

Chapter 7 – The Action Plan: Powering Seattle for the Future

This Integrated Resource Plan (IRP) presents a course of action that utilizes the best information available. The Plan meets the overall objective of determining strategies for the type, amount and timing of new resource acquisitions to meet electrical load over the 20 years between 2007 and 2026.

The preferred portfolio satisfies the criteria established at the beginning of the planning process: reliability of service, reasonable costs, reasonable risks and limited environmental impacts. The preferred portfolio:

- Focuses on improving City Light’s seasonal resource balance in the short term, thus avoiding the costs of major resource additions early in the planning period.
- More clearly identifies the reliability risk inherent in the current resource mix and provides a plan of action to mitigate that risk.
- Considers the risks attributable to new resources when evaluating them for the Plan.
- Clearly identifies the environmental impacts of resources and portfolios in the Plan, in terms of the emissions of air pollutants and impacts to land, water, wildlife and aesthetics.

Any 20-year plan faces many uncertainties and this is particularly true in an environment as dynamic and volatile as energy markets. The intent of the IRP is not to lock the City of Seattle or City Light into a 20-year course of action. Rather, the Plan provides long-term strategic direction for resource acquisition and a short-term action plan to begin moving in that direction.

City Light confronts a wide range of challenges in meeting its mission of providing stable, competitively priced and environmentally sound electricity to customers. These challenges require many decisions each year, large and small, related to power resources. Creating a long-term resource plan provides the framework for a short-term action plan that will help guide the Utility on a path that brings long-term resource benefits to customers.

Action Plan

This section describes City Light’s action plan as related to resource acquisition, transmission and planning. Major elements of the Action Plan include:

Resource Acquisition

- Continue to acquire conservation resources
- Investigate new generating resources
- Evaluate and acquire cost-effective “lost opportunity” resources

Transmission

- Ensure adequate transmission capacity to meet resource needs

Planning

- Explore, monitor and evaluate potential future technologies and resources
- Enhance IRP analytical capabilities
- Keep the IRP up-to-date with new information

Resource Acquisition

Conservation

City Light began acquiring conservation resources over 25 years ago. Conservation has proven to be a good investment and City Light will continue to pursue the acquisition of cost-effective conservation.

While the cost and environmental benefits of conservation are well known, one benefit of conservation may have gone relatively unnoticed. As the Pacific Northwest’s population and energy consumption grew, regional electric transmission facilities did not keep pace. Today, Seattle faces significant limitations on future use of long distance, high voltage electric transmission to access new resources. Large investments in new transmission infrastructure will be required to overcome these

limitations. In a transmission-constrained future, conservation becomes more cost-effective and pragmatic as a resource. Expanding transmission infrastructure takes many years and depends upon the close cooperation of a variety of governmental agencies and electric utilities. However, the citizens of Seattle can directly control acquisition of conservation resources.

In the 2006 IRP, the Round 2 analysis identified acceleration of conservation programs as a promising resource strategy. However, additional information on costs and feasibility is needed. As part of the 2006 IRP Action Plan, a study of the costs, benefits and feasibility of accelerating conservation is recommended.

Generation

The IRP makes many assumptions about the availability and costs of generic resources. Implementation of the Plan requires confirming resource availability and costs for specific opportunities. If the specific resource opportunities from real world suppliers do not match the IRP assumptions, the Plan must be adjusted to more accurately reflect the costs and characteristics of the resources that are actually available.

Lost Opportunities

The 2006 IRP identifies “lost opportunity” resources including seasonal exchanges, seasonal capacity contracts, landfill gas and a contract with an existing hydro facility. These opportunities may be lost if they are not acted upon within a certain time frame and will require prompt investigation. This can mean acquiring resources ahead of schedule, if it is more cost-effective to do so than to acquire a higher cost resource at a later time.

Investigation and monitoring of new resource technologies is also important to keep abreast of future resource opportunities. Technological advancement and economies of scale can expand future choices for cost-effective and environmentally responsible resources.

During the 2006 IRP, City Light identified potential generation efficiency upgrades at its Skagit River hydroelectric facilities. Because of uncertainty about development costs, this resource was not included in the Round 2 portfolios. However, if studies prove these upgrades to be cost-effective, they can be evaluated in the context of the next IRP.

Transmission

Adequate transmission capacity can reduce the costs of new resources by allowing more seasonal exchanges and power purchases, thereby reducing the amount of generation reserves that would otherwise be necessary. Important decisions to expand regional transmission facilities in the Pacific Northwest will be made well within the 20-year time frame of this Plan. City Light will work to ensure the availability of adequate transmission facilities that are critical to Seattle’s electricity supply, reliability, cost and energy policy objectives.

Future Integrated Resource Planning

Improving information and planning capabilities can enhance the quality of information available to City policy-makers and facilitate better long-term decision-making, lower costs and reduced risk.

This 2006 IRP sets the long-term strategic direction for how City Light will meet future growth in electricity demand for Seattle. However, the Plan is not etched in stone, nor should it be. Many assumptions about the future are used in the Plan. While City Light sought to use the best information and analytical methods available for the 2006 IRP, it is impossible to correctly forecast all aspects of a dynamic market, operating and technological environment. Accordingly, City Light will formally update the Plan every two years.

City Light will continue to develop and refine its modeling tools and assumptions for use in future resource planning. Demand forecasts will be prepared and updated routinely and new information on resource costs and availability will be collected. City Light will also participate in regional planning forums on topics such as resource adequacy, integration of wind resources, regional transmission planning and expansion and rule-making for Initiative 937.

During the 2006 IRP process, public input identified issues that will require further research. These included the impacts of climate change on City Light operations and distributed generation. City Light will continue to work on these topics in the upcoming IRP.

Two Year Action Plan Summary (2007-2008)

Table 7-1 summarizes the two-year action plan for the 2006 IRP.

Table 7-1. IRP Action Plan, 2007-2008

| Actions | 2007 | 2008 |
|---|--|--|
| Conservation Resources | | |
| Acquire cost-effective conservation in the targeted amounts. | 7 aMW by end of 4th Qtr | 7 aMW by end of 4th Qtr |
| Investigate methods and costs of accelerating conservation resources. | Investigate delivery costs and methods by year end | Include in IRP |
| Generation Resources | | |
| Investigate costs and availability of planned resources. | Go/no go decision on landfill gas by year end. | Negotiate contracts as needed. |
| Market Resources | | |
| Investigate and acquire seasonal exchanges and/or seasonal market purchases to offset near-term reliability risk. | Additional 50 aMW as needed | Additional 50 aMW as needed |
| Other New Resources | | |
| Collect and update information on costs of a wide range of new resources commercially available by June 2008. | Ongoing | Finalize assumptions by May for 2008 IRP |
| Investigate the development status, costs and commercial availability of new resource technologies. | Ongoing | Ongoing |
| Investigate the cost-effectiveness of hydro efficiency measures and other steps to improve Skagit output. | Further investigate Gorge Tunnel economics | Decision on inclusion in 2008 portfolios |
| Transmission | | |
| Work to ensure adequate transmission to support reliable service to existing and future load needs. | Ongoing | Ongoing |
| Future IRPs | | |
| Continue to refine assumptions, forecasts and modeling. | Ongoing | Ongoing |
| Monitor development of regional resource adequacy standards. | Ongoing | Ongoing |
| Assess the impacts of climate change on operations and load in greater depth. | By year end | Reflect in 2008 IRP |
| Evaluate distributed generation opportunity and distribution savings potential. | Conclusions by year end | Incorporate conclusions into 2008 IRP |
| Update the demand outlook and estimate of resource adequacy. | Results by year end | Use demand forecast for 2008 IRP |
| Prepare IRP Update and any EIS update. | Initiate studies and investigations listed above. | Complete 2008 IRP |
| File IRP with the Department of Community, Trade and Economic Development (CTED) according to administrative rules. | | File IRP by September 2008 |

