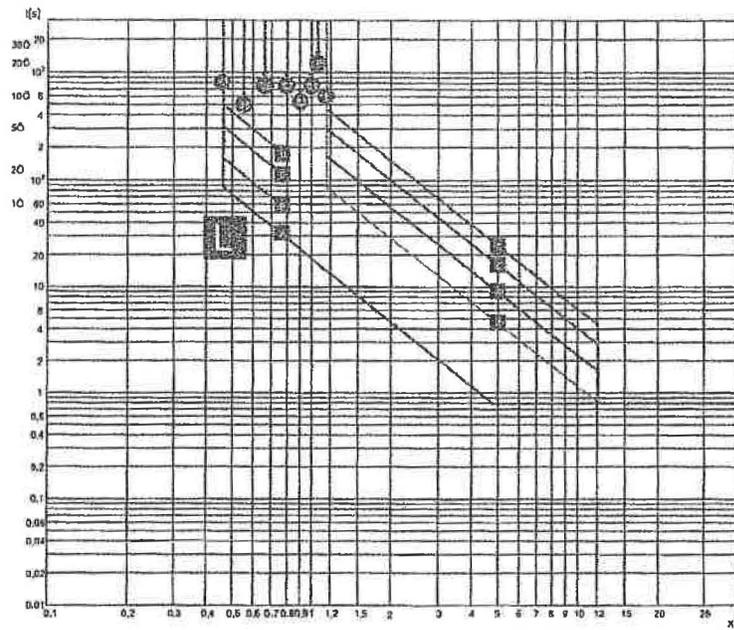
Mod. Rev.	M4379		Apparecchio Apparatus	SACE Emax	Scala Scala
			N° Doc. Doc. No.	601933/001	N° Pae. Sk. No. 52/00

12.8 Curve di intervento

12.8 Trip curves

12.8.1 Curve di intervento protezione "L"

12.8.1 Trip curves of protection "L"



Tolleranza sulle soglie di intervento

$L = \pm$  Sgancio tra 1,05 e 1,3  $I_n$  (secondo le Norme IEC 947-2)

$I = \pm 20\%$

Trip threshold tolerance

$L =$  Release between 1.05 and 1.3  $I_n$  (in conformity with IEC 947-2 standards)

$I = \pm 20\%$

Tolleranza sui tempi di intervento

$L = \pm 10\%$  (20% per  $I > 2 \times I_n$ )

$t = \pm 20\%$

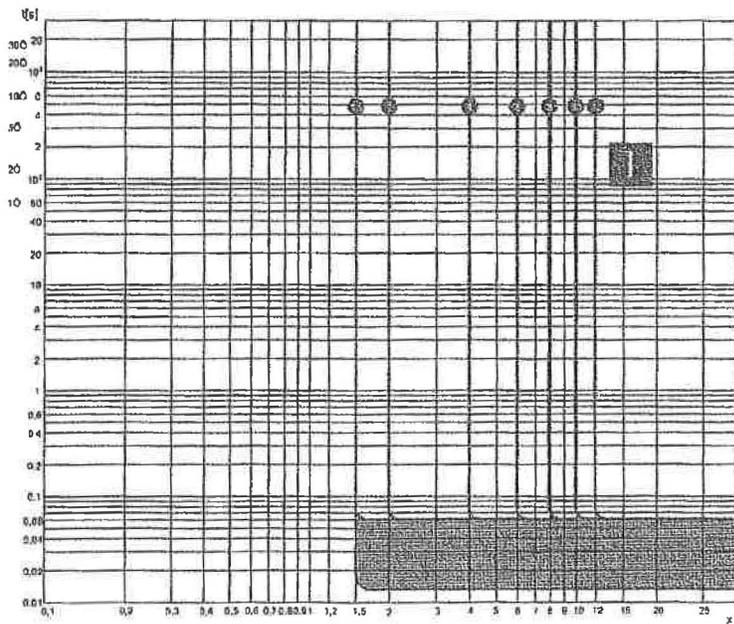
Trip time tolerances

$L = \pm 10\%$  (20% per  $I > 2 \times I_n$ )

$t = \pm 20\%$

12.8.2 Curve di Intervento protezione "I"

12.8.2 Trip curves of protection "I"



Legenda

$I_n =$  Corrente nominale dei trasformatori di corrente

$t =$  tempo di intervento

Caption

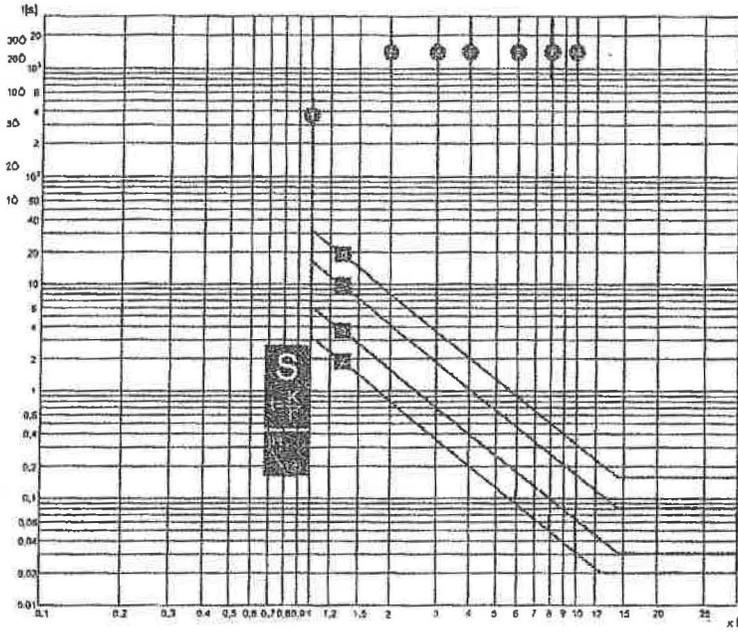
$I_n =$  Rated current of current transformers

$t =$  trip time

Mod. Rev.	M4379		Apparecchio Apparatus	SACE Emax	Scala Scale
			N° Doc. Doc. No	601933/001	N° Pag. 32, N° 53/100

12.8.3 Curve di intervento protezione "S"

12.8.3 Trip curves of protection "S"

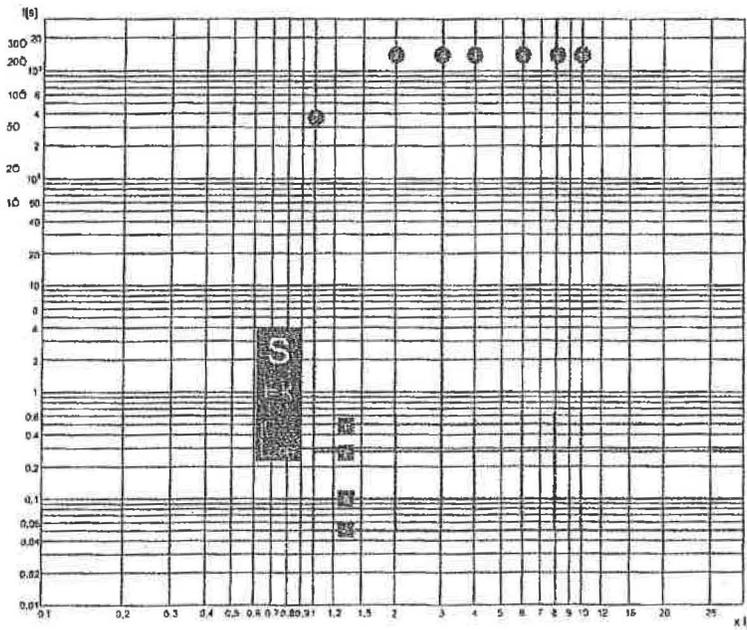


Tolleranza sulle soglie di intervento  
 $S = \pm 10\%$

Trip threshold tolerance  
 $S = \pm 10\%$

Tolleranza sui tempi di intervento  
 $S = \pm 20\%$

Trip time tolerances  
 $S = \pm 20\%$



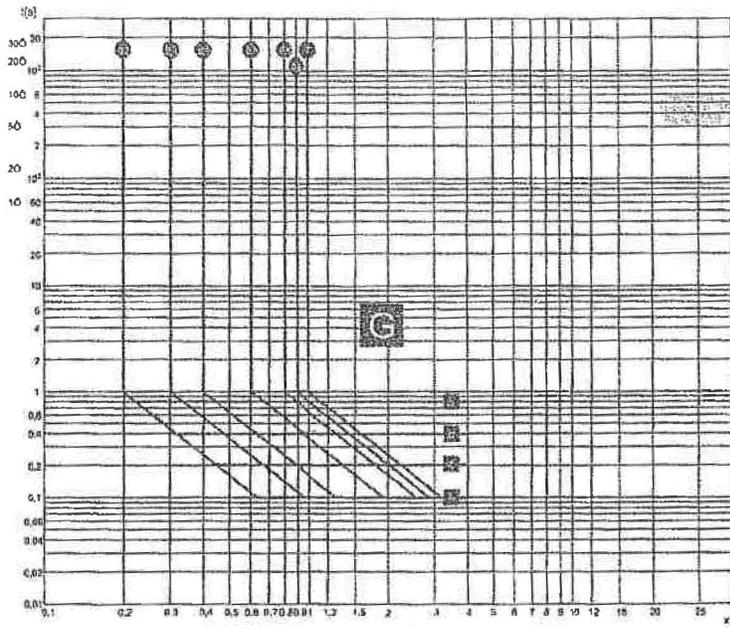
Legenda  
 $I_n$  = Corrente nominale dei trasformatori di corrente  
 $t$  = tempo di intervento

Caption  
 $I_n$  = Rated current of current transformers  
 $t$  = trip time

Mod. Rev.	M4379		Apparecchio Apparatus	SACE Emax	Scala Scale
			N° Doc. Doc. No.	601933/001	N° Fog. Sh. No. 64103

12.8.4 Curve di intervento protezione "G"

12.8.4 Trip curves of protection "G"



Tolleranza sulle soglie di intervento  
G = ± 20%

Trip threshold tolerance  
G = ± 20%

Tolleranza sui tempi di intervento  
G = ± 20%

Trip time tolerances  
G = ± 20%

**Legenda**  
In = Corrente nominale dei trasformatori di corrente  
t = tempo di intervento

**Caption**  
In = Rated current of current transformers  
t = trip time

Mod. Rev.	M4379		Apparecchio Apparatus	SACE Emax	Scala Scale
			N° Doc. Doc. No.	601933/001	N° Pgg. Sh. Alla 65/100

# CURRENT TRANSFORMERS

Window Diameter 3.25"

Models 3360 RW & SH.

Fully encapsulated.  
Indoor/outdoor applications.

Standard 5-amp secondary.  
Others available.

## APPLICATION:

For Ammeters, Watthour Meters, Wattmeters, Relays.

## CONTINUOUS THERMAL RATING:

1.33 at 30 C. amb.; 1.0 at 55 C. amb.

## INSULATION CLASS:

0.6 kV. BIL 10kV. full wave.

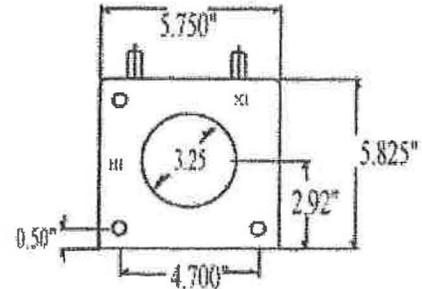
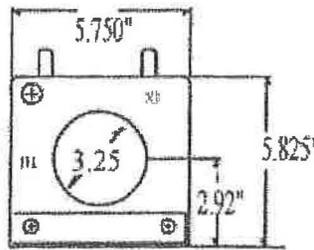
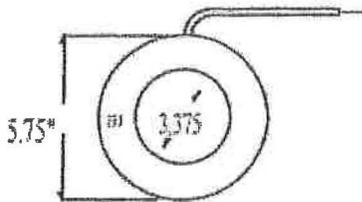
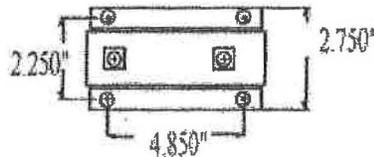
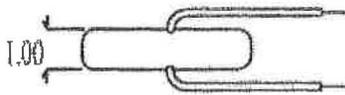
50-400 Hz.



207232



INSTRUMENT TRANSFORMER  
E175133



3360RW-\*\*

3360SH-\*\*

- Flexible leads are UL 3173 125 degree C. CSA approved, #16 AWG 24" long
- Non-Standard length to be specified.
- Terminals are brass No. 10-32 UNC.
- Mounting brackets optional, order No. 3360-MBK.
- Approximate weight 3 lbs.
- Additional ratios available.

CATALOG NUMBER	CURRENT RATIO AMPERES	V.A. FOR ± 1% CLASS	ANSI METERING CLASS AT 60 Hz				
			BO.1	BO.2	BO.5	BO.9	B1.8
**300	300:5	15.0	0.6	0.6	1.2	2.4	-
**400	400:5	25.0	0.3	0.6	1.2	1.2	-
**500	500:5	35.0	0.3	0.3	0.6	1.2	2.4
**600	600:5	50.0	0.3	0.3	0.6	1.2	1.2
**750	750:5	50.0	0.3	0.3	0.3	0.6	1.2
**800	800:5	60.0	0.3	0.3	0.3	0.6	1.2
**1000	1000:5	75.0	0.3	0.3	0.3	0.6	0.6
**1200	1200:5	75.0	0.3	0.3	0.3	0.6	0.6
**1500	1500:5	90.0	0.3	0.3	0.3	0.6	0.6
**1600	1600:5	100.0	0.3	0.3	0.3	0.6	0.6
**2000	2000:5	100.0	0.3	0.3	0.3	0.3	0.3
**2500	2500:5	100.0	0.3	0.3	0.3	0.3	0.3
**3000	3000:5	120.0	0.3	0.3	0.3	0.3	0.3
**3500	3500:5	120.0	0.3	0.3	0.3	0.3	0.3
**4000	4000:5	120.0	0.3	0.3	0.3	0.3	0.3

Made in the United States of America

**BEFORE THE  
IDAHO PUBLIC UTILITIES COMMISSION  
CASE NO. IPC-E-12-25**

**IDAHO POWER COMPANY**

**ATTACHMENT 6**

## Feasibility Study Agreement

**THIS AGREEMENT** is made and entered into this \_\_\_ day of September 2008 by and between Andgar Corporation, a Corporation organized and existing under the laws of the State of Washington, ("Interconnection Customer,") and Idaho Power Company a Corporation existing under the laws of the State of Idaho ("Transmission Provider"). Interconnection Customer and Transmission Provider each may be referred to as a "Party," or collectively as the "Parties."

### RECITALS

**WHEREAS**, Interconnection Customer is proposing to develop a Small Generating Facility or generating capacity addition to an existing Small Generating Facility consistent with the Interconnection Request completed by Interconnection Customer on 9/10/08, also known as Project # 268; and

**WHEREAS**, Interconnection Customer desires to interconnect the Small Generating Facility with the Transmission Provider's Transmission System; and

**WHEREAS**, Interconnection Customer has requested the Transmission Provider to perform a feasibility study to assess the feasibility of interconnecting the proposed Small Generating Facility with the Transmission Provider's Transmission System, and of any Affected Systems;

**NOW, THEREFORE**, in consideration of and subject to the mutual covenants contained herein the Parties agreed as follows:

- 1.0 When used in this Agreement, with initial capitalization, the terms specified shall have the meanings indicated or the meanings specified in the standard Small Generator Interconnection Procedures.
- 2.0 The Interconnection Customer elects and the Transmission Provider shall cause to be performed an interconnection feasibility study consistent the standard Small Generator Interconnection Procedures in accordance with the Open Access Transmission Tariff.
- 3.0 The scope of the feasibility study shall be subject to the assumptions set forth in Attachment A to this Agreement.
- 4.0 The feasibility study shall be based on the technical information provided by the Interconnection Customer in the Interconnection Request, as may be modified as the result of the scoping meeting. The Transmission Provider reserves the right to request additional technical information from the Interconnection Customer as may reasonably become necessary consistent with Good Utility Practice during the course of the feasibility study and as designated in accordance with the standard Small Generator Interconnection Procedures. If the Interconnection Customer modifies its Interconnection Request, the time to complete the feasibility study may be extended by agreement of the Parties.

- 5.0 In performing the study, the Transmission Provider shall rely, to the extent reasonably practicable, on existing studies of recent vintage. The Interconnection Customer shall not be charged for such existing studies; however, the Interconnection Customer shall be responsible for charges associated with any new study or modifications to existing studies that are reasonably necessary to perform the feasibility study.
- 6.0 The feasibility study report shall provide the following analyses for the purpose of identifying any potential adverse system impacts that would result from the interconnection of the Small Generating Facility as proposed:
  - 6.1 Initial identification of any circuit breaker short circuit capability limits exceeded as a result of the interconnection;
  - 6.2 Initial identification of any thermal overload or voltage limit violations resulting from the interconnection;
  - 6.3 Initial review of grounding requirements and electric system protection; and
  - 6.4 Description and non-bonding estimated cost of facilities required to interconnect the proposed Small Generating Facility and to address the identified short circuit and power flow issues.
- 7.0 The feasibility study shall model the impact of the Small Generating Facility regardless of purpose in order to avoid the further expense and interruption of operation for reexamination of feasibility and impacts if the Interconnection Customer later changes the purpose for which the Small Generating Facility is being installed.
- 8.0 The study shall include the feasibility of any interconnection at a proposed project site where there could be multiple potential Points of Interconnection, as requested by the Interconnection Customer and at the Interconnection Customer's cost.
- 9.0 In lieu of Feasibility Study deposit, Interconnection Customer agrees that study funds will be drawn from the application fee for the performance of the Interconnection Feasibility Study.

Transmission Provider shall charge and Interconnection Customer shall pay the actual costs of the Interconnection Feasibility Study. Any difference between the deposit and the actual cost of the study shall be paid by or refunded to Interconnection Customer, as appropriate.

Small Gen Feasibility Study Agreement  
Swagger Farms Project # 268

- 10.0 Once the feasibility study is completed, a feasibility study report shall be prepared and transmitted to the Interconnection Customer. Barring unusual circumstances, the feasibility study must be completed and the feasibility study report transmitted within 30 business days of the Interconnection Customer's agreement to conduct a feasibility study.
- 11.0 Any study fees shall be based on the Transmission Provider's actual costs and will be invoiced to the Interconnection Customer after the study is completed and delivered and will include a summary of professional time.
- 12.0 The Interconnection Customer must pay any study costs that exceed the deposit without interest within 30 calendar days on receipt of the invoice or resolution of any dispute. If the deposit exceeds the invoiced fees, the Transmission Provider shall refund such excess within 30 calendar days of the invoice without interest.

**IN WITNESS WHEREOF**, the Parties have caused this Agreement to be duly executed by their duly authorized officers or agents on the day and year first above written.

**Transmission Provider:**  
Idaho Power Company – Delivery

**Interconnection Customer:**  
Andgar Corporation

Signed Marc Patterson

Signed RJ

Printed Marc Patterson

Printed Ryle Jurgens

Title Engineering Leader - T&D Planning

Title Project Development Manager

Date 9/28/08

Date 9/19/08

**Attachment A to Feasibility Study Agreement**

**Assumptions Used in Conducting the Feasibility Study**

The feasibility study will be based upon the information set forth in the Interconnection Request and agreed upon in the scoping meeting held on 9/29/08:

1) Designation of Point of Interconnection and configuration to be studied.

Next to Mechanical Building on Aerial photo - 1767 E 3800 N, Buhl, ID with 350' line extension from 12kV distribution feeder Clover 012.

2) Designation of alternative Points of Interconnection and configuration.

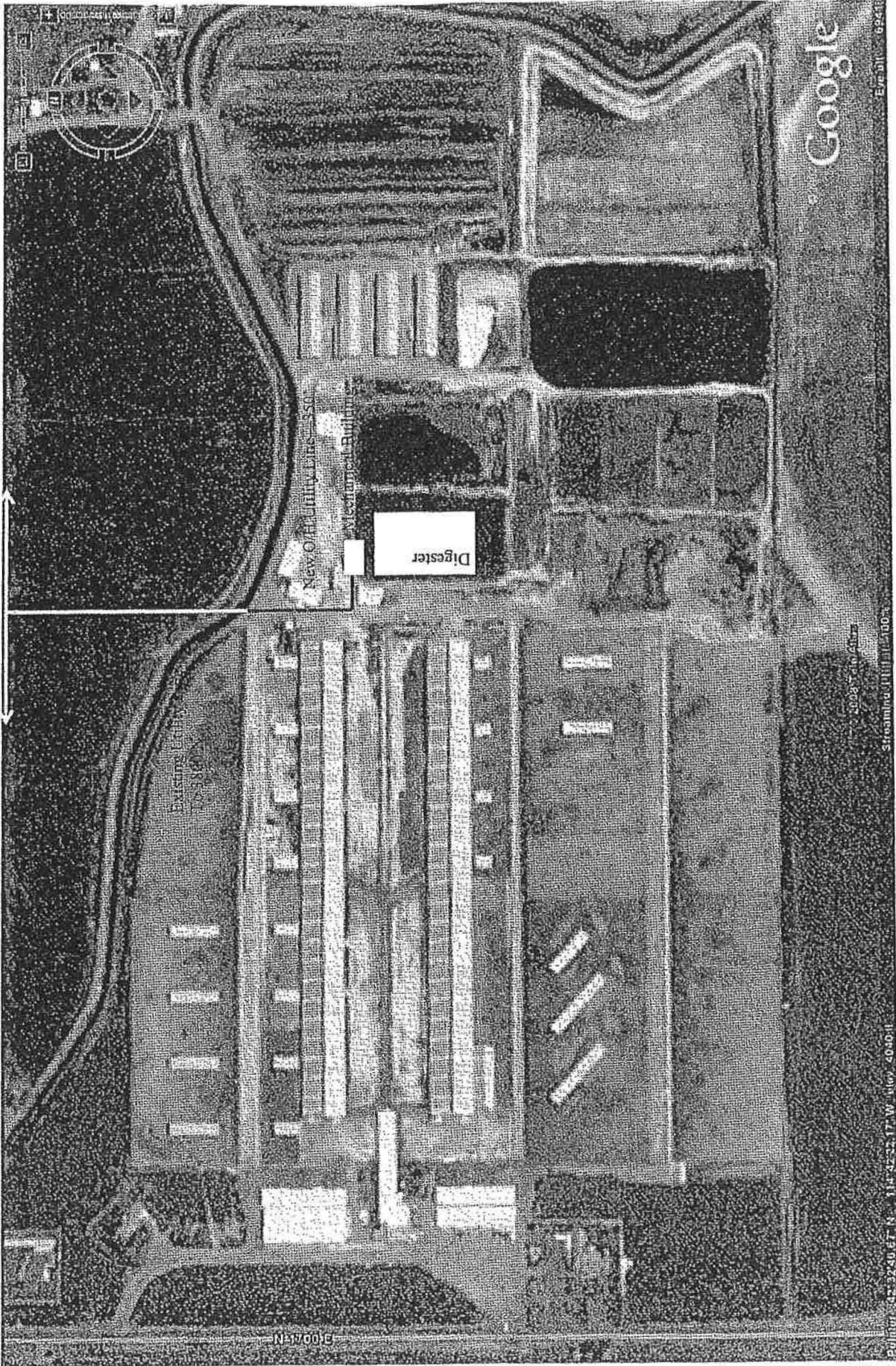
1) and 2) are to be completed by the Interconnection Customer. Other assumptions (listed below) are to be provided by the Interconnection Customer and the Transmission Provider.

*Maximum output limited to 1.2 MW.*

*Interconnect transformer to be provided by Idaho Power with wye-wye ground configuration.*

Swager Farms— 1707 E 3800 N Buhl, ID 83316

CLOVER 012



**BEFORE THE  
IDAHO PUBLIC UTILITIES COMMISSION  
CASE NO. IPC-E-12-25**

**IDAHO POWER COMPANY**

**ATTACHMENT 7**

**GENERATOR INTERCONNECTION  
FEASIBILITY STUDY**

For integration of the proposed

**SWAGER FARMS DAIRY DIGESTER PROJECT**

In

**TWIN FALLS COUNTY, IDAHO**

To the

**IDAHO POWER COMPANY ELECTRICAL SYSTEM**

For

**ANDGAR CORPORATION**

The

**INTERCONNECTION CUSTOMER**

**FINAL REPORT  
NOVEMBER 13, 2008**

## **1.0 Introduction**

Andgar Corporation has contracted with Idaho Power Company (IPCO) to perform a Generator Interconnection Feasibility Study for the integration of the proposed 1.2 MW digester project at Swager Farms (project #268). The proposed location of the project is in Idaho Power's southern Idaho service territory in Twin Falls County at 3800 North 1707 East. See Appendix B for general location map of project area.

This report documents the basis for and the results of the Feasibility Study for the Swager Farms Project. It describes the proposed project, the study cases used; estimated costs for interconnection and determination of project interconnect feasibility.

## **2.0 Summary**

The proposed small generation project is a 1.2 MW biogas generation project consisting of two 600 kW Stamford PI736B synchronous generator units. The generation project will connect to the IPCO owned Clover 012 (COVR-012) 12.5 kV distribution feeder. The upgrades to this feeder needed to connect this project include a 350' line extension, transformer and capacitor bank installations, as well as a generation interconnection and protection package. The estimated cost to interconnect this generation project to Idaho Power's system is \$316,250.

This feasibility study indicates the existing 46 kV transmission system does currently have the capacity for the 1.2 MW output of the digester project. However, there are limitations in the Midpoint West transmission system to the north and west of this area. There is no available transmission capacity for this project in the Midpoint West system when considering other proposed generation projects ahead of this one in the queue. An existing study is attached as Appendix C which details the existing system limitations and describes the improvements necessary to increase the capacity of this system another 330 MW. However, this proposed capacity is already committed to other proposed generation projects currently ahead of this one in the queue.

## **3.0 Scope of Interconnection Feasibility Study**

The Interconnection Feasibility Study was done and prepared in accordance with Idaho Power Company Standard Generator Interconnection Procedures, to provide a preliminary evaluation of the feasibility of the interconnection of the proposed generating project to the Idaho Power system. As listed in Section 5.0 of the Interconnection Feasibility Study agreement, the Interconnection Feasibility Study report provides the following information:

- preliminary identification of any circuit breaker short circuit capability limits exceeded as a result of the interconnection;
- preliminary identification of any thermal overload or voltage limit violations resulting from the interconnection; and
- preliminary description and non-binding estimated cost of facilities required to interconnect the Small Generating Facility to the Distribution System and to address the identified short circuit and power flow issues.

All other proposed Generation projects prior to this project in the Generator Interconnect queue were considered in this study. A current list of these projects can be found on the Idaho Power web site as follows:

<http://www.oatioasis.com/ipco/index.html>.

#### **4.0 Description of Proposed Generating Project**

The Swager Farms biogas project proposes to connect to the Idaho Power distribution system for an injection of 1.2 MW (maximum project output) using two 600 kW Stamford PI736B synchronous generator units.

#### **5.0 Description of Transmission Facilities**

The 1.2 MW Andgar biogas generation project at Swager Farms Dairy in Twin Falls County, Idaho will connect IPCO's Clover 012 (COVR-012) 12.5 kV distribution line. The Clover substation is served by Idaho Power's Dale - Twin Falls 46 kV transmission system. There is adequate capacity on this 46 kV transmission system to serve this project.

This feasibility study has identified limitations in the Midpoint West transmission system to the north and west of this area. There is no available transmission capacity for this project in the Midpoint West system when considering other proposed generation projects ahead of this one in the queue. An existing study is attached as Appendix C which details the existing system limitations and describes the improvements necessary to increase the capacity of this system another 330 MW. However, this proposed capacity is already committed to other proposed generation projects currently ahead of this one in the queue.

#### **6.0 Description of Substation Facilities**

The substation serving the area around Swager Farms Dairy is IPCO's Clover (COVR) substation, which is located near the intersection of 3350 N. and 1950 E. in Twin Falls County. The existing substation transformer is a 46:12.5 kV, 4.69 MVA transformer. This study indicates there is adequate capacity at COVR substation for the 1.2 MW biogas project.

#### **7.0 Description of Distribution Facilities**

The 1.2 MW Andgar biogas generation project at Swager Farms Dairy in Twin Falls County, Idaho will connect to IPCO's COVR-012 12.5 kV distribution line. There is adequate capacity on this distribution line to serve this project. However, the project will have to run at a power factor between 80% and 88%, lagging. In other words, it will have to absorb between 650 kVAR and 900 kVAR, especially during periods of light loading.

A capacitor bank will have to be added for compensation purposes due to the facilities lagging power factor. Since it will be running between 80% and 88% power factor, 650 kVAR to 900 kVAR will need to be generated. That VAR flow will come from a 900 kVAR capacitor bank located near the intersection of 3550 N. and 1700 E. This location eliminates high voltage

concerns which would have become an issue if the bank were placed closer to Swager Farms Dairy.

Other additions include a line extension and transformer addition at the POI. The line extension will be 350' long and comprised of #4 ACSR conductor. The transformer will be a 1500 kVA 12.47 kV:480 V padmount transformer.

Since the biogas generation project is served by a feeder that also serves other Idaho Power customers, and to minimize the risk of islanding the generator with local load, a generation interconnection and protection package will be required at the point of interconnection (POI). This package includes a 12.5 kV recloser, controls, CTs, PTs, and communications per Idaho Power's standard for generators connected to the distribution system.

### **8.0 Circuit Breaker Short Circuit Limits**

The maximum available fault current with the Andgar 1.2 MW project connected is about 6000 Amps at the POI. The 12.5 kV breakers at COVR substation are rated for 18 KAIC. This feasibility study indicates that there is adequate short circuit interrupting capability on these breakers for the addition of this generation project.

### **9.0 Site Load**

At the generating site, 75 kW of load has been studied for insertion prior to generation. There will be no required upgrades to add the 75 kW of load at Swager Farms.

### **10.0 Cost Estimate**

The estimated costs to interconnect the 1.2 MW biogas generation project by Andgar at Swager Farms Dairy in Twin Falls County is \$316,250. These upgrades are listed in the following Table.

<b>Description</b>	<b>Estimated Cost</b>
One 1500 kVA 12.47kV:480 V padmount transformer, 900 kVAR capacitor bank and 350' of new line at POI	\$91,250
Generation Interconnection Protection Package (Includes 12.47 kV recloser, controls, CTs, PTs, and communications)	\$225,000
<b>Total Estimated Cost</b>	<b>\$316,250</b>

Table 1: Cost Estimates

### **11.0 Description of Operating Requirements**

In addition to the upgrades listed in section 8.0 of this report, the proposed project must meet several operating requirements. The project must be controlled to operate at a lagging power

factor between 80% and 88% or meet the voltage schedule provided by Idaho Power. If this requirement can not be met, further voltage studies will be necessary. Voltage flicker at startup and during operation will be limited to less than 5% as measured at the point of interconnection. For this to occur, the generation facility can not exceed 50 Amps during start up at the 12.5 kV voltage level. This forces the generating facility to start their generators separately. The project is required to comply with the applicable Voltage and Current Distortion Limits found in IEEE Standard 519-1992 *IEEE Recommended Practices and Requirements for Harmonic Control in Electrical Power Systems*. The project must also limit the ground fault current at the point of interconnection to 20 Amps. See Appendix A for more details

## **12.0 Conclusion**

The requested interconnection of the 1.2 MW Andgar Biogas project located at Swager Farms Dairy in Twin Falls County to Idaho Power's system was studied. The results of this study indicate that it is feasible to connect this project to the existing Idaho Power system. A transmission system impact study is required for this project to determine any additional transmission system upgrades required but not detailed in this feasibility study report.

## **APPENDIX A**

### **A-1.0 Method of Study**

The Feasibility Study plan inserts the Project up to the maximum requested injection into the selected Western Electric Coordinating Council (WECC) power flow case and then, using Power World Simulator Version 11, examines the impacts of the new resource on Idaho Power's transmission system (lines, transformers, etc.) within the study area under various operating/outage scenarios. The WECC and Idaho Power reliability criteria and Idaho Power operating procedures were used to determine the acceptability of the configurations considered. The WECC case is a recent case modified to simulate stressed but reasonable pre-contingency energy transfers utilizing the IPC system. For distribution feeder analysis, Idaho Power utilizes Advantica's SynerGEE Software.

### **A-2.0 Acceptability Criteria**

The following acceptability criteria were used in the power flow analysis to determine under which system configuration modifications may be required:

The continuous rating of equipment is assumed to be the normal thermal rating of the equipment. This rating will be as determined by the manufacturer of the equipment or as determined by Idaho Power. Less than or equal to 100% of continuous rating is acceptable.

Idaho Power's Voltage Operating Guidelines were used to determine voltage requirements on the system. This states that voltages, under normal operating conditions, are to be maintained within plus or minus 5% (0.05 per unit) of nominal. Therefore, voltages greater than or equal to 0.95 p.u. voltage and less than or equal to 1.05 p.u. voltage are acceptable.

Voltage flicker during starting, stopping or operation of the generator is limited to 5% as measured at the point of interconnection, per Idaho Power's T&D Advisory Information Manual.

Idaho Power's Reliability Criteria for System Planning was used to determine proper transmission system operation.

All other applicable national and Idaho Power standards and prudent utility practices were used to determine the acceptability of the configurations considered.

The stable operation of the system requires an adequate supply of volt-amperes reactive (VARs) to maintain a stable voltage profile under both steady-state and dynamic system conditions. An inadequate supply of VARs will result in voltage decay or even collapse under the worst conditions.

All customer generation must meet IEEE 519 and ANSI C84.1 Standards.

Equipment/line/path ratings used will be those that are in use at the time of the study or that are represented by IPC upgrade projects that are either currently under construction or whose

budgets have been approved for construction in the near future. All other potential future ratings are outside the scope of this study. Future transmission changes may, however, affect current facility ratings used in the study.

#### **A-3.0 Grounding Requirements**

Idaho Power Company (IPC) requires interconnected transformers to limit their ground fault current to 20 amps at the point of interconnection.

#### **A-4.0 Electrical System Protection Guidance**

IPC requires electrical system protection per Requirements for Generation Interconnections found on the Idaho Power Web site, <http://www.idahopower.com/aboutus/business/generationInterconnect/>.

#### **A-5.0 WECC Coordinated Off-Nominal Frequency Load Shedding and Restoration Requirements**

IPC requires frequency operational limits to adhere to WECC Under-frequency and Over-frequency Limits per the WECC Coordinated Off-Nominal Frequency Load Shedding and Restoration Requirements available upon request.



**APPENDIX C**

**GENERATOR INTERCONNECTION  
SYSTEM IMPACT STUDY REPORT**

for

**Up to 330 MW of New Generation  
On the 138 kV Transmission System  
In the Twin Falls Area**

to

**IDAHO POWER COMPANY, Transmission Provider  
TRANSMISSION SYSTEM**

**FINAL REPORT  
June 29, 2007**

## 1.0 Introduction

Multiple new generation projects have contacted Idaho Power Company (IPC) to perform Generator Interconnection System Impact Studies for Network Resource Interconnection Service at 138 kV for the integration of new generation projects in the Twin Falls area.

This report documents the basis for and the results of this System Impact Study. Previous studies were performed with these new generation projects being non-dispatchable. This System Impact Study will document the transmission system improvements required if the new generation projects are dispatchable. It describes the backbone transmission system improvements required for Network Resource Interconnection Service of the new generation proposed, the study cases used, outage scenarios assumed, redispatch requirements, and results of all work in the areas of concern.

## 2.0 Summary

The performance of the backbone transmission system was evaluated to integrate up to 304 MW of new generation on the 138 kV transmission system in the Twin Falls area. Five phases of transmission system improvements are required to provide 304 MW of new generation Network Resource Interconnection Service.

- Phase #1: Install an 8 ohm 138 kV Series Reactor on the Upper Salmon-Mountain Home Junction 138 kV transmission line. Without this improvement, the outage of the Midpoint-Rattlesnake 230 kV transmission line results in an overload of the Upper Salmon-Mountain Home Junction 138 kV line with no new generation in the Twin Falls area. This improvement is necessitated by the transmission improvements associated with Generation Project 88, and as a result should be funded by Idaho Power Company – Delivery. This phase of improvements is estimated at approximately \$290,000.
- Phase #2: Install a 4 ohm 138 kV Series Reactor on the Mountain Home Junction-Lucky Peak 138 kV transmission line. Without this improvement, the outage of the Rattlesnake-Boise Bench 230 kV transmission line results in an overload exceeding the 30 minute emergency rating of the Mountain Home Junction-Lucky Peak 138 kV line with new generation levels greater than 42 MW in the Twin Falls area. This phase of improvements is estimated at approximately \$290,000.
- Phase #3: Install a 12.35 ohm 138 kV Series Reactor on the Lower Malad-Mountain Home Junction 138 kV transmission line and increase the impedance of the existing Upper Salmon-Mountain Home Junction 138 kV Series Reactor to 26.2 ohms. Without this improvement, the outage of the Midpoint-Rattlesnake 230 kV transmission line results in an overload exceeding the 30 minute emergency rating of the Lower Malad-Mountain Home Junction 138 kV line with new generation levels greater than 94 MW in the Twin Falls area. This phase of improvements is estimated at approximately \$290,000.

Phase #4: Re-configure the Midpoint-Rattlesnake 230 kV series capacitor bank to allow 1/3 of the compensation to be bypassed via IPC's SCADA system and install a "automatic 1/3 bypass scheme" for overloads exceeding series capacitor's 30 minute emergency equipment rating of 135%. Without this improvement, the outage of the Midpoint-Boise Bench #3 230 kV transmission line results in an overload exceeding the 30 minute emergency rating of the Midpoint-Rattlesnake 230 kV Series Capacitor Bank with new generation levels greater than 153 MW in the Twin Falls area. This phase of improvements is estimated at approximately \$100,000.

Phase #5: Fold the Midpoint-DRAM #1 230 kV transmission line into the King Substation and install a 230/138 kV 300 MVA transformer. Without this improvement, the outage of the Rattlesnake-Boise Bench 230 kV transmission line results in an overload exceeding the 30 minute emergency rating of the Mountain Home Junction-Lucky Peak 138 kV line with new generation levels greater than 156 MW in the Twin Falls area. This phase of improvements is estimated at \$10,320,000.

Once all five phases of improvements have been completed, the transmission system is capable of interconnecting approximately 330 MW of new generation in the Twin Falls area and serving them on a dispatchable basis.

Section 8.0 of this report details the results of studies to quantify generation redispatch requirements following single contingencies on the transmission system. Reductions in the amount of generation which may be redispatched following contingencies, are possible by completing Phase #4 improvements earlier than required or funding optional modifications on the Midpoint-Boise Bench #3 series capacitor bank.

These cost estimates include direct equipment and installation labor costs, indirect labor costs and overheads, and allowance for funds used during construction (AFUDC). The proposed cost allocation is subject to change, as more information is known. These are cost estimates only and final charges to the customer will be based on the actual construction costs incurred.

### **3.0 Summary of Interconnection Requests**

Requests were made to Idaho Power Co. by multiple generation projects in the Twin Falls area to study the interconnection of the proposed generation projects to Idaho Power's transmission system at the 138 kV level for Network Resource Interconnection Service.

### **4.0 Scope of Interconnection System Impact Study**

The Interconnection System Impact Study was done and prepared in accordance with the FERC Order 2003-A, Standard Large Generator Interconnection Procedures, to provide a preliminary evaluation of the System Impact of the interconnection of the proposed large generating project to the Idaho Power transmission system. This study will only be concerned with the capabilities of the Idaho Power system to manage this new resource within the study area of the proposed interconnection.

## **5.0 Description of Existing Transmission Facilities**

As shown in Figure 1 of Section 7.0, Midpoint Substation, north of Twin Falls, has three 230 kV lines that carry bulk power westward to the Boise area. Midpoint-DRAM #1 line utilizes single 715.5 MCM conductor and has a continuous rating of 339 MVA. The Midpoint-Rattlesnake-Boise Bench #2 line utilizes a 2 conductor bundle of 715.5 MCM. This line has a continuous rating of 677 MVA. The Midpoint-Boise Bench #3 line has similar conductors and the same rating as the Rattlesnake-Boise Bench #2 line. In the Mountain Home area, an additional 230 kV line is planned to carry bulk power westward. The Rattlesnake-Bennett Mountain-Danskin-Mora line utilizes single 1272 MCM conductors (478 MVA) from Rattlesnake-Bennett Mountain, single 1590 MCM conductors (550 MVA) from Bennett Mountain-Danskin and Danskin-Mora. The Bennett Mountain-Danskin-Mora transmission lines are required for the interconnection of Generation Project 88; scheduled to be in-service Spring of 2008.

In addition to the Midpoint to the Boise area 230 kV lines previously mentioned, there are two 138 kV circuits which can carry power from the Twin Falls area to the Mountain Home area. They are:

- King-Lower Malad-Mountain Home Junction 138 kV Line
- King-Upper Salmon-Mountain Home Junction 138 kV Line

Generators located in the Twin Falls area which are intended to serve load growth in the Treasure Valley area, will be adding new incremental flows on top of existing committed east-to-west transactions across the Midpoint West transmission cutplane. This System Impact study will model approximately 1100 MW of transfers across the Midpoint West cutplane, prior to this proposed generator addition. For these studies, the flow level of the Midpoint west cutplane is defined as the sum of the flows on the following lines:

- Midpoint-DRAM #1 230 kV line
- Midpoint-Rattlesnake 230 kV Line
- Midpoint-Boise Bench #3 230 kV Line
- Lower Malad-Mountain Home Junction 138 kV Line
- Upper Salmon-Mountain Home Junction 138 kV Line

## **6.0 Description of Configurations Studied**

Since the most limiting operating conditions are expected during heavy production on the upper and middle Snake and Boise River hydro plants, with heavy east-west transfers across the Idaho Power transmission system, the injection of the new generation at King 138 kV bus was inserted into a power flow case that would simulate committed (approximately 1100 MW) pre-contingency flows on the Midpoint West transmission path.

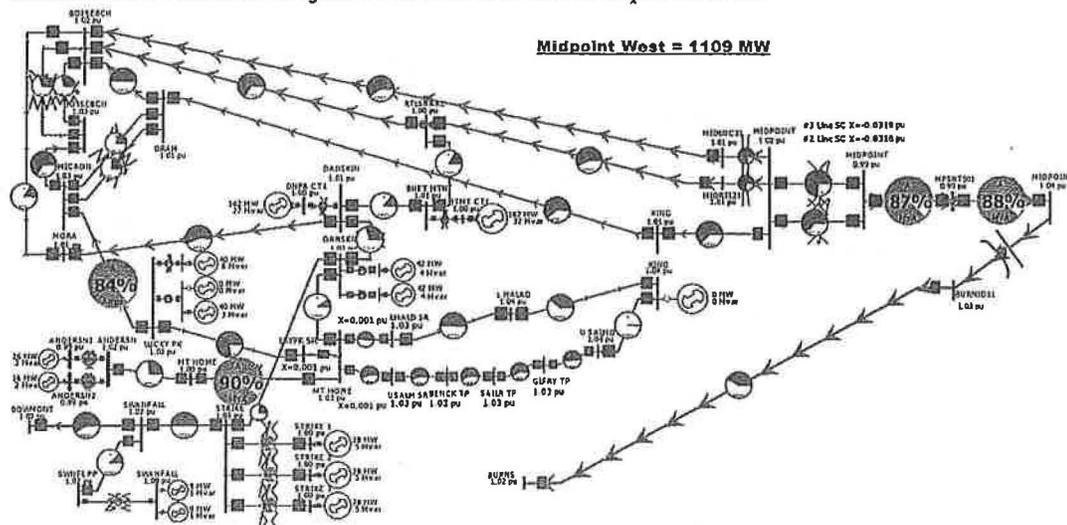
## **7.0 Post-transient Study Results**

This Interconnection System Impact Study Report is for Network Resource Interconnection Service at 138 kV, for numerous proposed generation additions in the Twin Falls area. System transfers across the Midpoint West cutplane are modeled at approximately 1100 MW prior to

the proposed transmission improvements or the proposed generators producing any power. Hydro generation production for the Boise & Snake plants, were modeled at heavy, but realistic levels. Output levels for the existing peakers at Danskin and Bennett Mountain were varied over their operating ranges as appropriate. N-0 and N-1 outage performance for the existing system are recorded. For generation projects which will be dispatchable, generation levels at King 138 kV bus are increased until a transmission system component reaches its 30 minute emergency equipment ratings during N-1 outages. IPC's 30 minute emergency equipment ratings are 115% of continuous thermal ratings on transmission lines and transformers, and 135% on Midpoint series capacitors. The most effective and cost-efficient transmission system improvements are then added to the model and King generation is then increased until 30 minute emergency equipment ratings are reached during N-1 outages. Following any N-1 outage, transmission line and transformer loadings which are less than or equal to the 30 minute emergency equipment ratings (115%), but greater than the equipment continuous ratings (100%), must be reduced to the continuous ratings by generation curtailments, redispatch, or some other operating procedure. For the Midpoint series capacitor banks, following any N-1 outage, similar corrective actions are required for loadings which are less than or equal to the 30 minute emergency equipment ratings (135%), but greater than the equipment 8 hour rating (110%). Various options to correct overloads following N-1 outages will be explored.

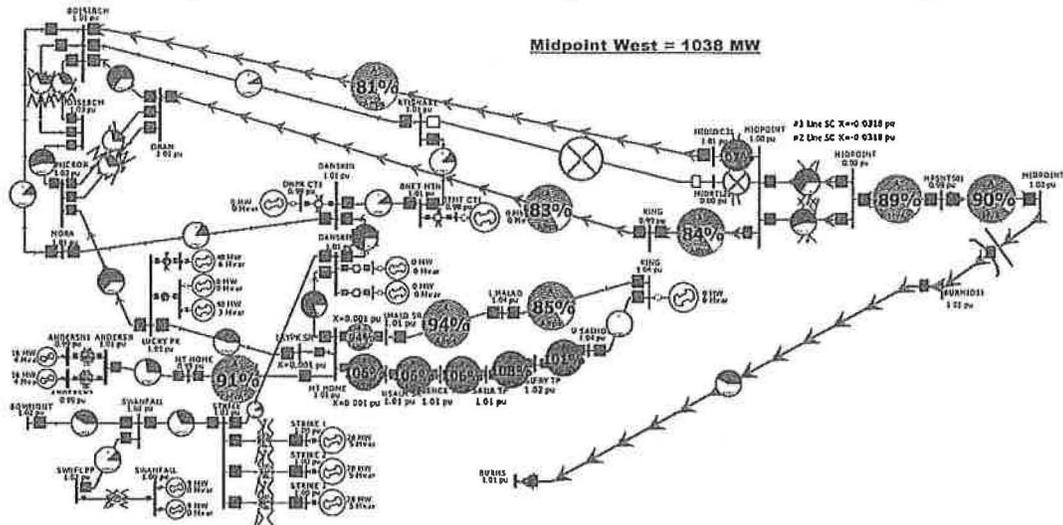
### System following Generation Project 88

The following one line diagram depicts the transmission system with no outages, after the addition of Generation Project 88 and its associated improvements.



### System following Generation Project 88 with N-1 Outages

The following one line diagram depicts the transmission system following the addition of Generation Project 88 and its associated improvements in 2008, with no new generation in the Twin Falls area, and the only N-1 outage between Midpoint and the Mountain Home area that results in loadings above continuous thermal ratings on the 138 kV transmission system.

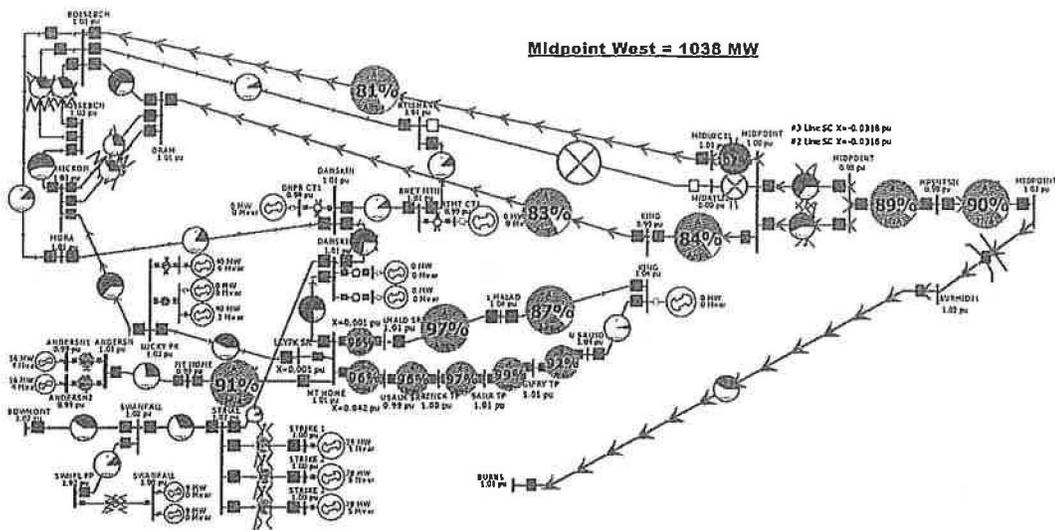


System following Generation Project 88 – Midpoint-Rattlesnake 230 kV Outage  
**Figure 2**

### Phase #1 Transmission Improvements

The Midpoint Series Capacitor banks are capable of 110% of thermal rating for eight hours. A prolonged outage of the Midpoint-Rattlesnake 230 kV line will require a reduction of transfers across the Midpoint West cutplane to prepare for the next contingency. The overload of the Midpoint-Boise Bench #3 Series Capacitor is less than its 8 hour rating, and will be resolved with the reduction in transfers. As a result, only the overloads on the 138 kV lines between Upper Salmon and Mountain Home Junction are problematic. The most effective and cost-efficient transmission improvement to alleviate these overloads is the installation of a series reactor on the Upper Salmon-Mountain Home Junction 138 kV line to better balance flows on the transmission network. A series reactor with an impedance of .042 p.u. (8 ohms) alleviates the overloads. Since this N-1 overload condition pre-exists the addition of any new generation in the Twin Falls area, Idaho Power Company will take responsibility to fund this series reactor installation.

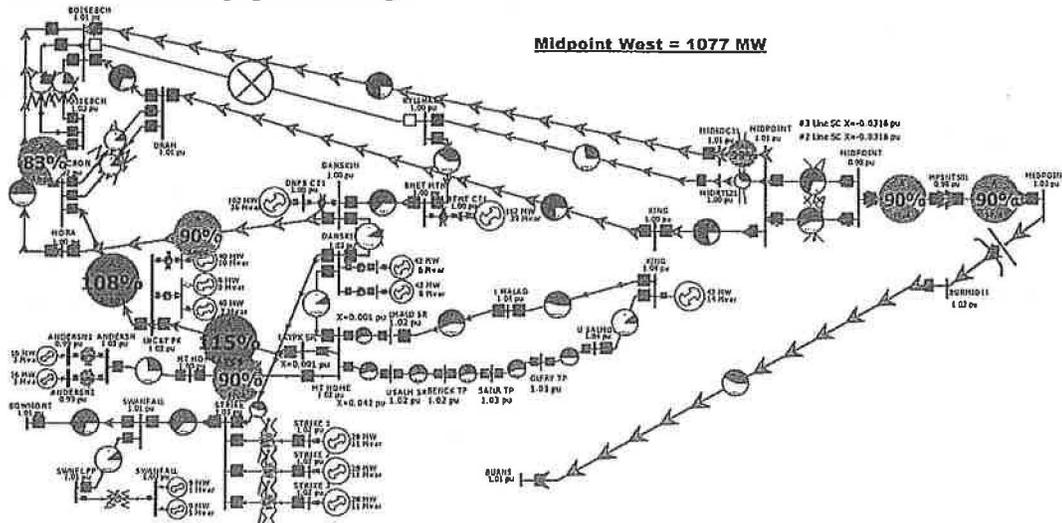
The following one line diagram depicts the system with Phase #1 improvements added, no new generation in the Twin Falls area, and the same N-1 as Figure 2.



**Phase #1 Transmission Improvements – Midpoint-Rattlesnake 230 kV Outage  
No New Generation  
Figure 3**

**Phase #2 Transmission Improvements**

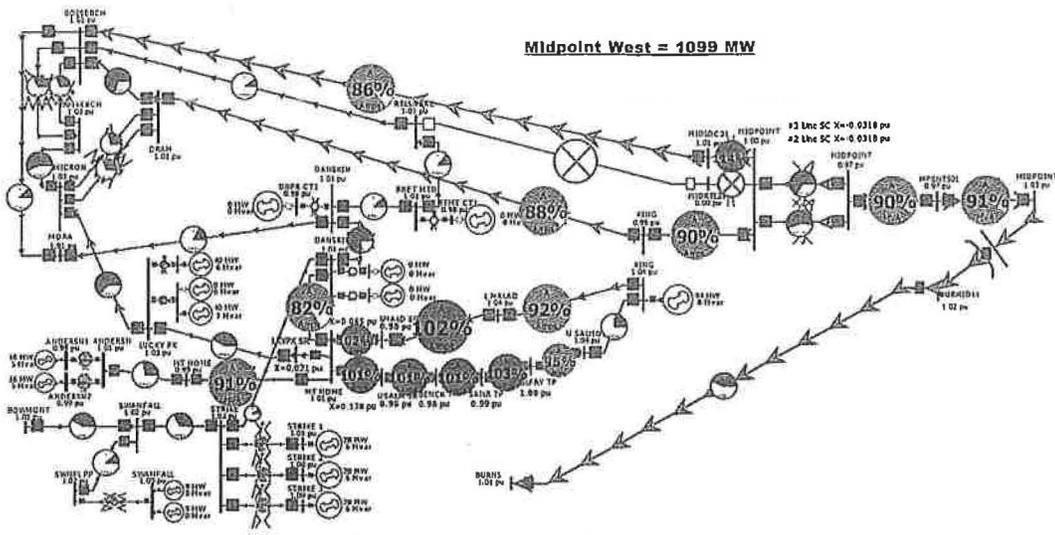
The following one line diagram depicts Phase #1 transmission improvements and 42 MW of new generation in the Twin Falls area, and the only N-1 outage that results in loadings at or above 30 minute equipment ratings.



**Phase #1 Transmission Improvements – Rattlesnake-Boise Bench #2 230 kV Outage  
42 MW of New Generation  
Figure 4**





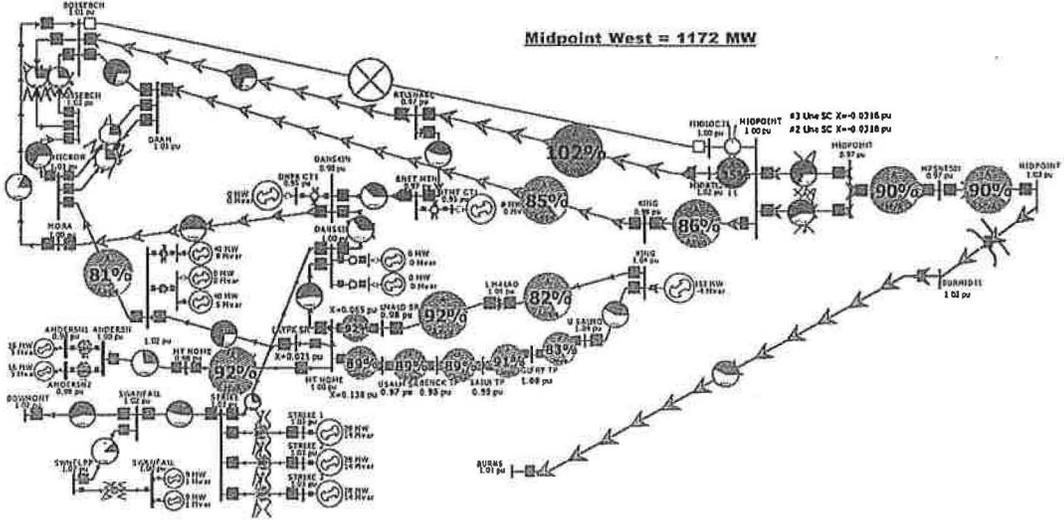


Phase #3 Transmission Improvements – Midpoint-Rattlesnake 230 kV Outage  
94 MW of New Generation

Figure 7

Phase #4 Transmission Improvements

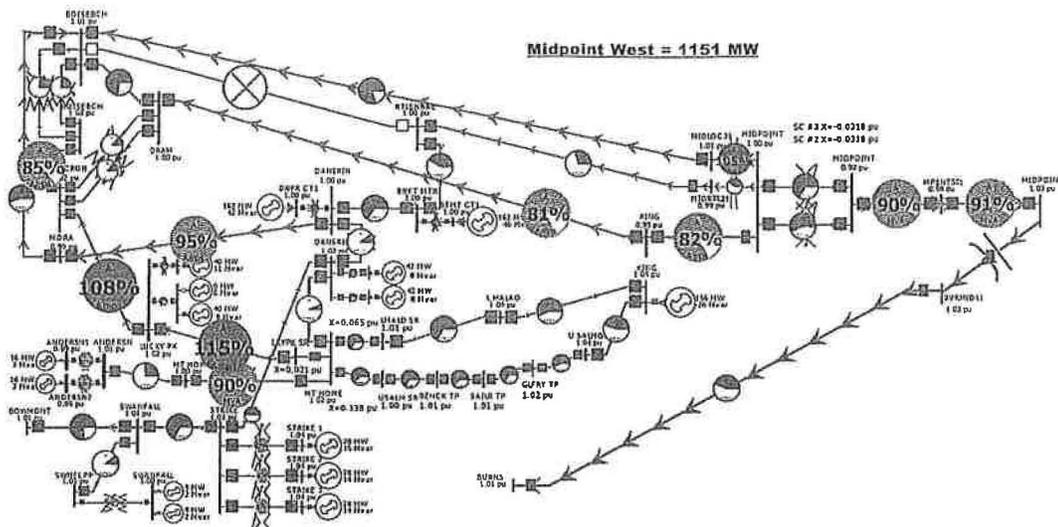
The following one line diagram depicts Phase #3 transmission improvements and 153 MW of new generation in the Twin Falls area, and the only N-1 outage that results in loadings at or above 30 minute equipment ratings.



Phase #3 Transmission Improvements – Midpoint-Boise Bench #3 230 kV Outage  
153 MW of New Generation

Figure 8



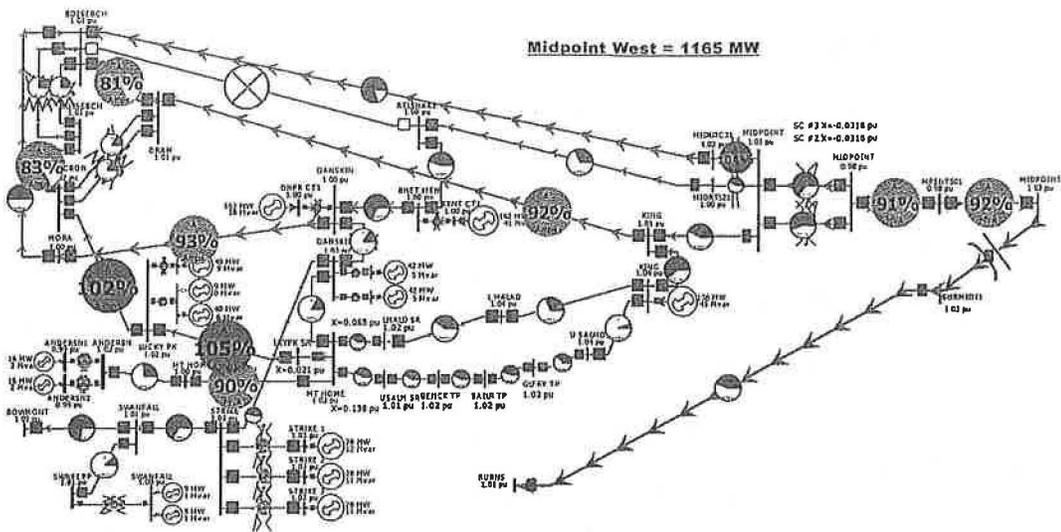


**Phase #4 Transmission Improvements – Rattlesnake-Boise Bench #2 230 kV Outage  
156 MW of New Generation**

**Figure 10**

To interconnect generation quantities greater than 156 MW will require additional transmission system improvements. If new generation levels exceed 156 MW, and the Rattlesnake-Boise Bench #2 230 kV line opens, the Mountain Home Junction-Lucky Peak 138 kV transmission line may exceed its 30 minute overload capability of 115%. The required system improvements are referred to as “Phase #5” and include folding the Midpoint-DRAM #1 230 kV transmission line into and back out of the King Substation and installing a 230/138 kV 300 MVA transformer. This overload is the result of the addition of new generation in the Twin Falls area, and as a result the costs of this improvement will be allocated to new generation interconnections.

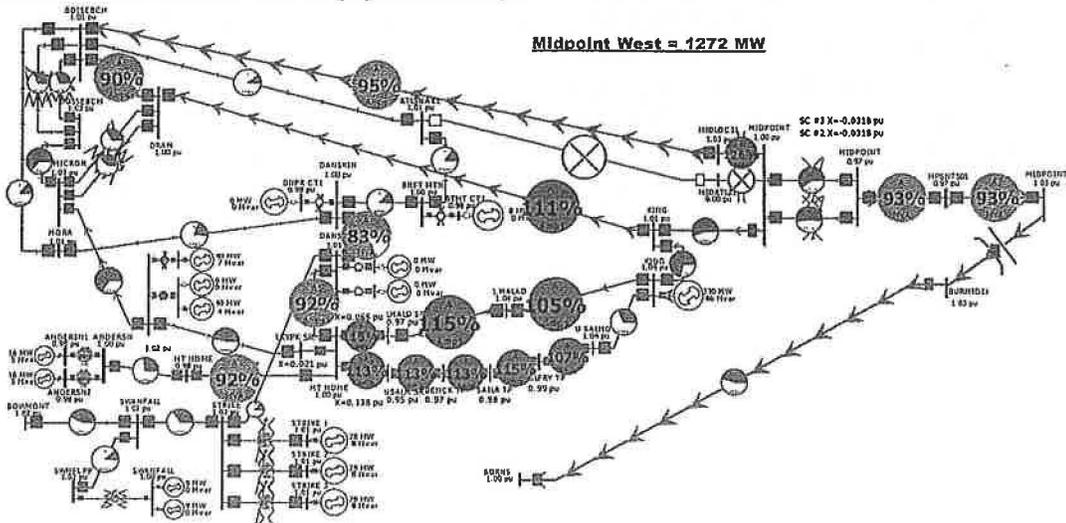
The following one line diagram depicts the system with Phase #5 improvements added, 156 MW of new generation in the Twin Falls area, and the same N-1 as Figure 10.



**Phase #5 Transmission Improvements – Rattlesnake-Boise Bench #2 230 kV Outage  
156 MW of New Generation**

**Figure 11**

Phase #5 transmission improvements are capable of accommodating approximately 330 MW of new generation in the Twin Falls area. The following one line diagram depicts the system with Phase #5 improvements added, 330 MW of new generation in the Twin Falls area, and the loss of the Midpoint-Rattlesnake 230 kV transmission line. At 330 MW of new generation in the Twin Falls area, two other outages also result in transmission system components loaded at their 30 minute emergency equipment ratings.



**Phase #5 Transmission Improvements – Midpoint-Rattlesnake #2 230 kV Outage  
330 MW of New Generation**

**Figure 12**

## 8.0 Generation Redispatch Requirements

Generators which have chosen to be dispatchable are allowed to operate at levels which may create overloads at or below 30 minute emergency equipment ratings following N-1 contingencies. Following any N-1 outage, transmission line and transformer loadings which are less than or equal to the 30 minute emergency equipment ratings (115%), but greater than the equipment continuous ratings (100%), must be reduced to the continuous ratings by generation curtailments, redispatch, or some other operating procedure. For the Midpoint series capacitor banks, following any N-1 outage, similar corrective actions are required for loadings which are less than or equal to the 30 minute emergency equipment ratings (135%), but greater than the equipment 8 hour rating (110%).

The following table summarizes generation curtailment requirements for the proposed generation projects modeled at King 138 kV Substation; for various timeframes, and for numerous transmission system single contingencies.

The fourth column of the table provides information regarding potential benefits of requesting and funding an optional improvement. The improvement evaluated is the re-configuration of the Midpoint-Boise Bench #3 230 kV series capacitor bank to allow one third of the compensation to be bypassed. Unlike Phase #4, no automatic control scheme is contemplated. This Optional Improvement may reduce the magnitude of generation which must be redispatched during a Midpoint-Rattlesnake 230 kV Transmission Line outage. The Optional Improvement is estimated at approximately \$50,000.

The fifth column of the table provides information regarding potential benefits of completing a portion of Phase #4 improvements early. Phase #4 improvements can be separated into two components. The first component is the "re-configuration" of the Midpoint-Rattlesnake 230 kV series capacitor so it can be operated "fully in-service", "1/3 bypassed", "2/3 bypassed", or "fully bypassed". The second component was the "automatic control scheme". The Phase #4a improvement contained in the fifth column is for expediting only the "re-configuration" component. Expediting the phase #4a improvement may reduce the magnitude of generation which must be redispatched during a Midpoint-Boise Bench #3 230 kV Transmission Line outage. The Phase #4a improvement is estimated at approximately \$50,000.

Contingency	Maximum Allowable Generation Before N-1	Maximum Allowable Generation After N-1	Maximum Allowable Generation After N-1 w/Optional Improvement	Maximum Allowable Generation After N-1 w/Phase #4a Improvement
<b>After Phase #1, but before Phase #2</b>				
Midpoint-Boise Bench #3 230 kV Line	42 MW	0 MW	0 MW	42 MW
Midpoint-Rattlesnake 230 kV Line	42 MW	7 MW	7 MW	7 MW
Rattlesnake-Boise Bench 230 kV Line, also open Mountain Home Junction-Danskin 138 kV Line	42 MW	9 MW	9 MW	9 MW
Danskin-Mora 230 kV Line, also open Mountain Home Junction-Danskin 138 kV Line	42 MW	42MW	42MW	42 MW
<b>After Phase #2, but before Phase #3</b>				
Midpoint-Boise Bench #3 230 kV Line	94 MW	0 MW	0 MW	94 MW
Midpoint-Rattlesnake 230 kV Line	94 MW	9 MW	9 MW	9 MW
Rattlesnake-Boise Bench 230 kV Line, also open Mountain Home Junction-Danskin 138 kV Line	94 MW	32MW	32MW	32MW
Danskin-Mora 230 kV Line, also open Mountain Home Junction-Danskin 138 kV Line	94 MW	80 MW	80 MW	80 MW
Mountain Home Junction-Lower Malad 138 kV Line	94 MW	49 MW	49 MW	49 MW
Lucky Peak-Micron 138 kV Line	94 MW	45 MW	45 MW	45 MW
Danskin 230/138 kV Transformer	94 MW	90 MW	90 MW	90 MW
<b>After Phase #3, but before Phase #4</b>				
Midpoint-Boise Bench #3 230 kV Line	153 MW	0 MW	0 MW	153 MW
Midpoint-Rattlesnake 230 kV Line	153 MW	17 MW	53 MW	17 MW
Rattlesnake-Boise Bench 230 kV Line, also open Mountain Home Junction-Danskin 138 kV Line	153 MW	71 MW	71 MW	71 MW
Danskin-Mora 230 kV Line, also open Mountain Home Junction-Danskin 138 kV Line	153 MW	120 MW	120 MW	120 MW
Mountain Home Junction-Lower Malad 138 kV Line	153 MW	129 MW	129 MW	129 MW
Lucky Peak-Micron 138 kV Line	153 MW	84 MW	84 MW	84 MW
Danskin 230/138 kV Transformer	153 MW	125 MW	125 MW	125 MW

Contingency	Maximum Allowable Generation Before N-1	Maximum Allowable Generation After N-1	Maximum Allowable Generation After N-1 w/Optional Improvement	Maximum Allowable Generation After N-1 w/Phase #4a Improvement
<b>After Phase #4, but before Phase #5</b>				
Midpoint-Boise Bench #3 230 kV Line	156 MW	156 MW	156 MW	N/A
Midpoint-Rattlesnake 230 kV Line	156 MW	18 MW	53 MW	N/A
Rattlesnake-Boise Bench 230 kV Line, also open Mountain Home Junction-Danskin 138 kV Line	156 MW	71 MW	71 MW	N/A
Danskin-Mora 230 kV Line, also open Mountain Home Junction-Danskin 138 kV Line	156 MW	120 MW	120 MW	N/A
Mountain Home Junction-Lower Malad 138 kV Line	156 MW	129 MW	129 MW	N/A
Lucky Peak-Micron 138 kV Line	156 MW	84 MW	84 MW	N/A
Danskin 230/138 kV Transformer	156 MW	125 MW	125 MW	N/A
<b>After Phase #5</b>				
Midpoint-Boise Bench #3 230 kV Line	330 MW	140 MW	140 MW	N/A
Midpoint-Rattlesnake 230 kV Line	330 MW	25 MW	123 MW	N/A
Rattlesnake-Boise Bench 230 kV Line, also open Mountain Home Junction-Danskin 138 kV Line	330 MW	254 MW	254 MW	N/A
Danskin-Mora 230 kV Line, also open Mountain Home Junction-Danskin 138 kV Line	330 MW	310 MW	310 MW	N/A
Mountain Home Junction-Lower Malad 138 kV Line	330 MW	280 MW	280 MW	N/A
Lucky Peak-Micron 138 kV Line	330 MW	265 MW	265 MW	N/A
Danskin 230/138 kV Transformer	330 MW	295 MW	295 MW	N/A
King 230/138 kV Transformer	330 MW	245 MW	245 MW	N/A

## **9.0 Fault Study Results**

Since this System Impact Study lumps all the proposed generation additions at King 138 kV bus, this Draft Report makes no attempt to address fault study concerns. Each proposed generation project will have to be evaluated individually based on its specific location.

## **10.0 Transient Stability Study Results**

The Midpoint West Transmission System is not transient stability limited. Therefore, no transient stability studies were performed.

## **11.0 Conclusions**

The System Impact of interconnecting up to 304 MW of new generation in the Twin Falls area to Idaho Power's 138 kV transmission system was studied. Five phases of transmission system improvements are required to provide Network Resource Interconnection Service to 304 MW of new generation, on a dispatchable basis. Phase #1 is the installation of an 8 ohm 138 kV Series Reactor on the Upper Salmon-Mountain Home Junction 138 kV transmission line. This improvement corrects an N-1 overload that exists before any new generation is added in the Twin Falls area. As a result, the estimated \$290,000 cost of this improvement will be borne by Idaho Power Company. After approximately 42 MW of new generation is added, Phase #1 improvements are no longer sufficient. Phase #2 improvements require the installation of a 4 ohm 138 kV Series Reactor on the Mountain Home Junction-Lucky Peak 138 kV transmission line. The estimated \$290,000 cost of this improvement should be allocated to new generator interconnections. Following the addition of approximately 94 MW of new generation, Phase #3 transmission improvements are required. Phase #3 improvements require the installation a 12.35 ohm 138 kV Series Reactor on the Lower Malad-Mountain Home Junction 138 kV transmission line, and increasing the impedance of the existing Upper Salmon-Mountain Home Junction 138 kV Series Reactor to 26.2 ohms. The estimated \$290,000 cost of Phase #3 improvements should be allocated to new generator interconnections. Following the addition of approximately 153 MW of new generation, Phase #4 transmission improvements are required. Phase #4 involves re-configuring the Midpoint-Rattlesnake 230 kV series capacitor bank to allow 1/3 of the compensation to be bypassed via IPC's SCADA system and install a "automatic 1/3 bypass scheme" for overloads exceeding the series capacitor's 30 minute emergency equipment rating of 135%. The estimated \$100,000 cost of this improvement should be allocated to new generator interconnections. Following the addition of approximately 156 MW of new generation, Phase #5 transmission improvements are required. Phase #5 involves folding the Midpoint-DRAM #1 230 kV transmission line into and back out of the King Substation and installing a 230/138 kV 300 MVA transformer. The estimated \$10,320,000 cost of this improvement should be allocated to new generator interconnections. Phase #5 transmission improvements are adequate to interconnect approximately 330 MW of new generation in the Twin Falls area, on a dispatchable basis, before additional improvements are required.

## APPENDIX A

### 1.0 Method of Study

The study methodology inserts the proposed generators up to the maximum requested output of 304 MW into the selected WECC power flow case and then, using the PowerWorld Simulator powerflow program, examines the impacts of the new resource on Idaho Power's transmission system (lines, transformers, etc.) within the study area under various operating/outage scenarios. The WECC and Idaho Power reliability criteria and Idaho Power operating procedures were used to determine the acceptability of the alternatives considered. The WECC case is a recent case modified to simulate stressed but reasonable pre-contingency energy transfers utilizing the IPC system.

### 2.0 Acceptability Criteria

The following acceptability criteria were used in the power flow analysis to determine the acceptability of the alternatives:

Loadings on transmission lines and transformers should not exceed 115% of the continuous rating, immediately following any N-1 outage. Loading on the Midpoint 230 kV series capacitors should not exceed 135% of the continuous rating, immediately following any N-1 outage. These loadings levels of 115% on transmission lines and transformers and 135% on Midpoint series capacitors correspond to IPC's 30 minute emergency equipment ratings. Any loadings immediately following an N-1 outage, less than the 30 minute emergency rating is acceptable.

Loadings which are less than the 30 minute emergency equipment ratings, but greater than the equipment continuous ratings, must be reduced to the continuous ratings by generation curtailments, re-dispatch, or some other operating procedure. Any remedial action schemes (RAS) or other transmission switching, must be judged to be reasonable before the alternatives performance can be deemed acceptable.

The continuous rating of equipment is assumed to be the normal thermal rating of the equipment. This rating will be as determined by the manufacturer of the equipment or as determined by Idaho Power. Less than or equal to 100% of continuous rating for transmission lines and transformers is acceptable. Less than or equal to 110% of continuous rating for the Midpoint 230 kV series capacitors is acceptable.

Transmission voltages, under normal operating conditions, are maintained within plus or minus 5% (0.05 per unit) of nominal. Therefore, voltages greater than or equal to 0.95 p.u. voltage and less than or equal to 1.05 p.u. voltage are acceptable.

The stable operation of the transmission system requires an adequate supply of volt-amperes reactive (VARs) to maintain a stable voltage profile under both steady-state and dynamic system conditions. An inadequate supply of VARs will result in voltage decay or even collapse under the worst conditions. Idaho Power designs its system to integrate Network Resources at full capability during specified outage conditions.

Equipment/line/path ratings used will be those that are in use at the time of the study or that are represented by IPC upgrade projects that are either currently under construction or whose budgets have been approved for

construction in the near future. All other potential future ratings are outside the scope of this study. Future transmission changes may, however, affect current facility ratings used in the study.

**BEFORE THE  
IDAHO PUBLIC UTILITIES COMMISSION  
CASE NO. IPC-E-12-25**

**IDAHO POWER COMPANY**

**ATTACHMENT 8**



November 17, 2008

Re: Project # 268, Swager Farms

Dear Mr. Juergens:

Enclosed is a signed System Impact Study Agreement (SISA) for the above-referenced generator interconnection project. Please provide all technical data, if you have not already done so, when you deliver the executed Agreement. Please review the Point of Interconnection, sign, and return all pages to Candace Gentry, 1221 West Idaho Street, Boise, ID 83702.

In order to proceed, we must receive the executed System Impact Study Agreement, and a required \$2,000 deposit from you by January 2, 2009, otherwise your application will be deemed withdrawn.

The studies will begin on the date we receive your deposit, the signed System Impact Study Agreement, and all required technical data. If the technical data is not provided or if it is deficient, you will be notified and must cure the deficiency within ten (10) Business Days, provided, however, such deficiency does not include failure to deliver the executed SISA or deposit.

Upon receipt of the executed System Impact Study Agreement, the System Impact Study will be completed within 30 calendar days. During the study period, we will keep you apprised of our progress. If you have any questions in the meantime, please contact me.

Sincerely,

A handwritten signature in cursive script, appearing to read "Marc Patterson".

Marc Patterson

C: R Bishop/IPC

Enclosure: Two Signed SISAs (one for your records)

## System Impact Study Agreement

**THIS AGREEMENT** is made and entered into this \_\_\_\_ day of \_\_\_\_\_ 2008, by and between \_\_\_\_\_, a \_\_\_\_\_ organized and existing under the laws of the State of \_\_\_\_\_, ("Interconnection Customer,") and Idaho Power Company a Corporation existing under the laws of the State of Idaho, ("Transmission Provider"). Interconnection Customer and Transmission Provider each may be referred to as a "Party," or collectively as the "Parties."

### RECITALS

**WHEREAS**, the Interconnection Customer is proposing to develop a Small Generating Facility or generating capacity addition to an existing Small Generating Facility consistent with the Interconnection Request completed by the Interconnection Customer on September 10, 2008, and

**WHEREAS**, the Interconnection Customer desires to interconnect the Small Generating Facility with the Transmission Provider's Transmission System;

**WHEREAS**, the Transmission Provider has completed a feasibility study and provided the results of said study to the Interconnection Customer (This recital to be omitted if the Parties have agreed to forego the feasibility study.); and

**WHEREAS**, the Interconnection Customer has requested the Transmission Provider to perform a system impact study(s) to assess the impact of interconnecting the Small Generating Facility with the Transmission Provider's Transmission System, and of any Affected Systems;

**NOW, THEREFORE**, in consideration of and subject to the mutual covenants contained herein the Parties agreed as follows:

- 1.0 When used in this Agreement, with initial capitalization, the terms specified shall have the meanings indicated or the meanings specified in the standard Small Generator Interconnection Procedures.
- 2.0 The Interconnection Customer elects and the Transmission Provider shall cause to be performed a system impact study(s) consistent with the standard Small Generator Interconnection Procedures in accordance with the Open Access Transmission Tariff.
- 3.0 The scope of a system impact study shall be subject to the assumptions set forth in Attachment A to this Agreement.
- 4.0 A system impact study will be based upon the results of the feasibility study and the technical information provided by Interconnection Customer in the Interconnection Request. The Transmission Provider reserves the right to request additional technical information from the Interconnection Customer as may reasonably become necessary consistent with Good Utility Practice during the course of the system impact study. If the

Small Generator System Impact Study Agreement  
Project # 268, Swager Farms

Interconnection Customer modifies its designated Point of Interconnection, Interconnection Request, or the technical information provided therein is modified, the time to complete the system impact study may be extended.

- 5.0 A system impact study shall consist of a short circuit analysis, a stability analysis, a power flow analysis, voltage drop and flicker studies, protection and set point coordination studies, and grounding reviews, as necessary. A system impact study shall state the assumptions upon which it is based, state the results of the analyses, and provide the requirement or potential impediments to providing the requested interconnection service, including a preliminary indication of the cost and length of time that would be necessary to correct any problems identified in those analyses and implement the interconnection. A system impact study shall provide a list of facilities that are required as a result of the Interconnection Request and non-binding good faith estimates of cost responsibility and time to construct.
- 6.0 A distribution system impact study shall incorporate a distribution load flow study, an analysis of equipment interrupting ratings, protection coordination study, voltage drop and flicker studies, protection and set point coordination studies, grounding reviews, and the impact on electric system operation, as necessary.
- 7.0 Affected Systems may participate in the preparation of a system impact study, with a division of costs among such entities as they may agree. All Affected Systems shall be afforded an opportunity to review and comment upon a system impact study that covers potential adverse system impacts on their electric systems, and the Transmission Provider has 20 additional Business Days to complete a system impact study requiring review by Affected Systems.
- 8.0 If the Transmission Provider uses a queuing procedure for sorting or prioritizing projects and their associated cost responsibilities for any required Network Upgrades, the system impact study shall consider all generating facilities (and with respect to paragraph 8.3 below, any identified Upgrades associated with such higher queued interconnection) that, on the date the system impact study is commenced –
  - 8.1 Are directly interconnected with the Transmission Provider's electric system; or
  - 8.2 Are interconnected with Affected Systems and may have an impact on the proposed interconnection; and
  - 8.3 Have a pending higher queued Interconnection Request to interconnect with the Transmission Provider's electric system.
- 9.0 A distribution system impact study, if required, shall be completed and the results transmitted to the Interconnection Customer within 30 Business Days after this Agreement is signed by the Parties. A transmission system impact study, if required, shall be completed and the results transmitted to the Interconnection Customer within 45

Small Generator System Impact Study Agreement  
Project # 268, Swager Farms

Business Days after this Agreement is signed by the Parties, or in accordance with the Transmission Provider's queuing procedures.

- 10.0 A \$2,000 deposit will be required from the Interconnection Customer upon execution of this agreement by the Interconnection Customer.
- 11.0 Any study fees shall be based on the Transmission Provider's actual costs and will be invoiced to the Interconnection Customer after the study is completed and delivered and will include a summary of professional time.
- 12.0 The Interconnection Customer must pay any study costs that exceed the deposit without interest within 30 calendar days on receipt of the invoice or resolution of any dispute. If the deposit exceeds the invoiced fees, the Transmission Provider shall refund such excess within 30 calendar days of the invoice without interest.

**IN WITNESS THEREOF**, the Parties have caused this Agreement to be duly executed by their duly authorized officers or agents on the day and year first above written.

**Transmission Provider:** Idaho Power Company

Signed: 

Printed: Marc Patterson

Title: Leader, T&D Planning

Date: November 17, 2008

**Interconnection Customer:** \_\_\_\_\_

Signed \_\_\_\_\_

Printed \_\_\_\_\_

Title \_\_\_\_\_

Date \_\_\_\_\_



**BEFORE THE  
IDAHO PUBLIC UTILITIES COMMISSION**

**CASE NO. IPC-E-12-25**

**IDAHO POWER COMPANY**

**ATTACHMENT 9**

### System Impact Study Agreement

**THIS AGREEMENT** is made and entered into this 28<sup>th</sup> day of January 2008<sup>9</sup>, by and between Avogav Corporation, a Corporation organized and existing under the laws of the State of Washington, ("Interconnection Customer,") and Idaho Power Company a Corporation existing under the laws of the State of Idaho, ("Transmission Provider"). Interconnection Customer and Transmission Provider each may be referred to as a "Party," or collectively as the "Parties."

#### RECITALS

**WHEREAS**, the Interconnection Customer is proposing to develop a Small Generating Facility or generating capacity addition to an existing Small Generating Facility consistent with the Interconnection Request completed by the Interconnection Customer on September 10, 2008, and

**WHEREAS**, the Interconnection Customer desires to interconnect the Small Generating Facility with the Transmission Provider's Transmission System;

**WHEREAS**, the Transmission Provider has completed a feasibility study and provided the results of said study to the Interconnection Customer (This recital to be omitted if the Parties have agreed to forego the feasibility study.); and

**WHEREAS**, the Interconnection Customer has requested the Transmission Provider to perform a system impact study(s) to assess the impact of interconnecting the Small Generating Facility with the Transmission Provider's Transmission System, and of any Affected Systems;

**NOW, THEREFORE**, in consideration of and subject to the mutual covenants contained herein the Parties agreed as follows:

- 1.0 When used in this Agreement, with initial capitalization, the terms specified shall have the meanings indicated or the meanings specified in the standard Small Generator Interconnection Procedures.
- 2.0 The Interconnection Customer elects and the Transmission Provider shall cause to be performed a system impact study(s) consistent with the standard Small Generator Interconnection Procedures in accordance with the Open Access Transmission Tariff.
- 3.0 The scope of a system impact study shall be subject to the assumptions set forth in Attachment A to this Agreement.
- 4.0 A system impact study will be based upon the results of the feasibility study and the technical information provided by Interconnection Customer in the Interconnection Request. The Transmission Provider reserves the right to request additional technical information from the Interconnection Customer as may reasonably become necessary consistent with Good Utility Practice during the course of the system impact study. If the

Small Generator System Impact Study Agreement  
Project # 268, Swager Farms

Interconnection Customer modifies its designated Point of Interconnection, Interconnection Request, or the technical information provided therein is modified, the time to complete the system impact study may be extended.

- 5.0 A system impact study shall consist of a short circuit analysis, a stability analysis, a power flow analysis, voltage drop and flicker studies, protection and set point coordination studies, and grounding reviews, as necessary. A system impact study shall state the assumptions upon which it is based, state the results of the analyses, and provide the requirement or potential impediments to providing the requested interconnection service, including a preliminary indication of the cost and length of time that would be necessary to correct any problems identified in those analyses and implement the interconnection. A system impact study shall provide a list of facilities that are required as a result of the Interconnection Request and non-binding good faith estimates of cost responsibility and time to construct.
- 6.0 A distribution system impact study shall incorporate a distribution load flow study, an analysis of equipment interrupting ratings, protection coordination study, voltage drop and flicker studies, protection and set point coordination studies, grounding reviews, and the impact on electric system operation, as necessary.
- 7.0 Affected Systems may participate in the preparation of a system impact study, with a division of costs among such entities as they may agree. All Affected Systems shall be afforded an opportunity to review and comment upon a system impact study that covers potential adverse system impacts on their electric systems, and the Transmission Provider has 20 additional Business Days to complete a system impact study requiring review by Affected Systems.
- 8.0 If the Transmission Provider uses a queuing procedure for sorting or prioritizing projects and their associated cost responsibilities for any required Network Upgrades, the system impact study shall consider all generating facilities (and with respect to paragraph 8.3 below, any identified Upgrades associated with such higher queued interconnection) that, on the date the system impact study is commenced –
  - 8.1 Are directly interconnected with the Transmission Provider's electric system; or
  - 8.2 Are interconnected with Affected Systems and may have an impact on the proposed interconnection; and
  - 8.3 Have a pending higher queued Interconnection Request to interconnect with the Transmission Provider's electric system.
- 9.0 A distribution system impact study, if required, shall be completed and the results transmitted to the Interconnection Customer within 30 Business Days after this Agreement is signed by the Parties. A transmission system impact study, if required, shall be completed and the results transmitted to the Interconnection Customer within 45

Small Generator System Impact Study Agreement  
Project # 268, Swager Farms

Business Days after this Agreement is signed by the Parties, or in accordance with the Transmission Provider's queuing procedures.

- 10.0 A \$2,000 deposit will be required from the Interconnection Customer upon execution of this agreement by the Interconnection Customer.
- 11.0 Any study fees shall be based on the Transmission Provider's actual costs and will be invoiced to the Interconnection Customer after the study is completed and delivered and will include a summary of professional time.
- 12.0 The Interconnection Customer must pay any study costs that exceed the deposit without interest within 30 calendar days on receipt of the invoice or resolution of any dispute. If the deposit exceeds the invoiced fees, the Transmission Provider shall refund such excess within 30 calendar days of the invoice without interest.

**IN WITNESS THEREOF**, the Parties have caused this Agreement to be duly executed by their duly authorized officers or agents on the day and year first above written.

**Transmission Provider:** Idaho Power Company

Signed: Marc Patterson

Printed: Marc Patterson

Title: Leader, T&D Planning

Date: November 17, 2008

**Interconnection Customer:** Andgar Corporation

Signed Eric Powell

Printed Eric Powell

Title Project Development Coordinator

Date January 28, 2009

**Attachment A**  
**Assumptions Used in Conducting the System Impact Study**

The system impact study shall be based upon the results of the feasibility study, subject to any modifications in accordance with the standard Small Generator Interconnection Procedures, and the following assumptions:

- 1) Designation of Point of Interconnection and configuration to be studied.

*Based on the description in the feasibility study.*

- 2) Designation of alternative Points of Interconnection and configuration.

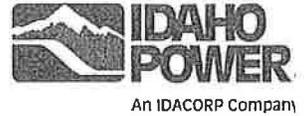
*None.*

1) and 2) are to be completed by the Interconnection Customer. Other assumptions (listed below) are to be provided by the Interconnection Customer and the Transmission Provider.

**BEFORE THE  
IDAHO PUBLIC UTILITIES COMMISSION  
CASE NO. IPC-E-12-25**

**IDAHO POWER COMPANY**

**ATTACHMENT 10**



February 2, 2009

Eric Powell  
Andgar Corporation  
6920 Salashan Pkwy. A102  
Ferndale, WA 98428  
360.366.9900

Re: Swager Farms Generator Interconnection Project # 268

Dear Eric:

Enclosed is an Executed System Impact Study Agreement between you and Idaho Power Company for the above-referenced Generator Interconnection project. Please provide any technical data required for the study, if you have not already done so.

We expect the System Impact Study to be completed by March 18, 2009. During the study period, we will keep you apprised of our progress. If you have any questions in the meantime, please contact me.

Sincerely,

A handwritten signature in black ink that reads "Marc Patterson".

Marc Patterson  
Engineering Leader, T&D Planning  
208.388.2712  
[marcpatterson@idahopower.com](mailto:marcpatterson@idahopower.com)

Enclosure: Executed System Impact Study Agreement

C: R Bishop/IPC

**BEFORE THE  
IDAHO PUBLIC UTILITIES COMMISSION**

**CASE NO. IPC-E-12-25**

**IDAHO POWER COMPANY**

**ATTACHMENT 11**

April 10, 2009

Eric Powell  
Andgar Corporation  
6920 Salashan Pkwy. A102  
Fendale, WA 98428  
306.366.9900

Subject: GINT#268 System Impact Study

Dear Mr. Powell:

The Generator Interconnect Project (GINT) #268 was reviewed for system impacts. This review identified other projects as well as other transmission system requests (TSR's) ahead of this in the queue. The results of this review determined that the impact of this project were inconclusive without the associated TSR from the energy provider.

At this time, no additional transmission system upgrades have been identified that are associated with this project, other than those upgrades identified in the Feasibility Study Report. After a contract is reached between this project and the energy provider, any required TSR will be submitted by the energy provider and a more detailed study will occur.

Sincerely,

Marc Patterson  
Engineer Leader, T&D Planning  
208.388.2712  
[marcpatterson@idahopower.com](mailto:marcpatterson@idahopower.com)

C: R Bishop/IPC

**BEFORE THE  
IDAHO PUBLIC UTILITIES COMMISSION  
CASE NO. IPC-E-12-25**

**IDAHO POWER COMPANY**

**ATTACHMENT 12**



April 24, 2009

Eric Powell  
Andgar Corporation  
6920 Salashan Pkwy. A102  
Ferndale, WA 98428  
306.366.9900

Re: Project # 268 – Swager Farms Project

Dear Eric:

Attached please find two copies of the Facility Study Agreement (FSA) that describes the design phase of the project, the responsibilities and obligations of both parties, and the work schedules required. To proceed with this application, Idaho Power must receive your executed FSA and the required deposit in order to remain in the Generator Interconnection queue. The deposit under this FSA is \$15,000 based on the estimated engineering costs provided to you in the Feasibility Study Report.

If you wish to proceed, please complete Attachment A, sign both copies and submit them along with the deposit to Idaho Power Company, attn: Rowena Bishop by June 8, 2009, otherwise your application will be deemed withdrawn. Please contact me if you have any questions.

Sincerely,

A handwritten signature in cursive script that reads "Marc Patterson".

Marc Patterson  
Leader, T&D Engineering  
Ph 208.388.2712

Encl: Two Facility Study Agreements

Cc: Candace Gentry/IPC  
Rowena Bishop/IPC  
Ed Kosydar/IPC

## Facilities Study Agreement

**THIS AGREEMENT** is made and entered into this \_\_\_\_ day of \_\_\_\_\_ 2009, by and between \_\_\_\_\_, a \_\_\_\_\_ organized and existing under the laws of the State of \_\_\_\_\_, ("Interconnection Customer,") and Idaho Power Company, a Corporation existing under the laws of the State of Idaho ("Transmission Provider"). Interconnection Customer and Transmission Provider each may be referred to as a "Party," or collectively as the "Parties."

### RECITALS

**WHEREAS**, the Interconnection Customer is proposing to develop a Small Generating Facility consistent with the Interconnection Request completed by the Interconnection Customer on September 10, 2008, and

**WHEREAS**, the Interconnection Customer desires to interconnect the Small Generating Facility with the Transmission Provider's Transmission System;

**WHEREAS**, the Transmission Provider has completed a system impact study and provided the results of said study to the Interconnection Customer; and

**WHEREAS**, the Interconnection Customer has requested the Transmission Provider to perform a facilities study to specify and estimate the cost of the equipment, engineering, procurement and construction work needed to implement the conclusions of the system impact study in accordance with Good Utility Practice to physically and electrically connect the Small Generating Facility with the Transmission Provider's Transmission System.

**NOW, THEREFORE**, in consideration of and subject to the mutual covenants contained herein the Parties agreed as follows:

- 1.0 When used in this Agreement, with initial capitalization, the terms specified shall have the meanings indicated or the meanings specified in the standard Small Generator Interconnection Procedures.
- 2.0 The Interconnection Customer elects and the Transmission Provider shall cause a facilities study consistent with the standard Small Generator Interconnection Procedures to be performed in accordance with the Open Access Transmission Tariff.
- 3.0 The scope of the facilities study shall be subject to data provided in Attachment A to this Agreement.
- 4.0 The facilities study shall specify and estimate the cost of the equipment, engineering, procurement and construction work (including overheads) needed to implement the conclusions of the system impact study(s).

The facilities study shall also identify (1) the electrical switching configuration of the equipment, including, without limitation, transformer, switchgear, meters, and other station equipment, (2) the nature and estimated cost of the Transmission Provider's

Interconnection Facilities and Upgrades necessary to accomplish the interconnection, and (3) an estimate of the time required to complete the construction and installation of such facilities.

- 5.0 The Transmission Provider may propose to group facilities required for more than one Interconnection Customer in order to minimize facilities costs through economies of scale, but any Interconnection Customer may require the installation of facilities required for its own Small Generating Facility if it is willing to pay the costs of those facilities.
- 6.0 A deposit of \$15,000 is due upon execution of this agreement by the Interconnection customer.
- 7.0 In cases where Upgrades are required, the facilities study must be completed within 45 Business Days of the receipt of this Agreement. In cases where no Upgrades are necessary and the required facilities are limited to Interconnection Facilities, the facilities study must be completed within 30 Business Days.
- 8.0 Once the facilities study is completed, a facilities study report shall be prepared and transmitted to the Interconnection Customer. Barring unusual circumstances, the facilities study must be completed and the facilities study report transmitted within 30 Business Days of the Interconnection Customer's agreement to conduct a facilities study.
- 9.0 Any study fees shall be based on the Transmission Provider's actual costs and will be invoiced to the Interconnection Customer after the study is completed and delivered and will include a summary of professional time.
- 10.0 The Interconnection Customer must pay any study costs that exceed the deposit without interest within 30 calendar days on receipt of the invoice or resolution of any dispute. If the deposit exceeds the invoiced fees, the Transmission Provider shall refund such excess within 30 calendar days of the invoice without interest.

**IN WITNESS WHEREOF**, the Parties have caused this Agreement to be duly executed by their duly authorized officers or agents on the day and year first above written.

**Transmission Provider:**  
**Idaho Power Company - Delivery**

**Interconnection Customer:**  
\_\_\_\_\_

Signed: \_\_\_\_\_

Signed: \_\_\_\_\_

Printed Name: \_\_\_\_\_

Printed Name: \_\_\_\_\_

Title: \_\_\_\_\_

Title: \_\_\_\_\_

**Data to Be Provided by the Interconnection Customer  
With the Facilities Study Agreement**

1. Provide location plan and simplified one-line diagram of the plant and station facilities. For staged projects, please indicate future generation, transmission circuits, etc.

On the one-line diagram, indicate the generation capacity attached at each metering location. (Maximum load on CT/PT)

On the one-line diagram, indicate the location of auxiliary power. (Minimum load on CT/PT) Amps

2. One set of metering is required for each generation connection to the new ring bus or existing Transmission Provider station. Number of generation connections:

\_\_\_\_\_

3. Will an alternate source of auxiliary power be available during CT/PT maintenance?  
Yes \_\_\_\_\_ No \_\_\_\_\_

4. Will a transfer bus on the generation side of the metering require that each meter set be designed for the total plant generation? Yes \_\_\_\_\_ No \_\_\_\_\_  
(Please indicate on the one-line diagram).

5. What type of control system or PLC will be located at the Small Generating Facility?

\_\_\_\_\_  
\_\_\_\_\_

6. What protocol does the control system or PLC use?

\_\_\_\_\_  
\_\_\_\_\_

7. Please provide a 7.5-minute quadrangle map of the site. Indicate the plant, station, transmission line, and property lines.

8. Physical dimensions of the proposed interconnection station:

\_\_\_\_\_

9. Bus length from generation to interconnection station:

---

10. Line length from interconnection station to Transmission Provider's Transmission System.

---

11. Tower number observed in the field. (Painted on tower leg)\*:

---

12. Number of third party easements required for transmission lines\*:

---

\* To be completed in coordination with Transmission Provider.

13. Is the Small Generating Facility located in Transmission Provider's service area?

Yes \_\_\_\_\_ No \_\_\_\_\_ If No, please provide name of local provider:

---

**14. Please provide the following proposed schedule dates:**

Begin Construction Date: \_\_\_\_\_

Generator Step-Up Transformers Date: \_\_\_\_\_  
Receive Back Feed Power

Generation Testing Date: \_\_\_\_\_

Commercial Operation Date: \_\_\_\_\_

**BEFORE THE  
IDAHO PUBLIC UTILITIES COMMISSION**

**CASE NO. IPC-E-12-25**

**IDAHO POWER COMPANY**

**ATTACHMENT 13**



June 8, 2009

Andgar Corporation  
Attn: Eric Powell  
6920 Salashan Parkway A-102  
Ferndale, WA 98248

Re: Project #268 System Impact Study Refund

Dear Mr. Powell:

Project #268 has completed the System Impact Study phase and the project has been withdrawn. As a result, we are returning the original \$2,000.00 deposit plus interest of \$24.93. Please find enclosed a check totaling \$2,024.93.

<i>Date of Request</i>	<i>Description of Requested Service</i>
2/9/09	Project #268 Swager Farms System Impact Study

If I can be of any further assistance, please call (208) 388-5736.

Sincerely,

Kelley K. Rechel

cc: Rowena Bishop, IPC

**BEFORE THE  
IDAHO PUBLIC UTILITIES COMMISSION**

**CASE NO. IPC-E-12-25**

**IDAHO POWER COMPANY**

**ATTACHMENT 14**

# The New Energy Company, LLC

---

8720 Vic Lane  
Middleton, ID 8366

Phone: 208.890.8783  
Fax: 208.585.9016  
E-mail:  
laura@thenewenergycompany.com

October 12, 2009

Rowena Bishop  
Idaho Power Company  
1221 W. State Street  
Boise ID 83702

Re: Small Generator Interconnection Applications for 2 Locations

Dear Rowena:

Please find enclosed Small Generator Interconnection Request Application Forms for two locations:

1. Double B Dairy  
1250 West 1100 South  
Murtaugh, ID 83344
2. Swager Farms  
1707 E 3800 N  
Buhl, ID 83316

New Energy plans to complete anaerobic digesters at both facilities in 2010. Please find enclosed the \$1000 deposit for each project for a total of \$2000. Please call me at 208.890.8783 with questions or if more information is required.

Thank you,



Laura Knothe, PE  
The New Energy Company, LLC

RECEIVED  
10/12/09 RB

**SMALL GENERATOR INTERCONNECTION REQUEST**  
**(Application Form)**

**Transmission Provider: IDAHO POWER COMPANY**

Designated Contact Person: Rowena Bishop  
Address: 1221 W. Idaho Street, Boise ID 83702  
Telephone Number: 208-388-2658  
Fax: 208-388-6647  
E-Mail Address: rbishop@idahopower.com

An Interconnection Request is considered complete when it provides all applicable and correct information required below.

**Preamble and Instructions**

An Interconnection Customers who request interconnection must submit this Interconnection Request by hand delivery, mail, e-mail, or fax to the Transmission Provider.

**Processing Fee or Deposit:**

If the Interconnection Request passes ALL screens of SGIP Section 2.2.1, the application may be submitted under the Fast Track Process, and the non-refundable processing fee is \$500. Please contact Idaho Power if you have any questions.

All Interconnection Requests submitted under the Study Process, whether a new submission or an Interconnection Request that did not pass the Fast Track Process, shall submit to the Transmission Provider a deposit not to exceed \$1,000 towards the cost of the feasibility study.

**Interconnection Customer Information**

Legal Name of the Interconnection Customer (or, if an individual, individual's name)

Name: Owner/Operator company development in progress

Contact Person: See Below

Mailing Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Facility Location (if different from above): \_\_\_\_\_

Telephone (Day): \_\_\_\_\_ Telephone (Evening): \_\_\_\_\_

Fax: \_\_\_\_\_ E-Mail Address: \_\_\_\_\_

Alternative Contact Information (if different from the Interconnection Customer)

Contact Name: Laura Knothe, PE

Title: Project Manager

Address: 8720 Vic Lane  
Middleton, ID 83644

Telephone (Day): 208.890.8783 Telephone (Evening): 208.890.8783

Fax: 208.585.9016 E-Mail Address: laura@thenewenergycompany.com

Application is for:  New Small Generating Facility  
 Capacity addition to Existing Small Generating Facility

If capacity addition to existing facility, please describe: NA

Will the Small Generating Facility be used for any of the following?

To Supply Power to the Interconnection Customer? Yes \_\_\_ No   
To Supply Power to Others? Yes \_\_\_ No

For installations at locations with existing electric service to which the proposed Small Generating Facility will interconnect, provide:

Idaho Power Company 2169397508  
(Local Electric Service Provider\*) (Existing Account Number\*)

[\*To be provided by the Interconnection Customer if the local electric service provider is different from the Transmission Provider]

Contact Name: \_\_\_\_\_

Title: \_\_\_\_\_

Address: \_\_\_\_\_

Telephone (Day): \_\_\_\_\_ Telephone (Evening): \_\_\_\_\_

Fax: \_\_\_\_\_ E-Mail Address: \_\_\_\_\_

Requested Point of Interconnection: 1707 E 3800 N Buhl, ID 83316

Interconnection Customer's Requested In-Service Date: July 2010

**Small Generating Facility Information**

Data apply only to the Small Generating Facility, not the Interconnection Facilities.

Energy Source: \_\_\_ Solar \_\_\_ Wind \_\_\_ Hydro \_\_\_ Hydro Type (e.g. Run-of-River): \_\_\_\_\_  
\_\_\_ Diesel \_\_\_ Natural Gas \_\_\_ Fuel Oil  Other (state type) Methane Gas

Prime Mover: \_\_\_ Fuel Cell  Recip Engine \_\_\_ Gas Turb \_\_\_ Steam Turb  
\_\_\_ Microturbine \_\_\_ PV \_\_\_ Other

Type of Generator:  Synchronous \_\_\_ Induction \_\_\_ Inverter

Generator Nameplate Rating: 1200 kW (Typical) Generator Nameplate kVAR: \_\_\_\_\_

Interconnection Customer or Customer-Site Load: None kW (if none, so state)

Typical Reactive Load (if known): NA

Maximum Physical Export Capability Requested: 1200 kW

List components of the Small Generating Facility equipment package that are currently certified:

Equipment Type	Certifying Entity
1. _____	_____
2. _____	_____
3. _____	_____
4. _____	_____
5. _____	_____

Is the prime mover compatible with the certified protective relay package? \_\_\_ Yes \_\_\_ No

Generator (or solar collector)

Manufacturer, Model Name & Number: (2) Caterpillar G3512 Gas Gensets @ 600kW

Version Number: \_\_\_\_\_

Nameplate Output Power Rating in kW: (Summer) 1200 (Winter) 1200

Nameplate Output Power Rating in kVA: (Summer) 1500 (Winter) 1500

Individual Generator Power Factor

Rated Power Factor: Leading: \_\_\_\_\_ Lagging: 0.8

Total Number of Generators in wind farm to be interconnected pursuant to this NA

Interconnection Request: \_\_\_\_\_ Elevation: \_\_\_\_\_ Single phase \_\_\_ Three phase

Inverter Manufacturer, Model Name & Number (if used): NA

List of adjustable set points for the protective equipment or software: \_\_\_\_\_

**Note: A completed Power Systems Load Flow data sheet must be supplied with the Interconnection Request.**

**Small Generating Facility Characteristic Data (for inverter-based machines)**

Max design fault contribution current: NA Instantaneous     or RMS?    

Harmonics Characteristics: NA

Start-up requirements: NA

**Small Generating Facility Characteristic Data (for rotating machines)**

RPM Frequency: 1200/60Hz

(\*) Neutral Grounding Resistor (If Applicable):                     

Synchronous Generators:

Direct Axis Synchronous Reactance,  $X_d$ :            P.U.

Direct Axis Transient Reactance,  $X'_d$ :            P.U.

Direct Axis Subtransient Reactance,  $X''_d$ :            P.U.

Negative Sequence Reactance,  $X_2$ :            P.U.

Zero Sequence Reactance,  $X_0$ :            P.U.

KVA Base:                                     

Field Volts:                                     

Field Amperes:                                     

Induction Generators:

Motoring Power (kW):                                     

$I^2t$  or K (Heating Time Constant):                                     

Rotor Resistance,  $R_r$ :                                     

Stator Resistance,  $R_s$ :                                     

Stator Reactance,  $X_s$ :                                     

Rotor Reactance,  $X_r$ :                                     

Magnetizing Reactance,  $X_m$ :                                     

Short Circuit Reactance,  $X_d''$ :                                     

Exciting Current:                                     

Temperature Rise:                                     

Frame Size:                                     

Design Letter:                                     

Reactive Power Required In Vars (No Load):                                     

Reactive Power Required In Vars (Full Load):                                     

Total Rotating Inertia, H:                                      Per Unit on kVA Base

Note: Please contact the Transmission Provider prior to submitting the Interconnection Request to determine if the specified information above is required.

Excitation and Governor System Data for Synchronous Generators Only

Provide appropriate IEEE model block diagram of excitation system, governor system and power system stabilizer (PSS) in accordance with the regional reliability council criteria. A PSS may be determined to be required by applicable studies. A copy of the manufacturer's block diagram may not be substituted.

Interconnection Facilities Information

Will a transformer be used between the generator and the point of common coupling?  Yes \_\_\_ No

Will the transformer be provided by the Interconnection Customer?  Yes \_\_\_ No

Transformer Data (If Applicable, for Interconnection Customer-Owned Transformer):

Is the transformer: \_\_\_ single phase \_\_\_ three phase? Size: \_\_\_ kVA  
 Transformer Impedance: \_\_\_ % on \_\_\_ kVA Base

If Three Phase:

Transformer Primary: \_\_\_ Volts \_\_\_ Delta \_\_\_ Wye \_\_\_ Wye Grounded  
 Transformer Secondary: \_\_\_ Volts \_\_\_ Delta \_\_\_ Wye \_\_\_ Wye Grounded  
 Transformer Tertiary: \_\_\_ Volts \_\_\_ Delta \_\_\_ Wye \_\_\_ Wye Grounded

Transformer Fuse Data (If Applicable, for Interconnection Customer-Owned Fuse):

(Attach copy of fuse manufacturer's Minimum Melt and Total Clearing Time-Current Curves)

Manufacturer: \_\_\_ Type: \_\_\_ Size: \_\_\_ Speed: \_\_\_

Interconnecting Circuit Breaker (if applicable):

Manufacturer: \_\_\_ Type: \_\_\_  
 Load Rating (Amps): \_\_\_ Interrupting Rating (Amps): \_\_\_ Trip Speed (Cycles): \_\_\_

Interconnection Protective Relays (If Applicable):

If Microprocessor-Controlled:

List of Functions and Adjustable Setpoints for the protective equipment or software:

Setpoint Function	Minimum	Maximum
1. See attached SEL-547 Relay Settings Sheet	_____	_____
2. _____	_____	_____
3. _____	_____	_____
4. _____	_____	_____
5. _____	_____	_____
6. _____	_____	_____

**If Discrete Components:**

(Enclose Copy of any Proposed Time-Overcurrent Coordination Curves)

Manufacturer: _____	Type: _____	Style/Catalog No.: _____	Proposed Setting: _____
Manufacturer: _____	Type: _____	Style/Catalog No.: _____	Proposed Setting: _____
Manufacturer: _____	Type: _____	Style/Catalog No.: _____	Proposed Setting: _____
Manufacturer: _____	Type: _____	Style/Catalog No.: _____	Proposed Setting: _____
Manufacturer: _____	Type: _____	Style/Catalog No.: _____	Proposed Setting: _____

**Current Transformer Data (If Applicable):**

(Enclose Copy of Manufacturer's Excitation and Ratio Correction Curves)

Manufacturer: \_\_\_\_\_  
Type: \_\_\_\_\_ Accuracy Class: \_\_\_ Proposed Ratio Connection: \_\_\_\_\_

Manufacturer: \_\_\_\_\_  
Type: \_\_\_\_\_ Accuracy Class: \_\_\_ Proposed Ratio Connection: \_\_\_\_\_

**Potential Transformer Data (If Applicable):**

Manufacturer: \_\_\_\_\_  
Type: \_\_\_\_\_ Accuracy Class: \_\_\_ Proposed Ratio Connection: \_\_\_\_\_

Manufacturer: \_\_\_\_\_  
Type: \_\_\_\_\_ Accuracy Class: \_\_\_ Proposed Ratio Connection: \_\_\_\_\_

**General Information**

Enclose copy of site electrical one-line diagram showing the configuration of all Small Generating Facility equipment, current and potential circuits, and protection and control schemes. This one-line diagram must be signed and stamped by a licensed Professional Engineer if the Small Generating Facility is larger than 50 kW. Is One-Line Diagram Enclosed?  Yes \_\_\_ No

Enclose copy of any site documentation that indicates the precise physical location of the proposed Small Generating Facility (e.g., USGS topographic map or other diagram or documentation).

Proposed location of protective interface equipment on property (include address if different from the Interconnection Customer's address) 1707 E 3800 N Buhl ID 83316

Enclose copy of any site documentation that describes and details the operation of the protection and control schemes. Is Available Documentation Enclosed?  Yes \_\_\_ No

Enclose copies of schematic drawings for all protection and control circuits, relay current circuits, relay potential circuits, and alarm/monitoring circuits (if applicable).  
Are Schematic Drawings Enclosed? \_\_\_ Yes \_\_\_ No

**Applicant Signature**

I hereby certify that, to the best of my knowledge, all the information provided in this Interconnection Request is true and correct.

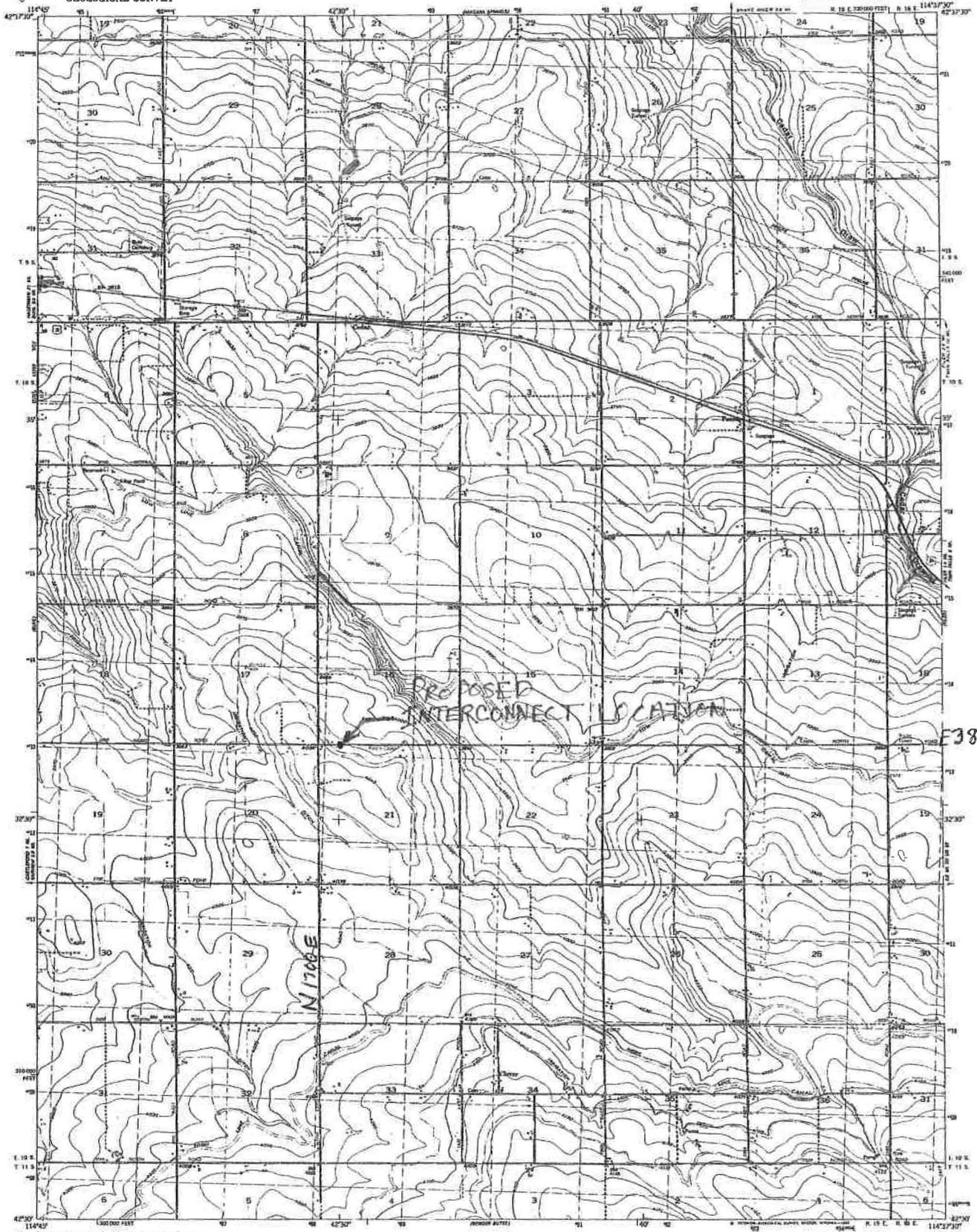
For Interconnection Customer:

Signed

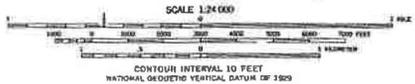
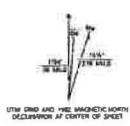
 Date: 10/9/09

Printed

Laura Knothe, PE



Produced by the United States Geological Survey  
Covered by USGS and NGS/NOAA  
Compiled from aerial photographs taken 1946. Information shown  
in this map has been updated from aerial photographs taken 1967 and  
1970. Contours may not show  
minor localized features and previously mapped contours.  
North American Datum of 1983 (NAD 83). Projection and  
1000-foot grid scale. State Coordinate System,  
central zone (Nevada Meridian)  
1000-meter Universal Transverse Mercator grid, zone 11  
The difference between NAD 83 and North American Datum of  
1983 (NAD 26) for 7.5 minute quadrangles is given in USGS  
Bulletin 1159. The NAD 83 is shown by dashed corner ticks

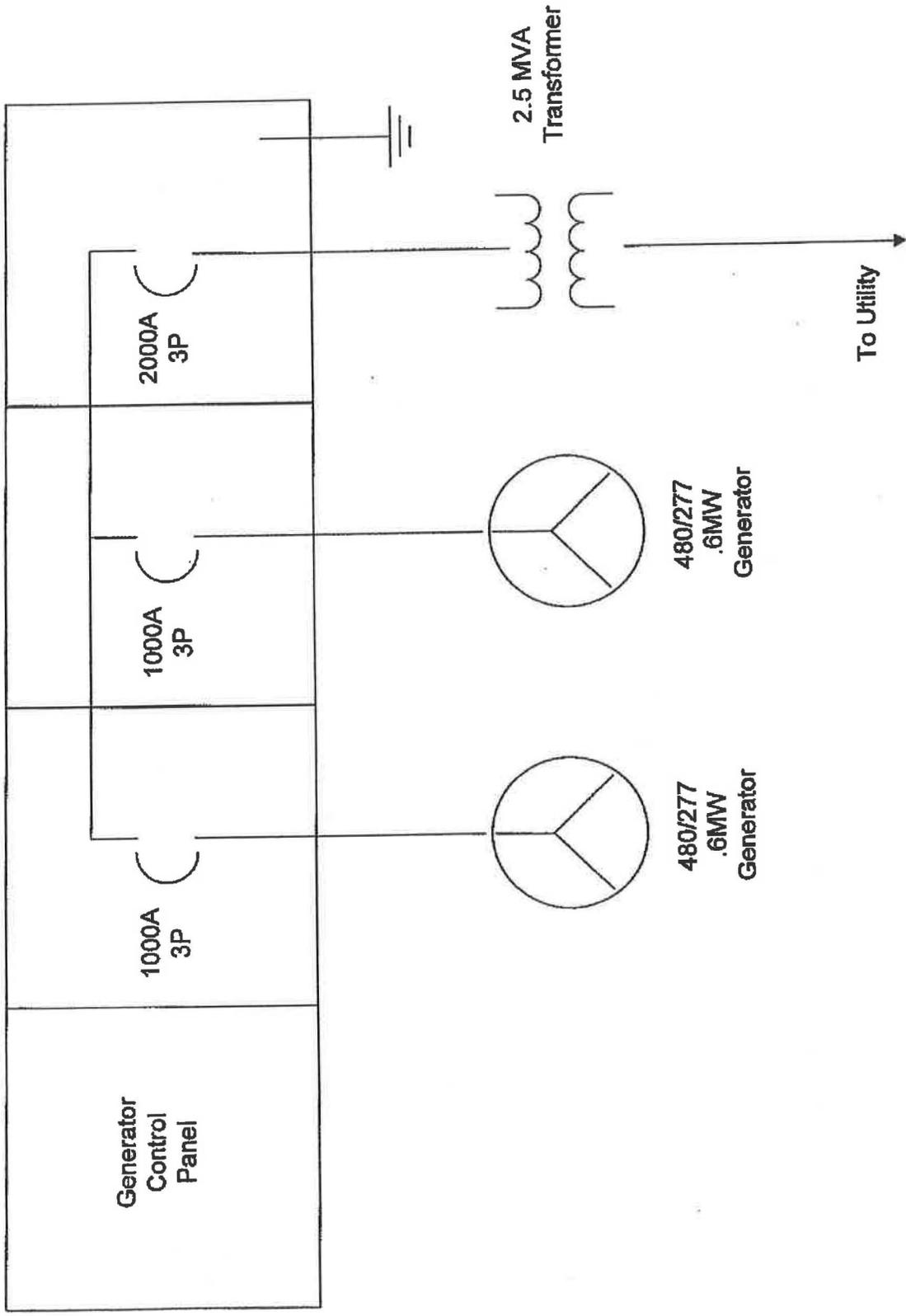


ROAD CLASSIFICATION

Primary highway, hard surface	Light-duty road, hard or improved surface
Secondary highway, hard surface	Unimproved road
Interstate Route	U. S. Route
	State Route

THIS MAP COMPLIES WITH NATIONAL MAP REVISION SYMBOLS  
FOR SALE BY U. S. GEOLOGICAL SURVEY, DENVER, COLORADO 80262, OR RESTON, VIRGINIA 22092  
A FOLDER CONTAINING TOPOGRAPHIC MAPS AND SERIES IS AVAILABLE ON REQUEST

CLOVER, IDAHO  
42114-00-004  
1981  
REVISED 1983  
DMA 3009 & DM-GENES 4870



# Appendix C

## SEL-547 Relay EZ Settings Sheet

### EZ Settings (use SH0 E and SET E commands)

#### General Settings

Relay Identifier (30 characters)	<b>RELID</b>	= _____
Terminal Identifier (30 characters)	<b>TERMI</b>	= _____
Current Transformer Ratio (1–1000)	<b>CRATIO</b>	= _____
Nominal Input Voltage, line-to-line (208–480 Vac)	<b>NOMV</b>	= _____
Three-Phase Voltage Connection (WYE); fixed setting	<b>3PCONN</b>	= _____
Nominal System Frequency (50, 60 Hz)	<b>FREQ</b>	= _____
Phase Rotation (ABC, ACB)	<b>ROTATE</b>	= _____
Date Format (MDY, YMD)	<b>DATE</b>	= _____
LED Flash Interval (OFF, 5, 10, 15, 30, 60 sec.)	<b>LEDFL</b>	= _____

#### Voltage Element Settings (device 27/59; 4 elements)

Undervoltage 1 Pickup (OFF, 50–100%); see Note 1	<b>27UV1P</b>	= _____
Undervoltage 1 Time Delay (0.00–16000 cyc)	<b>27UV1D</b>	= _____
Undervoltage 2 Pickup (OFF, 50–100%); see Note 1	<b>27UV2P</b>	= _____
Undervoltage 2 Time Delay (0.00–16000 cyc)	<b>27UV2D</b>	= _____
Overvoltage 1 Pickup (OFF, 50–144%); see Note 1	<b>59OV1P</b>	= _____
Overvoltage 1 Time Delay (0.00–16000 cyc)	<b>59OV1D</b>	= _____
Overvoltage 2 Pickup (OFF, 50–144%); see Note 1	<b>59OV2P</b>	= _____
Overvoltage 2 Time Delay (0.00–16000 cyc)	<b>59OV2D</b>	= _____

#### Frequency Element Settings (device 81; 4 elements)

Undervoltage Block Pickup (50–100%); see Note 1	<b>27BLKP</b>	= _____
Over- and Underfrequency 1 Pickup (OFF, 40.1–69.9 Hz)	<b>81OU1P</b>	= _____
Over- and Underfrequency 1 Time Delay (5.00–16000 cyc)	<b>81OU1D</b>	= _____
Over- and Underfrequency 2 Pickup (OFF, 40.1–69.9 Hz)	<b>81OU2P</b>	= _____

Over- and Underfrequency 2 Time Delay (5.00–16000 cyc)	<b>81OU2D</b>	= _____
Over- and Underfrequency 3 Pickup (OFF, 40.1–69.9 Hz)	<b>81OU3P</b>	= _____
Over- and Underfrequency 3 Time Delay (5.00–16000 cyc)	<b>81OU3D</b>	= _____
Over- and Underfrequency 4 Pickup (OFF, 40.1–69.9 Hz)	<b>81OU4P</b>	= _____
Over- and Underfrequency 4 Time Delay (5.00–16000 cyc)	<b>81OU4D</b>	= _____

**Directional Power Element Settings** (device 32; 1 element)

Three-Phase Power Pickup (OFF, 40–900 Watts, secondary)	<b>32P</b>	= _____
Power Element, Forward or Reverse (F, R)	<b>32FR</b>	= _____
Power Element Time Delay (0.00–16000 cyc)	<b>32D</b>	= _____

**Synchronism Check Element Settings** (device 25; 1 element)

Difference Voltage Pickup (OFF, 1–50%); see <i>Note 1</i>	<b>25DIFP</b>	= _____
Maximum Slip Frequency (0.1–0.5 Hz)	<b>25SLP</b>	= _____
Maximum Angle (2–60 degrees)	<b>25ANG</b>	= _____

**BEFORE THE  
IDAHO PUBLIC UTILITIES COMMISSION  
CASE NO. IPC-E-12-25**

**IDAHO POWER COMPANY**

**ATTACHMENT 15**

October 19, 2009

Laura Knothe, PE  
The New Energy Company  
8720 Vic Lane  
Middleton, ID 83644

Re: Swager Farms- Project # 307

Dear Laura:

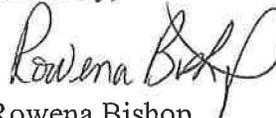
Thank you for your Generator Interconnection application for the Rock Creek Dairy Project to be connected to the Idaho Power system at Twin Falls County, Idaho (see attached copy). Since we have received all of the required materials, this application is now considered complete. As you may be aware, we are required to post certain information to our OASIS (Open Access Same Time Information) website. Please refer to the website periodically to view a list of current projects at <http://www.oatioasis.com/IPCO/index.html> under GENERATOR INTERCONNECTION INFORMATION folder, on the left side of the screen.

For your reference, enclosed is a copy of Idaho Power Company's Requirements for Generation Interconnection which may or may not apply to your project. More information about the Generation Interconnection process can be found on the Idaho Power website at: <http://www.idahopower.com/AboutUs/BusinessToBusiness/GenerationInterconnect/default.cfm>

At this time, Idaho Power Company will assign a planning engineer for this project, and we will contact you in the near future to schedule a Scoping Meeting. For your review, I am attaching a copy of the standard Interconnection Feasibility Study Agreement that needs to be executed by you soon after our Scoping Meeting. Please feel free to contact me with your questions about the Generator Interconnection Process anytime.

I will forward this application to our T&D Planning Leader, Marc Patterson, who will be evaluating your request.

Sincerely,



Rowena Bishop  
Operations Analyst  
Ph 208-388-2658

Encl Application  
Idaho Power Company's Requirements for Generation Interconnection  
Standard Interconnection Feasibility Study Agreement

Cc: Marc Patterson/IPC (via email)

**BEFORE THE  
IDAHO PUBLIC UTILITIES COMMISSION**

**CASE NO. IPC-E-12-25**

**IDAHO POWER COMPANY**

**ATTACHMENT 16**

## Feasibility Study Agreement

**THIS AGREEMENT** is made and entered into this 27 day of October 2009 by and between The New Energy Company, LLC, a LLC organized and existing under the laws of the State of Idaho, ("Interconnection Customer,") and Idaho Power Company a Corporation existing under the laws of the State of Idaho ("Transmission Provider"). Interconnection Customer and Transmission Provider each may be referred to as a "Party," or collectively as the "Parties."

### RECITALS

**WHEREAS**, Interconnection Customer is proposing to develop a Small Generating Facility or generating capacity addition to an existing Small Generating Facility consistent with the Interconnection Request completed by Interconnection Customer on October 12, 2009, also known as Project # 307; and

**WHEREAS**, Interconnection Customer desires to interconnect the Small Generating Facility with the Transmission Provider's Transmission System; and

**WHEREAS**, Interconnection Customer has requested the Transmission Provider to perform a feasibility study to assess the feasibility of interconnecting the proposed Small Generating Facility with the Transmission Provider's Transmission System, and of any Affected Systems;

**NOW, THEREFORE**, in consideration of and subject to the mutual covenants contained herein the Parties agreed as follows:

- 1.0 When used in this Agreement, with initial capitalization, the terms specified shall have the meanings indicated or the meanings specified in the standard Small Generator Interconnection Procedures.
- 2.0 The Interconnection Customer elects and the Transmission Provider shall cause to be performed an interconnection feasibility study consistent the standard Small Generator Interconnection Procedures in accordance with the Open Access Transmission Tariff.
- 3.0 The scope of the feasibility study shall be subject to the assumptions set forth in Attachment A to this Agreement.
- 4.0 The feasibility study shall be based on the technical information provided by the Interconnection Customer in the Interconnection Request, as may be modified as the result of the scoping meeting. The Transmission Provider reserves the right to request additional technical information from the Interconnection Customer as may reasonably become necessary consistent with Good Utility Practice during the course of the feasibility study and as designated in accordance with the standard Small Generator Interconnection Procedures. If the Interconnection Customer modifies its Interconnection Request, the time to complete the feasibility study may be extended by agreement of the Parties.

- 5.0 In performing the study, the Transmission Provider shall rely, to the extent reasonably practicable, on existing studies of recent vintage. The Interconnection Customer shall not be charged for such existing studies; however, the Interconnection Customer shall be responsible for charges associated with any new study or modifications to existing studies that are reasonably necessary to perform the feasibility study.
- 6.0 The feasibility study report shall provide the following analyses for the purpose of identifying any potential adverse system impacts that would result from the interconnection of the Small Generating Facility as proposed:
- 6.1 Initial identification of any circuit breaker short circuit capability limits exceeded as a result of the interconnection;
  - 6.2 Initial identification of any thermal overload or voltage limit violations resulting from the interconnection;
  - 6.3 Initial review of grounding requirements and electric system protection; and
  - 6.4 Description and non-bonding estimated cost of facilities required to interconnect the proposed Small Generating Facility and to address the identified short circuit and power flow issues.
- 7.0 The feasibility study shall model the impact of the Small Generating Facility regardless of purpose in order to avoid the further expense and interruption of operation for reexamination of feasibility and impacts if the Interconnection Customer later changes the purpose for which the Small Generating Facility is being installed.
- 8.0 The study shall include the feasibility of any interconnection at a proposed project site where there could be multiple potential Points of Interconnection, as requested by the Interconnection Customer and at the Interconnection Customer's cost.
- 9.0 In lieu of Feasibility Study deposit, Interconnection Customer agrees that study funds will be drawn from the application fee for the performance of the Interconnection Feasibility Study.

Transmission Provider shall charge and Interconnection Customer shall pay the actual costs of the Interconnection Feasibility Study. Any difference between the deposit and the actual cost of the study shall be paid by or refunded to Interconnection Customer, as appropriate.

- 10.0 Once the feasibility study is completed, a feasibility study report shall be prepared and transmitted to the Interconnection Customer. Barring unusual circumstances, the feasibility study must be completed and the feasibility study report transmitted within 30 business days of the Interconnection Customer's agreement to conduct a feasibility study.
- 11.0 Any study fees shall be based on the Transmission Provider's actual costs and will be invoiced to the Interconnection Customer after the study is completed and delivered and will include a summary of professional time.
- 12.0 The Interconnection Customer must pay any study costs that exceed the deposit without interest within 30 calendar days on receipt of the invoice or resolution of any dispute. If the deposit exceeds the invoiced fees, the Transmission Provider shall refund such excess within 30 calendar days of the invoice without interest.

**IN WITNESS WHEREOF**, the Parties have caused this Agreement to be duly executed by their duly authorized officers or agents on the day and year first above written.

**Transmission Provider:**

Idaho Power Company – Delivery

Signed Marc Patterson

Printed Marc Patterson

Title Engineering Leader

Date 10/27/09

**Interconnection Customer:**

The New Energy Company, LLC

Signed Laura Knothe PE

Printed Laura Knothe PE

Title Managing Partner

Date 10/27/09

**Attachment A to Feasibility Study Agreement**

**Assumptions Used in Conducting the Feasibility Study**

The feasibility study will be based upon the information set forth in the Interconnection Request and agreed upon in the scoping meeting held on 10/27/09:

- 1) Designation of Point of Interconnection and configuration to be studied.

Claver 12 12.5kW adjacent to 1707 E 3800 N; Buhl

- 2) Designation of alternative Points of Interconnection and configuration.
- 

1) and 2) are to be completed by the Interconnection Customer. Other assumptions (listed below) are to be provided by the Interconnection Customer and the Transmission Provider.

**BEFORE THE  
IDAHO PUBLIC UTILITIES COMMISSION  
CASE NO. IPC-E-12-25**

**IDAHO POWER COMPANY**

**ATTACHMENT 17**

**GENERATOR INTERCONNECTION  
FEASIBILITY STUDY**

for integration of the proposed

**PROJECT #307**

to the

**IDAHO POWER COMPANY ELECTRICAL SYSTEM**

for the

**INTERCONNECTION CUSTOMER**

**FINAL REPORT  
JANUARY 13, 2010**

## 1.0 Introduction

The Generation Interconnection Customer has contracted with Idaho Power Company (IPCo) to perform a Generator Interconnection Feasibility Study for the integration of a proposed 1.2 MW dairy digester Project (project #307). The location of the project is in Idaho Power's Southern Idaho service territory in Twin Falls County, Idaho.

This report documents the basis for and the results of this Feasibility Study for the Generation Interconnection Customer. It describes the proposed project, the study cases used, the impact of associated projects, and results of all work in the areas of concern.

## 2.0 Summary

The proposed project is a 1.2 MW biogas generation project consisting of two 600 kW synchronous generators. The proposed Point of Interconnection (POI) for the generating facility with the IPCo system is in Twin Falls County, Idaho at the 12.5 kV distribution level.

This feasibility study indicates the existing local transmission system does currently have the capacity for the 1.2 MW output of the digester project.

The upgrades to this feeder needed to connect this project include a capacitor bank installation, as well as a generation interconnection and protection package. The estimated cost to interconnect this generation project to Idaho Power's system is **\$234,800**.

## 3.0 Scope of Interconnection Feasibility Study

The Interconnection Feasibility Study was done and prepared in accordance with Idaho Power Company Standard Generator Interconnection Procedures, to provide a preliminary evaluation of the feasibility of the interconnection of the proposed generating project to the Idaho Power system. As listed in the Interconnection Feasibility Study agreement, the Interconnection Feasibility Study report provides the following information:

- preliminary identification of any circuit breaker short circuit capability limits exceeded as a result of the interconnection;
- preliminary identification of any thermal overload or voltage limit violations resulting from the interconnection; and
- preliminary description and non-binding estimated cost of facilities required to interconnect the Small Generating Facility to the Distribution System and to address the identified short circuit and power flow issues.

All other proposed Generation projects prior to this project in the Generator Interconnect queue were considered in this study. A current list of these projects can be found on the Idaho Power web site as follows:

<http://www.oatioasis.com/ipco/index.html>.

#### **4.0 Description of Proposed Generating Project**

Project #307 proposes to connect to the IPCo distribution system for an injection of 1.2 MW (maximum project output) using two 600 kW synchronous generator.

#### **5.0 Description of Existing Substation Facilities**

The distribution substation that serves this area is located approximately three and a half miles south and east of the POI. The existing substation transformer is a 46:12.5 kV transformer that has adequate capacity for this project.

The associated feeder breaker at the substation is rated for use at 12.5 kV. This breaker's interrupting capabilities are not exceeded with the added generation.

#### **6.0 Description of Existing Distribution Facilities**

The distribution feeder serving this area is grounded wye and operates at 12.5 kV. There is adequate capacity on this feeder to serve this project. However, the project will have to run at a power factor between 90% and 98% lagging when at full output. In other words, the generation facility will have to absorb between 240 kVAR and 580 kVAR when operating at full output (1200 kW) throughout the year.

A capacitor bank will have to be added for compensation purposes due to the facilities lagging power factor. Since it will be running at a max power factor of 90%, 600 kVAR will need to be produced. That VAR flow will come from a 600 kVAR capacitor bank located a couple spans to the west of COVR substation. This location eliminates high voltage concerns which would have become an issue if the bank were placed closer to the POI.

Since the biogas generation project is served by a feeder that also serves other Idaho Power customers, and to minimize the risk of islanding the generator with local load, a generation interconnection and protection package will be required at the POI. This package includes a 12.5 kV recloser, controls, CTs, PTs, and communications per Idaho Power's standard for generators connected to the distribution system.

#### **7.0 Description of Existing Transmission Facilities**

The transmission line that serves this area is a 46 kV radial tap. With the addition of this generation project no capacity related problems occur on this tap. Therefore, no improvements need to be made on the immediate transmission system. However, high voltage becomes a problem during periods of light loading (fall and spring). To avoid this problem the generators will need to lag at a 90% power factor at these times. In the summer and winter the generators can lag up to a 98% power factor as indicated previously.

### 8.0 Description and Cost Estimate of Required Facility Upgrades

The estimated costs to interconnect the 1.2 MW biogas generation project in Twin Falls County, Idaho is \$234,800. These upgrades are listed in the following Table.

Description	Estimated Cost
600 kVAR capacitor bank	\$9,800
Generation Interconnection Protection Package (Includes 12.47 kV recloser, controls, CTs, PTs, and communications)	\$225,000
<b>Total Estimated Cost</b>	<b>\$234,800</b>

Table 1: Cost Estimates

These cost estimates include direct equipment and installation labor costs, indirect labor costs and overheads. (Tax Gross Up has not been included presuming construction of interconnection facilities will not qualify under IRS rules as a taxable event. Allowance for funds used during construction (AFUDC) has not been included in the cost estimates since it is assumed that IPC will be provided up-front funding by the Project). These are cost estimates only and final charges to the customer will be based on the actual construction costs incurred.

### 9.0 Description of Operating Requirements

In addition to the upgrades listed in section 8.0 of this report, the proposed project must meet several operating requirements. The project must be controlled to operate at a lagging power factor of 90% during the fall and spring months and between 90% and 98% during the summer and winter months or meet the voltage schedule provided by Idaho Power. Voltage flicker at startup and during operation will be limited to less than 5% as measured at the point of interconnection. For this to occur, the current cannot exceed 46 Amps during start up at the 12.5 kV voltage level. This forces the generating facility to start the generators separately. The project is required to comply with the applicable Voltage and Current Distortion Limits found in IEEE Standard 519-1992 *IEEE Recommended Practices and Requirements for Harmonic Control in Electrical Power Systems*. The project must also limit the ground fault current at the point of interconnection to 20 Amps. See Appendix A for more details

## 10.0 Conclusions

The requested interconnection of project #307 to IPCo's system was studied. The results of this study indicate that it is feasible to connect this project to the existing IPCo system with the upgrades outlined above.

## **APPENDIX A**

### **A-1.0 Method of Study**

The Feasibility Study plan inserts the Project up to the maximum requested injection into the selected Western Electric Coordinating Council (WECC) power flow case and then, using Power World Simulator Version 12, examines the impacts of the new resource on Idaho Power's transmission system (lines, transformers, etc.) within the study area under various operating/outage scenarios. The WECC and Idaho Power reliability criteria and Idaho Power operating procedures were used to determine the acceptability of the configurations considered. The WECC case is a recent case modified to simulate stressed but reasonable pre-contingency energy transfers utilizing the IPC system. For distribution feeder analysis, Idaho Power utilizes Advantica's SynerGEE Software.

### **A-2.0 Acceptability Criteria**

The following acceptability criteria were used in the power flow analysis to determine under which system configuration modifications may be required:

The continuous rating of equipment is assumed to be the normal thermal rating of the equipment. This rating will be as determined by the manufacturer of the equipment or as determined by Idaho Power. Less than or equal to 100% of continuous rating is acceptable.

Idaho Power's Voltage Operating Guidelines were used to determine voltage requirements on the system. This states, in part, that distribution voltages, under normal operating conditions, are to be maintained within plus or minus 5% (0.05 per unit) of nominal everywhere on the feeder. Therefore, voltages greater than or equal to 0.95 pu voltage and less than or equal to 1.05 pu voltage are acceptable.

Voltage flicker during starting or stopping the generator is limited to 5% as measured at the point of interconnection, per Idaho Power's T&D Advisory Information Manual.

Idaho Power's Reliability Criteria for System Planning was used to determine proper transmission system operation.

All customer generation must meet IEEE 519 and ANSI C84.1 Standards.

All other applicable national and Idaho Power standards and prudent utility practices were used to determine the acceptability of the configurations considered.

The stable operation of the system requires an adequate supply of volt-amperes reactive (VARs) to maintain a stable voltage profile under both steady-state and dynamic system conditions. An inadequate supply of VARs will result in voltage decay or even collapse under the worst conditions.

Equipment/line/path ratings used will be those that are in use at the time of the study or that are represented by IPC upgrade projects that are either currently under construction or whose budgets have been approved for construction in the near future. All other potential future ratings are outside the scope of this study. Future transmission changes may, however, affect current facility ratings used in the study.

### **A-3.0 Grounding Guidance**

Idaho Power Company (IPC) requires interconnected transformers to limit their ground fault current to 20 amps at the point of interconnection.

### **A-4.0 Electrical System Protection Guidance**

IPC requires electrical system protection per Requirements for Generation Interconnections found on the Idaho Power Web site, <http://www.idahopower.com/aboutus/business/generationInterconnect/>.

### **A-5.0 WECC Coordinated Off-Nominal Frequency Load Shedding and Restoration Requirements**

IPC requires frequency operational limits to adhere to WECC Under-frequency and Over-frequency Limits per the WECC Coordinated Off-Nominal Frequency Load Shedding and Restoration Requirements available upon request.

**BEFORE THE  
IDAHO PUBLIC UTILITIES COMMISSION  
CASE NO. IPC-E-12-25**

**IDAHO POWER COMPANY**

**ATTACHMENT 18**

January 13, 2010

Laura Knothe  
The New Energy Company  
8720 Vic Lane  
Middleton, ID 83644

RE: Swager Farms, Double B Dairy and Rock Creek Dairy- Project #s 307, 308, 309

Dear Ms. Knothe:

Enclosed are the Final Feasibility Study Reports for the above-referenced projects. The feasibility analysis indicates that the system is capable of integrating your generator at the proposed location. However, the study does not provide any transmission rights which may be required for the sale of energy from this project. It is recommended that you contact Idaho Power's Power Supply Department to begin the study process for the delivery of energy from this project. Additional network upgrades may be required which could have a significant financial impact. If you have any comments to the draft report, please contact me as soon as possible.

Since no System Impact Study is required, I have enclosed two (2) copies of the Facility Study Agreement (FSA) for the above-referenced projects. In order to proceed with these applications, Idaho Power must receive your agreement to proceed with a Facility Study by executing both copies of each FSA and submitting completed Attachments, along with the required deposit in order to remain in the Generator Interconnection queue. The deposit under the FSA is based on the estimated engineering costs provided to you in the Feasibility Study Reports. The required deposits are:

#307	\$11,740.00	#308	\$11,250.00	#309	\$17,760.00
------	-------------	------	-------------	------	-------------

If you wish to proceed, please sign both copies of each FSA and submit them along with the deposit(s) to Idaho Power Company, attn: Rowena Bishop by March 1, 2010, otherwise your application will be deemed withdrawn. Please contact me if you have any questions.

Sincerely,



Marc Patterson  
Engineering Leader, T&D Planning  
Ph. 208.388.2712

Encl: Final Feasibility Study Reports - #307, #308, #309  
2 copies - Facility Study Agreement #307  
2 copies - Facility Study Agreement #308  
2 copies - Facility Study Agreement #309

C: Chris Punt/IPC  
Ed Kosydar/IPC

**BEFORE THE  
IDAHO PUBLIC UTILITIES COMMISSION  
CASE NO. IPC-E-12-25**

**IDAHO POWER COMPANY**

**ATTACHMENT 19**

March 3, 2010

**Randy C. Allphin**  
Sr. Energy Contract Coordinator  
Tel: (208) 388-2614  
[rallphin@idahopower.com](mailto:rallphin@idahopower.com)

The New Energy Company LLC  
Attn: Laura Knothe  
8720 Vic Lane  
Middleton ID 83644

E-mail Copy: [laura@thenewenergycompany.com](mailto:laura@thenewenergycompany.com)

RE: Letter of Understanding  
Swagger Farms Dairy - Proposed Anaerobic Digester Project

Ms. Knothe,

Summarized below is a brief outline of the purchase power agreement, interconnection process and transmission capacity requirements for your proposed generation project.

Purchase Power Agreement

The project you have described appears to be eligible for a purchase power agreement under the guidelines for a Qualifying Facility as defined by the Public Utilities Regulatory Policies Act of 1978 (PURPA). At the time you are ready to proceed with a purchase power agreement for this project, Idaho Power will prepare a purchase power agreement that complies with the current rules and regulations that govern these PURPA agreements, any draft purchase power agreements previously provided to you for review must be updated to include current rules and regulations.

Prior to Idaho Power executing a purchase power agreement it will be required that you have:

- 1.) Provided documentation that substantiates that the project has filed for interconnection and is in compliance with any payments and/or other requirements specified in the Interconnection process for this project and;

- 2.) Received and accepted an interconnection feasibility study for this project and;
- 3.) Returned a signed copy of this letter of understanding and all of the required information to enable Idaho Power to file an application requesting transmission capacity for this project. Completion of the enclosed Transmission Capacity Application Questionnaire will provide the majority of this information and;
- 4.) Confirmation that the results of the initial transmission capacity application are known and the project accepts these results and intends to continue with the development of the project including, if applicable, execution of a Network Resource Integration Study Agreement in the form enclosed herein.

#### Interconnection and Transmission Capacity

Your project will be responsible for all costs of physically interconnecting the project to the Idaho Power electrical system and any costs associated with acquiring adequate firm transmission capacity on the Idaho Power transmission system to enable the project's energy to be delivered to Idaho Power customers.

#### Interconnection

Your project will be required to complete the interconnection process and execute a Generation Interconnection Agreement ("GIA").

#### Transmission Capacity

To sell your project's energy to Idaho Power, your project must be designated as a Network Resource ("DNR").

In order for this project to achieve DNR status, Idaho Power is required to make a request (complete and file an application) and be granted firm transmission capacity from the Idaho Power delivery business unit ("Delivery") to move your project's energy from the physical interconnection point to Idaho Power customers. In accordance with various rules and regulations, the project must be granted DNR status no later than 60 days prior to the project delivering any energy to Idaho Power.

Idaho Power will begin this firm transmission capacity application process only after the project has returned a signed copy of this letter of understanding and all of the information required for Idaho Power to file this application (see attached Transmission Capacity Application Questionnaire).

After filing a complete firm transmission capacity application with Delivery, Idaho Power will receive notification back from Delivery within 30 days that: (a) adequate transmission capacity is available for this project without the need to construct upgrades; or (b) a transmission capacity system impact study is required to determine the available transmission capacity and/or required upgrades; or (c) a statement of the required transmission upgrades and the associated costs. Idaho Power will notify the project of this response to the transmission capacity application in a timely manner after the response is received from Delivery.

If the response from Delivery is as specified in item (a) (transmission capacity is available), the project will be required to execute a purchase power agreement with Idaho Power within 30 days in order to retain this transmission capacity reservation.

If the response from Delivery is as specified in items (b) or (c) (studies required and/or upgrades required), the project will be required to execute a Network Resource Integration Study Agreement (sample copy attached for your information) and submit all required deposits or fees within 15 days after receiving notification of this requirement in order for Idaho Power to continue the transmission capacity request. This Network Resource Integration Study Agreement will specify that the project will be responsible for costs incurred by Idaho Power to perform any required studies. If, after the studies are concluded the project wishes to continue the pursuit of transmission capacity, the project will also be responsible for all transmission system upgrade costs identified within the studies. The fees and costs will be in the form of both initial deposits as well as actual costs. If at any time after executing the Network Resource Integration Study Agreement the project does not pay any required fees, or elects to stop the transmission study or upgrade process, the project shall be responsible for all costs incurred by Idaho Power in performing the studies or upgrades up to the point of termination of the Network Resource Integration Study Agreement.

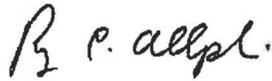
Upon successful completion of the above described transmission capacity upgrade process, a transmission capacity reservation will exist for this project. However, in order to finalize this transmission capacity reservation, a purchase power agreement with Idaho Power must be executed no later than 30 days after the transmission capacity upgrades are completed. If the purchase power agreement is not executed by this deadline, the transmission capacity reservation will be released and this process will have to be repeated if the project later requests transmission capacity.

As noted earlier, this transmission capacity acquisition and associated Network Resource designation must be completed, at the minimum, 60 days prior to the project delivering any energy to Idaho Power. In addition, the project must provide routine updates to Idaho Power of the expected online date of the generation project to ensure Idaho Power is capable of accepting the energy from the project on the actual date the project comes online.

Please return all required information to:

Idaho Power Company  
Attn: Randy C. Allphin  
P O Box 70  
Boise, ID 83707  
E-mail: rallphin@idahopower.com

Sincerely,



Randy C Allphin  
Idaho Power Company

Understood and accepted this \_\_\_\_ day of \_\_\_\_\_, 2010

Signature \_\_\_\_\_

Print Name \_\_\_\_\_

Title \_\_\_\_\_

## Transmission Capacity Application Questionnaire

*This list is the known information requirements as of the date of the letter transmitting this request. If additional information is required, Idaho Power will promptly notify the project developer of the additional information requirements.*

A. Project Name

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B. Project Location

---

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---

---

C. Project Developer

Name

---

Address

---

City / State / Zip

---

Phone Number

---

E-mail

---

D. Idaho Power Delivery Business unit Interconnection "Que" reference number (if not known, please contact the Idaho Power Interconnection group)

---

E. Evidence of the Project's good standing status in the Idaho Power Interconnection Process

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F. Copy of the Idaho Power Interconnection feasibility study and a statement from the project that the project has accepted the results of the interconnection feasibility study and is continuing the process of interconnecting and developing the generation project.

G. Maximum Capacity (MW) \_\_\_\_\_

H. Beginning day and time of energy deliveries

Day (mm/dd/yyyy) \_\_\_\_\_

Time \_\_\_\_\_

I. Ending day and time of energy deliveries

Day (mm/dd/yyyy) \_\_\_\_\_

Time \_\_\_\_\_

J. VAR capability (both leading and lagging) of all generators \_\_\_\_\_

K. Identification of the control area(s) from which the energy will originate

\_\_\_\_\_  
\_\_\_\_\_

L. List any periods of restricted operations throughout the year

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

M. Maintenance schedule

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

N. Minimum loading level of each generation unit \_\_\_\_\_

O. Normal operating level of each generation unit. \_\_\_\_\_

P. Any must-run generation unit designations required for system reliability or contractual reason

\_\_\_\_\_  
\_\_\_\_\_

Q. Approximate variable generation cost (\$/MWh) *Note – this will be estimated energy pricing from a potential purchase power agreement that this project may be eligible for.*

\_\_\_\_\_

R. If the generation resource is to be located in the Idaho Power Balancing Authority Area and if only a portion of the resource output is to be designated as a Network Resource, then explain arrangements governing sale and delivery of additional output to third parties.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

S. If the project **is not directly interconnected** to the Idaho Power transmission system, provide the transmission provider(s) name, Point of Receipt, Point of Delivery and the transmission reservation number for all of the transmission providers required to deliver the project's energy to Idaho Power.

Transmission Provider(s) Name \_\_\_\_\_

Point of Receipt \_\_\_\_\_

Point of Delivery \_\_\_\_\_

Transmission Reservation Number(s) \_\_\_\_\_

T. If the project **is directly interconnected** to the Idaho Power transmission system, provide the Point of Receipt, physical location and voltage.

Point of Receipt \_\_\_\_\_

Physical Location \_\_\_\_\_

Voltage \_\_\_\_\_

U. Is the project committed to execute a purchase power agreement with Idaho Power upon a favorable resolution of the identified interconnection and transmission costs?

Yes  No

V. Is any portion of the maximum capacity identified for this project committed to any other party?

Yes  No

Signature \_\_\_\_\_ Date \_\_\_\_\_

## NETWORK RESOURCE INTEGRATION STUDY AGREEMENT

THIS Agreement is made and entered into this \_\_\_\_ day of \_\_\_\_\_ 20\_\_ between Idaho Power Company ("Idaho Power" or "Company") through its Power Supply business unit ("Power Supply") and \_\_\_\_\_, ("Developer"). Power Supply and Developer may hereinafter be referred to individually as "Party" or collectively as "Parties."

### RECITALS:

A. Developer has advised Power Supply that it intends to develop a generating facility that would meet the criteria for a Qualifying Facility ("QF") as that term is defined in the Public Utility Regulatory Policies Act of 1978. Developer desires to sell the energy to be generated by the QF to Idaho Power as a non-interruptible designated network resource ("DNR").

B. In order for the QF to be classified as a DNR and for Idaho Power to purchase the energy to be generated by the QF on a firm basis, a network resource integration system impact study ("SIS") must be performed by Idaho Power's delivery business unit ("Delivery"). The SIS will identify the need and associated costs for Delivery to install facilities, including "upgrades" (as that term is defined in Idaho Power Company's Schedule 72), to allow the QF to operate as a DNR and deliver firm energy to the Company's load centers. The Federal Energy Regulatory Commission's rules require that Power Supply make the request to Delivery to perform the SIS. Delivery will bill Power Supply for the costs incurred to perform the SIS.

## AGREEMENTS:

1. Developer hereby requests that Power Supply initiate the process for Delivery to conduct a SIS for determining the cost of the QF's becoming a DNR for the Company. Developer agrees to pay all charges associated with any analyses that Delivery determines are reasonably necessary to evaluate the impact of the QF on Idaho Power's transmission system.

2. In order for Power Supply to initiate a SIS, Developer must submit the estimated SIS cost of \_\_\_\_\_ within fourteen (14) days of the date of this Agreement. This amount is based on Delivery's estimate of the actual cost of performing the SIS, including appropriate loading and administrative and general overheads. Should the scope of the SIS be changed by Developer or further study be necessitated due to reasons beyond the control of Delivery, Power Supply will advise Developer of the revised charges, if any.

3. Upon receipt of this Agreement executed by Developer, payment of the amount specified in paragraph 2, and all information required to enable Power Supply to complete the necessary request, Power Supply will submit the necessary request and documentation to Delivery to commence the SIS. Subject to Developer's providing requested information and making any requested supplemental payments in a timely manner, Delivery will perform the SIS with due diligence. Power Supply will respond to Developer's reasonable requests for information regarding an estimated completion date for the SIS and, if necessary, with an explanation of why additional time is required to complete the SIS.

4. Following completion of the SIS, a copy of the completed SIS shall be provided to Developer. Power Supply and Developer shall then reconcile the payments made for the SIS and "true-up" any over or under payments made by Developer. The total charge to Developer for the SIS will not exceed the actual cost of the SIS as billed by Delivery to Power Supply.

IN WITNESS WHEREOF, the Parties have caused this Agreement to be executed effective on the first day written above.

**IDAHO POWER COMPANY**

By: \_\_\_\_\_

Title: \_\_\_\_\_

**DEVELOPER**

By: \_\_\_\_\_

Title: \_\_\_\_\_

**BEFORE THE  
IDAHO PUBLIC UTILITIES COMMISSION  
CASE NO. IPC-E-12-25**

**IDAHO POWER COMPANY**

**ATTACHMENT 20**



March 3, 2010

**Randy C. Allphin**  
Sr. Energy Contract Coordinator  
Tel: (208) 388-2614  
[rallphin@idahopower.com](mailto:rallphin@idahopower.com)

The New Energy Company LLC  
Attn: Laura Knothe  
8720 Vic Lane  
Middleton ID 83644

E-mail Copy: [laura@thenewenergycompany.com](mailto:laura@thenewenergycompany.com)

received  
3/10/10

RE: Letter of Understanding  
Swager Farms Dairy - Proposed Anaerobic Digester Project

Ms. Knothe,

Summarized below is a brief outline of the purchase power agreement, interconnection process and transmission capacity requirements for your proposed generation project.

Purchase Power Agreement

The project you have described appears to be eligible for a purchase power agreement under the guidelines for a Qualifying Facility as defined by the Public Utilities Regulatory Policies Act of 1978 (PURPA). At the time you are ready to proceed with a purchase power agreement for this project, Idaho Power will prepare a purchase power agreement that complies with the current rules and regulations that govern these PURPA agreements, any draft purchase power agreements previously provided to you for review must be updated to include current rules and regulations.

Prior to Idaho Power executing a purchase power agreement it will be required that you have:

- 1.) Provided documentation that substantiates that the project has filed for interconnection and is in compliance with any payments and/or other requirements specified in the Interconnection process for this project and;

- 2.) Received and accepted an interconnection feasibility study for this project and;
- 3.) Returned a signed copy of this letter of understanding and all of the required information to enable Idaho Power to file an application requesting transmission capacity for this project. Completion of the enclosed Transmission Capacity Application Questionnaire will provide the majority of this information and;
- 4.) Confirmation that the results of the initial transmission capacity application are known and the project accepts these results and intends to continue with the development of the project including, if applicable, execution of a Network Resource Integration Study Agreement in the form enclosed herein.

#### Interconnection and Transmission Capacity

Your project will be responsible for all costs of physically interconnecting the project to the Idaho Power electrical system and any costs associated with acquiring adequate firm transmission capacity on the Idaho Power transmission system to enable the project's energy to be delivered to Idaho Power customers.

#### Interconnection

Your project will be required to complete the interconnection process and execute a Generation Interconnection Agreement ("GIA").

#### Transmission Capacity

To sell your project's energy to Idaho Power, your project must be designated as a Network Resource ("DNR").

In order for this project to achieve DNR status, Idaho Power is required to make a request (complete and file an application) and be granted firm transmission capacity from the Idaho Power delivery business unit ("Delivery") to move your project's energy from the physical interconnection point to Idaho Power customers. In accordance with various rules and regulations, the project must be granted DNR status no later than 60 days prior to the project delivering any energy to Idaho Power.

Idaho Power will begin this firm transmission capacity application process only after the project has returned a signed copy of this letter of understanding and all of the information required for Idaho Power to file this application (see attached Transmission Capacity Application Questionnaire).

After filing a complete firm transmission capacity application with Delivery, Idaho Power will receive notification back from Delivery within 30 days that: (a) adequate transmission capacity is available for this project without the need to construct upgrades; or (b) a transmission capacity system impact study is required to determine the available transmission capacity and/or required upgrades; or (c) a statement of the required transmission upgrades and the associated costs. Idaho Power will notify the project of this response to the transmission capacity application in a timely manner after the response is received from Delivery.

If the response from Delivery is as specified in item (a) (transmission capacity is available), the project will be required to execute a purchase power agreement with Idaho Power within 30 days in order to retain this transmission capacity reservation.

If the response from Delivery is as specified in items (b) or (c) (studies required and/or upgrades required), the project will be required to execute a Network Resource Integration Study Agreement (sample copy attached for your information) and submit all required deposits or fees within 15 days after receiving notification of this requirement in order for Idaho Power to continue the transmission capacity request. This Network Resource Integration Study Agreement will specify that the project will be responsible for costs incurred by Idaho Power to perform any required studies. If, after the studies are concluded the project wishes to continue the pursuit of transmission capacity, the project will also be responsible for all transmission system upgrade costs identified within the studies. The fees and costs will be in the form of both initial deposits as well as actual costs. If at any time after executing the Network Resource Integration Study Agreement the project does not pay any required fees, or elects to stop the transmission study or upgrade process, the project shall be responsible for all costs incurred by Idaho Power in performing the studies or upgrades up to the point of termination of the Network Resource Integration Study Agreement.

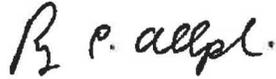
Upon successful completion of the above described transmission capacity upgrade process, a transmission capacity reservation will exist for this project. However, in order to finalize this transmission capacity reservation, a purchase power agreement with Idaho Power must be executed no later than 30 days after the transmission capacity upgrades are completed. If the purchase power agreement is not executed by this deadline, the transmission capacity reservation will be released and this process will have to be repeated if the project later requests transmission capacity.

As noted earlier, this transmission capacity acquisition and associated Network Resource designation must be completed, at the minimum, 60 days prior to the project delivering any energy to Idaho Power. In addition, the project must provide routine updates to Idaho Power of the expected online date of the generation project to ensure Idaho Power is capable of accepting the energy from the project on the actual date the project comes online.

Please return all required information to:

Idaho Power Company  
Attn: Randy C. Allphin  
P O Box 70  
Boise, ID 83707  
E-mail: rallphin@idahopower.com

Sincerely,



Randy C Allphin  
Idaho Power Company

Understood and accepted this 1 day of April, 2010

Signature  4/1/10  
Print Name Laura Knothe, PE  
Title Project Manager



## Transmission Capacity Application Questionnaire

This list is the known information requirements as of the date of the letter transmitting this request. If additional information is required, Idaho Power will promptly notify the project developer of the additional information requirements.

A. Project Name

Swager Dairy Digester

B. Project Location

1707 E 3800 N  
Buhl ID 83316

C. Project Developer

Name The New Energy Company, LLC  
Address 8700 Vic Lane  
City / State / Zip Middleton ID 83604  
Phone Number 208.890.8783  
E-mail laura@thenewenergycompany.com

D. Idaho Power Delivery Business unit Interconnection "Que" reference number (if not known, please contact the Idaho Power Interconnection group)

307

E. Evidence of the Project's good standing in the Idaho Power Interconnection Process

See attached Feasibility Study. The Facility Study Agreement and deposit have been submitted.

F. Copy of the Idaho Power Interconnection feasibility study and a statement from the project that the project has accepted the results of the interconnection feasibility study and is continuing the process of interconnecting and developing the generation project.

G. Maximum Capacity (MW) 1.2 MW

H. Beginning day and time of energy deliveries

Day (mm/dd/yyyy) 8/1/2011  
Time 8:00 a.m.

I. Ending day and time of energy deliveries

Day (mm/dd/yyyy) 8/1/2026  
Time 5:00 p.m.

J. VAR capability (both leading and lagging) of all generators 98 leading, 8 lagging

K. Identification of the control area(s) from which the energy will originate

Power plant w/ anaerobic digesters per  
interconnection agreement with Idaho Power.

L. List any periods of restricted operations throughout the year

None anticipated

M. Maintenance schedule

Due to system redundancies, the components will  
be maintained on a rolling basis and is expected  
to be on line at all times. On an annual  
basis, we expect to be connected 98% of the time

N. Minimum loading level of each generation unit 60%

O. Normal operating level of each generation unit. 100%

P. Any must-run generation unit designations required for system reliability or contractual reason

System, Reliability depends on heat from the generators,  
which need to remain base-loaded. We are contracted  
to take 100% of the waste from the dairy and  
need to be operational at all times.

Q. Approximate variable generation cost (\$/MWh) *Note – this will be estimated energy pricing from a potential purchase power agreement that this project may be eligible for.*

Not considered variable generation.

R. If the generation resource is to be located in the Idaho Power Balancing Authority Area and if only a portion of the resource output is to be designated as a Network Resource, then explain arrangements governing sale and delivery of additional output to third parties.

NA

S. If the project **is not directly interconnected** to the Idaho Power transmission system, provide the transmission provider(s) name, Point of Receipt, Point of Delivery and the transmission reservation number for all of the transmission providers required to deliver the project's energy to Idaho Power.

Transmission Provider(s) Name NA

Point of Receipt \_\_\_\_\_

Point of Delivery \_\_\_\_\_

Transmission Reservation Number(s) \_\_\_\_\_

T. If the project **is directly interconnected** to the Idaho Power transmission system, provide the Point of Receipt, physical location and voltage.

Point of Receipt TBD

Physical Location 1707 E 3800 N

Voltage 12.5 kV

U. Is the project committed to execute a purchase power agreement with Idaho Power upon a favorable resolution of the identified interconnection and transmission costs?

Yes  No

V. Is any portion of the maximum capacity identified for this project committed to any other party?

Yes  No

Signature



Date

4/1/2010

## NETWORK RESOURCE INTEGRATION STUDY AGREEMENT

THIS Agreement is made and entered into this \_\_\_\_ day of \_\_\_\_\_ 20\_\_ between Idaho Power Company ("Idaho Power" or "Company") through its Power Supply business unit ("Power Supply") and \_\_\_\_\_, ("Developer"). Power Supply and Developer may hereinafter be referred to individually as "Party" or collectively as "Parties."

### RECITALS:

A. Developer has advised Power Supply that it intends to develop a generating facility that would meet the criteria for a Qualifying Facility ("QF") as that term is defined in the Public Utility Regulatory Policies Act of 1978. Developer desires to sell the energy to be generated by the QF to Idaho Power as a non-interruptible designated network resource ("DNR").

B. In order for the QF to be classified as a DNR and for Idaho Power to purchase the energy to be generated by the QF on a firm basis, a network resource integration system impact study ("SIS") must be performed by Idaho Power's delivery business unit ("Delivery"). The SIS will identify the need and associated costs for Delivery to install facilities, including "upgrades" (as that term is defined in Idaho Power Company's Schedule 72), to allow the QF to operate as a DNR and deliver firm energy to the Company's load centers. The Federal Energy Regulatory Commission's rules require that Power Supply make the request to Delivery to perform the SIS. Delivery will bill Power Supply for the costs incurred to perform the SIS.

## AGREEMENTS:

1. Developer hereby requests that Power Supply initiate the process for Delivery to conduct a SIS for determining the cost of the QF's becoming a DNR for the Company. Developer agrees to pay all charges associated with any analyses that Delivery determines are reasonably necessary to evaluate the impact of the QF on Idaho Power's transmission system.

2. In order for Power Supply to initiate a SIS, Developer must submit the estimated SIS cost of \_\_\_\_\_ within fourteen (14) days of the date of this Agreement. This amount is based on Delivery's estimate of the actual cost of performing the SIS, including appropriate loading and administrative and general overheads. Should the scope of the SIS be changed by Developer or further study be necessitated due to reasons beyond the control of Delivery, Power Supply will advise Developer of the revised charges, if any.

3. Upon receipt of this Agreement executed by Developer, payment of the amount specified in paragraph 2, and all information required to enable Power Supply to complete the necessary request, Power Supply will submit the necessary request and documentation to Delivery to commence the SIS. Subject to Developer's providing requested information and making any requested supplemental payments in a timely manner, Delivery will perform the SIS with due diligence. Power Supply will respond to Developer's reasonable requests for information regarding an estimated completion date for the SIS and, if necessary, with an explanation of why additional time is required to complete the SIS.

4. Following completion of the SIS, a copy of the completed SIS shall be provided to Developer. Power Supply and Developer shall then reconcile the payments made for the SIS and "true-up" any over or under payments made by Developer. The total charge to Developer for the SIS will not exceed the actual cost of the SIS as billed by Delivery to Power Supply.

IN WITNESS WHEREOF, the Parties have caused this Agreement to be executed effective on the first day written above.

**IDAHO POWER COMPANY**

By: \_\_\_\_\_

Title: \_\_\_\_\_

**DEVELOPER**

By: \_\_\_\_\_

Title: \_\_\_\_\_

**BEFORE THE  
IDAHO PUBLIC UTILITIES COMMISSION  
CASE NO. IPC-E-12-25**

**IDAHO POWER COMPANY**

**ATTACHMENT 21**

# The New Energy Company, LLC

---

8720 Vic Lane  
Middleton, ID 8366

Phone: 208.890.8783  
Fax: 208.585.9016  
E-mail:  
laura@thenewenergycompany.com

April 2, 2010  
Rowena Bishop  
Idaho Power Company  
1221 W Idaho Street  
Boise ID 83702

Re: Facility Study Agreements for Projects 307 and 308 and Interconnection Application for additional capacity for Project 309

Dear Ms. Bishop:

Please find enclosed the following applications and applicable deposits:

- Facility Study Agreement and deposit in the amount of \$11,740 for Project 307, Swager Dairy Digester
- Facility Study Agreement and deposit in the amount of \$11,250 for Project 308, Double B Dairy Digester
- Interconnection Application and deposit in the amount of \$1000 for additional capacity of 1.6 MW (for a total of 4.0 MW) for Project 309, Rock Creek Dairy Digester.

Please contact me at 208.890.8783 if additional information is required.

Thank you,



Laura Knothe, PE  
The New Energy Company, LLC

## Facilities Study Agreement

**THIS AGREEMENT** is made and entered into this 2<sup>nd</sup> day of April, 2010 by and between The New Energy Company, LLC, a Limited Liability Company organized and existing under the laws of the State of Idaho, ("Interconnection Customer,") and Idaho Power Company, a Corporation existing under the laws of the State of Idaho ("Transmission Provider"). Interconnection Customer and Transmission Provider each may be referred to as a "Party," or collectively as the "Parties."

### RECITALS

**WHEREAS**, the Interconnection Customer is proposing to develop a Small Generating Facility or generating capacity addition to an existing Small Generating Facility consistent with the Interconnection Request completed by the Interconnection Customer on October 12, 2009, and

**WHEREAS**, the Interconnection Customer desires to interconnect the Small Generating Facility with the Transmission Provider's Transmission System;

**WHEREAS**, the Transmission Provider has completed a system impact study and provided the results of said study to the Interconnection Customer; and

**WHEREAS**, the Interconnection Customer has requested the Transmission Provider to perform a facilities study to specify and estimate the cost of the equipment, engineering, procurement and construction work needed to implement the conclusions of the system impact study in accordance with Good Utility Practice to physically and electrically connect the Small Generating Facility with the Transmission Provider's Transmission System.

**NOW, THEREFORE**, in consideration of and subject to the mutual covenants contained herein the Parties agreed as follows:

- 1.0 When used in this Agreement, with initial capitalization, the terms specified shall have the meanings indicated or the meanings specified in the standard Small Generator Interconnection Procedures.
- 2.0 The Interconnection Customer elects and the Transmission Provider shall cause a facilities study consistent with the standard Small Generator Interconnection Procedures to be performed in accordance with the Open Access Transmission Tariff.
- 3.0 The scope of the facilities study shall be subject to data provided in Attachment A to this Agreement.
- 4.0 The facilities study shall specify and estimate the cost of the equipment, engineering, procurement and construction work (including overheads) needed to implement the conclusions of the system impact study(s).

The facilities study shall also identify (1) the electrical switching configuration of the equipment, including, without limitation, transformer, switchgear, meters, and other station equipment, (2) the nature and estimated cost of the Transmission Provider's

Interconnection Facilities and Upgrades necessary to accomplish the interconnection, and (3) an estimate of the time required to complete the construction and installation of such facilities.

- 5.0 The Transmission Provider may propose to group facilities required for more than one Interconnection Customer in order to minimize facilities costs through economies of scale, but any Interconnection Customer may require the installation of facilities required for its own Small Generating Facility if it is willing to pay the costs of those facilities.
- 6.0 A deposit of \$11,740.00 is due upon execution of this agreement by the Interconnection customer.
- 7.0 In cases where Upgrades are required, the facilities study must be completed within 45 Business Days of the receipt of this Agreement. In cases where no Upgrades are necessary, and the required facilities are limited to Interconnection Facilities, the facilities study must be completed within 30 Business Days.
- 8.0 Once the facilities study is completed, a facilities study report shall be prepared and transmitted to the Interconnection Customer. Barring unusual circumstances, the facilities study must be completed and the facilities study report transmitted within 30 Business Days of the Interconnection Customer's agreement to conduct a facilities study.
- 9.0 Any study fees shall be based on the Transmission Provider's actual costs and will be invoiced to the Interconnection Customer after the study is completed and delivered and will include a summary of professional time.
- 10.0 The Interconnection Customer must pay any study costs that exceed the deposit without interest within 30 calendar days on receipt of the invoice or resolution of any dispute. If the deposit exceeds the invoiced fees, the Transmission Provider shall refund such excess within 30 calendar days of the invoice without interest.

**IN WITNESS WHEREOF**, the Parties have caused this Agreement to be duly executed by their duly authorized officers or agents on the day and year first above written.

**Transmission Provider:**  
**Idaho Power Company - Delivery**

Signed: Edward Kaszdar

Printed Name: EDWARD KASZDAR

Title: PM SUPERVISOR  
4/14/10

**Interconnection Customer:**

Signed: Laura Knoth

Printed Name: Laura Knoth PE

Title: Project Manager

**Data to Be Provided by the Interconnection Customer  
With the Facilities Study Agreement**

1. Provide location plan and simplified one-line diagram of the plant and station facilities. For staged projects, please indicate future generation, transmission circuits, etc.

On the one-line diagram, indicate the generation capacity attached at each metering location. (Maximum load on CT/PT)

On the one-line diagram, indicate the location of auxiliary power. (Minimum load on CT/PT) Amps

2. One set of metering is required for each generation connection to the new ring bus or existing Transmission Provider station. Number of generation connections:

1 connection

3. Will an alternate source of auxiliary power be available during CT/PT maintenance?

Yes \_\_\_\_\_ No \_\_\_\_\_ NA

4. Will a transfer bus on the generation side of the metering require that each meter set be designed for the total plant generation? Yes \_\_\_\_\_ No x \_\_\_\_\_

(Please indicate on the one-line diagram).

5. What type of control system or PLC will be located at the Small Generating Facility?

Automation Direct

6. What protocol does the control system or PLC use?

Modbus or other if required

7. Please provide a 7.5-minute quadrangle map of the site. Indicate the plant, station, transmission line, and property lines.

8. Physical dimensions of the proposed interconnection station:

NE Corner of 3900 N 1700 E

9. Bus length from generation to interconnection station:

TBD

10. Line length from interconnection station to Transmission Provider's Transmission System.

TBD

11. Tower number observed in the field. (Painted on tower leg)\*:

TBD

12. Number of third party easements required for transmission lines\*:

None anticipated

\* To be completed in coordination with Transmission Provider.

13. Is the Small Generating Facility located in Transmission Provider's service area?

Yes  No  If No, please provide name of local provider:

14. Please provide the following proposed schedule dates:

Begin Construction Date: 10/1/2010

Generator Step-Up Transformers Date: 4/15/2011

Receive Back Feed Power

Generation Testing Date: 5/15/2011

Commercial Operation Date: 8/1/2011



**BEFORE THE  
IDAHO PUBLIC UTILITIES COMMISSION**

**CASE NO. IPC-E-12-25**

**IDAHO POWER COMPANY**

**ATTACHMENT 22**

May 7, 2010

The New Energy Company LLC  
Attn: Laura Knothe  
8720 Vic Lane  
Middleton, ID 83644

Original and Attachments: Scheduled for Pick up at Idaho Power on May 7, 2010

Cover letter E-mail copy:

Laure Knothe           laura@thenewenergycompany.com  
Dean J. (Joe) Miller   joe.mcdevitt-miller.com

Re: Swager Farms Digester, Project #31616130

Ms. Knothe,

As you are aware on March 16, 2010, the Idaho Public Utilities Commission (IPUC) issued Order 31025 which revised the Published Avoided Cost rates. These rates are the energy prices Idaho Power is required to include in PURPA purchase power agreements for projects less than 10 average MW. This Order was very specific in stating that any contracts executed after March 16, 2010, must have the new energy pricing.

However, in regards to the Swager Farms Digester project, our records indicate that prior to March 16, 2010:

- a.) The interconnection feasibility study had been completed and the project was continuing to progress through the interconnection process.
- b.) Information from the project required to complete and file the transmission capacity application had been provided. Subsequently the transmission applications were filed and Idaho Power received confirmation that contingent upon execution of both a Generation Interconnection Agreement (GIA) and purchase power agreement, transmission capacity is available for this project.
- c.) A PURPA purchase power agreement was materially complete and except for routine final processing, an agreement would have been executed prior to March 16, 2010.

At this time Idaho Power is willing to execute the attached PURPA purchase power agreement that contains the energy prices that were in effect prior to IPUC order 31025 issued on March 16, 2010 contingent upon the project returning fully executed agreements to Idaho Power prior to 5 PM Mountain time, on May 24, 2010.

Upon receipt from you of the three signed copies of the PURPA purchase power agreement enclosed with this letter by the above due date, I will arrange for and present the agreement to Idaho Power Company management for their signature. I will return to you one fully executed copy for your records, and Idaho Power will prepare and file a copy with the Idaho Public Utilities Commission (IPUC) requesting approval of the agreement. Idaho Power will keep the third copy for our records.

If all three copies of the PURPA purchase power agreement are not executed and received by Idaho Power by the time and date specified above, this specific agreement (which includes the pre March 16, 2010 PURPA energy prices) will no longer be available for this project. Idaho Power will update any future proposed PURPA agreements for this project to be in accordance with all current and applicable rules, regulations and energy pricing.

Please use one of the following addresses to return the executed agreements to Idaho Power:

US Mail:

Idaho Power Company  
Attn: Randy Allphin  
PO Box 70  
Boise, ID 83707

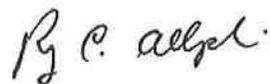
Overnight Mailing Address:

Idaho Power Company  
Attn: Randy Allphin  
1221 W Idaho  
Boise, ID 83702

This agreement as with all PURPA purchase power agreement will require Idaho Public Utilities Commission (IPUC) approval. Only after both parties have executed this agreement **and** the IPUC has approved the agreement, as specified within the agreement, shall the agreement be considered to be effective and a binding commitment shall exist between the parties.

If you have any questions please do not hesitate to contact me.

Sincerely,



Randy C. Allphin  
Senior Energy Contract Coordinator  
(208) 388-2614  
E-mail: [rallphin@idahopower.com](mailto:rallphin@idahopower.com)

**BEFORE THE  
IDAHO PUBLIC UTILITIES COMMISSION  
CASE NO. IPC-E-12-25**

**IDAHO POWER COMPANY**

**ATTACHMENT 23**



August 17, 2010

Laura Knothe  
The New Energy Company  
8720 Vic Lane  
Middleton, ID 83644

Re: Swager Farms Dairy Digester Project Facility Study Report – Project #307

Dear Ms. Knothe:

Idaho Power Company (IPC) has completed the Facility Study cost estimate for your Generator Interconnection project. Attached please find a Draft Facility Study Report (FSR). I am available to discuss the FSR, and begin Construction arrangements for the project.

In order to proceed with this project, please provide your comments to the Facility Study Report to me by September 17, 2010 and indicate whether you wish to proceed with final design and construction. The final report will be used to prepare a draft Generator Interconnection Agreement in preparation for Construction. Rowena Bishop will be working with you to finalize the Interconnection Agreement.

Before we can begin Construction or order materials, you are responsible for contacting Idaho Power's credit department to discuss credit requirements for construction funding. Please contact Kelley Noe (208-388-5736) at your earliest convenience. Once we receive funding, or the credit requirement is met, we can proceed with construction of the project.

The actual construction and labor charges will be finalized approximately 90 days subsequent to project completion. We will reconcile any over- or underpayment at that time.

I look forward to hearing from you soon.

Sincerely,

A handwritten signature in cursive script that reads "Eric Hackett".

Eric Hackett  
Project Leader

Attachment: Swager Farms Dairy Digester Project Draft Facility Study Report with Drawings

Cc: R Bishop/IPC  
K Noe/IPC  
A Sloan/IPC

**DRAFT**  
**Generator Interconnection**  
**Facility Study Report**

for the

**Swager Farms Dairy Digester Project – Project #307**

for

**The New Energy Group**

in

**Twin Falls County, Idaho**

**August 17, 2010**

# DRAFT - FACILITY STUDY REPORT (FSR)

## Swager Farms Dairy Digester

Project #307

August 17, 2010

### 1. General Facility Description

The proposed project will consist of Idaho Power's standard overhead generation interconnection package including an overhead recloser, metering package, local service power transformer, disconnect switches, and a relay/control box. Additionally, one 1500 kVA 277/480 to 12.47 kV Grounded Wye / Grounded Wye padmounted transformer will be installed, including the associated underground cabling and vaults. The project is located in Twin Falls County, Idaho and connects to the 12.5 kV system on Idaho Power Company's Clover (CLVR-012) distribution line. The total project output is 1.2 MW.

Interconnection Customer:

Laura Knothe  
The New Energy Company  
8720 Vic Lane  
Middleton, ID 83644

A Standard Generator Interconnection Agreement under Idaho Power Company's Open Access Transmission Tariff (OATT) or Schedule 72 between Interconnection Customer and Idaho Power Company – Delivery (Transmission Owner) for the Swager Farms Dairy Digester Project, specifically Generator Interconnection Project #307, will be prepared for this project. Final drawings will be produced in the timeline shown below in MILESTONES.

### 2. Interconnection Point

The Interconnection Point for the Swager Farms Dairy Digester Project will be the low-side bushings on the padmounted transformer (SW1). The project's location is in T10S R15E Section 21 of Twin Falls County, Idaho. A drawing identifying the Point of Interconnection is attached.

### 3. Point of Change of Ownership

The Point of Change of Ownership for the Swager Farms Dairy Digester Project will be the low-side bushings on the padmounted transformer (SW1).

### 4. Interconnection Details

In general, interconnection equipment includes, but is not limited to, switching/disconnection, metering, system protection and control, and communications/telemetry. All interconnection equipment electrically located on the generator side of the Point of Change Ownership shall be owned and maintained by the Generator. All interconnection equipment electrically located on the utility side of the Point of Change Ownership shall be owned, operated, and maintained by Idaho Power.

#### 4.1 Project Team

An Idaho Power Company project team was assembled to investigate the proposed project, and develop cost estimates and a project schedule to construct Idaho Power facilities required for the interconnection. The project team consisted of the following employees:

Project Manager	Senior Engineer
Principal Engineer	Relay & Communications Leader
Engineer – Protection	Metering Technical Advisor
Area Apparatus Leader	Right of Way Agent
Design Engineer	Distribution Line Designer
Stations Designer	

#### 4.2 Customer's Interconnection Facilities

The Interconnection Customer will install generators, low-side disconnect switches, all wiring and conduit between the generators and the padmounted transformer, appropriate grounding measures, and associated auxiliary equipment. Interconnection Customer will build underground facilities to the Point of Change of Ownership for the generator facility.

The low-side disconnect switch should be visible, lockable, within ten (10) feet of the padmounted transformers, and accessible to Idaho Power personnel.

#### 4.3 Other Facilities Provided by Interconnection Customer

##### 4.3.1 Telecommunications

The Interconnection Customer will provide two communication circuits between the generation interconnection site and a location, or locations, specified by Idaho Power. One of the circuits will be a dedicated 4-wire leased analog circuit connected to the SEL 311C relay and the other will be a POTS dial-up circuit to the revenue meter. The Interconnection Customer is responsible for supplying and coordinating the installation of the phone lines and paying the monthly service charges. The communication circuits will need to be installed and operational prior to generating into the Idaho Power system.

##### 4.3.2 Ground Fault Equipment

The customer will install ground fault limiting equipment that will limit the zero sequence fault current to 20 amps at the Interconnection Point.

##### 4.3.3 Monitoring Information

If the Interconnection Customer requires the ability to monitor information related to the Idaho Power recloser in the generation interconnection package they are required to supply their own communications circuit to the control box.

##### 4.3.4 Easements

The Interconnection Customer will secure underground and overhead easements with Swager Farms Dairy once a specific route is determined. Idaho Power will provide the documentation.

#### **4.4 Idaho Power Company's Interconnection Facilities**

Idaho Power will install a standard generation interconnection package on the existing distribution feeder (CLVR-012) on private property southwest of the intersection of 3800 North and 1700 East in Twin Falls County, ID. See the attached work order maps (WO 27328106, sheet 1 of 2) for details.

The new interconnection package will include four distribution poles to mount a local service transformer, solid blade disconnects, primary metering package, recloser, relays, fuses and riser necessary for the package. The interconnection will be controlled by a SEL-311C line protection relay. The relay will be located in a pole mounted enclosure and will also contain a test switch (TS4), SLSS, modems, isolation interface, power supply, DC converter, control switch and surge protector.

Idaho Power will install (and subsequently own and maintain) one 1500 kVA 277/480 to 12.47 kV Grounded Wye / Grounded Wye padmounted transformer on top of a vault. Conduit and underground cables will be installed from the interconnection package to padmounted transformer. Protective posts will be installed to protect the ground mounted equipment from damage.

A 2" conduit will be installed alongside the underground primary to facilitate information exchange to the customer about the recloser. (The Interconnection Customer is responsible for providing and installing the appropriate cable.)

#### **4.5 Scope of Upgrades**

Idaho Power will install a new capacitor bank on the existing distribution feeder (CLVR-012) just west of the existing Clover Substation. See the attached work order maps (WO 27328106, sheet 2 of 2) for details.

#### **4.7 Operational Limitations**

Interconnection Customer will be able to modify power plant facilities on the generator side of the Interconnection Point with no impact upon the operation of the transmission system whenever the generation facilities are electrically isolated from the transmission system.

The project must be controlled to operate at a lagging power factor of 90% during the fall and spring months and between 90% and 98% during the summer and winter months or meet the voltage schedule provided by Idaho Power. Voltage flicker at startup and during operation will be limited to less than 5% as measured at the point of interconnection. For this to occur, the current cannot exceed 46 Amps during start up at the 12.5 kV voltage level. This forces the generating facility to start the generators separately.

The project is required to comply with the applicable Voltage and Current Distortion Limits found in IEEE Standard 519-1992 *IEEE Recommended Practices and Requirements for Harmonic Control in Electrical Power Systems*.

## 5. Budget

The following good faith estimates are provided in 2010 dollars:

### Estimated Cost & Ownership:

Description	Ownership	Cost Estimate
<b>Generation Facilities:</b>		
Provided by the customer (Including low-side disconnect switch)	Customer	N/A
<b>TOTAL</b>		<b>N/A</b>
<b>Interconnection Facilities:</b>		
Overhead Generation Interconnection Package	IPC	\$200,000
Underground Equipment and 1500 kVA Transformer	IPC	\$60,000
<b>TOTAL</b>		<b>\$260,000</b>
<b>Upgrades to Distribution:</b>		
New Capacitor	IPC	\$30,000
<b>TOTAL</b>		<b>\$30,000</b>
<b>GRAND TOTAL</b>		<b>\$290,000</b>

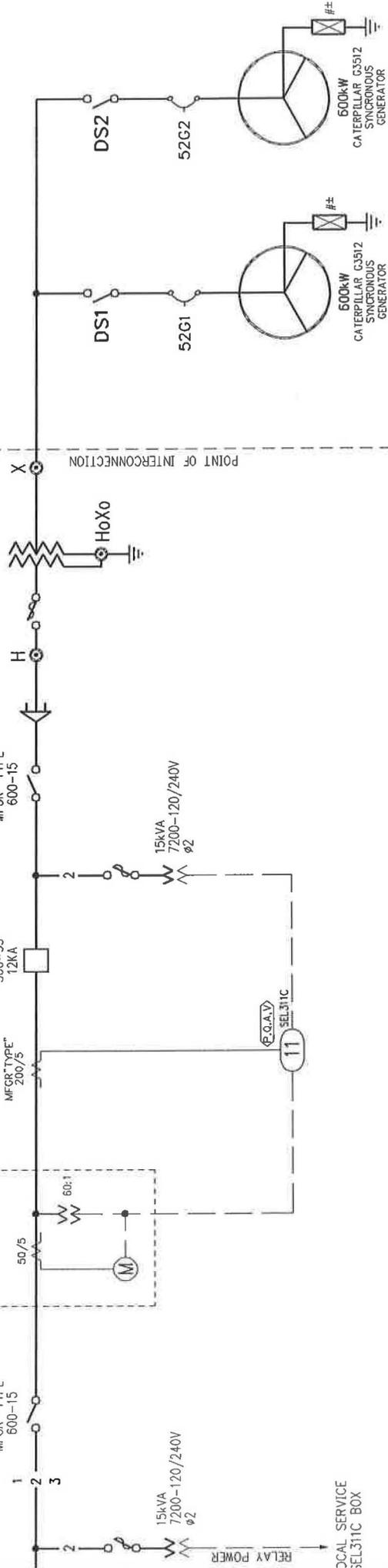
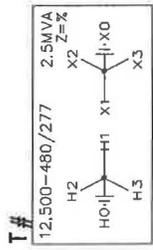
### Milestones:

Date	Milestones
08/17/10	<i>Design Completion and Facility Study Report Submitted to Customer</i>
9/17/10	<i>Construction Funds Received by IPC</i>
10/5/10	<i>Order Materials</i>
11/20/10	<i>Finalize Construction Documents</i>
1/15/11	<i>Begin Construction (Assuming Materials are Available-Otherwise as Materials are Received)</i>
2/15/11	<i>Construction Completion</i>
3/1/11	<i>Test and Commission Equipment</i>
3/10/11	<i>Commercial Operation</i>

### Construction Budget Timeline:

Period	Amount
Jan 2010 – March 2011	\$290,000
<b>GRAND TOTAL</b>	<b>\$290,000</b>

BY IPCO ← → BY OWNER



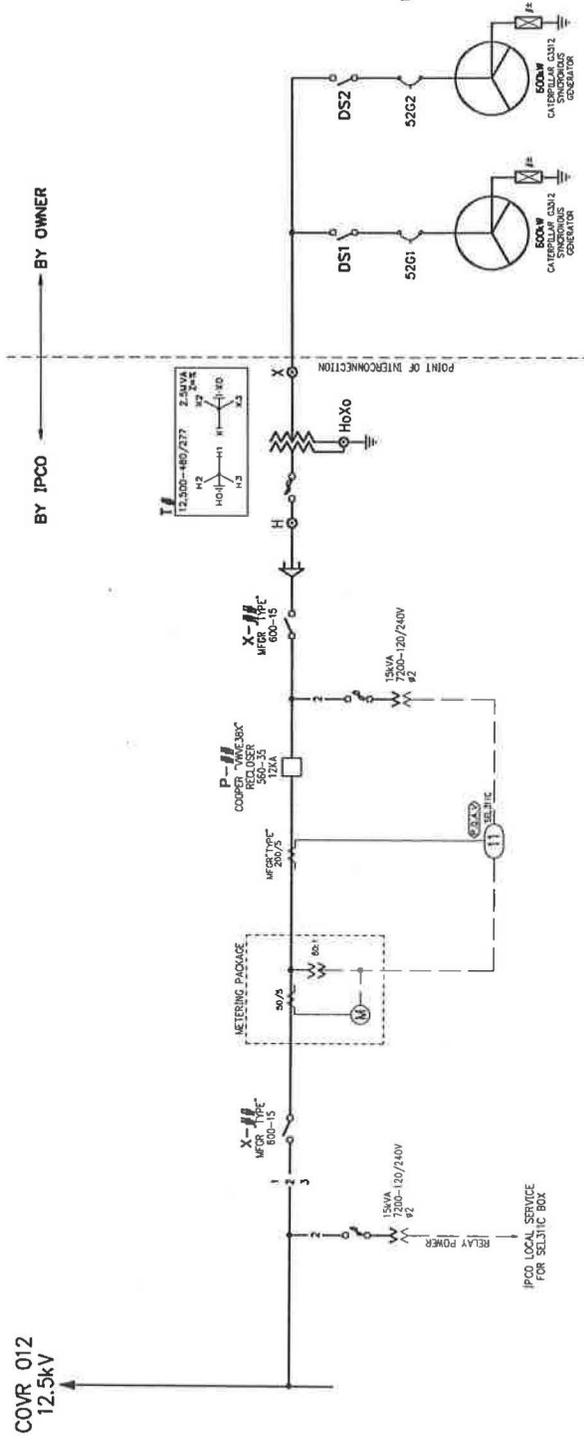
PROJECT LOCATION:



NO.	REVISION
1	Initial Interconnection for Single Farm Dairy
2	02/27/11 JHJ

COVER 012  
12.5kV

BY IPCO ← → BY OWNER



ALLOWED CAPACITY  
BY CONTRACT: \_\_\_\_\_ KVA

SINGLE LINE APPROVAL	
Structural Engineer	_____
Chief Engineer	_____
Field Price Eng.	_____
Design Engineer	_____
PE Required LDR	_____
Ask Required LDR	_____
Priority	_____
Date	_____
Drawn By	_____
Checked By	_____
Scale	_____
Sheet No.	21D-62790-1

REFERENCE DRAWINGS	
D-42782-1.3	CONTROL SCHEMATICS
D-42782-1-1	CONTROL SCHEMATICS

PROJECT LOCATION:	
1105, RISE SECTION 21	
3800 NORTH 1700 EAST, TWIN FALLS COUNTY, IDAHO	
IN SERVICE BY MAY 2011	

SINGLE LINE INTERCONNECTION	
SWAGER FARMS DAIRY DIGESTER	
INTERCONNECTION	
SINGLE LINE	
SCALE	NONE
DATE	8-21-10
DESIGNED BY	JHJ
CHECKED BY	JHJ
APPROVED BY	JHJ
DATE	2/10/11
PROJECT NO.	21D-62790
SHEET NO.	1
TOTAL SHEETS	01

**BEFORE THE  
IDAHO PUBLIC UTILITIES COMMISSION  
CASE NO. IPC-E-12-25**

**IDAHO POWER COMPANY**

**ATTACHMENT 24**



COPY

Western States Equipment Company  
500 East Overland Road  
Meridian, ID 83642  
208-888-2287 (office)  
208-884-2308 (fax)

**LETTER OF GUARANTEE**

**Reference: Swager Farms**

**Subject: Financial guarantee for the payment of Liquidated Damages payable under the Firm Energy Sales Agreement for Swager Farms, Project Number 31616130.**

We, the undersigned, Western States Equipment Company, an Idaho corporation ("Guarantor") hereby declare that we irrevocably and unconditionally guarantee as primary guarantor on behalf of New Energy Three, LLC ("Customer") with its place of business at 8720 Vic Lane, Middleton ID, the full and prompt payment when due of the payment obligations of Customer to Idaho Power Company ("Idaho Power") in the amount of eighty-one thousand dollars (\$81,000.00). This Guarantee is provided to cover Customer's payment obligations to Idaho Power under paragraph 5.3 and 5.4 of the Firm Energy Sales Agreement for the Swager Farms, Project Number 31616130 (hereafter referred to as "the Agreement").

Payment shall be made by Guarantor to Idaho Power hereunder when demand for such payment is made by Idaho Power upon the failure of Customer to meet its obligations under paragraph 5.8 of the Agreement regarding the failure to meet the scheduled operation date as defined in Appendix "B". Payment shall be unconditional and absolute and without objection or legal proceedings and, without limiting the generality of the foregoing, shall not be released, discharged or otherwise affected by any modification, amendment, waiver, extension of or supplement to the Agreement, any change in the corporate existence of the Customer or Guarantor, or any insolvency, bankruptcy, reorganization or other similar proceedings affecting the Customer or its assets, or the Guarantor. . This Guarantee is a guarantee of payment and not merely of collection and Guarantor agrees that its obligations hereunder are of a primary obligor and not merely of a surety. The Guarantor agrees that Idaho Power may resort to the Guarantor for payment of the obligation whether or not Idaho Power has resorted to any collateral security, or shall have proceeded against Customer or any other obligor principally or secondarily obligated with respect to the obligation. All payments hereunder by Guarantor shall be made without set-off or counterclaim in U.S. dollars in immediately available funds.

This Guarantee shall remain in force until New Energy has, to the satisfaction of Idaho Power, under the terms of paragraph 5.2 of the Agreement, achieved the Operation Date or until Guarantor is released from this Guarantee pursuant to paragraph 5.8.2 of the Agreement.

Meridian, ID  
208-888-2287

Twin Falls, ID  
208-734-7330

Pocatello, ID  
208-232-2640

Idaho Falls, ID  
208-552-2287

Lewiston, ID  
208-746-3301

Spokane, WA  
509-535-1744

Pasco, WA  
509-547-9541

Pendleton, OR  
541-276-5812

LaGrande, OR  
541-963-3101

Missoula, MT  
406-721-4050

Kalispell, MT  
406-752-3030

Swager

This Guarantee is governed by the law applicable to the Agreement. The courts having jurisdiction for matters relating to the Agreement shall have jurisdiction in respect of matters relating to this guarantee. This Guarantee may not be amended, supplemented or modified, nor any of the terms and conditions hereof waived, except by a written instrument executed by the Guarantor and Idaho Power.

This Guarantee is effective as of the date executed below.

Done at Meridian, ID on August 30, 2010

A handwritten signature in black ink, appearing to read "Tom", is written over a solid horizontal line.

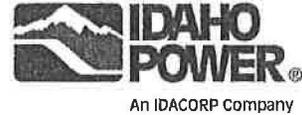
Tom Harris  
President  
Western States Equipment Company

**BEFORE THE  
IDAHO PUBLIC UTILITIES COMMISSION**

**CASE NO. IPC-E-12-25**

**IDAHO POWER COMPANY**

**ATTACHMENT 25**



September 16, 2010

Laura Knothe  
The New Energy Company  
8720 Vic Lane  
Middleton, ID 83644

Re: Swager Farms Dairy Digester Project Final Facility Study Report – Project #307

Dear Ms. Knothe:

Idaho Power Company (IPC) has completed the Facility Study cost estimate for your Generator Interconnection project. Attached please find the Final Facility Study Report (FSR). I am available to discuss the FSR, and begin Construction arrangements for the project.

This report will be used to prepare a draft Generator Interconnection Agreement in preparation for Construction. Rowena Bishop will be working with you to finalize the Interconnection Agreement.

Before we can begin Construction or order materials, you are responsible for contacting Idaho Power's credit department to discuss credit requirements for construction funding. Please contact Kelley Noe (208-388-5736) at your earliest convenience. Once we receive funding, or the credit requirement is met, we can proceed with construction of the project.

The actual construction and labor charges will be finalized approximately 90 days subsequent to project completion. We will reconcile any over- or underpayment at that time.

I look forward to hearing from you soon.

Sincerely,

Eric Hackett  
Project Leader

Attachment: Swager Farms Dairy Digester Project Final Facility Study Report with Drawings

Cc: R Bishop/IPC  
K Noe/IPC  
A Sloan/IPC



**FINAL  
Generator Interconnection  
Facility Study Report**

for the

**Swager Farms Dairy Digester Project – Project #307**

for

**The New Energy Group**

in

**Twin Falls County, Idaho**

**September 16, 2010**

---

# FINAL - FACILITY STUDY REPORT (FSR)

## Swager Farms Dairy Digester

### Project #307

September 16, 2010

#### 1. General Facility Description

The proposed project will consist of Idaho Power's standard overhead generation interconnection package including an overhead recloser, metering package, local service power transformer, disconnect switches, and a relay/control box. Additionally, one 1500 kVA 277/480 to 12.47 kV Grounded Wye / Grounded Wye padmounted transformer will be installed, including the associated underground cabling and vaults. The project is located in Twin Falls County, Idaho and connects to the 12.5 kV system on Idaho Power Company's Clover (CLVR-012) distribution line. The total project output is 1.2 MW.

Interconnection Customer:

Laura Knothe  
The New Energy Company  
8720 Vic Lane  
Middleton, ID 83644

A Standard Generator Interconnection Agreement under Idaho Power Company's Open Access Transmission Tariff (OATT) or Schedule 72 between Interconnection Customer and Idaho Power Company – Delivery (Transmission Owner) for the Swager Farms Dairy Digester Project, specifically Generator Interconnection Project #307, will be prepared for this project. Final drawings will be produced in the timeline shown below in MILESTONES.

#### 2. Interconnection Point

The Interconnection Point for the Swager Farms Dairy Digester Project will be the low-side bushings on the padmounted transformer (SW1). The project's location is in T10S R15E Section 21 of Twin Falls County, Idaho. A drawing identifying the Point of Interconnection is attached.

#### 3. Point of Change of Ownership

The Point of Change of Ownership for the Swager Farms Dairy Digester Project will be the low-side bushings on the padmounted transformer (SW1).

#### 4. Interconnection Details

In general, interconnection equipment includes, but is not limited to, switching/disconnection, metering, system protection and control, and communications/telemetry. All interconnection equipment electrically located on the generator side of the Point of Change Ownership shall be owned and maintained by the Generator. All interconnection equipment electrically located on the utility side of the Point of Change Ownership shall be owned, operated, and maintained by Idaho Power.

#### 4.1 Project Team

An Idaho Power Company project team was assembled to investigate the proposed project, and develop cost estimates and a project schedule to construct Idaho Power facilities required for the interconnection. The project team consisted of the following employees:

Project Manager	Senior Engineer
Principal Engineer	Relay & Communications Leader
Engineer – Protection	Metering Technical Advisor
Area Apparatus Leader	Right of Way Agent
Design Engineer	Distribution Line Designer
Stations Designer	

#### 4.2 Customer's Interconnection Facilities

The Interconnection Customer will install generators, low-side disconnect switches, all wiring and conduit between the generators and the padmounted transformer, appropriate grounding measures, and associated auxiliary equipment. Interconnection Customer will build underground facilities to the Point of Change of Ownership for the generator facility.

The low-side disconnect switch should be visible, lockable, within ten (10) feet of the padmounted transformers, and accessible to Idaho Power personnel.

#### 4.3 Other Facilities Provided by Interconnection Customer

##### 4.3.1 Telecommunications

The Interconnection Customer will provide two communication circuits between the generation interconnection site and a location, or locations, specified by Idaho Power. One of the circuits will be a dedicated 4-wire leased analog circuit connected to the SEL 311C relay and the other will be a POTS dial-up circuit to the revenue meter. The Interconnection Customer is responsible for supplying and coordinating the installation of the phone lines and paying the monthly service charges. The communication circuits will need to be installed and operational prior to generating into the Idaho Power system.

##### 4.3.2 Ground Fault Equipment

The customer will install ground fault limiting equipment that will limit the zero sequence fault current to 20 amps at the Interconnection Point.

##### 4.3.3 Monitoring Information

If the Interconnection Customer requires the ability to monitor information related to the Idaho Power recloser in the generation interconnection package they are required to supply their own communications circuit to the control box.

##### 4.3.4 Easements

The Interconnection Customer will secure underground and overhead easements with Swager Farms Dairy once a specific route is determined. Idaho Power will provide the documentation.

#### **4.4 Idaho Power Company's Interconnection Facilities**

Idaho Power will install a standard generation interconnection package on the existing distribution feeder (CLVR-012) on private property southwest of the intersection of 3800 North and 1700 East in Twin Falls County, ID. See the attached work order maps (WO 27328106, sheet 1 of 2) for details.

The new interconnection package will include four distribution poles to mount a local service transformer, solid blade disconnects, primary metering package, recloser, relays, fuses and riser necessary for the package. The interconnection will be controlled by a SEL-311C line protection relay. The relay will be located in a pole mounted enclosure and will also contain a test switch (TS4), SLSS, modems, isolation interface, power supply, DC converter, control switch and surge protector.

Idaho Power will install (and subsequently own and maintain) one 1500 kVA 277/480 to 12.47 kV Grounded Wye / Grounded Wye padmounted transformer on top of a vault. Conduit and underground cables will be installed from the interconnection package to padmounted transformer. Protective posts will be installed to protect the ground mounted equipment from damage.

A 2" conduit will be installed alongside the underground primary to facilitate information exchange to the customer about the recloser. (The Interconnection Customer is responsible for providing and installing the appropriate cable.)

#### **4.5 Scope of Upgrades**

Idaho Power will install a new capacitor bank on the existing distribution feeder (CLVR-012) just west of the existing Clover Substation. See the attached work order maps (WO 27328106, sheet 2 of 2) for details.

#### **4.7 Operational Limitations**

Interconnection Customer will be able to modify power plant facilities on the generator side of the Interconnection Point with no impact upon the operation of the transmission system whenever the generation facilities are electrically isolated from the transmission system.

The project must be controlled to operate at a lagging power factor of 90% during the fall and spring months and between 90% and 98% during the summer and winter months or meet the voltage schedule provided by Idaho Power. Voltage flicker at startup and during operation will be limited to less than 5% as measured at the point of interconnection. For this to occur, the current cannot exceed 46 Amps during start up at the 12.5 kV voltage level. This forces the generating facility to start the generators separately.

The project is required to comply with the applicable Voltage and Current Distortion Limits found in IEEE Standard 519-1992 *IEEE Recommended Practices and Requirements for Harmonic Control in Electrical Power Systems*.

## 5. Budget

The following good faith estimates are provided in 2010 dollars:

### Estimated Cost & Ownership:

Description	Ownership	Cost Estimate
<b>Generation Facilities:</b>		
Provided by the customer (Including low-side disconnect switch)	Customer	N/A
<b>TOTAL</b>		<b>N/A</b>
<b>Interconnection Facilities:</b>		
Overhead Generation Interconnection Package	IPC	\$200,000
Underground Equipment and 1500 kVA Transformer	IPC	\$60,000
<b>TOTAL</b>		<b>\$260,000</b>
<b>Upgrades to Distribution:</b>		
New Capacitor	IPC	\$30,000
<b>TOTAL</b>		<b>\$30,000</b>
<b>GRAND TOTAL</b>		<b>\$290,000</b>

### Milestones:

Date	Milestones
09/16/10	<i>Final Facility Study Report Submitted to Customer</i>
10/17/10	<i>Construction Funds Received by IPC</i>
11/5/10	<i>Order Materials</i>
3/15/11	<i>IPCO Construction Completion</i>
4/1/11	<i>IPCO Test and Commission Equipment Completion</i>
TBD	<i>Commercial Operation</i>

### Construction Budget Timeline:

Period	Amount
Feb 2010 – April 2011	\$290,000
<b>GRAND TOTAL</b>	<b>\$290,000</b>

**BEFORE THE  
IDAHO PUBLIC UTILITIES COMMISSION**

**CASE NO. IPC-E-12-25**

**IDAHO POWER COMPANY**

**ATTACHMENT 26**



An IDACORP Company

October 25, 2010

Via email &

Certified Mail # 7006 0810 0006 5511 2990

Laura Knothe  
The New Energy Company  
8720 Vic Lane  
Middleton, ID 83644

Re: Swager Farms Project #307 & Double B Dairy Project #308

Dear Laura:

Attached please find a copy of the final Facility Study Report (FSR) and a draft Generator Interconnection Agreement (GIA) for your Generator Interconnection projects. This GIA is part of Idaho Power Company's Rate Schedule 72 tariff approved by the Idaho Public Utilities Commission (IPUC). The IPUC has the authority to review and modify these schedules periodically. You may view the most current tariff at Idaho Power's website at: <http://www.idahopower.com/aboutus/regulatoryinfo/tariffs.asp>. If you would like to schedule a meeting or conference call to discuss the GIA please contact me as soon as possible.

Under the Generator Interconnection process, the following items must be provided to me on or before execution of the GIA:

- Proof of Site Control for the project
- Insurance certification
- Financial arrangements/construction funding

Although the preferred method of funding is full deposit upfront; payment arrangements may be requested. If you have not already done so, please contact Jill Sprenger (208-388-6424), Finance at your earliest convenience to discuss Idaho Power's credit requirements for construction funding. Once we receive funding, or the credit requirement is met, we can proceed with construction of the project. The actual construction and labor charges will be reconciled approximately 90 days subsequent to project completion.

PLEASE NOTE - While the Generator Interconnection process (Feasibility, System Impact, and Facility studies) we are going through identifies any necessary Network Upgrades that may have to be made to move your Project energy to load, it does not secure the transmission rights to do so. The GIA only provides for the physical connection of the project output to the generator side of the point of interconnection with Idaho Power's grid. It does not cover the transmission service to transfer your project output across the connection point or to the ultimate load.

An additional agreement providing for transmission of the energy is required to be secured to deliver your energy from the point of interconnection with your project to Idaho Power load. You or the energy purchaser must arrange for transmission, and provide the necessary documentation prior to commercial operation. This would include either a Transmission Service

Request (TSR) or a Network Designation from the energy purchaser. My records show that this has already been done.

You may have noticed that we have drafted the GIA Attachments based on the Facility Study Report provided to you on September 16, 2010. Please review the Attachments to make sure they are comprehensive and accurate and advise me of any changes as soon as possible. The completed Attachments must be sent to me by close of business on November 29, 2010, so that we may prepare the GIA for execution.

Failure to respond to this letter will be considered as an election not to proceed with the project, and we will consider your Generator Interconnection request to have been withdrawn and terminated. If you have any further questions, please don't hesitate to contact me.

Sincerely,



Rowena Bishop  
Operations Analyst  
[rbishop@idahopower.com](mailto:rbishop@idahopower.com)  
ph 208.388.2658

Encl: Final Facility Study Reports - # 307 & #308  
draft GIA for Swager Farms Project # 307  
draft GIA for Double B Dairy Project # 308

Cc: (via email)

Eric Hackett /IPC  
Rich Bauer/IPC  
Jill Sprenger/IPC  
Randy Allphin/IPC

October 25, 2010

**GENERATOR INTERCONNECTION AGREEMENT  
Schedule 72**

**SWAGER FARMS DAIRY DIGESTER PROJECT  
1.2 MW**

**DRAFT**

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This Generator Interconnection Agreement ("Agreement") under Idaho Power Company's Schedule 72 is effective as of the \_\_\_\_ day of \_\_\_\_\_, 2010 between \_\_\_\_\_, ("Seller" or "The Project") and Idaho Power Company – Delivery ("Company", or "Transmission Owner").

### RECITALS

A. Seller will own or operate a Generation Facility that qualifies for service under Idaho Power's Commission-approved Schedule 72 and any successor schedule.

B. The Generation Facility covered by this Agreement is more particularly described in Attachment 1.

### AGREEMENTS

1. Capitalized Terms

Capitalized terms used herein shall have the same meanings as defined in Schedule 72 or in the body of this Agreement.

2. Terms and Conditions

This Agreement and Schedule 72 provide the rates, charges, terms and conditions under which the Seller's Generation Facility will interconnect with, and operate in parallel with, the Company's transmission/distribution system. Terms defined in Schedule 72 will have the same defined meaning in this Agreement. If there is any conflict between the terms of this Agreement and Schedule 72, Schedule 72 shall prevail.

3. This Agreement is not an agreement to purchase Seller's power.

Purchase of Seller's power and other services that Seller may require will be covered under separate agreements. Nothing in this Agreement is intended to affect any other agreement between the Company and Seller.

4. Attachments

Attached to this Agreement and included by reference are the following:

Attachment 1 – Description and Costs of the Generation Facility, Interconnection Facilities, and Metering Equipment.

Attachment 2 – One-line Diagram Depicting the Generation Facility, Interconnection Facilities, Metering Equipment and Upgrades.

Attachment 3 – Milestones For Interconnecting the Generation Facility.

Attachment 4 – Additional Operating Requirements for the Company's Transmission System Needed to Support the Seller's Generation Facility.

Attachment 5 – Reactive Power.

Attachment 6 – Description of Upgrades required to integrate the Generation Facility and Best Estimate of Upgrade Costs.

5. Effective Date, Term, Termination and Disconnection.

5.1 Term of Agreement. Unless terminated earlier in accordance with the provisions of this Agreement, this Agreement shall become effective on the date specified above and remain effective as long as Seller's Generation Facility is eligible for service under Schedule 72.

5.2 Termination.

5.2.1 Seller may voluntarily terminate this Agreement upon expiration or termination of an agreement to sell power to the Company.

5.2.2 After a Default, either Party may terminate this Agreement pursuant to Section 6.5.

5.2.3 Upon termination or expiration of this Agreement, the Seller's Generation Facility will be disconnected from the Company's transmission/distribution system. The termination or expiration of this Agreement shall not relieve either Party of its liabilities and obligations, owed or continuing at the time of the termination. The provisions of this Section shall survive termination or expiration of this Agreement.

5.3 Temporary Disconnection. Temporary disconnection shall continue only for so long as reasonably necessary under "Good Utility Practice." Good Utility Practice means any of the practices, methods and acts engaged in or approved by a significant portion of the electric industry during the relevant time period, or any of the practices, methods and acts which, in the exercise of reasonable judgment in light of the facts known at the time the decision was made, could have been expected to accomplish the desired result at a reasonable cost consistent with good business practices, reliability, safety and expedition. Good Utility Practice is not intended to be limited to the optimum practice, method, or act to the exclusion of all others, but rather to be acceptable practices, methods, or acts generally accepted in the region. Good Utility Practice includes compliance with WECC or NERC requirements. Payment of lost revenue resulting from temporary disconnection shall be governed by the power purchase agreement.

5.3.1 Emergency Conditions. "Emergency Condition" means a condition or situation: (1) that in the judgment of the Party making the claim is imminently likely to endanger life or property; or (2) that, in the case of the Company, is imminently likely (as determined in a non-discriminatory manner) to cause a material adverse effect on the security of, or damage to the Company's transmission/distribution system, the Company's Interconnection Facilities or the equipment of the Company's customers; or (3) that, in the case of the Seller, is imminently likely (as determined in a non-discriminatory manner) to cause a material adverse effect on the reliability and security of, or damage to, the Generation Facility or the Seller's Interconnection Facilities. Under Emergency Conditions, either the Company or the Seller may immediately suspend interconnection service and temporarily disconnect the Generation Facility. The Company shall notify the Seller promptly when it becomes aware of an Emergency Condition that may reasonably be expected to affect the Seller's operation of the Generation Facility. The Seller shall notify the Company promptly when it becomes aware of an Emergency Condition that may reasonably be expected to affect the Company's equipment or service to the Company's customers. To the extent information is known, the notification shall describe the Emergency Condition, the extent of the damage or deficiency, the expected effect on the operation of both Parties' facilities and operations, its anticipated duration, and the necessary corrective action.

5.3.2 Routine Maintenance, Construction, and Repair. The Company may interrupt interconnection service or curtail the output of the Seller's Generation Facility

and temporarily disconnect the Generation Facility from the Company's transmission/distribution system when necessary for routine maintenance, construction, and repairs on the Company's transmission/distribution system. The Company will make a reasonable attempt to contact the Seller prior to exercising its rights to interrupt interconnection or curtail deliveries from the Seller's Facility. Seller understands that in the case of emergency circumstances, real time operations of the electrical system, and/or unplanned events, the Company may not be able to provide notice to the Seller prior to interruption, curtailment or reduction of electrical energy deliveries to the Company. The Company shall use reasonable efforts to coordinate such reduction or temporary disconnection with the Seller.

**5.3.3 Scheduled Maintenance.** On or before January 31 of each calendar year, Seller shall submit a written proposed maintenance schedule of significant Facility maintenance for that calendar year and the Company and Seller shall mutually agree as to the acceptability of the proposed schedule. The Parties determination as to the acceptability of the Seller's timetable for scheduled maintenance will take into consideration Good Utility Practices, Idaho Power system requirements and the Seller's preferred schedule. Neither Party shall unreasonably withhold acceptance of the proposed maintenance schedule.

**5.3.4 Maintenance Coordination.** The Seller and the Company shall, to the extent practical, coordinate their respective transmission/distribution system and Generation Facility maintenance schedules such that they occur simultaneously. Seller shall provide and maintain adequate protective equipment sufficient to prevent damage to the Generation Facility and Seller-furnished Interconnection Facilities. In some cases, some of Seller's protective relays will provide back-up protection for Idaho Power's facilities. In that event, Idaho Power will test such relays annually and Seller will pay the actual cost of such annual testing.

**5.3.5 Forced Outages.** During any forced outage, the Company may suspend interconnection service to effect immediate repairs on the Company's transmission/distribution system. The Company shall use reasonable efforts to provide the Seller with prior notice. If prior notice is not given, the Company shall, upon request, provide the Seller written documentation after the fact explaining the circumstances of the disconnection.

**5.3.6 Adverse Operating Effects.** The Company shall notify the Seller as soon as practicable if, based on Good Utility Practice, operation of the Seller's Generation Facility may cause disruption or deterioration of service to other customers served from the same electric system, or if operating the Generation Facility could cause damage to the Company's transmission/distribution system or other affected systems. Supporting documentation used to reach the decision to disconnect shall be provided to the Seller upon request. If, after notice, the Seller fails to remedy the adverse operating effect within a reasonable time, the Company may disconnect the Generation Facility. The Company shall provide the Seller with reasonable notice of such disconnection, unless the provisions of Article 5.3.1 apply.

**5.3.7 Modification of the Generation Facility.** The Seller must receive written authorization from the Company before making any change to the Generation Facility that may have a material impact on the safety or reliability of the Company's transmission/distribution system. Such authorization shall not be unreasonably withheld. Modifications shall be done in accordance with Good Utility Practice. If the Seller makes such modification without the Company's prior written authorization, the latter shall have the right to temporarily disconnect the Generation Facility.

5.3.8 Reconnection. The Parties shall cooperate with each other to restore the Generation Facility, Interconnection Facilities, and the Company's transmission/distribution system to their normal operating state as soon as reasonably practicable following a temporary disconnection.

5.3.9 Voltage Levels. Seller, in accordance with Good Utility Practices, shall minimize voltage fluctuations and maintain voltage levels acceptable to Idaho Power. Idaho Power may, in accordance with Good Utility Practices, upon one hundred eighty (180) days' notice to the Seller, change its nominal operating voltage level by more than ten percent (10%) at the Point of Delivery, in which case Seller shall modify, at Idaho Power's expense, Seller's equipment as necessary to accommodate the modified nominal operating voltage level.

5.4 Land Rights.

5.4.1 Seller to Provide Access. Seller hereby grants to Idaho Power for the term of this Agreement all necessary rights-of-way and easements to install, operate, maintain, replace, and remove Idaho Power's Metering Equipment, Interconnection Equipment, Disconnection Equipment, Protection Equipment and other Special Facilities necessary or useful to this Agreement, including adequate and continuing access rights on property of Seller. Seller warrants that it has procured sufficient easements and rights-of-way from third parties so as to provide Idaho Power with the access described above. All documents granting such easements or rights-of-way shall be subject to Idaho Power's approval and in recordable form.

5.4.2 Use of Public Rights-of-Way. The Parties agree that it is necessary to avoid the adverse environmental and operating impacts that would occur as a result of duplicate electric lines being constructed in close proximity. Therefore, subject to Idaho Power's compliance with Paragraph 5.4.4, Seller agrees that should Seller seek and receive from any local, state or federal governmental body the right to erect, construct and maintain Seller-furnished Interconnection Facilities upon, along and over any and all public roads, streets and highways, then the use by Seller of such public right-of-way shall be subordinate to any future use by Idaho Power of such public right-of-way for construction and/or maintenance of electric distribution and transmission facilities and Idaho Power may claim use of such public right-of-way for such purposes at any time. Except as required by Paragraph 5.4.4, Idaho Power shall not be required to compensate Seller for exercising its rights under this Paragraph 5.4.2.

5.4.3 Joint Use of Facilities. Subject to Idaho Power's compliance with Paragraph 5.4.4, Idaho Power may use and attach its distribution and/or transmission facilities to Seller's Interconnection Facilities, may reconstruct Seller's Interconnection Facilities to accommodate Idaho Power's usage or Idaho Power may construct its own distribution or transmission facilities along, over and above any public right-of-way acquired from Seller pursuant to Paragraph 5.4.2, attaching Seller's Interconnection Facilities to such newly constructed facilities. Except as required by Paragraph 5.4.4, Idaho Power shall not be required to compensate Seller for exercising its rights under this Paragraph 5.4.3.

5.4.4 Conditions of Use. It is the intention of the Parties that the Seller be left in substantially the same condition, both financially and electrically, as Seller existed prior to Idaho Power's exercising its rights under this Paragraph 5.4. Therefore, the Parties agree that the exercise by Idaho Power of any of the rights enumerated in Paragraphs

5.4.2 and 5.4.3 shall: (1) comply with all applicable laws, codes and Good Utility Practices, (2) equitably share the costs of installing, owning and operating jointly used facilities and rights-of-way. If the Parties are unable to agree on the method of apportioning these costs, the dispute will be submitted to the Commission for resolution and the decision of the Commission will be binding on the Parties, and (3) shall provide Seller with an interconnection to Idaho Power's system of equal capacity and durability as existed prior to Idaho Power exercising its rights under this Paragraph 5.4.

6. Assignment, Liability, Indemnity, Force majeure, Consequential Damages and Default.

6.1 Assignment. This Agreement may be assigned by either Party upon twenty-one (21) calendar days prior written notice and opportunity to object by the other Party; provided that:

6.1.1 Either Party may assign this Agreement without the consent of the other Party to any affiliate of the assigning Party with an equal or greater credit rating and with the legal authority and operational ability to satisfy the obligations of the assigning Party under this Agreement.

6.1.2 The Seller shall have the right to contingently assign this Agreement, without the consent of the Company, for collateral security purposes to aid in providing financing for the Generation Facility, provided that the Seller will promptly notify the Company of any such contingent assignment.

6.1.3 Any attempted assignment that violates this article is void and ineffective. Assignment shall not relieve a Party of its obligations, nor shall a Party's obligations be enlarged, in whole or in part, by reason thereof. An assignee is responsible for meeting the same financial, credit, and insurance obligations as the Seller. Where required, consent to assignment will not be unreasonably withheld, conditioned or delayed.

6.2 Limitation of Liability. Each Party's liability to the other Party for any loss, cost, claim, injury, liability, or expense, including reasonable attorney's fees, relating to or arising from any act or omission in its performance of this Agreement, shall be limited to the amount of direct damage actually incurred. In no event shall either Party be liable to the other Party for any indirect, special, consequential, or punitive damages, except as authorized by this Agreement.

6.3 Indemnity.

6.3.1 This provision protects each Party from liability incurred to third parties as a result of carrying out the provisions of this Agreement. Liability under this provision is exempt from the general limitations on liability found in Article 6.2.

6.3.2 The Parties shall at all times indemnify, defend, and hold the other Party harmless from, any and all damages, losses, claims, including claims and actions relating to injury to or death of any person or damage to property, demand, suits, recoveries, costs and expenses, court costs, attorney fees, and all other obligations by or to third parties, arising out of or resulting from the other Party's action or failure to meet its obligations under this Agreement on behalf of the indemnifying Party, except in cases of gross negligence or intentional wrongdoing by the indemnified Party.

6.3.3 If an indemnified person is entitled to indemnification under this article as a result of a claim by a third party, and the indemnifying Party fails, after notice and reasonable opportunity to proceed under this article, to assume the defense of such claim, such indemnified person may at the expense of the indemnifying Party contest,

settle or consent to the entry of any judgment with respect to, or pay in full, such claim. Failure to defend is a Material Breach.

6.3.4 If an indemnifying party is obligated to indemnify and hold any indemnified person harmless under this article, the amount owing to the indemnified person shall be the amount of such indemnified person's actual loss, net of any insurance or other recovery.

6.3.5 Promptly after receipt by an indemnified person of any claim or notice of the commencement of any action or administrative or legal proceeding or investigation as to which the indemnity provided for in this article may apply, the indemnified person shall notify the indemnifying party of such fact. Any failure of or delay in such notification shall be a Material Breach and shall not affect a Party's indemnification obligation unless such failure or delay is materially prejudicial to the indemnifying party.

6.4 Force Majeure. As used in this Agreement, "Force Majeure" or "an event of Force Majeure" means any cause beyond the control of the Seller or of the Company which, despite the exercise of due diligence, such Party is unable to prevent or overcome. Force Majeure includes, but is not limited to, acts of God, fire, flood, storms, wars, hostilities, civil strife, strikes and other labor disturbances, earthquakes, fires, lightning, epidemics, sabotage, or changes in law or regulation occurring after the Operation Date, which, by the exercise of reasonable foresight such party could not reasonably have been expected to avoid and by the exercise of due diligence, it shall be unable to overcome. If either Party is rendered wholly or in part unable to perform its obligations under this Agreement because of an event of Force Majeure, both Parties shall be excused from whatever performance is affected by the event of Force Majeure, provided that:

(1) The non-performing Party shall, as soon as is reasonably possible after the occurrence of the Force Majeure, give the other Party written notice describing the particulars of the occurrence.

(2) The suspension of performance shall be of no greater scope and of no longer duration than is required by the event of Force Majeure.

(3) No obligations of either Party which arose before the occurrence causing the suspension of performance and which could and should have been fully performed before such occurrence shall be excused as a result of such occurrence.

## 6.5 Default and Material Breaches.

6.5.1 Defaults. If either Party fails to perform any of the terms or conditions of this Agreement (a "Default" or an "Event of Default"), the nondefaulting Party shall cause notice in writing to be given to the defaulting Party, specifying the manner in which such default occurred. If the defaulting Party shall fail to cure such Default within the sixty (60) days after service of such notice, or if the defaulting Party reasonably demonstrates to the other Party that the Default can be cured within a commercially reasonable time but not within such sixty (60) day period and then fails to diligently pursue such cure, then, the nondefaulting Party may, at its option, terminate this Agreement and/or pursue its legal or equitable remedies.

6.5.2 Material Breaches. The notice and cure provisions in Paragraph 6.6.1 do not apply to Defaults identified in this Agreement as Material Breaches. Material Breaches must be cured as expeditiously as possible following occurrence of the breach.

## 7. Insurance.

During the term of this Agreement, Seller shall secure and continuously carry the following insurance coverage:

7.1 Comprehensive General Liability Insurance for both bodily injury and property damage with limits equal to \$1,000,000, each occurrence, combined single limit. The deductible for such insurance shall be consistent with current Insurance Industry Utility practices for similar property.

7.2 The above insurance coverage shall be placed with an insurance company with an A.M. Best Company rating of A- or better and shall include:

(a) An endorsement naming Idaho Power as an additional insured and loss payee as applicable; and

(b) A provision stating that such policy shall not be canceled or the limits of liability reduced without sixty (60) days' prior written notice to Idaho Power.

7.3 Seller to Provide Certificate of Insurance. As required in Paragraph 7 herein and annually thereafter, Seller shall furnish the Company a certificate of insurance, together with the endorsements required therein, evidencing the coverage as set forth above.

7.4 Seller to Notify Idaho Power of Loss of Coverage - If the insurance coverage required by Paragraph 7.1 shall lapse for any reason, Seller will immediately notify Idaho Power in writing. The notice will advise Idaho Power of the specific reason for the lapse and the steps Seller is taking to reinstate the coverage. Failure to provide this notice and to expeditiously reinstate or replace the coverage will constitute grounds for a temporary disconnection under Section 5.3 and will be a Material Breach.

## 8. Miscellaneous.

8.1 Governing Law. The validity, interpretation and enforcement of this Agreement and each of its provisions shall be governed by the laws of the state of Idaho without regard to its conflicts of law principles.

8.2 Salvage. No later than sixty (60) days after the termination or expiration of this Agreement, Idaho Power will prepare and forward to Seller an estimate of the remaining value

of those Idaho Power furnished Interconnection Facilities as required under Schedule 72 and/or described in this Agreement, less the cost of removal and transfer to Idaho Power's nearest warehouse, if the Interconnection Facilities will be removed. If Seller elects not to obtain ownership of the Interconnection Facilities but instead wishes that Idaho Power reimburse the Seller for said Facilities the Seller may invoice Idaho Power for the net salvage value as estimated by Idaho Power and Idaho Power shall pay such amount to Seller within thirty (30) days after receipt of the invoice. Seller shall have the right to offset the invoice amount against any present or future payments due Idaho Power.

9. Notices.

9.1 General. Unless otherwise provided in this Agreement, any written notice, demand, or request required or authorized in connection with this Agreement ("Notice") shall be deemed properly given if delivered in person, delivered by recognized national carrier service, or sent by first class mail, postage prepaid, to the person specified below:

**If to the Seller:**

Seller: \_\_\_\_\_  
Attention: \_\_\_\_\_  
Address: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_  
Phone: \_\_\_\_\_ Fax: \_\_\_\_\_

**If to the Company:**

Idaho Power Company - Delivery  
Attention: Operations Manager  
1221 W. Idaho Street  
Boise: Idaho 83702  
Phone: 208-388-5669 Fax: 208-388-5504

9.2 Billing and Payment. Billings and payments shall be sent to the addresses set out below:

Seller: \_\_\_\_\_  
Attention: \_\_\_\_\_  
Address: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_  
Phone: \_\_\_\_\_ Fax: \_\_\_\_\_

Idaho Power Company - Delivery  
Attention: Corporate Cashier  
PO Box 447  
Salt Lake City Utah 84110-0447  
Phone: 208-388-5697 email: asloan@idahopower.com

9.3 Designated Operating Representative. The Parties may also designate operating representatives to conduct the communications which may be necessary or convenient for the administration of this Agreement. This person will also serve as the point of contact with respect to operations and maintenance of the Party's facilities.

**Seller's Operating Representative:**

Seller: \_\_\_\_\_  
 Attention: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_  
 Phone: \_\_\_\_\_ Fax: \_\_\_\_\_

**Company's Operating Representative:**

Idaho Power Company - Delivery  
 Attention: Regional Outage Coordinator - Regional Dispatch  
 1221 W. Idaho Street  
 Boise, Idaho 83702  
 Phone: 208-388-2633, 388-5125, or 388-5175 during regular business hours  
 (after hours Southern Region 208-388-5190).

9.5 Changes to the Notice Information. Either Party may change this information by giving five (5) Business Days written notice prior to the effective date of the change.

10. Signatures.

IN WITNESS WHEREOF, the Parties have caused this Agreement to be executed by their respective duly authorized representatives.

**For the Seller**

Name: \_\_\_\_\_  
 Title: \_\_\_\_\_  
 Date: \_\_\_\_\_

**For the Company**

Name: \_\_\_\_\_  
 Title: Manager, Grid Operations – Idaho Power Company, Delivery  
 Date: \_\_\_\_\_

## Attachment 1

### Description and Costs of the Generation Facility, Interconnection Facilities and Metering Equipment

In this attachment the Generation Facility and Interconnection Facilities, including Special Facilities and upgrades, are itemized and identified as being owned by the Seller or the Company. As provided in Schedule 72, Payment For Interconnection Facilities, the Company will provide a best estimate itemized cost of its Interconnection Facilities, including Special Facilities, upgrades and Metering Equipment.

#### **General Facility Description**

The proposed project will connect to Idaho Power's 12.5kV system on Idaho Power Company's Clover (CLVR-012) distribution line. The total project output is 1.2 MW.

#### **Interconnection Point**

The Interconnection Point for the Swager Farms Dairy Digester Project will be the low-side bushings on the padmounted transformer (SW1). The project's location is in T10S R15E Section 21 of Twin Falls County, Idaho. A drawing identifying the Point of Interconnection is included as Attachment 2. The Point of Change of Ownership will be the low-side bushings on the padmounted transformer (SW1).

#### **Seller's Interconnection Facilities**

The Seller will install generators, low-side disconnect switches, all wiring and conduit between the generators and the padmounted transformer, appropriate grounding measures, and associated auxiliary equipment. The Seller will build underground facilities to the Point of Change of Ownership for the generator facility. The low-side disconnect switch should be visible, lockable, within ten (10) feet of the padmounted transformers, and accessible to Idaho Power personnel.

The Seller will provide phone service to IPCo's generator interconnect package as described in *Telecommunications* below.

All interconnection equipment electrically located on the generator side of the Point of Change Ownership shall be owned and maintained by the Seller.

#### **Other Facilities Provided by Seller**

##### ***Telecommunications***

The Interconnection Customer will provide two communication circuits between the generation interconnection site and a location, or locations, specified by Idaho Power. One of the circuits will be a dedicated 4-wire leased analog circuit connected to the SEL 311C relay and the other will be a POTS dial-up circuit to the revenue meter. The Interconnection Customer is responsible for supplying and coordinating the installation of the phone lines and paying the monthly service charges. The communication circuits will need to be installed and operational prior to generating into the Idaho Power system.

##### ***Ground Fault Equipment***

The Seller will install ground fault limiting equipment that will limit the zero sequence fault current to 20 amps at the Interconnection Point.

##### ***Monitoring Information***

If the Interconnection Customer requires the ability to monitor information related to the Idaho Power recloser in the generation interconnection package they are required to supply their own communications circuit to the control box.

### Easements

The Seller will secure underground and overhead easements with Swager Farms Dairy once a specific route is determined. Idaho Power will provide the documentation.

### Idaho Power Company's Interconnection Facilities

Idaho Power will install a standard generation interconnection package on the existing distribution feeder (CLVR-012) on private property southwest of the intersection of 3800 North and 1700 East in Twin Falls County, ID. The new interconnection package will include four distribution poles to mount a local service transformer, solid blade disconnects, primary metering package, recloser, relays, fuses and riser necessary for the package. The interconnection will be controlled by a SEL-311C line protection relay. The relay will be located in a pole mounted enclosure and will also contain a test switch (TS4), SLSS, modems, isolation interface, power supply, DC converter, control switch and surge protector.

Idaho Power will install (and subsequently own and maintain) one 1500 kVA 277/480 to 12.47 kV Grounded Wye / Grounded Wye padmounted transformer on top of a vault. Conduit and underground cables will be installed from the interconnection package to padmounted transformer. Protective posts will be installed to protect the ground mounted equipment from damage.

A 2" conduit will be installed alongside the underground primary to facilitate information exchange to the customer about the recloser. (The Interconnection Customer is responsible for providing and installing the appropriate cable).

All interconnection equipment electrically located on the utility side of the Point of Change Ownership shall be owned, operated, and maintained by Idaho Power.

**Estimated Cost & Ownership:** The following good faith estimates are provided in 2010 dollars

Description	Ownership	Cost Estimate
<b>Generation Facilities:</b>		
Provided by Seller	Seller	\$N/A
<b>Interconnection Facilities:</b>		
Overhead Generation Interconnection Package	IPCO	\$200,000
Underground Equipment and 1500 kVA Transformer	IPCO	\$60,000
<b>TOTAL</b>		<b>\$260,000</b>
<b>GRAND TOTAL</b>		<b>SEE ATTACHMENT 6</b>

Full payment is required up front in accordance with Section 9, unless payment arrangements are made in advance with Idaho Power Delivery Finance.

Billing for construction activities will be based upon actual expenditures.

### Billing and Payment during Construction

Transmission Provider will prepare monthly invoices for services performed in accordance with this Agreement and deliver the invoices to Seller. Seller will transmit payment to Transmission Provider no later than 30 days after receiving the invoice. In the event any monthly payment is missed, Idaho Power Company may revoke the unsecured nature of the construction funding and will require security for the remaining funds. In the event of payment default construction will cease until remediation is made by the Seller.

Invoices are to be addressed to Seller as follows:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

In the event of a billing dispute, Seller must pay invoices when due subject to refund (without interest). Invoices must be accompanied by appropriate supporting documentation and proof of expenditures as applicable.

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Attachment 2

*One-line Diagram Depicting the Small Generation Facility, Interconnection Facilities, Metering Equipment and Upgrades*

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Attachment 3

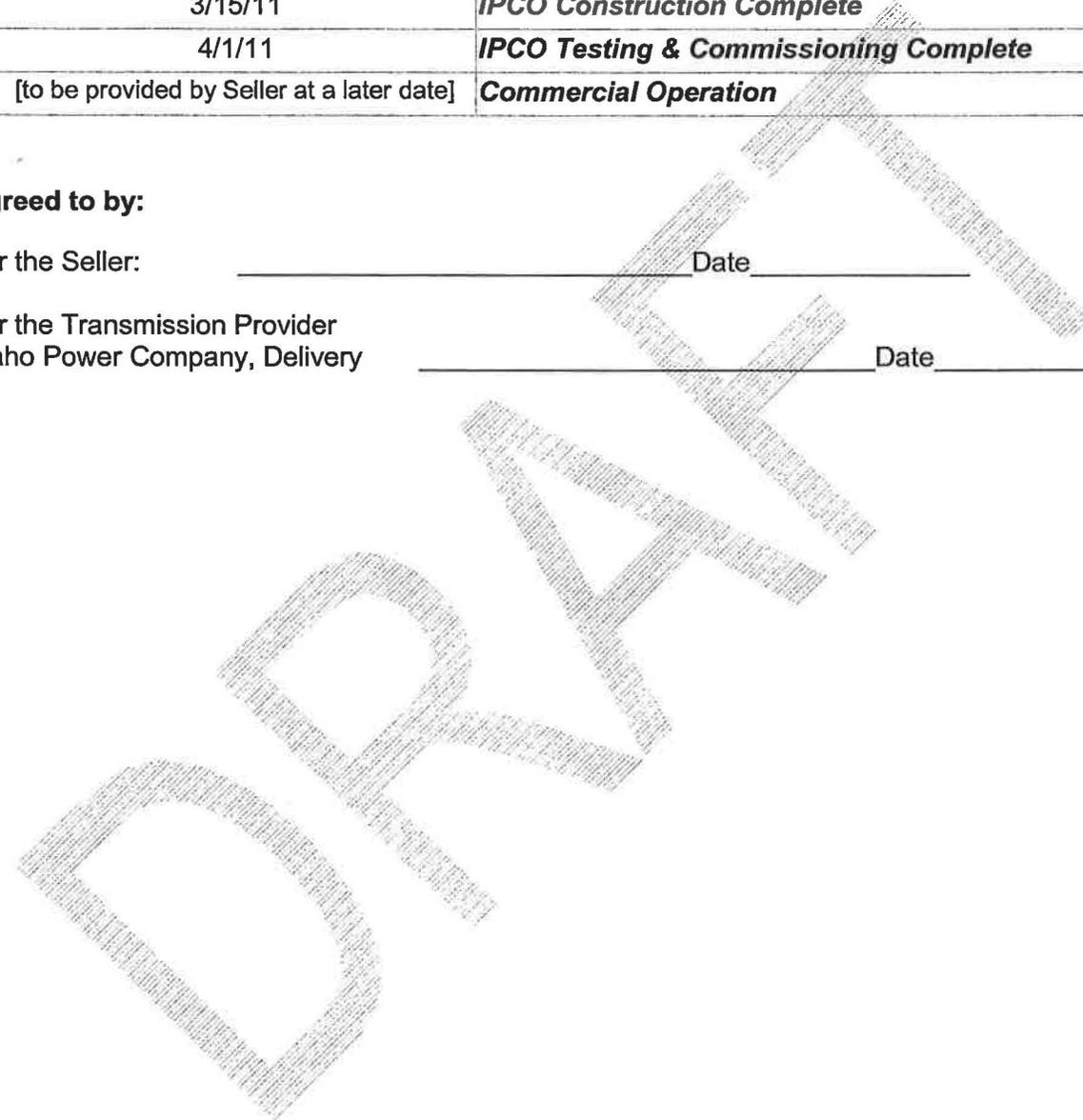
**Milestones:**

Date	Milestones
9/16/10	<i>Final FSR submitted to Seller</i>
10/17/10	<i>Construction Funds received by IPCO</i>
11/5/10	<i>Order Materials</i>
3/15/11	<i>IPCO Construction Complete</i>
4/1/11	<i>IPCO Testing &amp; Commissioning Complete</i>
[to be provided by Seller at a later date]	<i>Commercial Operation</i>

**Agreed to by:**

For the Seller: \_\_\_\_\_ Date \_\_\_\_\_

For the Transmission Provider  
Idaho Power Company, Delivery \_\_\_\_\_ Date \_\_\_\_\_



## Attachment 4

### Additional Operating Requirements for the Company's Transmission System and Affected Systems Needed to Support the Seller's Needs

*The Company shall also provide requirements that must be met by the Seller prior to initiating parallel operation with the Company's Transmission System.*

#### **Operating Requirements**

The project is required to comply with the applicable Voltage and Current Distortion Limits found in IEEE Standard 519-1992 *IEEE Recommended Practices and Requirements for Harmonic Control in Electrical Power Systems* or any subsequent standards as they may be updated from time to time.

Seller will be able to modify power plant facilities on the generator side of the Interconnection Point with no impact upon the operation of the transmission system whenever the generation facilities are electrically isolated from the transmission system and a terminal clearance is issued by Idaho Power Company's Grid Operator.

Voltage flicker at startup and during operation will be limited to less than 5% as measured at the Interconnection Point. For this to occur, the current cannot exceed 46 Amps during start up at the 12.5 kV voltage level. This forces the generating facility to start the generators separately.

#### **Low Voltage Ride Through**

The Project shall remain interconnected upon the occurrence of a three phase or single phase to ground fault down to a voltage of zero at locations on Idaho Power's system as close to the Seller's facilities as **Idaho Power Company's Clover Substation** prior to the fault being cleared for the minimum times stated below before tripping off-line:

- Three phase fault: Normal clearing that takes up to 9 cycles.
- Single phase to ground fault: Delayed clearing that takes up to 50 cycles.

#### **Ground Fault Equipment**

The Seller will install transformer configurations that provide a ground source to the transmission system.

#### **Commercial Operation Requirements**

The Seller will be granted a requested Commercial Operation date only when all requirements have been met under this GIA and Idaho Power Company's Power Sales Agreement. A transmission service request ("TSR") for this generation has been submitted to Idaho Power Company's Grid Operations group under TSR 74117864.

## Attachment 5

### Reactive Power Requirements

*Idaho Power will determine the reactive power required to be supplied by the Company to the Seller, based upon information provided by the Seller. The Company will specify the equipment required on the Company's system to meet the Facility's reactive power requirements. These specifications will include but not be limited to equipment specifications, equipment location, Company-provided equipment, Seller provided equipment, and all costs associated with the equipment, design and installation of the Company-provided equipment. The equipment specifications and requirements will become an integral part of this Agreement. The Company-owned equipment will be maintained by the Company, with total cost of purchase, installation, operation, and maintenance, including administrative cost to be reimbursed to the Company by the Seller. Payment of these costs will be in accordance with Schedule 72 and the total reactive power cost will be included in the calculation of the Monthly Operation and Maintenance Charges specified in Schedule 72.*

The project must be controlled to operate at unity power factor.

Attachment 6Company's Description of Special Facilities and Upgrades Required to Integrate the Generation Facility and Best Estimate of Costs

As provided in Schedule 72 this Attachment describes Upgrades, Special Facilities, including Network Upgrades, and provides an itemized best estimate of the cost of the required facilities.

**Upgrades*****Distribution Upgrades***

Idaho Power will install a new capacitor bank on the existing distribution feeder (CLVR-012) just west of the existing Clover Substation.

Description	Ownership	Cost Estimate
<b><i>Distribution Upgrades:</i></b>		
New Capacitor	IPCO	\$30,000
<b><i>TOTAL</i></b>		
<b><i>Interconnection costs (from Attachment 1)</i></b>		<b><i>\$260,000</i></b>
<b><i>Project GRAND TOTAL</i></b>		<b><i>\$290,000</i></b>

**BEFORE THE  
IDAHO PUBLIC UTILITIES COMMISSION  
CASE NO. IPC-E-12-25**

**IDAHO POWER COMPANY**

**ATTACHMENT 27**

## Bishop, Rowena

---

**From:** Hackett, Eric  
**Sent:** Monday, January 03, 2011 9:53 AM  
**To:** Laura Knothe  
**Cc:** Bishop, Rowena  
**Subject:** RE: GI 307 & 308 - Swager Farms and Double B Dairy

Great to hear from you Laura. As you can see if the FSR for both, it is approximately 6 months from the time we receive construction funding to the time we can have the project in-service on our end. We are still in good shape for meeting a late summer or early fall date. However, as you mentioned, the sooner funding is received and I can order materials and get the designers going on final design the better. I would anticipate material orders being placed within a couple weeks of payment and design to start a month or so after that based on current workload and resource availability. I think payment in the next 4-6 weeks would be best so we can schedule construction resources as well for this summer.

Thanks again.

***Eric Hackett, P.E.***

***Project Leader***

*Idaho Power Company*

*PO Box 70, 83707*

*1221 West Idaho St.*

*Boise, ID 83702*

*Office Phone: (208) 388-5712*

*Cell Phone: (208) 283-2720*

---

**From:** Laura Knothe [<mailto:laura@thenewenergycompany.com>]

**Sent:** Monday, January 03, 2011 9:43 AM

**To:** Hackett, Eric

**Cc:** Bishop, Rowena

**Subject:** GI 307 & 308 - Swager Farms and Double B Dairy

Good morning Eric and Happy New Year! I just wanted to check in with you regarding the above referenced projects. We have an investor on board and will proceed with the GIA in the next week or so. We have several meetings this week, so I should know more by the end of the week. How is your work load at this point? We are looking at construction this spring/summer and an operation date in September or October. I'm sure we need to get this proceeding right away. Please advise!

Thank you.

**Laura Knothe, PE, LEED AP**

The New Energy Company

[www.thenewenergycompany.com](http://www.thenewenergycompany.com)

208.890.8783

**BEFORE THE  
IDAHO PUBLIC UTILITIES COMMISSION  
CASE NO. IPC-E-12-25**

**IDAHO POWER COMPANY**

**ATTACHMENT 28**

1/14/11 KB

## SMALL GENERATOR INTERCONNECTION REQUEST (Application Form)

**Transmission Provider: IDAHO POWER COMPANY**

Designated Contact Person:	Rowena Bishop
Address:	1221 W. Idaho Street, Boise ID 83702
Telephone Number:	208-388-2658
Fax:	208-388-6647
E-Mail Address:	rbishop@idahopower.com

An Interconnection Request is considered complete when it provides all applicable and correct information required below.

### Preamble and Instructions

An Interconnection Customers who request interconnection must submit this Interconnection Request by hand delivery, mail, e-mail, or fax to the Transmission Provider.

### Processing Fee or Deposit:

If the Interconnection Request passes ALL screens of SGIP Section 2.2.1, the application may be submitted under the Fast Track Process, and the non-refundable processing fee is \$500. Please contact Idaho Power if you have any questions.

All Interconnection Requests submitted under the Study Process, whether a new submission or an Interconnection Request that did not pass the Fast Track Process, shall submit to the Transmission Provider a deposit not to exceed \$1,000 towards the cost of the feasibility study.

### Interconnection Customer Information

Legal Name of the Interconnection Customer (or, if an individual, individual's name)

Name: New Energy Two, LLC

Contact Person: Laura Knothe, PE

Mailing Address: 8720 Vic Lane

City: Middleton State: ID Zip: 83644

Facility Location (if different from above): \_\_\_\_\_

Telephone (Day): 208.890.8783 Telephone (Evening): 208.585.9016

Fax: 208.585.9016 E-Mail Address: laura@thenewenergycompany.com

Alternative Contact Information (if different from the Interconnection Customer) NA

Contact Name: \_\_\_\_\_

Title: \_\_\_\_\_

Address: \_\_\_\_\_  
\_\_\_\_\_

Telephone (Day): \_\_\_\_\_ Telephone (Evening): \_\_\_\_\_

Fax: \_\_\_\_\_ E-Mail Address: \_\_\_\_\_

Application is for: \_\_\_\_\_ New Small Generating Facility  
                                   Capacity addition to Existing Small Generating Facility

If capacity addition to existing facility, please describe: Project has completed Facility Study and Draft GIA, but no physical work has been completed – Project Number 307. This application is for an additional 800kW to bring the total request to 2000kW. The values below indicate the total project capacity and not the additional capacity for this specific request.

Will the Small Generating Facility be used for any of the following?

To Supply Power to the Interconnection Customer? Yes \_\_\_ No   
To Supply Power to Others? Yes \_\_\_ No

*Project AB*

For installations at locations with existing electric service to which the proposed Small Generating Facility will interconnect, provide:

\_\_\_\_\_  
(Local Electric Service Provider\*) (Existing Account Number\*)  
[\*To be provided by the Interconnection Customer if the local electric service provider is different from the Transmission Provider]

Contact Name: \_\_\_\_\_

Title: \_\_\_\_\_

Address: \_\_\_\_\_  
\_\_\_\_\_

Telephone (Day): \_\_\_\_\_ Telephone (Evening): \_\_\_\_\_

Fax: \_\_\_\_\_ E-Mail Address: \_\_\_\_\_

Requested Point of Interconnection: See previous studies – Project Number 307

Interconnection Customer's Requested In-Service Date: September 2011

SWAGER FARMS PROJECT

**Small Generating Facility Information**

Data apply only to the Small Generating Facility, not the Interconnection Facilities.

Energy Source: \_\_\_ Solar \_\_\_ Wind \_\_\_ Hydro \_\_\_ Hydro Type (e.g. Run-of-River): \_\_\_\_\_  
\_\_\_ Diesel \_\_\_ Natural Gas \_\_\_ Fuel Oil x Other (state type) methane gas

Prime Mover: \_\_\_ Fuel Cell x Recip Engine \_\_\_ Gas Turb \_\_\_ Steam Turb  
\_\_\_ Microturbine \_\_\_ PV \_\_\_ Other

Type of Generator: x Synchronous \_\_\_ Induction \_\_\_ Inverter

Generator Nameplate Rating: up to 2000 kW (Typical) Generator Nameplate kVAR:  
up to 1500

Interconnection Customer or Customer-Site Load: none kW (if none, so state)

Typical Reactive Load (if known): \_\_\_\_\_

Maximum Physical Export Capability Requested: 2000 kW (total for both applications; 800kW  
Additional for this application)

List components of the Small Generating Facility equipment package that are currently certified:

Equipment Type	Certifying Entity
1. _____	_____
2. _____	_____
3. _____	_____
4. _____	_____
5. _____	_____

Is the prime mover compatible with the certified protective relay package? \_\_\_ Yes \_\_\_ No

Generator (or solar collector)

Manufacturer, Model Name & Number: MWM TCG 2016 V16 C - 800kW

Version Number: \_\_\_\_\_

Nameplate Output Power Rating in kW: (Summer) 2000 (Winter) 2000

Nameplate Output Power Rating in kVA: (Summer) 2500 (Winter) 2500

Individual Generator Power Factor

Rated Power Factor: Leading: \_\_\_\_\_ Lagging: .8

Total Number of Generators in wind farm to be interconnected pursuant to this

Interconnection Request: \_\_\_\_\_ Elevation: \_\_\_\_\_ \_\_\_ Single phase \_\_\_ Three phase

Inverter Manufacturer, Model Name & Number (if used): \_\_\_\_\_

List of adjustable set points for the protective equipment or software: \_\_\_\_\_

Note: A completed Power Systems Load Flow data sheet must be supplied with the Interconnection Request.

**Small Generating Facility Characteristic Data (for inverter-based machines)**

Max design fault contribution current: \_\_\_\_\_ Instantaneous \_\_\_ or RMS? \_\_\_\_\_

Harmonics Characteristics: \_\_\_\_\_

Start-up requirements: \_\_\_\_\_

**Small Generating Facility Characteristic Data (for rotating machines)**

RPM Frequency: \_\_\_\_\_

(\*) Neutral Grounding Resistor (If Applicable): \_\_\_\_\_

Synchronous Generators:

Direct Axis Synchronous Reactance,  $X_d$ : \_\_\_\_\_ P.U.

Direct Axis Transient Reactance,  $X'_d$ : \_\_\_\_\_ P.U.

Direct Axis Subtransient Reactance,  $X''_d$ : \_\_\_\_\_ P.U.

Negative Sequence Reactance,  $X_2$ : \_\_\_\_\_ P.U.

Zero Sequence Reactance,  $X_0$ : \_\_\_\_\_ P.U.

KVA Base: \_\_\_\_\_

Field Volts: \_\_\_\_\_

Field Amperes: \_\_\_\_\_

Induction Generators: NA

Motoring Power (kW): \_\_\_\_\_

$I_2^2t$  or K (Heating Time Constant): \_\_\_\_\_

Rotor Resistance,  $R_r$ : \_\_\_\_\_

Stator Resistance,  $R_s$ : \_\_\_\_\_

Stator Reactance,  $X_s$ : \_\_\_\_\_

Rotor Reactance,  $X_r$ : \_\_\_\_\_

Magnetizing Reactance,  $X_m$ : \_\_\_\_\_

Short Circuit Reactance,  $X_d''$ : \_\_\_\_\_

Exciting Current: \_\_\_\_\_

Temperature Rise: \_\_\_\_\_

Frame Size: \_\_\_\_\_

Design Letter: \_\_\_\_\_

Reactive Power Required In Vars (No Load): \_\_\_\_\_

Reactive Power Required In Vars (Full Load): \_\_\_\_\_

Total Rotating Inertia, H: \_\_\_\_\_ Per Unit on kVA Base

Note: Please contact the Transmission Provider prior to submitting the Interconnection Request to determine if the specified information above is required.

Excitation and Governor System Data for Synchronous Generators Only

Provide appropriate IEEE model block diagram of excitation system, governor system and power system stabilizer (PSS) in accordance with the regional reliability council criteria. A PSS may be determined to be required by applicable studies. A copy of the manufacturer's block diagram may not be substituted.

**Interconnection Facilities Information**

Will a transformer be used between the generator and the point of common coupling?  Yes  No

Will the transformer be provided by the Interconnection Customer?  Yes  No

Transformer Data (If Applicable, for Interconnection Customer-Owned Transformer):

Is the transformer:  single phase  three phase? Size: \_\_\_\_\_ kVA  
Transformer Impedance: \_\_\_\_\_ % on \_\_\_\_\_ kVA Base

If Three Phase:

Transformer Primary: \_\_\_\_\_ Volts  Delta  Wye  Wye Grounded

Transformer Secondary: \_\_\_\_\_ Volts  Delta  Wye  Wye Grounded

Transformer Tertiary: \_\_\_\_\_ Volts  Delta  Wye  Wye Grounded

Transformer Fuse Data (If Applicable, for Interconnection Customer-Owned Fuse):

(Attach copy of fuse manufacturer's Minimum Melt and Total Clearing Time-Current Curves)

Manufacturer: \_\_\_\_\_ Type: \_\_\_\_\_ Size: \_\_\_\_\_ Speed: \_\_\_\_\_

Interconnecting Circuit Breaker (if applicable):

Manufacturer: \_\_\_\_\_ Type: \_\_\_\_\_  
Load Rating (Amps): \_\_\_\_\_ Interrupting Rating (Amps): \_\_\_\_\_ Trip Speed (Cycles): \_\_\_\_\_

Interconnection Protective Relays (If Applicable):

If Microprocessor-Controlled:

List of Functions and Adjustable Setpoints for the protective equipment or software:

Setpoint Function	Minimum	Maximum
1. _____	_____	_____
2. _____	_____	_____
3. _____	_____	_____
4. _____	_____	_____
5. _____	_____	_____
6. _____	_____	_____

If Discrete Components:

(Enclose Copy of any Proposed Time-Overcurrent Coordination Curves)

Manufacturer: _____	Type: _____	Style/Catalog No.: _____	Proposed Setting: _____
Manufacturer: _____	Type: _____	Style/Catalog No.: _____	Proposed Setting: _____
Manufacturer: _____	Type: _____	Style/Catalog No.: _____	Proposed Setting: _____
Manufacturer: _____	Type: _____	Style/Catalog No.: _____	Proposed Setting: _____
Manufacturer: _____	Type: _____	Style/Catalog No.: _____	Proposed Setting: _____

Current Transformer Data (If Applicable):

(Enclose Copy of Manufacturer's Excitation and Ratio Correction Curves)

Manufacturer: \_\_\_\_\_  
Type: \_\_\_\_\_ Accuracy Class: \_\_\_ Proposed Ratio Connection: \_\_\_\_\_

Manufacturer: \_\_\_\_\_  
Type: \_\_\_\_\_ Accuracy Class: \_\_\_ Proposed Ratio Connection: \_\_\_\_\_

Potential Transformer Data (If Applicable):

Manufacturer: \_\_\_\_\_  
Type: \_\_\_\_\_ Accuracy Class: \_\_\_ Proposed Ratio Connection: \_\_\_\_\_

Manufacturer: \_\_\_\_\_  
Type: \_\_\_\_\_ Accuracy Class: \_\_\_ Proposed Ratio Connection: \_\_\_\_\_

**General Information**

Enclose copy of site electrical one-line diagram showing the configuration of all Small Generating Facility equipment, current and potential circuits, and protection and control schemes. This one-line diagram must be signed and stamped by a licensed Professional Engineer if the Small Generating Facility is larger than 50 kW. Is One-Line Diagram Enclosed?  Yes  No

Enclose copy of any site documentation that indicates the precise physical location of the proposed Small Generating Facility (e.g., USGS topographic map or other diagram or documentation). See earlier applications.

Proposed location of protective interface equipment on property (include address if different from the Interconnection Customer's address) 1707 E 3800 N Buhl, ID 83316

Enclose copy of any site documentation that describes and details the operation of the protection and control schemes. Is Available Documentation Enclosed?  Yes  No

Enclose copies of schematic drawings for all protection and control circuits, relay current circuits, relay potential circuits, and alarm/monitoring circuits (if applicable).  
Are Schematic Drawings Enclosed?  Yes  No

**Applicant Signature**

I hereby certify that, to the best of my knowledge, all the information provided in this Interconnection Request is true and correct.

For Interconnection Customer:

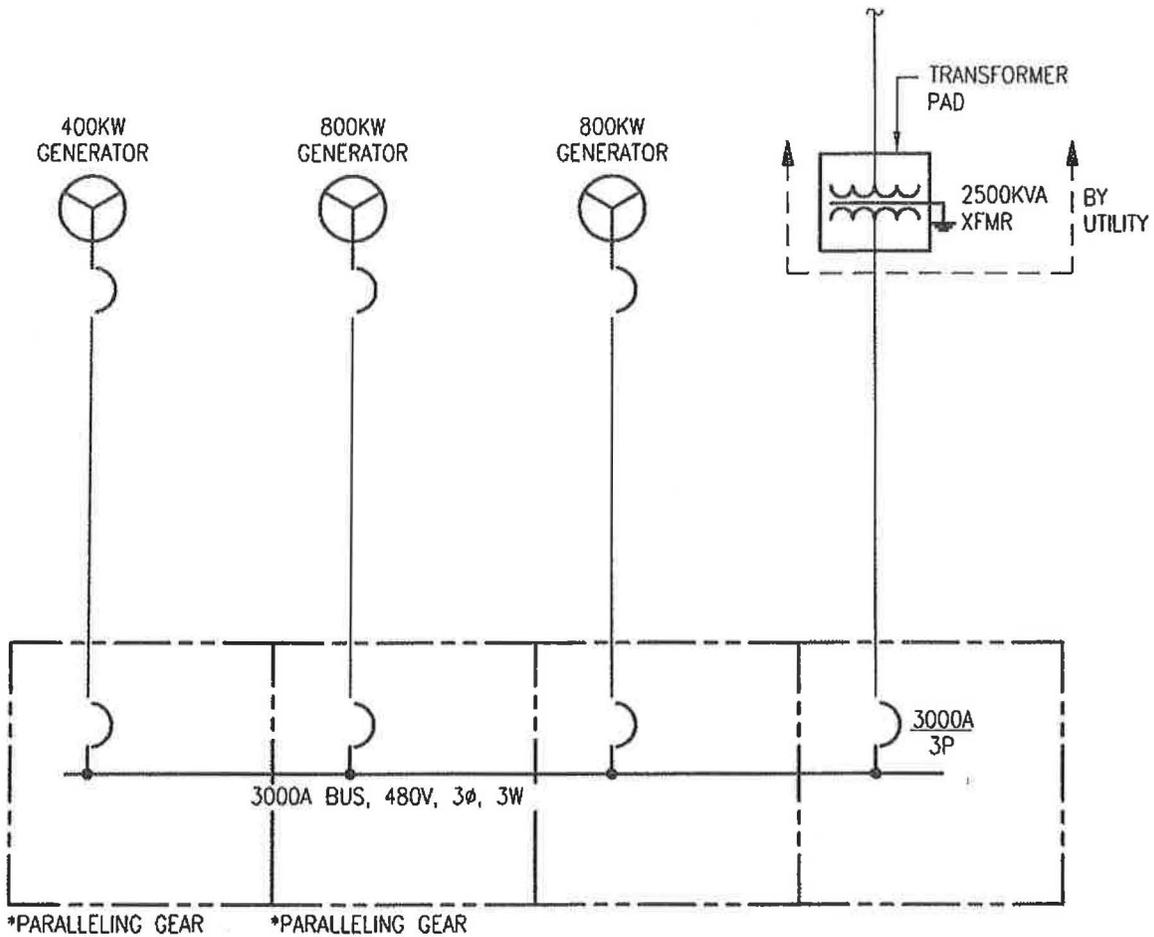
Signed



Date: 1/12/11

Printed

Laura Knothe



DATE: 01/11/11	<b>SKE-1</b>	<b>SWAGGER ONE-LINE DIAGRAM</b>	 440 East Corporate Dr., Ste. 103 Meridian ID 83642 ph 208-288-2181 fax 208-288-2182 project 00000
JOB NO. -			
SCALE NTS	REF. SHTS: -		

**BEFORE THE  
IDAHO PUBLIC UTILITIES COMMISSION  
CASE NO. IPC-E-12-25**

**IDAHO POWER COMPANY**

**ATTACHMENT 29**



January 20, 2011  
via email and  
Certified Mail # 70060810000655113157

Laura Knothe  
8720 Vic Lane  
Middleton, ID 83694

Re: Expansion Projects # 364 (Swager Farms) and # 365 (Double B)

Dear Laura:

Thank you for your Generator Interconnection applications for the expansion projects shown above (see attached copy). Since we have received all of the required materials, these applications are now considered complete. As you may be aware, we are required to post certain information to our OASIS (Open Access Same Time Information) website. Please refer to the website periodically to view a list of current projects at <http://www.oatioasis.com/IPCO/index.html> under GENERATOR INTERCONNECTION INFORMATION folder, on the left side of the screen.

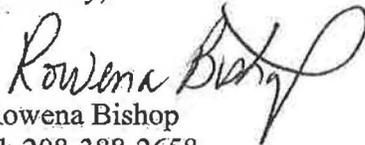
Since you will be selling the project output to Idaho Power Company-Power Supply (as a Network Resource-NR, or as a PURPA), transmission studies for moving this energy to the load or a point of delivery inside of our system will be included in the Generator Interconnection studies. If you haven't already done so, please contact Randy Allphin for your Power Sales contract under a parallel process. He can be reached at 208-388-2614.

At this time, Idaho Power Company will assign a planning engineer for this project, and we will contact you in the near future to schedule a Scoping Meeting. If your project passes screening for the FAST TRACK process, which means your project output can be accommodated into our system without facility upgrades or further studies, we will immediately notify you of next steps to proceed.

For your review, I am attaching a copy of the standard Interconnection Feasibility Study Agreement that needs to be executed by you soon after our Scoping Meeting. Please feel free to contact me with your questions about the Generator Interconnection Process anytime.

I will forward this application to our T&D Planning Leader, Marc Patterson, who will be evaluating your request.

Sincerely,

  
Rowena Bishop  
Ph 208-388-2658

Encl Application  
Idaho Power Company's Facility Connection Requirements  
Standard Interconnection Feasibility Study Agreement

Cc (via email):  
Marc Patterson/IPC  
Randy Allphin/IPC

**BEFORE THE  
IDAHO PUBLIC UTILITIES COMMISSION**

**CASE NO. IPC-E-12-25**

**IDAHO POWER COMPANY**

**ATTACHMENT 30**

## Feasibility Study Agreement

THIS AGREEMENT is made and entered into this 2 day of February 2011, by and between the New Energy Company, LLC a LLC organized and existing under the laws of the State of Idaho, ("Interconnection Customer,") and Idaho Power Company a Corporation existing under the laws of the State of Idaho ("Transmission Provider"). Interconnection Customer and Transmission Provider each may be referred to as a "Party," or collectively as the "Parties."

### RECITALS

**WHEREAS**, Interconnection Customer is proposing to develop a Small Generating Facility or generating capacity addition to an existing Small Generating Facility consistent with the Interconnection Request completed by Interconnection Customer on January 14, 2011; also known as Project # 364; and

**WHEREAS**, Interconnection Customer desires to interconnect the Small Generating Facility with the Transmission Provider's Transmission System; and

**WHEREAS**, Interconnection Customer has requested the Transmission Provider to perform a feasibility study to assess the feasibility of interconnecting the proposed Small Generating Facility with the Transmission Provider's Transmission System, and of any Affected Systems;

**NOW, THEREFORE**, in consideration of and subject to the mutual covenants contained herein the Parties agreed as follows:

- 1.0 When used in this Agreement, with initial capitalization, the terms specified shall have the meanings indicated or the meanings specified in the standard Small Generator Interconnection Procedures.
- 2.0 The Interconnection Customer elects and the Transmission Provider shall cause to be performed an interconnection feasibility study consistent the standard Small Generator Interconnection Procedures in accordance with the Open Access Transmission Tariff.
- 3.0 The scope of the feasibility study shall be subject to the assumptions set forth in Attachment A to this Agreement.
- 4.0 The feasibility study shall be based on the technical information provided by the Interconnection Customer in the Interconnection Request, as may be modified as the result of the scoping meeting. The Transmission Provider reserves the right to request additional technical information from the Interconnection Customer as may reasonably become necessary consistent with Good Utility Practice during the course of the feasibility study and as designated in accordance with the standard Small Generator

Interconnection Procedures. If the Interconnection Customer modifies its Interconnection Request, the time to complete the feasibility study may be extended by agreement of the Parties.

- 5.0 In performing the study, the Transmission Provider shall rely, to the extent reasonably practicable, on existing studies of recent vintage. The Interconnection Customer shall not be charged for such existing studies; however, the Interconnection Customer shall be responsible for charges associated with any new study or modifications to existing studies that are reasonably necessary to perform the feasibility study.
- 6.0 The feasibility study report shall provide the following analyses for the purpose of identifying any potential adverse system impacts that would result from the interconnection of the Small Generating Facility as proposed:
  - 6.1 Initial identification of any circuit breaker short circuit capability limits exceeded as a result of the interconnection;
  - 6.2 Initial identification of any thermal overload or voltage limit violations resulting from the interconnection;
  - 6.3 Initial review of grounding requirements and electric system protection; and
  - 6.4 Description and non-bonding estimated cost of facilities required to interconnect the proposed Small Generating Facility and to address the identified short circuit and power flow issues.
- 7.0 The feasibility study shall model the impact of the Small Generating Facility regardless of purpose in order to avoid the further expense and interruption of operation for reexamination of feasibility and impacts if the Interconnection Customer later changes the purpose for which the Small Generating Facility is being installed.
- 8.0 The study shall include the feasibility of any interconnection at a proposed project site where there could be multiple potential Points of Interconnection, as requested by the Interconnection Customer and at the Interconnection Customer's cost.
- 9.0 In lieu of Feasibility Study deposit, Interconnection Customer agrees that study funds will be drawn from the application fee for the performance of the Interconnection Feasibility Study.

Transmission Provider shall charge and Interconnection Customer shall pay the actual costs of the Interconnection Feasibility Study. Any difference between the deposit and the actual cost of the study shall be paid by or refunded to Interconnection Customer, as appropriate.

Small Generator Feasibility Study Agreement

Swager Farms Project # 364

- 10.0 Once the feasibility study is completed, a feasibility study report shall be prepared and transmitted to the Interconnection Customer. Barring unusual circumstances, the feasibility study must be completed and the feasibility study report transmitted within 30 business days of the Interconnection Customer's agreement to conduct a feasibility study.
- 11.0 Any study fees shall be based on the Transmission Provider's actual costs and will be invoiced to the Interconnection Customer after the study is completed and delivered and will include a summary of professional time.
- 12.0 The Interconnection Customer must pay any study costs that exceed the deposit without interest within 30 calendar days on receipt of the invoice or resolution of any dispute. If the deposit exceeds the invoiced fees, the Transmission Provider shall refund such excess within 30 calendar days of the invoice without interest.

**IN WITNESS WHEREOF**, the Parties have caused this Agreement to be duly executed by their duly authorized officers or agents on the day and year first above written.

**Transmission Provider:**

Idaho Power Company – Delivery

Signed: Marc Patterson

Printed: Marc Patterson

Title: Engineering Leader, T&D Planning

Date: 2/2/2011

**Interconnection Customer:**

The New Energy Co, LLC

Signed: Laura Knothe

Printed: Laura Knothe

Title: Manager, The New Energy Company LLC

Date: 2/2/2011

Keslie White  
Manager, The New Energy Company  
LLC  
2/2/2011

## Attachment A to Feasibility Study Agreement

### Assumptions Used in Conducting the Feasibility Study

The feasibility study will be based upon the information set forth in the Interconnection Request and agreed upon in the scoping meeting held on Feb 2, 2011:

- 1) Designation of Point of Interconnection and configuration to be studied.

Clover 12 12.5kV adjacent to 1707 E 3800 N; Bah 1  
800kW  
(This is an expansion to #307.) The total project will be 2,000 kW

- 2) Designation of alternative Points of Interconnection and configuration.

1) and 2) are to be completed by the Interconnection Customer. Other assumptions (listed below) are to be provided by the Interconnection Customer and the Transmission Provider.

**BEFORE THE  
IDAHO PUBLIC UTILITIES COMMISSION  
CASE NO. IPC-E-12-25**

**IDAHO POWER COMPANY**

**ATTACHMENT 31**

**GENERATOR INTERCONNECTION  
FEASIBILITY STUDY**

For integration of the proposed

**SWAGER FARMS DIGESTER EXPANSION PROJECT**

In

**TWIN FALLS COUNTY, IDAHO**

To the

**IDAHO POWER COMPANY ELECTRICAL SYSTEM**

For

**NEW ENERGY TWO, LLC**

The

**INTERCONNECTION CUSTOMER**

**DRAFT REPORT**

**MARCH 16, 2011**

# Generator Interconnection Feasibility Study

## General Interconnection Information

Queue	Date of Request	Location	Total (MW)	Station or Trans Line for POI	Projected In-Service Date	Type of facility (combined cycle, base load, CT, fuel type)
#364	January 2011	Twin Falls County	2.0	12.5 kV through Clover (COVR) substation	September 2011	Biogas

## Short Circuit Analysis Results

System Changes Required:  Yes  No

## Power Flow Analysis Results

System Changes Required:  Yes  No

System upgrades are required to the Idaho Power substation and to the existing distribution system to interconnect the 2 MW dairy digester generation project at Swager Farms. These upgrades are shown in the Table 1 below:

Description	Estimated Cost
4 total miles of distribution line upgrades	\$529,000
Substation upgrades to Clover Substation including new 7 MVA 46:12.5 kV transformer, associated bus reconfiguration and SCADA upgrades.	\$959,000
Generation Interconnection Protection Package (Includes 12.47 kV recloser, controls, CTs, PTs, and communications)	\$225,000
<b>Total Estimated Cost</b>	<b>\$1,713,000</b>

**Table 1: Estimated interconnection costs for 2 MW project at Swager Farms**

Idaho Power recently updated its operating requirements for generators interconnecting to the distribution system. Because of these new requirements, there are upgrades required to the existing IPC distribution system to interconnect the 1.2 MW generator project at Swager Farms. These estimates are shown in Table 2 below.

Description	Estimated Cost
Distribution line upgrades (2.5 miles total)	\$350,000
Generation Interconnection Protection Package (Includes 12.47 kV recloser, controls, CTs, PTs, and communications)	\$225,000
<b>Total Estimated Cost</b>	<b>\$575,000</b>

**Table 2: Estimated interconnection costs for 1.2 MW project at Swager Farms**

### **Good Faith Cost Estimate**

Interconnection cost estimate for 2 MW generator project: **\$1,713,000.**

Interconnection cost estimate for 1.2 MW generator project: **\$575,000.**

**System Impact Study Required?**  Yes  No

This Feasibility Study only addresses the work required to interconnect the Swager Farms digester projects to the Idaho Power system. There are no transmission rights secured for the project until a transmission system request is submitted by the corresponding transmission customer. The required transmission facilities, if any, to support energy transfers will then be determined based on first come first serve basis (queue order).

### **Operating Requirements:**

Project #364 will be controlled to operate at unity power factor with an operating bandwidth of  $\pm 300$  kVAR.

**BEFORE THE  
IDAHO PUBLIC UTILITIES COMMISSION  
CASE NO. IPC-E-12-25**

**IDAHO POWER COMPANY**

**ATTACHMENT 32**

**GENERATOR INTERCONNECTION  
FEASIBILITY STUDY**

For integration of the proposed

**SWAGER FARMS DIGESTER EXPANSION PROJECT**

In

**TWIN FALLS COUNTY, IDAHO**

To the

**IDAHO POWER COMPANY ELECTRICAL SYSTEM**

For

**NEW ENERGY TWO, LLC**

The

**INTERCONNECTION CUSTOMER**

**FINAL REPORT**

**APRIL 26, 2011**

# Generator Interconnection Feasibility Study

## General Interconnection Information

Queue	Date of Request	Location	Total (MW)	Station or Trans Line for POI	Projected In-Service Date	Type of facility (combined cycle, base load, CT, fuel type)
#364	January 2011	Twin Falls County	2.0	12.5 kV through Clover (COVR) substation	September 2011	Biogas

## Short Circuit Analysis Results

System Changes Required:  Yes  No

## Power Flow Analysis Results

System Changes Required:  Yes  No

System upgrades are required to the Idaho Power substation and to the existing distribution system to interconnect the 2 MW dairy digester generation project at Swager Farms. These upgrades are shown in the Table 1 below:

Description	Estimated Cost
4 total miles of distribution line upgrades	\$529,000
Substation upgrades to Clover Substation including new 7 MVA 46:12.5 kV transformer, associated bus reconfiguration and SCADA upgrades.	\$959,000
Generation Interconnection Protection Package (Includes 12.47 kV recloser, controls, CTs, PTs, and communications)	\$225,000
<b>Total Estimated Cost</b>	<b>\$1,713,000</b>

**Table 1: Estimated interconnection costs for 2 MW project at Swager Farms**

Idaho Power recently updated its operating requirements for generators interconnecting to the distribution system. Because of these new requirements, there are upgrades required to the existing IPC distribution system to interconnect the 1.2 MW generator project at Swager Farms. These estimates are shown in Table 2 below.

Description	Estimated Cost
Distribution line upgrades (2.5 miles total)	\$350,000
Generation Interconnection Protection Package (Includes 12.47 kV recloser, controls, CTs, PTs, and communications)	\$225,000
<b>Total Estimated Cost</b>	<b>\$575,000</b>

**Table 2: Estimated interconnection costs for 1.2 MW project at Swager Farms**

### **Good Faith Cost Estimate**

Interconnection cost estimate for 2 MW generator project: **\$1,713,000.**

Interconnection cost estimate for 1.2 MW generator project: **\$575,000.**

**System Impact Study Required?**  Yes  No

This Feasibility Study only addresses the work required to interconnect the Swager Farms digester projects to the Idaho Power system. There are no transmission rights secured for the project until a transmission system request is submitted by the corresponding transmission customer. The required transmission facilities, if any, to support energy transfers will then be determined based on first come first serve basis (queue order).

### **Operating Requirements:**

Project #364 will be controlled to operate at unity power factor with an operating bandwidth of  $\pm 300$  kVAR.

**BEFORE THE  
IDAHO PUBLIC UTILITIES COMMISSION  
CASE NO. IPC-E-12-25**

**IDAHO POWER COMPANY**

**ATTACHMENT 33**



April 27, 2011  
Certified Mail #70092820000284567176

Laura Knothe  
8720 Vic Lane  
Middleton, ID 83694

RE: Swager Farms expansion (GI 364) and Double B expansion (GI 365)

Dear Laura:

Enclosed is the Final Feasibility Study Report for each of the above-referenced projects. The feasibility analysis indicates that modification/addition of some facilities will not be required to integrate the network resource capacity addition of your project into the Idaho Power system.

Since no System Impact Study is required, I have enclosed two (2) copies of the Facility Study Agreement (FSA) for each project. In order to proceed, Idaho Power must receive your agreement to proceed with the project(s) by executing both copies of the FSA and submitting completed Attachments, along with the deposit in order to remain in the Generator Interconnection queue. The deposit under each FSA is based on the estimated engineering costs.

For GI 364 – Swager Farms, the deposit is \$30,000;  
For GI 365 – Double B Dairy, the deposit is \$18,800.00.

In order for your application to remain in the Generator Interconnection study queue, Idaho Power must receive all of these items by June 9, 2011; otherwise the application will be deemed withdrawn:

1. the executed Facility Study Agreement,
2. the completed Attachment A, and
3. the corresponding deposit.

Please submit to: Idaho Power Company, Attention: Rowena Bishop, 1221 West Idaho Street, Boise, ID 83702. Please contact me if you have questions.

Sincerely,

Marc Patterson  
Engineering Leader, T&D Planning  
Ph. 208.388.2712

Enclosures: Final Feasibility Study Report (2) GI 364 & 365  
Facility Study Agreements (s) GI 364 & 365

C: Rowena Bishop/IPC

## Facilities Study Agreement

**THIS AGREEMENT** is made and entered into this \_\_\_\_ day of \_\_\_\_\_ 2011 by and between \_\_\_\_\_, a \_\_\_\_\_ organized and existing under the laws of the State of \_\_\_\_\_, ("Interconnection Customer,") and Idaho Power Company, a Corporation existing under the laws of the State of Idaho ("Transmission Provider"). Interconnection Customer and Transmission Provider each may be referred to as a "Party," or collectively as the "Parties."

### RECITALS

**WHEREAS**, the Interconnection Customer is proposing to develop a Small Generating Facility or generating capacity addition to an existing Small Generating Facility consistent with the Interconnection Request completed by the Interconnection Customer on 1/14/11; and

**WHEREAS**, the Interconnection Customer desires to interconnect the Small Generating Facility with the Transmission Provider's Transmission System;

**WHEREAS**, the Transmission Provider has completed a system impact study and provided the results of said study to the Interconnection Customer; and

**WHEREAS**, the Interconnection Customer has requested the Transmission Provider to perform a facilities study to specify and estimate the cost of the equipment, engineering, procurement and construction work needed to implement the conclusions of the system impact study in accordance with Good Utility Practice to physically and electrically connect the Small Generating Facility with the Transmission Provider's Transmission System.

**NOW, THEREFORE**, in consideration of and subject to the mutual covenants contained herein the Parties agreed as follows:

- 1.0 When used in this Agreement, with initial capitalization, the terms specified shall have the meanings indicated or the meanings specified in the standard Small Generator Interconnection Procedures.
- 2.0 The Interconnection Customer elects and the Transmission Provider shall cause a facilities study consistent with the standard Small Generator Interconnection Procedures to be performed in accordance with the Open Access Transmission Tariff.
- 3.0 The scope of the facilities study shall be subject to data provided in Attachment A to this Agreement.
- 4.0 The facilities study shall specify and estimate the cost of the equipment, engineering, procurement and construction work (including overheads) needed to implement the conclusions of the system impact study(s).

The facilities study shall also identify (1) the electrical switching configuration of the equipment, including, without limitation, transformer, switchgear, meters, and other station equipment, (2) the nature and estimated cost of the Transmission Provider's

Interconnection Facilities and Upgrades necessary to accomplish the interconnection, and (3) an estimate of the time required to complete the construction and installation of such facilities.

- 5.0 The Transmission Provider may propose to group facilities required for more than one Interconnection Customer in order to minimize facilities costs through economies of scale, but any Interconnection Customer may require the installation of facilities required for its own Small Generating Facility if it is willing to pay the costs of those facilities.
- 6.0 A deposit of \$30,00.00 is due upon execution of this agreement by the Interconnection customer.
- 7.0 In cases where Upgrades are required, the facilities study must be completed within 45 Business Days of the receipt of this Agreement. In cases where no Upgrades are necessary, and the required facilities are limited to Interconnection Facilities, the facilities study must be completed within 30 Business Days.
- 8.0 Once the facilities study is completed, a facilities study report shall be prepared and transmitted to the Interconnection Customer. Barring unusual circumstances, the facilities study must be completed and the facilities study report transmitted within 30 Business Days of the Interconnection Customer's agreement to conduct a facilities study.
- 9.0 Any study fees shall be based on the Transmission Provider's actual costs and will be invoiced to the Interconnection Customer after the study is completed and delivered and will include a summary of professional time.
- 10.0 The Interconnection Customer must pay any study costs that exceed the deposit without interest within 30 calendar days on receipt of the invoice or resolution of any dispute. If the deposit exceeds the invoiced fees, the Transmission Provider shall refund such excess within 30 calendar days of the invoice without interest.

**IN WITNESS WHEREOF**, the Parties have caused this Agreement to be duly executed by their duly authorized officers or agents on the day and year first above written.

**Transmission Provider:**  
**Idaho Power Company - Delivery**

**Interconnection Customer:**

Signed: \_\_\_\_\_

Signed: \_\_\_\_\_

Printed Name: \_\_\_\_\_

Printed Name: \_\_\_\_\_

Title: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Date: \_\_\_\_\_

**Data to Be Provided by the Interconnection Customer  
With the Facilities Study Agreement**

1. Provide location plan and simplified one-line diagram of the plant and station facilities. For staged projects, please indicate future generation, transmission circuits, etc.

On the one-line diagram, indicate the generation capacity attached at each metering location. (Maximum load on CT/PT)

On the one-line diagram, indicate the location of auxiliary power. (Minimum load on CT/PT) Amps

2. One set of metering is required for each generation connection to the new ring bus or existing Transmission Provider station. Number of generation connections:

\_\_\_\_\_

3. Will an alternate source of auxiliary power be available during CT/PT maintenance?  
Yes \_\_\_\_\_ No \_\_\_\_\_

4. Will a transfer bus on the generation side of the metering require that each meter set be designed for the total plant generation? Yes \_\_\_\_\_ No \_\_\_\_\_  
(Please indicate on the one-line diagram).

5. What type of control system or PLC will be located at the Small Generating Facility?

\_\_\_\_\_  
\_\_\_\_\_

6. What protocol does the control system or PLC use?

\_\_\_\_\_  
\_\_\_\_\_

7. Please provide a 7.5-minute quadrangle map of the site. Indicate the plant, station, transmission line, and property lines.

8. Physical dimensions of the proposed interconnection station:

\_\_\_\_\_

9. Bus length from generation to interconnection station:

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10. Line length from interconnection station to Transmission Provider's Transmission System.

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11. Tower number observed in the field. (Painted on tower leg)\*:

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12. Number of third party easements required for transmission lines\*:

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\* To be completed in coordination with Transmission Provider.

13. Is the Small Generating Facility located in Transmission Provider's service area?

Yes \_\_\_\_\_ No \_\_\_\_\_ If No, please provide name of local provider:

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14. Please provide the following proposed schedule dates:

Begin Construction Date: \_\_\_\_\_

Generator Step-Up Transformers Date: \_\_\_\_\_  
Receive Back Feed Power

Generation Testing Date: \_\_\_\_\_

Commercial Operation Date: \_\_\_\_\_

**BEFORE THE  
IDAHO PUBLIC UTILITIES COMMISSION  
CASE NO. IPC-E-12-25**

**IDAHO POWER COMPANY**

**ATTACHMENT 34**



June 10, 2011  
VIA email &  
Certified mail # 70090820000123019190

Laura Knothe  
8720 Vic Lane  
Middleton, ID 83694

Subject: Swager Farms expansion Project #364 – FINAL NOTICE

Dear Laura:

By letter dated April 27, 2011 Idaho Power provided you with a Facility Study Agreement for interconnection of the proposed Swager Farms expansion to be interconnected in Twin Falls County, Idaho.

Interconnection Customer was to execute and return to me the Facility Study Agreement with the required \$30,000.00 deposit by June 9, 2011. That time period has now expired. Your application for Generation Interconnection has now been deemed withdrawn.

Failure to submit the deficient items to me by June 24, 2011 will cause your Generator Interconnection request to be terminated. If you have any further questions, please don't hesitate to contact me.

Sincerely,

A handwritten signature in black ink that reads "Rowena Bishop". The signature is fluid and cursive.

Rowena Bishop  
Operations Analyst  
Ph 208.388.2658  
[rbishop@idahopower.com](mailto:rbishop@idahopower.com)

cc (via email):  
Orlando Ciniglio/IPC  
Marc Patterson/IPC  
Eric Hackett/IPC  
Aubrae Sloan/IPC

**BEFORE THE  
IDAHO PUBLIC UTILITIES COMMISSION  
CASE NO. IPC-E-12-25**

**IDAHO POWER COMPANY**

**ATTACHMENT 35**

**GENERATOR INTERCONNECTION  
FEASIBILITY STUDY**

For integration of the proposed

**SWAGER FARMS DIGESTER PROJECT**

In

**TWIN FALLS COUNTY, IDAHO**

To the

**IDAHO POWER COMPANY ELECTRICAL SYSTEM**

For

**NEW ENERGY TWO, LLC**

The

**INTERCONNECTION CUSTOMER**

**REVISED REPORT**

**August 26, 2011**

# Generator Interconnection Feasibility Study

## General Interconnection Information

Queue	Date of Request	Location	Total (MW)	Station or Trans Line for POI	Projected In-Service Date	Type of facility (combined cycle, base load, CT, fuel type)
#307	January 2011	Twin Falls County	1.2	12.5 kV through Clover (COVR) substation	September 2011	Biogas

## Short Circuit Analysis Results

System Changes Required:  Yes  No

## Power Flow Analysis Results

System Changes Required:  Yes  No

Idaho Power recently updated its operating requirements for generators interconnecting to the distribution system. Because of these new requirements, there are upgrades required to the existing IPC distribution system to interconnect the 1.2 MW generator project at Swager Farms that were not identified in the original January 2010 report. The cost estimates for those upgrades are shown in Table 1 below.

Description	Estimated Cost
Distribution line upgrades (2.5 miles total)	\$350,000
Generation Interconnection Protection Package (Includes 12.47 kV recloser, controls, CTs, PTs, and communications)	\$225,000
<b>Total Estimated Cost</b>	<b>\$575,000</b>

Table 1: Estimated interconnection costs for 1.2 MW project at Swager Farms

## Good Faith Cost Estimate

Interconnection cost estimate for 1.2 MW generator project: **\$575,000.**

System Impact Study Required?  Yes  No

This Feasibility Study only addresses the work required to interconnect the Swager Farms digester projects to the Idaho Power system. There are no transmission rights secured for the project until a transmission system request is submitted by the corresponding transmission customer. The required transmission facilities, if any, to support energy transfers will then be determined based on first come first serve basis (queue order).

## Operating Requirements:

As part of the updated operating requirements, project #364 will be controlled to operate at unity power factor with an operating bandwidth of  $\pm 300$  kVAR.

**BEFORE THE  
IDAHO PUBLIC UTILITIES COMMISSION  
CASE NO. IPC-E-12-25**

**IDAHO POWER COMPANY**

**ATTACHMENT 36**



September 9, 2011

Certified Mail # 70090820000123019695

Laura Knothe  
The New Energy Company  
8720 Vic Lane  
Middleton, ID 83644

RE: Swager Farms Project # 307

Dear Laura:

Since we issued your previous Feasibility Study Report, some Idaho Power operating requirements changed that affect this project. The additional modifications were previously presented to you as part of our April 26, 2011 Feasibility Report for GINT#346. Enclosed is a Revised Feasibility Study Report for the above-referenced project. The feasibility analysis indicates that modification/addition of some facilities will be required to integrate the network resource capacity addition of your project into the Idaho Power system.

Enclosed are two Facility Study Agreements (FSAs) for the above-referenced generator interconnection. In order to proceed with your project, and for your application to remain in the Generator Interconnection study queue, Idaho Power must receive 2 signed copies of the FSA by October 21, 2011, otherwise your GI application will be deemed withdrawn. The deposit under this FSA is \$30,000 based on estimated engineering costs.

The submittal should be sent to: Idaho Power Company, Attention: Rowena Bishop, 1221 West Idaho Street, Boise, ID 83702. Please contact me if you have questions.

Sincerely,

Marc Patterson  
Engineering Leader, T&D Planning  
Ph. 208.388.2712

Enclosures: two Facility Study Agreements

C: Rowena Bishop/IPC  
Ed Kosydar/IPC

## Facilities Study Agreement

**THIS AGREEMENT** is made and entered into this \_\_\_\_ day of \_\_\_\_\_ 2011 by and between \_\_\_\_\_, a \_\_\_\_\_ organized and existing under the laws of the State of \_\_\_\_\_, ("Interconnection Customer,") and Idaho Power Company, a Corporation existing under the laws of the State of Idaho ("Transmission Provider"). Interconnection Customer and Transmission Provider each may be referred to as a "Party," or collectively as the "Parties."

### RECITALS

**WHEREAS**, the Interconnection Customer is proposing to develop a Small Generating Facility or generating capacity addition to an existing Small Generating Facility consistent with the Interconnection Request completed by the Interconnection Customer on 10/12/09; and

**WHEREAS**, the Interconnection Customer desires to interconnect the Small Generating Facility with the Transmission Provider's Transmission System;

**WHEREAS**, the Transmission Provider has completed a Revised Feasibility Study and provided the results of said study to the Interconnection Customer; and

**WHEREAS**, the Interconnection Customer has requested the Transmission Provider to perform a facilities study to specify and estimate the cost of the equipment, engineering, procurement and construction work needed to implement the conclusions of the system impact study in accordance with Good Utility Practice to physically and electrically connect the Small Generating Facility with the Transmission Provider's Transmission System.

**NOW, THEREFORE**, in consideration of and subject to the mutual covenants contained herein the Parties agreed as follows:

- 1.0 When used in this Agreement, with initial capitalization, the terms specified shall have the meanings indicated or the meanings specified in the standard Small Generator Interconnection Procedures.
- 2.0 The Interconnection Customer elects and the Transmission Provider shall cause a facilities study consistent with the standard Small Generator Interconnection Procedures to be performed in accordance with the Open Access Transmission Tariff.
- 3.0 The scope of the facilities study shall be subject to data provided in Attachment A to this Agreement.
- 4.0 The facilities study shall specify and estimate the cost of the equipment, engineering, procurement and construction work (including overheads) needed to implement the conclusions of the system impact study(s).

The facilities study shall also identify (1) the electrical switching configuration of the equipment, including, without limitation, transformer, switchgear, meters, and other station equipment, (2) the nature and estimated cost of the Transmission Provider's

Interconnection Facilities and Upgrades necessary to accomplish the interconnection, and (3) an estimate of the time required to complete the construction and installation of such facilities.

- 5.0 The Transmission Provider may propose to group facilities required for more than one Interconnection Customer in order to minimize facilities costs through economies of scale, but any Interconnection Customer may require the installation of facilities required for its own Small Generating Facility if it is willing to pay the costs of those facilities.
- 6.0 A deposit of \$30,000 is due upon execution of this agreement by the Interconnection customer.
- 7.0 In cases where Upgrades are required, the facilities study must be completed within 45 Business Days of the receipt of this Agreement. In cases where no Upgrades are necessary, and the required facilities are limited to Interconnection Facilities, the facilities study must be completed within 30 Business Days.
- 8.0 Once the facilities study is completed, a facilities study report shall be prepared and transmitted to the Interconnection Customer. Barring unusual circumstances, the facilities study must be completed and the facilities study report transmitted within 30 Business Days of the Interconnection Customer's agreement to conduct a facilities study.
- 9.0 Any study fees shall be based on the Transmission Provider's actual costs and will be invoiced to the Interconnection Customer after the study is completed and delivered and will include a summary of professional time.
- 10.0 The Interconnection Customer must pay any study costs that exceed the deposit without interest within 30 calendar days on receipt of the invoice or resolution of any dispute. If the deposit exceeds the invoiced fees, the Transmission Provider shall refund such excess within 30 calendar days of the invoice without interest.

**IN WITNESS WHEREOF**, the Parties have caused this Agreement to be duly executed by their duly authorized officers or agents on the day and year first above written.

**Transmission Provider:**  
**Idaho Power Company - Delivery**

**Interconnection Customer:**

Signed: \_\_\_\_\_

Signed: \_\_\_\_\_

Printed Name: \_\_\_\_\_

Printed Name: \_\_\_\_\_

Title: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Date: \_\_\_\_\_

**Data to Be Provided by the Interconnection Customer  
With the Facilities Study Agreement**

1. Provide location plan and simplified one-line diagram of the plant and station facilities. For staged projects, please indicate future generation, transmission circuits, etc.

On the one-line diagram, indicate the generation capacity attached at each metering location. (Maximum load on CT/PT)

On the one-line diagram, indicate the location of auxiliary power. (Minimum load on CT/PT) Amps

2. One set of metering is required for each generation connection to the new ring bus or existing Transmission Provider station. Number of generation connections:

\_\_\_\_\_

3. Will an alternate source of auxiliary power be available during CT/PT maintenance?  
Yes \_\_\_\_\_ No \_\_\_\_\_

4. Will a transfer bus on the generation side of the metering require that each meter set be designed for the total plant generation? Yes \_\_\_\_\_ No \_\_\_\_\_  
(Please indicate on the one-line diagram).

5. What type of control system or PLC will be located at the Small Generating Facility?

\_\_\_\_\_  
\_\_\_\_\_

6. What protocol does the control system or PLC use?

\_\_\_\_\_  
\_\_\_\_\_

7. Please provide a 7.5-minute quadrangle map of the site. Indicate the plant, station, transmission line, and property lines.

8. Physical dimensions of the proposed interconnection station:

\_\_\_\_\_

9. Bus length from generation to interconnection station:

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10. Line length from interconnection station to Transmission Provider's Transmission System.

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11. Tower number observed in the field. (Painted on tower leg)\*:

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12. Number of third party easements required for transmission lines\*:

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\* To be completed in coordination with Transmission Provider.

13. Is the Small Generating Facility located in Transmission Provider's service area?

Yes \_\_\_\_\_ No \_\_\_\_\_ If No, please provide name of local provider:

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14. Please provide the following proposed schedule dates:

Begin Construction Date: \_\_\_\_\_

Generator Step-Up Transformers Date: \_\_\_\_\_  
Receive Back Feed Power

Generation Testing Date: \_\_\_\_\_

Commercial Operation Date: \_\_\_\_\_

**BEFORE THE  
IDAHO PUBLIC UTILITIES COMMISSION  
CASE NO. IPC-E-12-25**

**IDAHO POWER COMPANY**

**ATTACHMENT 37**



**BEFORE THE  
IDAHO PUBLIC UTILITIES COMMISSION  
CASE NO. IPC-E-12-25**

**IDAHO POWER COMPANY**

**ATTACHMENT 38**

Rec'd  
10/21/11 KB

## Facilities Study Agreement

**THIS AGREEMENT** is made and entered into this 21 day of October, 2011 by and between New Energy Two, LLC, a Limited Liability Company organized and existing under the laws of the State of Idaho, ("Interconnection Customer,") and Idaho Power Company, a Corporation existing under the laws of the State of Idaho ("Transmission Provider"). Interconnection Customer and Transmission Provider each may be referred to as a "Party," or collectively as the "Parties."

### RECITALS

**WHEREAS**, the Interconnection Customer is proposing to develop a Small Generating Facility or generating capacity addition to an existing Small Generating Facility consistent with the Interconnection Request completed by the Interconnection Customer on 10/12/09; and

**WHEREAS**, the Interconnection Customer desires to interconnect the Small Generating Facility with the Transmission Provider's Transmission System;

**WHEREAS**, the Transmission Provider has completed a Revised Feasibility Study and provided the results of said study to the Interconnection Customer; and

**WHEREAS**, the Interconnection Customer has requested the Transmission Provider to perform a facilities study to specify and estimate the cost of the equipment, engineering, procurement and construction work needed to implement the conclusions of the system impact study in accordance with Good Utility Practice to physically and electrically connect the Small Generating Facility with the Transmission Provider's Transmission System.

**NOW, THEREFORE**, in consideration of and subject to the mutual covenants contained herein the Parties agreed as follows:

- 1.0 When used in this Agreement, with initial capitalization, the terms specified shall have the meanings indicated or the meanings specified in the standard Small Generator Interconnection Procedures.
- 2.0 The Interconnection Customer elects and the Transmission Provider shall cause a facilities study consistent with the standard Small Generator Interconnection Procedures to be performed in accordance with the Open Access Transmission Tariff.
- 3.0 The scope of the facilities study shall be subject to data provided in Attachment A to this Agreement.
- 4.0 The facilities study shall specify and estimate the cost of the equipment, engineering, procurement and construction work (including overheads) needed to implement the conclusions of the system impact study(s).

The facilities study shall also identify (1) the electrical switching configuration of the equipment, including, without limitation, transformer, switchgear, meters, and other station equipment, (2) the nature and estimated cost of the Transmission Provider's

Interconnection Facilities and Upgrades necessary to accomplish the interconnection, and (3) an estimate of the time required to complete the construction and installation of such facilities.

- 5.0 The Transmission Provider may propose to group facilities required for more than one Interconnection Customer in order to minimize facilities costs through economies of scale, but any Interconnection Customer may require the installation of facilities required for its own Small Generating Facility if it is willing to pay the costs of those facilities.
- 6.0 A deposit of \$18,260 is due upon execution of this agreement by the Interconnection customer.
- 7.0 In cases where Upgrades are required, the facilities study must be completed within 45 Business Days of the receipt of this Agreement. In cases where no Upgrades are necessary, and the required facilities are limited to Interconnection Facilities, the facilities study must be completed within 30 Business Days.
- 8.0 Once the facilities study is completed, a facilities study report shall be prepared and transmitted to the Interconnection Customer. Barring unusual circumstances, the facilities study must be completed and the facilities study report transmitted within 30 Business Days of the Interconnection Customer's agreement to conduct a facilities study.
- 9.0 Any study fees shall be based on the Transmission Provider's actual costs and will be invoiced to the Interconnection Customer after the study is completed and delivered and will include a summary of professional time.
- 10.0 The Interconnection Customer must pay any study costs that exceed the deposit without interest within 30 calendar days on receipt of the invoice or resolution of any dispute. If the deposit exceeds the invoiced fees, the Transmission Provider shall refund such excess within 30 calendar days of the invoice without interest.

**IN WITNESS WHEREOF**, the Parties have caused this Agreement to be duly executed by their duly authorized officers or agents on the day and year first above written.

**Transmission Provider:**  
**Idaho Power Company - Delivery**

Signed:   
Printed Name: EDWARD KOSYDAR  
Title: Engg. Supervisor  
Date: 11/2/11

**Interconnection Customer:**

\_\_\_\_\_  
Signed:   
Printed Name: Leslie White  
Title: Project Manager  
Date: 10/21/2011

**Data to Be Provided by the Interconnection Customer  
With the Facilities Study Agreement**

1. Provide location plan and simplified one-line diagram of the plant and station facilities. For staged projects, please indicate future generation, transmission circuits, etc. Submitted previously.

On the one-line diagram, indicate the generation capacity attached at each metering location. (Maximum load on CT/PT)

On the one-line diagram, indicate the location of auxiliary power. (Minimum load on CT/PT) Amps

2. One set of metering is required for each generation connection to the new ring bus or existing Transmission Provider station. Number of generation connections: 1 connection.

3. Will an alternate source of auxiliary power be available during CT/PT maintenance?  
Yes \_\_\_\_\_ No NA.

4. Will a transfer bus on the generation side of the metering require that each meter set be designed for the total plant generation? Yes \_\_\_\_\_ No X  
(Please indicate on the one-line diagram).

5. What type of control system or PLC will be located at the Small Generating Facility?  
Automation Direct
- 

6. What protocol does the control system or PLC use?

Mobus or other if required.

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7. Please provide a 7.5-minute quadrangle map of the site. Indicate the plant, station, transmission line, and property lines. Submitted previously.

8. Physical dimensions of the proposed interconnection station: NE Corner of 3900N 1700E

9. Bus length from generation to interconnection station:

TBD

10. Line length from interconnection station to Transmission Provider's Transmission System.

TBD

11. Tower number observed in the field. (Painted on tower leg)\*:

TBD

12. Number of third party easements required for transmission lines\*:

None Anticipated

\* To be completed in coordination with Transmission Provider.

13. Is the Small Generating Facility located in Transmission Provider's service area?

Yes X No        If No, please provide name of local provider:

14. Please provide the following proposed schedule dates:

Begin Construction Date: 12/15/2011

Generator Step-Up Transformers  
Receive Back Feed Power Date: 6/15/2012

Generation Testing Date: 7/15/2012

Commercial Operation Date: 10/1/2012

**BEFORE THE  
IDAHO PUBLIC UTILITIES COMMISSION  
CASE NO. IPC-E-12-25**

**IDAHO POWER COMPANY**

**ATTACHMENT 39**

Rec'd 10/21/11 RB

Rowena Bishop  
Idaho Power  
1221 W. Idaho Street  
Boise, Idaho 83702  
[rbishop@idahopower.com](mailto:rbishop@idahopower.com)

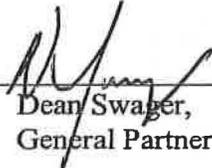
Re: Proof of Site Control  
Swager Dairy

Dear Ms. Bishop:

The undersigned, Swager Farms, LLLP, is the Owner of Swager Dairy, as evidenced by copies of the vesting deed and tax records attached. This is to acknowledge that New Energy Company Two, LLC, is negotiating with Owner as regards the right to lease and occupy a site upon the subject property for purposes of development of an anaerobic digester project. Please consider this as Proof of Site Control as required to by Idaho Power to be submitted during the interconnection process ongoing between Idaho Power and New Energy Company Two, LLC.

Swager Farms, LLLP,  
an Idaho limited liability partnership

By: \_\_\_\_\_

  
Dean Swager,  
General Partner

Date: October 19, 2011

TWIN FALLS COUNTY  
RECORDED FOR:  
FREDERICKSEN, WILLIAMS  
9:24:27 am 12-22-2008  
2008-026678  
NO. PAGES: 2 FEE: \$6.00  
KRISTINA GLASCOCK  
COUNTY CLERK  
DEPUTY: DANIEL

QUITCLAIM DEED

FOR VALUE RECEIVED, THE GERBEN AND MARIAN SWAGER FAMILY TRUST, under trust agreement dated June 21, 1991, Gerben Swager and Marian Swager, Trustees, hereby remises, releases, and forever quitclaims unto SWAGER FARMS, LLLP, an Idaho limited liability partnership, 1707 East 3800 North, Buhl, Idaho 83316-1646, hereinafter called the "Grantee", all its right, title and interest in the following described real property, to-wit:

See EXHIBIT A attached hereto.

Together with all water rights appurtenant thereto.

TO HAVE AND TO HOLD the premises, with their appurtenances unto said Grantee, and the Grantee's heirs and assigns forever.

DATED this 19<sup>th</sup> day of December, 2008.

"GRANTOR"

THE GERBEN AND MARIAN SWAGER  
FAMILY TRUST, General Partner

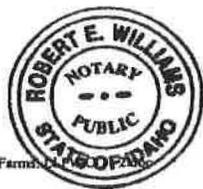
*Gerben Swager*  
GERBEN SWAGER, Trustee

*Marian Swager*  
MARIAN SWAGER, Trustee

STATE OF IDAHO )  
ss:  
County of Jerome)

On this 19<sup>th</sup> day of December, 2008, before me, the undersigned, a Notary Public in and for said County and State, personally appeared GERBEN SWAGER and MARIAN SWAGER, husband and wife, Trustees of the Gerben and Marian Swager Family Trust u/v/a dtd 6/24/91, General Partner, known to me to be such Trustees and the persons whose names are subscribed to the within and foregoing instrument, and who acknowledged to me that they executed the same on behalf of the Trust as General Partner of the Partnership.

IN WITNESS WHEREOF, I have hereunto set my hand and seal, the day and year in this certificate first above written.



*Robert E. Williams*  
NOTARY PUBLIC for Idaho  
Residing at: Jerome  
Commission Expires: 1/27/11

**PARCEL NO. 1**

Township 10 South, Range 15 East, Boise Meridian, Twin Falls County, Idaho  
Section 20: NE 1/4 NE 1/4, EXCEPT the West 10 acres thereof  
Section 21: N 1/2 NW 1/4  
SUBJECT TO: Twin Falls Highway District right of way

**PARCEL NO. 2**

Township 10 South, Range 15 East, Boise Meridian, Twin Falls County, Idaho  
Section 21: S 1/2 NW 1/4  
SUBJECT TO: Twin Falls Highway District right of way

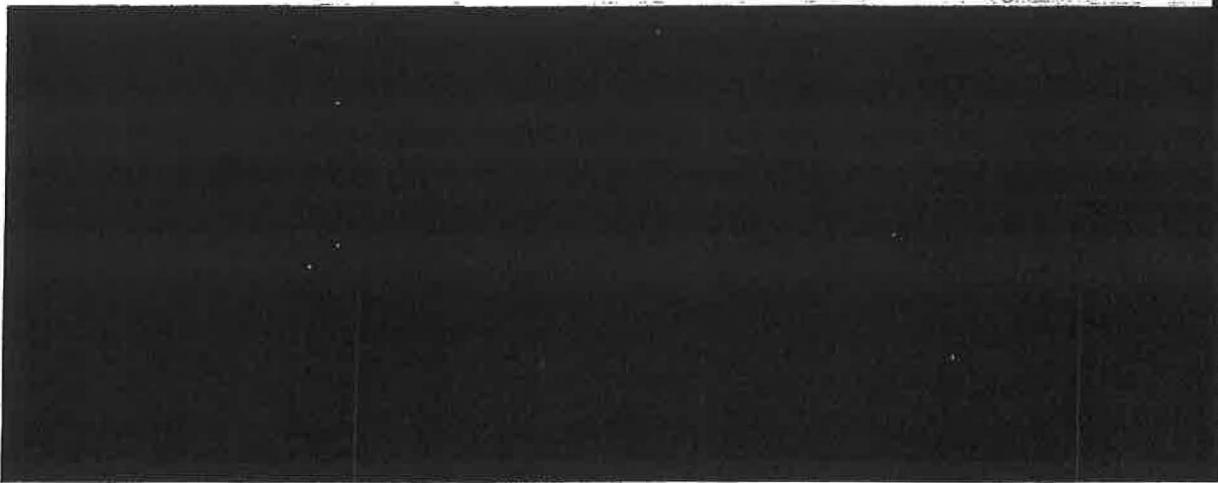
**PARCEL NO. 3**

Township 10 South, Range 15 East, Boise Meridian, Twin Falls County, Idaho  
Section 21: E 1/2 NE 1/4  
SUBJECT TO: Twin Falls Highway District right of way

**PARCEL NO. 4**

Township 10 South, Range 15 East, Boise Meridian, Twin Falls County, Idaho  
Section 21: W 1/2 NE 1/4; NW 1/4 SE 1/4  
SUBJECT TO: Twin Falls Highway District right of way

**EXHIBIT**  
*A*



## Twin Falls County Property Information Access

Parcel ID Number: **RP10S15E212400A**

Owner Information	Legal Description
SWAGER FARMS, LLLP 1707 E 3800 N BUHL ID 83316	Tax Code: 620000 Zip: 0  SEC 21 T 10 R 15 N1/2 NW

Category Information			
Category	Quantity	Unit	Value
1 - IRRGTD AG	19.742	AC	21064
10 - RURAL HOMESITE	1.000	AC	11480
10 - RURAL HOMESITE	1.000	AC	11480
18 - OTHER LAND	54.226	AC	127539
19 - WASTE	4.032	AC	0
31 - RURAL RES BLDG	0.000		208868
32 - RURAL IMP ON AG	0.000		2017670
47 - IMP TO MAN HSG	0.000		17360
48 - MANUF HS W/SID	0.000		43433

Property Information	Tax Information				
<b>3772 1700 E</b> Year Built: 2000 Effective Year: 2000 Other rural land  Impr.Type: DWELL Condition: AV # Levels: 001 Number Living Rooms: 1 Number Bedrooms: 3 Number Full Baths: 3 Half: 0 Number Family Rooms: 0 Number Dining Rooms: 0 Number Kitchens: 1 Other Rooms: 1 Kit Sinks:1 Wtr Heaters:1 Number Fireplaces: 1 Total Sq Feet: 2504 Total Living Sq Feet: 2504 Prim.Heat: Forced hot air-gas Central Air: Y Roof Type: Hip Roof Covering: Comp sh heavy Int. Walls: Drywall Foundation: Formed conc	<b>Tax Year: 2006</b> Bill#: 28366 Market: 2296090 C.B.: 0.00 H.O.: 0 Special: 36.86 Tax: 26246.90  <b>First Half:</b> Cost: 0.00 Interest: 0.00 Penalty: 0.00 Paid: 13123.45 Cancelled: 0.00  <b>Second Half:</b> Cost: 0.00 Interest: 0.00 Penalty: 0.00 Paid: 13123.45 Cancelled: 0.00	<b>Tax Year: 2007</b> Bill#: 29453 Market: 2986733 C.B.: 0.00 H.O.: 0 Special: 36.86 Tax: 29649.36  <b>First Half:</b> Cost: 0.00 Interest: 0.00 Penalty: 0.00 Paid: 14824.68 Cancelled: 0.00  <b>Second Half:</b> Cost: 0.00 Interest: 0.00 Penalty: 0.00 Paid: 14824.68 Cancelled: 0.00	<b>Tax Year: 2008</b> Bill#: 30410 Market: 2986733 C.B.: 0.00 H.O.: 0 Special: 36.86 Tax: 30231.88  <b>First Half:</b> Cost: 0.00 Interest: 0.00 Penalty: 0.00 Paid: 15115.94 Cancelled: 0.00  <b>Second Half:</b> Cost: 0.00 Interest: 0.00 Penalty: 0.00 Paid: 15115.94 Cancelled: 0.00	<b>Tax Year: 2009</b> Bill#: 31365 Market: 2377204 C.B.: 0.00 H.O.: 135331 Special: 36.86 Tax: 23222.70  <b>First Half:</b> Cost: 0.00 Interest: 0.00 Penalty: 0.00 Paid: 11611.35 Cancelled: 0.00  <b>Second Half:</b> Cost: 0.00 Interest: 0.00 Penalty: 0.00 Paid: 11611.35 Cancelled: 0.00	<b>Tax Year: 2010</b> Bill#: 32195 Market: 2377204 C.B.: 0.00 H.O.: 132014 Special: 36.86 Tax: 23987.08  <b>First Half:</b> Cost: 0.00 Interest: 0.00 Penalty: 0.00 Paid: 11993.54 Cancelled: 0.00  <b>Second Half:</b> Cost: 0.00 Interest: 0.00 Penalty: 0.00 Paid: 11993.54 Cancelled: 0.00

Special Taxing Districts: AMER.FALLS

Deed Reference Numbers: 08-026679 08-026678 02-009992 99-007758 TB88093489 Last Change Date: 12-22-2008

Related Parcel Numbers:  
(none)

**Parcel Comments:**

ASSOC PARCEL - RP10S15E210600; ASSOC PARCEL - RP10S15E213600; ASSOC PARCEL - RP10S15E214800; ASSOC PARCEL - RP10S15E216010; ASSOC PARCEL - RP10S15E210010;

**Ownership History:**

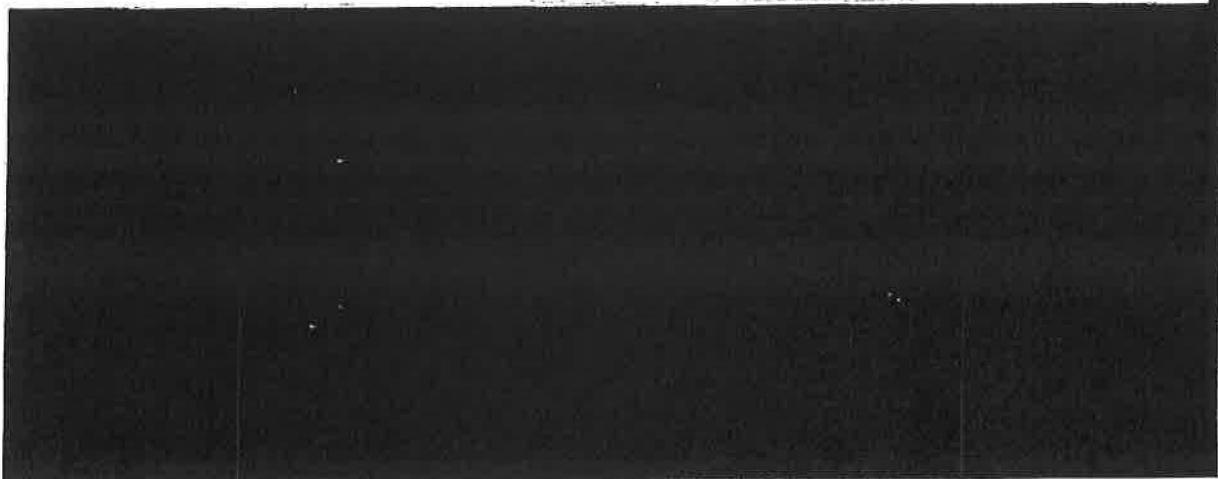
2009 - 2010 SWAGER FARMS, LLLP  
2002 - 2008 SWAGER, GERBEN  
1999 - 2001 TRANSMUTATION PROPERTIES, INC  
1994 - 1998 HAFLIGER, HENRY C JR

**Scanned Worksheets:**

1961 RURAL LAND APPRAISAL for: DROWN, LYNN R  
1961 OUT BUILDING for: DROWN, LYNN R  
1962 SUMMARY SHEET for: OPPLIGER, FRED  
1970 SUMMARY SHEET for: SLIGAR, RODNEY L  
1971 RURAL LAND APPRAISAL for: DROWN, LYNN R  
1971 OUT BUILDING for: DROWN, LYNN R  
1976 SUMMARY SHEET for: DROWN, LYNN R  
1980 OUT BUILDING for: DROWN, LYNN R  
1982 SUMMARY SHEET for: DROWN, LYNN R  
1984 RURAL LAND APPRAISAL for: DROWN, LYNN R  
1984 OUT BUILDING for: DROWN, LYNN R  
1985 SUMMARY SHEET for: DROWN, LYNN R  
1988 SUMMARY SHEET for: HAFLIGER, HENRY C JR  
1989 OUT BUILDING for: DROWN, LYNN R  
1989 MH APPRAISAL SHEET for: H&H DAIRY  
1993 APPRAISAL HOUSE #1 for: HAFLIGER, HENRY C JR  
1993 APPRAISAL HOUSE #2 for: HAFLIGER, HENRY C JR  
1993 OUT BUILDING for: HAFLIGER, HENRY C JR  
1996 MH APPRAISAL SHEET for: H&H DAIRY

**Additional Property Sheets:**

Property Sheet: 2  
Property Sheet: 3  
Property Sheet: 4  
Property Sheet: 5  
Property Sheet: 6  
Property Sheet: 7  
Property Sheet: 8  
Property Sheet: 9  
Property Sheet: 10  
Property Sheet: 11  
Property Sheet: 12  
Property Sheet: 13  
Property Sheet: 14  
Property Sheet: 15



[Property Sheet: 16](#)  
[Property Sheet: 17](#)  
[Property Sheet: 18](#)  
[Property Sheet: 19](#)  
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[Property Sheet: 41](#)  
[Property Sheet: 42](#)  
[Property Sheet: 43](#)  
[Property Sheet: 44](#)

Calculate taxes due- Interest as of date:  (do not use hyphens, enter as mmdyyy)

Tax Payment History											
Year/Type	Date	Half	Batch/Trans#	Tax	Penalty	Interest	Total	Remark	Payor	User	PUP
2006 Payment	12-13-2006	1	50 - 35	13123.45	0.00	0.00	13123.45	CK 4619-- M	SWAGER FARMS	BETHL	
2006 Payment	05-17-2007	2	50 - 6	13123.45	0.00	0.00	13123.45	CK 5027-- M	SWAGER, GERBEN	BETHL	
2007 Payment	12-17-2007	1	80 - 89	14824.68	0.00	0.00	14824.68	CK 5632 - M	SWAGER, GERBEN	KATHIE	
2007 Payment	12-17-2007	2	80 - 89	14824.68	0.00	0.00	14824.68	CK 5632 - M	SWAGER, GERBEN	KATHIE	
2008 Payment	12-29-2008	1	50 - 19	15115.94	0.00	0.00	15115.94	CK 6718-- M	SWAGER FARMS	JERIE	
2008 Payment	12-29-2008	2	50 - 19	15115.94	0.00	0.00	15115.94	CK 6718-- M	SWAGER FARMS	JERIE	
2009 Payment	12-17-2009	1	20 - 9	11611.35	0.00	0.00	11611.35	CK 10008 M	SWAGER FARMS, LLP	CAROL	
2009	12-17-	2	20 - 9	11611.35	0.00	0.00	11611.35	CK 10008	SWAGER FARMS,	CAROL	

<http://216.83.79.6:9951/resultdetail.php?parcel=RP10S15E212400A>

10/13/2011

Payment	2009						M	LLP		
2010 Payment	12-21- 2010	1	160 - 44	11993.54	0.00	0.00	11993.54	CK 11278-- --M	SWAGER FARMS, LLP	PEEKABOO
2010 Payment	06-17- 2011	2	70 - 51	11993.54	0.00	0.00	11993.54	CK#11882 M	SWAGER FARMS, LLP	DEBBIE

Use the browser **BACK** button to return to search results.

Begin [New Parcel Search](#)

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**BEFORE THE  
IDAHO PUBLIC UTILITIES COMMISSION  
CASE NO. IPC-E-12-25**

**IDAHO POWER COMPANY**

**ATTACHMENT 40**

Rec'd  
10/21/11/UB



October 21, 2011

Idaho Power Company  
Attn: Rowena Bishop  
1221 W. Idaho St.  
Boise, ID 83702

RE: Swager FSA-GI 307

Dear Rowena,

We are pleased to offer the enclosed signed Facilities Study Agreement for project #307 as well as the deposit of \$18,260. Additionally, we have reviewed correspondence that has taken place since the draft Generation Interconnection Agreement issued by Idaho Power on October 25, 2010 and we require your assistance in clarifying a few items pertaining to the studies and the associated revisions to the estimated interconnection costs for this project.

The primary clarification we require is the definition of the new operating requirements which have caused a significant change in the estimated interconnection cost for this project compared with the costs provided in the aforementioned Draft Generation Interconnection Agreement still in our possession. Please provide a summary, specific to project #307, of the relevant differences between the new operating requirements which are now in effect and those that were in effect when our generation interconnection request was accepted and final studies were submitted by Idaho Power.

Please also review the timeline shown in Table 1 and provide feedback concerning this table so that we can better understand the events that have transpired since the issuance of the Draft GIA for project #307.

**Table 1. Timeline**

Date	Transaction	Notes
9/16/2010	Facility Study Report #307	Projected cost \$290K
10/25/2010	Final FSR and Draft GIA #307	Projected cost \$290K
11/28/2010	Laura Knothe contacts Rowena Bishop	It is discussed that we will continue to work on the Draft GIA's (307 & 308) and keep Idaho Power informed of our progress.
1/3/11	Laura Knothe contacts Eric Hackett	We provided an updated of our progress on the Draft GIA and inquired about expected interconnection construction schedule.
3/16/2011	Draft FeSR GINT #364	Projected cost 2 MW = \$1.7M and 1.2 MW = \$575K. Noted operating requirement project #364 will be controlled to operate at unity power factor with an operating bandwidth of +/- 300 kVAR
4/16/2011	Final FeSR GINT #364	Projected cost 2 MW = \$1.7M and 1.2 MW = \$575K
8/26/2011	Revised report FeSR GINT #307	Projected cost 1.2 MW = \$575K. Noted operating requirement project #364 will be controlled to operate at unity power factor with an operating bandwidth of +/- 300 kVAR
9/9/2011	FSA #307 with request for deposit of \$30K.	
9/28/2011	Revised FSA #307 with request for deposit of \$18,260.	



A second need for clarification has to do with the "Operating Requirements" section of the August 26 Feasibility Study for project #307 which reads, "As part of the updated operating requirements, project #364 will be controlled to operate at unity power factor with an operating bandwidth of  $\pm 300$  kVAR." Specifically, we would like to know if there has been some confusion between the two different interconnection queue numbers being discussed early in 2011, namely #307 and #364. The feasibility study is for project #307, but some of the text is clearly referring to project #364.

Please do not hesitate to contact us with any questions regarding this letter or the enclosed documents.

Best Regards,

A handwritten signature in black ink that reads "Leslie White". The signature is written in a cursive, flowing style.

Leslie White  
Project Manager, New Energy Two  
Ph. 208.890.4660

Enclosures: Executed Facility Study Agreements (2)  
Deposit Check # 1571  
Swagger Site Control Documentation

**BEFORE THE  
IDAHO PUBLIC UTILITIES COMMISSION**

**CASE NO. IPC-E-12-25**

**IDAHO POWER COMPANY**

**ATTACHMENT 41**

**Clark, Danielle**

---

**From:** Patterson, Marc  
**Sent:** Thursday, December 08, 2011 4:35 PM  
**To:** 'Leslie White'  
**Cc:** Bishop, Rowena; Hackett, Eric; Schultz, Trevor  
**Subject:** FW: FSA for Project #307 Swager Farms

Leslie –

Idaho Power will not provide our detailed system information and customer load information to you. As indicated early, when we completed the revised Feasibility Study we identified upgrades required to interconnect this project. In addition, we reviewed the system changes suggested by Exergy at our November 3<sup>rd</sup> meeting, but those options had already been considered in our study process. Therefore the upgrades identified in the Feasibility Study will be required in order to connect this project.

In addition, because the project Facility Study will be completed next week, I suggest waiting for that study to be issued before setting another meeting to discuss this project.

Marc Patterson

---

**From:** Leslie White [<mailto:lwhite@exergydevelopment.com>]  
**Sent:** Wednesday, December 07, 2011 9:54 AM  
**To:** Patterson, Marc  
**Subject:** RE: FSA for Project #307 Swager Farms

Hello Marc,

Have you had time to consider this email and perhaps provide us with some direction with these concerns? Is there any chance we can arrange to talk about this on Friday or Monday?

Warm regards,

Leslie



**Leslie White**  
802 W Bannock, 12th Floor Boise, ID 83702  
Office: 208.336.9793 | Mobile: 208.890.4660  
[www.exergydevelopment.com](http://www.exergydevelopment.com)

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---

**From:** Leslie White  
**Sent:** Thursday, December 01, 2011 3:28 PM  
**To:** 'Patterson, Marc'  
**Cc:** 'Bishop, Rowena'; 'Hackett, Eric'; Josh Gunderson  
**Subject:** FSA for Project #307 Swager Farms

Marc,

I spoke to Eric today and he has directed us back to you with regards to our questions surrounding #307. We continue to struggle with depth of the upgrades required on the distribution line, but this is probably attributable to our lack of familiarity with the line. In reviewing the two drawings presented under work order # 27328106, the single line (21D-62790) and the google earth map depicting the distribution line path and location of the POI and Substation, we are wondering if you can fill in a few blanks and help us with defining the equipment and conductors on that line and perhaps the line loads?

We recognize that your team is confident in the need to upgrade 2 miles of distribution line as a result of their analysis, but I trust you can agree that the feasibility study does not provide the necessary details to support that conclusion. We are in a position to want see the problem and the solution as you see it, but we are unable to do so and thus you have been peppered with questions as we seek to understand the situation better. Perhaps you are willing to share the details of your system modeling and analysis, but if not, we would still find it useful to see the inputs to that model – namely drawings that depict what infrastructure exists in the area shown on the google earth map provided previously. By allowing us to see the problem as you see it, we can invest our time toward answering our own questions rather than infringing on your time to answer them. If by some chance we come up with an alternative solution that works, all the better and then Exergy will have to purchase further studies to investigate in detail. If we cannot find a such a solution, then at least your team and our team will be seeing the same problem in the same way and we can move forward.

Warm regards,

Leslie



**Leslie White**

802 W Bannock, 12th Floor Boise, ID 83702  
Office: 208.336.9793 | Mobile: 208.890.4660  
[www.exergydevelopment.com](http://www.exergydevelopment.com)

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**BEFORE THE  
IDAHO PUBLIC UTILITIES COMMISSION  
CASE NO. IPC-E-12-25**

**IDAHO POWER COMPANY**

**ATTACHMENT 42**



December 15, 2011

Leslie White  
New Energy Two, LLC  
802 W. Bannock  
12<sup>th</sup> Floor  
Boise, ID 83702

Re: Swager Farms Dairy Digester Project Revised Draft Facility Study Report – Project #307

Dear Ms. White:

Idaho Power Company (IPC) has completed the Draft Facility Study cost estimate for your Generator Interconnection project based on the revised Feasibility Study Report dated August 26, 2011. Attached please find the Draft Facility Study Report (FSR). I am available to discuss the FSR, and begin Construction arrangements for the project.

In order to proceed with this project, please provide your comments to the Facility Study Report to me by January 15, 2012 and indicate whether you wish to proceed with final design and construction. The final report will be used to prepare a draft Generator Interconnection Agreement in preparation for Construction. Rowena Bishop will be working with you to finalize the Interconnection Agreement.

Before we can begin Construction or order materials, you are responsible for contacting Idaho Power's credit department to discuss credit requirements for construction funding. Please contact Aubrae Sloan (208-388-5697) at your earliest convenience. Once we receive funding, or the credit requirement is met, we can proceed with construction of the project.

The actual construction and labor charges will be finalized approximately 90 days subsequent to project completion. We will reconcile any over- or underpayment at that time.

I look forward to hearing from you soon.

Sincerely,

A handwritten signature in cursive script that reads "Eric Hackett".

Eric Hackett  
Project Leader

Attachment: Swager Farms Dairy Digester Project Draft Facility Study Report with Drawings

Cc: R Bishop/IPC      A Sloan/IPC      R Bauer/IPC      D Walker/IPC



**DRAFT**  
**Generator Interconnection**  
**Facility Study Report**

for the

**Swager Farms Dairy Digester Project – Project #307**

for

**New Energy Two, LLC**

in

**Twin Falls County, Idaho**

**December 15, 2011**

---

# DRAFT - FACILITY STUDY REPORT (FSR)

## Swager Farms Dairy Digester

### Project #307

December 15, 2011

#### 1. General Facility Description

The proposed project will consist of Idaho Power's standard overhead generation interconnection package including an overhead recloser, metering package, local service power transformer, disconnect switches, and a relay/control box. Additionally, one 1500 kVA 277/480 to 12.47 kV Grounded Wye / Grounded Wye padmounted transformer will be installed, including the associated underground cabling and vaults. The project is located in Twin Falls County, Idaho and connects to the 12.5 kV system on Idaho Power Company's Clover (COVR-012) distribution line. The total project output is 1.2 MW.

##### Interconnection Customer:

Leslie White  
New Energy Two, LLC  
802 W. Bannock  
12<sup>th</sup> Floor  
Boise, ID 83702

A Standard Generator Interconnection Agreement under Idaho Power Company's Open Access Transmission Tariff (OATT) or Schedule 72 between Interconnection Customer and Idaho Power Company – Delivery (Transmission Owner) for the Swager Farms Dairy Digester Project, specifically Generator Interconnection Project #307, will be prepared for this project.

#### 1.1 Interconnection Point

The Interconnection Point for the Swager Farms Dairy Digester Project will be the low-side bushings on the padmounted transformer (SW1). The project's location is in T10S R15E Section 21 of Twin Falls County, Idaho. A drawing identifying the Interconnection Point is attached.

#### 1.2 Point of Change of Ownership

The Point of Change of Ownership for the Swager Farms Dairy Digester Project will be the low-side bushings on the padmounted transformer (SW1).

#### 1.3 Customer's Interconnection Facilities

The Interconnection Customer will install generators, low-side disconnect switches, all wiring and conduit between the generators and the padmounted transformer, appropriate grounding measures, and associated auxiliary equipment. Interconnection Customer will build underground facilities to the Point of Change of Ownership for the generator facility.

The low-side disconnect switch shall be as specified or as determined by mutual agreement and be readily accessible, operable, and lockable by Idaho Power personnel at all times.

## **1.4 Other Facilities Provided by Interconnection Customer**

### **1.4.1 Telecommunications**

In addition to communication circuits that may be needed by the Interconnection Customer, the Interconnection Customer shall provide the following communication circuits for Idaho Power's use:

1. One POTS (Plain Old Telephone Service) dial-up circuit for querying the revenue meter at the generation interconnection site.
2. One leased DDS (Digital Data Service) circuit for SCADA between the generation interconnection site and the Twin Falls Service Building (273 Blue Lakes Blvd. S., Twin Falls, ID 83301). This circuit must operate at 19.2 kbps data rate or higher. Please note that Frame Relay service is not acceptable.

The Interconnection Customer is required to coordinate with a communications provider to provide the communications circuits and pay the associated one time setup and periodic charges. The communication circuits will need to be installed and operational prior to generating into the Idaho Power system. Note that installation by communications provider may take several months and should be ordered in advance to avoid delaying the project. If the communication circuit types listed above are not available at the site by a communications provider, the Interconnection Customer shall confer with Idaho Power.

If high voltage protection is required by the communications provider for the incoming communications provider cable, the high voltage protection assembly shall be engineered and supplied by the Interconnect Customer. Options are available for indoor or outdoor mounting. The high voltage protection assembly shall be located in a manner that provides Idaho Power 24-hour access to the assembly for troubleshooting of Idaho Power owned equipment.

### **1.4.2 Ground Fault Equipment**

The customer will install ground fault limiting equipment that will limit the zero sequence fault current to 20 amps at the Interconnection Point.

### **1.4.3 Easements**

The Interconnection Customer will provide to Idaho Power a surveyed (Metes & Bounds) legal description along with exhibit map for Idaho Power's proposed facilities. After the legal description has been delivered to IPCO for review, IPCO will supply to the Interconnection Customer a completed IPCO easement for signature by the land owner of record. Once the signatures have been secured, the Interconnection Customer will return the signed easement to IPCO for recording.

### **1.4.4 Generator Output Limit Control**

The Interconnection Customer will install equipment to receive signals from Idaho Power Grid Operations for Generation Output Limit Control ("GOLC") - see Section 3 Operating Requirements.

#### 1.4.5 Local Service

The Interconnection Customer is responsible to arrange for local service to their site, as necessary.

#### 1.4.6 Monitoring Information

If the Interconnection Customer requires the ability to monitor information related to the Idaho Power recloser in the generation interconnection package they are required to supply their own communications circuit to the control box.

### 1.5 Idaho Power Company's Interconnection Facilities

Idaho Power will install a standard generation interconnection package on the existing distribution feeder (COVR-012) on private property southeast of the intersection of E. 3800 N. and N. 1700 E. in Twin Falls County, ID. See the attached work order maps (WO 27328106, sheet 1 of 2) for details.

The new interconnection package will include four distribution poles to mount a local service transformer, solid blade disconnects, primary metering package, recloser, relays, fuses and riser necessary for the package. The interconnection will be controlled by a SEL-311C line protection relay. The relay will be located in a pole mounted enclosure and will also contain a test switch (TS4), SLSS, modems, isolation interface, power supply, DC converter, control switch and surge protector.

Idaho Power will install (and subsequently own and maintain) one 1500 kVA 277/480 to 12.47 kV Grounded Wye / Grounded Wye padmounted transformer on top of a vault. Conduit and underground cables will be installed from the interconnection package to padmounted transformer. Protective posts will be installed to protect the ground mounted equipment from damage.

A 2" conduit will be installed alongside the underground primary to facilitate information exchange to the customer about the recloser if desired. (The Interconnection Customer is responsible for providing and installing the appropriate cable.)

### 1.6 Facility Estimated Cost:

The following good faith estimates are provided in 2011 dollars:

Description	Ownership	Cost Estimate
<b>Interconnection Facilities:</b>		
Overhead Generation Interconnection Package	IPC	\$200,000
Underground Equipment and 1500 kVA Transformer	IPC	\$70,000
<b>SUBTOTAL</b>		<b>\$270,000</b>
<i>See Section 6 for the Project Grand Total</i>		

## 2. Milestones

Date	Milestones
TBD	<i>Construction Funds Received by IPCO</i>
6 Months after Construction Funds Received by IPCO	<i>IPCO Construction Complete</i>
1 month after IPCO Construction Complete	<i>IPCO Commissioning Complete</i>
TBD by seller	<i>Commercial Operation Date</i>

These milestone dates assume that material can be procured and labor resources are available. Additionally, any permitting issues outside the immediate control of Idaho Power could also influence the Commercial Operation Date.

## 3. Operating Requirements

The project is required to comply with the applicable Voltage and Current Distortion Limits found in IEEE Standard 519-1992 *IEEE Recommended Practices and requirements for harmonic Control in Electrical Power Systems* or any subsequent standards as they may be updated from time to time. Voltage flicker at startup and during operation must be limited to less than 5% as measured at the Interconnection Point.

The Project will be subject to reductions directed by Idaho Power Grid Operations during transmission system contingencies and other reliability events. When these conditions occur, the Project will be subject to Generator Output Limit Control (“GOLC”) and will have equipment capable of receiving an analog setpoint via DNP 3.0 from Idaho Power for GOLC. Generator Output Limit Control will be a setpoint from Idaho Power to the Project indicating maximum output allowed.

The Project must be capable of riding through faults on adjacent section of the power system without tripping due to low voltage. It has been determined, through study, that the Project must be capable of remaining interconnected for any single phase voltage as low as 0.7 PU for 30 cycles, and for all three phase voltages as low as 0.8 PU for 30 cycles.

Interconnection Customer will be able to modify power plant facilities on the Interconnection Customer side of the Interconnection Point with no impact upon the operation of the transmission or distribution system whenever the generation facilities are electrically isolated from the system and a terminal clearance is issued by Idaho Power Company’s Grid Operator.

## 4. Reactive Power

The Project must be controlled to operate as a VAr neutral system with a  $\pm 300$  kVAr operating band.

## 5. Upgrades

### 5.1 Distribution Upgrades

Idaho Power will upgrade the existing distribution feeder (COVR-012) along E. 3550 N. from the Clover Substation (approximately N. 1950 E.) west to N. 1700 E. The new conductor will be 336.4 All Aluminum (336AAC) and will require new support structures to accommodate the larger wire.

Additionally, an existing fixed type capacitor bank on the feeder will be upgraded. In order to avoid high voltage on the feeder during minimum load situations, the capacitor must have automatic controls in order to switch on and off as necessary.

## 6. Estimated Costs

The following good faith estimates are provided in 2011 dollars:

### Estimated Cost:

Description	Ownership	Cost Estimate
<b><i>Interconnection Facilities (from section 1.6):</i></b>		
Overhead Generation Interconnection Package	IPC	\$200,000
Underground Equipment and 1500 kVA Transformer	IPC	\$70,000
<b><i>TOTAL</i></b>		<b>\$270,000</b>
<b><i>Upgrades to Distribution:</i></b>		
Reconductor Approximately 2.5 Miles to 336 AAC	IPC	\$325,000
Upgrade C69 Capacitor	IPC	\$30,000
<b><i>TOTAL</i></b>		<b>\$355,000</b>
<b><i>GRAND TOTAL</i></b>		<b>\$625,000</b>

### Note Regarding Transmission Service:

This Facility Study is a Network Resource Interconnection Facility Study. This study identifies the facilities necessary to integrate the Generating Facility into Idaho Power's network to serve load within Idaho Power's balancing area. Network Resource Interconnection Service in and of itself does not convey any right to deliver electricity to any specific customer or Point of Delivery.



**BEFORE THE  
IDAHO PUBLIC UTILITIES COMMISSION  
CASE NO. IPC-E-12-25**

**IDAHO POWER COMPANY**

**ATTACHMENT 43**



January 25, 2012

Leslie White  
New Energy Two, LLC  
802 W. Bannock  
12<sup>th</sup> Floor  
Boise, ID 83702

Re: Swager Farms Dairy Digester Project Revised Facility Study Report – Project #307

Dear Ms. White:

Attached please find the Facility Study Report (FSR) based on the revised Feasibility Study Report dated August 26, 2011. This report is considered final as no comments were received by IPCO from the draft FSR sent December 15, 2011. Rowena Bishop will be using this FSR and working with you to finalize the Interconnection Agreement.

Before we can begin Construction or order materials, you are responsible for contacting Idaho Power's credit department to discuss credit requirements for construction funding. Please contact Aubrae Sloan (208-388-5697) at your earliest convenience. Once we receive funding, or the credit requirement is met, we can proceed with construction of the project.

The actual construction and labor charges will be finalized approximately 90 days subsequent to project completion. We will reconcile any over- or underpayment at that time.

Sincerely,

A handwritten signature in cursive script that reads "Eric Hackett".

Eric Hackett  
Project Leader

Attachment: Swager Farms Dairy Digester Project Facility Study Report with Drawings

Cc: R Bishop/IPC      A Sloan/IPC      R Bauer/IPC      D Walker/IPC



# **Generator Interconnection Facility Study Report**

for the

**Swager Farms Dairy Digester Project – Project #307**

for

**New Energy Two, LLC**

in

**Twin Falls County, Idaho**

**January 25, 2012**

---

# FACILITY STUDY REPORT (FSR)

## Swager Farms Dairy Digester

### Project #307

January 25, 2012

## 1. General Facility Description

The proposed project will consist of Idaho Power's standard overhead generation interconnection package including an overhead recloser, metering package, local service power transformer, disconnect switches, and a relay/control box. Additionally, one 1500 kVA 277/480 to 12.47 kV Grounded Wye / Grounded Wye padmounted transformer will be installed, including the associated underground cabling and vaults. The project is located in Twin Falls County, Idaho and connects to the 12.5 kV system on Idaho Power Company's Clover (COVR-012) distribution line. The total project output is 1.2 MW.

### Interconnection Customer:

Leslie White  
New Energy Two, LLC  
802 W. Bannock  
12<sup>th</sup> Floor  
Boise, ID 83702

A Standard Generator Interconnection Agreement under Idaho Power Company's Open Access Transmission Tariff (OATT) or Schedule 72 between Interconnection Customer and Idaho Power Company – Delivery (Transmission Owner) for the Swager Farms Dairy Digester Project, specifically Generator Interconnection Project #307, will be prepared for this project.

### 1.1 Interconnection Point

The Interconnection Point for the Swager Farms Dairy Digester Project will be the low-side bushings on the padmounted transformer (SW1). The project's location is in T10S R15E Section 21 of Twin Falls County, Idaho. A drawing identifying the Interconnection Point is attached.

### 1.2 Point of Change of Ownership

The Point of Change of Ownership for the Swager Farms Dairy Digester Project will be the low-side bushings on the padmounted transformer (SW1).

### 1.3 Customer's Interconnection Facilities

The Interconnection Customer will install generators, low-side disconnect switches, all wiring and conduit between the generators and the padmounted transformer, appropriate grounding measures, and associated auxiliary equipment. Interconnection Customer will build underground facilities to the Point of Change of Ownership for the generator facility.

The low-side disconnect switch shall be as specified or as determined by mutual agreement and be readily accessible, operable, and lockable by Idaho Power personnel at all times.

## **1.4 Other Facilities Provided by Interconnection Customer**

### **1.4.1 Telecommunications**

In addition to communication circuits that may be needed by the Interconnection Customer, the Interconnection Customer shall provide the following communication circuits for Idaho Power's use:

1. One POTS (Plain Old Telephone Service) dial-up circuit for querying the revenue meter at the generation interconnection site.
2. One leased DDS (Digital Data Service) circuit for SCADA between the generation interconnection site and the Twin Falls Service Building (273 Blue Lakes Blvd. S., Twin Falls, ID 83301). This circuit must operate at 19.2 kbps data rate or higher. Please note that Frame Relay service is not acceptable.

The Interconnection Customer is required to coordinate with a communications provider to provide the communications circuits and pay the associated one time setup and periodic charges. The communication circuits will need to be installed and operational prior to generating into the Idaho Power system. Note that installation by communications provider may take several months and should be ordered in advance to avoid delaying the project. If the communication circuit types listed above are not available at the site by a communications provider, the Interconnection Customer shall confer with Idaho Power.

If high voltage protection is required by the communications provider for the incoming communications provider cable, the high voltage protection assembly shall be engineered and supplied by the Interconnect Customer. Options are available for indoor or outdoor mounting. The high voltage protection assembly shall be located in a manner that provides Idaho Power 24-hour access to the assembly for troubleshooting of Idaho Power owned equipment.

### **1.4.2 Ground Fault Equipment**

The customer will install ground fault limiting equipment that will limit the zero sequence fault current to 20 amps at the Interconnection Point.

### **1.4.3 Easements**

The Interconnection Customer will provide to Idaho Power a surveyed (Metes & Bounds) legal description along with exhibit map for Idaho Power's proposed facilities. After the legal description has been delivered to IPCO for review, IPCO will supply to the Interconnection Customer a completed IPCO easement for signature by the land owner of record. Once the signatures have been secured, the Interconnection Customer will return the signed easement to IPCO for recording.

### **1.4.4 Generator Output Limit Control**

The Interconnection Customer will install equipment to receive signals from Idaho Power Grid Operations for Generation Output Limit Control ("GOLC") - see Section 3 Operating Requirements.

**1.4.5 Local Service**

The Interconnection Customer is responsible to arrange for local service to their site, as necessary.

**1.4.6 Monitoring Information**

If the Interconnection Customer requires the ability to monitor information related to the Idaho Power recloser in the generation interconnection package they are required to supply their own communications circuit to the control box.

**1.5 Idaho Power Company's Interconnection Facilities**

Idaho Power will install a standard generation interconnection package on the existing distribution feeder (COVR-012) on private property southeast of the intersection of E. 3800 N. and N. 1700 E. in Twin Falls County, ID. See the attached work order maps (WO 27328106, sheet 1 of 2) for details.

The new interconnection package will include four distribution poles to mount a local service transformer, solid blade disconnects, primary metering package, recloser, relays, fuses and riser necessary for the package. The interconnection will be controlled by a SEL-311C line protection relay. The relay will be located in a pole mounted enclosure and will also contain a test switch (TS4), SLSS, modems, isolation interface, power supply, DC converter, control switch and surge protector.

Idaho Power will install (and subsequently own and maintain) one 1500 kVA 277/480 to 12.47 kV Grounded Wye / Grounded Wye padmounted transformer on top of a vault. Conduit and underground cables will be installed from the interconnection package to padmounted transformer. Protective posts will be installed to protect the ground mounted equipment from damage.

A 2" conduit will be installed alongside the underground primary to facilitate information exchange to the customer about the recloser if desired. (The Interconnection Customer is responsible for providing and installing the appropriate cable.)

**1.6 Facility Estimated Cost:**

The following good faith estimates are provided in 2011 dollars:

Description	Ownership	Cost Estimate
<b><i>Interconnection Facilities:</i></b>		
Overhead Generation Interconnection Package	IPC	\$200,000
Underground Equipment and 1500 kVA Transformer	IPC	\$70,000
<b><i>SUBTOTAL</i></b>		<b>\$270,000</b>
<b><i>See Section 6 for the Project Grand Total</i></b>		

## 2. Milestones

Date	Milestones
TBD	<i>Construction Funds Received by IPCO</i>
6 Months after Construction Funds Received by IPCO	<i>IPCO Construction Complete</i>
1 month after IPCO Construction Complete	<i>IPCO Commissioning Complete</i>
TBD by seller	<i>Commercial Operation Date</i>
<p>These milestone dates assume that material can be procured and labor resources are available. Additionally, any permitting issues outside the immediate control of Idaho Power could also influence the Commercial Operation Date.</p>	

## 3. Operating Requirements

The project is required to comply with the applicable Voltage and Current Distortion Limits found in IEEE Standard 519-1992 *IEEE Recommended Practices and requirements for harmonic Control in Electrical Power Systems* or any subsequent standards as they may be updated from time to time. Voltage flicker at startup and during operation must be limited to less than 5% as measured at the Interconnection Point.

The Project will be subject to reductions directed by Idaho Power Grid Operations during transmission system contingencies and other reliability events. When these conditions occur, the Project will be subject to Generator Output Limit Control (“GOLC”) and will have equipment capable of receiving an analog setpoint via DNP 3.0 from Idaho Power for GOLC. Generator Output Limit Control will be a setpoint from Idaho Power to the Project indicating maximum output allowed.

The Project must be capable of riding through faults on adjacent section of the power system without tripping due to low voltage. It has been determined, through study, that the Project must be capable of remaining interconnected for any single phase voltage as low as 0.7 PU for 30 cycles, and for all three phase voltages as low as 0.8 PU for 30 cycles.

Interconnection Customer will be able to modify power plant facilities on the Interconnection Customer side of the Interconnection Point with no impact upon the operation of the transmission or distribution system whenever the generation facilities are electrically isolated from the system and a terminal clearance is issued by Idaho Power Company’s Grid Operator.

## 4. Reactive Power

The Project must be controlled to operate as a VAr neutral system with a  $\pm 300$  kVAr operating band.

## 5. Upgrades

### 5.1 Distribution Upgrades

Idaho Power will upgrade the existing distribution feeder (COVR-012) along E. 3550 N. from the Clover Substation (approximately N. 1950 E.) west to N. 1700 E. The new conductor will be 336.4 All Aluminum (336AAC) and will require new support structures to accommodate the larger wire.

Additionally, an existing fixed type capacitor bank on the feeder will be upgraded. In order to avoid high voltage on the feeder during minimum load situations, the capacitor must have automatic controls in order to switch on and off as necessary.

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### Estimated Cost:

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<b><i>Upgrades to Distribution:</i></b>		
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Upgrade C69 Capacitor	IPC	\$30,000
<b><i>TOTAL</i></b>		<b>\$355,000</b>
<b><i>GRAND TOTAL</i></b>		<b>\$625,000</b>

### Note Regarding Transmission Service:

This Facility Study is a Network Resource Interconnection Facility Study. This study identifies the facilities necessary to integrate the Generating Facility into Idaho Power's network to serve load within Idaho Power's balancing area. Network Resource Interconnection Service in and of itself does not convey any right to deliver electricity to any specific customer or Point of Delivery.



**BEFORE THE  
IDAHO PUBLIC UTILITIES COMMISSION  
CASE NO. IPC-E-12-25**

**IDAHO POWER COMPANY**

**ATTACHMENT 44**

## Clark, Danielle

---

**From:** Leslie White [lwhite@exergydevelopment.com]  
**ent:** Tuesday, February 28, 2012 12:47 PM  
**To:** Bishop, Rowena  
**Cc:** Hackett, Eric  
**Subject:** RE: Swager Farms- GI 307

Hello Rowena,

I cannot as of yet confirm inservice dates but I appreciate knowing that construction is dependent upon receipt of funds from Exergy.

James will be meeting with our technology provider within the next two weeks. I should be able to extract the pertinent data to provide you with inservice dates at that point.

Thanks,

Leslie



**Leslie White**  
802 W Bannock, 12th Floor Boise, ID 83702  
Office: 208.336.9793 | Mobile: 208.890.4660  
[www.exergydevelopment.com](http://www.exergydevelopment.com)

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---

**From:** Bishop, Rowena [<mailto:RBishop@idahopower.com>]  
**Sent:** Friday, February 24, 2012 2:51 PM  
**To:** Leslie White  
**Cc:** Hackett, Eric  
**Subject:** RE: Swager Farms- GI 307

Leslie,

Please give me a call next week so we can finalize the milestones and determine your inservice date. Note that construction may not begin until Idaho Power receives funding. Thank you.

*Rowena Bishop*  
*Operations Analyst*  
*Interchange Operations - chq 4*  
*Ext. 388-2658*

---

**From:** Bishop, Rowena  
**Sent:** Wednesday, February 15, 2012 11:54 AM  
**To:** 'Leslie White'  
**Cc:** Hackett, Eric  
**Subject:** RE: Swager Farms- timelines

Hi Leslie,

Just checking on you? Please let us know what your intended in service date is as soon as possible.  
thx!

Rowena Bishop  
Operations Analyst  
Interchange Operations - chq 4  
Ext. 388-2658

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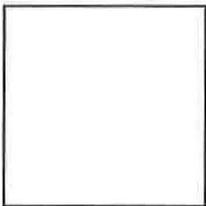
**From:** Bishop, Rowena  
**Sent:** Monday, February 06, 2012 3:08 PM  
**To:** 'Leslie White'  
**Cc:** Hackett, Eric  
**Subject:** Swager Farms- timelines

Hi Leslie,  
I am ready to offer a Draft GIA for Swager Farms. Please review this milestone table and let us know when you want to be in service so that we can proceed. Thank you.

Critical milestones and responsibility as agreed to by the Parties:

Date	Responsible Party	Milestones
	<b>Seller</b>	<b>E&amp;P funding received by IPCO \$XXX</b>
	<b>Seller</b>	<b>Remaining Balance received by IPCO \$XXX</b>
	<b>Seller</b>	<b>Customer GOLC ready to connect &amp; customer telecomm requirements are complete</b>
6mos(per FSR)	<b>IPCO</b>	<b>IPCO Construction Complete</b>
1 mo	<b>IPCO</b>	<b>IPCO Commissioning Complete</b>
	<b>IPCO</b>	<b>Project Leader issues Construction Complete Letter</b>
	<b>Seller</b>	<b>Customer testing begins</b>
Provided by Customer	<b>Seller</b>	<b>Customer's requested In-Service Date</b>

Rowena  
Ext. 2658



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**BEFORE THE  
IDAHO PUBLIC UTILITIES COMMISSION  
CASE NO. IPC-E-12-25**

**IDAHO POWER COMPANY**

**ATTACHMENT 45**



March 22, 2012  
Via email/Certified 7010278000090951588

Leslie White  
Exergy Development Group of Idaho  
802 W Bannock, Suite 1200  
Boise, ID 83702

Re: Swager Farms Project – GI# 307

Dear Leslie:

Attached please find a copy of the final Facility Study Report (FSR) dated January 25, 2012 and a draft Generator Interconnection Agreement (GIA) for your Generator Interconnection project. The GIA is part of Idaho Power Company's Rate Schedule 72 tariff approved by the Idaho Public Utilities Commission (IPUC). The IPUC has the authority to review and modify these schedules periodically. You may view the most current tariff at Idaho Power's website: <http://www.idahopower.com/aboutus/regulatoryinfo/tariffs.asp> The GIA Attachments are based on the Facility Study Report. Please review the GIA Attachments to make sure they are comprehensive and accurate and advise me of any changes as soon as possible.

Although the preferred method of funding is full payment upfront; payment arrangements may be requested. If you have not already done so, please contact Aubrae Sloan (208-388-5697), Operations Finance at your earliest convenience to discuss Idaho Power's credit requirements for construction funding. Once we receive funding, or the credit requirement is met, we can proceed with construction of the project. The actual construction and labor charges will be reconciled approximately 90 days subsequent to project completion.

Under the Generator Interconnection process, the following items must be provided to me on or before execution of the GIA:

1. Your requested in service date to complete Attachment 3 of the GIA.
2. Insurance certification pursuant to Section 7 of the GIA (certificate, 1 endorsement for Additional insured, and 1 for the cancellation notice)
3. Financial arrangements approved by Idaho Power credit department, or full payment for construction

Failure to submit all of the requested items above by April 23, 2012 will cause your Generator Interconnection request to have been deemed withdrawn and terminated. Please contact me at your earliest convenience with any questions.

Sincerely,

Josh Harris  
Operations Analyst  
[JHarris@idahopower.com](mailto:JHarris@idahopower.com)

Encl: Final Facility Study Report  
draft GIA for Swager Farms Project # 307

Cc: (via email) Eric Hackett, Project Leader/IPC  
Rich Bauer/IPC  
Aubrae Sloan/IPC

March 22, 2012

**GENERATOR INTERCONNECTION AGREEMENT**  
Schedule 72

**SWAGER FARMS DAIRY DIGESTER PROJECT**

1.2 MW

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This Generator Interconnection Agreement ("Agreement") under Idaho Power Company's Schedule 72 is effective as of the \_\_\_\_ day of \_\_\_\_\_, 2012 between \_\_\_\_\_, ("Seller" or "The Project") and Idaho Power Company – Delivery ("Company", or "Transmission Owner").

### RECITALS

A. Seller will own or operate a Generation Facility that qualifies for service under Idaho Power's Commission-approved Schedule 72 and any successor schedule.

B. The Generation Facility covered by this Agreement is more particularly described in Attachment 1.

### AGREEMENTS

1. Capitalized Terms

Capitalized terms used herein shall have the same meanings as defined in Schedule 72 or in the body of this Agreement.

2. Terms and Conditions

This Agreement and Schedule 72 provide the rates, charges, terms and conditions under which the Seller's Generation Facility will interconnect with, and operate in parallel with, the Company's transmission/distribution system. Terms defined in Schedule 72 will have the same defined meaning in this Agreement. If there is any conflict between the terms of this Agreement and Schedule 72, Schedule 72 shall prevail.

3. This Agreement is not an agreement to purchase Seller's power.

Purchase of Seller's power and other services that Seller may require will be covered under separate agreements. Nothing in this Agreement is intended to affect any other agreement between the Company and Seller.

4. Attachments

Attached to this Agreement and included by reference are the following:

Attachment 1 – Description and Costs of the Generation Facility, Interconnection Facilities, and Metering Equipment.

Attachment 2 – One-line Diagram Depicting the Generation Facility, Interconnection Facilities, Metering Equipment and Upgrades.

Attachment 3 – Milestones For Interconnecting the Generation Facility.

Attachment 4 – Additional Operating Requirements for the Company's Transmission System Needed to Support the Seller's Generation Facility.

Attachment 5 – Reactive Power.

Attachment 6 – Description of Upgrades required to integrate the Generation Facility and Best Estimate of Upgrade Costs.

5. Effective Date, Term, Termination and Disconnection.

---

5.1 Term of Agreement. Unless terminated earlier in accordance with the provisions of this Agreement, this Agreement shall become effective on the date specified above and remain effective as long as Seller's Generation Facility is eligible for service under Schedule 72.

5.2 Termination.

5.2.1 Seller may voluntarily terminate this Agreement upon expiration or termination of an agreement to sell power to the Company.

5.2.2 After a Default, either Party may terminate this Agreement pursuant to Section 6.5.

5.2.3 Upon termination or expiration of this Agreement, the Seller's Generation Facility will be disconnected from the Company's transmission/distribution system. The termination or expiration of this Agreement shall not relieve either Party of its liabilities and obligations, owed or continuing at the time of the termination. The provisions of this Section shall survive termination or expiration of this Agreement.

5.3 Temporary Disconnection. Temporary disconnection shall continue only for so long as reasonably necessary under "Good Utility Practice." Good Utility Practice means any of the practices, methods and acts engaged in or approved by a significant portion of the electric industry during the relevant time period, or any of the practices, methods and acts which, in the exercise of reasonable judgment in light of the facts known at the time the decision was made, could have been expected to accomplish the desired result at a reasonable cost consistent with good business practices, reliability, safety and expedition. Good Utility Practice is not intended to be limited to the optimum practice, method, or act to the exclusion of all others, but rather to be acceptable practices, methods, or acts generally accepted in the region. Good Utility Practice includes compliance with WECC or NERC requirements. Payment of lost revenue resulting from temporary disconnection shall be governed by the power purchase agreement.

5.3.1 Emergency Conditions. "Emergency Condition" means a condition or situation: (1) that in the judgment of the Party making the claim is imminently likely to endanger life or property; or (2) that, in the case of the Company, is imminently likely (as determined in a non-discriminatory manner) to cause a material adverse effect on the security of, or damage to the Company's transmission/distribution system, the Company's Interconnection Facilities or the equipment of the Company's customers; or (3) that, in the case of the Seller, is imminently likely (as determined in a non-discriminatory manner) to cause a material adverse effect on the reliability and security of, or damage to, the Generation Facility or the Seller's Interconnection Facilities. Under Emergency Conditions, either the Company or the Seller may immediately suspend interconnection service and temporarily disconnect the Generation Facility. The Company shall notify the Seller promptly when it becomes aware of an Emergency Condition that may reasonably be expected to affect the Seller's operation of the Generation Facility. The Seller shall notify the Company promptly when it becomes aware of an Emergency Condition that may reasonably be expected to affect the Company's equipment or service to the Company's customers. To the extent information is known, the notification shall describe the Emergency Condition, the extent of the damage or deficiency, the expected effect on the operation of both Parties' facilities and operations, its anticipated duration, and the necessary corrective action.

5.3.2 Routine Maintenance, Construction, and Repair. The Company may interrupt interconnection service or curtail the output of the Seller's Generation Facility

and temporarily disconnect the Generation Facility from the Company's transmission/distribution system when necessary for routine maintenance, construction, and repairs on the Company's transmission/distribution system. The Company will make a reasonable attempt to contact the Seller prior to exercising its rights to interrupt interconnection or curtail deliveries from the Seller's Facility. Seller understands that in the case of emergency circumstances, real time operations of the electrical system, and/or unplanned events, the Company may not be able to provide notice to the Seller prior to interruption, curtailment or reduction of electrical energy deliveries to the Company. The Company shall use reasonable efforts to coordinate such reduction or temporary disconnection with the Seller.

**5.3.3 Scheduled Maintenance.** On or before January 31 of each calendar year, Seller shall submit a written proposed maintenance schedule of significant Facility maintenance for that calendar year and the Company and Seller shall mutually agree as to the acceptability of the proposed schedule. The Parties determination as to the acceptability of the Seller's timetable for scheduled maintenance will take into consideration Good Utility Practices, Idaho Power system requirements and the Seller's preferred schedule. Neither Party shall unreasonably withhold acceptance of the proposed maintenance schedule.

**5.3.4 Maintenance Coordination.** The Seller and the Company shall, to the extent practical, coordinate their respective transmission/distribution system and Generation Facility maintenance schedules such that they occur simultaneously. Seller shall provide and maintain adequate protective equipment sufficient to prevent damage to the Generation Facility and Seller-furnished Interconnection Facilities. In some cases, some of Seller's protective relays will provide back-up protection for Idaho Power's facilities. In that event, Idaho Power will test such relays annually and Seller will pay the actual cost of such annual testing.

**5.3.5 Forced Outages.** During any forced outage, the Company may suspend interconnection service to effect immediate repairs on the Company's transmission/distribution system. The Company shall use reasonable efforts to provide the Seller with prior notice. If prior notice is not given, the Company shall, upon request, provide the Seller written documentation after the fact explaining the circumstances of the disconnection.

**5.3.6 Adverse Operating Effects.** The Company shall notify the Seller as soon as practicable if, based on Good Utility Practice, operation of the Seller's Generation Facility may cause disruption or deterioration of service to other customers served from the same electric system, or if operating the Generation Facility could cause damage to the Company's transmission/distribution system or other affected systems. Supporting documentation used to reach the decision to disconnect shall be provided to the Seller upon request. If, after notice, the Seller fails to remedy the adverse operating effect within a reasonable time, the Company may disconnect the Generation Facility. The Company shall provide the Seller with reasonable notice of such disconnection, unless the provisions of Article 5.3.1 apply.

**5.3.7 Modification of the Generation Facility.** The Seller must receive written authorization from the Company before making any change to the Generation Facility that may have a material impact on the safety or reliability of the Company's transmission/distribution system. Such authorization shall not be unreasonably withheld. Modifications shall be done in accordance with Good Utility Practice. If the Seller makes such modification without the Company's prior written authorization, the latter shall have the right to temporarily disconnect the Generation Facility.

5.3.8 Reconnection. The Parties shall cooperate with each other to restore the Generation Facility, Interconnection Facilities, and the Company's transmission/distribution system to their normal operating state as soon as reasonably practicable following a temporary disconnection.

5.3.9 Voltage Levels. Seller, in accordance with Good Utility Practices, shall minimize voltage fluctuations and maintain voltage levels acceptable to Idaho Power. Idaho Power may, in accordance with Good Utility Practices, upon one hundred eighty (180) days' notice to the Seller, change its nominal operating voltage level by more than ten percent (10%) at the Point of Delivery, in which case Seller shall modify, at Idaho Power's expense, Seller's equipment as necessary to accommodate the modified nominal operating voltage level.

5.4 Land Rights.

5.4.1 Seller to Provide Access. Seller hereby grants to Idaho Power for the term of this Agreement all necessary rights-of-way and easements to install, operate, maintain, replace, and remove Idaho Power's Metering Equipment, Interconnection Equipment, Disconnection Equipment, Protection Equipment and other Special Facilities necessary or useful to this Agreement, including adequate and continuing access rights on property of Seller. Seller warrants that it has procured sufficient easements and rights-of-way from third parties so as to provide Idaho Power with the access described above. All documents granting such easements or rights-of-way shall be subject to Idaho Power's approval and in recordable form.

5.4.2 Use of Public Rights-of-Way. The Parties agree that it is necessary to avoid the adverse environmental and operating impacts that would occur as a result of duplicate electric lines being constructed in close proximity. Therefore, subject to Idaho Power's compliance with Paragraph 5.4.4, Seller agrees that should Seller seek and receive from any local, state or federal governmental body the right to erect, construct and maintain Seller-furnished Interconnection Facilities upon, along and over any and all public roads, streets and highways, then the use by Seller of such public right-of-way shall be subordinate to any future use by Idaho Power of such public right-of-way for construction and/or maintenance of electric distribution and transmission facilities and Idaho Power may claim use of such public right-of-way for such purposes at any time. Except as required by Paragraph 5.4.4, Idaho Power shall not be required to compensate Seller for exercising its rights under this Paragraph 5.4.2.

5.4.3 Joint Use of Facilities. Subject to Idaho Power's compliance with Paragraph 15.4.4, Idaho Power may use and attach its distribution and/or transmission facilities to Seller's Interconnection Facilities, may reconstruct Seller's Interconnection Facilities to accommodate Idaho Power's usage or Idaho Power may construct its own distribution or transmission facilities along, over and above any public right-of-way acquired from Seller pursuant to Paragraph 5.4.2, attaching Seller's Interconnection Facilities to such newly constructed facilities. Except as required by Paragraph 5.4.4, Idaho Power shall not be required to compensate Seller for exercising its rights under this Paragraph 5.4.3.

5.4.4 Conditions of Use. It is the intention of the Parties that the Seller be left in substantially the same condition, both financially and electrically, as Seller existed prior to Idaho Power's exercising its rights under this Paragraph 5.4. Therefore, the Parties agree that the exercise by Idaho Power of any of the rights enumerated in Paragraphs

5.4.2 and 5.4.3 shall: (1) comply with all applicable laws, codes and Good Utility Practices, (2) equitably share the costs of installing, owning and operating jointly used facilities and rights-of-way. If the Parties are unable to agree on the method of apportioning these costs, the dispute will be submitted to the Commission for resolution and the decision of the Commission will be binding on the Parties, and (3) shall provide Seller with an interconnection to Idaho Power's system of equal capacity and durability as existed prior to Idaho Power exercising its rights under this Paragraph 5.4.

6. Assignment, Liability, Indemnity, Force majeure, Consequential Damages and Default.

6.1 Assignment. This Agreement may be assigned by either Party upon twenty-one (21) calendar days prior written notice and opportunity to object by the other Party; provided that:

6.1.1 Either Party may assign this Agreement without the consent of the other Party to any affiliate of the assigning Party with an equal or greater credit rating and with the legal authority and operational ability to satisfy the obligations of the assigning Party under this Agreement.

6.1.2 The Seller shall have the right to contingently assign this Agreement, without the consent of the Company, for collateral security purposes to aid in providing financing for the Generation Facility, provided that the Seller will promptly notify the Company of any such contingent assignment.

6.1.3 Any attempted assignment that violates this article is void and ineffective. Assignment shall not relieve a Party of its obligations, nor shall a Party's obligations be enlarged, in whole or in part, by reason thereof. An assignee is responsible for meeting the same financial, credit, and insurance obligations as the Seller. Where required, consent to assignment will not be unreasonably withheld, conditioned or delayed.

6.2 Limitation of Liability. Each Party's liability to the other Party for any loss, cost, claim, injury, liability, or expense, including reasonable attorney's fees, relating to or arising from any act or omission in its performance of this Agreement, shall be limited to the amount of direct damage actually incurred. In no event shall either Party be liable to the other Party for any indirect, special, consequential, or punitive damages, except as authorized by this Agreement.

6.3 Indemnity.

6.3.1 This provision protects each Party from liability incurred to third parties as a result of carrying out the provisions of this Agreement. Liability under this provision is exempt from the general limitations on liability found in Article 6.2.

6.3.2 The Parties shall at all times indemnify, defend, and hold the other Party harmless from, any and all damages, losses, claims, including claims and actions relating to injury to or death of any person or damage to property, demand, suits, recoveries, costs and expenses, court costs, attorney fees, and all other obligations by or to third parties, arising out of or resulting from the other Party's action or failure to meet its obligations under this Agreement on behalf of the indemnifying Party, except in cases of gross negligence or intentional wrongdoing by the indemnified Party.

6.3.3 If an indemnified person is entitled to indemnification under this article as a result of a claim by a third party, and the indemnifying Party fails, after notice and reasonable opportunity to proceed under this article, to assume the defense of such claim, such indemnified person may at the expense of the indemnifying Party contest,

settle or consent to the entry of any judgment with respect to, or pay in full, such claim. Failure to defend is a Material Breach.

6.3.4 If an indemnifying party is obligated to indemnify and hold any indemnified person harmless under this article, the amount owing to the indemnified person shall be the amount of such indemnified person's actual loss, net of any insurance or other recovery.

6.3.5 Promptly after receipt by an indemnified person of any claim or notice of the commencement of any action or administrative or legal proceeding or investigation as to which the indemnity provided for in this article may apply, the indemnified person shall notify the indemnifying party of such fact. Any failure of or delay in such notification shall be a Material Breach and shall not affect a Party's indemnification obligation unless such failure or delay is materially prejudicial to the indemnifying party.

6.4 Force Majeure. As used in this Agreement, "Force Majeure" or "an event of Force Majeure" means any cause beyond the control of the Seller or of the Company which, despite the exercise of due diligence, such Party is unable to prevent or overcome. Force Majeure includes, but is not limited to, acts of God, fire, flood, storms, wars, hostilities, civil strife, strikes and other labor disturbances, earthquakes, fires, lightning, epidemics, sabotage, or changes in law or regulation occurring after the Operation Date, which, by the exercise of reasonable foresight such party could not reasonably have been expected to avoid and by the exercise of due diligence, it shall be unable to overcome. If either Party is rendered wholly or in part unable to perform its obligations under this Agreement because of an event of Force Majeure, both Parties shall be excused from whatever performance is affected by the event of Force Majeure, provided that:

(1) The non-performing Party shall, as soon as is reasonably possible after the occurrence of the Force Majeure, give the other Party written notice describing the particulars of the occurrence.

(2) The suspension of performance shall be of no greater scope and of no longer duration than is required by the event of Force Majeure.

(3) No obligations of either Party which arose before the occurrence causing the suspension of performance and which could and should have been fully performed before such occurrence shall be excused as a result of such occurrence.

6.5 Default and Material Breaches.

6.5.1 Defaults. If either Party fails to perform any of the terms or conditions of this Agreement (a "Default" or an "Event of Default"), the nondefaulting Party shall cause notice in writing to be given to the defaulting Party, specifying the manner in which such default occurred. If the defaulting Party shall fail to cure such Default within the sixty (60) days after service of such notice, or if the defaulting Party reasonably demonstrates to the other Party that the Default can be cured within a commercially reasonable time but not within such sixty (60) day period and then fails to diligently pursue such cure, then, the nondefaulting Party may, at its option, terminate this Agreement and/or pursue its legal or equitable remedies.

6.5.2 Material Breaches. The notice and cure provisions in Paragraph 6.6.1 do not apply to Defaults identified in this Agreement as Material Breaches. Material Breaches must be cured as expeditiously as possible following occurrence of the breach.

7. Insurance.

During the term of this Agreement, Seller shall secure and continuously carry the following insurance coverage:

7.1 Comprehensive General Liability Insurance for both bodily injury and property damage with limits equal to \$1,000,000, each occurrence, combined single limit. The deductible for such insurance shall be consistent with current Insurance Industry Utility practices for similar property.

7.2 The above insurance coverage shall be placed with an insurance company with an A.M. Best Company rating of A- or better and shall include:

(a) An endorsement naming Idaho Power as an additional insured and loss payee as applicable; and

(b) A provision stating that such policy shall not be canceled or the limits of liability reduced without sixty (60) days' prior written notice to Idaho Power.

7.3 Seller to Provide Certificate of Insurance. As required in Paragraph 7 herein and annually thereafter, Seller shall furnish the Company a certificate of insurance, together with the endorsements required therein, evidencing the coverage as set forth above.

7.4 Seller to Notify Idaho Power of Loss of Coverage - If the insurance coverage required by Paragraph 7.1 shall lapse for any reason, Seller will immediately notify Idaho Power in writing. The notice will advise Idaho Power of the specific reason for the lapse and the steps Seller is taking to reinstate the coverage. Failure to provide this notice and to expeditiously reinstate or replace the coverage will constitute grounds for a temporary disconnection under Section 5.3 and will be a Material Breach.

8. Miscellaneous.

8.1 Governing Law. The validity, interpretation and enforcement of this Agreement and each of its provisions shall be governed by the laws of the state of Idaho without regard to its conflicts of law principles.

8.2 Salvage. No later than sixty (60) days after the termination or expiration of this Agreement, Idaho Power will prepare and forward to Seller an estimate of the remaining value

of those Idaho Power furnished Interconnection Facilities as required under Schedule 72 and/or described in this Agreement, less the cost of removal and transfer to Idaho Power's nearest warehouse, if the Interconnection Facilities will be removed. If Seller elects not to obtain ownership of the Interconnection Facilities but instead wishes that Idaho Power reimburse the Seller for said Facilities the Seller may invoice Idaho Power for the net salvage value as estimated by Idaho Power and Idaho Power shall pay such amount to Seller within thirty (30) days after receipt of the invoice. Seller shall have the right to offset the invoice amount against any present or future payments due Idaho Power.

9. Notices.

9.1 General. Unless otherwise provided in this Agreement, any written notice, demand, or request required or authorized in connection with this Agreement ("Notice") shall be deemed properly given if delivered in person, delivered by recognized national carrier service, or sent by first class mail, postage prepaid, to the person specified below:

**If to the Seller:**

Seller: \_\_\_\_\_  
Attention: \_\_\_\_\_  
Address: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_  
Phone: \_\_\_\_\_ Fax: \_\_\_\_\_

**If to the Company:**

Idaho Power Company - Delivery  
Attention: Operations Manager  
1221 W. Idaho Street  
Boise: Idaho 83702  
Phone: 208-388-5669 Fax: 208-388-5504

9.2 Billing and Payment. Billings and payments shall be sent to the addresses set out below:

Seller: \_\_\_\_\_  
Attention: \_\_\_\_\_  
Address: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_  
Phone: \_\_\_\_\_ Fax: \_\_\_\_\_

Idaho Power Company - Delivery  
Attention: Corporate Cashier  
PO Box 447  
Salt Lake City Utah 84110-0447  
Phone: 208-388-5697 email: asloan@idahopower.com

9.3 Designated Operating Representative. The Parties may also designate operating representatives to conduct the communications which may be necessary or convenient for the administration of this Agreement. This person will also serve as the point of contact with respect to operations and maintenance of the Party's facilities.

**Seller's Operating Representative:**

Seller: \_\_\_\_\_  
 Attention: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_  
 Phone: \_\_\_\_\_ Fax: \_\_\_\_\_

**Company's Operating Representative:**

Idaho Power Company - Delivery  
 Attention: Outage Coordinator – System/Regional Dispatch  
 1221 W. Idaho Street  
 Boise, Idaho 83702  
 Phone: 208-388-2633, 388-5125, or 388-5175 during regular business hours  
 (after hours – Regional Dispatch Southern Region 208-388-5190)

9.5 Changes to the Notice Information. Either Party may change this information by giving five (5) Business Days written notice prior to the effective date of the change.

10. Signatures.

IN WITNESS WHEREOF, the Parties have caused this Agreement to be executed by their respective duly authorized representatives.

**For the Seller**

Name: \_\_\_\_\_  
 Title: \_\_\_\_\_  
 Date: \_\_\_\_\_

**For the Company**

Name: \_\_\_\_\_  
 Title: Manager, Grid Operations – Idaho Power Company, Delivery  
 Date: \_\_\_\_\_

## Attachment 1

### Description and Costs of the Generation Facility, Interconnection Facilities and Metering Equipment

#### **Interconnection Details**

Type of Interconnection Service:	Studied as an Idaho Power Network Resource under PURPA
Full Output:	1.2 MW
Nominal Delivery Voltage:	12.5 kV

#### **General Facility Description**

The proposed project will consist of Idaho Power's standard overhead generation interconnection package including an overhead recloser, metering package, local service power transformer, disconnect switches, and a relay/control box. Additionally, one 1500 kVA 277/480 to 12.47 kV Grounded Wye / Grounded Wye padmounted transformer will be installed, including the associated underground cabling and vaults. The project is located in Twin Falls County, Idaho and connects to the 12.5 kV system on Idaho Power Company's Clover (COVR-012) distribution line. The total project output is 1.2 MW.

#### **Interconnection Point**

The Interconnection Point for the Swager Farms Dairy Digester Project will be the low-side bushings on the padmounted transformer (SW1). The project's location is in T10S R15E Section 21 of Twin Falls County, Idaho. A drawing identifying the Point of Interconnection is included as Attachment 2. The Point of Change of Ownership will be the low-side bushings on the padmounted transformer (SW1).

#### **Seller's Interconnection Facilities**

The Seller will install generators, low-side disconnect switches, all wiring and conduit between the generators and the padmounted transformer, appropriate grounding measures, and associated auxiliary equipment. Seller will build underground facilities to the Point of Change of Ownership for the generator facility. The low-side disconnect switch shall be as specified or as determined by mutual agreement and be readily accessible, operable, and lockable by Idaho Power personnel at all times.

The Seller will install equipment to receive signals from Idaho Power Company Grid Operations for Generator Output Limit Control ("GOLC") - see Attachment 4 Operating Requirements.

The Seller will provide phone service to IPCo's generator interconnect package as described in *Telecommunications* below.

The Seller will provide a DNP 3.0 serial data connection to the local Idaho Power Company SCADA RTU when any communication with Seller-owned and maintained equipment is required for GOLC, voltage control or other plant monitoring or control. Preliminary points lists and functional description were provided to the Seller in the Facility Study Report.

All interconnection equipment electrically located on the generator side of the Point of Change Ownership shall be owned and maintained by the Seller.

#### **Other Facilities Provided by Seller**

##### ***Telecommunications***

In addition to communication circuits that may be needed by the Seller, the Seller shall provide the following communication circuits for Idaho Power's use:

1. One POTS (Plain Old Telephone Service) dial-up circuit for revenue metering at the generation interconnection site.

2. One DDS (Digital Data Service) circuit guaranteed minimum data rate of 19,200 bits per second for SCADA between the generation interconnection site and Idaho Power Company's Twin Falls Service Building (273 Blue Lakes Blvd. S., Twin Falls, Idaho).

The Seller is required to coordinate with the local communications provider to provide the communications circuits and pay the associated monthly charges. The communication circuits will need to be installed and operational prior to generating into Idaho Power system. Note that installation by the local communications provider may take several months and should be ordered in advance to avoid delaying the project. If the communication circuit types listed above are not available at the site by the local communications provider, the Seller shall confer with Idaho Power.

If high voltage protection is required by the local communications provider for the incoming cable, the high voltage protection assembly shall be engineered and supplied by the Seller. Options are available for indoor or outdoor mounting. The high voltage protection assembly shall be located in a manner that provides Idaho Power 24-hour access to the assembly for communications trouble-shooting of Idaho Power owned equipment.

#### **Ground Fault Equipment**

The customer will install ground fault limiting equipment that will limit the zero sequence fault current to 20 amps at the Interconnection Point.

#### **Easements**

The Seller will provide to IPCO a surveyed (Metes & Bounds) legal description along with exhibit map for IPCO's facilities. After the legal description has been delivered to IPCO for review, IPCO will supply to the Seller a completed IPCO easement for signature by the land owner of record. Once the signatures have been secured, the Seller will return the signed easement to IPCO for recording. IPCO construction will not proceed until the appropriate easements are secured.

#### **Generator Output Limit Control**

The Seller will install equipment to receive signals from Idaho Power Grid Operations for Generation Output Limit Control ("GOLC") - see Attachment 4 Operating Requirements.

#### **Local Service**

The Seller is responsible to arrange for local service to their site, as necessary.

#### **Idaho Power Company's Interconnection Facilities**

Idaho Power will install a standard generation interconnection package on the existing distribution feeder (COVR-012) on private property southeast of the intersection of E. 3800 N. and N. 1700 E. in Twin Falls County, ID. See single line drawing as Attachment 2.

The new interconnection package will include four distribution poles to mount a local service transformer, solid blade disconnects, primary metering package, recloser, relays, fuses and riser necessary for the package. The interconnection will be controlled by a SEL-311C line protection relay. The relay will be located in a pole mounted enclosure and will also contain a test switch (TS4), SLSS, modems, isolation interface, power supply, DC converter, control switch and surge protector.

Idaho Power will install (and subsequently own and maintain) one 1500 kVA 277/480 to 12.47 kV Grounded Wye / Grounded Wye padmounted transformer on top of a vault. Conduit and underground cables will be installed from the interconnection package to padmounted transformer. Protective posts will be installed to protect the ground mounted equipment from damage.

A 2" conduit will be installed alongside the underground primary to facilitate information exchange to the customer about the recloser if desired. (The Interconnection Customer is responsible for providing and installing the appropriate cable.)

All interconnection equipment electrically located on the utility side of the Interconnection Point shall be owned, operated, and maintained by Idaho Power.

### Estimated Cost & Ownership

The following good faith estimates are provided in 2011 dollars

Description	Ownership	Cost Estimate
<b><i>Interconnection Facilities:</i></b>		
Overhead Generation Interconnection Package	IPCO	\$200,000
Underground Equipment and 1500 kVA Transformer	IPCO	\$70,000
<b>SUBTOTAL</b>		<b>\$270,000</b>
<i>(See ATTACHMENT 6 for Project Grand Total)</i>		

Full payment is required up front in accordance with Schedule 72, unless payment arrangements are made in advance with Idaho Power Operations Finance (see Attachment 3).

Billing for construction activities will be based upon actual expenditures.

Attachment 2

*One-line Diagram Depicting the Small Generation Facility, Interconnection Facilities, Metering Equipment and Upgrades*

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Attachment 3

**Milestones**

1. Idaho Power Company agrees only to the Construction timelines under its direct control provided in the Facility Study Report for this Project.
2. These milestones will begin, and the construction schedule referenced below, will only be valid upon receipt of funding in full from the Seller or their authorized third party no later than the date set forth below for such payment. Additionally, failure by Seller to make the required payments as set forth in this Agreement by the date(s) specified below will be a material breach of this Agreement, which may result in any or all of the following: (i) loss of milestone dates and construction schedules set forth below; (ii) immediate termination of this Agreement by Idaho Power; (iii) removal from the generator interconnection queue.

Critical milestones and responsibility as agreed to by the Parties:

Date	Responsible Party	Milestones
	<b>Seller</b>	<b>E&amp;P funding received by IPCO \$XXX</b>
	<b>Seller</b>	<b>IPCO receives the remaining balance of Construction estimate \$XXX OR Credit arrangements are approved by IPCO</b>
	<b>Seller</b>	<b>Customer GOLC ready to connect &amp; customer telecomm requirements are complete</b>
6mos	<b>IPCO</b>	<b>IPCO Construction Complete</b>
1 mo	<b>IPCO</b>	<b>IPCO Commissioning Complete</b>
	<b>IPCO</b>	<b>Project Leader issues Construction Complete Letter</b>
	<b>Seller</b>	<b>Customer testing begins</b>
tbprovided	<b>Seller</b>	<b>Customer's requested In-Service Date</b>

**Agreed to by:**

For the Seller: \_\_\_\_\_ Date \_\_\_\_\_

For the Transmission Provider  
Idaho Power Company \_\_\_\_\_ Date \_\_\_\_\_

## Attachment 4

### Additional Operating Requirements for the Company's Transmission System and Affected Systems Needed to Support the Seller's Needs

*The Company shall also provide requirements that must be met by the Seller prior to initiating parallel operation with the Company's Transmission System.*

#### **Operating Requirements**

The project is required to comply with the applicable Voltage and Current Distortion Limits found in IEEE Standard 519-1992 *IEEE Recommended Practices and Requirements for Harmonic Control in Electrical Power Systems* or any subsequent standards as they may be updated from time to time.

Seller will be able to modify power plant facilities on the generator side of the Interconnection Point with no impact upon the operation of the transmission system whenever the generation facilities are electrically isolated from the transmission system and a terminal clearance is issued by Idaho Power Company's Grid Operator.

#### **Generator Output Limit Control ("Re-dispatch" or "GOLC")**

The Project will be subject to reductions directed by Idaho Power Company Grid Operations during transmission system contingencies and other reliability events. When these conditions occur, the Project will be subject to Generator Output Limit Control ("GOLC") and have equipment capable of receiving signals from Idaho Power for GOLC. Generator Output Limit Control will be a setpoint from Idaho Power to the Project indicating maximum output allowed during transmission contingencies as specified in the Facility Study Report.

#### **Low Voltage Ride Through**

The Project must be capable of riding through faults on adjacent section of the power system without tripping due to low voltage. It has been determined, through study, that the Project must be capable of remaining interconnected for any single phase voltage as low as 0.7 PU for 30 cycles, and for all three phase voltages as low as 0.8 PU for 30 cycles.

#### **Ground Fault Equipment**

The Seller will install transformer configurations that provide a ground source to the transmission system.

Attachment 5

Reactive Power Requirements

The project must be controlled to operate as a VAR neutral system with a +/- 300 kVAR operating band. Voltage flicker at startup and during operation will be limited to less than 5% as measured at the Interconnection Point.

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Attachment 6Company's Description of Special Facilities and Upgrades Required to Integrate the Generation Facility and Best Estimate of Costs

As provided in Schedule 72 this Attachment describes Upgrades, Special Facilities, including Network Upgrades, and provides an itemized best estimate of the cost of the required facilities.

**Upgrades*****Distribution Upgrades***

Idaho Power will upgrade the existing distribution feeder (COVR-012) along E. 3550 N. from the Clover Substation (approximately N. 1950 E.) west to N. 1700 E. The new conductor will be 336.4 All Aluminum (336AAC) and will require new support structures to accommodate the larger wire.

Additionally, an existing fixed type capacitor bank on the feeder will be upgraded. In order to avoid high voltage on the feeder during minimum load situations, the capacitor must have automatic controls in order to switch on and off as necessary.

The following good faith estimates are provided in 2011 dollars:

Description	Ownership	Cost Estimate
<b><i>Distribution Upgrades:</i></b>		
Reconductor approximate 2.5 miles to 336 AAC	IPCO	\$325,000
Upgrade C69 Capacitor	IPCO	\$30,000
	<b><i>TOTAL</i></b>	<b><i>\$355,000</i></b>
<b><i>Interconnection costs (from Attachment 1)</i></b>	<b><i>TOTAL</i></b>	<b><i>\$270,000</i></b>
	<b><i>PROJECT GRAND TOTAL</i></b>	<b><i>\$625,000</i></b>

**BEFORE THE  
IDAHO PUBLIC UTILITIES COMMISSION  
CASE NO. IPC-E-12-25**

**IDAHO POWER COMPANY**

**ATTACHMENT 46**



Josh Harris  
Operations Analyst  
Idaho Power Company  
1221 W. Idaho St  
Boise, ID 83702



Re: Swager Farms Project – GI #307

Dear Josh,

Regarding the Swager Farms GIA our electrical engineers are not able to link the project's obligation to run at unity to Idaho Powers request to update your distribution capabilities referenced in correspondence from Trevor Schultz, dated April 16<sup>th</sup>.

In light of the fact that the requirements and pricing established in the October 25, 2010 draft GIA, were substantially altered we believe it is necessary for Idaho Power to revisit the upgrade requirements specific to the verified capacity of 800 kW.

We appreciate the information and the issues Trevor has identified, however, the study cases presented and the type of equipment utilized invoke the following questions:

1. The use of a synchronous generator may increase the voltage stability of the line.
2. Do the regulators enable the steady state voltage without reconductoring? I believe Cases 3 and 4 indicate the regulators fix the problem.
3. We notice Case 4 is modeled without the capacitors, but if there is the requirement to run at Unity Power Factor, the capacitors may not be intended for flicker control, so why are they in the package?

The four cases presented seem to be incongruous with the present requirements, and as James Carkulis pointed out in email correspondence today we intend to commence construction in the 2nd quarter on this project, thus we need to obtain clarity on this issue before signing the GIA.

Regards,

A handwritten signature in cursive script that reads "Leslie White".

Leslie White  
President, Exergy New Energy, Biogas Division

**BEFORE THE  
IDAHO PUBLIC UTILITIES COMMISSION**

**CASE NO. IPC-E-12-25**

**IDAHO POWER COMPANY**

**ATTACHMENT 47**

## Feasibility Study Agreement

THIS AGREEMENT is made and entered into this 9 day of May 2012, by and between Energy Development Group of Idaho, a LLC organized and existing under the laws of the State of Idaho, ("Interconnection Customer,") and Idaho Power Company a Corporation existing under the laws of the State of Idaho ("Transmission Provider"). Interconnection Customer and Transmission Provider each may be referred to as a "Party," or collectively as the "Parties."

### RECITALS

**WHEREAS**, Interconnection Customer is proposing to develop a Small Generating Facility or generating capacity addition to an existing Small Generating Facility consistent with the Interconnection Request completed by Interconnection Customer on October 12, 2009; also known as Project #307, and

**WHEREAS**, Interconnection Customer desires to interconnect the Small Generating Facility with the Transmission Provider's Transmission System; and

**WHEREAS**, Interconnection Customer has requested the Transmission Provider to perform a feasibility study to assess the feasibility of interconnecting the proposed Small Generating Facility with the Transmission Provider's Transmission System, and of any Affected Systems;

**NOW, THEREFORE**, in consideration of and subject to the mutual covenants contained herein the Parties agreed as follows:

- 1.0 When used in this Agreement, with initial capitalization, the terms specified shall have the meanings indicated or the meanings specified in the standard Small Generator Interconnection Procedures.
- 2.0 The Interconnection Customer elects and the Transmission Provider shall cause to be performed an interconnection feasibility study consistent the standard Small Generator Interconnection Procedures in accordance with the Open Access Transmission Tariff.
- 3.0 The scope of the feasibility study shall be subject to the assumptions set forth in Attachment A to this Agreement.
- 4.0 The feasibility study shall be based on the technical information provided by the Interconnection Customer in the Interconnection Request, as may be modified as the result of the scoping meeting. The Transmission Provider reserves the right to request additional technical information from the Interconnection Customer as may reasonably become necessary consistent with Good Utility Practice during the course of the feasibility study and as designated in accordance with the standard Small Generator Interconnection Procedures. If the Interconnection Customer modifies its Interconnection

Small Generator Feasibility Study Agreement  
Swager Farms Project #307

Request, the time to complete the feasibility study may be extended by agreement of the Parties.

- 5.0 In performing the study, the Transmission Provider shall rely, to the extent reasonably practicable, on existing studies of recent vintage. The Interconnection Customer shall not be charged for such existing studies; however, the Interconnection Customer shall be responsible for charges associated with any new study or modifications to existing studies that are reasonably necessary to perform the feasibility study.
- 6.0 The feasibility study report shall provide the following analyses for the purpose of identifying any potential adverse system impacts that would result from the interconnection of the Small Generating Facility as proposed:
  - 6.1 Initial identification of any circuit breaker short circuit capability limits exceeded as a result of the interconnection;
  - 6.2 Initial identification of any thermal overload or voltage limit violations resulting from the interconnection;
  - 6.3 Initial review of grounding requirements and electric system protection; and
  - 6.4 Description and non-bonding estimated cost of facilities required to interconnect the proposed Small Generating Facility and to address the identified short circuit and power flow issues.
- 7.0 The feasibility study shall model the impact of the Small Generating Facility regardless of purpose in order to avoid the further expense and interruption of operation for reexamination of feasibility and impacts if the Interconnection Customer later changes the purpose for which the Small Generating Facility is being installed.
- 8.0 The study shall include the feasibility of any interconnection at a proposed project site where there could be multiple potential Points of Interconnection, as requested by the Interconnection Customer and at the Interconnection Customer's cost.
- 9.0 In lieu of Feasibility Study deposit, Interconnection Customer agrees that study funds will be drawn from the application fee for the performance of the Interconnection Feasibility Study.

Transmission Provider shall charge and Interconnection Customer shall pay the actual costs of the Interconnection Feasibility Study. Any difference between the deposit and the actual cost of the study shall be paid by or refunded to Interconnection Customer, as appropriate.
- 10.0 Once the feasibility study is completed, a feasibility study report shall be prepared and transmitted to the Interconnection Customer. Barring unusual circumstances, the

Small Generator Feasibility Study Agreement  
Swager Farms Project #307

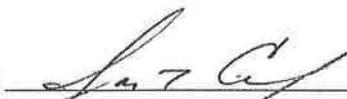
feasibility study must be completed and the feasibility study report transmitted within 30 business days of the Interconnection Customer's agreement to conduct a feasibility study.

- 11.0 Any study fees shall be based on the Transmission Provider's actual costs and will be invoiced to the Interconnection Customer after the study is completed and delivered and will include a summary of professional time.
- 12.0 The Interconnection Customer must pay any study costs that exceed the deposit without interest within 30 calendar days on receipt of the invoice or resolution of any dispute. If the deposit exceeds the invoiced fees, the Transmission Provider shall refund such excess within 30 calendar days of the invoice without interest.

**IN WITNESS WHEREOF**, the Parties have caused this Agreement to be duly executed by their duly authorized officers or agents on the day and year first above written.

**Transmission Provider:**

Idaho Power Company – Delivery

Signed: 

Printed: James Carkulis

Title: Manager

Date: 5/9/2012

**Interconnection Customer:**

\_\_\_\_\_

Signed: \_\_\_\_\_

Printed: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

## **Attachment A to Feasibility Study Agreement**

### **Assumptions Used in Conducting the Feasibility Study**

The feasibility study will be based upon the information set forth in the Interconnection Request and agreed upon in the scoping meeting held on October 27, 2009:

The Feasibility Study will be completed no later than 30 Business days after Idaho Power receives the fully executed Interconnection Feasibility Study Agreement, unless any requested study data is NOT received. Interconnection Customer will provide the requested study data as soon as possible on or before the return of the executed Interconnection Feasibility Study Agreement.

1) Designation of Point of Interconnection and configuration to be studied.

2) Designation of alternative Points of Interconnection and configuration.

1) and 2) are to be completed by the Interconnection Customer. Other assumptions (listed below) are to be provided by the Interconnection Customer and the Transmission Provider.

**BEFORE THE  
IDAHO PUBLIC UTILITIES COMMISSION  
CASE NO. IPC-E-12-25**

**IDAHO POWER COMPANY**

**ATTACHMENT 48**

**GENERATOR INTERCONNECTION  
FEASIBILITY STUDY**

For integration of the proposed

**SWAGER FARMS DIGESTER PROJECT**

In

**TWIN FALLS COUNTY, IDAHO**

To the

**IDAHO POWER COMPANY ELECTRICAL SYSTEM**

For

**EXERGY**

The

**INTERCONNECTION CUSTOMER**

**RE-STUDY REPORT**

**June 1, 2012**

# Generator Interconnection Feasibility Study

## General Interconnection Information

Queue	Date of Request	Location	Total (MW)	Station or Trans Line for POI	Projected In-Service Date	Type of facility (combined cycle, base load, CT, fuel type)
#307	Original Study: January 2010  Re-Study: May 2012	Twin Falls County	0.8	12.5 kV through Clover (COVR) substation	2012	Biofuel

### Short Circuit Analysis Results

System Changes Required:  Yes  No

### Power Flow Analysis Results

System Changes Required:  Yes  No

The cost estimates for those upgrades are shown in Table 1 below.

Description	Estimated Cost
Generation Interconnection Protection Package (Includes 12.47 kV recloser, controls, CTs, PTs)	\$225,000
<b>Total Estimated Cost</b>	<b>\$225,000</b>

Table 1: Estimated interconnection costs for 0.8 MW project at Swager Farms

### Good Faith Cost Estimate

Interconnection cost estimate for 0.8 MW generator project: **\$225,000.**

System Impact Study Required?  Yes  No

This Feasibility Study only addresses the work required to interconnect the Swager Farms digester projects to the Idaho Power system. There are no transmission rights secured for the project until a transmission system request is submitted by the corresponding transmission customer. The required transmission facilities, if any, to support energy transfers will then be determined based on first come first serve basis (queue order).

### Operating Requirements:

Project #307 will be controlled to operate at unity power factor with an operating bandwidth of  $\pm 200$  kVAR.

**BEFORE THE  
IDAHO PUBLIC UTILITIES COMMISSION  
CASE NO. IPC-E-12-25**

**IDAHO POWER COMPANY**

**ATTACHMENT 49**



June 4, 2012

Certified Mail # 70113500000156449143

Leslie White  
Exergy  
802 W Bannock, 12<sup>th</sup> Floor  
Boise, ID 83702

RE: Project # 307 – Swager Farms

Dear Leslie:

Enclosed is the Final Feasibility Study Report for the above-referenced project. The feasibility analysis indicates that modification/addition of some facilities will be required to integrate the network resource capacity addition of your project into the Idaho Power system. Please note, the Feasibility Study alone does not provide any transmission rights nor determines the necessary network upgrades to move the project energy to the load or a point of delivery in our system.

Since no SYSTEM IMPACT STUDY is needed, enclosed is a Facility Study Agreement (FSA) for the next phase of the project. In order to proceed, and for your application to remain in the Generator Interconnection study queue, Idaho Power must receive the 2 copies of the signed FSA, the completed Attachments, and the deposit by July 9, 2012, otherwise your application will be deemed withdrawn. The deposit under this FSA is \$11,250.00, based on the estimated engineering costs.

The submittal should be sent to: Idaho Power Company, Attention: Josh Harris, 1221 West Idaho Street, Boise, ID 83702. Please contact me if you have questions.

Sincerely,

Daniel Arjona  
Engineering Leader, T&D Planning  
208.388.2895  
[darjona@idahopower.com](mailto:darjona@idahopower.com)

Enclosures: Final Feasibility Study Report and FSA for signature (quantity 2)

CC (via email):  
Josh Harris/IPC  
Orlando Ciniglio/IPC

## Facilities Study Agreement

**THIS AGREEMENT** is made and entered into this \_\_\_\_ day of \_\_\_\_\_ 2012 by and between \_\_\_\_\_, a \_\_\_\_\_ organized and existing under the laws of the State of \_\_\_\_\_, ("Interconnection Customer,") and Idaho Power Company, a Corporation existing under the laws of the State of Idaho ("Transmission Provider"). Interconnection Customer and Transmission Provider each may be referred to as a "Party," or collectively as the "Parties."

### RECITALS

**WHEREAS**, the Interconnection Customer is proposing to develop a Small Generating Facility or generating capacity addition to an existing Small Generating Facility consistent with the Interconnection Request completed by the Interconnection Customer on October 12, 2009, and

**WHEREAS**, the Interconnection Customer desires to interconnect the Small Generating Facility with the Transmission Provider's Transmission System;

**WHEREAS**, the Transmission Provider has completed a system impact study and provided the results of said study to the Interconnection Customer; and

**WHEREAS**, the Interconnection Customer has requested the Transmission Provider to perform a facilities study to specify and estimate the cost of the equipment, engineering, procurement and construction work needed to implement the conclusions of the system impact study in accordance with Good Utility Practice to physically and electrically connect the Small Generating Facility with the Transmission Provider's Transmission System.

**NOW, THEREFORE**, in consideration of and subject to the mutual covenants contained herein the Parties agreed as follows:

- 1.0 When used in this Agreement, with initial capitalization, the terms specified shall have the meanings indicated or the meanings specified in the standard Small Generator Interconnection Procedures.
- 2.0 The Interconnection Customer elects and the Transmission Provider shall cause a facilities study consistent with the standard Small Generator Interconnection Procedures to be performed in accordance with the Open Access Transmission Tariff.
- 3.0 The scope of the facilities study shall be subject to data provided in Attachment A to this Agreement.
- 4.0 The facilities study shall specify and estimate the cost of the equipment, engineering, procurement and construction work (including overheads) needed to implement the conclusions of the system impact study(s).

The facilities study shall also identify (1) the electrical switching configuration of the equipment, including, without limitation, transformer, switchgear, meters, and other station equipment, (2) the nature and estimated cost of the Transmission Provider's

Interconnection Facilities and Upgrades necessary to accomplish the interconnection, and (3) an estimate of the time required to complete the construction and installation of such facilities.

- 5.0 The Transmission Provider may propose to group facilities required for more than one Interconnection Customer in order to minimize facilities costs through economies of scale, but any Interconnection Customer may require the installation of facilities required for its own Small Generating Facility if it is willing to pay the costs of those facilities.
- 6.0 A deposit of \$11,250.00 is due upon execution of this agreement by the Interconnection customer.
- 7.0 In cases where Upgrades are required, the facilities study must be completed within 45 Business Days of the receipt of this Agreement. In cases where no Upgrades are necessary, and the required facilities are limited to Interconnection Facilities, the facilities study must be completed within 30 Business Days.
- 8.0 Once the facilities study is completed, a facilities study report shall be prepared and transmitted to the Interconnection Customer. Barring unusual circumstances, the facilities study must be completed and the facilities study report transmitted within 30 Business Days of the Interconnection Customer's agreement to conduct a facilities study.
- 9.0 Any study fees shall be based on the Transmission Provider's actual costs and will be invoiced to the Interconnection Customer after the study is completed and delivered and will include a summary of professional time.
- 10.0 The Interconnection Customer must pay any study costs that exceed the deposit without interest within 30 calendar days on receipt of the invoice or resolution of any dispute. If the deposit exceeds the invoiced fees, the Transmission Provider shall refund such excess within 30 calendar days of the invoice without interest.

**IN WITNESS WHEREOF**, the Parties have caused this Agreement to be duly executed by their duly authorized officers or agents on the day and year first above written.

**Transmission Provider:**  
**Idaho Power Company - Delivery**

**Interconnection Customer:**  
\_\_\_\_\_

Signed: \_\_\_\_\_

Signed: \_\_\_\_\_

Printed Name: \_\_\_\_\_

Printed Name: \_\_\_\_\_

Title: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Date: \_\_\_\_\_

**Data to Be Provided by the Interconnection Customer  
With the Facilities Study Agreement**

1. Provide location plan and simplified one-line diagram of the plant and station facilities. For staged projects, please indicate future generation, transmission circuits, etc.

On the one-line diagram, indicate the generation capacity attached at each metering location. (Maximum load on CT/PT)

On the one-line diagram, indicate the location of auxiliary power. (Minimum load on CT/PT) Amps

2. One set of metering is required for each generation connection to the new ring bus or existing Transmission Provider station. Number of generation connections:

\_\_\_\_\_

3. Will an alternate source of auxiliary power be available during CT/PT maintenance?  
Yes \_\_\_\_\_ No \_\_\_\_\_

4. Will a transfer bus on the generation side of the metering require that each meter set be designed for the total plant generation? Yes \_\_\_\_\_ No \_\_\_\_\_  
(Please indicate on the one-line diagram).

5. What type of control system or PLC will be located at the Small Generating Facility?

\_\_\_\_\_  
\_\_\_\_\_

6. What protocol does the control system or PLC use?

\_\_\_\_\_  
\_\_\_\_\_

7. Please provide a 7.5-minute quadrangle map of the site. Indicate the plant, station, transmission line, and property lines.

8. Physical dimensions of the proposed interconnection station:

\_\_\_\_\_

9. Bus length from generation to interconnection station:

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10. Line length from interconnection station to Transmission Provider's Transmission System.

---

11. Tower number observed in the field. (Painted on tower leg)\*:

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12. Number of third party easements required for transmission lines\*:

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\* To be completed in coordination with Transmission Provider.

13. Is the Small Generating Facility located in Transmission Provider's service area?

Yes \_\_\_\_\_ No \_\_\_\_\_ If No, please provide name of local provider:

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14. Please provide the following proposed schedule dates:

Begin Construction Date: \_\_\_\_\_

Generator Step-Up Transformers Date: \_\_\_\_\_  
Receive Back Feed Power

Generation Testing Date: \_\_\_\_\_

Commercial Operation Date: \_\_\_\_\_

**BEFORE THE  
IDAHO PUBLIC UTILITIES COMMISSION  
CASE NO. IPC-E-12-25**

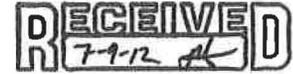
**IDAHO POWER COMPANY**

**ATTACHMENT 50**



July 9, 2012

Josh Harris  
Idaho Power Company  
1221 W. Idaho St  
Boise, ID 83707



RE: FSA Project #307

Dear Josh,

Enclosed is the FSA and the attachment. With regards to our conversation this morning, the Swager account with Idaho Power has a credit balance of \$24,093 which will be used to cover the deposit for this FSA and in part to cover the deposit for the FSA associated with project #390, Eagle View Dairy.

Regards,

A handwritten signature in cursive script that reads "Leslie White".

Leslie White  
The Biogas Division of Exergy New Energy  
Exergy Development Group of Idaho  
208-336-9793  
[lwhite@exergydevelopment.com](mailto:lwhite@exergydevelopment.com)

Enclosures: Completed FSA for project #307

## **Facilities Study Agreement**

**THIS AGREEMENT** is made and entered into this 6th day of June 2012 by and between Idaho Development Group of Idaho, a LLC organized and existing under the laws of the State of Idaho, ("Interconnection Customer,") and Idaho Power Company, a Corporation existing under the laws of the State of Idaho ("Transmission Provider"). Interconnection Customer and Transmission Provider each may be referred to as a "Party," or collectively as the "Parties."

### **RECITALS**

**WHEREAS**, the Interconnection Customer is proposing to develop a Small Generating Facility or generating capacity addition to an existing Small Generating Facility consistent with the Interconnection Request completed by the Interconnection Customer on October 12, 2009, and

**WHEREAS**, the Interconnection Customer desires to interconnect the Small Generating Facility with the Transmission Provider's Transmission System;

**WHEREAS**, the Transmission Provider has completed a system impact study and provided the results of said study to the Interconnection Customer; and

**WHEREAS**, the Interconnection Customer has requested the Transmission Provider to perform a facilities study to specify and estimate the cost of the equipment, engineering, procurement and construction work needed to implement the conclusions of the system impact study in accordance with Good Utility Practice to physically and electrically connect the Small Generating Facility with the Transmission Provider's Transmission System.

**NOW, THEREFORE**, in consideration of and subject to the mutual covenants contained herein the Parties agreed as follows:

- 1.0 When used in this Agreement, with initial capitalization, the terms specified shall have the meanings indicated or the meanings specified in the standard Small Generator Interconnection Procedures.
- 2.0 The Interconnection Customer elects and the Transmission Provider shall cause a facilities study consistent with the standard Small Generator Interconnection Procedures to be performed in accordance with the Open Access Transmission Tariff.
- 3.0 The scope of the facilities study shall be subject to data provided in Attachment A to this Agreement.
- 4.0 The facilities study shall specify and estimate the cost of the equipment, engineering, procurement and construction work (including overheads) needed to implement the conclusions of the system impact study(s).

The facilities study shall also identify (1) the electrical switching configuration of the equipment, including, without limitation, transformer, switchgear, meters, and other station equipment, (2) the nature and estimated cost of the Transmission Provider's

Interconnection Facilities and Upgrades necessary to accomplish the interconnection, and (3) an estimate of the time required to complete the construction and installation of such facilities.

- 5.0 The Transmission Provider may propose to group facilities required for more than one Interconnection Customer in order to minimize facilities costs through economies of scale, but any Interconnection Customer may require the installation of facilities required for its own Small Generating Facility if it is willing to pay the costs of those facilities.
- 6.0 A deposit of \$11,250.00 is due upon execution of this agreement by the Interconnection customer.
- 7.0 In cases where Upgrades are required, the facilities study must be completed within 45 Business Days of the receipt of this Agreement. In cases where no Upgrades are necessary, and the required facilities are limited to Interconnection Facilities, the facilities study must be completed within 30 Business Days.
- 8.0 Once the facilities study is completed, a facilities study report shall be prepared and transmitted to the Interconnection Customer. Barring unusual circumstances, the facilities study must be completed and the facilities study report transmitted within 30 Business Days of the Interconnection Customer's agreement to conduct a facilities study.
- 9.0 Any study fees shall be based on the Transmission Provider's actual costs and will be invoiced to the Interconnection Customer after the study is completed and delivered and will include a summary of professional time.
- 10.0 The Interconnection Customer must pay any study costs that exceed the deposit without interest within 30 calendar days on receipt of the invoice or resolution of any dispute. If the deposit exceeds the invoiced fees, the Transmission Provider shall refund such excess within 30 calendar days of the invoice without interest.

**IN WITNESS WHEREOF**, the Parties have caused this Agreement to be duly executed by their duly authorized officers or agents on the day and year first above written.

**Transmission Provider:**

**Idaho Power Company - Delivery**

Signed: Edward Kosydar

Printed Name: EDWARD KOSYDAR

Title: PM Supervisor

Date: 7/23/12

**Interconnection Customer:**

\_\_\_\_\_

Signed: James Carkulis

Printed Name: James Carkulis

Title: CEO

Date: June 6, 2012



9. Bus length from generation to interconnection station:

To be determined, less than 300' anticipated

10. Line length from interconnection station to Transmission Provider's Transmission System.

TBD

11. Tower number observed in the field. (Painted on tower leg)\*:

Same as original study

12. Number of third party easements required for transmission lines\*:

None anticipated

\* To be completed in coordination with Transmission Provider.

13. Is the Small Generating Facility located in Transmission Provider's service area?

Yes  No  If No, please provide name of local provider:

14. Please provide the following proposed schedule dates:

Begin Construction Date: August 15, 2012

Generator Step-Up Transformers  
Receive Back Feed Power Date: December 30, 2012

Generation Testing Date: January 30, 2013

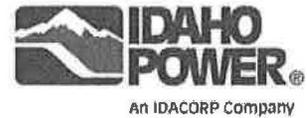
Commercial Operation Date: February 15, 2013



**BEFORE THE  
IDAHO PUBLIC UTILITIES COMMISSION  
CASE NO. IPC-E-12-25**

**IDAHO POWER COMPANY**

**ATTACHMENT 51**



September 10, 2012

Leslie White  
Exergy New Energy  
802 W. Bannock  
12<sup>th</sup> Floor  
Boise, ID 83702

Re: Swager Farms Dairy Digester Project (0.8 MW Output) Facility Study Report – Project #307

Dear Ms. White:

Idaho Power Company (IPC) has completed the Facility Study cost estimate for your Generator Interconnection project based on the revised Feasibility Study Report dated June 1, 2012. Attached please find the Facility Study Report (FSR). Please note the FSR has different requirements than past reports because the total output of the project is less than 1 megavoltampere (MVA), particularly there is no requirement for you to provide telecommunications to the Idaho Power facilities.

In order to proceed with this project, please provide your comments to the Facility Study Report to me by October 12, 2012 and indicate whether you wish to proceed with final design and construction. The final report will be used to prepare a Generator Interconnection Agreement in preparation for Construction. Josh Harris will be working with you to finalize the Interconnection Agreement.

Before we can begin Construction or order materials, you are responsible for contacting Idaho Power's credit department to discuss credit requirements for construction funding. Please contact Aubrae Sloan (208-388-5697) at your earliest convenience. Once we receive funding, or the credit requirement is met, we can proceed with construction of the project.

The actual construction and labor charges will be finalized approximately 90 days subsequent to project completion. We will reconcile any over- or underpayment at that time.

I look forward to hearing from you soon.

Sincerely,

A handwritten signature in cursive script that reads "Eric Hackett".

Eric Hackett  
Project Leader

Attachment: Swager Farms Dairy Digester Project Facility Study Report with Drawings

Cc: J Harris/IPC      A Sloan/IPC      D Walker/IPC



# **Generator Interconnection Facility Study Report**

for the

**Swager Farms Dairy Digester Project – Project #307**

for

**Exergy New Energy**

in

**Twin Falls County, Idaho**

**September 10, 2012**

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# FACILITY STUDY REPORT (FSR)

## Swager Farms Dairy Digester

### Project #307

September 10, 2012

#### 1. General Facility Description

The proposed project will consist of a short three-phase distribution line extension and Idaho Power's overhead generation interconnection package (for projects less than 1 MVA) including an overhead recloser, metering package, local service power transformer, disconnect switches, and a relay/control box. Additionally, one 1000 kVA 277/480 to 12.47 kV Grounded Wye / Grounded Wye padmounted transformer will be installed, including the associated underground cabling and vaults. The project is located in Twin Falls County, Idaho and connects to the 12.5 kV system on Idaho Power Company's Clover (COVR-012) distribution line. The total project output is 0.8 MW.

##### Interconnection Customer:

Leslie White  
Exergy New Energy  
802 W. Bannock  
12<sup>th</sup> Floor  
Boise, ID 83702

A Standard Generator Interconnection Agreement under Idaho Power Company's Open Access Transmission Tariff (OATT) or Schedule 72 between Interconnection Customer and Idaho Power Company – Delivery (Transmission Owner) for the Swager Farms Dairy Digester Project, specifically Generator Interconnection Project #307, will be prepared for this project.

#### 1.1 Interconnection Point

The Interconnection Point for the Swager Farms Dairy Digester Project will be the low-side bushings on the padmounted transformer (SW1). The project's location is in T10S R15E Section 21 of Twin Falls County, Idaho. A drawing identifying the Interconnection Point is attached.

#### 1.2 Point of Change of Ownership

The Point of Change of Ownership for the Swager Farms Dairy Digester Project will be the low-side bushings on the padmounted transformer (SW1).

#### 1.3 Customer's Interconnection Facilities

The Interconnection Customer will install generators, low-side disconnect switches, all wiring and conduit between the generators and the padmounted transformer, appropriate grounding measures, and associated auxiliary equipment. Interconnection Customer will build underground facilities to the Point of Change of Ownership for the generator facility.

The low-side disconnect switch shall be as specified or as determined by mutual agreement and be readily accessible, operable, and lockable by Idaho Power personnel at all times.

#### **1.4 Other Facilities Provided by Interconnection Customer**

##### **1.4.1 Ground Fault Equipment**

The customer will install ground fault limiting equipment that will limit the zero sequence fault current to 20 amps at the Interconnection Point.

##### **1.4.2 Easements**

The Interconnection Customer will provide to Idaho Power a surveyed (Metes & Bounds) legal description along with exhibit map for Idaho Power's proposed facilities. After the legal description has been delivered to IPCO for review, IPCO will supply to the Interconnection Customer a completed IPCO easement for signature by the land owner of record. Once the signatures have been secured, the Interconnection Customer will return the signed easement to IPCO for recording.

##### **1.4.3 Local Service**

The Interconnection Customer is responsible to arrange for local service to their site, as necessary.

##### **1.4.4 Monitoring Information**

If the Interconnection Customer requires the ability to monitor information related to the Idaho Power recloser in the generation interconnection package they are required to supply their own cabling/wiring to the control box.

#### **1.5 Idaho Power Company's Interconnection Facilities**

Idaho Power will install a generation interconnection package on the existing distribution feeder (COVR-012) on private property southeast of the intersection of E. 3800 N. and N. 1700 E. in Twin Falls County, ID. See the attached work order maps (WO 27328106, sheet 1 of 2) for details.

The new interconnection package will include four distribution poles to mount a local service transformer, solid blade disconnects, primary metering package, recloser, relays, fuses and riser necessary for the package. The interconnection will be controlled by a SEL-547 line protection relay. The relay will be located in a pole mounted enclosure and will also contain a test switch (TS4), isolation interface, power supply, DC converter, control switch and surge protector.

Idaho Power will install (and subsequently own and maintain) one 1000 kVA 277/480 to 12.47 kV Grounded Wye / Grounded Wye padmounted transformer on top of a vault. Conduit and underground cables will be installed from the interconnection package to padmounted transformer. Protective posts will be installed to protect the ground mounted equipment from damage.

A 2" conduit will be installed alongside the underground primary to facilitate information exchange to the customer about the recloser if desired. (The Interconnection Customer is responsible for providing and installing the appropriate cable.)

### 1.6 Facility Estimated Cost:

The following good faith estimates are provided in 2011 dollars:

Description	Ownership	Cost Estimate
<b>Interconnection Facilities:</b>		
Overhead Generation Interconnection Package & Line Extension	IPC	\$145,000
Underground Equipment and 1000 kVA Transformer	IPC	\$75,000
<b>SUBTOTAL</b>		<b>\$220,000</b>
<i>See Section 6 for the Project Grand Total</i>		

## 2. Milestones

Date	Milestones
12/10/12	<i>Construction Funds Received by IPCO</i>
6/10/13	<i>IPCO Construction Complete</i>
7/10/13	<i>IPCO Commissioning Complete</i>
TBD by seller	<i>Commercial Operation Date</i>

These milestone dates assume that material can be procured and labor resources are available. Additionally, any permitting issues outside the immediate control of Idaho Power could also influence the Commercial Operation Date.

## 3. Operating Requirements

The project is required to comply with the applicable Voltage and Current Distortion Limits found in IEEE Standard 519-1992 *IEEE Recommended Practices and requirements for harmonic Control in Electrical Power Systems* or any subsequent standards as they may be updated from time to time. Voltage flicker at startup and during operation must be limited to less than 5% as measured at the Interconnection Point.

The Project must be capable of riding through faults on adjacent section of the power system without tripping due to low voltage. It has been determined, through study, that the Project must be capable of remaining interconnected for any single phase voltage as low as 0.7 PU for 30 cycles, and for all three phase voltages as low as 0.8 PU for 30 cycles.

Interconnection Customer will be able to modify power plant facilities on the Interconnection Customer side of the Interconnection Point with no impact upon the operation of the transmission or distribution system whenever the generation facilities are electrically isolated from the system and a terminal clearance is issued by Idaho Power Company's Grid Operator.

#### 4. Reactive Power

The Project must be controlled to operate as a VAR neutral system with a  $\pm 200$  kVAR operating band.

#### 5. Upgrades

##### 5.1 Distribution Upgrades

Idaho Power will extend the existing distribution feeder (COVR-012) approximately 360 feet to the east (just north of the ponds) on private property to facilitate and locate the Interconnection Facilities.

#### 6. Estimated Costs

The following good faith estimates are provided in 2011 dollars:

##### Estimated Cost:

Description	Ownership	Cost Estimate
<i>Interconnection Facilities (from section 1.6):</i>		
Overhead Generation Interconnection Package & Line Extension	IPC	\$145,000
Underground Equipment and 1000 kVA Transformer	IPC	\$75,000
<b><i>SUBTOTAL</i></b>		<b>\$220,000</b>
<b><i>GRAND TOTAL</i></b>		<b>\$220,000</b>

##### Note Regarding Transmission Service:

This Facility Study is a Network Resource Interconnection Facility Study. This study identifies the facilities necessary to integrate the Generating Facility into Idaho Power's network to serve load within Idaho Power's balancing area. Network Resource Interconnection Service in and of itself does not convey any right to deliver electricity to any specific customer or Point of Delivery.



## Proposed Location for Distribution Upgrades and Interconnection Facilities

Green = Distribution Upgrades

Yellow = Interconnection Facilities (Interconnection Package)

Red = Interconnection Facilities (Underground Cables and Vaults)

Purple = Interconnection Facilities (Padmounted Transformer)



**BEFORE THE  
IDAHO PUBLIC UTILITIES COMMISSION  
CASE NO. IPC-E-12-25**

**IDAHO POWER COMPANY**

**ATTACHMENT 52**



September 14, 2012  
Via email & Certified Mail #7011350000156448948

Leslie White  
Exergy  
802 W. Bannock  
12<sup>th</sup> Floor  
Boise, ID 83702

Re: Swager Farms Dairy Digester Project – GI# 307

Dear Leslie:

Attached please find a copy of the final Facility Study Report (FSR) dated September 10, 2012, and a Generator Interconnection Agreement (GIA) for the Swager Farms Dairy Digester Project. Pursuant to our standard GIA process, you would normally be receiving a Draft GIA at this point in time with 30 days to review and comment, after which time you would be offered a Final GIA which you would then have 30 days to execute and fund. The construction sequencing for this project, based upon Idaho Power's current resources and scheduling would have Idaho Power construction completion sometime during approximately May – June 2013, assuming you execute and fund the GIA by November. However, because Idaho Power is aware of your need to bring this project online and operational before the end of the year, and based upon the unique facts and circumstances of this project, Idaho Power was able to rearrange some project scheduling and sequencing in an attempt to offer to you an opportunity to have the interconnection work completed by the end of this year. In order for your project to come online by December 31, 2012, we are providing you with a Final Facility Study Report and a Final GIA. Idaho Power must have the executed GIA and funding no later than October 1, 2012, in order to complete construction by this date.

Of course, if you wish to take time to review Draft versions of both the Facility Study and the GIA prior to being offered a Final GIA, please let me know and I will provide you with those documents. This will however push out the date by which we will have construction complete. I have provided you with a Final GIA with this letter, which if acceptable upon your review, is ready for execution and funding. This is being offered to you as a way to expedite the process so that Idaho Power may have the executed GIA and funding by October 1, 2012, in order for your project to come online by December 31, 2012.

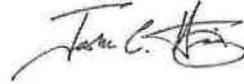
Although the preferred method of funding is full payment upfront; payment arrangements may be requested. If you have not already done so, please contact Aubrae Sloan (208-388-5697), Operations Finance, if you wish to discuss Idaho Power's credit requirements for construction funding. Once we receive funding, or the credit requirement is met, we will proceed with construction of the project. The actual construction and labor charges will be reconciled approximately 90 days subsequent to project completion.

Under the Generator Interconnection process, the following items must be provided to me on or before execution of the GIA:

1. Proof of Site Control for the project
2. Insurance certification pursuant to Section 7 of the GIA (certificate, 1 endorsement for Additional insured, and 1 for the cancellation notice)
3. Financial arrangements approved by Idaho Power credit department, or full payment for construction

Failure to submit all of the requested items above by October 1, 2012 will cause your Generator Interconnection request to forgo the expedited process and construction completion will not be possible by December 31, 2012, and will be schedule for approximately May/June 2013. We will then provide you with a draft version of the Facility Study and work through the Generator Interconnection Process as per the normal schedule. Please contact me at your earliest convenience with any questions.

Sincerely,



Josh Harris  
Operations Analyst  
[jharris@idahopower.com](mailto:jharris@idahopower.com)

Encl: Final Facility Study Report  
GIA for Swager Farms Dairy Digester Project #307

Cc: (via email) Eric Hackett/IPC  
Tess Park/IPC  
Aubrae Sloan/IPC  
Donovan Walker/IPC  
Randy Allphin/IPC

September 14, 2012

GENERATOR INTERCONNECTION AGREEMENT  
Schedule 72

Swager Farms Dairy Digester Project  
0.8 MW

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This Generator Interconnection Agreement ("Agreement") under Idaho Power Company's Schedule 72 is effective as of the \_\_\_\_ day of \_\_\_\_\_, 2012 between \_\_\_\_\_ ("Seller", "Customer" or "The Project") and Idaho Power Company ("Company", "Transmission Owner", "Idaho Power", "IPC" or "IPCO").

### RECITALS

A. Seller will own or operate a Generation Facility that qualifies for service under Idaho Power's Commission-approved Schedule 72 and any successor schedule.

B. The Generation Facility covered by this Agreement is more particularly described in Attachment 1.

### AGREEMENTS

#### 1. Capitalized Terms

Capitalized terms used herein shall have the same meanings as defined in Schedule 72 or in the body of this Agreement.

#### 2. Terms and Conditions

This Agreement and Schedule 72 provide the rates, charges, terms and conditions under which the Seller's Generation Facility will interconnect with, and operate in parallel with, the Company's transmission/distribution system. Terms defined in Schedule 72 will have the same defined meaning in this Agreement. If there is any conflict between the terms of this Agreement and Schedule 72, Schedule 72 shall prevail.

#### 3. This Agreement is not an agreement to purchase Seller's power.

Purchase of Seller's power and other services that Seller may require will be covered under separate agreements. Nothing in this Agreement is intended to affect any other agreement between the Company and Seller.

#### 4. Attachments

Attached to this Agreement and included by reference are the following:

Attachment 1 – Description and Costs of the Generation Facility, Interconnection Facilities, and Metering Equipment.

Attachment 2 – One-line Diagram Depicting the Generation Facility, Interconnection Facilities, Metering Equipment and Upgrades.

Attachment 3 – Milestones For Interconnecting the Generation Facility.

Attachment 4 – Additional Operating Requirements for the Company's Transmission System Needed to Support the Seller's Generation Facility.

Attachment 5 – Reactive Power.

Attachment 6 – Description of Upgrades required to integrate the Generation Facility and Best Estimate of Upgrade Costs.

Attachment 7 – Generator Interconnection Control Requirements

5. Effective Date, Term, Termination and Disconnection.

5.1 Term of Agreement. Unless terminated earlier in accordance with the provisions of this Agreement, this Agreement shall become effective on the date specified above and remain effective as long as Seller's Generation Facility is eligible for service under Schedule 72.

5.2 Termination.

5.2.1 Seller may voluntarily terminate this Agreement upon expiration or termination of an agreement to sell power to the Company.

5.2.2 After a Default, either Party may terminate this Agreement pursuant to Section 6.5.

5.2.3 Upon termination or expiration of this Agreement, the Seller's Generation Facility will be disconnected from the Company's transmission/distribution system. The termination or expiration of this Agreement shall not relieve either Party of its liabilities and obligations, owed or continuing at the time of the termination. The provisions of this Section shall survive termination or expiration of this Agreement.

5.3 Temporary Disconnection. Temporary disconnection shall continue only for so long as reasonably necessary under "Good Utility Practice." Good Utility Practice means any of the practices, methods and acts engaged in or approved by a significant portion of the electric industry during the relevant time period, or any of the practices, methods and acts which, in the exercise of reasonable judgment in light of the facts known at the time the decision was made, could have been expected to accomplish the desired result at a reasonable cost consistent with good business practices, reliability, safety and expedition. Good Utility Practice is not intended to be limited to the optimum practice, method, or act to the exclusion of all others, but rather to be acceptable practices, methods, or acts generally accepted in the region. Good Utility Practice includes compliance with WECC or NERC requirements. Payment of lost revenue resulting from temporary disconnection shall be governed by the power purchase agreement.

5.3.1 Emergency Conditions. "Emergency Condition" means a condition or situation: (1) that in the judgment of the Party making the claim is imminently likely to endanger life or property; or (2) that, in the case of the Company, is imminently likely (as determined in a non-discriminatory manner) to cause a material adverse effect on the security of, or damage to the Company's transmission/distribution system, the Company's Interconnection Facilities or the equipment of the Company's customers; or (3) that, in the case of the Seller, is imminently likely (as determined in a non-discriminatory manner) to cause a material adverse effect on the reliability and security of, or damage to, the Generation Facility or the Seller's Interconnection Facilities. Under Emergency Conditions, either the Company or the Seller may immediately suspend interconnection service and temporarily disconnect the Generation Facility. The Company shall notify the Seller promptly when it becomes aware of an Emergency Condition that may reasonably be expected to affect the Seller's operation of the Generation Facility. The Seller shall notify the Company promptly when it becomes aware of an Emergency Condition that may reasonably be expected to affect the Company's equipment or service to the Company's customers. To the extent information is known, the notification shall describe the Emergency Condition, the extent of the damage or deficiency, the expected effect on the operation of both Parties' facilities and operations, its anticipated duration, and the necessary corrective action.

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5.3.2 Routine Maintenance, Construction, and Repair. The Company may interrupt interconnection service or curtail the output of the Seller's Generation Facility and temporarily disconnect the Generation Facility from the Company's transmission/distribution system when necessary for routine maintenance, construction, and repairs on the Company's transmission/distribution system. The Company will make a reasonable attempt to contact the Seller prior to exercising its rights to interrupt interconnection or curtail deliveries from the Seller's Facility. Seller understands that in the case of emergency circumstances, real time operations of the electrical system, and/or unplanned events, the Company may not be able to provide notice to the Seller prior to interruption, curtailment or reduction of electrical energy deliveries to the Company. The Company shall use reasonable efforts to coordinate such reduction or temporary disconnection with the Seller.

5.3.3 Scheduled Maintenance. On or before January 31 of each calendar year, Seller shall submit a written proposed maintenance schedule of significant Facility maintenance for that calendar year and the Company and Seller shall mutually agree as to the acceptability of the proposed schedule. The Parties determination as to the acceptability of the Seller's timetable for scheduled maintenance will take into consideration Good Utility Practices, Idaho Power system requirements and the Seller's preferred schedule. Neither Party shall unreasonably withhold acceptance of the proposed maintenance schedule.

5.3.4 Maintenance Coordination. The Seller and the Company shall, to the extent practical, coordinate their respective transmission/distribution system and Generation Facility maintenance schedules such that they occur simultaneously. Seller shall provide and maintain adequate protective equipment sufficient to prevent damage to the Generation Facility and Seller-furnished Interconnection Facilities. In some cases, some of Seller's protective relays will provide back-up protection for Idaho Power's facilities. In that event, Idaho Power will test such relays annually and Seller will pay the actual cost of such annual testing.

5.3.5 Forced Outages. During any forced outage, the Company may suspend interconnection service to effect immediate repairs on the Company's transmission/distribution system. The Company shall use reasonable efforts to provide the Seller with prior notice. If prior notice is not given, the Company shall, upon request, provide the Seller written documentation after the fact explaining the circumstances of the disconnection.

5.3.6 Adverse Operating Effects. The Company shall notify the Seller as soon as practicable if, based on Good Utility Practice, operation of the Seller's Generation Facility may cause disruption or deterioration of service to other customers served from the same electric system, or if operating the Generation Facility could cause damage to the Company's transmission/distribution system or other affected systems. Supporting documentation used to reach the decision to disconnect shall be provided to the Seller upon request. If, after notice, the Seller fails to remedy the adverse operating effect within a reasonable time, the Company may disconnect the Generation Facility. The Company shall provide the Seller with reasonable notice of such disconnection, unless the provisions of Article 5.3.1 apply.

5.3.7 Modification of the Generation Facility. The Seller must receive written authorization from the Company before making any change to the Generation Facility that may have a material impact on the safety or reliability of the Company's transmission/distribution system. Such authorization shall not be unreasonably withheld.

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*Modifications shall be done in accordance with Good Utility Practice. If the Seller makes such modification without the Company's prior written authorization, the latter shall have the right to temporarily disconnect the Generation Facility.*

*5.3.8 Reconnection. The Parties shall cooperate with each other to restore the Generation Facility, Interconnection Facilities, and the Company's transmission/distribution system to their normal operating state as soon as reasonably practicable following a temporary disconnection.*

*5.3.9 Voltage Levels. Seller, in accordance with Good Utility Practices, shall minimize voltage fluctuations and maintain voltage levels acceptable to Idaho Power. Idaho Power may, in accordance with Good Utility Practices, upon one hundred eighty (180) days' notice to the Seller, change its nominal operating voltage level by more than ten percent (10%) at the Point of Delivery, in which case Seller shall modify, at Idaho Power's expense, Seller's equipment as necessary to accommodate the modified nominal operating voltage level.*

#### *5.4 Land Rights.*

*5.4.1 Seller to Provide Access. Seller hereby grants to Idaho Power for the term of this Agreement all necessary rights-of-way and easements to install, operate, maintain, replace, and remove Idaho Power's Metering Equipment, Interconnection Equipment, Disconnection Equipment, Protection Equipment and other Special Facilities necessary or useful to this Agreement, including adequate and continuing access rights on property of Seller. Seller warrants that it has procured sufficient easements and rights-of-way from third parties so as to provide Idaho Power with the access described above. All documents granting such easements or rights-of-way shall be subject to Idaho Power's approval and in recordable form.*

*5.4.2 Use of Public Rights-of-Way. The Parties agree that it is necessary to avoid the adverse environmental and operating impacts that would occur as a result of duplicate electric lines being constructed in close proximity. Therefore, subject to Idaho Power's compliance with Paragraph 5.4.4, Seller agrees that should Seller seek and receive from any local, state or federal governmental body the right to erect, construct and maintain Seller-furnished Interconnection Facilities upon, along and over any and all public roads, streets and highways, then the use by Seller of such public right-of-way shall be subordinate to any future use by Idaho Power of such public right-of-way for construction and/or maintenance of electric distribution and transmission facilities and Idaho Power may claim use of such public right-of-way for such purposes at any time. Except as required by Paragraph 5.4.4, Idaho Power shall not be required to compensate Seller for exercising its rights under this Paragraph 5.4.2.*

*5.4.3 Joint Use of Facilities. Subject to Idaho Power's compliance with Paragraph 5.4.4, Idaho Power may use and attach its distribution and/or transmission facilities to Seller's Interconnection Facilities, may reconstruct Seller's Interconnection Facilities to accommodate Idaho Power's usage or Idaho Power may construct its own distribution or transmission facilities along, over and above any public right-of-way acquired from Seller pursuant to Paragraph 5.4.2, attaching Seller's Interconnection Facilities to such newly constructed facilities. Except as required by Paragraph 5.4.4, Idaho Power shall not be required to compensate Seller for exercising its rights under this Paragraph 5.4.3.*

*5.4.4 Conditions of Use. It is the intention of the Parties that the Seller be left in substantially the same condition, both financially and electrically, as Seller existed prior*

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to Idaho Power's exercising its rights under this Paragraph 5.4. Therefore, the Parties agree that the exercise by Idaho Power of any of the rights enumerated in Paragraphs 5.4.2 and 5.4.3 shall: (1) comply with all applicable laws, codes and Good Utility Practices, (2) equitably share the costs of installing, owning and operating jointly used facilities and rights-of-way. If the Parties are unable to agree on the method of apportioning these costs, the dispute will be submitted to the Commission for resolution and the decision of the Commission will be binding on the Parties, and (3) shall provide Seller with an interconnection to Idaho Power's system of equal capacity and durability as existed prior to Idaho Power exercising its rights under this Paragraph 5.4.

6. Assignment, Liability, Indemnity, Force majeure, Consequential Damages and Default.

6.1 Assignment. This Agreement may be assigned by either Party upon twenty-one (21) calendar days prior written notice and opportunity to object by the other Party; provided that:

6.1.1 Either Party may assign this Agreement without the consent of the other Party to any affiliate of the assigning Party with an equal or greater credit rating and with the legal authority and operational ability to satisfy the obligations of the assigning Party under this Agreement.

6.1.2 The Seller shall have the right to contingently assign this Agreement, without the consent of the Company, for collateral security purposes to aid in providing financing for the Generation Facility, provided that the Seller will promptly notify the Company of any such contingent assignment.

6.1.3 Any attempted assignment that violates this article is void and ineffective. Assignment shall not relieve a Party of its obligations, nor shall a Party's obligations be enlarged, in whole or in part, by reason thereof. An assignee is responsible for meeting the same financial, credit, and insurance obligations as the Seller. Where required, consent to assignment will not be unreasonably withheld, conditioned or delayed.

6.2 Limitation of Liability. Each Party's liability to the other Party for any loss, cost, claim, injury, liability, or expense, including reasonable attorney's fees, relating to or arising from any act or omission in its performance of this Agreement, shall be limited to the amount of direct damage actually incurred. In no event shall either Party be liable to the other Party for any indirect, special, consequential, or punitive damages, except as authorized by this Agreement.

6.3 Indemnity.

6.3.1 This provision protects each Party from liability incurred to third parties as a result of carrying out the provisions of this Agreement. Liability under this provision is exempt from the general limitations on liability found in Article 6.2.

6.3.2 The Parties shall at all times indemnify, defend, and hold the other Party harmless from, any and all damages, losses, claims, including claims and actions relating to injury to or death of any person or damage to property, demand, suits, recoveries, costs and expenses, court costs, attorney fees, and all other obligations by or to third parties, arising out of or resulting from the other Party's action or failure to meet its obligations under this Agreement on behalf of the indemnifying Party, except in cases of gross negligence or intentional wrongdoing by the indemnified Party.

6.3.3 If an indemnified person is entitled to indemnification under this article as a result of a claim by a third party, and the indemnifying Party fails, after notice and

reasonable opportunity to proceed under this article, to assume the defense of such claim, such indemnified person may at the expense of the indemnifying Party contest, settle or consent to the entry of any judgment with respect to, or pay in full, such claim. Failure to defend is a Material Breach.

6.3.4 If an indemnifying party is obligated to indemnify and hold any indemnified person harmless under this article, the amount owing to the indemnified person shall be the amount of such indemnified person's actual loss, net of any insurance or other recovery.

6.3.5 Promptly after receipt by an indemnified person of any claim or notice of the commencement of any action or administrative or legal proceeding or investigation as to which the indemnity provided for in this article may apply, the indemnified person shall notify the indemnifying party of such fact. Any failure of or delay in such notification shall be a Material Breach and shall not affect a Party's indemnification obligation unless such failure or delay is materially prejudicial to the indemnifying party.

6.4 Force Majeure. As used in this Agreement, "Force Majeure" or "an event of Force Majeure" means any cause beyond the control of the Seller or of the Company which, despite the exercise of due diligence, such Party is unable to prevent or overcome. Force Majeure includes, but is not limited to, acts of God, fire, flood, storms, wars, hostilities, civil strife, strikes and other labor disturbances, earthquakes, fires, lightning, epidemics, sabotage, or changes in law or regulation occurring after the Operation Date, which, by the exercise of reasonable foresight such party could not reasonably have been expected to avoid and by the exercise of due diligence, it shall be unable to overcome. If either Party is rendered wholly or in part unable to perform its obligations under this Agreement because of an event of Force Majeure, both Parties shall be excused from whatever performance is affected by the event of Force Majeure, provided that:

(1) The non-performing Party shall, as soon as is reasonably possible after the occurrence of the Force Majeure, give the other Party written notice describing the particulars of the occurrence.

(2) The suspension of performance shall be of no greater scope and of no longer duration than is required by the event of Force Majeure.

(3) No obligations of either Party which arose before the occurrence causing the suspension of performance and which could and should have been fully performed before such occurrence shall be excused as a result of such occurrence.

6.5 Default and Material Breaches.

6.5.1 Defaults. If either Party fails to perform any of the terms or conditions of this Agreement (a "Default" or an "Event of Default"), the nondefaulting Party shall cause notice in writing to be given to the defaulting Party, specifying the manner in which such default occurred. If the defaulting Party shall fail to cure such Default within the sixty (60) days after service of such notice, or if the defaulting Party reasonably demonstrates to the other Party that the Default can be cured within a commercially reasonable time but not within such sixty (60) day period and then fails to diligently pursue such cure, then, the nondefaulting Party may, at its option, terminate this Agreement and/or pursue its legal or equitable remedies.

6.5.2 Material Breaches. The notice and cure provisions in Paragraph 6.5.1 do not apply to Defaults identified in this Agreement as Material Breaches. Material Breaches must be cured as expeditiously as possible following occurrence of the breach.

7. Insurance.

During the term of this Agreement, Seller shall secure and continuously carry the following insurance coverage:

7.1 Comprehensive General Liability Insurance for both bodily injury and property damage with limits equal to \$1,000,000, each occurrence, combined single limit. The deductible for such insurance shall be consistent with current Insurance Industry Utility practices for similar property.

7.2 The above insurance coverage shall be placed with an insurance company with an A.M. Best Company rating of A- or better and shall include:

(a) An endorsement naming Idaho Power as an additional insured and loss payee as applicable; and

(b) A provision stating that such policy shall not be canceled or the limits of liability reduced without sixty (60) days' prior written notice to Idaho Power.

7.3 Seller to Provide Certificate of Insurance. As required in Paragraph 7 herein and annually thereafter, Seller shall furnish the Company a certificate of insurance, together with the endorsements required therein, evidencing the coverage as set forth above.

7.4 Seller to Notify Idaho Power of Loss of Coverage - If the insurance coverage required by Paragraph 7.1 shall lapse for any reason, Seller will immediately notify Idaho Power in writing. The notice will advise Idaho Power of the specific reason for the lapse and the steps Seller is taking to reinstate the coverage. Failure to provide this notice and to expeditiously reinstate or replace the coverage will constitute grounds for a temporary disconnection under Section 5.3 and will be a Material Breach.

8. Miscellaneous.

8.1 Governing Law. The validity, interpretation and enforcement of this Agreement and each of its provisions shall be governed by the laws of the state of Idaho without regard to its conflicts of law principles.

8.2 Salvage. No later than sixty (60) days after the termination or expiration of this Agreement, Idaho Power will prepare and forward to Seller an estimate of the remaining value

of those Idaho Power furnished Interconnection Facilities as required under Schedule 72 and/or described in this Agreement, less the cost of removal and transfer to Idaho Power's nearest warehouse, if the Interconnection Facilities will be removed. If Seller elects not to obtain ownership of the Interconnection Facilities but instead wishes that Idaho Power reimburse the Seller for said Facilities the Seller may invoice Idaho Power for the net salvage value as estimated by Idaho Power and Idaho Power shall pay such amount to Seller within thirty (30) days after receipt of the invoice. Seller shall have the right to offset the invoice amount against any present or future payments due Idaho Power.

9. Notices.

9.1 General. Unless otherwise provided in this Agreement, any written notice, demand, or request required or authorized in connection with this Agreement ("Notice") shall be deemed properly given if delivered in person, delivered by recognized national carrier service, or sent by first class mail, postage prepaid, to the person specified below:

**If to the Seller:**

Seller: \_\_\_\_\_  
Attention: \_\_\_\_\_  
Address: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_  
Phone: \_\_\_\_\_ Fax: \_\_\_\_\_

**If to the Company:**

Idaho Power Company - Delivery  
Attention: Load Serving Operations Director  
1221 W. Idaho Street  
Boise: Idaho 83702  
Phone: 208-388-2630 Fax: 208-388-5504

9.2 Billing and Payment. Billings and payments shall be sent to the addresses set out below:

Seller: \_\_\_\_\_  
Attention: \_\_\_\_\_  
Address: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_  
Phone: \_\_\_\_\_ Fax: \_\_\_\_\_

Idaho Power Company - Delivery  
Attention: Corporate Cashier  
PO Box 447  
Salt Lake City Utah 84110-0447  
Phone: 208-388-5697 email: asloan@idahopower.com

9.3 Designated Operating Representative. The Parties may also designate operating representatives to conduct the communications which may be necessary or convenient for the administration of this Agreement. This person will also serve as the point of contact with respect to operations and maintenance of the Party's facilities.

**Seller's Operating Representative:**

Seller: \_\_\_\_\_  
 Attention: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_  
 Phone: \_\_\_\_\_ Fax: \_\_\_\_\_

**Company's Operating Representative:**

Idaho Power Company - Delivery  
 Attention: Outage Coordinator – System/Regional Dispatch  
 1221 W. Idaho Street  
 Boise, Idaho 83702  
 Phone: 208-388-2633, 388-5125, or 388-5175 during regular business hours  
 (after hours – System Dispatch Southern Region 208-388-5190)

9.5 Changes to the Notice Information. Either Party may change this information by giving five (5) Business Days written notice prior to the effective date of the change.

10. Signatures.

IN WITNESS WHEREOF, the Parties have caused this Agreement to be executed by their respective duly authorized representatives.

**For the Seller**

Name: \_\_\_\_\_  
 Title: \_\_\_\_\_  
 Date: \_\_\_\_\_

**For the Company**

Name: \_\_\_\_\_  
 Title: Director, Load Serving Operations – Idaho Power Company, Delivery  
 Date: \_\_\_\_\_

## Attachment 1

### Description and Costs of the Generation Facility, Interconnection Facilities and Metering Equipment

#### **Interconnection Details**

Type of Interconnection Service: Studied as an Idaho Power Network Resource under PURPA  
Full Output: 0.8 MW  
Nominal Delivery Voltage: 12.5 kV

#### **General Facility Description**

The proposed project will consist of a short three-phase distribution line extension and Idaho Power's overhead generation interconnection package including an overhead recloser, metering package, local service power transformer, disconnect switches, and a relay/control box. Additionally, one 1000 kVA 277/480 to 12.47 kV Grounded Wye / Grounded Wye padmounted transformer will be installed, including the associated underground cabling and vaults. The project is located in Twin Falls County, Idaho and connects to the 12.5 kV system on Idaho Power Company's Clover (COVR-012) distribution line. The total project output is 0.8 MW.

#### **Interconnection Point**

The Interconnection Point for the Swager Farms Dairy Digester Project will be the low-side bushings on the padmounted transformer (SW1). The project's location is in T10S R15E Section 21 of Twin Falls County, Idaho.

A drawing identifying the Point of Interconnection is included as Attachment 2. The Point of Change of Ownership is electrically the same as the Interconnection Point.

#### **Point of Change of Ownership**

The Point of Change of Ownership for the Swager Farms Dairy Digester Project will be the low-side bushings on the padmounted transformer (SW1).

#### **Seller's Interconnection Facilities**

The Swager Farms Project will install generators, low-side disconnect switches, all wiring and conduit between the generators and the padmounted transformer, appropriate grounding measures, and associated auxiliary equipment. Seller will build underground facilities to the Point of Change of Ownership for the generator facility.

The low-side disconnect switch shall be as specified or as determined by mutual agreement and be readily accessible, operable, and lockable by Idaho Power personnel at all times.

All interconnection equipment electrically located on the generator side of the Point of Change Ownership shall be owned and maintained by the Seller.

#### **Other Facilities Provided by Seller**

##### ***Ground Fault Equipment***

The Seller will install ground fault limiting equipment that will limit the zero sequence fault current to 20 amps at the Interconnection Point.

##### ***Monitoring Information***

If the Seller requires the ability to monitor information related to the Idaho Power recloser in the generation interconnection package they are required to supply their own cabling/wiring to the control box.

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**Easements**

The Seller will provide to Idaho Power a surveyed (Metes & Bounds) legal description along with exhibit map for Idaho Power's proposed facilities. After the legal description has been delivered to IPCO for review, IPCO will supply to the Seller a completed IPCO easement for signature by the land owner of record. Once the signatures have been secured, the Seller will return the signed easement to IPCO for recording.

**Local Service**

The Seller is responsible to arrange for local service to their site, as necessary.

**Idaho Power Company's Interconnection Facilities**

Idaho Power will install a generation interconnection package on the existing distribution feeder (COVR-012) on private property southeast of the intersection of E. 3800 N. and N. 1700 E. in Twin Falls County, ID.

The new interconnection package will include four distribution poles to mount a local service transformer, solid blade disconnects, primary metering package, recloser, relays, fuses and riser necessary for the package. The interconnection will be controlled by a SEL-547 line protection relay. The relay will be located in a pole mounted enclosure and will also contain a test switch (TS4), isolation interface, power supply, DC converter, control switch and surge protector.

Idaho Power will install (and subsequently own and maintain) one 1000 kVA 277/480 to 12.47 kV Grounded Wye / Grounded Wye padmounted transformer on top of a vault. Conduit and underground cables will be installed from the interconnection package to padmounted transformer. Protective posts will be installed to protect the ground mounted equipment from damage.

A 2" conduit will be installed alongside the underground primary to facilitate information exchange to the Seller about the recloser if desired. (The Seller is responsible for providing and installing the appropriate cable.)

See single line drawing as Attachment 2.

All interconnection equipment electrically located on the utility side of the Interconnection Point shall be owned, operated, and maintained by Idaho Power.

**Estimated Cost & Ownership**

The following good faith estimates are provided in 2012 dollars:

Description	Ownership	Cost Estimate
<b>Interconnection Facilities:</b>		
Overhead Generation Interconnection Package & Line Extension	IPC	\$145,000
Underground Equipment and 1000 kVA Transformer	IPC	\$75,000
<b>SUBTOTAL</b>		<b>\$220,000</b>
<i>(See ATTACHMENT 6 for Project Grand Total)</i>		

Full payment is required up front in accordance with Schedule 72, unless payment arrangements are made in advance with Idaho Power Operations Finance (see Attachment 3).

Billing for construction activities will be based upon actual expenditures.

Attachment 2

One-line Diagram Depicting the Small Generation Facility, Interconnection Facilities, Metering Equipment and Upgrades

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Attachment 3Milestones

Idaho Power Company agrees only to the Construction timelines under its direct control provided in the Facility Study Report for this Project.

These milestones will begin, and the construction schedule referenced below, will only be valid upon receipt of funding in full from the Seller or their authorized third party no later than the date set forth below for such payment. Additionally, failure by Seller to make the required payments as set forth in this Agreement by the date(s) specified below will be a material breach of this Agreement, which may result in any or all of the following: (i) loss of milestone dates and construction schedules set forth below; (ii) immediate termination of this Agreement by Idaho Power; (iii) removal from the generator interconnection queue.

Critical milestones and responsibility as agreed to by the Parties:

Date	Responsible Party	Milestones
10/1/2012	Seller	IPCO receives the remaining balance of Construction estimate \$220,000 OR Credit arrangements are approved by IPCO
10/1/2012	IPCO	Long Lead Time Material Ordered (approximately 8-10 week lead time)
12/10/2012	IPCO	IPCO Construction Complete
12/31/2012	IPCO	IPCO Commissioning Complete
12/31/2012	IPCO	Project Leader issues Construction Complete Letter
12/31/2012	IPCO	Director of Load Serving Operations authorizes project to be energized, upon verification that Seller has previously met Schedule 72, Sec 7 Insurance requirements
12/31/2012	Seller	Seller testing begins
12/31/2012	Seller	Seller's requested In-Service Date

**Agreed to by:**

For the Seller: \_\_\_\_\_ Date \_\_\_\_\_

For the Transmission Provider  
Idaho Power Company \_\_\_\_\_ Date \_\_\_\_\_

## Attachment 4

### Additional Operating Requirements for the Company's Transmission System and Affected Systems Needed to Support the Seller's Needs

*The Company shall also provide requirements that must be met by the Seller prior to initiating parallel operation with the Company's Transmission System.*

#### **Operating Requirements**

The project is required to comply with the applicable Voltage and Current Distortion Limits found in IEEE Standard 519-1992 *IEEE Recommended Practices and Requirements for Harmonic Control in Electrical Power Systems* or any subsequent standards as they may be updated from time to time.

Seller will be able to modify power plant facilities on the generator side of the Interconnection Point with no impact upon the operation of the transmission system whenever the generation facilities are electrically isolated from the system and a terminal clearance is issued by Idaho Power Company's Grid Operator.

Voltage flicker at startup and during operation will be limited to less than 5% as measured at the Interconnection Point. It is preferable to bring each generating unit online separately to minimize voltage flicker on the distribution system.

#### **Low Voltage Ride Through**

The Project must be capable of riding through faults on adjacent section of the power system without tripping due to low voltage. It has been determined, through study, that the Project must be capable of remaining interconnect for any single phase voltage as low as 0.7 PU for 30 cycles, and for all three phase voltages as low as 0.8 PU for 30 cycles.

#### **"As-Built" Generation Interconnection Data**

Modifications of the interconnection equipment or material changes for the Seller's generator facility that results in changes to modeling data (steady state data and dynamics data) previously submitted by the Seller for the System Impact Study requires prior approval from Idaho Power Company in order to validate that the System Impact Study results remain valid for the modified equipment or material changes to the facility. Validation of these results may require additional SIS re-study work. Should Seller make any changes to facility that were not considered in any studies or outlined in this agreement, Idaho Power reserves the right to delay interconnection until any applicable re-study work has been completed and approval has been granted.

The Seller is encouraged to notify Idaho Power Company of such changes as soon as possible in order to minimize potential delays in energization of the Project.

Equipment settings determined during final commissioning of the generator facility that are represented in the Transmission Provider's network models shall be provided by the Seller within 30 days following the date of commercial operations. Such settings include but are not limited to interconnection transformer energized tap position, load tap changer control settings, control setpoints (pickup level and time delay) of automatic switching schemes for static reactive power equipment, and final control characteristics of dynamic reactive power equipment.

Attachment 5

Reactive Power Requirements

The project must be controlled to operate at unity power factor +/- 200 kVAr .  
Voltage flicker at startup and during operation will be limited to less than 5% as measured at the Interconnection Point.

---

Attachment 6

Company's Description of Special Facilities and Upgrades Required to Integrate the Generation Facility and Best Estimate of Costs

As provided in Schedule 72 this Attachment describes Upgrades, Special Facilities, including Network Upgrades, and provides an itemized best estimate of the cost of the required facilities.

**Upgrades**

**Substation Upgrades**

\$0

**Distribution Upgrades**

\$0

**Transmission Upgrades**

\$0

The following good faith estimates are provided in 2012 dollars:

Description	Ownership	Cost Estimate
<b>Interconnection Facilities (from section 1.6):</b>		
Overhead Generation Interconnection Package & Line Extension	IPC	\$145,000
Underground Equipment and 1000 kVA Transformer	IPC	\$75,000
<b>TOTAL</b>		<b>\$220,000</b>
<b>Substation Upgrades:</b>		
<b>TOTAL</b>		<b>\$0</b>
<b>Upgrades to Distribution:</b>		
<b>TOTAL</b>		<b>\$0</b>
<b>Upgrades to Transmission:</b>		
<b>TOTAL</b>		<b>\$0</b>
<b>GRAND TOTAL</b>		<b>\$220,000</b>

**BEFORE THE  
IDAHO PUBLIC UTILITIES COMMISSION  
CASE NO. IPC-E-12-25**

**IDAHO POWER COMPANY**

**ATTACHMENT 53**

COPY

Clark, Danielle

**From:** Harris, Joshua  
**Sent:** Monday, October 08, 2012 2:21 PM  
**To:** Clark, Danielle  
**Subject:** FW: Swager Farms (GI 307) Interconnection Agreement

Thanks,

**Josh Harris**  
OPERATIONS ANALYST  
Idaho Power | Generator Interconnection

208-388-5751

Email [jharris@idahopower.com](mailto:jharris@idahopower.com)

---

**From:** Walker, Donovan  
**Sent:** Thursday, September 20, 2012 4:39 PM  
**To:** 'lwhite@exergydevelopment.com'  
**Cc:** Harris, Joshua; Blackburn, Rex; Allphin, Randy; Anderson, John; Park, Tessia  
**Subject:** RE: Swager Farms (GI 307) Interconnection Agreement

Ms. White,

There has been no discussion, and absolutely no agreement from Idaho Power to extend the Scheduled Operation Date from the PPA for this project, as you have referred to in conversation with Idaho Power's Josh Harris, and as you refer to below. The Scheduled Operation Date for the project remains October 1, 2012. This date will obviously not be met, and consequently under the terms of the PPA a 90 cure period will commence.

Idaho Power, through Josh Harris' communication and forwarding of a GIA to you last week, extended an option for the project to proceed with the required interconnection work, and a commitment from Idaho Power that it would have its required work completed by year end, 2012, **IF** the project executes the final GIA **AND** pays the required funding **NO LATER THAN OCTOBER 1, 2012**. Mr. Harris' letter of September 14, 2012, states clearly that in order to take advantage of this expedited process and construction, you must authorize Idaho Power to move forward by executing the GIA and paying the required funding no later than October 1, 2012. If this date is missed, then it will not be possible to complete the required interconnection work before the end of the year 2012.

We look forward to your response.

**Donovan E. Walker**  
LEAD COUNSEL  
Idaho Power | Legal  
208-388-5317

---

**From:** Harris, Joshua  
**Sent:** Wednesday, September 19, 2012 9:55 AM

**To:** Darrington, Michael; Allphin, Randy; Walker, Donovan  
**Subject:** FW: Swager Farms (GI 307) Interconnection Agreement

COPY

FYI.

Thanks,

**Josh Harris**  
OPERATIONS ANALYST  
Idaho Power | Generator Interconnection

208-388-5751

Email [jharris@idahopower.com](mailto:jharris@idahopower.com)

---

**From:** Leslie White [<mailto:lwhite@exergydevelopment.com>]  
**Sent:** Tuesday, September 18, 2012 9:54 AM  
**To:** Harris, Joshua  
**Subject:** RE: Swager Farms (GI 307) Interconnection Agreement

Hello Josh,

Thank you for sending this offer. My understanding from talking to James this morning is that Roy Eiguren met with IP yesterday on our behalf and that that discussion has been tabled for a few days. I'll need to see the outcome of that conversation to give you some direction on this offer.

Regards,

Leslie



**Leslie White**  
802 W Bannock, 12th Floor Boise, ID 83702  
Office: 208.336.9793 | Mobile: 208.890.4660  
[www.exergydevelopment.com](http://www.exergydevelopment.com)

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---

**From:** Harris, Joshua [<mailto:JHarris@idahopower.com>]  
**Sent:** Friday, September 14, 2012 10:17 AM  
**To:** Leslie White  
**Cc:** Hackett, Eric; Park, Tessia; Sloan, Aubrae; Walker, Donovan; Allphin, Randy; Darrington, Michael  
**Subject:** Swager Farms (GI 307) Interconnection Agreement

Leslie,

The attached is being sent to you in the mail today. Please let me know if you have any questions.

Thanks,

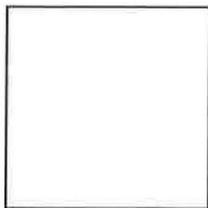
**Josh Harris**  
OPERATIONS ANALYST  
Idaho Power | Generator Interconnection

1221 W. Idaho Street | Boise, Idaho | 83702

Work 208-388-5751

Fax 208-433-3571

Email [jharris@idahopower.com](mailto:jharris@idahopower.com)



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**BEFORE THE  
IDAHO PUBLIC UTILITIES COMMISSION  
CASE NO. IPC-E-12-25**

**IDAHO POWER COMPANY**

**ATTACHMENT 54**

## Clark, Danielle

---

**From:** Walker, Donovan  
**Sent:** Monday, October 08, 2012 11:31 AM  
**To:** Clark, Danielle  
**Subject:** FW: digester meeting on Friday

---

**From:** James Carkulis [mailto:jcarkulis@exergydevelopment.com]  
**Sent:** Thursday, September 27, 2012 1:46 PM  
**To:** Walker, Donovan; Leslie White; Laura Knothe; Harris, Joshua  
**Cc:** Blackburn, Rex; Allphin, Randy; Darrington, Michael; reiguren@idaho-politics.com; rriley@hawleytroxell.com  
**Subject:** Re: digester meeting on Friday

Thanks.

---

**From:** Walker, Donovan [mailto:DWalker@Idahopower.com]  
**Sent:** Thursday, September 27, 2012 01:43 PM  
**To:** James Carkulis; Leslie White; Laura Knothe; Harris, Joshua <JHarris@idahopower.com>  
**Cc:** Blackburn, Rex <RBlackburn@idahopower.com>; Allphin, Randy <RAllphin@idahopower.com>; Darrington, Michael <MDarrington@idahopower.com>; 'reiguren@idaho-politics.com' <reiguren@idaho-politics.com>; 'rriley@hawleytroxell.com' <rriley@hawleytroxell.com>  
**Subject:** Re: digester meeting on Friday

I have us scheduled for 9:30 a.m. tomorrow. See you then.

Donovan.

---

**From:** James Carkulis [mailto:jcarkulis@exergydevelopment.com]  
**Sent:** Thursday, September 27, 2012 01:03 PM  
**To:** Walker, Donovan; Leslie White <lwhite@exergydevelopment.com>; Laura Knothe <lknothe@exergydevelopment.com>; Harris, Joshua  
**Cc:** Blackburn, Rex; Allphin, Randy; Darrington, Michael; reiguren@idaho-politics.com <reiguren@idaho-politics.com>; rriley@hawleytroxell.com <rriley@hawleytroxell.com>  
**Subject:** Re: digester meeting on Friday

We shall meet tomorrow.

---

**From:** Walker, Donovan [mailto:DWalker@Idahopower.com]  
**Sent:** Thursday, September 27, 2012 11:43 AM  
**To:** James Carkulis; Leslie White; Laura Knothe; Harris, Joshua <JHarris@idahopower.com>  
**Cc:** Blackburn, Rex <RBlackburn@idahopower.com>; Allphin, Randy <RAllphin@idahopower.com>; Darrington, Michael <MDarrington@idahopower.com>; 'reiguren@idaho-politics.com' <reiguren@idaho-politics.com>; 'rriley@hawleytroxell.com' <rriley@hawleytroxell.com>  
**Subject:** RE: digester meeting on Friday

James,

Idaho Power takes significant issue with your "first I heard" statement below. Your statement and inferences that there was some kind of agreement to move the dates in the PPA for the digesters, as part of the agreement reached with regard to the wind projects is absolutely not correct. Mr. Eiguren and Mr. Riley were both present as your attorneys at a meeting on August 14, 2012, with myself and Mr. Williams, on behalf of Idaho Power, to finalize the paperwork on the

settlement agreement for the wind projects. Mr. Riley attempted to present terms in those agreements related to the digesters. When I questioned him about it and informed him that there had been no agreement and no discussion related to the digesters, Mr. Eiguren stepped in and told Mr. Riley that the digesters were not part of the discussions that he and Rex Blackburn had previously had regarding termination of the wind PPAs, were not part of the agreement and settlement reached related to the wind projects, and were separate matters that had not been discussed, much less agreed to by the parties. In addition, Mr. Blackburn and myself again informed Mr. Eiguren on September 24, 2012, that there had been no discussion and no agreement to change the PPA dates for the digesters, and further that Idaho Power was not willing to agree to changes in those dates.

Simply put, your agents – Messrs. Eiguren and Riley – will confirm that there was no agreement reached to modify the digester PPA agreements, and that Idaho Power expressly rejected any proposal to do so. If the purpose of your requested meeting tomorrow is to discuss modification of the terms of the digester PPAs, the meeting is not necessary. I previously advised Exergy, in writing, on September 20, 2012, that Idaho Power is not in agreement to amending these agreements. Additionally, as stated below, Idaho Power has offered Exergy an expedited schedule that would allow us to complete the required interconnection facilities prior to the end of this year – contingent upon Exergy authorizing Idaho Power to proceed with such work no later than Monday October 1, by paying the required deposit and executing the GIA.

With the above in mind, please advise as to whether there is a need for us to meet tomorrow.

-Donovan

---

**From:** James Carkulis [<mailto:jcarkulis@exergydevelopment.com>]

**Sent:** Thursday, September 27, 2012 9:35 AM

**To:** Walker, Donovan; Leslie White; Laura Knothe; Harris, Joshua

**Cc:** Blackburn, Rex; Allphin, Randy; Darrington, Michael

**Subject:** Re: digester meeting on Friday

Meeting tomorrow at 9:30 shall be fine. I should be back from North Carolina by then.

However, first I heard about something different than what was agreed to as the Term Sheet presented for settlement was an email to Leslie last Friday.

Thanks

James

---

**From:** Walker, Donovan [<mailto:DWalker@idahopower.com>]

**Sent:** Thursday, September 27, 2012 08:48 AM

**To:** James Carkulis; Leslie White; Laura Knothe; Harris, Joshua <[JHarris@idahopower.com](mailto:JHarris@idahopower.com)>

**Cc:** Blackburn, Rex <[RBlackburn@idahopower.com](mailto:RBlackburn@idahopower.com)>; Allphin, Randy <[RAllphin@idahopower.com](mailto:RAllphin@idahopower.com)>; Darrington, Michael <[MDarrington@idahopower.com](mailto:MDarrington@idahopower.com)>

**Subject:** RE: digester meeting on Friday

James,

Idaho Power can meet with you on Friday. Could we make it at either 9:00 or 9:30 a.m.? Also, as previously indicated, Idaho Power has been clear that it will not agree to change the dates in the PPA. Idaho Power has offered an expedited schedule for the construction of the required interconnection facilities, and will commit to completing that work by the end of the year IF you authorize Idaho Power to proceed no later than Monday, October 1, by paying the required deposit and executing the GIA.

Please let me know if you can make it at 9:00 or 9:30 a.m. tomorrow.

Thanks,  
-Donovan

---

**From:** James Carkulis [mailto:jcarkulis@exergydevelopment.com]  
**Sent:** Thursday, September 27, 2012 5:38 AM  
**To:** Walker, Donovan; Leslie White; Laura Knothe; Harris, Joshua  
**Subject:** digester meeting on Friday

Donovan:

I would like to request a digester meeting on Friday around 10 AM please to sort this out.

Thanks.

James



**James T Carkulis**  
802 W Bannock, 12th Floor Boise, ID 83702  
Office: 208.336.9793 | Mobile: 406.459.3013  
jcarkulis@exergydevelopment.com  
www.exergydevelopment.com

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**BEFORE THE  
IDAHO PUBLIC UTILITIES COMMISSION  
CASE NO. IPC-E-12-25**

**IDAHO POWER COMPANY**

**ATTACHMENT 55**

## Clark, Danielle

---

**From:** Walker, Donovan  
**Sent:** Monday, October 08, 2012 11:29 AM  
**To:** Clark, Danielle  
**Subject:** FW: New Energy 2 and New Energy 3

---

**From:** James Carkulis [<mailto:jcarkulis@exergydevelopment.com>]  
**Sent:** Friday, September 28, 2012 11:40 AM  
**To:** Walker, Donovan; Harris, Joshua; Leslie White; Laura Knothe  
**Subject:** New Energy 2 and New Energy 3

Donovan:

Thank you for the time today. Not sure I will stand for more insults though. I would venture to say Rex's reputation also precedes him.

So we shall not be taking the expedited interconnection process for Swager. Let's proceed under normal circumstances.

As to the PPAs, I think it best that we file our force majeure positions on those based on the generic PURPA docket going on. Hopefully, we can resolve both of these outside of the courtroom.

Thanks.

James



**James T Carkulis**

802 W Bannock, 12th Floor Boise, ID 83702  
Office: 208.336.9793 | Mobile: 406.459.3013  
[jcarkulis@exergydevelopment.com](mailto:jcarkulis@exergydevelopment.com)  
[www.exergydevelopment.com](http://www.exergydevelopment.com)

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**BEFORE THE  
IDAHO PUBLIC UTILITIES COMMISSION  
CASE NO. IPC-E-12-25**

**IDAHO POWER COMPANY**

**ATTACHMENT 56**



**NOTICE OF FORCE MAJEURE  
UNDER  
FIRM ENERGY SALES AGREEMENTS DATED MAY 24, 2010  
RE:  
SWAGER FARMS PROJECT (#31616130)  
DOUBLE B DAIRY PROJECT (#31616120)**

**From Seller:** New Energy Two, LLC  
New Energy Three, LLC  
c/o Exergy Development Group of Idaho, LLC  
802 W. Bannock Ste. 1200  
Boise, ID 83702  
Attn: James Carkulis  
Email: [jcarkulis@exergydevelopment.com](mailto:jcarkulis@exergydevelopment.com)

**To Idaho Power:** Vice President, Power Supply  
Idaho Power Company  
PO Box 70  
Boise, Idaho 83707  
Email: [lgrow@idahopower.com](mailto:lgrow@idahopower.com)

**With copy to:** Cogeneration and Small Power Production  
Idaho Power Company  
PO Box 70  
Boise, Idaho 83707  
Email: [rallphin@idahopower.com](mailto:rallphin@idahopower.com)

**Date:** September 28, 2012

**VIA EMAIL, HAND DELIVERY AND REGULAR MAIL**

In accordance with Article XIV (Force Majeure) of the Firm Energy Sale Agreements referenced above (hereinafter, collectively, the "FESA"), Seller hereby gives Idaho Power written notice of the occurrence of a Force Majeure event, in the following particulars:

1. There are currently ongoing proceedings upon the IPUC docket, the issues in which include pricing, size, duration and curtailment. (See, e.g., IPC-E-11-15.)
2. The pending proceedings concern, among other things, the unilateral amendment by Idaho Power of FESA provisions regarding (i) ownership of Green Tags and Renewable Energy Certificate(s) (RECs), or equivalent environmental attributes, and (ii) Suspension of Energy Deliveries (Curtailment).



3. The overall effect of the pending proceedings is that until such proceedings are finally resolved, the entire circumstance of continued viability of all renewable energy projects in Idaho is undecided and beyond the control of Seller. Indeed, the ultimate decisions made may render Seller wholly or in part unable to perform its obligations under the FESA.

4. A consequence of the pending proceedings, perhaps unintended, but certainly beyond the control of Seller, is that renewable energy project lenders are unwilling to lend in Idaho pending the outcome of these proceedings. There is, therefore, no financing available, making it impossible for Seller to perform its obligation under the FESA.

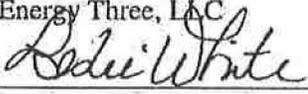
Accordingly, by this written notice to Idaho Power, Idaho Power is advised that a Force Majeure event has occurred, thereby creating a suspension of performance for the duration of the event, as further described in Article XIV of the FESA.

Further, pursuant to Section 19.1 (Disputes) of Article XIX of the FESA, if Idaho Power disputes this matter, Seller reserves the right to submit the same to the Idaho Public Utilities Commission and/or pursue any resolution to which it may be entitled before the appropriate Idaho district court, FERC and/or any other applicable tribunal or governing body.

Further, Seller asserts that it is protected from any default under the FESA pending resolution of the asserted Force Majeure issues, including, without limitation, any dispute or litigation as to whether said Force Majeure Event does protect Seller from any such default.

SELLER:

New Energy Two, LLC  
New Energy Three, LLC

By:   
Leslie White  
Member

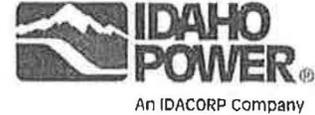
cc: Donovan E. Walker, Esq.  
James Carkulis  
Laura Knothe  
Brian L. Ballard, Esq.

**BEFORE THE  
IDAHO PUBLIC UTILITIES COMMISSION**

**CASE NO. IPC-E-12-25**

**IDAHO POWER COMPANY**

**ATTACHMENT 57**



October 1, 2012

New Energy Two, LLC  
c/o Exergy Development Group of Idaho, LLC  
Attention: Laura Knothe  
802 W. Bannock, 12<sup>th</sup> Floor  
Boise, ID 83702

Sent Via: Email, Certified Mail

Swager Farms Project Operation Date – Project #31616130

Dear Ms. Knothe:

The Firm Energy Sales Agreement (FESA) between Idaho Power Company and your Swager Farms anaerobic digester project dated May 24, 2010 established a Scheduled Operation Date of October 1, 2012.

As required in Article 5.3.1 of the FESA, “if the Operation Date occurs after the Scheduled Operation Date but on or prior to 90 days following the Scheduled Operation Date, the seller shall pay Idaho Power Delay Liquidated Damages calculated at the end of each calendar month after the Scheduled Operation Date”.

Article 5.3.2 states, “If the Operation Date does not occur within 90 days following the Scheduled Operation Date, the Seller shall pay Idaho Power Delay Liquidated Damages, in addition to those provided in paragraph 5.3.1, calculated as follows: Forty five dollars (\$45) multiplied by the Maximum Capacity with the Maximum Capacity being measured in kW”.

The FESA also stipulates in Article 5.4 that if New Energy Two fails to achieve the Operation Date within 90 days following the Scheduled Operation Date, such failure will be a Material Breach and Idaho Power may terminate the FESA at any time until the Seller cures the Material Breach.

Idaho Power received your September 28, 2012, letter claiming a force majeure event has occurred. Idaho Power does not agree with your claim - that pending matters at the Idaho PUC, or your lack of ability to finance a project/projects are valid events of force majeure pursuant to the FESA. As of October 1, 2012, Idaho Power has not received a request for an Operation Date or any information that would allow Idaho Power to grant an Operation Date for the Swager

Farms project from New Energy Two, LLC. Therefore, Idaho Power will begin calculating Delay Liquidated Damages as specified in the FESA.

If you have any questions please do not hesitate to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Michael Darrington". The signature is fluid and cursive, with a long horizontal stroke at the end.

Michael Darrington  
Energy Contracts  
Idaho Power  
(208)388-5946  
[mdarrington@idahopower.com](mailto:mdarrington@idahopower.com)

cc: Donovan Walker (IPC)  
Randy Allphin (IPC)  
Josh Harris (IPC)  
James Carkulis (Exergy)  
Leslie White (New Energy Two)

**BEFORE THE  
IDAHO PUBLIC UTILITIES COMMISSION  
CASE NO. IPC-E-12-25**

**IDAHO POWER COMPANY**

**ATTACHMENT 58**



October 2, 2012

Leslie White  
Exergy New Energy  
802 W. Bannock  
12<sup>th</sup> Floor  
Boise, ID 83702

Re: Swager Farms Dairy Digester Project (0.8 MW Output) Draft Facility Study Report – Project #307

Dear Ms. White:

Given Exergy's recent election not to proceed with an expedited Generator Interconnection Agreement (GIA) as offered by Josh Harris on September 14, 2012, I have attached the Draft Facility Study Report (FSR) for the subject project.

In order to proceed with this project, please provide your comments to the FSR to me by November 1, 2012 and indicate whether you wish to proceed with final design and construction. The final report will be used to prepare a draft GIA in preparation for Construction. Josh Harris will be working with you to finalize the Interconnection Agreement.

Before we can begin Construction or order materials, you are responsible for contacting Idaho Power's credit department to discuss credit requirements for construction funding. Please contact Aubrae Sloan (208-388-5697) at your earliest convenience. Once we receive funding, or the credit requirement is met, we can proceed with construction of the project.

The actual construction and labor charges will be finalized approximately 90 days subsequent to project completion. We will reconcile any over- or underpayment at that time.

I look forward to hearing from you soon.

Sincerely,

A handwritten signature in cursive script that reads "Eric Hackett".

Eric Hackett  
Project Leader

Attachment: Swager Farms Dairy Digester Project Draft Facility Study Report with Drawings

Cc: J Harris/IPC      A Sloan/IPC      D Walker/IPC

**DRAFT**  
**Generator Interconnection**  
**Facility Study Report**

for the

**Swager Farms Dairy Digester Project – Project #307**

for

**Exergy New Energy**

in

**Twin Falls County, Idaho**

**October 2, 2012**

# DRAFT - FACILITY STUDY REPORT (FSR)

## Swager Farms Dairy Digester

Project #307

October 2, 2012

### 1. General Facility Description

The proposed project will consist of a short three-phase distribution line extension and Idaho Power's overhead generation interconnection package (for projects less than 1 MVA) including an overhead recloser, metering package, local service power transformer, disconnect switches, and a relay/control box. Additionally, one 1000 kVA 277/480 to 12.47 kV Grounded Wye / Grounded Wye padmounted transformer will be installed, including the associated underground cabling and vaults. The project is located in Twin Falls County, Idaho and connects to the 12.5 kV system on Idaho Power Company's Clover (COVR-012) distribution line. The total project output is 0.8 MW.

Interconnection Customer:

Leslie White  
Exergy New Energy  
802 W. Bannock  
12<sup>th</sup> Floor  
Boise, ID 83702

A Standard Generator Interconnection Agreement under Idaho Power Company's Open Access Transmission Tariff (OATT) or Schedule 72 between Interconnection Customer and Idaho Power Company – Delivery (Transmission Owner) for the Swager Farms Dairy Digester Project, specifically Generator Interconnection Project #307, will be prepared for this project.

#### 1.1 Interconnection Point

The Interconnection Point for the Swager Farms Dairy Digester Project will be the low-side bushings on the padmounted transformer (SW1). The project's location is in T10S R15E Section 21 of Twin Falls County, Idaho. A drawing identifying the Interconnection Point is attached.

#### 1.2 Point of Change of Ownership

The Point of Change of Ownership for the Swager Farms Dairy Digester Project will be the low-side bushings on the padmounted transformer (SW1).

#### 1.3 Customer's Interconnection Facilities

The Interconnection Customer will install generators, low-side disconnect switches, all wiring and conduit between the generators and the padmounted transformer, appropriate grounding measures, and associated auxiliary equipment. Interconnection Customer will build underground facilities to the Point of Change of Ownership for the generator facility.

The low-side disconnect switch shall be as specified or as determined by mutual agreement and be readily accessible, operable, and lockable by Idaho Power personnel at all times.

#### **1.4 Other Facilities Provided by Interconnection Customer**

##### **1.4.1 Ground Fault Equipment**

The customer will install ground fault limiting equipment that will limit the zero sequence fault current to 20 amps at the Interconnection Point.

##### **1.4.2 Easements**

The Interconnection Customer will provide to Idaho Power a surveyed (Metes & Bounds) legal description along with exhibit map for Idaho Power's proposed facilities. After the legal description has been delivered to IPCO for review, IPCO will supply to the Interconnection Customer a completed IPCO easement for signature by the land owner of record. Once the signatures have been secured, the Interconnection Customer will return the signed easement to IPCO for recording.

##### **1.4.3 Local Service**

The Interconnection Customer is responsible to arrange for local service to their site, as necessary.

##### **1.4.4 Monitoring Information**

If the Interconnection Customer requires the ability to monitor information related to the Idaho Power recloser in the generation interconnection package they are required to supply their own cabling/wiring to the control box.

#### **1.5 Idaho Power Company's Interconnection Facilities**

Idaho Power will install a generation interconnection package on the existing distribution feeder (COVR-012) on private property southeast of the intersection of E. 3800 N. and N. 1700 E. in Twin Falls County, ID. See the attached work order maps (WO 27328106, sheet 1 of 1) for details.

The new interconnection package will include four distribution poles to mount a local service transformer, solid blade disconnects, primary metering package, recloser, relays, fuses and riser necessary for the package. The interconnection will be controlled by a SEL-547 line protection relay. The relay will be located in a pole mounted enclosure and will also contain a test switch (TS4), isolation interface, power supply, DC converter, control switch and surge protector.

Idaho Power will install (and subsequently own and maintain) one 1000 kVA 277/480 to 12.47 kV Grounded Wye / Grounded Wye padmounted transformer on top of a vault. Conduit and underground cables will be installed from the interconnection package to padmounted transformer. Protective posts will be installed to protect the ground mounted equipment from damage.

A 2" conduit will be installed alongside the underground primary to facilitate information exchange to the customer about the recloser if desired. (The Interconnection Customer is responsible for providing and installing the appropriate cable.)

### 1.6 Facility Estimated Cost:

The following good faith estimates are provided in 2011 dollars:

Description	Ownership	Cost Estimate
<b>Interconnection Facilities:</b>		
Overhead Generation Interconnection Package & Line Extension	IPC	\$145,000
Underground Equipment and 1000 kVA Transformer	IPC	\$75,000
<b>SUBTOTAL</b>		<b>\$220,000</b>
<i>See Section 6 for the Project Grand Total</i>		

## 2. Milestones

Date	Milestones
TBD	<i>Construction Funds Received by IPCO</i>
6 Months after Construction Funds Received by IPCO	<i>IPCO Construction Complete</i>
1 month after IPCO Construction Complete	<i>IPCO Commissioning Complete</i>
TBD by seller	<i>Commercial Operation Date</i>
<p>These milestone dates assume that material can be procured and labor resources are available. Additionally, any permitting issues outside the immediate control of Idaho Power could also influence the Commercial Operation Date.</p>	

## 3. Operating Requirements

The project is required to comply with the applicable Voltage and Current Distortion Limits found in IEEE Standard 519-1992 *IEEE Recommended Practices and requirements for harmonic Control in Electrical Power Systems* or any subsequent standards as they may be updated from time to time. Voltage flicker at startup and during operation must be limited to less than 5% as measured at the Interconnection Point.

The Project must be capable of riding through faults on adjacent section of the power system without tripping due to low voltage. It has been determined, through study, that the Project must be capable of remaining interconnected for any single phase voltage as low as 0.7 PU for 30 cycles, and for all three phase voltages as low as 0.8 PU for 30 cycles.

Interconnection Customer will be able to modify power plant facilities on the Interconnection Customer side of the Interconnection Point with no impact upon the operation of the transmission or distribution system whenever the generation facilities are electrically isolated from the system and a terminal clearance is issued by Idaho Power Company's Grid Operator.

#### 4. Reactive Power

The Project must be controlled to operate as a VAR neutral system with a  $\pm 200$  kVAR operating band.

#### 5. Upgrades

##### 5.1 Distribution Upgrades

Idaho Power will extend the existing distribution feeder (COVR-012) approximately 360 feet to the east (just north of the ponds) on private property to facilitate and locate the Interconnection Facilities.

#### 6. Estimated Costs

The following good faith estimates are provided in 2012 dollars:

##### Estimated Cost:

Description	Ownership	Cost Estimate
<b><i>Interconnection Facilities (from section 1.6):</i></b>		
Overhead Generation Interconnection Package & Line Extension	IPC	\$145,000
Underground Equipment and 1000 kVA Transformer	IPC	\$75,000
<b><i>SUBTOTAL</i></b>		<b>\$220,000</b>
<b><i>GRAND TOTAL</i></b>		<b>\$220,000</b>

##### Note Regarding Transmission Service:

This Facility Study is a Network Resource Interconnection Facility Study. This study identifies the facilities necessary to integrate the Generating Facility into Idaho Power's network to serve load within Idaho Power's balancing area. Network Resource Interconnection Service in and of itself does not convey any right to deliver electricity to any specific customer or Point of Delivery.



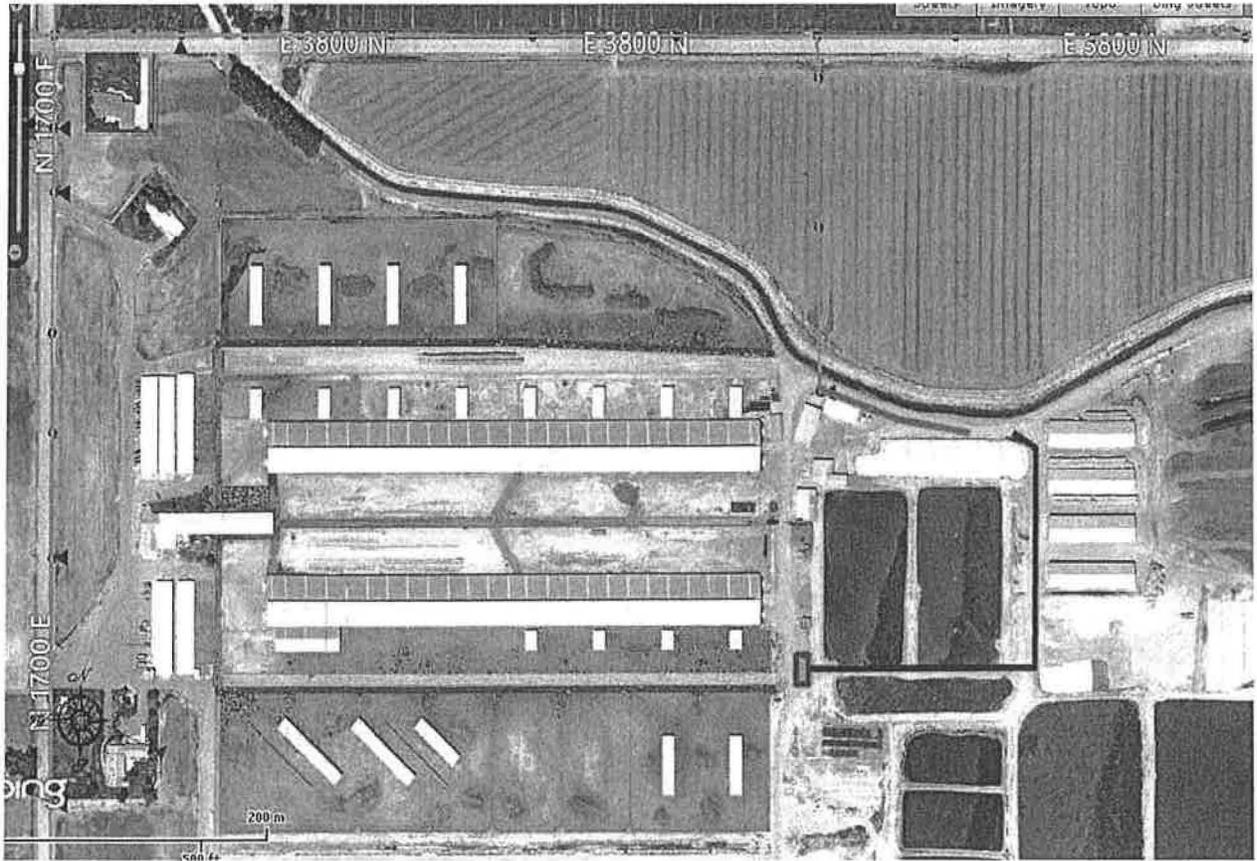
## Proposed Location for Distribution Upgrades and Interconnection Facilities

Green = Distribution Upgrades

Yellow = Interconnection Facilities (Interconnection Package)

Red = Interconnection Facilities (Underground Cables and Vaults)

Purple = Interconnection Facilities (Padmounted Transformer)



**BEFORE THE  
IDAHO PUBLIC UTILITIES COMMISSION  
CASE NO. IPC-E-12-25**

**IDAHO POWER COMPANY**

**ATTACHMENT 59**

## Walker, Donovan

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**To:** Harris, Joshua; Park, Tessia  
**Cc:** Hackett, Eric; Georgeson, Keith; Darrington, Michael; Anderson, Kathleen  
**Subject:** RE: Draft FSR for Swager Farms GI#307

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**From:** Harris, Joshua  
**Sent:** Thursday, November 01, 2012 10:27 AM  
**To:** Walker, Donovan; Park, Tessia  
**Cc:** Hackett, Eric; Georgeson, Keith; Darrington, Michael; Anderson, Kathleen  
**Subject:** FW: Draft FSR for Swager Farms GI#307

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**From:** Leslie White [<mailto:lwhite@exergydevelopment.com>]  
**Sent:** Thursday, November 01, 2012 9:58 AM  
**To:** Hackett, Eric; Harris, Joshua  
**Cc:** James Carkulis; Laura Knothe  
**Subject:** RE: Draft FSR for Swager Farms GI#307

Good morning Josh and Eric,

With regards to the draft FSR for GI #307 and the draft GIA for GI #390, Exergy provided IPCo with a notice of Force Majeure on September 28<sup>th</sup>. As mentioned in the notice a consequence of the pending IPUC proceedings is that renewable energy project lenders are unwilling to lend in Idaho. Therefore with regards to the current status of GI#307 and GI#390 we will remain ready to proceed with both pending documents upon resolution of the matter at the IPUC, but until that time I do not see the value in submitting comments to the FSR or GIA. I appreciate your continued work on these projects and look forward to finding a path forward.

Please give me a call if you have any questions.

Leslie



**Leslie White**  
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**From:** Hackett, Eric [<mailto:EHackett@idahopower.com>]  
**Sent:** Wednesday, October 03, 2012 9:24 AM  
**To:** Leslie White  
**Cc:** Harris, Joshua; Walker, Donovan; Sloan, Aubrae  
**Subject:** Draft FSR for Swager Farms GI#307

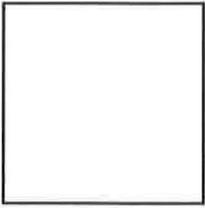
Leslie,  
Please see attached.

**Eric Hackett, P.E., PMP**  
ENGINEERING LEADER, COST & CONTROLS  
Idaho Power | Delivery Projects

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