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David Clement
SCL 2014 IRP Update and Progress Report RES
June 16, 2014
Version #1

CITY OF SEATTLE

RESOLUTION 31537

A RESOLUTION relating to the City Light Department; acknowledging the 2014 Integrated Resource Plan Update and Progress Report as conforming with the public policy objectives of The City of Seattle and the requirements of the State of Washington; and approving the Update and Progress Report for the biennium September 2014 through August 2016.

WHEREAS, The City of Seattle (the "City") recognizes the desire of its citizens to have adequate, reliable, cost-effective, low risk, and environmentally responsible electric power resources; and

WHEREAS, the City recognizes the need for adequate electric power resources to assure the economic well-being, health, comfort, and safety of its citizens; and

WHEREAS, the 2014 Integrated Resource Plan Update and Progress Report continues to put conservation first as its foundation and is consistent with Seattle City Council Resolution 30144 for meeting as much load growth as possible with conservation and renewable resources; and

WHEREAS, the 2014 Integrated Resource Plan Update and Progress Report is intended to conform with State of Washington requirements under the Revised Code of Washington ("RCW") 19.280 for development of integrated resource plans by consumer-owned utilities and approval of such plans by the consumer-owned utilities' governing boards by September 1 each biennium; and

WHEREAS, the City of Seattle's Integrated Resource Plan will be revised and updated within the next two years to reflect changes to the region's and City Light's circumstances; NOW, THEREFORE,

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF SEATTLE, THE MAYOR CONCURRING, THAT:

Section 1. The City Council acknowledges the 2014 Integrated Resource Plan Update and Progress Report, as developed by the City Light Department's management, and the

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executive summary of which is attached hereto as Attachment 1 ("Seattle City Light 2014 Integrated Resource Plan Update and Progress Report Executive Summary"), they comply with the public policy objectives of the City of Seattle and the requirements of the State of Washington, and hereby approves the Integrated Resource Plan Update and Progress Report for the biennium September 2014 through August 2016.

Section 2. Consistent with the findings of the Integrated Resource Plan Update and Progress Report, as well as the 2012 Integrated Resource Plan, the City Council expects City Light to continue to emphasize conservation and the acquisition of renewable energy credits or renewable resources as cost-effective for compliance with the Washington Energy Independence Act, between now and the completion of the 2016 Integrated Resource Plan.

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Adopted by the City Council the ____ day of _____, 2014, and signed by me in open session in authentication of its adoption this_____ day of _____, 2014.

_____

President _____of the City Council

THE MAYOR CONCURRING:

_____

Edward B. Murray, Mayor

Filed by me this ____ day of _____, 2014.

_____

Monica Martinez Simmons, City Clerk

(Seal)

Attachment 1: Seattle City Light 2014 Integrated Resource Plan Update and Progress Report Executive Summary

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Attachment 1
Seattle City Light
2014 Integrated Resource Plan Update and Progress Report
Executive Summary

The key findings of the 2014 Integrated Resource Plan Update and Progress Report include:

- The onset of new energy resource need is likely delayed by at least 2 years
- Cost-effective, achievable conservation potential increased by 44 average megawatts over the next 20 years
- By 2017, City Light will have gained about 26 average megawatts in new renewable energy resources since 2012
- The long-term forecast rate of growth in demand is half the national average

New Conservation Potential

Conservation will continue to play an important role in Seattle's energy future throughout the twenty-year forecast. In City Light's 2013 Conservation Potential Assessment, an additional 44 megawatts of achievable, cost-effective conservation was identified over the 20-year forecast horizon. The change is mainly driven by declines in the cost of energy efficient technologies, particularly lighting. Much of the conservation potential will come from interior and exterior lighting, new appliance efficiencies, and more energy efficient motors and controls.

Gains in Renewable Resources

Since 2012, Seattle City Light has acquired renewable generation resources and will gain more within three years. These include hydro efficiency creating an additional 40 megawatts of new capacity by 2017; 6.4 average megawatts of additional landfill gas generation at Columbia Ridge; 2.4 average megawatts of generation at West Point waste treatment plant; generation from a waste heat recovery process at Nucor Steel Seattle; and up to 2 average megawatts from solar generation installed by customers and City Light's community solar program.

Slowing Growth in Demand

Electricity demand in Seattle is forecast to grow more slowly than in 2012. Nationally, the Energy Information Administration forecasts electricity demand growth to average about one percent per year. City Light's 2014 long-term forecast is about one-half the national average in

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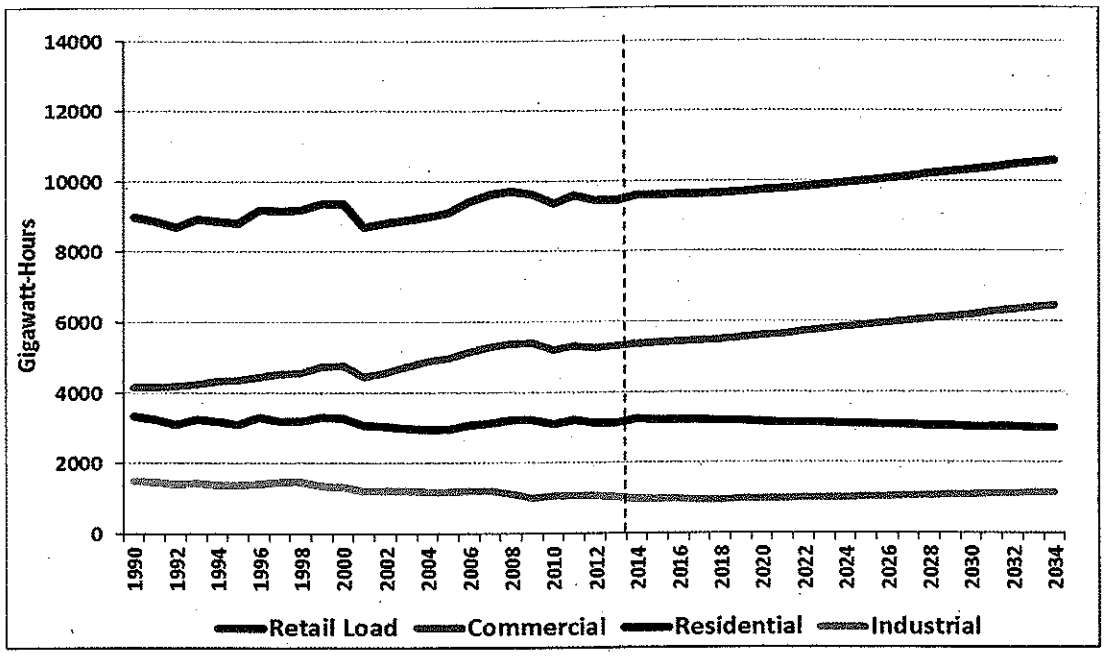
demand growth, even with Seattle's growing population and recovering economy. Commercial electricity demand is the fastest growing segment. Industrial is growing moderately, while residential demand is continuing a long, slow, decline.



In combination, new renewable resource gains, increasing conservation potential, gains in renewable resources, and slowing demand growth lead City Light to forecast that the need for new energy resources will be delayed by at least two years from the forecasts contained in the 2012 IRP. A more robust analysis of these factors will occur in Seattle City Light's 2016 Integrated Resource Plan.

Watching Key Trends

Behind the assumptions and forecasts included in long-term resource planning are important trends. These trends are often considered within long-term forecasts, but can go a very different way than expected. They pose some of the most important risks to City Light's IRP forecasts. They can drive the pace of future electricity demand growth and the future costs and availability of renewable resources.

Climate Change

As an electric utility with over 90% hydropower, climate change can have a very direct impact upon Seattle's future energy resources. In the 2010 and 2012 Integrated Resource Plans, City

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Light modeled potential impacts on its hydropower generation. In collaboration with the National Park Service and the University of Washington, City Light is currently researching the long-term effects of climate change on Skagit River Basin glaciers, whose run-off supplies much of the summer flows and hydropower from the Skagit River. If climate change accelerates, it could impact the forecast costs and seasonal availability of hydropower in the IRP. In addition, it may have implications for operations under strong precipitation and severe heat events.

Carbon Dioxide Regulation

In the 2012 IRP, City Light forecasted that there would be no carbon tax for carbon dioxide emissions before 2018. The Base Case called for a carbon tax to be applied in 2018 at less than $20/ton. The Low Case called for a tax of less than $10/ton, first applied in 2020. That forecast of stymied public policy was driven by divisive national politics, not City policy or need. With inaction by Congress, the EPA has taken steps to regulate the carbon dioxide emissions of power plants. This can cause the retirement of large coal-fired plants in the Western U.S., raising the costs and lowering the availability of power in the wholesale market.

Electric Vehicles

Electric vehicle registrations, both hybrid and electric battery, are growing rapidly from a small base. In the 2012 IRP, City Light forecast modest growth in electric vehicles driven by higher costs; range anxiety; the average time owners keep vehicles; and the recession delaying new vehicle purchases. Electric vehicles hold the potential to significantly increase demand for electricity. A new and improved battery technology or lower cost vehicles could greatly impact consumer demand. Today, in total they represent less than one-half of one percent of Seattle's electricity demand.

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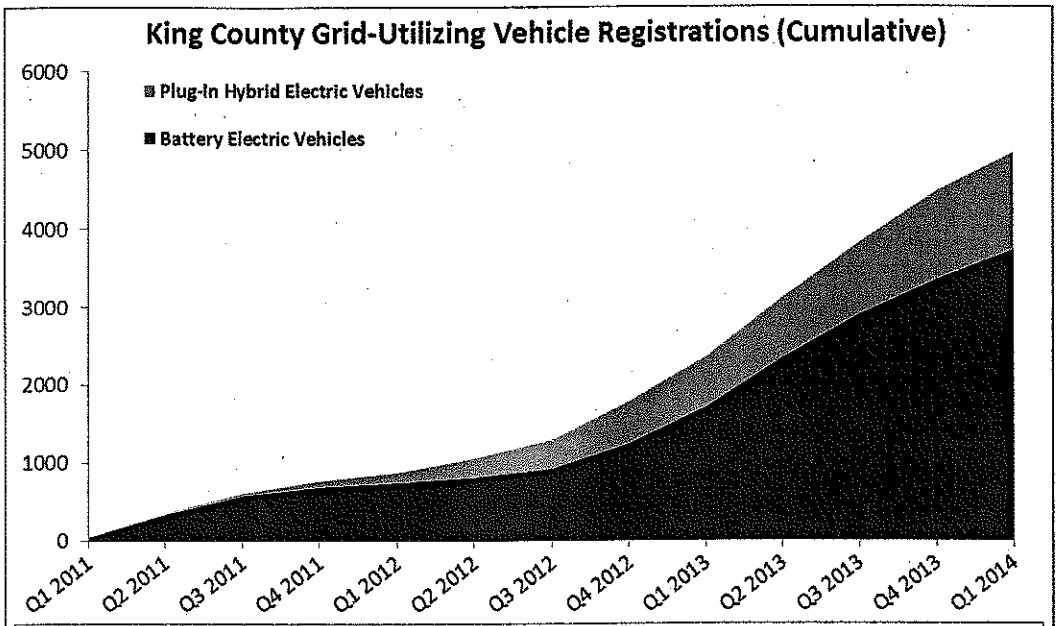

•King County plug-in vehicles totaled 4,966 as of the end of Q1 2014. Registrations grew 10.8% relative to the previous quarter - the slowest quarter-over-quarter growth rate since our records began (2010). Over the past four quarters, plug-ins have grown 111% at an average quarterly rate of 20.5%.
•Estimated 3.0 MW demand from plug-ins in King County, approximately one quarter of one percent of SCL system load for March 2014.
•Data from SCL New Technologies and EPRI.

Solar

Nationally, rapid growth in solar PV installations has led industry pundits to forecast the end of the electric utility business as we know it. A key question is: how fast? Solar installations in Seattle are highly dependent upon state and federal subsidies whose long-term fate is unknown. Seattle's cloudy marine climate and low cost electricity make it one of the least cost-effective locations for solar power in the United States. Like electric vehicles, solar installations in Seattle are growing quickly from a small base. Like electric vehicles, technology or other cost improvements could spur much faster growth. At present, solar-generated power serves about one-tenth of one percent of Seattle's electricity demand.

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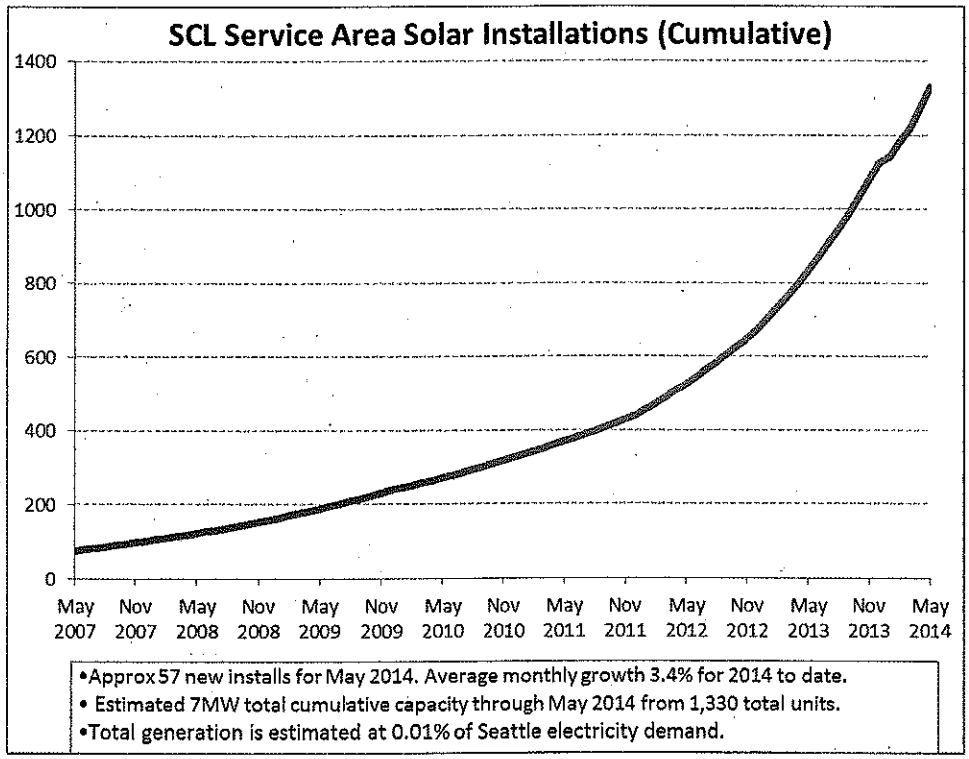

Progress Report

Beyond updating forecasts in the 2012 Integrated Resource Plan, City Light intends to file a progress report with the Washington Department of Commerce. The 2012 IRP included an Action Plan that is the focus of the progress report. City Light will report that it made strong progress on the Action Plan.

2012 IRP Action Plan Progress			
Action	**2012**	**2013**	**Progress**
Pursue accelerated conservation in the amounts targeted in the renewables: base conservation portfolio, as budget allows:	14 aMW by end of 4th Quarter	14 aMW more by end of 4th Quarter	The energy savings achieved in 2012 was 15.68 aMW; in 2013 was 15.77 aMW. These savings include the transmission & distribution-related benefits that reflect busbar savings.
Continue to acquire RECs, per the resource acquisition strategy, in order to meet I-937 requirements	Acquire an annual average of 7.3 aMW	Acquire an annual average of 7.3 aMW	The 2012 and 2013 targets were exceeded well in advance and sufficient RECs have been acquired to meet requirements into the 2020s.
Work to ensure sufficient transmission transfer capability for City Light to support serving peak customer demand	Ongoing	Ongoing	City Light's current transmission transfer capacity is sufficient. City Light continues work to obtain long-term, firm transmission for new, renewable resources.
Serve retail load with market purchases, short-term	Ongoing	Ongoing	In 2013 and 2014, City Light sold surplus

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exchanges, and transactions to reshape seasonal energy as needed			energy in March and purchased energy in April. Additionally, in 2013 surplus energy was sold in July and was purchased for August and September.
Complete a new conservation resource potential assessment for use in integrated resource planning and I-937 compliance	Complete project design and contracting	Complete study and report results for use in 2014 IRP, I-937	City Light completed a Conservation Potential Assessment in late 2013, finding 22.6 aMW of achievable conservation potential in the 2014-2015 biennium.
Engage BPA to limit the cost drivers in the FY 2013-14 rate case	Ongoing	Ongoing	City Light has continued to engage with the BPA on a wide range of issues to limit the rate at which our BPA power and transmission rates have been increasing.
Future Resource Costs			
Investigate the development status, costs, and commercial availability of resources	Ongoing	Ongoing	City Light is participating in the 7th Plan Generation Resource Advisory Committee of the Northwest Power & Conservation Council and independently collecting information on new resource developments and costs.
Continue to refine forecasts, modeling, and assumptions	Ongoing	Ongoing	Initiated long-term outage plans in IRP modeling to better define variations in resource needs through 2031. Updated the system load forecasts in 2013 and 2014.
Continue participation in and evaluation of climate change research for impacts to hydro operations and fish populations	Ongoing	Ongoing	Collaboratively working with the National Park Service and the University of Washington to study the impacts of climate change on North Cascades glaciers feeding the Skagit River basin

City Light's resource strategy defined in the 2012 Integrated Resource Plan has allowed City Light to continue to reliably serve its customers, minimize the costs to customers of power resources, and meet the conservation and renewable resource requirements of Washington's Energy Independence Act without expensive resource acquisitions. In summary, the 2014 Integrated Resource Plan Update and Progress Report finds that City Light's long-term energy resource strategy, consistent with the 2012 IRP, continues to be appropriate.

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Form revised: February 26, 2014

FISCAL NOTE FOR NON-CAPITAL PROJECTS

Department:	Contact Person/Phone:	CBO Analyst/Phone:
City Light	David Clement/206-684-3564	Greg Shiring/206-386-4085

Legislation Title:
A RESOLUTION relating to the City Light Department; acknowledging the 2014 Integrated Resource Plan Update and Progress Report as conforming with the public policy objectives of The City of Seattle and the requirements of the State of Washington; and approving the Update and Progress Report for the biennium September 2014 through August 2016.

Summary of the Legislation:
The proposed Resolution approves the 2014 Integrated Resource Plan Update and Progress Report for the biennium September 2014 through August 2016. It is pursuant to the requirements of RCW 19.280 for development of integrated resource plans or progress reports by consumer-owned utilities and approval of such plans or reports by the consumer-owned utilities' governing boards; and subsequent filing with the State of Washington Department of Commerce by September 1, 2014.

Background:
(Include a brief description of the purpose and context of legislation and include record of previous legislation and funding history, if applicable.)

- In 2007, HB 2020 (RCW 19.280) was passed by the Washington legislature. This legislation and rulemaking requires Seattle City Light to prepare an integrated resource plan or progress report for filing with the Washington Department of Commerce every two years. The requirement for the integrated resource plan or progress report is intended to ensure that Washington's utilities adequately plan for future power resource needs to maintain electric reliability.

- Resolution 31397 to adopt the 2012 Integrated Resource Plan was passed by the Seattle City Council on July 31, 2012. The proposed resolution would adopt the 2014 Integrated Resource Plan Update and Progress Report for the 2012 Integrated Resource Plan.

- The financial implications of the Integrated Resource Plan for the years 2014-2016 are being considered within the current budgeting process. The resolution approves the progress report for the period September 2014 through August 2016. Therefore, the resolution does not have any financial implications beyond those already addressed in the current budgeting process.

__X__ This legislation does not have any financial implications.

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Other Implications:

a) **Does the legislation have indirect financial implications, or long-term implications?**
No. It approves the IRP Update and Progress Report for the biennium 2014-2016. The report recommends no resource acquisitions during the biennium.

b) **What is the financial cost of not implementing the legislation?**
There is no known financial cost of not implementing the legislation. However, not implementing the legislation would fail to comply with Chapter 19.280 RCW.

c) **Does this legislation affect any departments besides the originating department?**
No.

d) **What are the possible alternatives to the legislation that could achieve the same or similar objectives?** No. The law states the governing board of the utility must approve the report. City Light's governing board is the City Council.

e) **Is a public hearing required for this legislation?**
Yes, however, the Energy Committee meeting scheduled for July 9 will meet the public hearing requirement. The IRP Update and Progress Report will be discussed there, before a vote is taken by the City Council.

f) **Is publication of notice with *The Daily Journal of Commerce* and/or *The Seattle Times* required for this legislation?**
No.

g) **Does this legislation affect a piece of property?**
No.

h) **Other Issues:**

List attachments to the fiscal note below:

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City of Seattle
Edward B. Murray
Mayor

July 1, 2014

Honorable Tim Burgess
President
Seattle City Council
City Hall, 2nd Floor

Dear Council President Burgess:

I am pleased to transmit the attached proposed resolution to adopt the 2014 Integrated Resource Plan Update and Progress Report. The report provides an update on key aspects of the 2012 Integrated Resource Plan (IRP) for Seattle City Light and discusses progress on the 2012 IRP Action Plan. It updates the forecasts of future demand for power, future conservation potential, identifies gains in renewable resources, and reports on important trends in planning for adequate resources.

With the oversight of the Council's Energy and Environment Committee, the City Council approved the last IRP on July 31, 2012 with Resolution 31397. Under Chapter 19.280 RCW, City Light must file a Progress Report on the 2012 IRP Action Plan. In conjunction with preparing the Progress Report, City Light elected to work with the IRP Stakeholders to review and update the 2012 IRP to identify potential improvements for the next full plan, to be completed in 2016. Key conclusions of the IRP Update and Progress Report are that strong progress was made on the 2012 IRP Action Plan and that the fundamental resource strategy developed within the 2012 IRP continues to be robust beyond 2016, when the next IRP will be completed.

The Integrated Resource Plan Update and Progress Report is part of an ongoing resource planning process that will help to ensure that Seattle has sufficient environmentally-responsible power and conservation resources to maintain the economic well-being, health, comfort, and safely of its citizens. Thank you for your consideration of this resolution. Should you have any questions, please contact David Clement at (206) 684-3564.

Sincerely,

Edward B. Murray
Mayor of Seattle

cc: Honorable Members of the Seattle City Council

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