Jerold G. Oldroyd, Esq. (#2453)
Tesia N. Stanley, Esq. (#13367)
Ballard Spahr LLP
201 South Main Street, Suite 800
Salt Lake City, Utah 84111-2221
Telephone: (801) 531-3000
Facsimile: (801) 531-3001
OldroydJ@ballardspahr.com
StanleyT@ballardspahr.com

Daniel R. Simon, Esq.
Ballard Spahr LLP
1909 K Street, NW, Suite 1200
Washington, DC 20006
Telephone: (202) 661-2200
Facsimile: (202) 661-2299
simond@ballardspahr.com

Attorneys for Scatec Solar North America, Inc.

BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH

In the Matter of the Application of Rocky Mountain Power for Approval of Changes to Renewable Avoided Cost Methodology for Qualifying Facilities Projects Larger than Three Megawatts	)))))))	Docket No. 12-035-100 DIRECT TESTIMONY OF LUIGI RESTA

Scatec Solar North America, Inc., by and through its counsel, hereby files the direct testimony of Luigi Resta with the Public Service Commission of Utah in the above-captioned matter.

Respectfully submitted this 29th day of March, 2013.

/s/ Jerold G. Oldroyd
Jerold G. Oldroyd
Attorney for Scatec Solar North America, Inc.

Q: PLEASE STATE YOUR NAME, POSITION, AND BUSINESS ADDRESS.

A: My name is Luigi Resta. I am the Chief Executive Officer of Scatec Solar North America, Inc. ("Scatec"). My business address is 2320 Marinship Way, Suite 300, Sausalito, California, 94965.

Q: PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND RELEVANT PROFESSIONAL EXPERIENCE.

A: I have been invested in the success of renewable energy most of my life. In 1972, my parents started "Future Studies," which looked at the environmental impact on the land caused by humans. In my current position as Chief Executive Officer of Scatec, I am responsible for all facets of project development, including property acquisitions and permitting; interconnection and technical work; providing testimony; technology selections; engineering, procurement, and construction ("EPC") provider and partner selections and negotiations; project finance structures; and general operations. I have served as CEO since December 2011. Prior to this role, I served as Chief Sales Officer. In this role, I had responsibility for general project development in both commercial and utility size projects. My career began in solar in 2005, where I held the position of Founder and Vice President of Business Development for a venture capital-backed renewable energy company called AMG Energy. I've also testified in Docket No. 2011-0384 at the Hawaii Public Utilities Commission regarding a Power Purchase Agreement Scatec entered into with the Hawaiian Electric Company and related 46-kV line extension.

Q: PLEASE DESCRIBE SCATEC AND ITS INTEREST IN THIS PROCEEDING.

A: Scatec, a wholly owned subsidiary of Scatec Solar AS, focuses on the development of commercial- and utility-scale solar power projects. These development capabilities include designing, constructing, operating, and maintaining solar photovoltaic (PV) power plants. Scatec's executive team consists of qualified individuals with extensive renewable energy development experience and success. Scatec Solar AS, headquartered in Oslo, Norway, was formed in 2007 and is an established global developer of ground-mount and commercial rooftop PV solar energy solutions, focusing on making solar power attractive and affordable to customers and investors worldwide. We are currently working on developing a utility-scale solar photovoltaic project in Iron County, Utah. As a utility-scale solar developer, this proceeding may provide a critical aspect of the economics of our project.

Utah does not have a traditional Renewable Portfolio Standard. Nevertheless, allowing Scatec to sell the Renewable Energy Credits ("RECs") to a willing buyer in Utah or another state could provide the economic catalyst that enables the project to be built. In fact, RECs generated by solar projects generate higher-value RECs in states that include solar carve-outs in the Renewable Portfolio Standards.

Q: WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A: The purpose of this testimony is to respond to testimony submitted in this proceeding on behalf of PacifiCorp dba Rocky Mountain Power ("PacifiCorp") with respect to with respect to the proper ownership of RECs, as between the utility and the qualifying facility ("QF") that sells to the utility under the Public

Utility Regulatory Policy Act ("PURPA"), and address additional issues regarding PacifiCorp's methodology for calculating "avoided cost."

Q: PLEASE SUMMARIZE YOUR TESTIMONY

A: **First,** I recommend that the Public Service Commission of Utah ("Commission") follow its precedent in Docket No. 10-035-15, *"In the Matter of the Complaint of Cottonwood Hydro, LLC vs. Rocky Mountain Power"* (Report and Order, issued May 27, 2010) *("Cottonwood"*), and find that, absent a *negotiated* contractual provision to the contrary, a QF that sells to a utility under PURPA, whether wind, solar or any other such QF, retains the rights to any RECs associated with that QF, as the avoided cost price does not typically account for the environmental attributes of renewable energy. In supporting my position, I rely upon Federal Energy Regulatory Commission ("FERC") precedent on PURPA, including orders issued in 2012 affirming its approach. I have been told by counsel for Scatec that the Commission is bound by orders of FERC. In my view, the FERC orders are not only consistent with the Commission's treatment of RECs in *Cottonwood*, but also consistent with its Report and Order issued on October 31, 2005, in Docket No. 03-035-14, *"In the Matter of the Application of PacifiCorp for Approval of an IRP-Based Avoided Cost Methodology for QF Projects Larger Than One Megawatt"* ("2005 PacifiCorp Order").

Second, I advocate that PacifiCorp adopt a solar-specific Market Proxy price methodology and include an appropriate amount of solar power in its Integrated Resource Plan ("IRP").

Finally, I explain how PacifiCorp's avoided cost methodology does not account

for the useful role large-scale solar plays as a "hedge" against regulatory and fuel price uncertainty.

REC OWNERSHIP

Q: PLEASE DESCRIBE PACIFICORP'S POSITION ON OWNERSHIP OF RECS.

A: Pursuant to testimony filed January 31, 2013, PacifiCorp claims that "RECs generated by a QF project should go to the utility whenever that QF sells energy to the utility and receives compensation for that energy at approved avoided cost rates." Direct Testimony of Paul H. Clements ("Clements Testimony") at p. 3. PacifiCorp bases its position on the assertion that "PURPA contains no requirement that a purchasing utility pay twice for what it has already bought." *Id.* at 4.

Q: IS PACIFICORP'S POSITION CONSISTENT WITH FERC PRECEDENT ON IMPLEMENTING PURPA?

A: No. In fact, PacifiCorp's position directly conflicts with FERC precedent on PURPA.

Q: PLEASE EXPLAIN.

A: In *American Ref-Fuel Co*., 105 FERC ¶ 61,004 (2003), *order denying reh'g*, 107 FERC ¶ 61,016 (2004), FERC explained that "PURPA does determine the rate which electric utilities must offer to purchase electric energy from QFs." *American Ref-Fuel Co*., 107 FERC ¶ 61,016 at P 12. FERC's regulations at 18 C.F.R. § 292.304(e) set forth the factors to be considered to calculate PURPA's avoided cost rate. These factors do not include environmental attributes:

> [T]he factor that is not mentioned in the Commission's regulations is the environmental attributes of the QF selling to the utility. This is because, under PURPA and our implementing regulations, avoided costs were intended to put the utility in the same position when purchasing QF capacity and energy as if the utility either had generated the energy itself or purchased the energy from another source. In this regard, the avoided cost that a utility pays a QF does not depend on the type of QF, i.e., whether it is a fossil-fuel-fired cogeneration facility or a renewable-energy-fired small power production facility. As those seeking rehearing recognize, only renewable energy small power production facilities have renewable attributes, yet the energy from a cogeneration facility is priced the same as the energy from a small power production facility. Both are priced based on a purchasing utility's avoided costs. The Commission thus reasonably concluded that avoided cost rates are not intended to compensate the QF for more than capacity and energy.

American Ref-Fuel Co., 107 FERC ¶ 61,016 at P 15.

FERC recognized that state law – not PURPA – created the concept of RECs, and therefore can determine who owns them and how they are sold. The avoided cost paid by a utility typically does not cover the environmental attributes.

Importantly, FERC recognized that state law that allows for RECs to be unbundled and traded therefore proves that an avoided cost contract does not include payment for the environmental attributes:

> The very fact that RECs may be unbundled and may be traded under State law indicates that the environmental attributes do not inherently convey pursuant to an avoided cost contract to the purchasing utility.

American Ref-Fuel Co., 107 FERC ¶ 61,016 at P 16.

Q: PLEASE DESCRIBE THE MORE RECENT FERC ORDERS THAT YOU MENTIONED.

A: In *Morgantown Energy Associates*, 139 FERC ¶ 61,066 at P 47 (2012), FERC followed its earlier decisions in *American Ref-Fuel Co*. to find that the avoided

cost rate does not compensate a QF for RECs or other environmental attributes:

> [U]nder PURPA and the Commission's regulations, electric utilities must purchase energy and capacity made available by QFs, and that rates for these purchases must be just and reasonable to the electric customer of the electric utility and in the public interest, and not discriminate against QFs. Additionally, an electric utility is not required to pay the QF more than the avoided costs of generating the power itself or of purchasing from another source. The Commission stated that these avoided cost rates, "in short, are not intended to compensate the QF for more that capacity and energy." To the extent that the West Virginia Order finds that avoided-cost rates under PURPA also compensate for RECs, the West Virginia Order is inconsistent with PURPA.

FERC denied rehearing of the *Morgantown* order in *Morgantown Energy Associates, et al*, 140 FERC ¶ 61,223 (2012).

Q: HOW HAS THE COMMISSION INTERPRETED STATE LAW REGARDING REC OWNERSHIP?

A: The Commission's *Cottonwood* order involved a QF hydropower facility. It relied upon its earlier 2005 PacifiCorp Order and its February 3, 2006 Order on Reconsideration and Clarification of that Order in Docket No. 03-035-14 ("2006 PacifiCorp Order"). In *Cottonwood*, the Commission held that its 2006 PacifiCorp Order had ruled that the energy and environmental attributes of energy generated by a QF can be separated, and that "the Commission 'considers[s] the ownership of RECs to be a separable contractual issue.'" *Cottonwood* at 9 (citing to the 2006 PacificCorp Order). This Commission already has determined, therefore, that QF energy and RECs, are separable.

Q: PLEASE CONTINUE YOUR DESCRIPTION OF THE *COTTONWOOD* ORDER.

A: In describing the 2005 and 2006 PacifiCorp Orders, the Commission in

Cottonwood found that "absent a contract providing otherwise, the RECs remain with the QF even when the power generated is delivered to the utility." *Cottonwood* at 9. The same finding is at p. 11 in ordering paragraph 2 of the *Cottonwood* order. (Stating "[u]nless provided for otherwise in a contract, the RECs remain with the generator of renewable energy, and may be sold and valued separately from the energy produced or retained by the generator of the REC.") In fact, the Commission in *Cottonwood* confirmed that its two PacifiCorp Orders had the same result, by stating that "it would be discriminatory" to treat smaller QFs (whose rates are determined under Schedule 37) different than larger QFs (whose rates are determined pursuant to Schedule 38 as in the PacifiCorp orders) "with respect to ownership of RECs." *Cottonwood* at 10.

Q: TOGETHER, WHAT DO THE FERC ORDERS AND PRIOR COMMISSION DECISIONS MEAN?

A: These FERC orders directly show that RECs are NOT part of what the utility is buying when paying a QF through a generic avoided cost methodology. They also show that PacifiCorp's customers are not harmed if the avoided cost does not include the RECs because the utility is not paying "twice for what it has already bought." Clements Testimony at 4. The prior Commission decisions explain that RECs can be unbundled and separated from the energy generated by renewable energy projects. Therefore, RECs are not included in an avoided cost contract.

Q: DOES PACIFICORP'S PROXY/PDDRR METHOD FOR CALCULATING AVOIDED COST OFFERED TO SOLAR PROJECTS TAKE INTO ACCOUNT THE ENVIRONMENTAL ATTRIBUTES OF THE QF?

A: No. The Proxy/PDDRR method calculates an energy price based on the system energy value of adding a QF resource and a capacity price "based on the cost and timing of the next deferrable thermal resource in the IRP." Direct Testimony of Gregory N. Duvall, filed January 31, 2013 ("Duvall Testimony") at 5.

Q: DO YOU HAVE ANY COMMENT ON PACIFICORP'S ASSERTION (CLEMENTS TESTIMONY AT P. 6) THAT A RECENT DECISION IN WYOMING SUPPORTS HIS RECOMMENDATION?

A: Yes. First, as counsel has informed me, FERC orders are binding on the Commission, but the Wyoming order is not. Second, the key issue here is whether state law allows REC unbundling. The Commission already has determined that Utah state law allows such unbundling; therefore, an avoided cost contract does not compensate the QF for the environmental attributes. Additionally, I note that the Minnesota Public Utilities Commission has ruled that avoided cost rates for capacity and energy sold under contracts entered into under PURPA *do not* convey renewable energy credits to the purchaser, even if the contracts are silent on the issue, relying in part on FERC's decision in *American Ref-Fuel*. *"In the Matter of Xcel Energy's Petition for a Determination of Entitlement to Renewable Attributes of Energy Purchases Pursuant to Renewable Energy Requirements"*, Docket No. E-002/M-08-440 (Sept. 9, 2010).

MARKET PROXY FOR SOLAR

Q: DO YOU ADVOCATE ANY CHANGES TO PACIFICORP'S AVOIDED COST METHODOLOGY?

A: Yes. As Mr. Duvall explains in his direct testimony at pages 4-5, PacifiCorp

currently uses a "Market Proxy" method for determining the avoided cost paid to wind QF resources that do not exceed the IRP target for wind resources. As Mr. Duvall explains, to derive avoided cost prices using the Market Proxy method, the Commission requires PacifiCorp to use the "most recently executed RFP contract … against which project specific adjustments are made to produce an indicative price for wind QFs in Utah." The last RFP conducted by the Company was the 2009 RFP, which was issued on July 8, 2009. The 2009 RFP resulted in the selection of the Dunlap wind facility; therefore, the Dunlap wind facility is the resource currently used to set the Market Proxy avoided cost prices. It is my understanding that PacifiCorp does not provide the same opportunity for large-scale solar to obtain an avoided cost rate based on a Market Proxy price targeted to the cost of a large-scale solar facility.

Q: DOES PACIFICORP TREAT WIND AND SOLAR DIFFERENTLY IN ITS IRP?

A: I believe so. PacifiCorp's 2004 IRP included a wind target of 1,400 MW. Mr. Duvall indicates at pages 8-9 of his testimony that PacifiCorp's 2011 IRP Update includes 2,075 MW of new wind resources. Looking at the 2011 IRP Update cited by Mr. Duval, Table 5.5 (labeled 2012 Business Plan Portfolio, Detail Level on page 55) identifies a 2012-2030 target of 2,075 MW of "Wind, Wyoming, 35% Capacity Factor." I presume this 2,075 MW is the same figure Mr. Duval mentions in his testimony. I see no similar target for large scale solar. The only solar I see listed in PacifiCorp's Table 5.5 is in the Western part of its system; specifically, 9 MW for the "OR Solar Capacity Standard," and 6 MW for the "OR

Solar Incentive Program Pilot." It is my understanding that these are programs in Oregon.

Q: WHY DO YOU FIND PACIFICORP'S APPROACH TO SOLAR INAPPROPRIATE?

A: Solar provides many of the same advantages as wind, while providing additional benefits wind does not. For instance, neither wind nor solar have any fuel costs, so both provide a useful hedge against future natural gas and coal prices. Both also provide a useful hedge against costs PacifiCorp likely will incur in complying with environmental regulations, especially the many Clean Air Act regulations the U.S. Environmental Protection Agency has been implementing. These regulations include the likely implementation of regulations to control greenhouse gas emissions.

Unlike wind, however, solar tends to produce the most energy around peak load hours when it is needed the most during sunny and hot hours. As PacifiCorp's own exhibit recognizes (at page 1 of PacifiCorp's Exhibit A, Historical Capacity Contribution of Wind and Solar Resources), solar has a much higher peak capacity factor than wind. Solar also is less costly to integrate into the grid than wind.

Q: ARE PACIFICORP'S CAPACITY CONTRIBUTION ESTIMATES FOR SOLAR ACCURATE?

A: PacifiCorp's evaluation of solar capacity factor underestimates the capacity factor likely to be achieved by a project in southern Utah, such as the Scatec project in Iron County. As PacifiCorp explains (at page 6 of its Exhibit A):

> The capacity contribution measurement was based on a simulated class of solar resources representative of locations throughout the PacifiCorp's service territory. It was developed using the combined simulated profiles from five locations: Pocatello, ID; Yakima, WA; Pendleton, OR; Lander, WY; and Salt Lake City, UT. The analysis was performed twice, first with all of the resources configured to energy and second with all of the resources configured to peak, as detailed above.

These "combined simulated profiles" failed to include southern Utah, the best location within PacifiCorp's system for solar, and the location in which Scatec plans to develop its Iron County project.

Q: DOES SOLAR PROVIDE ANY ECONOMIC DEVELOPMENT ADVANTAGES FOR UTAH?

A: Yes. Solar also provides Utah a great opportunity for in-state economic development. As PacifiCorp's own 2011 IRP Update indicates, PacifiCorp plans to obtain its wind capacity from Wyoming. In contrast, Utah – particularly southern Utah – provides terrific solar conditions, better than those generally available in the rest of the PacifiCorp system. An emphasis on solar for PacifiCorp would likely lead to solar projects being developed in Utah.

Q: ISN'T SOLAR EXPENSIVE?

A: It is understandable that PacifiCorp treated wind and solar differently in its 2004 IRP, as wind power at the time was measurable less expensive. But today, the circumstances have changed dramatically. The price for PV panels has dropped significantly and is now comparable to wind on a per-kW installed basis. Furthermore, PacifiCorp would not need to include in its IRP a solar capacity target equal to wind. A 200 MW to 300 MW solar target for the *entire* PacifiCorp system, for instance, is just a fraction of its 2,075 MW target for wind. Any slight

premium PacifiCorp might have to pay for a small solar capacity carve-out would be offset by the added value solar brings, as I discuss above. Much of this solar capacity could be developed and deployed here in Utah.

Q: SHOULD PACIFICORP OFFER THE SAME MARKET PROXY PRICE FOR WIND AND SOLAR?

A: No. Although solar is generally more expensive than wind based on a per-kW/hour produced, as I discussed above, solar provides unique benefits that wind does not, particularly by generating the most power during the hours of the day that demand is highest.

SOLAR AS A HEDGE AGAINST FUEL AND REGULATORY RISKS

Q: DO YOU HAVE ANY RECOMMENDATIONS FOR MODIFYING PACIFICORP'S PROXY/PDDRR METHODOLOGY?

A: Yes. To the extent PacifiCorp uses the Proxy/PDDRR methodology for calculating the avoided cost for solar QFs under Schedule 38, it should at least take into account the hedging capability solar provides against the many risks PacifiCorp will face in environmental regulations and fuel costs.

Q: EXPLAIN HOW SOLAR CAN PROVIDE A HEDGE AGAINST ENVIRONMENTAL REGULATORY RISK?

A: It is my understanding that the U.S. EPA has been developing and implementing several sets of new environmental regulations governing different aspects of power plant emissions. These regulations may eventually include controls over greenhouse gas emissions. Solar power has essentially no emissions. As PacifiCorp will need to evaluate which fossil fuel plants it must make expensive

upgrades to control emissions or shut down altogether, large-scale solar PV projects will require no such changes. Any portion of solar generating capacity under contract with PacifiCorp through long-term fixed prices represents a portion of PacifiCorp's fleet that will not be at risk of having to address those air emissions regulations.

Q: EXPLAIN HOW SOLAR CAN PROVIDE A HEDGE AGAINST FUEL PRICE RISK?

A: Large-scale solar requires no variable fuel costs. In contrast, coal and natural gas prices constantly move. Natural gas prices in particular may be hard to predict, as so many electric utilities that rely heavily on coal (such as PacifiCorp) move towards natural gas. Additional potential impacts to natural gas prices include changes to environmental regulations governing the process of hydraulic fracturing or federal regulatory changes to allowing the export of natural gas could impact natural gas prices.

It is my understanding that PacifiCorp relies heavily on coal-fired generating facilities to serve its Utah load, and that it plans to increase its reliance on natural gas. The price of both of these fuels can be volatile. Although currently at historically low prices, natural gas has a long history of tremendous price volatility.

Increased natural gas demand, new environmental regulations (either air emissions or drilling requirements), and increased natural gas exports: any one of these difficult to predict factors could increase natural gas price volatility in a manner that is difficult to predict.

Q: DOES THIS CONCLUDE YOUR TESTIMONY?

A: Yes, this concludes my testimony.

VERIFICATION

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Executed on March 29th, 2013.

/s/ Luigi Resta
Luigi Resta