Supplement Analysis
to the Resource Contingency Program (RCP) EIS
for the
Hermiston Power Project (HPP)

January 14, 1999

1.0 Introduction

In September 1995, BPA completed a Final Environmental Impact Statement (FEIS) on the Hermiston Power Project (HPP), one of three option energy projects in BPA's Resource Contingency Program (RCP). The FEIS described the RCP Program as a program that was designed to complete environmental review and licensing for several combustion turbines in advance of actual needs, so that BPA or another entity could more quickly acquire energy to meet future demands. The FEIS evaluated the environmental effects of constructing and operating a cogeneration/combined-cycle turbine at the Hermiston site and the effects of constructing transmission lines from the plant site to BPA's McNary Substation, at which point existing transmission facilities would be used to wheel the power to other delivery points. A Record of Decision (ROD) on the FEIS was not issued at that time as a decision to acquire the output of the projects was to be made later if/when BPA needed additional energy and thus chose to exercise its option.

Since the completion of the FEIS, the manner in which BPA makes decisions has changed. The Federal Energy Regulatory Commission (FERC) issued Order Nos. 888 and 889, requiring power marketers within FERC's jurisdiction to administratively separate their power marketing and transmission functions, and to provide open access to their transmission systems. As a non-jurisdictional utility, BPA has voluntarily complied with the FERC orders by separating its power and transmission business lines. The Power Business Line (PBL) and the Transmission Business Line (TBL) now make independent decisions on power and transmission issues pursuant to BPA's Standards of Conduct filed with FERC (Docket No. NJ97-7-000). The decision on whether or not to acquire the output of HPP is now a PBL decision. The decision to integrate the output of HPP and deliver the energy over BPA's transmission system is now a TBL decision. BPA's environmental analysis staff is administratively separated from both the TBL and PBL and is a shared resource. BPA's environmental staff works separately with each of BPA's business lines and adheres to the above mentioned standards of conduct in helping the business lines comply with their National Environmental Policy Act (NEPA) obligations. However, BPA's environmental staff is kept abreast of both PBL's and TBL's projects, in part to ensure BPA as a whole complies with NEPA, such as where the independent actions of the business lines could result in cumulative impacts.

Pursuant to BPA's Open Access Transmission Tariff, on April 3, 1998, Hermiston Power Partnership came to BPA with a good faith request for Long-Term Firm transmission service to integrate the 536 megawatt (MW) output of the proposed HPP gas fired power plant into the Federal Columbia River Transmission System (FCRTS). In complying with the Tariff, BPA completed system impact and facilities studies, and now BPA's TBL must decide whether to provide transmission service for the HPP. The timeline in the TBL Tariff requires it to make a decision whether to provide transmission service by January 1999. The TBL plans to issue a Record of Decision (ROD) on the transmission request after completion of this supplemental analysis and the determination of whether a supplemental EIS is needed. If a supplemental EIS is needed the ROD would follow the Supplemental EIS.

When the PBL is ready to make a decision whether to acquire any power generated by HPP (perhaps as soon as late 1999), it will issue a separate ROD.

Since the completion of the FEIS in September 1995, and certification of the site by the State of Oregon, some changes have occurred in the project proposal. These include a change in ownership of the plant, increased generating capacity of the plant, and more detailed information for the transmission line plans. In accordance with the procedural requirements of NEPA, BPA shall prepare a supplemental EIS if there are substantial changes to the proposal or significant new circumstances or information relevant to environmental concerns. Pursuant to 10 C.F.R. §1021.314(c) and 40 C.F.R. §1502.9(c)(1), this Supplement Analysis has been prepared to determine if a supplemental EIS is required for the proposed project.

2.0 Description of the Original Project (same as in the Final EIS)

The HPP would be located 4.8 kilometers (3 miles) south of Hermiston, Oregon, in an industrial area adjacent to the J.R. Simplot potato processing plant. The proposed location for the cogeneration facility is a 6.9 hectare (17 acre) site in an area used for alfalfa production. The property is currently owned by the J. R. Simplot Company, and the Hermiston Power Partnership (consisting of wholly owned subsidiaries of Ida-West Energy Company, J. R. Simplot Company, and TransCanada Pipelines, Limited) has an option to lease the site. The facility site is surrounded by agricultural land, agricultural businesses, and railroad yards. The site is approximately 0.8 km (0.5 mile) from the nearest residence.

The project would consist of two gas-fired combined cycle combustion turbines that could supply up to 430 aMW of power. The project plans are to interconnect with two natural gas pipelines of 6.4 km (4 miles) and 13 km (8 miles) in length. The project would store 7.6 million liters (2 million gallons) of fuel oil in above-ground storage tanks for emergency situations when natural gas is not available.

In addition to the production of electricity, excess steam from waste heat in the power plant would be used by the J. R. Simplot potato plant for processing operations. The existing boilers at the potato plant could be shut down and placed in a stand-by condition.

Water for the facility would be purchased from the Port of Umatilla regional water system, which draws water from the Columbia River under an existing water right. The HPP would require an average of 6,000 liters per minute (lpm) (1,944 gallons per minute [gpm]) of process water. The water supply for the project would originate at the Port of Umatilla treatment facility and be transported to the facility site by a 2.1 km (1.3 mile) pipeline that would parallel State Route 207 to the project site.

The FEIS identified two transmission alternatives, the Western 230-kV Alternative and the Eastern 500-kV Alternative, to connect the project into BPA's McNary Substation. For purposes of this supplement analysis, only the Eastern 500-kV Alternative is described as it is the preferred transmission alternative being considered at this time.

Eastern 500-kV Alternative

This alternative requires constructing a new 500-kV single-circuit transmission line between BPA's McNary Substation and a new substation to be built on the HPP site. A description of the proposed location and design of this line is provided below.

Beginning at McNary Substation, the HPP 500-kV line would use a portion of BPA's existing McNary-Lower Monumental 500-kV line for 1.4 km (0.9 Miles) as it heads east from McNary Substation. This was necessary to terminate the HPP 500-kV line at the proper location within McNary Substation and to avoid transmission line crossovers.

BPA's existing 500-kV McNary-Lower Monumental transmission line (now occupied by the HPP line) would be relocated to the County Road 1231 right-of-way (ROW) approximately 200 m (656 feet) east of its present position. The relocated line would be approximately 1.6 km (1-mile) in length and would be constructed on new tubular steel poles or lattice steel towers.

The HPP 500-kV line would follow a short section of new ROW 0.4 km (0.2 miles) between the McNary-Lower Monumental ROW and a junction with BPA's McNary-Roundup 230-kV line corridor. From this point the HPP 500-kV line would proceed southerly and be within existing vacant ROW immediately adjacent to the existing wood pole H-frame McNary-Roundup 230-kV line for a distance of 13.7 km (8.5 miles). Steel towers or poles would be constructed at 304.8 or 365.8 m (1,000 or 1,200 foot) intervals along the eastern one-half of the ROW. This design would be used for l3.7 km (8.5 miles) to the point where the line intersects with Canal Road.

At Canal Road, the HPP 500-kV line would continue south along Canal Road on single-shaft tubular steel poles approximately 1.4 km (0.9 mile) to the intersection with Feedville Road. Pole placement would be along the county road ROW. At Feedville Road the line follows the south side of Feedville Road west approximately 5.1 km (3.2 miles) to a point 0.2 m (0.1 mile) west of the intersection of Hermiston and Hinkel Roads. From this point the line would continue south and slightly west to the facility site. The 500-kV transmission line would parallel and use a common ROW corridor with the proposed Northwest Pipeline Corporation's gas line route between the facility site and Canal Road.

3.0 New Information or Changes Since BPA's Final EIS

3.1 Generation Plant Output

In the FEIS the proposed HPP project was described as capable of producing an average of 430 MW. However, since the completion of the FEIS in September 1995, vendors of the turbines that HPP proposes to use have revised the nominal capacity ratings. These revisions are based upon continued improvement in the turbine performance, as well as on additional data from turbines that others have purchased and installed. The turbines are now expected to produce an average of 536 MW. This represents approximately a

20 percent increase in output; however, natural gas consumption for the improved turbine units would only increase by approximately 4 percent. The improved efficiency of the turbines consumes less gas per kilowatt hour of power generated and decreases carbon dioxide emissions per kilowatt hour.

3.2 Ownership

Since the completion of the FEIS, the Hermiston Power Partnership, consisting of wholly owned subsidiaries of Ida-West Energy Company, J. R. Simplot Company, and TransCanada Pipelines, Limited, has had a change in partnership. The J. R. Simplot Company has withdrawn from the Hermiston Power Partnership, leaving Ida-West Energy Company and TransCanada Pipelines, Limited as the two remaining partners. Although J. R. Simplot will no longer be a partner in the project, the HPP plant will still be constructed with a steam pipeline to the potato processing plant for potentially providing excess steam to the plant.

3.3 Transmission Line Facilities

Eastern 500-kV Alternative

BPA originally purchased additional ROW along the McNary-Roundup 230-kV line in anticipation of a need for a potential future line unassociated with the HPP project. Because BPA still anticipates this need, the proposed new 500-kV structure along this route must be able to accommodate a future line. The new towers will initially be strung for the single-circuit 500-kV line that is directly associated with this HPP project. At such time the second line is deemed necessary, these new towers may be modified to accommodate additional conductors. A separate NEPA process and any additional environmental analysis for this double circuiting would be done at that time. Because of the change in the tower design that would accommodate a future line, the tower heights would vary from about 35.0 m (115 feet) to about 48.8 m (160 feet) as compared to the typical 38.7 m (127 feet) as described in the FEIS.

A section of the McNary-Roundup corridor will be close to the Hermiston airfield. The Federal Aviation Administration (FAA) has specific height requirements for transmission towers within its air space. Transmission line designers will work with the FAA to accommodate their air space/structure height requirements. It is likely that the tower design would be different in this short segment with all conductors being on the same level and span lengths shorter in order to keep the top conductor height to a minimum.

Along Canal Road and Feedville Road there are portions of existing 12.5-kV distribution lines in the same position the new 500-kV line would take. The distribution lines would either be put under the new 500-kV line on the same structure or be eliminated. If the distribution lines are eliminated, the affected customers would receive their electricity from another distribution line. The 500-kV structures would be slightly taller if they also have a distribution line attached.

On the 500-kV transmission line section west of the intersection of Feedville and Hermiston-Hinkel roads, continuing southwest to the HPP project, portions of the 500-kV line will utilize the existing ROW of a 69-kV line. The two lines will occupy the same structure, with the 69-kV line either under the new 500-kV line or double circuit the new 500-kV line. As a result, an increased tower height (not to exceed 48.8 m (160 feet)) is also required in this section.

The 500-kV transmission line ROW along Feedville Road may be shared with the proposed gas pipeline for the project. The new transmission line and associated ROW will be designed to meet, as a minimum, National Electric Safety Code (NESC) requirements. In addition, based on existing permits, the tower heights will not exceed 48.8 m (160 feet) and the span length between towers will not exceed 243.8 m (800 feet).

3.3.1 Electric and Magnetic Fields

Because of the increased generation capacity of the HPP project there would be an increase in electric and magnetic fields (EMF) by a magnitude of approximately 15-20%.

3.4 Separation of Preferred Alternative into Two Subalternatives

In the FEIS (p. 1-7), BPA's preferred alternative was stated as, " . . . the acquisition of power from both units optioned at the Hermiston Power Project Plant site (only if there is a need for power at a future date), or wheeling of power by BPA if another party acquires the energy output."

Both the option of purchasing the power output from the project and the construction of necessary transmission facilities were intertwined in this alternative. Because of BPA's new corporate structure, this alternative has been broken into two subalternatives which may be accepted or rejected in separate RODs. The leading subalternative, construction of transmission facilities, enables HPP power to travel to the FCRTS grid after the construction of the generating facility. The second subalternative, the purchase of the HPP power by PBL, is contingent upon TBL's decision to construct the transmission facilities, but this option is exercised independently of TBL's decision.

4.0 Environmental Considerations

4.1 Generation Plant Output

The 20 percent increased generation capacity based upon continued improvements in the turbine performance will not cause environmental impacts beyond those analyzed in the FEIS. Natural gas consumption will increase by approximately 4 percent, with a corresponding increase in pollutants. The FEIS examined predicted average and maximum project emissions, and the minor predicted increased emissions due to increased natural gas consumption will easily fall within this range. The improved efficiency of the turbines consumes less gas per kilowatt hour of power generated and decreases carbon dioxide emissions per kilowatt hour. Additionally, the State of

Oregon's Energy Facility Siting Council does not require an amendment to the site certificate if increased fuel consumption is 10 percent or less.

4.2 Ownership

The change in partnership of the HPP project is not expected to cause any environmental impacts beyond those analyzed in the FEIS.

4.3 Transmission Line Facilities

The visual impacts from the slight increased tower height will increase in some areas. However, the difference in the visual impacts analyzed in the FEIS and the new visual impacts is minor. The FEIS rated the visual impacts of the 500-kV line from low to moderate, depending on the area. The increase in height will not change the levels of impact. The previous visual analysis was based on a typical height of 38.7 m (127 feet) recognizing the actual tower heights would vary after completion of detailed designs such that some structures would be taller and some would be shorter than 38.7 m (127 feet). It is likely that most new structures would be between about 35.0 to 45.7 m (115 to 150 feet) including those with other lines attached and those towers that would accommodate a future line adjacent to the McNary-Roundup 230-kV line. As stated in the FEIS, there are existing transmission lines in the area that already create visual impacts.

4.3.1 Electric and Magnetic Fields

The proposed change in load does not change the environmental impacts that were described in the FEIS. For a full discussion of electric and magnetic fields, refer to Section 4.11.3 *Electrical and Magnetic Fields (EMF) and Shock Hazard* in the FEIS.

4.4 Separation of Preferred Alternative into Two Subalternatives

The separation of the preferred alternative into two separate subalternatives does not create any new environmental impacts. The FEIS assumed that both actions would be carried out. If the transmission facilities are built, but BPA decides not to purchase any output from HPP, HPP will simply market the power produced to someone else. The FEIS took into consideration that HPP might sell power to someone other than BPA in analyzing the environmental impacts of the project. If BPA decides not to build the transmission facilities to enable HPP to connect to the FCRTS, then HPP cannot build the generating plant and no environmental effects will occur. This division of alternatives for purposes of decision-making will create no additional environmental impacts.

5.0 Conclusion

The proposed HPP project changes described above do not differ substantially from the original proposal analyzed in the FEIS, nor are any of the proposed changes and their corresponding environmental effects considered significant new information or circumstances relevant to environmental concerns. Because of this, preparation of a supplemental EIS is not required.