



Oregon

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March 16, 2007

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RE: LC 41 -- OPUC Staff comments on 2006 Integrated Resource Plan

The Oregon Public Utility Commission (OPUC) received the 2006 Integrated Resource Plan (IRP or plan) of Idaho Power Company (IPCo) on October 23, 2006. The IRP is intended to meet the requirements of both OPUC Order No. 89-507 and Idaho Public Utilities Commission (IPUC) Order No. 22299.

The plan has been docketed as LC 41 and is currently under OPUC Staff review. At the February 5, 2007, LC 41 Prehearing Conference the Administrative Law Judge adopted the following schedule:

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| 1. Last Day to Intervene | February 12, 2007 |
| 2. Idaho Power's Supplemental Filing per Order No. 07-002 | February 16, 2007 |
| 3. Idaho Power's Summary Presentation at Commission Public Meeting | February 27, 2007 |
| 4. Intervener Comments on plan due | March 16, 2007 |
| 5. Staff Final Comments, recommendations and Draft Order due | April 12, 2007 |
| 6. Reply Comments due | May 4, 2007 |
| 7. Hearing/Commission Public Meeting | June 2007 |

One party has intervened -- The Citizens' Utility Board (CUB).

OPUC Order No. 07-002 (*Investigation into Integrated Resource Planning, issued January 8, 2007*) stated that IPCo should supplement its 2006 IRP as needed to meet the IRP guidelines adopted in the Order. Per the LC 41 schedule, IPCo filed the required 2006 IRP supplement with the OPUC on February 16, 2007. In the IRP supplement, IPCo detailed its belief that the 2006 IRP largely meets the intent and guidelines of Order No. 07-002. Staff agrees with IPCo's assessment.

Also, as required by the LC 41 schedule, IPCo made a summary presentation of its 2006 IRP at the Commission's February 27, 2007, public meeting. The PowerPoint presentation - Planning for the Future - provided information regarding IPCo's load/resource balance over the IRP's 20-year planning horizon, analysis of resource alternatives for meeting identified load deficits, and the IRP's preferred plan for future resource acquisitions. The presentation was well received.

Background: Beginning in late summer 2005, Idaho Power Company began the process of developing its 2006 IRP. IPCo invited representatives of the environmental community, major industrial customers, irrigation customers, the Idaho state legislature, the Oregon and Idaho Public Utility Commissions (OPUC and IPUC), the Idaho Governor's office, and others to form an Integrated Resource Plan Advisory Council (IRPAC).¹ At IRPAC meetings, that generally occurred on a monthly basis, members reviewed load and resource information provided by IPCo and offered comments and suggestions regarding the IRP study formulation and analysis.

IPCo issued a draft of its 2006 IRP on August 24, 2006. IRPAC members and the general public were invited to offer written comments. During the fall of 2006, the Company held draft 2006 IRP public meetings throughout its Idaho (Pocatello, Twin Falls, and Boise) and Oregon (Ontario) service territories.² Based on comments received from IRPAC members and the general public, IPCo made several revisions to the draft IRP.

IPCo's final 2006 IRP was filed with the OPUC on October 23, 2006.

¹ The IRPAC members included representatives from the Natural Resources Defense Council, Advocates for the West, Micron Technology, J.R. Simplot Company, Idaho National Engineering and Environmental Laboratory, Heinz Frozen Foods, American Association of Retired Persons, Idaho Retailers Association, Agricultural Interests, Meridian School District, Idaho Department of Environmental Quality, Idaho Governor's Office, Idaho State Legislature, Northwest Power and Conservation Council, and the Idaho and Oregon PUCs.

² Attendance at the draft IRP public meetings was small and few written comments were provided.

Summary of Plan: The 2006 IRP consists of five separate documents: the IRP Report, an Economic Forecast, a Sales and Load Forecast, a Demand-Side Management Annual Report, and a Technical Appendix. The analysis assumes that IPCo will continue to operate throughout the IRP's 20-year planning horizon as a vertically-integrated electric utility.

The primary goals of the 2006 IRP are to:

1. Identify sufficient resources to reliably serve the growing demand for energy service within Idaho Power's service territory throughout the 20-year planning horizon (2006 through 2025).
2. Ensure that the portfolio of resources selected balances costs, risks, and environmental concerns.

In addition, the IRP incorporates the following accompanying goals:

1. Give equal and balanced treatment to both supply-side resources and demand-side measures.
2. Involve the public in the planning process in a meaningful way.
3. Explore transmission alternatives.
4. Investigate and evaluate advanced coal technologies.

The plan details the rapid growth that IPCo's service territory is experiencing. The general customer base is expected to increase from 456,000 in 2005 to over 680,000 by the end of the planning horizon in 2025. The average annual compound load growth is forecast to be 1.9 percent. With this forecast, average load is expected to increase by 40 aMW per year and summertime peak-hour loads are expected to increase by over 80 MW per year.

The total nameplate generation capacity of IPCo's system is 3,085 MW. In 2005, the system's firm load was 1,660 aMW. In July 2006, the Company set a new peak-hour load record of 3,084 MW. The IRP's analysis of the system's load/resource balance clearly documents that IPCo will need to acquire additional supply-side and demand-side resources to meet its system's growing electric demand.

The IRP identifies new supply-side and demand-side resource options and analyzes the costs and risks of 12 potential resource portfolios designed to meet expected load requirements. The portfolios were developed to represent a wide range of resource alternatives. The alternatives varied from a portfolio that included nearly 1,000 MW of renewables and no coal-fired generation, to one with 1,475 MW of new transmission capacity, as well as a predominately coal-fired portfolio. There were also several

diversified portfolios that consisted of varying amounts of wind, geothermal, transmission, coal, natural gas, and demand-side resources.

Based on the portfolio analysis, IPCo selected a preferred strategy that in the near-term focuses on acquisition of renewable and demand-side resources, with new transmission capacity and conventional supply-side base load resources added over the longer-term (see listing below). The IRP notes, however, that each resource acquisition presents different characteristics for satisfying electric demand in what is a dynamic energy marketplace. Therefore, given the two-year cycle of the IRP process, it is likely that changing market conditions, technology advancements, and specific development opportunities may cause IPCo to reassess the resource acquisitions identified in the 2006 IRP.

Preferred portfolio resource acquisitions over the 20-year planning horizon are as follows:

<u>Year</u>	<u>Resource Acquisitions</u>	<u>Capacity (MW)</u>
2008	Wind (2005 RFP)	100
2009	Geothermal (2006 RFP)	50
2010	CHP*	50
2012	Wind	150
2012	Transmission McNary–Boise	225
2013	Wyoming Pulverized Coal	250
2017	Regional IGCC Coal	250
2019	Transmission Lolo-Oxbow	60
2020	CHP	100
2021	Geothermal	50
2022	Geothermal	50
2023	INL Nuclear**	250
Total Nameplate Capacity.....		1,585

* Combined Heat and Power

** Idaho National Laboratory

The plan also includes demand-side management (DSM) programs estimated to reduce annual loads by 88 average MW and peak-hour loads by 187 MW.

The IRP's 10-year action plan (shown below) lists the activities necessary to begin implementation of the preferred plan, as well as the anticipated longer-term planning activities through 2015.³

³ While the 2006 IRP has a 20-year planning horizon, the plan presents a 10-year outline of activities necessary to implement the preferred portfolio. This recognizes that, with biennial updates of the IRP, activities in the last 10 years of 2006 plan (2016 through 2025) will likely undergo significant revisions.

Late 2006 and early 2007

1. Conclude 100 MW wind RFP issued in response to the 2004 IRP
2. Notify short-listed bidders in 100 MW geothermal RFP issued in response to the 2004 IRP
3. McNary–Boise transmission upgrade process initiated
4. Develop implementation plans for new DSM programs with guidance from the EEAG
5. Continue coal-fired resource evaluation with Avista and consider expansion opportunities at Idaho Power's existing projects (Jim Bridger, Boardman and Valmy)
6. Investigate opportunities to increase participation in the highly successful Irrigation Peak Rewards DSM program
7. Complete wind integration study
8. Evaluate the Energy Efficiency Rider level necessary to fund DSM program expansion

2007

1. Finalize DSM implementation plans and budgets with guidance from the EEAG
2. 100 MW geothermal RFP concluded
3. Assess CHP development in progress via PURPA process—consider issuing RFP for 50 MW CHP depending on level of PURPA development
4. Identify leading candidate site(s) for coal-fired resource addition and begin permitting activities
5. 225 MW McNary–Boise transmission upgrade – studies in progress
6. 100 MW wind on-line
7. Evaluate/initiate DSM programs
8. Select coal-fired resource, finalize contracts, begin design, procurement, and pre-construction activities

2008

1. 225 MW McNary–Boise transmission upgrade—final commitments
2. 250 MW Borah–West transmission upgrade complete
3. 170 MW Danskin expansion on-line
4. Evaluate/initiate DSM programs
5. Prepare and file 2008 IRP

2009

1. 150 MW wind RFP issued
2. 50 MW geothermal resource on-line – possibly more depending on response to the 2006 RFP
3. Evaluate/initiate DSM programs

2010

1. 50 MW CHP on-line
2. Evaluate/initiate DSM programs
3. 49 MW Shoshone Falls upgrade on-line
4. Prepare and file 2010 IRP

2011

1. Evaluate/initiate DSM programs

2012

1. 225 MW McNary–Boise transmission upgrade complete
2. 150 MW wind on-line
3. Evaluate/initiate DSM programs
4. Prepare and file 2012 IRP

2013

1. 250 MW coal-fired generation on-line
2. Evaluate/initiate DSM programs

2014

1. Evaluate/initiate DSM programs
2. Prepare and file 2014 IRP

2015

1. Evaluate/initiate DSM programs

OPUC Staff Comments

General Comments: In 2005, IPCo served 456,104 customers, which is a 57 percent increase from the 290,492 customers the Company served in 1990. The 2005 peak firm load was 2,961 MW and the average firm load was 1,660 aMW. The Company's installed (2005) generation was 3,085 MW nameplate capacity, with approximately 1,380 MW of thermal generation and the remainder hydroelectric. The above data and the 2006 IRP analysis demonstrate that IPCo has moved from a capacity and energy surplus during the 1990s to current capacity and energy deficits during summer and winter peaks.

Because of the Company's dependence on hydroelectric generation, energy deficiencies are amplified during low-water years. Therefore, Staff supports the IRP's continued use of a 70th percentile water conditions in evaluating resource requirements.⁴ This conservative water planning criteria was first used in IPCo's 2002 IRP and is intended to reduce price variability risk for both the utility and its customers.⁵

To meet growing demand, the IRP's preferred portfolio includes a diversified mix of renewable and conventional technologies, transmission upgrades, and DSM. In the near term, the plan emphasizes renewable resource development and demand

⁴ This criteria means that hydro generation is based on stream flows that are expected to occur in seven out of ten years on average.

⁵ During the 2001 energy crisis, poor water conditions and unprecedented wholesale market prices resulted in huge increases in IPCo's cost of power. Based on customer, legislative, and regulatory feedback, IPCo adopted the 70th percentile planning criteria in its 2002 IRP.

response (i.e., irrigation and air conditioning peak reduction) and cost-effective energy efficiency programs. OPUC Staff supports these actions.

Renewable Resources: The preferred portfolio contains the acquisition of 250 MW of wind generation (100 MW in 2008 and 150 MW in 2012). Including projected wind acquisitions through PURPA (200 MW), the amount of wind in IPCo's resource base will increase to 450 MW by 2012. Depending on the success of initial wind projects, and IPCo's ability to use its hydro generation to help firm the wind resource, it may be possible for IPCo to modify its wind acquisition strategy.

The 2006 IRP indicates the acquisition of 150 MW of geothermal generation. The first 50 MW increment is anticipated to be online in 2009. The last two 50 MW increments are scheduled for 2021 and 2022. IPCo indicates that the physical and cost-effective supply of geothermal is uncertain. The Company is reluctant to commit to a larger quantity of geothermal until the viability of the resource is better understood. IPCo states that it will further investigate geothermal's potential in its 2008 IRP.

Staff supports the IRP's near-term actions to acquire wind and geothermal generation. The successful integration of these resources into IPCo's system would allow the Company to give greater emphasis to the use of renewables in meeting its growing customer load requirements. This could potentially impact the need for and timing of new base load (coal) resource acquisitions.

DSM Activities: To fund DSM activities within IPCo's service territory, both the IPUC and OPUC have approved an Energy Efficiency Rider (Rider) that allows the Company to collect 1.5 percent of base revenues for implementation of DSM programs. To assist with the development and ongoing review of DSM programs, IPCo has organized an Energy Efficiency Advisory Group (EEAG) that includes customer, public, and private representatives. The initial focus of DSM efforts has been toward irrigation and air conditioning demand response programs during summer peaks. The Company is also promoting commercial, industrial, and residential energy efficiency programs. The 2006 IRP estimates that DSM programs will achieve 88 aMW of energy savings per year and 187 MW of summertime peak-load reduction by the end of the 20-year planning horizon in 2025.

In addition, IPCo has an agreement to provide funding to the Northwest Energy Efficiency Alliance (NEEA). NEEA is a regional organization that works to enhance the efficient use of energy through various market transformation programs that benefit the Pacific Northwest (PNW), including IPCo customers. Specific to Oregon, IPCo continues to offer a Low-Income Weatherization Program, Oregon Commercial Audits (Schedule 82) and the Oregon Residential Weatherization Program (Schedule 78).

OPUC Staff participates in the EEAG process and supports the demand response and energy efficiency programs that have been developed. Staff believes that synergies are achieved through the coordination by IPCo of energy conservation and demand

reduction programs in its Idaho and Oregon service territories. Through participation in the EEAG, Staff will continue to encourage the pursuit of identified cost-effective DSM activities.

Transmission: To reduce transmission constraints, the 2006 IRP includes two transmission projects designed to significantly improve IPCo's ability to import power from the Mid-Columbia market in the PNW. The first is the construction of a new 230 kV line from BPA's McNary Dam Substation to IPCo's Brownlee Dam Substation, a distance of 215 miles. An additional 70 miles of line from Brownlee to Boise will complete the project. The estimated capacity of this link is 225 MW. The second project involves the reconductoring of the existing Lolo to Oxbow transmission line. This upgrade is expected to add approximately 60 MW of additional import capacity.

The above projects will also require significant upgrades to IPCo's backbone system. Preliminary engineering studies are currently in progress. The McNary to Boise line is projected to be complete in 2012. The Lolo to Oxbow completion date is 2019.

The Borah-West upgrade described in the 2004 IRP is scheduled for completion in late spring 2007. This upgrade will provide a 250 MW increase in IPCo's ability to import power from the east side of its system. This upgrade should benefit new renewable projects that are expected to be located in eastern Idaho.

Staff believes that, given the complexity and long lead times associated with transmission projects, IPCo's decision to move forward with the identified projects is reasonable. The status of these projects and need for additional transmission upgrades should be thoroughly evaluated in the 2008 IRP.

Proposed Coal Resources: The 2006 IRP identifies the acquisition of 250 MW of pulverized coal generation to be online in 2013 and 250 MW of IGCC (Integrated Gasification Combined Cycle) coal to be online in 2017. IPCo recognizes that potential carbon emission costs represent the most significant risk in the 2006 IRP. Nevertheless, the IRP analysis results indicated that, for any value of a carbon adder up to \$28 per ton, pulverized coal yielded the lowest levelized cost compared to other base load resource alternatives. An adder of greater than \$28 per ton indicated that IGCC technology with carbon sequestration resulted in the lowest levelized cost.

The results of the 2006 IRP analysis strongly indicate that by 2013 additional base load generation will be needed to meet IPCo's growing load requirements. Given the IRP results regarding the need for base load resources and that, even with emission adders, coal has the lowest levelized cost, Staff supports IPCo's plan to continue to evaluate coal-fired opportunities and to identify the leading coal alternative(s).

The target date for selecting the 2013 coal resource and proceeding with the pre-construction phase is 2007. Coal has the advantage of being an abundant domestic energy resource that, even with emission adders, appears to have the lowest

generation costs. Therefore, it needs to be considered a viable resource alternative. Nevertheless, Staff recommends that IPCo should emphasize identified renewable and DSM acquisitions and, to the extent practical, delay a final commitment to a pulverized coal plant. Staff believes that any future coal plant construction should be designed to mitigate environmental damage to the maximum extent that is technically and economically (*considering both private and societal costs*) viable. If shown to be commercially viable, an IGCC coal facility with carbon sequestration would be the environmentally superior alternative.

Nuclear: The IRP identifies the potential that IPCo will consider entering into a power purchase agreement for roughly 250 MW of energy from a “next generation” nuclear power project that the U.S. Department of Energy plans to construct at the Idaho National Laboratory (INL). The INL is located in southeastern Idaho. The project’s current schedule has a online date of 2021. While the INL project is authorized by the Energy Policy Act of 2005, the likelihood of necessary funding appropriations is unknown.

IPCo indicates that it will monitor the progress of this R&D nuclear project and provide an update in its 2008 IRP. Staff’s believes this pathway is reasonable.

If you wish to discuss any of the above material or have questions, please give me a call at (503) 378-6360.

/s/ William A. McNamee

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(503) 378-6360

c: Lee Sparling, OPUC
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CERTIFICATE OF SERVICE

LC 41

I certify that I have this day served the foregoing document upon all parties of record in this proceeding by delivering a copy in person or by mailing a copy properly addressed with first class postage prepaid, or by electronic mail pursuant to OAR 860-13-0070, to the following parties or attorneys of parties.

Dated at Salem, Oregon, this 16th day of March, 2007.



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