CHAPTER 1

Introduction

1.1 Proposed Action

COB Energy Facility, LLC (the project proponent) proposes to build and operate a natural gas-fired, combined-cycle electric power generation plant near Bonanza, Oregon. The plant would have a nominal generation capacity of 1,160 megawatts (MW). Electric power from the proposed plant would enter the regional grid at the Bonneville Power Administration's (BPA's) Captain Jack Substation.

Development of the COB Energy Facility requires two Federal actions. First, BPA must agree to provide the necessary connection to the regional electric power transmission grid. The proposed point of connection is Captain Jack Substation. The project proponent would have to construct an electric transmission line from the COB Energy Facility to the Captain Jack Substation. The proposed transmission line crosses Federal lands under the jurisdiction of the Bureau of Land Management (BLM). The second Federal action, therefore, is BLM's agreement to grant the necessary rights-of-way for this transmission line.

To inform BPA and BLM decisionmakers and the public of the potential environmental impacts of the proposed actions by BPA and BLM related to the proposed project, this environmental impact statement (EIS) has been prepared pursuant to the National Environmental Protection Agency (NEPA). Because the actions are integrally related and necessary for ultimate construction of the Facility, they are considered together as one combined proposed action.

The following terms are used in this environmental impact statement (EIS):

- The power generation equipment and other onsite facilities are referred to collectively as the proposed Energy Facility or proposed project.
- The physical location of the Energy Facility is referred to as the proposed Energy Facility site.
- The Energy Facility site and related or supporting facilities (electric transmission line, natural gas pipeline, and water supply pipeline and well system) are referred to as the Facility.
- The site certification applicant, COB Energy Facility, LLC, is referred to as the project proponent.

1.2 Purpose and Need for the Action

1.2.1 Underlying Need for Action

Recent national and regional forecasts project increasing consumption of electrical energy to continue into the foreseeable future, requiring development of new generation resources to satisfy the increasing demand.

The Energy Information Administration[1] provides a National forecast in its report titled *Annual Energy Outlook (AEO) 2003 with Projections to 2025*:

> Total electricity demand is projected to grow by 1.9 percent per year from 2001 through 2020 (the same as in *AEO2002*) and 1.8 percent per year from 2001 to 2025. Rapid growth in electricity use for computers, office equipment, and a variety of electrical appliances in the residential and commercial sectors is only partially offset by improved efficiency in these and other more traditional electrical applications; however, demand growth is expected to slow as regional and national market saturation is reached for air conditioning and some other applications (see Figure 1-1).
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> Generation from natural gas, coal, nuclear, and renewable fuels is projected to increase through 2025 to meet growing demand for electricity and offset the projected retirement of existing generating capacity, mostly fossil steam capacity being displaced by more efficient natural-gas-fired combined-cycle capacity brought online in the past few years and still being constructed (Figure 1-2). The projected levels of generation from power plants using coal, nuclear, and renewable fuels are higher than in *AEO2002* due to higher projected natural gas prices and uprates and life extensions of nuclear plants.
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> The natural gas share of electricity generation is projected to increase from 17 percent in 2001 to 29 percent in 2025, including generation by electric utilities, (Independent Power Producers), and (Combined Heat and Power) generators.[2]

The Western Electricity Coordinating Council[3] (WECC) forecasts electricity demand in the western United States. System-wide, according to their most recent 10-year coordinated plan summary, "The 2001-2011 summer peak demand requirement is forecast to increase at a compound rate of 2.5 percent per year."[4] For the Northwest Power Pool Area[5], WECC forecasts:

> For the period from 2001 through 2011, peak demand and annual energy requirements are projected to grow at respective annual compound rates of 2.5 percent and

1 The Energy Information Administration, created by Congress in 1977, is a statistical agency of the U.S. Department of Energy. It provides policy-independent data, forecasts, and analyses to promote sound policy-making, efficient markets, and public understanding regarding energy and its interaction with the economy and the environment.
2 Energy Information Administration, Report # DOE/EIA-0383(2003), January 9, 2003.
3 WECC is one of the 10 electric reliability councils in North America, encompassing a geographic area equivalent to over half the United States. The members, representing all segments of the electric industry, provide electricity to 71 million people in 14 Western states, two Canadian provinces, and portions of one Mexican state.
4 WECC, September 2002. *10-Year Coordinated Plan Summary 2002-2011 Planning and Operation for Electric System Reliability*, p. 16.
5 The Northwest Power Pool Area is comprised of all or major portions of the states of Idaho, Montana, Nevada, Oregon, Utah, Washington, and Wyoming; a small portion of Northern California; and the Canadian provinces of British Columbia and Alberta.

> 1.9 percent. With a significant percentage of hydro generation in the region, the ability to meet peak demand is expected to be adequate for the next ten years. The ability to meet sustained seasonal energy requirements over the 10-year period is dependent on new generation additions.[6] (Refer to Figures 1-3 and 1-4.)

Finally, the Northwest Power Planning Council (NWPPC) regularly prepares a 20-year forecast of electricity demand in the Pacific Northwest. As stated in the May 13, 2003, *Revised Draft Forecast of Electricity Demand for the 5th Pacific Northwest Conservation and Electric Power Plan*, NWPPC's latest long-term forecast found,

> Electricity demand is forecast to grow from 20,080 average megawatts in 2000 to 25,423 average megawatts by 2025 in the medium forecast. The average annual rate of growth in this forecast is just less than 1 percent per year.* * * The most likely range of demand growth (between the medium-low and medium-high forecasts) is between 0.4 and 1.50 percent per year. However, the low to high forecast range recognizes that growth as low as –0.5 percent per year or as high as 2.4 percent per year is possible, although relatively unlikely (see Table 1-1).

Generation resources typically require interconnection with a high-voltage electrical transmission system for delivery to purchasing retail utilities. Bonneville Power Administration owns and operates the Federal Columbia River Transmission System (FCRTS), comprising more than three-fourths of the high-voltage transmission grid in the Pacific Northwest and including extra-regional transmission facilities. BPA operates the FCRTS, in part, to integrate and transmit "electric power from existing or additional Federal or non-Federal generating units."[7] BPA has adopted an Open Access Transmission Tariff for FCRTS consistent with the Federal Energy Regulatory Commission's (FERC) *pro forma* open access tariff.[8] Under BPA's tariff, BPA offers transmission interconnection to the FCRTS to all eligible customers on a first-come, first-served basis, with this offer subject to an environmental review under NEPA. Interconnection with the FCRTS is essential to deliver power from many generation facilities to loads both within and outside the Pacific Northwest.

In summary, electrical consumers served by the Northwest Power Pool and in other western states need increased power production to serve increasing demand, and high-voltage transmission services to deliver that power. In addition, BPA and BLM need to respond to PERC's request for authorizations required from these agencies for PERC to construct the proposed project. More specifically, BPA needs to respond to PERC's request for an interconnection of the proposed project to the FCRTS at BPA's Captain Jack Substation and integration of the power from the project into the FCRTS. BLM needs to respond to PERC's request for a grant of right-of-way across BLM land.

1.2.2 Purpose of the Action

BPA intends to base its decision on the following objectives:

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6 Ibid., p. 11.

7 16 U.S.C. 838b.

8 Although BPA is not subject to FERC jurisdiction, BPA follows the open tariff as a matter of national policy. This course of action demonstrates BPA's commitment to non-discriminatory access to its transmission system and ensures that BPA will receive non-discriminatory access to the transmission system of utilities that are subject to FERC jurisdiction.

- An adequate, economical, efficient, and reliable power supply to the Pacific Northwest, including FCRTS electrical stability and reliability
- Consistency with BPA environmental and social responsibilities
- Cost and administrative efficiency

As a cooperating agency, BLM intends to base its decision on the following objectives outlined in the Record of Decision (ROD) for the Klamath Falls Resource Area Resource Management Plan (May 22, 1995):

- Where consistent with local comprehensive plan and Oregon's statewide planning goals and rules, BLM-administered land would continue to be available for needed rights-of-way.
- New facilities would be encouraged to locate adjacent to existing facilities to the extent technically and economically feasible.
- New facilities would be limited to the minimum acreage necessary for operation and maintenance.

1.3 National Environmental Policy Act Review

The National Environmental Policy Act (NEPA) was signed into law in 1970 and requires that the environmental consequences of any proposed action by a Federal agency be determined before a final decision on the action is taken. Where the action could have a significant adverse impact on the environment, an EIS must be prepared. The proposed project requires action by two Federal agencies. BPA would need to permit the proposed project to connect with the regional power grid and BLM would need to permit the electric transmission line to cross Federal lands under its jurisdiction. Although BPA has already completed the requisite environmental analysis in its Business Plan EIS (DOE/EIS-0183), BPA is jointly preparing this EIS with BLM at the request and expense of the project proponent.

1.3.1 Public Involvement

NEPA requires that the public be provided an opportunity to participate in the EIS process, both before environmental analysis begins and after a draft EIS is completed. Public comments on the scope of an EIS are solicited before EIS preparation begins. This early solicitation of public comments is referred to as the scoping process.

As required by NEPA, BPA published a Notice of Intent (NOI) to prepare an EIS on the COB Energy Facility in the Federal Register on January 4, 2002. The NOI is presented in Appendix A. The NOI announced the commencement of a 45-day scoping period during which comments from the public would be accepted. It also invited members of the public to a scoping meeting held at Lorella Community Hall on January 15, 2002. The meeting was in the form of an open house structured to provide the community with an overview of the project proponent and the project and an opportunity to comment. After signing in, members of the public were invited to examine exhibits describing the proposed project and to discuss it with representatives of BPA and the project proponent. Overviews of the NEPA

and state permitting processes were provided by BPA and the Oregon Department of Energy (ODOE).

To inform the general public of the scoping meeting, paid public announcements were placed in local papers in editions published about 1 week before the meeting. Letters were sent to all landowners with property near the proposed Energy Facility. Also, letters were sent to local, state, and Federal agencies and Native American organizations that might have an interest in the proposed project.

1.3.2 Comments Received

Approximately 150 people attended the scoping meeting in January 2002, including representatives of the Energy Facility Siting Council (EFSC), BPA, and the project proponent. A number of people expressed strong concerns about the Facility's impact on groundwater in the area. Many of the farmers rely heavily on shallow groundwater for irrigating pastures and cropland. The project proponent explained that groundwater would be drawn from a deep aquifer, which testing suggests is isolated from the shallow zone.

To address the concern about impact on groundwater, the project proponent has committed to switching from wet cooling to air cooling. This switch reduces water requirements by 97 percent. On July 25, 2003, the project proponent filed an amendment to the site certificate application (SCA) dated September 5, 2002, documenting the switch to air cooling.

BPA received one letter (U.S. Bureau of Reclamation) and one telephone comment following the meeting. The Bureau of Reclamation wanted to confirm its interest in the project, and one private citizen wanted to confirm the location of the proposed Energy Facility.

1.4 State of Oregon Environmental Review

Oregon does not have a state law equivalent to NEPA. Instead, environmental review is conducted through the state's energy facility siting procedures. Before construction of an energy facility is approved in Oregon, EFSC must find that the proposed project meets certain standards, including environmental standards, pursuant to Oregon Administrative Rule (OAR) Chapter 345, Division 21, Section 045. If satisfied that a proposed project meets the standards, EFSC issues a site certificate that permits the project to be built.

The project proponent submitted an application for a site certificate on September 5, 2002. The SCA was deemed complete on April 30, 2003. On July 25, 2003, an amendment was filed with EFSC to switch to air cooling from wet cooling. Review of the application by state agencies would proceed concurrent with the NEPA review process. EFSC has no involvement with BPA's siting and construction of its transmission lines and appurtenant facilities.

1.5 Scope and Organization of the EIS

Chapter 2 of this EIS describes the proposed Federal actions and their alternatives. The actions are defined comprehensively to include both the Federal actions (allowing connection of the proposed Energy Facility to the regional power grid and allowing construction of the electric transmission line on Federal lands) and construction of the Energy Facility and

its related or supporting facilities. The related or supporting facilities include a natural gas pipeline, water supply pipeline, water supply well system, and the electric transmission line.

Chapter 3 describes the affected environment and the environmental consequences of the proposed action. An assessment of the direct, indirect, and cumulative effects of the proposed action on geology, soil, and seismicity, hydrology and water quality, vegetation and wildlife, fish, traffic and circulation, air quality, visual quality and aesthetics, cultural resources, land use plans and policies, socioeconomics, public services and utilities, and health and safety, including noise, is provided in Chapter 3.

Cumulative impacts are the impacts resulting from the incremental impact of the proposed action viewed collectively with the impacts of other past, present, and reasonably foreseeable future actions. Unavoidable impacts are those impacts that are unavoidable and remain significant even with the application of mitigation measures.

Chapter 4 describes how the proposed action would comply with various legal and regulatory requirements. Contributors to the EIS are listed in Chapter 5. Recipients of the EIS are listed in Chapter 6. References, a list of acronyms and terms, and an index are provided in Chapters 7, 8, and 9, respectively.

TABLE 1-1
Forecast Northwest Power Needs

	ACTUAL	FORECAST		GROWTH RATES	
	2000	**2015**	**2025**	**2000-2015**	**2000-2025**
Low	20,080	17,489	17,822	-0.92	-0.48
Medium Low	20,080	19,942	21,934	-0.05	0.35
Medium	20,080	22,105	25,423	0.64	0.95
Medium High	20,080	24,200	29,138	1.25	1.50
High	20,080	27,687	35,897	2.16	2.35

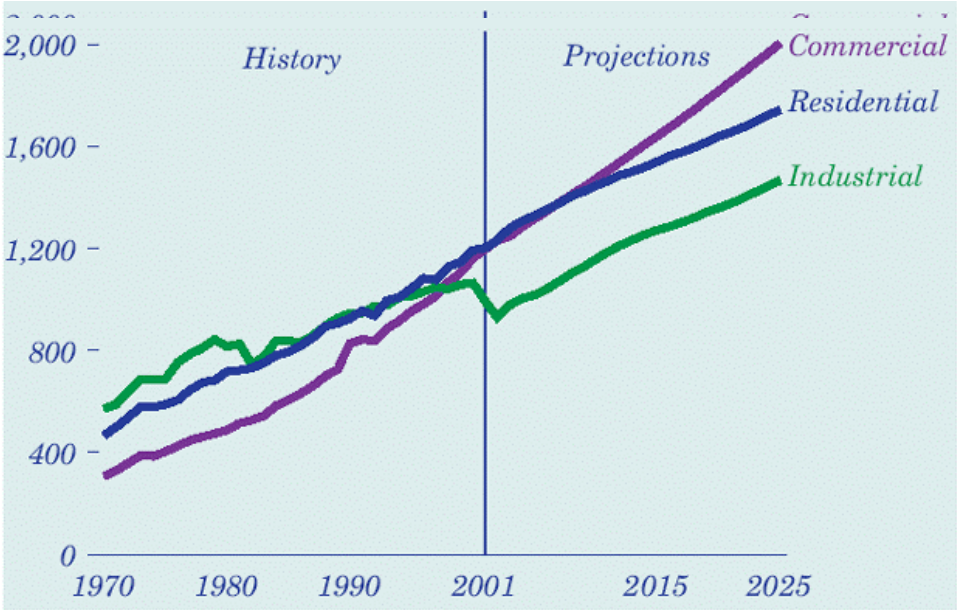

FIGURE 1-1
Annual Electricity Sales by Sector, 1970-2025 (billion kilowatt-hours)

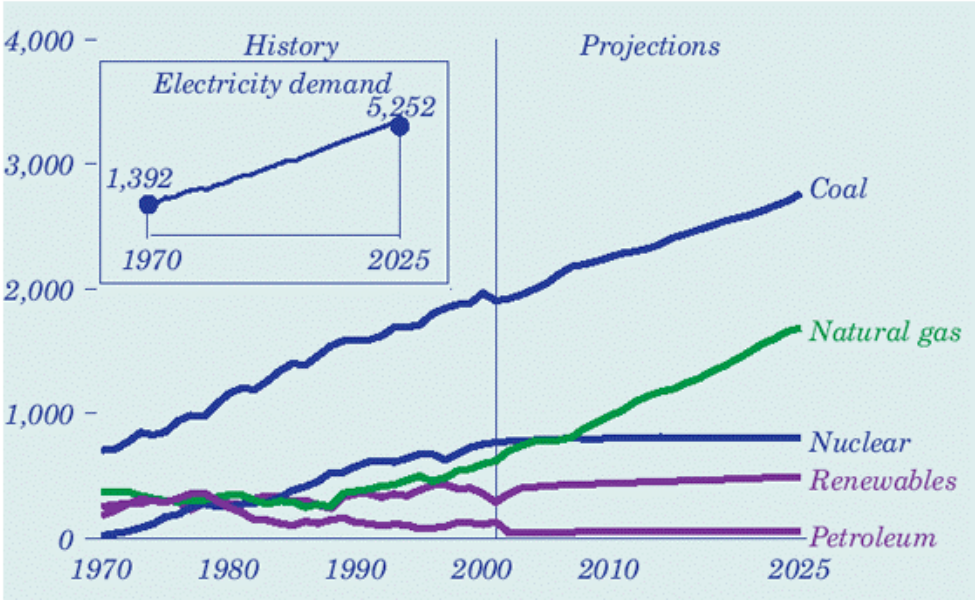

FIGURE 1-2
Electricity Generation by Fuel, 1970-2025 (billion kilowatt-hours)

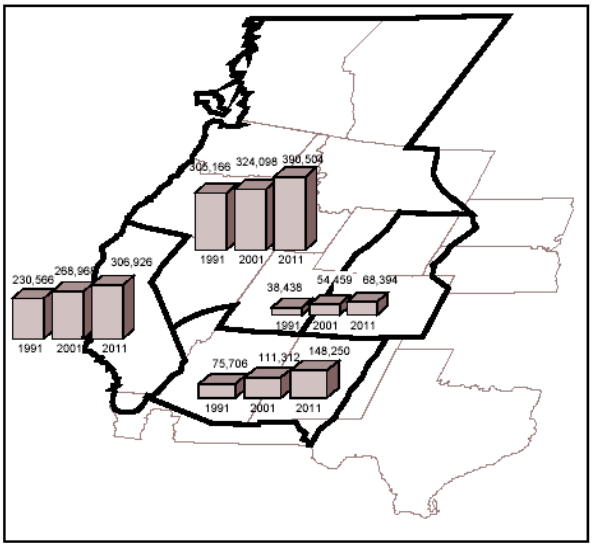

FIGURE 1-3
1991, 2001, and 2011 Annual Energy Loads

Source: WECC

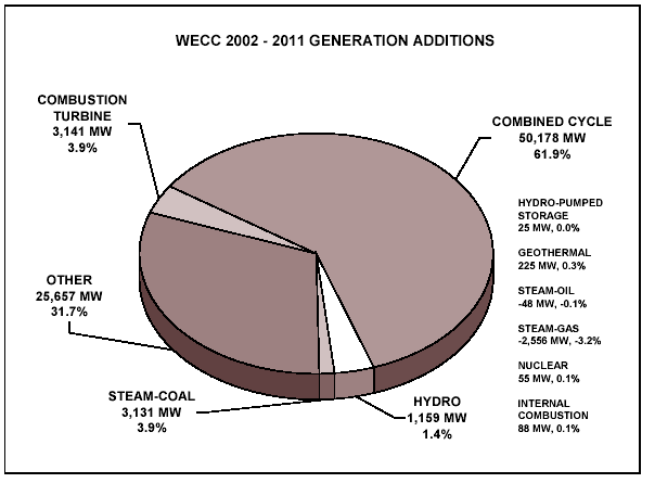

FIGURE 1-4
Summary of Generation Additions 2002-2011 (Summer Capability in megawatts [MW])