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IDAHO PUBLIC UTILITIES COMMISSION

BEFORE THE IDAHO PUBLIC UTILITIES COMMISSION

IN THE MATTER OF IDAHO POWER)		
COMPANY'S APPLICATION FOR A)	CASE NO.	IPC-E-09-03
CERTIFICATE OF PUBLIC CONVENIENCE)		
AND NECESSITY FOR THE LANGLEY)		
GULCH POWER PLANT.)		
)		

IDAHO POWER COMPANY

DIRECT TESTIMONY

OF

VERNON PORTER

- 1 Q. Would you please state your name, employment
- 2 status, and educational background?
- 3 A. My name is Vernon Porter. I have been
- 4 employed by Idaho Power Company ("Idaho Power" or
- 5 "Company") for 19 years. I currently hold, and at all
- 6 times relevant to this Application have held, the position
- 7 of General Manager of Power Production. I work at the
- 8 Company's Corporate Headquarters, located at 1221 West
- 9 Idaho Street in Boise. I attended Brigham Young University
- 10 from which I obtained a Bachelor of Science degree in 1985
- 11 in Electrical Engineering and a Master of Science degree in
- 12 1986.
- Q. What are your responsibilities as General
- 14 Manager of Power Production?
- 15 A. I manage the operation, maintenance, and
- 16 construction of Idaho Power's generation facilities. I
- 17 also manage Idaho Power's interest in certain jointly owned
- 18 coal-fired plants and a coal mine.
- 19 Q. Would you please provide a summary of your
- 20 testimony in this proceeding?
- 21 A. I offer testimony regarding: the
- 22 development of the proposed combined cycle combustion
- 23 turbine ("CCCT") baseload resource that is the subject of
- 24 this proceeding ("Langley Gulch Power Plant" or "Plant");

- 1 the contracts for acquisition of the equipment and the
- 2 engineering, procurement, and construction ("EPC") services
- 3 relating to the Plant; the status of the Company's efforts
- 4 to obtain governmental permits necessary to construct and
- 5 operate the Plant; the Plant's environmental and emission
- 6 controls; the allocation of price risk associated with the
- 7 construction of the Plant; interconnection of the Plant to
- 8 Idaho Power's system; plant operation, and benefits
- 9 associated with the Company's operation of the Plant; and
- 10 economic benefits to the local economy of construction and
- 11 operation of the plant.
- 12 Q. What role have you had in the development of
- 13 the Langley Gulch Power Plant?
- 14 A. I was the senior member of the Idaho Power
- 15 team that submitted the Company's benchmark resource
- 16 proposal in response to the Company's baseload resource
- 17 Request for Proposal ("RFP"). That team is commonly
- 18 referred to as the "Benchmark Resource Team" or "Team," and
- 19 the benchmark resource is now referred to as the Langley
- 20 Gulch Power Plant.
- Q. What were the responsibilities of the
- 22 Benchmark Resource Team?
- 23 A. The Benchmark Resource Team was responsible
- 24 for developing a proposal for a technologically and

- 1 economically sound baseload generating resource that would
- 2 be capable of commercial operation by June of 2012.
- 3 Q. You stated that the Langley Gulch Power
- 4 Plant was originally scheduled to be in service in June
- 5 2012. What is its currently scheduled date of commercial
- 6 operation?
- 7 A. December 1, 2012.
- 8 Q. Why did its commercial operation date
- 9 change?
- 10 A. In order to meet a June 1, 2012, commercial
- 11 operation date, Idaho Power would have to authorize the EPC
- 12 contractor to proceed with engineering and other project
- 13 related activities before the Idaho Public Utilities
- 14 Commission ("IPUC") had considered and ruled upon Idaho
- 15 Power's Application for a Certificate of Public Convenience
- 16 and Necessity. Given the current economic crisis and the
- 17 challenges it creates in financing the project, Idaho Power
- 18 has negotiated with the EPC contractor to delay
- 19 commencement of its work until September 1, 2009. This
- 20 will permit the IPUC to consider the Application and, if it
- 21 so decides, issue a Certificate that will facilitate
- 22 project financing.

1 LANGLEY GULCH POWER PLANT DEVELOPMENT

- Q. Will you please describe, in general, the
- 3 Langley Gulch Power Plant?
- 4 A. The proposed Langley Gulch Power Plant is a
- 5 CCCT power plant that utilizes a Siemens SGT6-5000F
- 6 combustion gas turbine matched with a Siemens steam turbine
- 7 (a combination referred to as a "1X1" configuration) for a
- 8 flexible, energy efficient, low-emission, highly reliable
- 9 power plant located approximately four miles south of New
- 10 Plymouth, Idaho, in Payette County. The Benchmark Resource
- 11 Team performed an extensive evaluation of numerous sites
- 12 across Southwest Idaho. The selected site, in combination
- 13 with high efficiency equipment and superior design and
- 14 construction, will result in a state of the art facility
- 15 that will provide long-term, low cost, fully integratable,
- 16 and operationally flexible generation to meet Idaho Power
- 17 customer needs for an estimated 35 years.
- Q. Will you please describe, in general, the
- 19 Benchmark Resource Team's process that led to the
- 20 development of the Langley Gulch Power Plant proposal?
- 21 A. The Benchmark Resource Team was led by Idaho
- 22 Power's Power Production group, with technical assistance
- 23 of many others within, and external to, Idaho Power. The
- 24 Team has been assisted by Idaho Power personnel from the

- 1 Company's Land Management, Legal, Environmental, and Water
- 2 Management Departments.
- 3 The Team also retained the services of an
- 4 independent engineering firm, Power Engineers, to act as an
- 5 Owner's Engineer to assist with technical matters and
- 6 provide independent advice on pricing and current trends
- 7 and developments in the combined cycle industry.
- 8 The Team conducted a thorough site selection process
- 9 that led to the Company acquiring the right to purchase
- 10 land for the facility.
- The Team issued an RFP and conducted a competitive
- 12 bidding process for key equipment components the gas and
- 13 steam turbines. The Team selected an equipment supplier,
- 14 Siemens, after receiving the competing proposals.
- The Benchmark Resource Team also issued a Request
- 16 for Statement of Qualifications ("RFQ") to identify
- 17 potential contractors to perform EPC services. After
- 18 evaluating the qualifications of potential contractors,
- 19 interviewing representatives of the contractors, and
- 20 inspecting projects built by them, the Team selected what
- 21 it considers to be the best EPC contractor for this
- 22 project.
- The Team has begun the process of securing
- 24 environmental, land use, and other permits necessary to

- 1 complete construction and commence commercial operation of
- 2 the Plant by December 1, 2012.
- Q. Where is the Langley Gulch Power Plant to be
- 4 located?
- 5 A. The site consists of 137 acres of
- 6 undeveloped range land located in rural Payette County,
- 7 adjacent to Interstate 84 and immediately southwest of Exit
- 8 9. This interchange provides access to US Highway 30 and
- 9 the City of New Plymouth approximately four miles to the
- 10 north. To the south, the interchange leads directly into
- 11 this specific property. The site is bounded by Interstate
- 12 84 to the north, Bureau of Land Management ("BLM") land to
- 13 the south and west, and private range ground to the east.
- Q. What has the Company done to secure land on
- 15 which the Langley Gulch Power Plant will be located?
- 16 A. The Company has acquired an option to
- 17 purchase the land. The option will expire in March 2010.
- 18 Q. Will you please describe how the Benchmark
- 19 Resource Team selected this site for the Langley Gulch
- 20 Power Plant?
- 21 A. The Benchmark Resource Team conducted a
- 22 detailed review of 13 potential sites in Southwest Idaho in
- 23 order to identify and secure a site that provides the
- 24 optimal combination of project performance, reliability,

- 1 economy, minimal environmental impact, and
- 2 constructability. The Team considered 18 factors relative
- 3 to each site. The proposed project site will permit the
- 4 construction of a highly efficient combined cycle plant
- 5 (low elevation, water cooled) at a location away from any
- 6 population center and outside the potential air quality
- 7 "non-attainment" area consisting of Ada and Canyon
- 8 counties. At the same time, the site is near available
- 9 transmission, gas, and transportation facilities. The site
- 10 will also accommodate the possible future construction of
- 11 additional generating resources at the same location.
- 12 Specifically:
- 13 (1) The site is at low elevation, and can
- 14 access water from the Snake River. These factors optimize
- 15 the generating efficiency of the Plant and reduce overall
- 16 generation costs;
- 17 (2) Gas supply from the Williams Northwest
- 18 Pipeline is located approximately three-quarters of a mile
- 19 from the site;
- 20 (3) The site is near existing transmission
- 21 facilities;
- 22 (4) The site has no nearby neighbors. The
- 23 nearest residence is approximately three quarters of a mile
- 24 from the site, across the Interstate;

- 1 (5) The site is located adjacent to the
- 2 Interstate and nearby rail sidings, permitting optimal
- 3 access; and
- 4 (6) The site could accommodate possible
- 5 future construction of a similar capacity plant or simple
- 6 cycle gas generation facility at the same location.
- 7 Q. You indicated that the Langley Gulch Power
- 8 Plant will be water cooled. What has the Company done to
- 9 secure water for this Plant?
- 10 A. The Company purchased a water right from the
- 11 Cottonwood Irrigation District for Snake River surface
- 12 water rights. The Company will construct a pumping station
- 13 and pipeline. The pipeline will be approximately eight
- 14 miles in length, the majority of which will be across BLM
- 15 land.

16 SIEMENS EQUIPMENT

- 17 Q. You stated that the Langley Gulch Power
- 18 Plant will utilize a Siemens gas turbine and Siemens steam
- 19 turbine. What has the Company done to assure that this
- 20 equipment will be available for the Plant?
- 21 A. Due to global high demand and long
- 22 manufacturing lead times for gas and steam turbines, in
- 23 2008 Idaho Power entered into reservation agreements with
- 24 Siemens for combustion and steam turbines to assure their

- 1 delivery in time to permit completion of construction and
- 2 commercial operation of the Plant in 2012. Idaho Power and
- 3 Siemens have since executed final contracts relating to the
- 4 purchase of the equipment. Idaho Power has paid Siemens a
- 5 total of \$8,721,701 to reserve the equipment. This sum is
- 6 creditable against the final purchase price of the
- 7 equipment. No further payments on the equipment are
- 8 required before September 1, 2009. If Idaho Power
- 9 terminates the contracts, the payments made to date will be
- 10 largely non-refundable. The contracts are, however,
- 11 potentially assignable subject to certain conditions.
- 12 Q. How did the Benchmark Resource Team come to
- 13 select Siemens equipment?
- 14 A. Siemens Energy was selected as the
- 15 combustion turbine and steam turbine supplier after Idaho
- 16 Power received bids in response to a RFP. Idaho Power
- 17 received bids from two of the three major suppliers of such
- 18 equipment (Siemens, General Electric, and Mitsubishi).
- 19 Q. What are the key terms of the Siemens
- 20 contracts?
- 21 A. The two contracts for the purchase of the
- 22 gas turbine and steam turbine, respectively, have similar
- 23 terms. Each contract requires: the Company to pay a fixed
- 24 price for the equipment; Siemens to guarantee delivery of

- 1 the equipment to the site by specific dates that will
- 2 accommodate the project schedule, or incur liquidated
- 3 damages; Siemens to guarantee that the equipment will meet
- 4 specified performance and emission standards, or incur
- 5 liquidated damages; and Siemens to warrant for a period of
- 6 time that the equipment is free from defects. The
- 7 contracts are also assignable by Idaho Power with the
- 8 consent of Siemens (which may not be unreasonably withheld
- 9 by Siemens).
- Q. Will you please describe the technical
- 11 characteristics of the Siemens' gas and steam turbines?
- 12 A. The proposed Langley Gulch Power Plant will
- 13 utilize a Siemens gas fired combustion turbine matched with
- 14 a Siemens steam turbine for an energy efficient, low heat
- 15 rate, low emission combined cycle power plant.
- The gas turbine is classified as an SGT6-5000F ("F-
- 17 class") machine, capable of producing 180 MW at the design
- 18 condition. The design condition is 90 degrees Fahrenheit,
- 19 at 20 percent relative humidity. The machine class is the
- 20 same as Idaho Power's Bennett Mountain and Danskin Unit No.
- 21 1 machines. The F-class machine has demonstrated an
- 22 exceptional world-wide operating and reliability record
- 23 with nearly five million operating hours and 205 machines
- 24 in the fleet.

- 1 The steam turbine is a SST-700 high pressure steam
- 2 turbine directly coupled with a SST-900 intermediate
- 3 pressure turbine, capable of producing 96 MW at the design
- 4 condition. The SST-900 turbine is equipped with a multi-
- 5 valve inlet to accommodate the low pressure steam system.
- 6 These turbines have high reliability and efficiency. They
- 7 have a compact design and are nearly completely assembled
- 8 at the factory for easy integration during construction.
- 9 The turbine equipment will be controlled by a
- 10 Siemens T-3000 control system. This is the same control
- 11 system in use at Idaho Power's other gas-fired plants.
- 12 EPC SERVICES
- Q. Who will provide EPC services for the
- 14 Langley Gulch Power Plant?
- 15 A. Idaho Power has executed a memorandum of
- 16 understanding ("MOU") with a joint venture consisting of
- 17 The Industrial Company ("TIC") and Kiewit Power Engineers
- 18 Co. ("Kiewit") to provide EPC services for the Langley
- 19 Gulch Power Plant.
- Q. How was the EPC contractor selected by Idaho
- 21 Power?
- A. Following issuance of a RFQ, the Benchmark
- 23 Resource Team conducted an evaluation of the most qualified
- 24 engineering and construction firms with experience relating

- 1 to combined cycle gas fired power plants. Eight firms
- 2 participated in a pre-qualification process. Various firms
- 3 were interviewed and representatives of the Benchmark
- 4 Resource Team examined reference plants constructed by
- 5 several of the firms. Through this process it became
- 6 apparent that Kiewit as an engineering firm, and TIC as a
- 7 construction firm, were superior to other potential firms.
- 8 Q. What are the EPC Contractor's
- 9 qualifications?
- 10 A. Kiewit and TIC have a long history of
- 11 successfully engineering and constructing combined cycle
- 12 gas projects. They have built plants both individually and
- 13 as members of joint ventures.
- Q. Has Idaho Power entered into a contract with
- 15 the EPC Contractor?
- 16 A. While an executed MOU is currently in place
- 17 between Idaho Power and the EPC contractor, the parties are
- 18 in the process of completing a final EPC contract. The
- 19 Parties expect to execute the final agreement by mid-March
- 20 2009. In addition, the EPC contractor has been performing
- 21 certain preliminary engineering services in order to
- 22 maintain project schedule. These services have been
- 23 performed pursuant to separate engineering services
- 24 agreements.

- Q. What are the key terms of the EPC contract?
- A. The EPC contract with TIC/Kiewit will
- 3 require TIC/Kiewit to perform all engineering services,
- 4 equipment procurement, and construction for the power plant
- 5 (other than the Siemens supplied gas and steam turbines).
- 6 TIC/Kiewit must quarantee completion of construction by
- 7 December 1, 2012, or pay liquidated damages. TIC/Kiewit
- 8 must also guarantee that the overall Plant will meet
- 9 specified performance standards, or pay liquidated damages.
- 10 TIC/Kiewit will warrant that they will perform the services
- 11 in accordance with the reasonable industry standards of
- 12 care, or remedy defective work.
- As discussed in greater detail in my testimony
- 14 below, TIC/Kiewit have assumed primary price risk in
- 15 relation to labor and materials relative to the EPC
- 16 contract.
- Q. What are the major construction schedule
- 18 dates?
- 19 A. Subject to IPUC approval, engineering will
- 20 begin on September 1, 2009, and construction will begin on
- 21 August 1, 2010. The gas turbine is scheduled to be
- 22 delivered on February 1, 2011, while the steam turbine is
- 23 scheduled to be delivered on July 29, 2011. The Plant will
- 24 be available for commercial operation by December 1, 2012.

1 PERMITS REQUIRED

- Q. What governmental permits are required for
- 3 the Langley Gulch Power Plant and what has the Company done
- 4 to assure that those permits will be secured in time to
- 5 maintain the construction schedule?
- 6 A. This is a summary of the required permits
- 7 and actions taken by the Company to obtain those permits:
- 8 (1) Tier 1 Title V Air Permit to
- 9 Construct. Preliminary air-shed modeling has been
- 10 completed by a consultant retained by the Company, Tetra
- 11 Tech, for 13 preliminary sites, including the proposed
- 12 site. Based on the results of the model, the Company
- 13 anticipates obtaining an air permit without complication.
- 14 The Team has coordinated with the Idaho Department of
- 15 Environmental Quality ("IDEQ") regarding the Meteorological
- 16 Monitoring Plan and location of a meteorological tower to
- 17 collect data required for the permit. The tower was
- 18 installed in November 2008 and is currently collecting
- 19 data.
- 20 (2) NEPA (Environmental). The Company has
- 21 entered into a contract with a consultant, EDAW, to perform
- 22 National Environmental Protection Act ("NEPA") compliance
- 23 services relating to the project. An Application for
- 24 Transportation and Utility Systems and Facilities on

- 1 Federal Lands required by the Department of the Interior
- 2 has been submitted to the BLM.
- 3 (3) Payette County Coordination.
- 4 Representatives of the Company have discussed this project
- 5 with Payette County Planning and Zoning Department
- 6 personnel on several occasions. Idaho Power has drafted a
- 7 comprehensive plan change application and is prepared to
- 8 submit the application.
- 9 (4) Other Permits and Related Activities.
- 10 Other permit applications will be prepared and submitted to
- 11 the appropriate regulatory authorities as the project
- 12 proceeds. These, and related activities, include:
- 13 (a) Section 404 Permit US Army Corps
- 14 of Engineers;
- 15 (b) Section 401 Water Quality -
- 16 through Idaho DEQ and EPA;
- 17 (c) Stream Alteration Permit through
- 18 Idaho Department of Water Resources (IDWR);
- 19 (d) Injection Well Permit to Construct
- 20 through IDWR;
- 21 (e) A National Pollutant Discharge
- 22 Elimination System Permit for Large Construction Activities
- 23 through EPA;

1	(f) Other building and installation			
2	permits will be obtained by the building contractor;			
3	(g) A geotechnical engineering report			
4	and supporting addenda were prepared for the site by a			
5	consultant retained by the Company, Materials Testing and			
6	Inspection;			
7	(h) A water distribution study has			
8	been completed for the construction of the pump station and			
9	associated water line to the plant. The trench will			
10	predominately be open-cut with a couple of borings to cross			
11	canals and State/Federal roadways; and			
12	(i) A Cultural Resource Survey has			
13	also been completed for the site.			
14	PLANT ENVIRONMENTAL AND EMISSION CONTROLS			
15	Q. What environmental and emission controls are			
16	incorporated into the Langley Gulch Power Plant's design?			
17	A. The Plant is designed to accommodate current			
18	and reasonably anticipated environmental restrictions, and			
19	to enhance community acceptance of the project.			
20	Specifically:			
21	(1) A preliminary air modeling study was			
22	completed that determined that the Langley Gulch location			
23	was suitable for obtaining an air permit to construct. The			

24 site is located outside the potential Ada and Canyon County

- 1 "non-attainment" area. The Plant will have selective
- 2 catalytic reduction for nitrogen oxide ("NOx") control, low
- 3 NOx burners, and a catalyst for carbon monoxide
- 4 ("CO") reduction. The emission controls will qualify for
- 5 Best Available Control Technology. NOx emissions will be 2
- 6 parts per million ("ppm") and CO emissions will be 1 ppm;
- 7 (2) The plant is designed for zero surface
- 8 wastewater discharge to reduce environmental effects. The
- 9 plant is designed to utilize a cooling water injection well
- 10 system; and
- 11 (3) The equipment will include sound
- 12 attenuation in the design. Plant noise will be less than
- 13 the adjacent interstate freeway bordering the site.

14 PRICE AND OUTPUT RISK

- 15 Q. What has the Company done to limit its price
- 16 risk associated with the Langley Gulch Power Plant?
- 17 A. In general, the Company has attempted to
- 18 manage price risk by securing, to the extent possible,
- 19 contractual terms with the equipment and EPC contractors
- 20 that result in those contractors assuming price risk. To
- 21 this end, the contracts with Siemens for the purchase of
- 22 the gas and steam turbines are fixed price contracts
- 23 pursuant to which Siemens assumes all price risk for labor

- 1 and material costs associated with the design, manufacture,
- 2 and delivery of the equipment.
- 3 The EPC contractor initially proposed two pricing
- 4 options: (1) a fixed price option pursuant to which the
- 5 contractor assumed all price risk for labor and material
- 6 costs associated with the construction of the Plant (other
- 7 than relating to the gas and steam turbine) and (2) a
- 8 "target" price option pursuant to which price risk
- 9 associated with engineered equipment would be shared by the
- 10 contractor and Idaho Power. Under the target price option:
- 11 (1) the EPC contractor's base bid is reduced by
- 12 approximately \$5.3 million as compared to the fixed price
- 13 option; (2) a target price for engineered equipment is
- 14 established. (Engineered equipment does not include
- 15 commodities such as steel, rebar, concrete, and other
- 16 materials used to construct those portions of the Plant not
- 17 consisting of engineered equipment. The EPC contractor
- 18 assumes price risk associated with these commodities.); and
- 19 (3) the contractor and Idaho Power share equally the risks
- 20 and rewards of actual engineered equipment costs in a range
- 21 approximately \$8 million above and below the target price.
- 22 Price risk and reward outside this aggregate approximately
- 23 \$16 million range is assumed exclusively by Idaho Power.

- 1 Q. Mr. Gale describes the Company's commitment
- 2 estimate in his testimony. Have you read his testimony?
- A. Yes.
- 4 Q. Based on your knowledge of the cost of the
- 5 Langley Gulch project, what price risk does the Company
- 6 retain relative to the commitment estimate?
- 7 A. The Company's proposed commitment estimate
- 8 includes contingencies for those components of the overall
- 9 price of the project where the Company continues to assume
- 10 price risk. Those primary components are:
- 11 (1) EPC Contract. As a condition of
- 12 delaying six months the commencement of construction and
- 13 procurement of materials and supplies (other than the
- 14 turbines), the EPC contractor requires Idaho Power to
- 15 accept price risk associated with two items: (1) Idaho
- 16 Power must accept the target price option relating to
- 17 engineered equipment; and (2) Idaho Power must assume labor
- 18 price escalation risk during the period of time that the
- 19 IPUC is considering the present petition, not to exceed two
- 20 percent of the total labor component of the EPC contract.
- 21 (2) Other Components. The proposed
- 22 commitment estimate also assumes project related expenses,
- 23 and contingencies, other than those related to the EPC and
- 24 Siemens contracts, including: (a) transmission costs, and

- 1 contingencies relating thereto; (b) the estimated cost of
- 2 constructing the gas line tap, and contingencies relating
- 3 thereto; (c) estimated costs associated with the gas line,
- 4 water line, and discharge water injection wells, and
- 5 contingencies relating thereto; (d) net start-up fuel
- 6 costs; and (e) RFP team expenses.
- 7 In the aggregate, that portion of the commitment
- 8 estimate that is comprised of contingencies is
- 9 approximately 2.8 percent.
- 10 Q. Did the Benchmark Resource Team's proposal
- 11 include reasonably anticipated maintenance and operation
- 12 expenses and future capital expenditures associated with
- 13 the Plant?
- 14 A. Yes. The proposal included costs for major
- 15 maintenance items such as hot gas path work, spare parts,
- 16 labor, and other reasonably anticipated maintenance and
- 17 operation expense. In addition, the proposal included
- 18 \$500,000 per year for capital and maintenance improvements.
- 19 Q. What has the Company done to assure the
- 20 Plant's generation output will be met?
- 21 A. The equipment contracts with Siemens contain
- 22 terms requiring that the gas and steam turbines meet
- 23 specific output performance standards, and if these
- 24 standards are not met, then Siemens must pay Idaho Power

- 1 specified liquidated damages. Similarly, the EPC contract
- 2 contains terms requiring that the overall Plant meet
- 3 specific output performance standards, and if these
- 4 standards are not met, the EPC contractor must pay Idaho
- 5 Power liquidated damages.

6 TRANSMISSION AND INTERCONNECTION

- 7 Q. How will the Langley Gulch Power Plant be
- 8 interconnected to the Company's transmission facilities?
- 9 A. A System Impact Study has been prepared by
- 10 the Company's Transmission Department. In addition, an
- 11 Application for Network Transmission Service for the
- 12 project has been submitted and is queued on OASIS as
- 13 Request No. 72568424.
- 14 The selected site provides for robust integration
- 15 into Idaho Power's transmission grid. The transmission
- 16 integration plan loops the existing Ontario-Caldwell 230kV
- 17 line (located 2.5 miles from the Plant) into the Plant, and
- 18 calls for construction of a new 18 mile, 138kV line from
- 19 the Plant to Wagner Tap, on the existing Caldwell-Willis
- 20 138kV line. Wagner Tap is approximately three miles from
- 21 Caldwell Substation. This 18 mile line will be built using
- 22 230kV construction, but will be operated at 138kV, so that
- 23 when future load growth drives the need for additional

- 1 capacity, this line can be inexpensively converted to
- 2 a230kV line.
- In addition, locating generation on the west side of
- 4 the Treasure Valley improves reliability in the Ontario-
- 5 Caldwell area. The new Plant helps alleviate problems (low
- 6 voltage and heavily loaded lines) associated with the loss
- 7 of the Brownlee-Ontario 230kV line.
- 8 Q. What is the cost of the interconnection?
- 9 A. Based on the System Impact Study, the
- 10 estimated cost of the transmission interconnection is
- 11 \$22,108,000. That figure does not include: (1) certain
- 12 upgrades recommended in the study to improve the
- 13 transmission system but not specifically required to
- 14 integrate the Langley Gulch Power Plant (bringing the total
- 15 estimated cost to \$25,424,250, exclusive of contingencies)
- or (2) a 20 percent contingency added in recognition that
- 17 final transmission cost estimates have not been completed.
- 18 Final estimates will be completed during the Facility
- 19 Study, which is expected to be completed in September 2009.
- During the Facility Study, a sub-synchronous
- 21 resonance ("SSR") analysis will be performed to determine
- 22 whether a potentially harmful torsional interaction exists
- 23 between the combined cycle units and the Ontario C231
- 24 series capacitor bank. If SSR interactions exist, they may

- 1 be mitigated by modifying the capacitor bank, using SSR
- 2 relays, or adapting operating procedures at the Plant. If
- 3 these options do not work, then a filter scheme can be used
- 4 to mitigate SSR interactions, costing an estimated \$4-\$8
- 5 million. Initial indications are that a filter scheme will
- 6 not be required, but that some other lower cost mitigation
- 7 measure may be required. The commitment estimate also
- 8 includes an expense (\$1 million) associated with this
- 9 component, and substation communication costs.
- 10 Q. Is the interconnection dependent upon the
- 11 Company's completion of the proposed Hemmingway to Boardman
- 12 or Sand Hollow facilities?
- 13 A. No. The Plant will be interconnected with
- 14 the existing Ontario-Caldwell 230kV line and the Caldwell-
- 15 Willis 138kV line.

16 PLANT OPERATION AND BENEFITS

- Q. Will Idaho Power have personnel capable of
- 18 operating a baseload resource of this type?
- 19 A. Yes. Idaho Power will be able to operate
- 20 and maintain this combined cycle power plant. Idaho Power
- 21 has been operating natural gas combustion turbines since
- 22 Evander Andrews Unit Nos. 2 and 3 were constructed in
- 23 2001. The Company added Bennett Mountain in 2005, and
- 24 Evander Andrews Unit No. 1 in 2008. Idaho Power's

- 1 operations and maintenance staff is familiar with gas
- 2 operations and has developed extensive expertise with
- 3 Siemens F-Class gas turbines. In addition, the combined
- 4 cycle power plant will be controlled by the Siemen's T-3000
- 5 system, which is the control system currently used to
- 6 operate the Company's existing gas turbines.
- 7 The combined cycle plant staff will consist of 18
- 8 personnel, including 10 operators to provide 24 by 7
- 9 coverage, two maintenance mechanics, two technicians, an
- 10 engineer, a chemist, a clerk/materials coordinator, and an
- 11 operations and maintenance supervisor. These individuals
- 12 will be hired at various stages in the construction process
- 13 so that they will be familiar, as needed, with the design
- 14 and construction of the Plant and will receive training
- 15 prior to commercial operation.
- 16 The existing combustion turbine staff and the new
- 17 combined cycle staff will be combined to form a gas group,
- 18 reporting to one manager. This will facilitate the sharing
- 19 of knowledge and expertise among the plants as well
- 20 as allow the Company to shift manpower as needed for
- 21 maintenance.
- 22 Prior to commencing with Plant operations, personnel
- 23 will receive operating and maintenance training as part of
- 24 the contracts with Siemens and Kiewit/TIC.

- 1 Operating and maintenance procedures will be
- 2 developed and implemented with Siemens and Kiewit/TIC prior
- 3 to commercial operation of the Plant.
- 4 Q. What advantages does the Company's operation
- 5 of a baseload resource of this type provide relative to the
- 6 operability of the Company's generation and transmission
- 7 systems?
- A. This power plant is a baseload facility with
- 9 inherent operational flexibility. It can be dispatched to
- 10 optimize the Plant's output and capabilities with Idaho
- 11 Power's existing generation fleet. The Plant can change
- 12 generation quickly to maintain system balance as load
- 13 varies or as intermittent resources such as wind and solar
- 14 vary their output. In light of the limited capacity of the
- 15 Company's existing hydro generation resources to integrate
- 16 intermittent generation resources such as wind and solar
- 17 generation, the flexibility this Plant would provide is
- 18 necessary to permit integration of future intermittent
- 19 generation resources.
- In addition, the Plant will also provide additional
- 21 operating reserves necessary to reliably operate Idaho
- 22 Power's transmission and generation system.

1 ECONOMIC BENEFITS TO LOCAL ECONOMY

- Q. How will the Langley Gulch Power Plant
- 3 impact the local economy?
- 4 A. Construction of the Plant will offer a
- 5 stimulus to the Treasure Valley economy. The construction
- 6 will require a labor force of up to 120 workers for as long
- 7 as two years. These will include qualified local
- 8 electricians, pipefitters, steelworkers, excavators,
- 9 carpenters, concrete workers, and laborers. In addition,
- 10 the construction will require the purchase of commodities
- 11 such as concrete, rebar, and steel, and the rental of
- 12 equipment.
- As noted above, when construction of the Plant is
- 14 complete, the Company is expected to employ 18 people to
- 15 operate the Plant.
- 16 Finally, the Plant will be placed in the tax base
- 17 and the Company will pay property taxes during the life of
- 18 the Plant.
- 19 Q. Does this conclude your testimony?
- 20 A. Yes, it does.