

August 26, 2008

Florida Public Service Commission  
C/o Ms. Karen Webb  
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Dear Public Service Commissioners,

Environmental Defense Fund (EDF) eagerly anticipates passage of a Renewable Portfolio Standard (RPS) by the Florida Legislature in the upcoming 2009 legislative session. Florida has enormous potential to become a national and world leader on clean energy. When harnessed, this potential will diversify Florida's economy, create jobs, enhance the quality of life of its citizens and protect Florida's environment. Unfortunately, the Draft Rule made public by PSC staff on August 11, 2008 does not earn the support of the Environmental Defense Fund, because it does not significantly deploy renewable energy, provide for large-scale investment in renewable energy, nor present an accelerated path toward grid parity for renewables.

The principles EDF applies to the creation of a RPS in Florida are akin to the legislative intent found in House Bill 7135 that states, "It is the intent of the Legislature to promote the development of renewable energy; protect the economic viability of Florida's existing renewable energy facilities; diversify the types of fuel used to generate electricity in Florida; lessen Florida's dependence on natural gas and fuel oil for the production of electricity; minimize the volatility of fuel costs; encourage investment within the state; improve environmental conditions; and, at the same time, minimize the costs of power supply to electric utilities and their customers."<sup>1</sup> Regrettably, the Draft Rule fails on each of these fronts. If a choice existed between having no RPS or implementing the Draft Rule as proposed, we would prefer there be no RPS. The Draft Rule misleads Florida's citizens into believing they have a successful, progressive renewable energy policy when in fact, it is a program designed to fail and continues the status quo of fossil fuel dependence for the majority of this century. More alarmingly, the

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<sup>1</sup> Section 366.92(1), Florida Statutes.

Draft Rule inhibits job creation and its associated economic development, while other states and countries continue to reap the lion's share of renewable energy jobs and profits. In order to craft an effective rule consistent with Governor Crist's vision and the Florida Legislature's intent in HB7135, the RPS must be revised to foster competition, create economies of scale, provide long-term contracts for renewable energy providers and contain cost recovery mechanisms that do not discriminate against renewable energy. The following principles, if implemented, will drive cost reductions in across renewable energy sectors and in turn, contain the overall costs of the policy.

### Targets

On numerous occasions, Governor Crist has stated that the Commission should wholeheartedly adopt and support a 20% RPS goal by 2020. EDF believes a ramped-up schedule of investment in renewable energy is the best way to progress toward this goal. We recommend the following staggered targets as a mechanism to prevent volatility and create a stable market for investors, renewable industries and IOUs:

<u>Year</u>	<u>Target (% of Prior Year's Retail Electricity Sales)</u>
2009-2010	2%
2011	3%
2012	4%
2013	6%
2014	8%
2015	10%
2016	12%
2017	14%
2018	16%
2019	18%
2020	20%

### Absence of Penalty Provision

An automatic penalty provision must be included within the RPS rule, not only to establish and maintain a level playing field, but to affirm to all renewable energy producers that they will not suffer competitive disadvantage for complying with the law even if others seek to evade it. A penalty provision is especially important to clearly demonstrate which parties are responsible for achieving the legislative mandate. Without meaningful penalties, renewable energy providers will not be able to begin construction of new facilities to meet the RPS goal until IOUs enter into

contracts for the output of new facilities. To this end, long-term contracts must be clearly assigned in an open, transparent solicitation process that begins as soon as the RPS is ratified. Otherwise, IOUs may be tempted to wait until program due dates arrive and then plead to the Commission that sufficient RECs were not available and therefore, they should be exempt from meeting their allocation. EDF urges that failure to enter into available REC contracts does not qualify an IOU for an exception to the RPS under (4)(a)1. of the Draft Rule. Therefore, to meet the RPS goal, IOUs must begin contracting with renewable energy providers as soon as practicable.

We recommend that penalties must be of sufficient size to deter noncompliance, so that an IOU prefers to acquire the renewable energy rather than pay the penalty. A penalty equal to 100% of the cost of a REC is insufficient as it only leaves the IOU indifferent between paying the penalty or complying with the law. In fact, given transaction costs, an IOU might still prefer to incur the penalty even with an amount above 100%. While we are sensitive to the fact that the penalty should not be set so high as to be solely punitive, stiff and automatic penalties are essential to a successful RPS. That is why EDF suggests that 200% of the REC price is an appropriate mechanism to address noncompliance. As the REC market develops and the PSC reviews each provider's annual report, we believe this penalty level can be reassessed higher or lower based on its efficacy.

#### Absence of Force Majeure Limitations

The Draft Rule has several large loopholes or exemptions that we feel are a detriment to the overall function and success of the RPS. We recommend that you closely examine the Texas RPS rule which is widely-viewed as one of the most successful in the nation.<sup>2</sup> Texas has a “no excuses” RPS that provides for significant amounts of renewable energy while appropriately containing costs. Strong limits on loopholes are compulsory to ensure confidence among all participants and would-be investors in the Florida REC market. As drafted, the rule states that the Commission “shall consider excusing an investor-owned electric utility from compliance with any renewable portfolio standard based upon a showing that: 1. the supply of renewable energy or renewable energy credits is not adequate to satisfy the demand for such energy; or 2.

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<sup>2</sup> See Exhibit 1 – Texas RPS Rule, attached.

the cost of securing renewable energy or renewable energy credits was prohibitive such that the total cost for compliance with the renewable portfolio standard exceeded one percent of the investor-owned utility's total annual retail revenues."<sup>3</sup> These two clauses give IOUs ample opportunity to claim failure to acquire and/or afford RECs. To avoid unnecessary noncompliance, the RPS rule must require IOU's to participate with multiple renewable providers in a transparent long-term contract solicitation process at the beginning of each compliance period. Again, we emphasize that failure to enter into REC contracts does not qualify as an exemption for meeting the RPS.

According to PSC staff's comments on the Draft Rule, "A one percent rate cap translates to approximately 0.1 cents per kWh or a \$1.20 monthly bill increase for a typical Florida residential ratepayer with 1,200 kWh monthly energy usage."<sup>4</sup> The EPA, in its Clean Energy-Environment Guide to Action, recommends that "effective caps [be] low enough to limit ratepayer impacts, but high enough to encourage renewable energy development."<sup>5</sup> A 1% overall cap is not only unreasonable as a measure for noncompliance, but provides a huge disincentive toward the investment in and development of renewable energy technologies. Many states have higher rate caps (some significantly so), including Illinois, North Carolina, Washington, and Oregon, and have already begun to see the benefit of this investment in overall rate savings for their customers.<sup>6</sup> In contrast, Floridians pay an average of 25% more for their electricity than they did in 2005, namely because of rising fuel costs. Notably, this percentage increase does not include the considerable rate hikes associated with early cost recovery for the construction of future nuclear facilities. Renewable energy must not take a backseat to the continued promotion of conventional fossil fuel-based policies simply to "protect ratepayers from undue rate increases... as the market for renewables develops in the state."<sup>7</sup> The RPS should be funded by all classes of electric customers, not just residential ones, toward the goal of successfully implementing the RPS is a direct investment in increased energy independence, renewable energy technology, jobs and energy security in Florida. Healthy competition among renewable energy producers will drive costs down more effectively than any ratepayer impact

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<sup>3</sup> Draft Rule 25-17.400. Page 5, Line 9-13.

<sup>4</sup> Summary of Draft Rule. Page 4. August 20, 2008.

<sup>5</sup> "Renewable Portfolio Standards" EPA Clean Energy-Environment Guide to Action. Section 5.1. Page 5-10,11.

<sup>6</sup> Id.

<sup>7</sup> Summary of Draft Rule. Page 4. August 20, 2008

cap. The best way to protect Florida's ratepayers is to embrace economies of scale, encourage broad participation in renewable energy markets, provide long-term contracts and avoid undue market manipulation through price caps. A well-designed RPS is the best cost containment solution.

#### Alternative and Complimentary Mechanism to Implement the RPS

SB7135 charges the PSC with drafting a RPS to promote development of renewable energy across Florida, lessen the state's dependence on fossil fuels, minimize fuel price volatility and improve the environment, while "minimizing the costs of power supply to electric utilities and their customers."<sup>8</sup> In its wisdom, the Legislature understood that there are multiple ways to implement such a standard when it "requir[ed] each provider to supply renewable energy to its customers directly, by procuring, or through renewable energy credits."<sup>9</sup> Under SB7135, the PSC is authorized to examine alternative methods of procuring renewable energy. Section 366.91(1) states "The commission shall have rulemaking authority for providing annual cost recovery and incentive-based adjustments to authorized rates for return on common equity to providers to incentivize renewable energy."<sup>10</sup> EDF is concerned that the Draft Rule's wholesale reliance on a REC program without analyzing the unprecedented successes of a procurement model established first in Germany, but now successfully implemented in over 45 countries around the world, puts Florida at a disadvantage. This model, called a Renewable Energy Payment (REP) or Feed-In Policy, is also being considered by multiple states here in the United States as both a separate energy policy and as a mechanism to implement a strong RPS. Failure to examine this alternative to the REC program outlined in the Draft Rule would be a missed opportunity to discover a policy that results in tremendous job creation, economic development and more renewable energy per dollar invested. Evidence is mounting that a REP policy far outweighs other procurement models for the large-scale adoption of renewable energy technologies. In his "Review of the Economics of Climate Change", British economist Sir Andrew Stern found that REPs are the most cost-effective renewable policy employed in the

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<sup>8</sup> Section 366.92(1), Florida Statutes.

<sup>9</sup> Section 366.92(3), Florida Statutes.

<sup>10</sup> Id.

world today.<sup>11</sup> While analyzing New Jersey's energy policy, Summit Blue Consulting found that SRECs were the most costly policy examined and REPs provided the least-cost option.<sup>12</sup> The European Commission found much the same in their comprehensive assessment of Europe's renewable energy policies.<sup>13</sup> Finally, Ernst and Young recently found that when comparing the British REC model with the German Feed-In model, Germans pay 25% less per kilowatt hour for renewable energy and deploy seven times more renewable energy.<sup>14</sup> EDF is concerned that the rule as drafted will not sufficiently encourage the investment needed to meet the Governor's 20% RPS goal by 2020.

By providing priority access to the grid to all renewable producers, long-term contracts attractive to lending institutions and a guaranteed renewable energy market, REPs are a vital tool to help renewable energy producers, both large and small, contribute to meeting the RPS goal. Notably, REPs have attributed to approximately 80% of the world's renewable energy generation and have done so at a fraction of the cost and in significantly less time than traditional RECs programs. The current emphasis on RECs in the RPS Draft Rule appears designed for only one or two large companies to actively participate, much in the same way one solar company in Maryland was able to monopolize the REC market by contracting with a leading utility and thereby supply 60% of the market.<sup>15</sup> In contrast, a REP mechanism supports renewable energy producers of all technologies at all levels to participate in the RPS market. REPs are designed to decline each year as economies of scale grow and grid parity is reached, thus they serve as a temporary, but highly effective, mechanism to meet the RPS. REPs also overcome many of the barriers to market entry for renewable energy producers. In Germany, REPs have had huge success, catapulting renewable energy production from 2% in 1997 to 14.6% in 2007. The jobs story has been equally compelling: renewable energy jobs in Germany now total approximately

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<sup>11</sup>Stern, Andrew. "Accelerating Technological Innovation." Found at: <[http://www.hm-treasury.gov.uk/media/C/7/Chapter\\_16\\_Accelerating\\_Technological\\_Innovation.pdf](http://www.hm-treasury.gov.uk/media/C/7/Chapter_16_Accelerating_Technological_Innovation.pdf)>.

<sup>12</sup>Summit Blue Consulting. "An Analysis of Potential Ratepayer Impacts of Alternatives for Transmitting the New Jersey Solar Market from Rebates to Market-Based Incentives." April 25, 2007. Found at: <http://www.summitblue.com/documents.php?doctype=reports>.

<sup>13</sup><http://ec.europa.eu>. "The Support for Electricity from Renewable Sources." Found at: [http://ec.europa.eu/governance/impact/docs/ia\\_2005/sec\\_2005\\_1571\\_en.pdf](http://ec.europa.eu/governance/impact/docs/ia_2005/sec_2005_1571_en.pdf).

<sup>14</sup> Ernst & Young. "Renewable Energy Country Attractiveness and Indices." Quarter 1-2, 2008. Found at: <[http://www.ey.com/Global/assets.nsf/International/Industry\\_Uilities\\_Renewable\\_energy\\_country\\_attractiveness\\_indices/\\$file/Industry\\_Uilities\\_Renewable\\_energy\\_country\\_attractiveness\\_indices.pdf](http://www.ey.com/Global/assets.nsf/International/Industry_Uilities_Renewable_energy_country_attractiveness_indices/$file/Industry_Uilities_Renewable_energy_country_attractiveness_indices.pdf)>.

<sup>15</sup> See Exhibit 2 - MDVSEIA Letter, attached.

250,000 and Spain has over 100,000, largely due to the successful implementation of REPs. In this economy, Florida needs more than just energy security and the stabilization of fuel prices; it needs jobs, venture capital investment and economic diversity. Including a REP mechanism within the RPS rule will go a long way to hasten Florida's economic recovery, while providing energy independence and economic potential with significant GHG reduction targets.

We continue to support the Commission's work in RPS rulemaking and look forward to working with you closely as a resource going forward.

Respectfully,

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Environmental Defense Fund

## EXHIBIT 1 – TEXAS RPS RULE

### **E, §25.173. Goal for Renewable Energy.**

- (a) **Purpose.** The purposes of this section are:
- (1) to ensure that the cumulative installed generating capacity from renewable energy technologies in this state totals 2,280 megawatts (MW) by January 1, 2007, 3,272 MW by January 1, 2009, 4,264 MW by January 1, 2011, 5,256 MW by January 1, 2013, and 5,880 MW by January 1, 2015, with a target of at least 500 MW of the total installed renewable capacity after September 1, 2005, coming from a renewable energy technology other than a source using wind energy, and that the means exist for the state to achieve a target of 10,000 MW of installed renewable capacity by January 1, 2025;
  - (2) to provide for a renewable energy credits trading program by which the renewable energy requirements established by the Public Utility Regulatory Act (PURA) §39.904(a) may be achieved in the most efficient and economical manner;
  - (3) to encourage the development, construction, and operation of new renewable energy resources at those sites in this state that have the greatest economic potential for capture and development of this state's environmentally beneficial resources;
  - (4) to protect and enhance the quality of the environment in Texas through increased use of renewable resources; and
  - (5) to ensure that all customers have access to providers of energy generated by renewable energy resources pursuant to PURA §39.101(b)(3).
- (b) **Application.** This section applies to power generation companies as defined in §25.5 of this title (relating to Definitions), and retail entities as defined in subsection (c) of this section.
- (c) **Definitions.**
- (1) **Compliance period** — A calendar year beginning January 1 and ending December 31 of each year in which renewable energy credits are required of a retail entity.
  - (2) **Compliance premium** — A premium awarded by the program administrator in conjunction with a renewable energy credit that is generated by a renewable energy source that is not powered by wind and meets the criteria of subsection (1) of this section. For the purpose of the renewable energy portfolio standard requirements, one compliance premium is equal to one renewable energy credit.
  - (3) **Designated representative** — A responsible natural person authorized by the owners or operators of a renewable resource to register that resource with the program administrator. The designated representative must have the authority to represent and legally bind the owners and operators of the renewable resource in all matters pertaining to the renewable energy credits trading program.
  - (4) **Existing facilities** — Renewable energy generators placed in service before September 1, 1999.
  - (5) **Generation offset technology** — Any renewable technology that reduces the demand for electricity at a site where a customer consumes electricity. An example of this technology is solar water heating.
  - (6) **Microgenerator** — A customer who owns one or more eligible renewable energy generating units with a rated capacity of less than 1MW operating on the customer's side of the utility meter.
  - (7) **New facilities** — Renewable energy generators placed in service on or after September 1, 1999. A new facility includes the incremental capacity and associated energy from an existing renewable facility achieved through repowering activities undertaken on or after September 1, 1999.
  - (8) **Off-grid generation** — The generation of renewable energy in an application that is not interconnected to a utility transmission or distribution system.
  - (9) **Program administrator** — The entity approved by the commission that is responsible for carrying out the administrative responsibilities related to the renewable energy credits trading program as set forth in subsection (g) of this section.
  - (10) **REC aggregator** — An entity managing the participation of two or more microgenerators in the REC trading program.

- (11) **REC offset (offset)** — A REC offset represents one megawatt-hour (MWh) of renewable energy from an existing facility that is not eligible to earn renewable energy credits or compliance premiums.
  - (12) **Renewable energy credit (REC or credit)** — A REC represents one MWh of renewable energy that is physically metered and verified in Texas and meets the requirements set forth in subsection (e) of this section.
  - (13) **Renewable energy credit account (REC account)** — An account maintained by the renewable energy credits trading program administrator for the purpose of tracking the production, sale, transfer, purchase, and retirement of RECs or compliance premiums by a program participant.
  - (14) **Renewable energy credits trading program (trading program)** — The process of awarding, trading, tracking, and submitting RECs or compliance premiums as a means of meeting the renewable energy requirements set out in subsection (d) of this section.
  - (15) **Renewable energy resource (renewable resource)** — A resource that produces energy derived from renewable energy technologies.
  - (16) **Renewable energy technology** — Any technology that exclusively relies on an energy source that is naturally regenerated over a short time and derived directly from the sun, indirectly from the sun, or from moving water or other natural movements and mechanisms of the environment. Renewable energy technologies include those that rely on energy derived directly from the sun, on wind, geothermal, hydroelectric, wave, or tidal energy, or on biomass or biomass-based waste products, including landfill gas. A renewable energy technology does not rely on energy resources derived from fossil fuels, waste products from fossil fuels, or waste products from inorganic sources.
  - (17) **Renewable Portfolio Standard (RPS)** — The amount of capacity required to meet the requirements of PURA §39.904 pursuant to subsection (h) of this section.
  - (18) **Repowered Facility** — An existing facility that has been modernized or upgraded to use renewable energy technology to produce electricity consistent with this rule.
  - (19) **Retail entity** — Municipally-owned utilities, generation and transmission cooperatives and distribution cooperatives that offer customer choice; retail electric providers (REPs); and investor-owned utilities that have not unbundled pursuant to PURA Chapter 39.
  - (20) **Settlement period** — The first calendar quarter following a compliance period in which the settlement process for that compliance period takes place.
  - (21) **Small producer** — A renewable resource that is less than ten megawatts (MW) in size.
- (d) **Renewable energy credits trading program (trading program).** Renewable energy credits may be generated, transferred, and retired by renewable energy power generators certified pursuant to subsection (n) of this section, retail entities, and other market participants as set forth in this section.
- (1) The program administrator shall apportion an RPS requirement among all retail entities as a percentage of the retail sales of each retail entity as set forth in subsection (h) of this section. Each retail entity shall be responsible for retiring sufficient RECs as set forth in subsections (h) and (k) of this section to comply with this section. The requirement to retire RECs to comply with this section becomes effective on the date a retail entity begins serving retail electric customers in Texas or, for an electric utility, as specified by law.
  - (2) A power generating company may participate in the program and may generate RECs and buy or sell RECs as set forth in subsection (k) of this section.
  - (3) RECs shall be credited on an energy basis as set forth in subsection (k) of this section.
  - (4) Municipally-owned utilities and distribution cooperatives that do not offer customer choice have no RPS requirement. However, regardless of whether the municipally-owned utility or distribution cooperative offers customer choice, a municipally-owned utility or distribution cooperative possessing renewable resources that meet the requirements of subsection (e) of this section may sell RECs generated by such a resource to retail entities as set forth in subsection (k) of this section.
  - (5) Except where specifically stated, the provisions of this section shall apply uniformly to all participants in the trading program.
- (e) **Facilities eligible for producing RECs and compliance premiums in the renewable energy credits trading program.** For a renewable facility to be eligible to produce RECs and compliance premiums in

the trading program it must be either a new facility, a small producer, or a repowered facility as defined in subsection (c) of this section and must also meet the requirements of this subsection.

- (1) A renewable energy resource must not be ineligible under subsection (f) of this section and must register pursuant to subsection (n) of this section.
  - (2) For a renewable energy technology that requires fossil fuel, the facility's use of fossil fuel must not exceed 25.0% of the total annual fuel input on a British thermal unit (BTU) or equivalent basis.
  - (3) For a renewable energy technology that requires the use of fossil fuel that exceeds 2.0% of the total annual fuel input on a BTU or equivalent basis, RECs can only be earned on the renewable portion of the production. A renewable energy resource using a technology described by this paragraph shall comply with the following requirements:
    - (A) A meter shall be installed and periodic tests of the heat content of the fuel shall be conducted to measure the amount of fossil fuel input on a British thermal unit (BTU) or equivalent basis that is used at the facility;
    - (B) The renewable energy resource shall calculate the electricity generated by the unit in MWH, based on the BTUs (or equivalent) produced by the fossil fuel and the efficiency of the renewable energy resource, subtract the MWH generated with fossil fuel input from the total MWH of generation and report the renewable energy generated to the program administrator;
    - (C) The renewable energy resource shall report the generation to the program administrator in the measurements, format and frequency prescribed by the program administrator, which may include a description of the methodology for calculating the non-renewable energy produced by the resource; and
    - (D) The renewable energy resource is subject to audit to verify the accuracy of the data submitted to the program administrator and compliance with this section, to be conducted by the program administrator or an independent third party, as requested by the program administrator. If the program administrator requires a third party audit, the audit shall be performed at the expense of the renewable energy resource.
  - (4) The output of the facility must be readily capable of being physically metered and verified in Texas by the program administrator. Energy from a renewable facility that is delivered into a transmission system where it is commingled with electricity from non-renewable resources before being metered can not be verified as delivered to Texas customers. A facility is not ineligible by virtue of the fact that the facility is a generation-offset, off-grid, or on-site distributed renewable facility if it otherwise meets the requirements of this section.
  - (5) For a municipally owned utility operating a gas distribution system, any production or acquisition of landfill gas that is directly supplied to the gas distribution system is eligible to produce RECs based upon the conversion of the thermal energy in BTUs to electric energy in kWh using for the conversion factor the system wide average heat rate of the gas-fired units of the combined utility's electric system as measured in BTUs per kWh.
  - (6) For industry-standard thermal technologies, the RECs can be earned only on the renewable portion of energy production. Furthermore, the contribution toward statewide renewable capacity megawatt goals from such facilities shall be equal to the fraction of the facility's annual MWH energy output from renewable fuel multiplied by the facility's nameplate MW capacity.
  - (7) For repowered facilities, a facility is eligible to earn RECs on all renewable energy produced up to a capacity of 150 MW. A repowered facility with a capacity greater than 150 MW may earn RECs for the energy produced in proportion to 150 divided by nameplate capacity.
- (f) **Facilities not eligible for producing RECs in the renewable energy credits trading program.** A renewable facility is not eligible to produce RECs in the trading program if it is:
- (1) A renewable energy capacity addition associated with an emissions reductions project described in Health and Safety Code §382.05193, that is used to satisfy the permit requirements in Health and Safety Code §382.0519; or
  - (2) An existing facility that is not a small producer as defined in subsection (c) of this section or has not been repowered as permitted under subsection (e) of this section.

(g) **Responsibilities of program administrator.** The commission shall appoint an independent entity to serve as the trading program administrator. At a minimum, the program administrator shall perform the following functions:

- (1) Create accounts that track RECs or compliance premiums for each participant in the trading program;
- (2) Award RECs or compliance premiums to registered renewable energy facilities on a quarterly basis based on verified meter reads;
- (3) Award offsets to retail entities on an annual basis based on a nomination submitted by the retail entity pursuant to subsection (i) of this section;
- (4) Annually record the retirement of RECs or compliance premiums that each retail entity submits;
- (5) Retire RECs at the end of each REC's compliance life;
- (6) Maintain public information on its website that provides trading program information to interested buyers and sellers of RECs;
- (7) Create an exchange procedure where persons may purchase and sell RECs or compliance premiums. The exchange shall ensure the anonymity of persons purchasing or selling RECs or compliance premiums. The program administrator may delegate this function to an independent third party, subject to commission approval;
- (8) Make public each month the total energy sales of retail entities in Texas for the previous month;
- (9) Perform audits of generators participating in the trading program to verify accuracy of metered production data;
- (10) Allocate the RPS requirement to each retail entity in accordance with subsection (h) of this section; and
- (11) Submit an annual report to the commission. The program administrator shall submit a report to the commission on or before May 15 of each calendar year. The report shall contain information pertaining to renewable energy power generators and retail entities. At a minimum, the report shall contain:
  - (A) the amount of existing and new renewable energy capacity in MW installed in the state by technology type, the owner/operator of each facility, the date each facility began to produce energy, the amount of energy generated in megawatt-hours (MWh) each quarter for all capacity participating in the trading program or that was retired from service; and
  - (B) a listing of all retail entities participating in the trading program, each retail entity's RPS requirement, the number of offsets used by each retail entity, the number of RECs retired by each retail entity, the number of compliance premiums retired by each retail entity, a listing of all retail entities that were in compliance with the RPS requirement, a listing of all retail entities that failed to comply with the RPS requirement, and the deficiency of each retail entity that failed to retire sufficient RECs or compliance premiums to meet its RPS requirement.

(h) **Allocation of RPS requirement to retail entities.** The program administrator shall allocate RPS requirements among retail entities. Any renewable capacity that is retired before January 1, 2015 or any capacity shortfalls that arise due to purchases of RECs from out-of-state facilities shall be replaced and incorporated into the allocation methodology set forth in this subsection. Any changes to the allocation methodology to reflect replacement capacity shall occur two compliance periods after the facility is retired or the capacity shortfall occurs. The program administrator shall use the following methodology to determine the total annual RPS requirement for a given year and the final RPS allocation for individual retail entities:

- (1) The total statewide RPS requirement for each compliance period shall be calculated in terms of MWh and shall be equal to the applicable capacity requirement set forth in this paragraph multiplied by 8,760 hours per year, multiplied by the appropriate capacity conversion factor set forth in subsection (j) of this section. The renewable energy capacity requirements for the compliance period beginning January 1, of the year indicated shall be:
  - (A) 1,400 MW of new resources in 2006;

- (B) 1,400 MW of new resources in 2007;
  - (C) 2,392 MW of new resources in 2008;
  - (D) 2,392 MW of new resources in 2009;
  - (E) 3,384MW of new resources in 2010;
  - (F) 3,384 MW of new resources in 2011;
  - (G) 4,376 MW of new resources in 2012;
  - (H) 4,376 MW of new resources in 2013;
  - (I) 5,000 MW of new resources in 2014; and
  - (J) 5,000 MW of new resources for each year after 2014.
- (2) The final RPS allocation for an individual retail entity for a compliance period shall be calculated as follows:
- (A) Each retail entity's preliminary RPS allocation is determined by dividing its total retail energy sales in Texas by the total retail sales in Texas of all retail entities, and multiplying that percentage by the total statewide RPS requirement for that compliance period.
  - (B) The adjusted RPS allocation for each retail entity that is entitled to an offset is determined by reducing its preliminary RPS allocation by the offsets to which it qualifies, as determined under subsection (i) of this section, with the maximum reduction equal to the retail entity's preliminary RPS allocation. The total reduction for all retail entities is equal to the total usable offsets for that compliance period.
  - (C) Each retail entity's final RPS allocation for a compliance period shall be increased to recapture the total usable offsets calculated under subparagraph (B) of this paragraph. The additional RPS allocation shall be calculated by dividing the retail entity's preliminary RPS allocation by the total preliminary RPS allocation of all retail entities. This fraction shall be multiplied by the total usable offsets for that compliance period and this amount shall be added to the retail entity's adjusted RPS allocation to produce the retail entity's final RPS allocation for the compliance period.
- (3) Concurrent with determining final individual RPS allocations for the current compliance period in accordance with this subsection, the program administrator shall recalculate the final RPS allocations for the previous compliance periods, taking into account corrections to retail sales resulting from resettlements. The difference between a retail entity's corrected final RPS allocation and its original final RPS allocation for the previous compliance periods shall be added to or subtracted from the retail entity's final RPS allocation for the current compliance period.
- (i) **Nomination and award of REC offsets.**
- (1) A REP, municipally-owned utility, G&T cooperative, distribution cooperative, or an affiliate of a REP, municipally-owned utility, or distribution cooperative, may apply offsets to meet all or a

portion of its renewable energy purchase requirement, as calculated in subsection (h) of this section, only if those offsets were nominated in a filing with the commission by June 1, 2001.

- (2) The program administrator shall award offsets consistent with the commission's actions to verify designations of REC offsets and with this section.
  - (3) REC offsets shall be equal to the average annual MWh output of an existing resource for the years 1991-2000 or the entire life of the existing resource, whichever is less.
  - (4) REC offsets qualify for use in a compliance period under subsection (h) of this section only to the extent that:
    - (A) The resource producing the REC offset has continuously since September 1, 1999 been owned by or its output has been committed under contract to a utility, municipally-owned utility, or cooperative (or successor in interest) nominating the resource under paragraph (1) of this subsection or, if the resource has been committed under a contract that expired after September 1, 1999 and before January 1, 2002, it was owned by or its output was committed under contract to a utility, municipally-owned utility, or cooperative on January 1, 2002; and
    - (B) The facility producing the REC offsets is operated and producing energy during the compliance period in a manner consistent with historic practice.
  - (5) If the production of energy from a facility that is eligible for an award of REC offsets ceases for any reason, or if the power purchase agreement with the facility's owner (or successor in interest) that is referred to in paragraph (4)(A) of this subsection has lapsed or is no longer in effect, the retail entity shall no longer be awarded REC offsets related to the facility.
  - (6) REC offsets shall not be traded.
- (j) **Calculation of capacity conversion factor.** The capacity conversion factor used by the program administrator to allocate credits to retail entities shall be calculated during the fourth quarter of each odd-numbered compliance year. The capacity conversion factor shall:
- (1) Be based on actual generator performance data for the previous two years for all renewable resources in the trading program during that period for which at least 12 months of performance data are available.
  - (2) Represent a weighted average of generator performance; and
  - (3) Use all actual generator performance data that is available for each renewable resource, excluding data for testing periods.
- (k) **Production, transfer, and expiration of RECs.** The program administrator shall administer a trading program for renewable energy credits in accordance with the requirements of this subsection.
- (1) The owner of a renewable resource shall earn one REC when a MWh is metered at that renewable resource. The program administrator shall record the energy in metered MWh and credit the REC account of the renewable resource that generated the energy on a quarterly basis. Quarterly production shall be rounded to the nearest whole MWh, with fractions of 0.5 MWh or greater rounded up.
  - (2) The transfer of RECs between parties shall be effective only when the transfer is recorded by the program administrator.
  - (3) The program administrator shall require that RECs be adequately identified prior to recording a transfer and shall issue an acknowledgement of the transaction to parties upon provision of adequate information. At a minimum, the following information shall be provided:
    - (A) identification of the parties;
    - (B) REC serial number, REC issue date, and the renewable resource that produced the REC;
    - (C) the number of RECs to be transferred; and
    - (D) the transaction date.
  - (4) A retail entity shall surrender RECs to the program administrator for retirement from the market in order to meet its RPS requirement for a compliance period. The program administrator will document all REC retirements annually.
  - (5) On or after each April 1, the program administrator will retire RECs that have not been retired by retail entities and have reached the end of their compliance life.
  - (6) The program administrator may establish a procedure to ensure that the award, transfer, and retirement of credits are accurately recorded.

- (7) The issue date of RECs created by a renewable energy resource shall coincide with the beginning of the compliance period (calendar year) in which the credits are generated. All RECs shall have a compliance life of three compliance periods, after which the program administrator will retire them from the trading program.
  - (8) Each REC that is not used in the compliance period in which it was created may be banked and is valid for the next two compliance periods.
- (l) **Target for renewable technologies other than wind power.** In order to meet the target of at least 500 MW of the total installed renewable capacity after September 1, 2005, coming from a renewable energy technology other than a source using wind energy as set forth in subsection (a)(1) of this section, the program administrator shall award compliance premiums to certified REC generators other than those powered by wind that were installed and certified by the commission pursuant to subsection (n) of this section after September 1, 2005. A compliance premium is created in conjunction with a REC.
- (1) For eligible non-wind renewable technologies, one compliance premium shall be awarded for each REC awarded for energy generated after December 31, 2007.
  - (2) Except as provided in this subsection, the award, retirement, trade, and registration of compliance premiums shall follow the requirements of subsections (d), (k) and (m) of this section.
  - (3) A compliance premium may be used by any entity toward its RPS requirement pursuant to subsection (h) of this section.
  - (4) The program administrator shall increase the statewide RPS requirement calculated for each compliance period pursuant to subsection (h)(1) of this section by the number of compliance premiums retired during the previous compliance period.
- (m) **Settlement process.** The first quarter following the compliance period shall be the settlement period during which the following actions shall occur:
- (1) By January 31, the program administrator will notify each retail entity of its total RPS requirement for the previous compliance period as determined pursuant to subsection (h) of this section.
  - (2) By March 31, each retail entity shall submit credits or compliance premiums to the program administrator from its account equivalent to its RPS requirement for the previous compliance period. If the retail entity does not submit sufficient credits or compliance premiums to satisfy its obligation, the retail entity is subject to the penalty provisions in subsection (o) of this section.
  - (3) The program administrator may request the commission to adjust the deadlines set forth in this section if changes to the ERCOT settlement calendar or other factors affect the availability of reliable retail sales data.
- (n) **Certification of renewable energy facilities.** The commission shall certify all renewable facilities that will produce either REC offsets, RECs, or compliance premiums for sale in the trading program. To be awarded RECs, or REC offsets, or compliance premiums, a power generator must complete the certification process described in this subsection. The program administrator shall not award offsets, RECs, or compliance premiums for energy produced by a power generator before it has been certified by the commission.
- (1) The designated representative of the generating facility shall file an application with the commission on a form approved by the commission for each renewable energy generation facility. At a minimum, the application shall include the location, owner, technology, and rated capacity of the facility and shall demonstrate that the facility meets the resource eligibility criteria in subsection (e) of this section. Any subsequent changes to the information in the application shall be filed with the commission within 30 days of such changes.
  - (2) No later than 30 days after the designated representative files the certification form with the commission, the commission shall inform both the program administrator and the designated representative whether the renewable facility has met the certification requirements. At that time, the commission shall either certify the renewable facility as eligible to receive RECs, offsets, or

compliance premiums, or describe any insufficiencies to be remedied. If the application is contested, the time for acting is extended for such time as is necessary for commission action.

- (3) Upon receiving notice of certification of new facilities, the program administrator shall create a REC account for the designated representative of the renewable resource.
  - (4) The commission or program administrator may make on-site visits to any certified facility, and the commission shall decertify any facility if it is not in compliance with the provisions of this section.
  - (5) A decertified renewable generator may not be awarded RECs. However, any RECs awarded by the program administrator and transferred to a retail entity prior to the decertification remain valid.
- (o) **Penalties and enforcement.** If by April 1 of the year following a compliance period the program administrator determines that a retail entity has not retired sufficient credits or compliance premiums to satisfy its allocation, the retail entity shall be subject to an administrative penalty pursuant to PURA §15.023, of \$50 per MWh that is deficient.
- (p) **Microgenerators and REC aggregators.** A REC aggregator may manage the participation of multiple microgenerators in the REC trading program. The program administrator shall assign to the REC aggregator all RECs accrued by the microgenerators who are under a REC management contract with the REC aggregator.
- (1) The microgenerator's units shall be installed and connected to the grid in compliance with P.U.C. Substantive Rules, applicable interconnection standards adopted pursuant to the P.U.C. Substantive Rules, and federal rules.
  - (2) Notwithstanding subsection (e)(3) of this section, a REC aggregator may use any of the following methods for reporting generation to the program administrator, as long as the same method is used for each microgenerator in an aggregation unit, as defined by the REC aggregator. A REC aggregator may have more than one aggregation and may choose any of the methods listed below for each aggregation unit.
    - (A) The REC aggregator may provide the program administrator with production data that is measured and verified by an electronic meter that meets ANSI C12 standards and that will be separate from the aggregator's billing meter for the service address and for which the billing data and the renewable energy data are separate and verifiable data. Such actual data shall be collected and transmitted within a reasonable time and shall be subject to verification by the program administrator. REC aggregators using this method shall be awarded one REC for every MWh generated.
    - (B) The REC aggregator may provide the program administrator with sufficient information for the program administrator to estimate with reasonable accuracy the output of each unit, based on known or observed information that correlates closely with the generation output. REC aggregators using this method shall be awarded one REC for every 1.25 MWh generated. After installing the unit, the certified technician shall provide the microgenerator, the REC aggregator, and the program administrator the information required by the program administrator pursuant to this paragraph (2) of this subsection.
    - (C) A generating unit may have a meter that transmits actual generation data to the program administrator using applicable protocols and procedures. Such protocols and procedures shall require that actual data be collected and transmitted within a reasonable time. REC aggregators using this method shall be awarded one REC for every MWh generated.
  - (3) REC aggregators shall register with the commission and the program administrator and also register to participate in the REC trading program.
  - (4) A microgenerator participating in the REC trading program individually without the assistance of a REC aggregator shall comply with the requirements of this subsection.

EXHIBIT 2 – MDVSEIA LETTER

January 2, 2008

Peter Lowenthal, Executive Director  
Maryland DC Virginia Solar Energy Industries Association  
4707 Elmhurst Lane  
Bethesda, MD 20814 – 3954

Re: Purchase of Solar Renewable Energy Certificates

To Whom It May Concern:

SunEdison, or its affiliate or subsidiaries (“SunEdison”), intends to purchase Solar Renewable Certificates from members of the Maryland District of Columbia Virginia Solar Energy Industry Association (“MDV-SEIA”). This letter of intent (“LOI”) generally describes our objective in this initiative to purchase Solar Renewable Certificates from members of MDV-SEIA.

**BACKGROUND:**

- A. The Maryland legislature has adopted the Renewable Energy Portfolio Standard (Annotated Code of Maryland, Public Utility Companies title § 7-701 et seq., as revised by 2007 bills SB 595 and HB 1016).
- B. Solar Renewable Energy Certificates (“RECs”) have been approved by the Maryland Public Service Commission (“PSC”) as a means of compliance with the Renewable Portfolio Standard (“RPS”) established for the State of Maryland.
- C. SunEdison is a member of MDV-SEIA.
- D. SunEdison’s objective is to purchase RECs generated by the solar electric facilities, as defined by law, (“Solar Power Plants”) owned by members of MDV-SEIA.

**1. Scope of Letter of Intent**

SunEdison intends to negotiate and sign individual REC Purchase Agreements (the

“Definitive Agreements”) so that any member of MDV-SEIA meeting the qualifications set forth in this LOI can sell RECs to SunEdison in accordance with the terms and conditions of the Definitive Agreement. The Definitive Agreement is subject to certain qualifications set forth in “Qualification of Systems”, and this LOI does not in any way obligate SunEdison to enter into the Definitive Agreement. The term of the Definitive Agreements shall be for 15 years, at the following quantities and pricing.

The following table expresses total incremental quantities of MWh which SunEdison intends to purchase under this program, provided, however, that these terms shall be available only to individual photovoltaic systems whose generating capacity is greater than 10 kW and less than 200 kW.

Year	MWh (REC) per year per New Contracts beginning in 2008	MWh (REC) New Contracts beginning in 2009	MWh (REC) New Contracts beginning in 2010	MWh (REC) New Contracts beginning in 2011	Total MWh under Contract by Calendar Year	Price per MWh (REC) paid in this Calendar Year to all Contracts
2008	660				660	\$324
2009	660	660			1320	\$288
2010	660	660	1980		3300	\$288
2011	660	660	1980	1980	5280	\$252
2012	660	660	1980	1980	5280	\$252
2013	660	660	1980	1980	5280	\$216
2014	660	660	1980	1980	5280	\$216
2015	660	660	1980	1980	5280	\$180
2016	660	660	1980	1980	5280	\$180
2017	660	660	1980	1980	5280	\$144
2018	660	660	1980	1980	5280	\$144
2019	660	660	1980	1980	5280	\$108
2020	660	660	1980	1980	5280	\$108
2021	660	660	1980	1980	5280	\$72
2022	660	660	1980	1980	5280	\$36
2023		660	1980	1980	4620	\$36
2024			1980	1980	3960	\$36
2025				1980	1980	\$36

## 2. Qualification of Systems

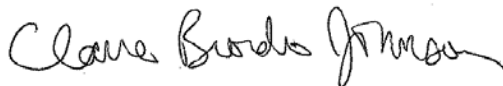
In order for SunEdison to determine whether or not you are qualified to enter into the Definitive Agreement, you must provide the following information for SunEdison’s review:

- A. An overall description of your companies' primary functions and staffing with respect to supporting the development of solar photovoltaic projects (e.g. supplier, manufacturer and turn-key installation capability);
- B. Financial Profile.
- C. Photovoltaic Experience (emphasis on the period 2002 to present), inclusive of the following information:
  - List of Clients and References – with project descriptions and project size
  - Scope of project support
  - Project technology (be specific about panel specifications)
  - Other relevant project commercial terms and conditions (e.g., warranties)
  - Project/Solar Plant specific features of note.
- D. Office locations.
- E. Number of experienced key personnel and information regarding lead discipline engineering personnel.
- F. Project management capability and experience involving solar photovoltaic systems.
- G. Operating performance of 3-5 largest photovoltaic installations completed – actual versus expected output, equipment reliability/availability.
- H. Typical maintenance activities for solar photovoltaic systems.
- I. Your present estimated schedule for solar installations given your current workload and project backlog.
- J. The number of completed photovoltaic system installations.

## 2. Additional or Other REC Purchases

This LOI is intended to serve as a "minimum standing offer" to qualified members of MDV-SEIA and should not be interpreted to restrict in any way additional or other REC purchase terms to be negotiated bilaterally between SunEdison and any member of MDV-SEIA.

Sincerely,



Claire Broido Johnson  
VP Environmental Attributes  
SunEdison