

**MEMORANDUM OF UNDERSTANDING**  
**executed by the**  
**UNITED STATES OF AMERICA**  
**DEPARTMENT OF ENERGY**  
**acting by and through the**  
**BONNEVILLE POWER ADMINISTRATION**  
**and**  
**PORTLAND GENERAL ELECTRIC COMPANY**

This MEMORANDUM OF UNDERSTANDING (MOU) is executed by the UNITED STATES OF AMERICA, Department of Energy, acting by and through the BONNEVILLE POWER ADMINISTRATION (BPA), and PORTLAND GENERAL ELECTRIC COMPANY (PGE). BPA and PGE are sometimes referred to individually as "Party" and collectively as "Parties".

**RECITALS**

PGE originally proposed the Cascade Crossing Transmission Project as a double-circuit 500 kV transmission line that would extend from Boardman, Oregon to Salem, Oregon to obtain approximately 2600 MW of capacity. Pursuant to MOU, Contract No. 13TX-15828, signed between BPA and PGE in January 2013, the Parties agreed to explore a different option that would yield up to 2600 MW of capacity. That option envisioned a single-circuit 500 kV transmission line from the Boardman, Oregon area to a new substation located near Maupin, Oregon, reducing the footprint of the original Project by nearly half. The single-circuit configuration is currently undergoing environmental review pursuant to the National Environmental Policy Act (NEPA).

As market conditions have continued to evolve<sup>1</sup> and negotiations between PGE and BPA have progressed, the Parties have identified an option that could still achieve approximately 2600 MW, but allow PGE to acquire ownership of needed transfer capability in the nearer term, and allow for the potential development of transmission system expansion, possibly including the Cascade Crossing Transmission Project, on a later transmission planning horizon. This option has the unique characteristic of originating between transmission providers, one of which is a load serving entity and both of which have an obligation to serve. As such, PGE is able to offer BPA operational efficiencies

<sup>1</sup> Such market conditions include:

- Lower than expected forecast of load growth;
- Incentives proposed for in-state renewables in California;
- Changing transmission needs of resource developers in the region; and
- Completion or expected completion of several BPA projects adding additional capacity to the regional transmission system.

through defined use of PGE's Distributed Generation and by making other PGE generation available on occasion for remedial actions and re-dispatch. The Parties view these and their other cooperative efforts as a positive step forward and as a demonstration of their commitment, as transmission providers, toward more efficient or cost-effective regional solutions.

This MOU sets forth a revised framework for the Parties to further explore a "capacity ownership" option described herein, whereby PGE may obtain ownership of transfer capability, to include transfer capability between Boardman, Oregon and the Willamette Valley, through an exchange of assets, investments, and/or PGE transfer capability to BPA, and/or implementation of non-wires solutions. Under this framework, BPA and PGE acknowledge that they will need to further define "capacity ownership" and develop a mutually acceptable description of the rights and obligations associated with capacity ownership interests. Concurrently, BPA and PGE will continue ongoing efforts to explore plans for right-time, right-build, transmission system expansions.

The Parties are further exploring this capacity ownership option as a possible alternative to the option described in the previous MOU. The Parties will consider whether the capacity ownership option could further reduce, or at least delay, the potential environmental impacts associated with the Cascade Crossing Transmission Project, while ensuring optimized utilization of the regional transmission system, enhanced operational efficiencies, and a collaborative joint approach to right-time/right-build transmission expansion for purposes of improving reliability, adding transfer capability and/or removing constraints on the regional transmission system.

Under the capacity ownership option, as described in greater detail below, PGE could acquire a perpetual ownership interest in transfer capability, based on rights and obligations supporting such perpetual ownership, in exchange for an investment and conveyance, to BPA, of ownership and/or rights to use one or more of the following: PGE assets, transfer capability, or rights to direct the operation of certain PGE generation facilities within certain limitations to be further negotiated between the Parties. As a result of such investment and conveyances, PGE would obtain ownership of approximately 1500 MW of transfer capability, which would include but may not be limited to transfer capability between Boardman, Oregon and the Willamette Valley. Thereafter, PGE would make its newly acquired transfer capability available in a manner that is consistent with the applicable provisions of its Open Access Transmission Tariff (OATT) or as may be otherwise authorized by the Federal Energy Regulatory Commission.

If the Parties agree, each at its sole and absolute discretion, that the capacity ownership option set forth below or some variant of it is acceptable, they would complete appropriate reviews and processes, including but not limited to environmental reviews, as required by applicable law. Additionally, the Parties would prepare one or more proposed agreements (the Agreement) for public review and comment and, subject to each Party's evaluation of such review and comment and any other review or process deemed necessary by the respective Party, the Parties would enter into such agreement(s). Such agreement(s) would lay out a plan for the Parties to further develop the option described below, as it may be modified pursuant to further review, study and analysis by the Parties.

**1. TERM**

This MOU shall be effective on the date of execution by the Parties and shall terminate and supersede the prior MOU, Contract No. 13TX-15828, which was entered into between the Parties on January 11, 2013. This MOU shall terminate on the earlier of: 1) execution of the Agreement by the Parties, or 2) December 31, 2014; provided, however, that any Party may withdraw from this MOU at any time, for any reason whatsoever or for no reason, after giving the other Party ninety (90) days' notice of its intent to do so.

**2. GENERAL PRINCIPLES; SCHEDULE**

The provisions of the Agreement, should the Parties decide to enter into it, will be consistent with the general principles described in Appendix A.

**3. NO FINAL DECISION**

Nothing in this MOU constitutes a final decision by either Party regarding the terms and conditions of the Agreement or in any other respect. No such Agreement will be entered into by BPA until such time as any appropriate public review and comment, and any other appropriate processes, have been completed.

As a Federal agency, BPA has certain obligations and responsibilities under the NEPA and other Federal laws (collectively the NEPA review process) that it must fulfill before it can make a final decision concerning whether to participate in implementation of the option described in Sections 4 and 5. Nothing in this MOU shall be construed as obligating or committing BPA to make a final decision concerning this option before a NEPA review process or other required processes have been completed. In addition, BPA reserves the right to determine the appropriate NEPA and other environmental compliance strategies for its role in any expansion project, and to choose any alternatives considered in the NEPA process, including the no-action alternative.

**4. EXCHANGE**

The Parties will explore the possibility of an exchange whereby PGE could obtain, from BPA, perpetual ownership of transfer capability of approximately 1500 MW, based on rights and obligations supporting such perpetual ownership, to include transfer capability between Boardman, Oregon and the Willamette Valley, and BPA could obtain from PGE on a similar basis ownership of transfer capability, investments, rights to direct the operation of certain PGE generation facilities (within certain limitations to be further negotiated between the Parties) to be selected by the Parties, and/or ownership or rights to use one or more of the following:

- (a) North to South transfer capability on the California-Oregon Intertie;
- (b) Transfer capability to serve BPA preference customers that are currently served by PGE's transmission system;
- (c) Grizzly-Round Butte 500 kV Line and 500/230 transformer;
- (d) Round Butte-Redmond 230 kV Line;

- (e) Carlton-Sherwood 230 kV Line;
- (f) Circuit breakers for BPA's Pearl Substation;
- (g) The addition of PGE's Port Westward Plant to BPA's remedial action scheme;
- (h) PGE taking certain actions with its Beaver Generating Plant and its distributed standby generation in the Portland area that would alleviate transmission congestion under specific contingencies and/or conditions specified in the Agreement,
- (i) Copies of, and the right to utilize, any surveys, studies and inspection data and results that PGE is authorized or permitted to share, pertaining to PGE's originally proposed and alternative transmission routes from the vicinity of Coyote Springs Substation to the proposed Grassland Substation and from Grassland Substation to the Salem area, including but not limited to land surveys, engineering studies, environmental and cultural inspections and surveys, together with any geotechnical soil testing results; and,
- (j) Other investments to be identified by the Parties.

**5. FUTURE TRANSMISSION SYSTEM EXPANSION**

The Parties will further pursue developing and completing necessary studies and analyses of various future transmission system expansion opportunities, described below, to increase transfer capability, including transfer capability between Boardman, Oregon and the Willamette Valley. If the Parties conclude that transmission system expansion is both commercially desirable and operationally acceptable, then, in addition to the description of rights and responsibilities below, the Parties will negotiate detailed rights and responsibilities associated with each element of the transmission system expansion as part of the Agreement or one or more additional agreements that may be negotiated between the Parties. Pending the outcome of such studies and analysis, the Parties expect that PGE could obtain and own approximately 1100 MW of additional transfer capability between Boardman, Oregon and the Willamette Valley. Studies may be completed on some or all of the following elements:

- (a) **Knight Series Capacitors**  
 Series capacitor banks could be installed at BPA's Knight Substation on BPA's Knight-Ostrander 500 kV and Knight-Wautoma 500 kV lines (Knight Series Capacitors) to increase the usable transfer capability of existing lines. PGE could own the Knight Series Capacitors and pay for the Knight Series Capacitors' permitting (permitting here and throughout this MOU includes any and all analysis undertaken relative to NEPA, the Clean Water Act, Endangered Species Act, the National Historic Preservation Act, and any other applicable environmental or cultural resource laws regarding the proposal), procurement and installation. BPA could operate and maintain the Knight Capacitors at PGE's expense. BPA would own, operate, and maintain the remainder of the Knight Substation at BPA's expense.

- (b) **Pine Grove Substation**  
PGE could construct a new Pine Grove Substation. BPA's John Day-Marion 500 kV, Ashe-Marion 500 kV and Buckley-Marion 500 kV lines could be looped into such Pine Grove Substation. Series capacitors could also be installed in the Pine Grove Substation on BPA's John Day-Pine Grove 500 kV, Ashe-Pine Grove 500 kV and Pine Grove-Marion Nos. 1, 2 and 3 lines. Other lines could potentially tie into this Substation as well. Pursuant to further negotiations between the Parties, PGE could own Pine Grove Substation, or a portion thereof, including the series capacitors, and could pay for the permitting, development and construction of the Pine Grove Substation and the series capacitors. PGE could also construct Pine Grove Substation in accordance with specifications provided by BPA and good utility practice. BPA would cooperate with any development and permitting that may be undertaken by PGE by providing information relating to the connection of BPA's transmission lines, noted above, to the Pine Grove Substation. BPA could operate and maintain Pine Grove Substation with a cost-split reflective of ownership.
- (c) **Cascade Crossing Transmission Project (from the Coyote Springs Substation to the Proposed Grassland Substation and from there to the vicinity of Salem, Oregon)**  
The Parties could permit, develop, and construct the line from Coyote Springs to a substation in the vicinity of Salem, Oregon (the original Cascade Crossing Transmission Project), or any portion thereof. As an alternative to the Cascade Crossing Transmission Project, the Parties may elect to build a new substation called Sandpiper and connect Slatt to Pine Grove.
- (d) **Grassland Substation**  
At BPA's discretion, Grassland Substation could be a terminus of a double or single circuit line to Salem. PGE could own the Grassland Substation and pay for the permitting, development and construction of the Grassland Substation.
- (e) **Longhorn Substation**  
If BPA subsequently chooses to develop and construct the Longhorn Substation, PGE could have the option to construct a transmission line from the Coyote Springs Substation to the Longhorn Substation and own one bay, provided it is willing to pay all costs associated with the 500 kV bay at the Longhorn Substation. BPA would cooperate with PGE's development and permitting of such a line by providing information relating to the connection of PGE's transmission line to BPA's Longhorn Substation.

- (f) **Transmission Expansion in the Portland and Salem Area**  
The Parties would develop and complete necessary studies of transmission system expansion that may be required to support additional transfer capability from Boardman, Oregon to PGE's service territory. Any such reinforcements could be made at PGE's expense and may include one or more of the following: constructing a new Blue Lake-Gresham 230 kV line, re-conductoring its Murray Hill-St. Mary 230 kV line, re-terminating and re-conductoring its McLoughlin-Pearl-Sherwood 230 kV line, separating its Pearl-Sherwood 230 kV lines into new breaker positions that could be placed into service as separated lines, separating the BPA Pearl-Marion and BPA Pearl-Ostrander 500 kV lines, installing a suitably sized shunt capacitor group at BPA's Allston 500 kV Substation, developing the BPA Sifton 230 kV yard or implementing a remedial action scheme-initiated generation trip at Bonneville generation project, expanding PGE's McLoughlin 230 kV Substation, upgrading the BPA Santiam-Chemawa 230 kV line to a higher current rating, and constructing a new Bethel-Salem 230 kV line. Ownership, operation, and maintenance of any such transmission reinforcements would be subject to further negotiations between the Parties.
- (g) **Other regional transmission expansion projects**  
The Parties intend to work together to determine the feasibility of additional transmission expansion projects where PGE may obtain additional capacity between its generating resources and its load service area. If the Parties identify such additional transmission projects where PGE may participate, the Parties will further explore such participation also in accordance with the principles established in Appendix A.
- (h) **Coordination**  
In the event that either Party decides to pursue future builds related to the Cascade Crossing Transmission Project, the Parties anticipate that BPA, or BPA and PGE jointly, will determine the timing of and potential route(s) associated with such build; provided, however, that neither Party would be required to take any action or consider entering into any agreement that would be inconsistent with the applicable provisions of their respective OATTs.

## 6. **ADDITIONAL VALUE**

As the Parties continue their evaluation of the elements found in Section 4 and in Section 5, they will also continue to assess the value provided by each Party to ensure that it is fair and equitable for both. In particular, both Parties acknowledge that as part of the potential exchange and expansion, PGE could also: 1) exchange additional transmission assets, transfer capability and/or provide other operational flexibilities to BPA, some of which may be described in Section 4(a-j) that BPA would find beneficial, and/or 2) provide compensation to BPA for use of BPA pre-existing transmission system (i.e., latent capacity and other impacts across BPA flowgates); in each case to the extent BPA is not otherwise sufficiently compensated by PGE.

**7. NON-BINDING NATURE OF MOU**

This MOU is not a binding and enforceable contract but is intended to serve as a basis for further discussion, study, analysis, and negotiations between the Parties with respect to the potential Agreement. In the course of this analysis and negotiation, PGE and BPA may determine that improvements can be made or substituted for the elements of this MOU. This MOU does not constitute an offer, agreement or commitment and does not contain all or necessarily any matters to be reflected in the Agreement or any other agreement the Parties may enter into.

**8. LIMITATION OF LIABILITY**

Each of the Parties acknowledges and agrees that the other Party shall not be liable to it for any claim, loss, cost, liability, damage or expense, including any direct damage or any special, indirect, exemplary, punitive, incidental or consequential loss or damage (including any loss of revenue, income, profits or investment opportunities or claims of third party customers), arising out of or directly or indirectly related to the other Party's performance or nonperformance under this MOU. The rights and obligations under this Section 8 shall survive the expiration and termination of this MOU if an Agreement is not entered into, but shall otherwise be superseded by the provisions of the Agreement.

**9. CAPACITY EXPANSION OR SERVICE ALTERNATIVES**

Both Parties acknowledge that it is always possible that they would not reach agreement on the elements contemplated in Section 4 and Section 5, or that environmental review or permitting issues could preclude some or all of the components contemplated from being implemented. PGE, at its own discretion, previously chose to focus its permitting on the modified Cascade Crossing Transmission Project from Boardman to Pine Grove, and to suspend permitting on the previously proposed section west of the Maupin area; and is now choosing to suspend permitting of that modified project. Both Parties acknowledge that if an Agreement is not reached between the Parties that is reflective of the elements contemplated here, then PGE has the option to resume its focus and permitting activities on the originally proposed 215 mile double-circuit Cascade Crossing Transmission Project. Notwithstanding the foregoing, both Parties acknowledge that PGE always has whatever rights it otherwise has to continue receiving transmission service under BPA's OATT or otherwise and, to request additional service from BPA under the OATT or otherwise.

**10. GENERAL PROVISIONS**

- (a) If transmission studies or other analyses performed by the Parties demonstrate that the investments or transmission system expansion described above do not provide the benefits that were expected by the Parties, then the Parties will cooperate in good faith to identify alternative transmission system expansion or other alternatives that would provide substantially similar benefits as the benefits currently expected from the elements described herein at a comparable cost.

- (b) This MOU may not be amended except in writing signed by both Parties.
- (c) This MOU is for the sole and exclusive benefit of the Parties and shall not create a contractual relationship with, or cause of action in favor of, any third party.
- (d) Neither Party shall have the right to assign its interest in this MOU without the prior written consent of the other Party, which consent may be withheld by the other Party in its sole and absolute discretion.
- (e) Nothing contained in this MOU shall be construed as creating a corporation, company, partnership, association, joint venture or other entity, nor shall anything contained in this MOU be construed as creating or requiring any fiduciary relationship between the Parties. No Party shall be responsible hereunder for the acts or omissions of the other Party. Nothing herein shall preclude a Party from taking any action (or having its affiliates take any action) with respect to any other transmission facility or investment, including any such project that may compete with any transmission facility or investment identified in this MOU.
- (f) Each Party acknowledges and agrees that the other Party's decision to proceed with an Agreement is within such Party's sole and absolute discretion.
- (g) This MOU shall not be deemed to establish any right or provide a basis, either legal or equitable, by any person or class of persons against the United States, its departments, agencies, instrumentalities or entities, or its officers or employees; or against PGE or its board of directors, employees, or agents.

*[Remainder of Page Intentionally Left Blank]*

15888 MOU 5/30/13  
Hand delivred - v

- (h) Nothing in this MOU shall be construed as limiting or affecting in any way the authority or responsibility of the Parties to perform within their authorities, and nothing in this MOU shall be construed as committing the Parties to take any action concerning the items identified in this MOU. Nothing in this MOU shall be construed to preclude either Party from complying with their respective OATTs or to require either Party to take any action or consider entering into any agreement that would be inconsistent with the applicable provisions of their respective OATTs.

**11. SIGNATURES**

The Parties have executed this MOU as of the last date indicated below.

PORTLAND GENERAL ELECTRIC  
COMPANY

UNITED STATES OF AMERICA  
Department of Energy  
Bonneville Power Administration

By: Bill Nicholson cle

By: Larry Bekkedahl

Name: BILL NICHOLSON  
(Print / Type)

Name: Larry Bekkedahl  
(Print / Type)

Title: SR VICE PRESIDENT

Title: Senior Vice President for Transmission Services

Date: 5/30/13

Date: May 30, 2013

(W:\TMC\CT\Portland General Electric (PGE)\Contracts (Final)\15888 MOU\_CCTP.docxx)

## APPENDIX A

### GENERAL PRINCIPLES FOR FURTHER DEVELOPMENT OF AN OPTION FOR DEVELOPING ADDITIONAL TRANSFER CAPABILITY

1. The Agreement must be good for the Northwest as a whole; the goal is to strengthen the integrity of the transmission grid - removing constraints, adding capacity, and improving reliability for the next 60 + years and maintaining good environmental stewardship. PGE and BPA are interested in providing diversity to the existing transmission ownership model:
  - Leveraging the opportunity to achieve together what neither could accomplish independently.
  - Leveraging ownership and capital financing opportunities.
2. The Agreement must be good for BPA customers as a whole and PGE customers as a whole:
  - There shall be no cost shifting without associated benefits.
  - Changes to revenue streams need early notice and adequate ability to manage impacts.
3. BPA and PGE are committed to cost effective, reliable integration of wind. BPA is committed to helping PGE satisfy its regulatory obligations of providing energy for customer and network load consistent with the Renewable Energy Standard.
4. BPA and PGE will respectively own their newly acquired transfer capability, which will be derived from the transmission system investments and conveyances to be made by the Parties in accordance with the Agreement, in a manner that is consistent with the applicable provisions of their respective OATTs or as may be authorized by applicable regulatory bodies or statute.
5. BPA and PGE are committed to demonstrate a collaborative decision making process to enhance the regional transmission capabilities. Any disputes unable to be resolved by the respective working teams will be elevated to each Party's executives for resolution.

(W:\TMC\CT\Portland General Electric (PGE)\Contracts (Final)\15888 MOU\_CCTP.docxx)