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IDAHO PUBLIC
UTILITIES COMMISSION

February 16, 2011

VIA HAND DELIVERY

Jean D. Jewell, Secretary
Idaho Public Utilities Commission
472 West Washington Street
P.O. Box 83720
Boise, Idaho 83720-0074

Re: Case No. IPC-E-10-46
*IN THE MATTER OF THE APPLICATION OF IDAHO POWER COMPANY
FOR APPROVAL OF REVISIONS TO THE IRRIGATION PEAK REWARDS
PROGRAM, SCHEDULE 23*

Dear Ms. Jewell:

Enclosed for filing please find an original and seven (7) copies of Idaho Power Company's Reply Comments in the above matter.

Very truly yours,



Lisa D. Nordstrom

LDN:csb
Enclosures

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Attorneys for Idaho Power Company

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BEFORE THE IDAHO PUBLIC UTILITIES COMMISSION

IN THE MATTER OF THE APPLICATION)
OF IDAHO POWER COMPANY FOR) CASE NO. IPC-E-10-46
APPROVAL OF REVISIONS TO THE)
IRRIGATION PEAK REWARDS) IDAHO POWER COMPANY'S
PROGRAM, SCHEDULE 23.) REPLY COMMENTS
_____)

Idaho Power Company ("Idaho Power" or "Company"), by and through its attorney of record, Lisa D. Nordstrom, and in response to the Notice of Modified Procedure issued in Order No. 32158 and Comments filed on or before February 9, 2011, respectfully submits the following Reply Comments.

I. BACKGROUND

On December 10, 2010, the Company filed proposed revisions to its optional demand response Irrigation Peak Rewards Program ("Program"), Schedule 23, to become effective March 1, 2011. Although the Company's filing addressed several Program design provisions, it was first and foremost developed to address prudence of

incentive payments by ensuring that the Program's incentive structure was aligned with the resource needs identified by the Company's 2011 Integrated Resource Plan ("IRP") analysis. When the cost of demand response is aligned with needed capacity reductions, Program participants, customers, intervenors, state utility commissions and the Company can be assured that incentive payments are wisely invested.

On February 9, 2011, the Idaho Public Utilities Commission ("Commission") Staff, Idaho Irrigation Pumpers Association ("IIPA"), and the Idaho Conservation League ("ICL") filed comments on Idaho Power's proposed modifications in Case No. IPC-E-10-46. In addition, several public comments were received from individual irrigation customers.

II. THE COMPANY'S PURSUIT OF DEMAND RESPONSE

On page 6 of its Comments, the IIPA states that Idaho Power's proposed changes go "far beyond the Program and impact the way IPC and the Commission view all DSM programs – limits are being set for all DSM programs, not just the dispatchable Program." Idaho Power strongly disagrees with IIPA's statement.

The Company has stated in numerous publications, filings, and proceedings that one of its major goals is to pursue all cost-effective energy efficiency and demand response. The Company has not changed this policy. The results of the Company's efforts to pursue cost-effective energy efficiency and demand response can be assessed by its achievements since 2002. From 2002 to 2009, the average annual increase in energy savings from Idaho Power's energy efficiency programs was more than 40 percent. Since 2003, the Company has reduced its demand every year by

investing in demand response programs. The Company has no intention of decreasing the amount of cost-effective, prudently incurred, energy savings or demand response.

It is not the Company's intent to limit demand response programs. To the contrary, the Company wishes to develop an incentive structure for the Irrigation Peak Rewards Program that will optimize demand reductions and sustain participation in response to the varying needs identified in the Company's IRP.

III. OPTIMIZING THE IRRIGATION PEAK REWARD PROGRAM

The IIPA implies that there is no difference between energy efficiency and demand response, continually referring to them collectively as Demand-Side Management ("DSM")¹ resources. The Company's position has long been that energy efficiency and demand response are fundamentally different.² By offering DSM programs to encourage customers to reduce energy consumption, the Company has promoted energy efficiency. In comparison, by offering programs that encourage customers to turn off or not use equipment for short periods of time to meet extreme capacity requirements, the Company has promoted demand response. When

¹ "Demand-side Management" is a broad term that encompasses both energy efficiency and demand response. The U.S. Energy Information Administration glossary defines DSM as: "The planning, implementation, and monitoring of utility activities designed to encourage consumers to modify patterns of electricity usage, including the timing and level of electricity demand. It refers to only energy and load-shape modifying activities that are undertaken in response to utility-administered programs. It does not refer to energy and load-shaped changes arising from the normal operation of the marketplace or from government-mandated energy-efficiency standards. Demand-Side Management covers the complete range of load-shape objectives, including strategic conservation and load management, as well as strategic load growth."

² Energy efficiency has been defined as "using less energy to provide the same or improved level of service to the energy consumer in an economically efficient way." On the other hand, demand response "entails customers changing their normal consumption patterns in response to changes in the price of energy over time or to incentive payments designed to induce lower electricity use when prices are high or system reliability is in jeopardy." Energy efficiency and demand response currently have significant differences in how they are measured, what organizations offer them, how they are delivered to customers, and how they are rewarded in the marketplace. Federal Energy Regulatory Commission Staff, National Action Plan on Demand Response dated January 2010, p. 21.

considering demand response, there is an optimum amount of demand reduction that can be realized from demand response programs and incorporated onto its electrical system. The fact that the IIPA states “It is not the position of the IIPA that there is no limit to the need for DSM. . .” confuses the distinction between energy efficiency and demand response. IIPA Comments at 6.

Both the Commission Staff and the IIPA indicate that the Company should attempt to obtain as much demand response resources as possible. On page 9 of its Comments, Staff states that the Company should not limit participation and it should “. . . not only accept, but promote participants in the Program in order to achieve peak load reduction. . . .” The Company’s ongoing goal has been to obtain the appropriate amount of peak reduction through demand response resources in order to satisfy the needs indicated in the Company’s IRP. To say the Company should obtain all demand response resources possible is analogous to saying it should build peaking plants whether they are needed or not. The Company believes that demand response programs should be optimally sized to meet the projected system needs and not limitlessly increased because there are willing participants.

Some comments explicitly state or otherwise intimate that the Company is substituting supply-side resources for demand response resources. This is simply not true. Demand response programs are intended to defer or avoid the need for peaking resources. Supply-side resource investments are typically “lumpy” and when integrated into the electrical system, they will temporally reduce the need for demand response. The Company’s proposal endeavors to price demand response in such a way that the incentive fluctuates rather than participation.

With Idaho Power's proposed changes, the Irrigation Peak Rewards Program remains cost-effective; however, the Company believes that its investment of customer funds in DSM programs should be optimized as well. By better aligning the cost of the resource with the demand reduction actually received, the Company is more responsibly investing customer DSM program funds and ensuring long-term optimization of demand response resources.³

The IIPA also states, ". . . if it isn't broke, there is no need to fix it." IIPA Comments at 3 and 14. Idaho Power does not consider the Program "broke." The Company is committed to a continuous improvement process for all of its DSM programs. As stated in paragraph 9 on page 6 of the Memorandum of Understanding for Prudency Determination of DSM Expenditures, dated January 25, 2010, "Utilities are encouraged to continually review these programs and make appropriate program improvements." The Company believes that the proposed changes to the Irrigation Peak Rewards Program better utilize customers' investment by operating the Program in such a way that the Company only pays the variable portion of the incentive for the load reduction that is needed and realized.

On pages 1 and 2 of the IIPA's Comments, a comparison is made between the value of demand response and market energy prices. The IIPA states that the Company should use the Program to its fullest and sell excess energy into the market. IIPA Comments at 10. This does not make economic sense considering that the price of demand response is approximately \$850 per megawatt-hour ("MWh") (assuming 60

³ Optimization of cost-effectiveness has been previously touted in the DSM context. See testimony of Lynn Anderson, Case No. IPC-E-08-10, Tr. at 1208-9, ". . . it is just as important that the DSM alternatives as implemented be as cost-effective as practicable from the utility perspective. . . . In other words, it is not prudent to pay more for a DSM resource than is necessary."

hours of operation annually) while market energy prices have recently been approximately \$40 per MWh on peak. The IIPA states on page 9, “. . . they [irrigation customers] sign up with the expectation that they will be interrupted 60 hours per season – nothing else makes economic sense.” This is difficult for Idaho Power to accept given the anecdotal information that the Company has received indicates that many participants’ crops cannot withstand 60 hours of interruption without damage.⁴ Moreover, participation has increased in part because irrigators have realized that the Company would only use the full 60 hours in very extreme conditions.

The purpose of demand response on the Idaho Power system is to fill a potential peaking need that the IRP identifies at extreme weather conditions during low water years. This rare instance causes a deficit between resources available and potential customer loads. The IRP includes market purchases to the extent that the Company has transmission capacity available to get the energy onto its system. But even with market purchases and utilizing all existing supply side resources, the IRP shows there are still deficits. It is these potential deficits that demand response has been designed to fill more economically than building additional gas fired peaking plants.

IV. ATTEMPTED COLLABORATION

The IIPA maintains that the Company made these proposals “out-of-the-blue” without an appropriate level of analysis. IIPA Comments at 6. Idaho Power would like to stress that it originally introduced the concept of variable pricing and the need for the 8:00 p.m. to 9:00 p.m. load reduction in the fall of 2009 during discussions with the IIPA about Program changes for 2010. At that time, the IIPA did not support these changes.

⁴ Mr. Ketterling’s quote on page 3 of the IIPA’s Comments that his participation in the program “may cost me some crop” alludes to this concern.

In November of 2010, prior to the Company's determination of its proposed changes to the Program, the Company initiated a conference call and workshop with the IIPA and other irrigation customers. The intent of the workshop was to discuss potential changes, answer questions, obtain input, and present the additional demand response analysis that the Company had performed. After this workshop, Idaho Power sent out a list of proposed changes to the IIPA and scheduled a follow-up meeting in December 2010. The December meeting was intended to be a working meeting with the IIPA to agree on proposed Program changes that could be supported by both the Company and IIPA. However, due to the fact that it might affect their ongoing case with Rocky Mountain Power, the IIPA decided that negotiations on proposed incentive levels and other design issues were not appropriate. Despite its efforts to the contrary, the Company was left to file its proposed Program modifications with limited input from the IIPA.

V. COMMENTS ON PROPOSED PROGRAM MODIFICATIONS

A. Incentive Payment Structure.

Staff Comments. Although Staff supports changing the existing incentive structure from a fixed to variable incentive payments for the Dispatchable Options, Staff does not support the Company's proposed levels of fixed and variable payments. Therefore, Staff does not recommend changes to the Program's current incentive structure. Staff Comments at 3 and 9.

IIPA Comments. The IIPA states that the proposed change in incentive structure will reduce participation in the Program and they do not support the Company's proposed incentive structure for participants of the Dispatchable Option. IIPA

Comments at 13 and 20. Assuming that the Commission wishes to lower the credit paid to Peak Reward participants, the IIPA offers that the credit could be reduced from \$32/kilowatt ("kW") down to \$25/kW (based on 50 percent load factor) if the hours of interruption are reduced from 60 hours per season to 28 hours per season (7 days of interruption). *Id.* at 14.

ICL Comments. The ICL supports the Company's proposal to move from a 100 percent fixed incentive payment to a fixed and variable payment as a means to minimize costs to "ratepayers while maximizing the value to Idaho Power." ICL Comments at 3.

Company's Position. The Company agrees with the commentors that the Company's proposed 40 percent fixed and 60 percent variable incentive may be considered a significant change from the current incentive structure. However, Idaho Power believes that having a fixed and variable incentive is important to ensure that the incentive structure remains aligned with the annual capacity needs of the Company, that the Program is used at the appropriate times, and that it brings balance and long-term value to all Idaho Power customers and Program participants.

Staff points out that it supports changing the incentive to have fixed and variable components, but it does not agree with the percentages the Company proposed. Staff instead proposes that a more appropriate guideline for determining the incentive level would be the proportion of fixed costs compared to variable costs of a simple-cycle peaking plant. Staff Comments at 5. If used, this ratio would result in approximately 50 percent fixed costs and 50 percent variable costs based on the Company's 2011 IRP analysis. These calculations, which Idaho Power has included on Attachment No. 1,

demonstrate that the forecasted 30-year levelized capital costs are \$159 per MWh while the forecasted 30-year levelized variable costs are also \$159 per MWh (includes non-fuel operation and maintenance, fuel expense, and emission adders) at an assumed 525 hours of operation per year. This calculation assumes a 6 percent capacity factor as identified in the Company's 2011 IRP analysis.

Based on this information, Idaho Power can mathematically support an incentive level of 50 percent fixed incentive payment and 50 percent variable incentive payment with the variable portion based on the number of hours a participant is interrupted through the Program. Idaho Power believes this newly proposed incentive payment structure will address concerns that the fixed incentive payment should be high enough to attract participants while setting the variable incentive payment high enough to make interruptions in participants' operations worthwhile from their perspective. These incentive levels are difficult to optimize for each participant, the variable incentive should be high enough that the Company will not dispatch the Program when reasonably priced energy is available on the market and transmission capacity is available to get energy into the Company's system.

However, if the Commission determines that neither the 40/60 nor 50/50 level of fixed to variable incentive payments is appropriate, the Company would urge the Commission to not abandon the fixed to variable incentive structure completely. Should the Commission agree that a fixed to variable structure is appropriate, but wish to mitigate initially the impact to participants, the Company suggests that a logical minimum variable payment basis would be to set the variable portion of the incentive at or above the 30-year levelized variable cost of a simple-cycle combustion turbine, which

is \$0.159 per kWh or \$159 per MWh (see Attachment No. 1). Using this approach, the variable incentive amount would result in a \$24 per kW fixed incentive and a ratio of 75 percent fixed to 25 percent variable. While not the Company's preferred incentive structure, this alternative structure would result in a variable dispatch cost that would create an economic disincentive for the Company to use the Program when reasonably priced market energy is available or when existing Idaho Power peaking generation resources are available for dispatch.

Idaho Power does not support IIPA's proposal to reduce the incentive to \$25 per kW or to reduce the hours of interruption. Idaho Power's proposed incentive structure is designed to better align the need for demand response with the cost of demand response, not to simply reduce costs and further limit the hours of dispatch availability of the Program.

B. Variable Payment Made by Check at End of Season.

Staff Comments. Staff suggests that if a variable payment is approved, the Company should pay the variable portion "as quickly as possible following the end of the Program season." Staff Comments at 5.

IIPA Comments. If a variable incentive payment is approved, IIPA recognizes that it may be necessary to pay this portion after the Program season. However, it feels that 30 days should allow sufficient time to make the payments rather than the 60 days after the August 15 Program end date that was proposed by Idaho Power. IIPA Comments at 23.

ICL Comments. The ICL does not address this proposed program modification in its Comments.

Company's Position. Idaho Power believes that paying the variable portion of the incentive at the end of the Program's season is the most viable way of making sure participants are paid accurately. In consideration of both Staff's and the IIPA's concerns on this payment methodology, the Company will agree to shorten the payment of the variable incentive time frame from 60 days to 45 days after the end of the Program's season. Any period shorter than 45 days is unworkable given that meter data necessary to calculate the variable incentive is not available until 30 days after the Program end date.

C. Dispatchable Option 3 Modifications.

Staff Comments. Staff agrees with the Company's proposal to have participants nominate their load and to pay an opt-out penalty under a fixed and variable incentive structure. Staff Comments at 6. However, Staff does not support the Company's proposed baseline calculation and "disagrees that the proposal would result in a more accurate estimate than the current method." *Id.* at 7. Staff instead suggested that the Company consider using the day prior to the event notification, by averaging participants' usages over the same period in which the actual event occurred. If two consecutive event days were called, baseline could be calculated using the day prior to the first event notification, by averaging usage of the full time period both events occurred. *Id.*

IIPA Comments. The IIPA does not support the Company's proposal to require participants to nominate their load reduction, charge an opt-out penalty, or implement a new method to calculate a baseline. IIPA suggests that the existing language in the Program's provisions be modified to reflect that the "24-hour period where the maximum

demand will be measured should be the 24 hours prior to the announcement of the curtailment event as opposed to prior to the event itself.” IIPA Comments at 20.

ICL Comments. ICL supports the Company's proposed modifications to require that Dispatch Option 3 participants to nominate their load and for the Company to implement an opt-out penalty. ICL believes these changes will ensure a “cost-effective, sustainable program.” ICL Comments at 3.

Company's Position. As proposed, Dispatchable Option 3 participants must nominate the minimum amount demand they are confident they can provide. This is important to allow Idaho Power to better plan its capacity during interruptions, but will not limit the ability to participate. For example, if the Company called an event, the Option 3 participant will be paid for the entire load reduction provided and the load reduction would affect both the fixed and variable portions of their incentive. If a customer was concerned about their ability to reduce load, they could participate but nominate 0kW and their fixed and variable incentive would reflect what loads they actually turned off during dispatched events. In effect, this nominated kW is used to determine the participant's incentive when no events are called and the nominated kW is the basis for the calculation of the opt-out penalty. It is not the Company's intent to reduce Dispatch Option 3 participants' flexibility.

With regard to changing the baseline for Dispatchable Option 3 participants, the Company agrees to adopt a methodology similar to what was proposed by both the IIPA and Staff, with one small clarification. The Company believes it is reasonable to use the maximum demand in the prior 24 hours preceding 2:00 p.m. of the notification day. Pursuant to the Program's terms, the Company currently notifies participants of events

prior to 4:00 p.m. the day prior to an event. However, the Company can (and does) begin earlier to ensure all participants are notified by 4:00 p.m.

D. Opt-out Penalty.

Staff Comments. Staff found the proposed change to the opt-out penalty to be lower and easier to calculate. Therefore, Staff supports the Company's proposal to change the penalty to \$1.00 per kW. Staff Comments at 7.

IIPA Comments. IIPA recommends adoption of the change to the opt-out penalty stating that it is easier to calculate and "is essentially fixed" as compared to the current \$0.005 per kWh rate. IIPA Comments at 22.

ICL Comments. ICL supports opt-out penalties in general as a means to "ensure the amount of load curtailment Idaho Power expects to have available actually comes to fruition." Although supportive of simplifying the calculation, the ICL indicated it did not "have the expertise to determine if the specific monetary amounts are sufficient." ICL Comments at 4.

Company's Position. Consistent with the other parties, the Company encourages the Commission to accept the proposed change to the opt-out penalty.

E. Extended Interruption Period from 8:00 p.m. to 9:00 p.m.

Staff Comments. Staff supports the extended interruption period. However, Staff suggests that it be a mandatory requirement of the Program in order to "fully achieve the operational impact of the Program." If adopted, the Company should consider increasing the incentive if the participation level drops and it is cost-effective to do so. Staff Comments at 8.

IIPA Comments. Although the IIPA believes that this extended interruption period “is not well thought out and is not economically designed to bring a strong response, there is no major harm to the dispatchable Program by the adoption of such a provision.” IIPA Comments at 22.

ICL Comments. ICL states that the extended interruption period will allow the Company to better match its system peaks. Although the ICL supports the increased variable incentive for participants choosing this option as necessary to attract participants in the short-term, it believes the “bonus incentive” should no longer be needed as the Program matures. ICL Comments at 2.

Company’s Position. Implementation of the “Extended Interruption” option will help ensure Idaho Power can reduce loads across the entire peak period and provide participants an opportunity to receive a higher incentive. As a result of its experience operating the Irrigation Peak Rewards Program in 2009 and 2010, the Company found that at least some of the capacity must be available in the 8:00 p.m. to 9:00 p.m. hour for demand response to fully reduce a system peak. However, the Company does not propose to make this option mandatory in order to maintain higher participation levels as recommended by Staff. Idaho Power representatives have received feedback while working with irrigation customers indicating some participants would definitely not participate if they thought the Company would be able to interrupt them after 8:00 p.m.

The goal of the Company in dispatching demand response is to flatten the system load throughout the peak hours. As the IIPA points out on page 21 of its Comments, the 3:00 p.m. to 4:00 pm peak is as high as the 8:00 p.m. to 9:00 p.m. peak. Idaho Power believes that approval of the extended interruption period from 8:00 p.m. to

9:00 p.m. will allow the Company to better address the entire peak period because the available hours will be inclusive enough to enable the Company to decrease both the early and later peaks by varying interruption periods throughout the Program's hours of operation.

F. Annual Test Event.

Staff Comments. Staff supports the Company's proposal to include one test event per season. Staff believes the test event is important to test reliability and timeliness of interruptions. Staff Comments at 8.

IIPA Comments. The IIPA recommends that the Commission reject the Company's proposal for an annual test event stating that all interruptions should count toward the full incentive payment. IIPA Comments at 16.

ICL Comments. ICL supports the proposed annual test event and states that it is a "prudent and effective strategy to ensure reliability." ICL Comments at 3.

Company's Position. Idaho Power proposes that one event be included as part of the fixed payment, which is essential to remove any disincentive for the Company to use the Program at least once during the Program season to monitor electronic interruption systems and to assess Program performance. Idaho Power believes the time frame of this event should be at the Company's discretion.

G. Limiting Program Participation.

Staff Comments. Staff recommends the Commission deny the Company's proposal to add language limiting the Program participation based on need for peak load reduction. Pointing to the Program's high long-term benefit/costs ratio, Staff

indicates that Idaho Power should promote participation to achieve peak load reduction over the longer term as long as the Program's B/C ratio is greater than one. Staff at 9.

IIPA Comments. The IIPA strongly opposes adoption of additional tariff language limiting the size of "DSM" programs. IIPA Comments at 8.

ICL Comments. ICL does not address this proposed change in their comments.

Company's Position. Idaho Power's proposal to add "clarifying language" to the tariff was intended to emphasize that the Company may limit participation in an effort to better align the Program with capacity needs identified in the Company's IRPs. However, in the larger context of the Program's tariff, the proposed clarifying language is not necessary.

H. Public Comments Generally.

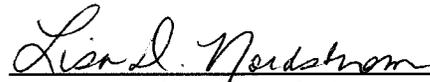
A number of the public comments refer to the substantial investments made to their irrigation systems in order to participate in the Program. It should be noted that the Company has never encouraged customers make substantial modifications to their systems in order to participate in the Program. In fact, there is a program requirement that "each Customer also agrees to not increase for the sole purpose of participating in the Program the capacity, horsepower ("HP") or size of the irrigation system served by the Company." IPUC Tariff No. 29, Schedule 23-1, paragraph 4. There is no guarantee of multi-year participation; the Program operates under a one-year contract with each participant, which objectively should discourage participants from making long-term investments in order to participate.

VI. CONCLUSION

There are few, if any, utilities of Idaho Power's size that have the experience with or the amount of demand response that the Company has. Idaho Power has worked for years with the IIPA, Staff, the Pacific Northwest Demand Response Project, the Energy Efficiency Advisory Group, and others to design, implement, and refine its programs.

The Company's purpose in filing this case was to optimize investment of customer funds in demand response resources by more closely aligning the need and realization of these resources with the costs. The Company believes that its original proposal to modify the Irrigation Peak Rewards Program would maintain participation and begin to match demand response reduction levels to the needs of its electrical system. That being said, the Company noted its agreement above with several changes suggested by the commentors. The Company requests the Commission adopt its proposed program revisions as modified above in Section V, A (incentive Structure), B (timing of variable payment check), and C (Option 3 24-hour baseline).

DATED at Boise, Idaho, this 16th day of February, 2011.



LISA D. NORDSTROM
Attorney for Idaho Power Company

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that on the 16th day of February, 2011, I served a true and correct copy of IDAHO POWER COMPANY'S REPLY COMMENTS upon the following named parties by the method indicated below, and addressed to the following:

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LISA D. NORDSTROM

**BEFORE THE
IDAHO PUBLIC UTILITIES COMMISSION**

CASE NO. IPC-E-10-46

IDAHO POWER COMPANY

ATTACHMENT NO. 1

**Idaho Power Company
30-Year Levelized Cost Calculations
Simple-Cycle Combustion Turbine
(2011 Idaho Power Company IRP)**

- A** Total fixed (\$/kW) and total variable (\$/MWh) costs of the circled "30 Year Total Levelized Cost/MWh" (i. e. -\$299 without Emission Adders, \$318 with Emission Adders).
- B** Forecasted fuel costs (\$/MWh) by year.
- C** Emission adders (\$/MWh) by year.
- D** Variable O&M costs (\$/MWh) by year.
- E** Discount rates used for the analysis.

	D		C		B		B	
	Capital Costs	Total O&M	Property Tax & Insurance	Emission Expense	Fuel Expense (incl transport)	Revenue Requirement	Fuel Cost /MMBtu	
2011	19,615,528	792,056	804,618	-	5,305,417	26,517,619	5.00	
2012	18,670,800	815,818	824,623	-	6,137,992	26,449,232	5.79	
2013	18,009,461	840,292	845,144	-	6,806,849	26,501,747	6.42	
2014	17,372,623	865,501	866,197	-	7,285,930	26,390,252	6.87	
2015	16,758,448	891,466	887,796	1,470,307	7,708,614	27,716,631	7.27	
2016	16,165,236	918,210	909,955	1,543,822	8,148,875	27,686,099	7.68	
2017	15,591,416	945,756	932,689	1,621,013	8,564,715	27,655,590	8.08	
2018	15,035,532	974,129	956,014	1,702,064	8,958,029	27,625,767	8.45	
2019	14,463,495	1,003,353	979,945	1,787,167	9,334,015	27,567,975	8.80	
2020	13,887,637	1,033,453	1,004,500	1,876,525	9,765,037	27,567,153	9.21	
2021	13,311,780	1,064,457	1,029,694	1,970,352	10,205,868	27,582,151	9.62	
2022	12,735,922	1,096,391	1,055,545	2,068,869	10,427,279	27,384,006	9.83	
2023	12,160,064	1,129,282	1,082,071	2,172,313	10,794,195	27,337,926	10.18	
2024	11,584,207	1,163,161	1,109,290	2,280,928	11,236,689	27,374,276	10.59	
2025	11,008,349	1,198,056	1,137,221	2,394,975	11,731,973	27,470,574	11.06	
2026	10,432,492	1,233,997	1,165,883	2,514,724	12,228,726	27,575,821	11.53	
2027	9,856,634	1,271,017	1,195,295	2,640,460	12,739,820	27,703,225	12.01	
2028	9,280,776	1,309,148	1,225,478	2,772,483	13,302,744	27,890,629	12.54	
2029	8,704,919	1,348,422	1,256,454	2,911,107	13,888,180	28,109,081	13.09	
2030	8,129,061	1,388,875	1,288,243	3,056,662	14,486,347	28,349,187	13.66	
2031	7,815,162	1,430,541	1,320,867	3,209,495	14,573,265	28,349,330	13.74	
2032	7,621,860	1,473,457	1,354,350	3,369,970	14,660,704	28,480,342	13.82	
2033	7,287,197	1,517,661	1,388,714	3,538,469	14,748,669	28,480,709	13.91	
2034	6,952,533	1,563,191	1,423,984	3,715,392	14,837,161	28,492,261	13.99	
2035	6,617,870	1,610,086	1,460,185	3,901,162	14,926,184	28,515,486	14.07	
2036	6,283,207	1,658,389	1,497,340	4,096,220	15,015,741	28,550,896	14.16	
2037	5,948,543	1,708,141	1,535,478	4,301,031	15,105,835	28,599,028	14.24	
2038	5,613,880	1,759,385	1,574,624	4,516,082	15,196,470	28,660,441	14.33	
2039	5,279,217	1,812,166	1,614,806	4,741,886	15,287,649	28,735,724	14.41	
2040	4,944,553	1,866,531	1,656,053	4,978,981	15,379,375	28,825,493	14.50	
Total	337,138,404	37,682,386	35,383,058	75,152,458	348,788,346	834,144,651		
PV (with Discount Delay)	\$175,981,532	\$13,951,551	\$13,408,409	\$22,493,821	\$126,506,197	\$352,341,509		
Levelized Payment	\$14,181,719	\$1,124,305	\$1,080,535	\$1,812,696	\$10,194,679	\$28,393,935		
Levelized (\$/MWh)	\$158.72	\$12.58	\$12.09	\$20.29	\$114.10	\$317.78		
Levelized (Mills/kWh/Month)	\$6.95	\$0.55	\$0.53	\$0.89	\$5.00	\$13.52		
Total Fixed	\$159	\$159						
Total Variable								

- A** Discount Rate 7.00%
- A** Discount Delay 0.5
- E** Book Life 30
- Annual Gen, kWh 89,352,000
- Plant Size, MW 170

Note: To calculate the \$299/MWh without emission adders, just zero out column I.

Supply-Side Resource Operating Inputs
2011 Integrated Resource Plan



Supply-Side Resource Type	Technology Description/Prototype Project	Capacity (MW Rating)	On-Peak Capacity (MW)	Assumed Location(s)/Region	Construction (Years)	Year that Technology is Available	30 Year Total Levelized Cost/MWh with Carbon	30 Year Total Levelized Cost/MWh w/o Carbon	Overnight Plant Capital Cost/KW \$ 2011 (No AFUDC)	Overnight Transmission Capital Cost/KW \$ 2011 (No AFUDC)	Overall Overnight Capital Cost \$ 2011 (No AFUDC)	Fixed O&M/KW (2011 \$)	Variable O&M/KW (2011 \$)	Other Fixed Charges/Addrs (Annual)	CO2 Adder 2011 \$ (\$/Ton)	NOx Adder 2011 \$ (\$/Pound)	Hg Adder 2011 \$ (\$/ounce)	PTC Incentive (2011 \$)	ITC Incentive	Heat Rate (HHV)	Capacity Factor (Annual)	On-Peak Capacity Factor
Simple Cycle CT - Industrial Frame	501F: Peaking Application	170	170	Southwestern Idaho	1.5 Years	2012	\$318	\$297	\$610	\$136	\$746	\$3.65	\$1.92	\$0	\$22 in 2015	\$1.62 in 2015 (May-Sep)	\$1,802 in 2015			11,870	6%	100%