RECOMMENDED PRINCIPLES AND BEST PRACTICES FOR STATE RENEWABLE PORTFOLIO STANDARDS

PREPARED AND ENDORSED BY THE STATE / FEDERAL RPS COLLABORATIVE

JANUARY 2009

INTRODUCTION: THE STATE / FEDERAL RPS COLLABORATIVE

There are presently 28 states plus the District of Columbia with Renewable Portfolio Standard (RPS) programs, and many other states are considering adopting such standards. A number of existing RPS programs are being modified to increase their effectiveness in achieving state goals for power generation from renewable energy sources. In some states, RPS programs have also included energy savings from the implementation of energy efficiency measures as well as energy derived from certain non-renewable energy resources. With many state RPS programs in the early stages of implementation, states are rapidly gaining experience and insights regarding how to ensure effective program design and implementation success.

In Spring 2008, a State / Federal RPS Collaborative was established, with support from the Energy Foundation and the U.S. Department of Energy through the National Renewable Energy Laboratory. The Collaborative's objective is to facilitate dialogue and learning among RPS stakeholders, with an emphasis on state-to-state and state-to-federal discussions. Guided by a Steering Committee composed of representatives from the states, the federal government, and national non-governmental organizations, the Collaborative hosted a series of webinars to explore key RPS-related issues, evaluate RPS program experiences and lessons learned, and develop recommendations to support RPS program success. An RPS National Summit of stakeholders was held in November, 2008 to advance the Collaborative's work and recommendations.

One specific goal of the Collaborative has been to identify a set of recommended principles and best practices emerging from state experiences that can assist legislators and regulators as they develop new RPS initiatives or revise existing programs. The Steering Committee, with input from Collaborative participants and the National RPS Summit, has developed the following Recommended Principles and Best Practices for effective state RPS program deployment.

RECOMMENDED PRINCIPLES FOR RPS PROGRAM DESIGN AND ADMINISTRATION

There is no single ideal way to design an RPS. Ultimately, the design of an RPS in a state must be tailored to meet the state's specific goals, mix of available renewable resources, and other circumstances unique to that state. However, analysis of program results and of the experience of individual states has shown that there are a number of design principles,

which, when put into practice, can increase program effectiveness and success. Key principles include the following:

The design of an RPS should be driven by specific, realistic goals, measureable social benefits and clear state policies.

- There should be a clear statement of the major RPS policy objectives in order to guide and facilitate implementation by regulatory agencies and program administrators.
- Design of an RPS should ensure that there is a direct link between program elements and desired outcomes. States have set forth a range of various goals to be achieved through an RPS, including improving air and water quality, reducing global warming emissions, creating jobs and increasing tax revenues, increasing technology diversity, moving toward energy independence, stabilizing electricity prices, and fostering in-state resource development. Identifying these goals is useful in guiding specific design of the key RPS program elements. For example, if promoting technology diversity is a priority goal, then an RPS design may want to include set-asides for solar and distributed generation. If addressing global warming is a priority over local job creation, geographic eligibility constraints may be less critical. Therefore, it is important for the state to clearly articulate what over-riding goals should govern the selection of various program design elements.
- An RPS program should ensure periodic review of results and outcomes with respect to policy objectives, benefits and costs. Streamlined administrative mechanisms should be established to allow for adjustment if objectives are not being met.

Program metrics and reporting should be established to track progress towards achieving annual targets, assess program costs, and promote long-term planning by developers for future projects.

- Program administrators should develop a set of metrics that include such key outcomes as substantive progress towards numeric targets, environmental and economic development impacts, program costs and rate impacts, generation diversity, degree of load serving entity (LSE) compliance, and other evaluation criteria to quantitatively and qualitatively assess the actual effectiveness of the RPS program.
- Metrics should be designed foremost to determine the degree to which the RPS design is effective at driving new renewable energy development and increased production of renewable electricity
- Program updates should be reported on a regular basis and made readily accessible to the public.

RPS programs should be simple to administer, cost-effective to operate, and flexible enough to respond to changing market conditions.

- RPS program administrative processes and requirements should be clearly specified and defined to minimize the need for administrative interventions and to reduce regulatory risk for developers and suppliers.

- While RPS program requirements and procedures should be designed to drive the market towards continually increasing renewable energy generation, programs should be sufficiently flexible to allow obligated parties to respond to changing market conditions or other matters outside of their control.

Predictable, stable requirements will be critical to ensuring market growth.

- Uncertainty about future changes to or elimination of RPS programs will slow market development and limit investments in renewable energy projects. Therefore, an RPS should provide a stable design for all parties in order to reduce regulatory risk and improve the opportunities for financing and investment. Renewable energy targets should be of sufficient duration and stability to minimize risk and accommodate long-term contracting. Increases in target levels should be adopted with sufficient lead time for program participants to respond efficiently.
- Definitions of resource eligibility should be clearly articulated and stable to support investment. It also is important to establish clear long-term standards for recovery of prudently incurred RPS compliance costs in electricity rates in order to ensure the confidence and support of utilities and developers.

The RPS program design should be non-discriminatory and enforceable.

- An RPS should apply to all suppliers of retail load in a jurisdiction to spread the costs and benefits of the policy to all ratepayers. State RPS program costs should be shared as fairly and as broadly among all ratepayers as possible, as the benefits of increased renewable energy production will accrue to all energy customers and the public at large.
- Consistent enforcement of RPS obligations is necessary to provide confidence to market participants and is critical if policy goals are to be achieved.

RPS policies should be compatible with other public policies as well as the regulatory frameworks that govern renewable energy project development.

- To be successful, RPS policies must be designed in the context of the broader regulatory policy framework. An RPS policy alone will not ensure accelerated development of renewable energy projects. The success and cost-effectiveness of an RPS may depend upon the creation (or revision) of compatible state and federal programs and policies that support renewable energy targets and project development. These may include predictable siting and permitting requirements, progressive interconnection and net metering laws, provision of tax incentives and public benefit funds to reduce the high capital costs of some renewable energy technologies, and workable transmission planning, siting, and cost allocation processes.
- The establishment of RPS geographic eligibility and electricity delivery requirements should be consistent with the structure of regional energy markets and with the dormant Commerce Clause of the U.S. Constitution. A more broadly defined geographic scope of eligibility for RPS generation attributes can provide a number of regional economic and environmental benefits and will encourage least cost compliance with RPS requirements. RPS programs that require physical delivery of

electricity could limit the opportunity to utilize lower cost resources within the larger regional market.

RECOMMENDED BEST PRACTICES FOR RPS PROGRAM SUCCESS

RPS Targets

- ***Targets should be stable, ramp up steadily over time and not be subject to sudden or uncertain shifts.*** This will create an investment climate for project development that is conducive to long-range planning and investment.
- ***RPS targets should be achievable and encourage renewable resource development beyond existing available resources, given developable resource potential, transmission constraints, interconnection barriers, availability of complementary mechanisms that support project development, and potential siting challenges..*** This will prevent recurring supply shortages that trigger enforcement actions as well as drive up the cost of compliance. Careful consideration should be given to maintaining a supply and demand balance in setting timetables and goals.
- ***Compliance periods should be at least one year in length*** to allow all renewable energy technologies to participate and be counted, including those resources that are seasonal by nature.

Program Duration

- ***An RPS program should be of sufficient duration to allow for long-term contracting and financing.*** Without some assurance of program continuity over time, buyers and investors will not have the confidence that they need to make extended commitments.
- ***RPS rules should be stable, with any changes to policy occurring only after ample notice and lead-time.*** Frequent changes in program design will inevitably lead to market stagnation as investment decisions are deferred in the face of future program uncertainty.

Covered Entities

- ***An RPS program should apply to all load serving entities -- investor owned, municipal, and electric cooperatives, including suppliers of last resort.*** Exceptions and waivers should be avoided to fairly distribute the program costs among all beneficiaries of RPS policies.
- ***In restructured markets, all suppliers to retail loads should be obligated to participate.*** The cost of meeting RPS targets should not create barriers to competitive entry.

Resource and Geographic Eligibility

- ***The eligibility of specific renewable energy technologies under an RPS should be well-defined.*** Ambiguity creates market uncertainty and stifles investment. The use of clear, precise definitions of RPS resource eligibility reduces administrative complexities and potential disputes with project developers.

- ***Fuel, technology, and vintage eligibility decisions should be guided by an assessment of the social benefits of the particular resources and technologies, and by an evaluation of the need of those projects for additional revenue possible from selling into an RPS market.***
- ***Customer-sited renewable generation should be eligible for RPS programs if all other RPS requirements are met.*** This recognizes the social benefits that distributed resources contribute. Owners of all renewable generation facilities, including distributed generation, should have the opportunity to negotiate whether to sell the Renewable Energy Certificates (RECs) from their facility to obligated parties for purposes of RPS compliance. Provisions should be made for aggregation and tracking of RECs from small generators for use in RPS compliance.
- ***Eligibility of existing renewable generation should be limited in order to support new renewable project development.*** Since the overall goal of an RPS is to increase the contribution that renewable generation makes to the total power supply, existing generation capacity should generally be regarded as a renewable energy baseline above which RPS targets are set.
- ***RPS rules on the treatment of out-of-state resources should be well-defined and legally defensible.*** The geographic eligibility rules must be consistent with the requirements of the dormant Commerce Clause of the U.S. Constitution and recognize that regional development of renewable resources can create shared benefits and reduce RPS compliance costs.

Tradable Renewable Energy Certificates (RECs)

- ***Use of tradable RECs for RPS compliance should be considered as a mechanism to provide for contracting flexibility, to lower compliance costs, and to simplify verification.*** The use of RECs frees renewable energy sellers from the need to deliver renewable electricity in real time to users, creates a fungible commodity that can be exchanged by suppliers, and provides an accurate and durable record of what was produced. The use of RECs can reduce the cost of compliance by providing access to a larger quantity and broader geographic scope of resource options, allowing obligated parties to seek the lowest cost renewable energy attributes.
- ***RPS rules and tracking systems should ensure that there is no double counting of RECs in compliance and voluntary markets.*** An RPS program should provide that once a REC is used for RPS compliance, the REC must be retired and cannot be sold again into other markets or used for future RPS compliance. An RPS program should provide that the same renewable energy shall not be used for more than one of the following: (1) compliance with the RPS of a given state or any other state, or (2) any voluntary clean electricity market or program in a given state or any other state.
- ***An RPS program should, whenever possible, require the use of a robust tracking system for registering and tracking RECs.*** A proper REC tracking system acts as an accounting and verification mechanism, ensures that RECs are

not double counted, and helps avoid disputes about REC authenticity and ownership. Incorporation of RECs into existing generation and attribute tracking systems will help ensure that high standards are used for REC tracking and that RECs can be easily traded across state boundaries in regional markets.

- ***An RPS program should explicitly define the environmental attributes that must be included in a REC used to comply with the state's RPS.*** Whether or not a state requires that RECs include specific environmental attributes for RPS compliance, it should clearly define any such requirements in order to remove market ambiguity.

Cost Recovery and Allocation of Costs

- ***An RPS program should ensure that prudently incurred RPS compliance costs can be recovered in electricity rates.*** The success of a state RPS program will require the willing participation and support of load serving entities (LSEs) that must enter into contracts to secure renewable generation as part of their overall supply portfolio. LSEs must have confidence that their cooperation with RPS requirements will not result in financial penalty or loss. (In many states, current regulatory cost recovery mechanisms may be adequate or flexible enough to allow for recovery of costs without the need to specifically address cost recovery in the RPS legislation.)
- ***Long-term contracting standards for regulated utilities should be established, supported, and encouraged.*** Long-term purchasing agreements for RECs and power supplies will create the market security sought by renewable project developers. Success in moving utilities and LSEs to extend beyond their annual obligations and enter into long-term arrangements with generators will depend on mitigation of perceived risks, such as through guaranteed cost recovery.
- ***The cost of RPS compliance should be allocated fairly across all utility customers.*** Allocation of RPS costs to all retail load customers (rather than to only customers of certain suppliers) will ensure that the costs and benefits of renewable development are spread and shared equitably. RPS requirements and allocation of costs across customers should be based on actual load (MWh), not capacity (MW).

Program Administration and Enforcement

- ***RPS implementation success is dependent on strong political and regulatory support.*** Formal legislative authorization should be secured for the RPS program to ensure legislative support. The authorizing legislation should clearly identify the priority policy objectives, program duration, and major design elements, with detailed design of the program elements then developed at the administrative or regulatory level with substantial stakeholder input. RPS rules should be well-defined and address the specific obligations of LSEs; technology and geographic eligibility definitions; performance requirements and penalties; and the role, responsibilities, and powers of a designated program administrator. This RPS

framework also should provide the administrator with some degree of latitude to make appropriate revisions in response to the results of evaluation and monitoring and/or unexpected cost impacts. However, any material changes should come with ample notice and lead-time and occur within narrowly defined parameters.

- ***An RPS program should be mandatory and impose repercussions on those entities that fail to meet the requirements.*** There should be clear rules for enforcement, providing confidence to developers that suppliers will make required purchases. At the same time, RPS policies should allow some compliance flexibility in the face of supply constraints that are difficult to predict.
- ***Measures to control compliance costs, such as alternative compliance payments, should be considered .*** Alternative compliance payments should be set at a level which controls compliance costs while still encouraging fulfillment of RPS requirements. If the payments are set significantly below the market price of acquiring renewable energy, obligated entities will choose not to comply and the RPS program will be rendered less effective. An effective practice is to direct any alternative compliance payments into a renewable energy development fund. It is important to put provisions in place that ensure that these funds are protected from uses un-related to the development of renewable energy.
- ***RPS rules should authorize the program administrator to accommodate the possible creation of a federal RPS program in the future.*** The program administrator should have the ability to determine in an efficient manner how best to administer the state RPS program in accordance with the terms of any federal RPS program.

SUMMARY: APPLYING BEST PRACTICES TO FUTURE PROGRAM DESIGN

As states continue to develop new RPS programs and adjust their current programs, it is important to examine the lessons learned from existing, "first generation" RPS programs. To that end, we suggest that states benchmark their existing and newly proposed RPS programs against these recommended Principles and Best Practices to determine if these recommendations can be productively used to guide state RPS policy design going forward. We believe that consideration of these recommendations can increase the likelihood that the design of future programs is successful in achieving state goals.

We emphasize again that there is no one "correct" way to design an RPS program. Each state's program will ultimately be driven by its own goals and resources. Success in advancing new renewable generation will be a function of many factors such as the overall climate for investment, transmission capacity availability, siting challenges, and the presence of complementary or conflicting programs and policies. However, it is our firm belief that the recommendations provided here can help to ensure the appropriate design of an RPS framework.