

Mark Pengilly
P.O. Box 10221
Portland, Oregon 97296

January 31, 2014

Via Electronic Filing and U.S. Postal Service

Oregon Public Utility Commission
Attn: Filing Center
3930 Fairview Industrial Drive SE
PO Box 1088
Salem OR 97308-1088

Re: UM 1673 – In the Matter of Public Utility Commission of Oregon, Report to the
Legislature on Effectiveness of Incentive Programs for Solar Photovoltaic Energy

Attention Filing Center:

Enclosed for Filing in the captioned matter are an original and one copy of the Proposed
Budget for Issue Fund Grant of Oregonians for Renewable Energy Progress.

This document is being electronically filed with the Filing Center and simultaneously
served on the UM 1673 Service List by electronic mail.

Thank you.

Very truly yours,

/s/ Mark E. Pengilly

MEP:s
Enclosures
Cc: UM 1673 Service List

**BEFORE THE PUBLIC UTILITY COMMISSION
OF OREGON**

UM 1673

In the Matter of

PUBLIC UTILITY COMMISSION OF
OREGON

Report to the Legislature on
Effectiveness of Incentive Programs for
Solar Photovoltaic Energy

PROPOSED BUDGET FOR
ISSUE FUND GRANT OF
OREGONIANS FOR
RENEWABLE ENERGY PROGRESS

Pursuant to Order No. 14-002, entered January 6, 2014, and Chief Administrative Law Judge Michael Grant's Ruling dated January 17, 2014, Oregonians for Renewable Energy Progress ("OREP") submits this Proposed Budget in support of its request for a grant of \$10,280 from the Portland General Electric ("PGE") Issue Fund and a grant of \$10,280 from the PacifiCorp Issue Fund.

Pursuant to Article 6.3 of the Second Amended and Restated Intervenor Funding Agreement ("IFA"), the proposed budget must identify certain points of information

(a.) Statement of the work to be performed:

OREP intends to participate in all workshops and public meetings in UM 1673. We will submit comments, review and analyze comments filed by other parties and consult with outside experts concerning solar resource value and the costs and benefits of programs for electricity consumers.

Until the true solar resource value is determined, the Commission, utilities stakeholders and policy makers cannot have a complete discussion on solar energy policy. Without a quantitative understanding of the balance between all the benefits and the costs of distributed solar generation, consideration of incentive levels and the impact on participants and non-participants is hypothetical.

Understanding all the components of solar resource value will allow clean solar energy to be appropriately incentivized, enabling customers to take advantage of distributed

generation to lower their bills without unduly affecting taxpayers or non-participating customers and will make solar more accessible to more people.

The balance between the costs and benefits of distributed solar needs to be determined comprehensively. Docket UM 1559 explored some of the costs and benefits associated with distributed solar, but the investigation was not sufficient to quantify the full solar resource value. The Commission identified several unquantified factors as legitimate components of the solar resource value. Other unquantified factors not considered in UM 1559, such as economic development benefits, are expected to be very relevant to policy makers. While the state may determine that ratepayers should not fund incentives to promote benefits that accrue to the state as a whole, the Commission should undertake the valuable task of quantifying these benefits so that the value of solar incentive programs can be better understood by state policy makers.

Solar resource value quantification can be done professionally and efficiently by experienced outside consultants. Outside consulting assistance is likely to be necessary if the Commission, utilities and other stakeholders are to have meaningful and useful solar resource value study data to ground future policy conversations.

(b.) Description of areas to be investigated by OREP:

OREP intends to investigate the following areas that would be helpful to the Legislature in considering the impacts of any future programs that may be recommended to provide incentives for the development of solar photovoltaic energy systems: economic development benefits including net job creation and state budget impacts, the hedge value to ratepayers of avoided fuel price volatility, and avoided CO₂ compliance and real costs. OREP will run sensitivity analysis on model parameters such as time duration and discount rate. OREP will hire independent experts to study and report on matters for which OREP lacks in-house expertise. A more detailed scope of work and researcher credentials are attached as Exhibit A.

(c.) Description of customer class or classes that will benefit from OREP's participation:

All customer classes, including participants in solar incentive programs, both business and residential, will benefit from this intervenor study, as well as all customers/taxpayers who may realize more stable, long-term rates from distributed solar generation.

(d.) Identification of the specific accounts from which OREP is seeking an Issue Fund Grant and an estimate of the amount of available funds in that account:

OREP seeks an Issue Fund Grant in the amount of \$10,280 from the PGE Issue Fund Grant, and an Issue Fund Grant of \$10,280 from the PacifiCorp Issue Fund. OREP will bear the cost of its participation to the extent that its costs exceed the amount requested. However, in the event that the Commission elects to modify the scope of this docket, OREP requests the right to file an amended budget.

OREP estimates that the amount available in the PGE Issue Fund Account for 2014 is \$152,622.00, and that the amount available in the PacifiCorp Issue Fund Account for 2014 is \$138,480.00

(e.) Budget showing estimated attorney and consultant fees and expert witness fees, which may include the cost for appropriate support staff and operational support:

Attached as Exhibit B is OREP's proposed Budget in UM 1673

(f.) Representation of the use of matching funds:

OREP represents that it will use matching funds, in the form of either in-house resources or outside funding, to account for or pay at least 20% of the Eligible Expenses for the work to be performed for which OREP is seeking an Issue Fund Grant. See attached Exhibit B.

Dated this 31st day of January 2014.

Respectfully submitted,

/s/Mark E. Pengilly

Mark E. Pengilly

Oregonians for Renewable Energy Progress

PO Box 10221

Portland, OR 97296

(503) 860-6410

mpengilly@gmail.com

EXHIBIT A

PROPOSED SCOPE OF WORK FOR ISSUE FUND GRANT OF OREP

The following is a list of impacted areas to be studied in assessing the value of additional solar resources in Oregon:

Job Creation

The increasing use of solar for power generation in Oregon impacts the employment market in several key ways. We will use the NREL Jobs and Economic Development Impact (JEDI) model for a quantitative analysis of direct and indirect job creation and will aggregate existing data and studies, with help from industry associations (OSEIA) and others, to assess the likely range of net impacts of continuing solar adoption and use over the study period. These impacts include:

- Direct employment: Gains in installation and related jobs, losses from offset jobs in other power production.
- Indirect job impacts: Gains from support and growth of related industries and businesses, such as panel production and related materials.
- Rate related job impacts: Sensitivity analysis of economic impacts of utility rate and rate stability changes, including changes in fuel sensitivity risk, on employment, location, and expansion decisions.
- Direct carbon risk impacts: How may reduced exposure to carbon risk and liability impact industry and employment prospects?

Broader economic impacts of local energy sourcing

Shifting to greater use of solar shifts the mix of local and external economic activity for both deployment and power production. In this section we will examine:

- The amounts and ratio of local and external economic activity generated from solar installation.
- The amounts and ratio of local and external economic activity not generated from offset alternative power facility construction.
- The net economic activity shift (in value and risk) resulting from reduced purchase of inputs (fuel, power, services) from out of state in the presence of increased solar.
- Impacts on state and local revenues

Carbon compliance costs

Shifting away from carbon-based generation reduces exposure to compliance costs and risks. We will seek to identify the range of likely marginal impacts, including:

- New and existing source EPA carbon emissions standards. What is the range of possible savings in compliance costs for generation not built?
- Carbon fees or taxes. What is the range of costs likely over the study period? What is the range of uncertainty / risk impact in carbon price growth?
- Stranded asset costs. Regulations and compliance costs are likely to lead to early retirement requirements for some facilities (as occurred with Boardman). What savings accrue when these units don't need to be built?

Direct carbon and related pollution costs

Alternatives to solar generation have environmental impacts and costs to the state and local communities. We will survey the literature to identify and quantify:

- Economic and social costs of non-carbon (conventional) pollution from non-solar generation, associated facilities and transport, on air, water, and land.
- Direct economic impacts of climate change from emissions of CO₂ and other Greenhouse Gasses during the study period.
- Indirect economic impacts of incremental global climate change resulting from emissions.
- Other carbon emission impacts, including impacts of acidification on fisheries and coastal community economies.

Fuel price risk exposure

Conventional (fossil) fuels, especially natural gas, have experienced considerable historic volatility, and recent production experience show this is likely to continue. We will examine the range of impacts from several scenarios, including:

- Differential impact on rates resulting from globalization of natural gas markets, as anticipated from expanded LNG export capabilities.
- Implications of rapid depletion observed in newly developed gas fields.
- Impacts of increasing production costs and risks in new natural gas source development.
- Potential for development of new low-cost gas sources.
- Price impacts of increased demand from build-out of new natural gas generation nationally.
- Impacts of developing demand for natural gas for transportation fuels and feedstocks.
- Potential impacts from supply disruption resulting from increased environmental regulation of gas exploration and extraction (fracking).

Sensitivity Analysis of Key Parameters in Calculating Value of Solar

Since forecasts of the parameters that impact the value of solar have inherent uncertainty, we will examine how the range of possible values impact our conclusions. Parameters such as time horizon, discount rate, fuel cost escalation, carbon pricing, and rates of solar adoption are appropriate for this treatment.

General Approach

We will draw upon a broad range of resources as a basis for these evaluations, which we will adapt as necessary to fit the local environment. We do not anticipate engaging in significant original research. We will endeavor to appropriately identify both the limitations of our analyses and the potential value of further study.

In presenting the findings from studying these specific impacts, we will also perform a qualitative analysis of collected impacts in context. In particular, we are concerned with understanding risks and benefits for low-income populations, when these impacts, and the impacts identified by PUC staff, occur against the background of other sources of economic and social volatility.

Future Work

We are in discussions with the Northwest Economic Research Center at Portland State University regarding an independently-funded extended study. This would enable full system modeling of the Oregon economy for a state-of-the-art evaluation of economic effects of varying degrees of solar photovoltaic deployment in Oregon. The work done under this PUC funding opportunity would be leveraged by providing much of the data inputs needed for the more extensive modeling effort.

PROPOSED CONTRIBUTORS

Steve McGrath, Consultant

Graduate Certificate in Applied Energy Economics, Portland State University
MBA, Finance, Portland State University
B.A., Statistics, University of California, Berkeley

Steve McGrath draws on extensive experience as a financial analyst, statistical analyst, staff scientist, software developer and consultant, sustainable business analyst, renewable energy and energy efficiency business owner, an intervenor in previous PUC dockets, and expert witness for legislative committees.

Kathleen Newman, Senior Policy Analyst at Oregonians for Renewable Energy Progress

A.A.S., Architectural Design and Drafting Portland Community College
Ph.D., Environmental Engineering, Massachusetts Institute of Technology
B.S., Chemistry, Cornell University

Raymond Neff, Senior Research Fellow at Oregonians for Renewable Energy Progress

Masters Degree in Community and Regional Planning, University of Oregon
B.S., Planning, Public Policy and Management, University of Oregon

Mark Pengilly, Senior Policy Director at Oregonians for Renewable Energy Progress

J.D., Indiana University
B.A., Stanford University

EXHIBIT B

PROPOSED BUDGET FOR ISSUE FUND GRANT OF OREP

<u>OREP Internal Expenses</u>	<u>Rate</u>	<u>Hours</u>	<u>Cost</u>
Kathleen Newman, Ph.D.	\$200	25	\$5,000
Ray Neff, M.C.R.P.	\$150	20	\$3,000
Mark Pengilly, J.D.	\$200	20	\$4,000
<i>Operational Expenses</i>			
Printing & Mailing			\$50
Travel			\$150
<u>External Professional Consultant Fees</u>			
Steve McGrath, M.B.A.	\$225	60	\$13,500
<u>In-House Resources</u>			
20% of Eligible Expenses			(\$5,140)
<u>Total</u>			\$25,700
OREP Request*			\$20,560

Though OREP shows eligible expenses in the amount of \$25,700, OREP seeks an issue fund grant in the amount of \$20,560.

CERTIFICATE OF SERVICE

I certify that I have on this day served the foregoing documents:

PROPOSED BUDGET FOR ISSUE FUND GRANT OF OREGONIANS FOR
RENEWABLE ENERGY PROGRESS

in Oregon PUC Docket No. UM 1673, by electronic mail to the PUC Service List as of
this date, which is attached hereto and made a part hereof.

Dated this 31st day of January 2014.

/s/ Mark E. Pengilly

Mark E. Pengilly

Oregonians for Renewable Energy Progress

Summary Report

UM 1673 PUC LEGISLATIVE REPORT TO COMPLY WITH HB 2893 SOLAR INCENTIVES

Category: Miscellaneous

In the Matter of
PUBLIC UTILITY COMMISSION OF OREGON,
Report to the Legislature on Effectiveness of Incentive Programs for Solar Photovoltaic Energy.

Docket opened by HB 2893. Copy and paste link below into...

Filing Date: 9/23/2013

SERVICE LIST:

OPUC DOCKETS
CITIZENS' UTILITY BOARD OF OREGON
610 SW BROADWAY, STE 400
PORTLAND OR 97205

REGULATORY DOCKETS
IDAHO POWER COMPANY
PO BOX 70
BOISE ID 83707-0070

OREGON DOCKETS
PACIFICORP, DBA PACIFIC POWER
825 NE MULTNOMAH ST, STE 2000
PORTLAND OR 97232

RNP DOCKETS
RENEWABLE NORTHWEST PROJECT
421 SW 6TH AVE., STE. 1125
PORTLAND OR 97204

GREGORY M. ADAMS
RICHARDSON ADAMS, PLLC
PO BOX 7218
BOISE ID 83702

ADAM BLESS
PUBLIC UTILITY COMMISSION OF OREGON
PO BOX 1088
SALEM OR 97308-1088

KACIA BROCKMAN
*OREGON DEPARTMENT OF ENERGY
625 MARION ST NE
SALEM OR 97301-3737

DAVID BROWN
OBSIDIAN RENEWABLES, LLC
5 CENTERPOINT DR, STE 590
LAKE OSWEGO OR 97035

MEGAN WALSETH DECKER
RENEWABLE NORTHWEST PROJECT
421 SW 6TH AVE #1125
PORTLAND OR 97204-1629

ROBERT DELMAR
*OREGON DEPARTMENT OF ENERGY
625 MARION STREET NE
SALEM OR 97301-3737

CHARLIE FISHER
ENVIRONMENT OREGON
1536 SE 11TH AVE STE B
PORTLAND OR 97214

RENEE M FRANCE
*OREGON DEPARTMENT OF JUSTICE
NATURAL RESOURCES SECTION
1162 COURT ST NE
SALEM OR 97301-4096

J RICHARD GEORGE
PORTLAND GENERAL ELECTRIC COMPANY
121 SW SALMON ST 1WTC1301
PORTLAND OR 97204

WENDY GERLITZ
NW ENERGY COALITION
1205 SE FLAVEL
PORTLAND OR 97202

Summary Report

UM 1673 PUC LEGISLATIVE REPORT TO COMPLY WITH HB 2893 SOLAR INCENTIVES

SARAH HIGGINBOTHAM
ENVIRONMENT OREGON
1536 SE 11TH AVE STE B
PORTLAND OR 97214

JULIA HILTON
IDAHO POWER COMPANY
PO BOX 70
BOISE ID 83707-0070

ROBERT JENKS
CITIZENS' UTILITY BOARD OF OREGON
610 SW BROADWAY, STE 400
PORTLAND OR 97205

ROBERT D KAHN
NW & INTERMOUNTAIN POWER PRODUCERS COALITIO
1117 MINOR AVENUE, SUITE 300
SEATTLE WA 98101

RHETT LAWRENCE
SIERRA CLUB
1821 SE ANKENY ST
PORTLAND OR 97214

ETTA LOCKEY
PACIFICORP
825 NE MULTNOMAH ST., STE 1800
PORTLAND OR 97232

RICHARD LORENZ
CABLE HUSTON BENEDICT HAAGENSEN & LLOYD LLP
1001 SW FIFTH AVE - STE 2000
PORTLAND OR 97204-1136

FRANCO LUCCHIN
CITY OF PORTLAND
1221 SW 4TH AVE
ROOM 430
PORTLAND OR 97204

G. CATRIONA MCCrackEN
CITIZENS' UTILITY BOARD OF OREGON
610 SW BROADWAY, STE 400
PORTLAND OR 97205

DEBBIE MENASHE
ENERGY TRUST OF OREGON
421 SW OAK ST, STE. 300
PORTLAND OR 97204

KATHLEEN NEWMAN
OREGONIANS FOR RENEWABLE ENERGY POLICY
1553 NE GREENSWORD DR
HILLSBORO OR 97214

MICHAEL O'BRIEN
RENEWABLE NORTHWEST PROJECT
421 SW 6TH AVENUE #1125
PORTLAND OR 97204

BRIAN PASKO
SIERRA CLUB
1821 SE ANKENY ST
PORTLAND OR 97214

MARK PETE PENGILLY
OREGONIANS FOR RENEWABLE ENERGY POLICY
PO BOX 10221
PORTLAND OR 97296

LISA F RACKNER
MCDOWELL RACKNER & GIBSON PC
419 SW 11TH AVE., SUITE 400
PORTLAND OR 97205

PETER J RICHARDSON
RICHARDSON ADAMS, PLLC
PO BOX 7218
BOISE ID 83707

CHRIS ROBERTSON
CHRIS ROBERTSON & ASSOCIATES, LLC
3707 NE 16TH AVE
PORTLAND OR 97212

THAD ROTH
ENERGY TRUST OF OREGON
421 SW OAK STE 300
PORTLAND OR 97204

Summary Report

UM 1673 PUC LEGISLATIVE REPORT TO COMPLY WITH HB 2893 SOLAR INCENTIVES

ANNE SMART
THE ALLIANCE FOR SOLAR CHOICE
18595 MARKET ST 29TH FL
SAN FRANCISCO CA 94105

CHAD M STOKES
CABLE HUSTON BENEDICT HAAGENSEN & LLOYD LLP
1001 SW 5TH - STE 2000
PORTLAND OR 97204-1136

GARY TAWWATER
PACIFIC POWER
825 NE MULTNOMAH STE 2000
PORTLAND OR 97232

JAY TINKER
PORTLAND GENERAL ELECTRIC
121 SW SALMON ST 1WTC-0702
PORTLAND OR 97204

JAIMES VALDEZ
CITY OF PORTLAND
1900 SW 4TH AVE
ROOM 7100
PORTLAND OR 97201