



01/26/16

[REDACTED]
[REDACTED]
[REDACTED] [REDACTED]
[REDACTED]

Re: Draft Facility Study Report for [REDACTED] - #494

Dear Mr. [REDACTED]

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 for the project.

In order to proceed with this project, please provide your comments to the Facility Study Report to me by 03/14/16 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 (GIA) in preparation for construction. [REDACTED] will be working with you to finalize the Interconnection Agreement.

Before we can begin construction or order materials, the GIA must be executed and you are responsible for payment of the estimated cost identified herein in full. Alternatively you may contact Idaho Power's credit department to discuss credit requirements for construction funding. Please contact [REDACTED] ([REDACTED]) at your earliest convenience. Once we have an executed GIA and Notice to Proceed, and 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.

Sincerely,

[REDACTED]
Project Leader

Attachment: [REDACTED] Project Draft Facility Study Report with Drawings

Cc: [REDACTED]/IPC [REDACTED]/IPC [REDACTED]/IPC [REDACTED]/IPC [REDACTED]/IPC



DRAFT
Generator Interconnection
Facility Study Report

for the

[REDACTED] Project #494

for

[REDACTED]

in

Lincoln, Idaho

01/26/16

DRAFT - FACILITY STUDY REPORT (FSR)

[REDACTED]
Project #494

01/26/16

1. General Facility Description

[REDACTED] (“Seller”) has stated that the proposed project will consist of a single 1.3 MW synchronous generator in Lincoln County, Idaho and connect to the 34.5 kV system on Idaho Power Company (IPC)’s [REDACTED] ([REDACTED]) distribution line. The total project output as studied is 1.3 MW.

Contact Information for Seller is as follows:

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

A Standard Generator Interconnection Agreement (the “GIA”) under IPC’s Open Access Transmission Tariff (OATT) or Schedule 72 between Seller and IPC – Delivery (Transmission Owner) for the [REDACTED] Project, specifically Generator Interconnection Project # 494, will be prepared for this project. The GIA will be a definitive agreement that contains terms and conditions that supersedes this FSR.

1.1 Interconnection Point

The Point of Interconnection for the [REDACTED] Project will be located on the Seller side of the disconnect switch at approximate coordinates [REDACTED], [REDACTED] near the intersection of [REDACTED] and [REDACTED], [REDACTED] on the [REDACTED]. The project is located within Lincoln, County Idaho. A work order map identifying the Point of Interconnection is attached (Appendix A). Additionally, a single line identifying the Point of Interconnection at X-## on Pole 4 is attached (Appendix B).

1.2 Point of Change of Ownership

The Point of Change of Ownership for the [REDACTED] Project will be the same as the Interconnection Point.

1.3 Customer’s Interconnection Facilities

The Seller will install generators, disconnect switches, distribution collector system, transformers, appropriate grounding measures, and associated auxiliary equipment. Seller will build facilities to the Point of Change of Ownership for the generator facility.

1.4 Other Facilities Provided by Seller

1.4.1 Telecommunications

In addition to communication circuits that may be needed by the Seller, the Seller shall provide the following communication circuits for IPC's use:

1. One POTS (Plain Old Telephone Service meeting the technical requirements of TR-NWT-000335:1993; NCI code 02LS2-2wire, loop start, 600 ohm) dial-up circuit for querying the revenue meter and protection relay at the generation interconnect site. The POTS line must be capable of supporting reliable sustained data communication at a minimum of 4800 bps with a modem using V.32bis modulation. If that minimum data rate is or becomes unattainable or unreliable, alternate circuits will be required - contact IPC for guidance.

The Seller shall provide the required communications circuits between the Interconnection site and IPC's operations points (i.e. EMS FEP location, etc.) specified by IPC. The communication circuits shall be DC powered (at the terminus locations and within the telecommunications provider's network) such that they will continue operation during a power outage for a minimum of 4 hours, and meet the specified reliability, bandwidth, and latency requirements. The Seller may choose to coordinate with a third party communications provider to provide the communications circuits and pay the provider's associated one time setup and periodic charges, or deliver the circuits using their own infrastructure, or a combination thereof. The communication circuits shall be terminated in an approved demarcation box (cable pairs shall be labeled accordingly) at a location approved by IPC. The communication circuits will need to be installed, tested and operational prior to the Seller being allowed to generate power into IPC's system. Note that installation by a third party communications provider may take several months and should be ordered in advance to avoid delaying the project.

The Seller or their third party communications provider may need to install communications equipment (i.e. batteries, multiplexers, etc) near each terminus of the required communications circuits. If this equipment is required, the Seller shall be responsible to install this equipment in facilities/locations that are not owned or operated by IPC. Note: Century Link and other third party communications providers typically have this type of equipment near IPC's operations points.

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 Interconnect Customer. Options are available for indoor or outdoor mounting. The high voltage protection assembly shall be located in a manner that provides IPC 24-hour access to the assembly for communications trouble-shooting of IPC owned equipment.

1.4.2 Ground Fault Equipment

The Seller will install transformer configurations that are Grounded-WYE to Grounded-WYE. The Seller will limit the ground fault current to less than 20 amps as measured at the Interconnection Point.

1.4.3 Easements

The Seller will provide to IPC a surveyed (Metes & Bounds) legal description along with exhibit map for IPC's facilities. After the legal description has been delivered to IPC for review, IPC will supply to the Seller a completed IPC easement for signature

by the land owner of record. Once the signatures have been secured, the Seller will return the signed easement to IPC for recording.

1.4.4 Local Service

The Seller is responsible to arrange for local service to their site, as necessary.

1.4.5 Monitoring Information

If the Seller requires the ability to monitor information related to the IPC 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

IPC will install a standard generation interconnection package that will connect to distribution feeder [REDACTED]. If the Seller is going underground to the Point of Interconnection, IPC will include a pole riser for the Seller to install cables to interconnect to the IPC system. If the Seller is going overhead to the Point of Interconnection, it will be at a tension not to exceed the design tension specified by IPC.

The new interconnection package will include four distribution poles to mount a local service transformer, solid blade disconnects, primary metering package, recloser, relays, RTU, fuses and riser necessary for the package. The interconnection will be controlled by a SEL-421 line protection relay and a GE iBox RTU. The relay and RTU will be located in a pole mounted enclosure and will also contain a test switch (TS4), SLSS, dialup modem, DDS CSU/DSU, isolation interface, power supply, DC converter, control switch and surge protector.

Concrete barriers may be necessary to protect this equipment from local area traffic.

A 2" conduit will be installed alongside the underground primary to facilitate information exchange to the customer about the recloser. (The Seller is responsible for providing and installing the appropriate cable.)

2. Estimated Milestones

These milestones will begin, and the construction schedule referenced below will only be valid, upon receipt of funding from Seller or its authorized third party no later than the date set forth below for such payment. IPC will not commit any resources toward project construction that have not been funded by Seller. Additionally, failure by Seller to make the required payments as set forth in this Study by the date(s) specified below may result in the loss of milestone dates and construction schedules set forth below. In the event that the Seller is unable to meet dates as outlined below, Seller may request an extension of the Operation Date of up to three (3) years. Seller's request will be evaluated by IPC to ensure Seller's request does not negatively impact other projects in IPC's Generator Interconnection Queue. Such extension will be allowed only if IPC determines, in its sole discretion, that the extension will not negatively impact other projects in IPC's Generator Interconnection Queue. Estimated milestones, which will be updated and revised for inclusion in the GIA in light of subsequent developments and conditions, are as follows:

Estimated Date	Responsible Party	Estimated Milestones
02/26/16	<i>Seller</i>	<i>Idaho Power receives Notice to Proceed and construction deposit of \$287,136.00 or arrangements acceptable to Idaho Power are made with Idaho Power's Credit Department</i>
06/15/16	<i>Idaho Power</i>	<i>Idaho Power Engineering and Design Complete</i>
08/01/16	<i>Idaho Power</i>	<i>Idaho Power Long Lead Material Procured/Received</i>
09/15/16	<i>Seller</i>	<i>Telecommunication circuits identified in Section 1.4.1 are operational and provided to the IPC site</i>
10/31/16	<i>Idaho Power</i>	<i>Idaho Power Construction Complete</i>
11/30/16	<i>Idaho Power</i>	<i>Idaho Power Commissioning Complete</i>
11/30/16	<i>Idaho Power</i>	<i>Notification from Idaho Power's Energy Contracting Coordinator confirming First Energy of Non-Firm Output</i>
TBD	<i>Seller</i>	<i>Seller testing begins</i>
TBD	<i>Idaho Power</i>	<i>Notification from Idaho Power's Energy Contracting Coordinator confirming Operation Date (pending all requirements are met) of Firm Network Resource Output</i>

IPC does not warrant or guarantee the foregoing estimated milestone dates, which are estimates only. These milestone dates assume, among other things, that materials can be timely procured, labor resources are available, and that outages to the existing transmission system are available to be scheduled. Additionally, there are several matters, such as permitting issues and the performance of subcontractors that are outside the control of IPC that could delay the estimated Operation Date. For purposes of example only, federal, state, or local permitting, land division approval, identification of Interconnection Facilities location, access to proposed Interconnection Facilities location for survey and geotechnical investigation, coordination of design and construction with the Seller, failure of IPC's vendors to timely perform services or deliver goods, and delays in payment from Seller, may result in delays of any estimated milestone and the Operation Date of the project. To the extent any of the foregoing are outside of the reasonable control of IPC, they shall be deemed Force Majeure events.

3. Operating Requirements

IPC shall also provide requirements that must be met by the Seller prior to initiating parallel operation with IPC System.

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 fluctuation at startup and during operation must be limited to less than 5% as measured at the Point of Interconnection.

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.

Seller will be able to modify power plant facilities on the Seller 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 via the disconnect switch on Pole #4 of the POI four pole package and a terminal clearance is issued by IPC's Grid Operator.

Frequency Response Requirements:

Generator must be capable of providing Fast Frequency Response for both positive and negative frequency deviations from 60Hz (+/- 0.036 Hz) for Bulk Electric System disturbances. The required frequency response will be linear for a deviation of 0 to +/- 0.1 Hz, a response of 0% to 3% of generator capacity, with a maximum required response of 3% of generator's full capacity for as long as the generator is able to provide support or the frequency deviation is reduced to within stated limits, whichever occurs first.

4. Reactive Power

████████████████████ Project must be controlled to operate as a VAr neutral system with a ± 629 kVAr operating band.

IPC will determine the reactive power required to be supplied by IPC to the Seller, based upon information provided by the Seller. IPC will specify the equipment required on IPC's system to meet the Facility's reactive power requirements. These specifications will include but not be limited to equipment specifications, equipment location, IPC-provided equipment, Seller provided equipment, and all costs associated with the equipment, design and installation of IPC-provided equipment. The equipment specifications and requirements will become an integral part of this Agreement. IPC-owned equipment will be maintained by IPC, with total cost of purchase, installation, operation, and maintenance, including administrative cost to be reimbursed to IPC 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.

Estimated Costs

The following good faith estimates are provided in 2015 dollars and are based on a number of assumptions and conditions. IPC does not warrant or guarantee the estimated costs in the table below, which are estimates only and are subject to change. Seller will be responsible for all actual costs incurred in connection with the work to be performed by IPC and its agents, under the terms and subject to the conditions included in any GIA executed by IPC and Seller.

Estimated Cost:

Description	Ownership	Cost Estimate
<i>Interconnection Facilities:</i>		
Four-pole 34.5 kV generation interconnection package	Idaho Power	\$287,136
<i>TOTAL</i>		\$287,136
<i>GRAND TOTAL</i>	\$287,136	

Note Regarding Transmission Service:

This FSR is an Energy Resource Interconnection Facility Study. This FSR identifies the facilities necessary to connect the Generating Facility to IPC’s Transmission System and be eligible to deliver the Generating Facility’s output using the existing firm or non-firm capacity of the Transmission System on an “as available” basis. Energy Resource Interconnection Service does not in and of itself convey any right to deliver electricity to any specific customer or Point of Delivery.

Note Regarding GIA:

This Facility Study Report (FSR) is a study and preliminary evaluation only and does not constitute, or form the basis of, a definitive agreement related to the matters described in this FSR. Unless and until a GIA is executed by IPC and Seller, no party will have any legal rights or obligations, express or implied, related to the subject matter of this FSR.