



February 19, 2021

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

Re: Final Facility Study Report for [REDACTED] – GI #576

Dear [REDACTED]:

Idaho Power Company (IPC) has completed the attached Final Interconnection Facility Study Report (FSR) in accordance with IPC's Open Access Transmission Tariff (OATT) Small Generator Interconnection Procedures for your project, GI # 576.

The FSR includes a description and non-binding good faith estimate of the Interconnection Customer's responsibility related to the cost of the Interconnection Facilities and Upgrades required to connect the project to IPC's system, in addition to estimated milestones. Operating requirements, land rights and obligations and other facilities required by the Interconnection Customer are also included.

A Small Generator Interconnection Agreement (SGIA) will be prepared for your project. To proceed, an executed SGIA will be required prior to a notice to proceed and may include payment terms.

I look forward to hearing from you.

Sincerely,

[REDACTED]

[REDACTED]

Principal Project Manager

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

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



2/19/2021

FACILITY STUDY REPORT
OATT Small Generator Interconnection Procedures

[REDACTED] Project #576

in

Gooding County, Idaho

FACILITY STUDY REPORT (FSR)

Project GI #576

2/19/2021

If [REDACTED] (Interconnection Customer) wishes to proceed, a Small Generator Interconnection Agreement (the “SGIA”) under IPC’s Open Access Transmission Tariff (OATT) between Interconnection Customer and IPC (Transmission Provider) for the [REDACTED] Project, specifically Generator Interconnection Project # 576 (“Project”), will be prepared for this project. The SGIA will be a definitive agreement that contains terms and conditions that supersedes this FSR.

This FSR is a study of a request for an Energy Resource Interconnection Service. This FSR identifies the facilities necessary to interconnect the Generating Facility to IPC’s Transmission System and be eligible to deliver the Project’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 transmission service or to deliver electricity to any specific customer or Point of Delivery. Submission of a Transmission Service Request (TSR) will be required.

This 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 SGIA is executed by IPC and Interconnection Customer, no party will have any legal rights or obligations, express or implied, related to the subject matter of this FSR.

1. Interconnection Facilities, Network Upgrades and Distribution Upgrades

1.1 General Facility Description

██████████ (Interconnection Customer) has stated that the proposed project will consist of a 3.2 MW biomass project in Gooding County, Idaho and connect to the 34.5kV system on Idaho Power Company's (IPC) ██████████ distribution line. The total project output as studied is 3.2 MW. All capitalized terms in this report, if not defined herein, are defined in IPC's Open Access Transmission Tariff (OATT).

Contact Information for Interconnection Customer is as follows:

██████████
██████████
██████████
██████████

1.2 Interconnection Customer's Facilities

1.2.1 Interconnection Customer's Interconnection Facilities

The Interconnection Customer's Interconnection Facilities are located in IPC's Southern Region at ██████████ ██████████ in Township ███, Range ███, Section ███. The Interconnection Customer will install, at its expense, air break switches, transformers, breakers, CTs, PTs, appropriate grounding measures, and associated auxiliary equipment. The transformers will be 2000kVA, 3 phase, 34.5/480/277 V units (5.75% impedance, 150kV BIL) with a grounded-wye to grounded-wye configuration. Interconnection Customer will build approximately ███ miles of underground and above ground facilities (conductor #4 ACSR) to the Point of Change of Ownership.

1.2.2 Interconnection Customer's Generating Facilities

The Interconnection Customer's biomass system will include two 1600kW, 2000kVA synchronous generators and a plant controller to control the system and to implement functionality for operating the project within a voltage range and power factor specified by IPC at the Point of Interconnection.

The above referenced generators, or equivalent generators that have the same specifications and functionality as stated above must be utilized. If a different generator is utilized that has different specifications and functionality than that which was studied, then additional study and/or equipment may be necessary.

1.3 Transmission Provider's Interconnection Facilities

Transmission Provider's Interconnection Facilities are referred to hereafter as "IPC's Interconnection Facilities." IPC's Interconnection Facilities are in IPC's Southern region in Township ███, Range ███, Section ███ and about ███ miles east of IPC's ██████████ Substation (Lat. ██████████, Long. ██████████). IPC's Interconnection Facilities will be installed by IPC.

IPC will install a standard 4 pole generation interconnection package that will connect to distribution feeder ██████████. If the Interconnection Customer is going underground to the Point of Change of Ownership, IPC will include a pole riser for the Interconnection Customer to install cables to interconnect to the IPC system. If the Interconnection Customer is going overhead to the

Point of Change of Ownership, 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 (■■■■), SLSS, dialup modem, 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 Interconnection Customer about the recloser. (The Interconnection Customer is responsible for providing and installing the appropriate cable.)

1.4 Point of Interconnection

The Point of Interconnection (“POI”) for the Project will be where IPC’s 4 pole Interconnection Facilities, as described in Section 1.3, will connect to IPC’s ■■■■■ near Pole ■ disconnect switch X-#. The POI on ■■■■■ will be on the part of the feeder that is for IPC’s sole use. A drawing identifying the POI is attached as Exhibit 1.

1.5 Point of Change of Ownership

The Point of Change of Ownership for the Project will be on Pole ■ of IPC’s Interconnection Facilities on the Interconnection Customer’s side of Pole ■ disconnect switch X-#, as shown in Exhibit 1.

1.6 Distribution Upgrades

No Distribution Upgrades will be required.

1.7 Network Upgrades

(a) Network Upgrades to Substations

Communication equipment will be installed at IPC’s ■■■■■ Transmission Station (■■■■) to accommodate IPC’s end of the required DS1 communications circuit.

A potential transformer will be installed at ■■■■■ substation on feeder ■■■■■ for dead-line check.

(b) Network Upgrades to the Transmission System

No Network Upgrades to the Transmission System will be required.

1.8 Estimated Costs

The following good faith estimates are provided in 2021 dollars and are based on several 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. Interconnection Customer 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 SGIA executed by IPC and Interconnection Customer.

The estimated cost below is required to be paid in full by the Interconnection Customer, or other arrangements acceptable to IPC are made with IPC’s Credit Department, prior to IPC commencing construction on the project.

Estimated Cost of IPC’s Interconnection Facilities and Network Upgrades:

Description	Ownership	Funding Responsibility ¹	Cost Estimate
<i>IPC Interconnection Facilities:</i>			
Install Interconnection Facilities as described in Section 1.3 above.	IPC	Interconnection Customer	\$250,000
<i>Network Upgrades:</i>			
Install Network Upgrades to Substations as described in Section 1.7 above.	IPC	Interconnection Customer	\$15,000
<i>GRAND TOTAL</i>			\$265,000

¹ Funding responsibility is described in the standard SGIA in Idaho Power’s OATT (OATT Attachment N). Under SGIA section 4, Interconnection Facilities are funded by the Interconnection Customer without reimbursement and Distribution Upgrades are directly assigned to the Interconnection Customer. Under SGIA section 5, Network Upgrades are funded by the Interconnection Customer and those funds are eligible for reimbursement.

2. Estimated Milestones

These milestones will begin, and the construction schedule referenced below will only be valid, upon receipt of funding from Interconnection Customer 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 Interconnection Customer. Additionally, failure by Interconnection Customer 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. Estimated milestones, which will be updated and revised for inclusion in the SGIA in light of subsequent developments and conditions, are as follows:

Estimated Date	Responsible Party	Estimated Milestones
[DATE]	<i>Interconnection Customer</i>	<i>Executed SGIA and construction funding or arrangements acceptable to IPC are made with IPC's Credit Department</i>
4 months after construction funds received	<i>IPC</i>	<i>IPC Engineering and Design Complete</i>
4 months after construction funds received	<i>IPC</i>	<i>IPC Long Lead Material Procured/Received</i>
4 months after construction funds received	<i>Interconnection Customer</i>	<i>Easements and permits procured for IPC site, construction will not begin until easements and permits are in place.</i> <i>Detailed in Appendix C attached.</i>
6 months prior to IPC Commissioning	<i>IPC</i>	<i>New generation must be modeled and submitted to the Western Energy Imbalance Market a minimum of 6 months prior to coming online, failure to submit by given lead time will results in project delay.</i>
8 months after construction funds received	<i>IPC</i>	<i>IPC Construction Complete</i>
8 months after construction funds received	<i>Interconnection Customer</i>	<i>Telecommunication circuits identified in Section 3.1.1 are operational and provided to the IPC site</i>
9 months after construction funds received	<i>IPC</i>	<i>IPC Commissioning Complete, commissioning will not take place until Telecommunication circuits are operational</i>
5 days after switching request made to IPC Dispatch	<i>Interconnection Customer</i>	<i>Switch at the Point of Change of Ownership can be closed</i>
TBD	<i>Interconnection Customer</i>	<i>Interconnection Customer testing begins</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 Interconnection Customer, failure of IPC's vendors to timely perform services or deliver goods, and delays in payment from Interconnection Customer, 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. Interconnection Details

3.1 Other Facilities Provided by Interconnection Customer

3.1.1 Telecommunications

In addition to communication circuits that may be needed by the Interconnection Customer, the Interconnection Customer shall provide the following communication circuits for IPC's use. **These circuits can be long-lead items and typically require coordination with third party telecommunications providers. The project's in-service date cannot be granted prior to complete circuit acceptance and testing as referenced in Appendix D.**

- a. 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 voice communication at IPC's Interconnection Facilities. If the circuit becomes unreliable, Interconnection Customer will be responsible for the circuit repair.
- b. One DS1 (High Capacity Digital Service meeting the technical requirements of GR-54-CORE:1995 and TR-NWT-000341:1993; NCI code 04DU9.1SN) high capacity serial circuit (ESF, B8ZS, Conventional Interface) between IPC's Interconnection Facilities demarcation and [REDACTED] Transmission Station ([REDACTED]), for multiplexed use by SCADA, data for up to three Revenue Meters, SCADA RTU Management, Protective Relay Management, and Phasor Measurement Unit (PMU) as required. If the minimum data rate is or becomes unattainable or unreliable, Interconnection Customer will be responsible for the circuit repair or replacement.

The Interconnection Customer shall provide all the required communications circuits between IPC's Interconnection site and IPC's operations points (i.e. IPC FEP location, etc.) as specified by IPC. Circuit reliability and data security specifications as well as circuit acceptance and testing requirements can be found in Appendix D.

3.1.2 Ground Fault Equipment

- a. The Interconnection Customer will install transformer configurations that are either Grounded-WYE to Grounded-WYE OR Ungrounded-WYE to Grounded-WYE with the Grounded-WYE on the IPC side of the transformer.
- b. The Interconnection Customer will limit the ground fault current to less than 20 amps as measured at the POI.

3.1.3 Generator Output Limit Control

The Interconnection Customer will install equipment to receive signals from IPC Grid Operations for Generation Output Limit Control ("GOLC") - see Section 3.2.2 Operating Requirements and Appendix A. IPC's recommended method of communication for GOLC is via fiber between IPC's Interconnection Facilities and the Project.

3.1.4 Local Service

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

3.1.5 Property

The Interconnection Customer will provide an easement for IPC's Interconnection Facilities and provide a year-round access. The Interconnection Customer, at its expense, will provide to IPC documents and services as identified in Appendix B and C relating to IPC's land rights required for its interconnection facilities as applicable.

Interconnection Customer is advised that IPC review and approval of the Land Transaction Documents may require six (6) to nine (9) months. Interconnection Customer is advised to provide all required Land Transaction Documents at earliest possible time. Upon IPC approval of all Land Transaction Documents, IPC will supply to the Interconnection Customer final form documents for signature by the landowner of record. The Interconnection Customer shall return original signed and recorded Land Transaction Documents to IPC. All recording and mailing fees shall be paid by Interconnection Customer. IPC shall provide to Interconnection Customer electronic copies of all fully executed and recorded Land Transaction documents.

Land transaction documents (“Land Transaction Documents”) in a form approved by IPC that may include, but are not limited to, the following:

- Right of Entry Agreement;
- Interconnection Facility Easement conveyance pursuant to a Warranty Deed.
- Access Easement;
- Completed Applications with respective fees for Release of Easements and/or Crossing Agreements that may be required for the Project;
- Crossing Agreements; and
- Any other Project specific documents deemed necessary by IPC.

3.1.6 Monitoring Information

If the Interconnection Customer requires the ability to monitor information related to the IPC breaker/relay (i.e. Mirrored Bits) in IPC’s Interconnection Facilities, they are required to supply their own communications circuit to IPC’s Interconnection Facilities, Pole █. The fiber communication circuit used for GOLC is acceptable.

3.1.7 Generator Technical Information & Drawings

Interconnection Customer shall provide draft design prints during FSR and SGIA development containing technical information, like impedances, and equipment brand and models. After construction, the Interconnection Customer shall submit to IPC all the as-built information, including prints with the latest approved technical information and commissioning test results.

3.2 Operating Requirements

3.2.1 Voltage and Current Distortion Limits

The Project is required to comply with the applicable Voltage and Current Distortion Limits found in IEEE Standard 519-2014 *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.

3.2.2 Generator Output Limit Control (GOLC)

The Project will be subject to reductions directed by IPC 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 IPC for GOLC. Generator Output Limit

Control will be accomplished with a setpoint and discrete output control from IPC to the Project indicating maximum output allowed. For more detail see Appendix A.

3.2.3 Low Voltage Ride Through

Based on recommended input from IEEE 1547-2108 and IEEE 1547a-2020, the voltage ride through requirements are identified in the tables below:

Category I – Rotating Machine Generation Operating Guidelines			
	Voltage (pu)	Clearing time (s)	Operation Mode
OV2	1.20	0.16	May ride-through or may trip
OV1	1.10	2.00	Permissive Operation Capability
UV1	0.70	2.00	Permissive Operation Capability
UV2	0.45	0.16	May ride-through or may trip

EPS - Electrical Power System

OV – Over Voltage

UV – Under Voltage

Mandatory Operation

Momentary Cessation - Cease to energize the EPS with immediate restore output to the EPS upon normal EPS operations

Permissive Operation Capability - Mandatory or Momentary Cessation Operation

3.2.4 Frequency Response Requirements

Generation Facility 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. Provided that Generation Facility meets the above Fast Frequency Response requirements, IPC shall not curtail Interconnection Customer when such curtailments are caused by a need to comply with applicable Frequency Responsive reliability standards.

3.2.5 Reactive Power

The Project shall be capable of injecting reactive power (over-excited) equal to 1760 kVAr and absorbing reactive power (under-excited) equal to 1000 kVAr at all active power output between 20% and 100% of nameplate active power rating as defined in IEEE 1547-2018 Category A reactive power capability. This is the requirement for the entire project and not just one generator. For clarification:

- Between 20% and 100% of nameplate active power each generator shall be capable of supporting 880 kVAr and absorbing reactive power of 500 kVAr.
- Between 20% and 100% of nameplate active system power; when both generators are available, the system shall be capable of supporting 1760 kVAr and absorbing reactive power of 1000 kVAr.

3.2.6 Modifications to Interconnection Customer's Facilities

Interconnection Customer will be able to modify facilities on the Interconnection Customer's side of the Point of Change of Ownership with no impact upon the operation of the transmission or distribution system whenever the Generation Facilities are electrically isolated from the system via IPC's Interconnection Facilities Pole ■ X-# disconnect switch and a terminal clearance is issued by IPC's Grid Operator.

Appendix A

Generation Interconnection Control Requirements

A.1 Generator Output Limit Control (GOLC)

A.1.1 IPC requires Interconnected Power Producers to accept GOLC signals from IPC’s energy management system (“EMS”).

A.1.2 The GOLC signals will consist of four points shared between the IPC EMS (via the IPC RTU) and the Interconnection Customer’s Generator Controller (“SGC”). The IPC RTU will be the master and the SGC will be the slave.

A.1.2.1 GOLC Setpoint: An analog output that contains the MW value the Interconnection Customer should curtail to, should a GOLC request be made via the GOLC On/Off discrete output Control point.

A.1.2.1.1 An Analog Input feedback point must be updated (to reflect the GOLC setpoint value) by the SGC upon the SGC's receipt of the GOLC setpoint change, with no intentional delay.

A.1.2.2 GOLC On/Off: A discrete output (DO) control point with pulsing Trip/Close controls. Following a "GOLC On" control (DNP Control Code "Close/Pulse On"), the SGC will run power output back to the MW value specified in the GOLC Setpoint. Following a "GOLC Off" control (DNP Control Code "Trip/Pulse On"), the Interconnection Customer is free to run to maximum possible output.

A.1.2.2.1 A Discrete Input (DI) feedback point must be updated (to reflect the last GOLC DO Control Code received) by the SGC upon the SGC's receipt of the GOLC DO control, with no intentional delay. The feedback DI should latch to an OFF state following the receipt of a "GOLC OFF" control and it should latch to an ON state following the receipt of an "GOLC ON" control.

A.1.3 If a GOLC control is issued, it is expected to see MW reductions start within 1 minute and plant output to be below the GOLC Setpoint value within 10 minutes.

A.2 Generation Interconnection Data Points Requirements

Digital Inputs to IPC (DNP Obj. 01, Var. 2)			
Index	Description	State (0/1)	Comments:
0	GOLC Off/On (Control Feedback)	Off/On	Feedback provided by Interconnection Customer
1	FREQUENCY RESPONSE Off/On (Control Feedback) (If applicable)	Off/On	Feedback provided by Interconnection Customer
2	52A Interconnection Customer MAIN BREAKER (if present)	Open/Closed	Sourced at substation
3	52A Interconnection Customer Capacitor Breaker (if present)	Open/Closed	Sourced at substation

Digital Outputs to Interconnection Customer (DNP Obj. 12, Var. 1)		
Index	Description	Comments:
0	GOLC Off/On	Control issued by IPC
1	FREQUENCY RESPONSE Off/On (if applicable)	Control issued by IPC

Analog Inputs to IPC (DNP Obj. 30, Var. 2)							
Index	Description	Raw High	Raw Low	EU High	EU Low	EU Units	Comments:
0	GOLC Setpoint Value Received (Feedback)	32767	-32768	TBD	TBD	MW	Provided by Interconnection Customer
1	SPARE						
2	Maximum Park Generating Capacity	32767	-32768	TBD	TBD	MW	Provided by Interconnection Customer
3	Ambient Temperature	32767	-32768	327.67	-327.68	Deg C	Provided by Interconnection Customer
4	Wind Direction	32767	-32768	3276.7	-3276.8	Deg from N	Provided by Interconnection Customer
5	Wind Speed	32767	-32768	327.67	-327.68	M/S	Provided by Interconnection Customer
6	Relative Humidity	32767	32768	TBD	TBD	%	Provided by Interconnection Customer
7	Global Horizontal Irradiance	32767	32768	TBD	TBD	W/M^2	Provided by Interconnection Customer
8	Plane of Array	32767	32768	TBD	TBD	W/M^2	Provided by Interconnection Customer
9	SPARE						
10	VOLT1_MIN (Feedback)	32767	-32768	327.67	-327.68	PU	Provided by Interconnection Customer
11	VOLT2_LOW (Feedback)	32767	-32768	327.67	-327.68	PU	Provided by Interconnection Customer
12	VOLT3_HIGH (Feedback)	32767	-32768	327.67	-327.68	PU	Provided by Interconnection Customer
13	VOLT4_MAX (Feedback)	32767	-32768	327.67	-327.68	PU	Provided by Interconnection Customer
14	VAR1_LEAD (Feedback)	32767	-32768	327.67	-327.68	% AVAIL	Provided by Interconnection Customer

15	VAR2_ZERO2 (Feedback)	32767	-32768	327.67	-327.68	% AVAIL	Provided by Interconnection Customer
16	VAR3_ZERO3 (Feedback)	32767	-32768	327.67	-327.68	% AVAIL	Provided by Interconnection Customer
17	VAR4_LAG (Feedback)	32767	-32768	327.67	-327.68	% AVAIL	Provided by Interconnection Customer

Analog Outputs to Interconnection Customer (DNP Obj. 41, Var. 2)							
Index	Description	Raw High	Raw Low	EU High	EU Low	EU Units	Comments:
0	GOLC Setpoint	32767	-32768	TBD	TBD	MW	Control issued by IPC
1	SPARE						
2	VOLT1_MIN (Feedback)	32767	-32768	327.67	327.68	PU	Provided by Interconnection Customer
3	VOLT2_LOW (Feedback)	32767	-32768	327.67	327.68	PU	Provided by Interconnection Customer
4	VOLT3_HIGH (Feedback)	32767	-32768	327.67	327.68	PU	Provided by Interconnection Customer
5	VOLT4_MAX (Feedback)	32767	-32768	327.67	327.68	PU	Provided by Interconnection Customer
6	VAR1_LEAD (Feedback)	32767	-32768	327.67	327.68	% AVAIL	Provided by Interconnection Customer
7	VAR2_ZERO2 (Feedback)	32767	-32768	327.67	327.68	% AVAIL	Provided by Interconnection Customer
8	VAR3_ZERO3 (Feedback)	32767	-32768	327.67	327.68	% AVAIL	Provided by Interconnection Customer
9	VAR4_LAG (Feedback)	32767	-32768	327.67	327.68	% AVAIL	Provided by Interconnection Customer

Appendix B

IPC Survey Requirements

- Is the Grantor's Deed Instrument No. noted in the Exhibit 'A' Legal Description or Exhibit 'B' Survey Map?
- Are the Section, Township, Range, and County information clearly stated on the Exhibits?
- Is the Basis of Bearings between found monuments called out and noted on the Exhibits?
- Are the Point of Commencement, Point of Beginning and or Point of Terminus shown on the Exhibits?
- Do all lines have a bearing and distance associated with them on the Exhibits?
- All lines need bounding calls to Grantor's ownership lines, Rights-of-Way, etc. in Exhibit A.
- Are the Subdivision names, lot & block, and streets labeled on the Exhibit B?
- Are any existing Utility Easements adjoining this Easement called out and shown on the Exhibits?
- Is the map scale noted and is there a North arrow shown on the Exhibit B?
- On a strip easement is the width given and does it call to form a closed figure in the Exhibit A?
- Does the Parcel description close?
- Are the reference surveys of record or CP&Fs used to prepare the easement called out and shown on the Exhibits?
- A Professional Land Surveyor or Engineer in responsible charge must stamp, sign and date the exhibits for submission.
- A copy of the current Deed of Record for the Grantor is needed for submission.

Appendix C

Idaho Power Company Corporate Real Estate Department Requirements of Developers for Interconnection Facility/Substation Land for Development of Idaho Power Company Interconnection Facilities

Corporate Real Estate process will require the following steps and/or documents.

Process time frame: 6 mos. to 1 year depending on project specifics

1. **Right of Entry Agreement**. A Right-of-Entry Agreement will allow Idaho Power to conduct necessary due diligence studies and review of the property and substation lands to determine feasibility for development. This document is required to be signed by the underlying property owner prior to Idaho Power entry onto the owner's lands for testing, surveying, etc. and will allow the preliminary stages of project development to commence pending completion of the transfer of substation lands to Idaho Power.
2. **Purchase and Sale Agreement – Substation Easement – Access Easement – Power Line Easements**. Idaho Power requires the following easements from the underlying property owner for our interconnection facilities: (1) substation easement, (2) access easement (for access to the substation) and (3) transmission and distribution line easements. Corporate Real Estate will enter into a purchase and sale agreement with the underlying property owner to provide for the grant of the easements to Idaho Power.
3. **Title Commitment**. Idaho Power requires that Developer ensure the substation, access, and power line easement lands are free from any encumbrances to title. To meet this requirement, a Title Commitment with A.L.T.A. extended coverage owner's policy in Idaho Power's name is required. All exceptions to title insurance need to be provided with the Title Commitment for Idaho Power review. Upon receipt, Corporate Real Estate will review all exceptions and will advise of any necessary follow-up actions. Importantly, Idaho Power requires a form of ownership that is free and clear from all encumbrances.
4. **Survey**. An A.L.T.A. survey for the substation, access and power line easements is required. The A.L.T.A. survey will be reviewed by Idaho Power's surveyor who will advise of any necessary revisions.
5. **Legal Descriptions**. Written legal descriptions, stamped and signed by a surveyor licensed in the state of Idaho, are required for the substation easement, access easement, and distribution/transmission line easements. The written legal descriptions will be reviewed by Idaho Power's surveyor who will advise of any necessary revisions.
6. **Phase I Study**. Developer shall provide Idaho Power with a Phase I environmental site assessment study for the substation, access and power line easement lands, which (1) is prepared by an independent environmental site assessment company, in Idaho Power's name, (2) recognizes that Idaho Power holds an interest in the easement areas and is a User of the Phase I report, and (3) provides appropriate environmental warranties to Idaho Power for the lands over which the substation, access and power line easements will be located. The Phase I study will be

reviewed by Idaho Power and Idaho Power will advise if a Phase II environmental site assessment or other actions are required based on the results of the Phase I study.

7. **Public Lands Permits/Authorizations (if needed)**. Should any public lands, rights-of-way, etc. be affected by Idaho Power's use of or access to the interconnection facilities, Developer shall be responsible to secure any necessary agency authorizations or permits in Idaho Power's name, at Developer's sole cost and expense. Developer shall be responsible to ensure all conditions of approval are satisfied, fees are paid, etc. for the agency permits.
8. **Land Use Permits/Authorizations**. Developer shall be responsible to secure any necessary land use entitlements or authorizations from the local jurisdiction, local agencies, state of Idaho, or Federal or other agencies for Idaho Power's construction, operation and maintenance of the interconnection facilities (example: Conditional Use Permit from city or county). Any such authorizations shall be secured in Idaho Power's name and for the benefit of Idaho Power. Idaho Power will require that the Developer satisfy all conditions of approval and requirements for any such entitlement or authorization.
9. **Costs**. Any costs pertaining to the above items shall be at the Developer's sole cost and expense.
10. **Miscellaneous Documents**. Other Miscellaneous Documents as necessary for the specific project, and which may include Memorandums of Understanding or Agreement, etc.

Appendix D

Communication Circuits

RELIABILITY AND DATA SECURITY: The communication circuits shall be DC powered at the terminus locations and within any 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 and bandwidth requirements. At transmission connected generation interconnect sites, IPC can extend its station battery to a circuit marshalling location in a shared access portion of the station yard if needed for Interconnection Customer telecommunications equipment used only to deliver IPC required circuits, but the Interconnection Customer is responsible for any required AC local service required by their equipment at their station or in the shared access portion of the station yard. The Interconnection Customer 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, deliver the circuits using their own infrastructure, or a combination thereof. Regardless of circuit transport implementation, in all cases the SCADA circuit must be transported using solely Layer 2 protocols (e.g. serial point-to-point data communication, no routable Layer 3 transport, such as Internet Protocol).

CIRCUIT ACCEPTANCE AND TESTING: The communication circuits shall be terminated in an approved demarcation box with the cable pairs punched down on a telecom block and labeled accordingly at a location approved by IPC. The communication circuits will need to be installed and tested by the Interconnection Customer prior to IPC acceptance testing, and operational prior to the Interconnection Customer being allowed to generate power into IPC's system. A Quasi Random Signal Source (QRSS) test pattern will be used for testing between the DS1 circuit demarcations points, and require 15 consecutive minutes with zero errored seconds and zero severely-errored seconds to pass; a subsequent 15 consecutive minutes (30 minutes total) with three or less total errored seconds and zero severely-errored seconds to pass if previous test failed; a subsequent 15 consecutive minutes (45 minutes total) with nine or less total errored seconds and two or less severely-errored seconds to pass if previous test failed. In addition an "all 1s" stress test with zero errored seconds over a five minute interval to pass, an "all 0s" stress test with zero errored seconds over a thirty second interval to pass, and a "1 in 8" stress test with zero errored seconds over a five minute interval to pass will also be performed. (Reference ANSI T1.510:1999) In either case, circuits with demonstrated reliability issues during commissioning will be required to demonstrate 24 hours of reliable service by the Interconnection Customer prior to final acceptance testing by IPC. Note that installation by a third-party communications provider may take several months and these services should be ordered well in advance to avoid delaying the project.

The Interconnection Customer 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 Interconnection Customer shall be responsible to install this equipment in locations that are not owned or operated by IPC. If high voltage protection is required by the communications provider for the incoming copper cable, the high voltage protection assembly shall be engineered, supplied, and maintained by the Interconnection Customer.

OPERATIONAL RESPONSE:

Interconnection Customer's failure to maintain and/or restore and repair intermittent or non-operational telecommunications circuits may result in disconnection of Interconnection Customer's generation facility/facilities until the circuits successfully complete Idaho Power's end-to-end testing.

The Interconnection Customer is responsible for repairing any circuits and contacting any third-party telecom provider as needed. [Note: IPC cannot contact third party telecom providers on behalf of the Interconnection Customer for circuit outages.] A third-party telecom provider is expected to have the ability to perform some level of remote circuit testing. If the Interconnection Customer's third-party telecom provider needs access to IPC facilities, they will contact IPC per contacts in SGIA.

The leased services required by IPC are to be kept separate from any communication services required by the Interconnection Customer. This includes the location where services are handed off from the telecom provider to IPC, also known as the TELCO demarcation. Under no circumstances will any service delivered to IPC's TELCO demarcation be extended beyond the IPC yard ground grid. If the Interconnection Customer requires their own leased services, they must be provided through a separate TELCO demarcation, as noted below.

