



Union of Concerned Scientists
Citizens and Scientists for Environmental Solutions

October 11, 2005

Luly E. Massaro, Commission Clerk
Rhode Island Public Utilities Commission
89 Jefferson Boulevard
Warwick, RI 02888

Re: Docket No. 3659: Proposed Rules and Regulations Governing the
Implementation of a Renewable Energy Standard – Comments by the Union of
Concerned Scientists

Dear Ms. Massaro:

This letter provides the comments of The Union of Concerned Scientists (“UCS”). UCS is an independent nonprofit alliance of more than 100,000 concerned citizens and scientists working for practical environmental solutions. For more than three decades, UCS has combined rigorous analysis with committed advocacy to reduce the environmental impacts and risks of energy. UCS’s energy program focuses on encouraging the development of clean and renewable energy resources, such as solar, wind, geothermal and biomass energy, and on improving energy efficiency. Participating in the design and implementation of state renewable policies is one way UCS actively works toward these ends. UCS is interested in promoting the public interest, which is served by a reliable and efficient regional electricity market broadly defined.

UCS commends the Rhode Island Public Utilities Commission (the Commission) and the collaborative working group for its efforts to arrive at draft regulatory language that will implement the state’s renewable energy standard (RES) on schedule.

While there are many aspects of the proposed regulations that UCS finds exemplary, in particular we would like to commend the Commission and working group for their efforts to develop a procurement policy that will best serve the consumers of Rhode Island. UCS strongly supports the inclusion of long-term contracts for RES procurement. The RES law in Rhode Island requires the state’s Public Utility Commission to develop standards for utility contracts and procurement plans for renewable energy resources in order to ensure goals explicitly including stabilizing long-term energy prices and enhancing environmental quality. The law also authorized rate recovery by electric utility distribution companies of all *prudently incurred* incremental costs of compliance.

Renewable energy facilities are uniquely situated to provide price and supply stability through long-term contracts without an associated cost premium for these benefits. Because renewable energy facilities do not rely on fossil fuels, their forward pricing of energy is largely tied to the amortization of initial capital investment. Fossil fuel plants, by contrast, must adjust their pricing to account for future long-term fuel price risk in the form of a premium under any long-term agreement. Moreover, development-stage renewable energy facilities have demonstrated their willingness to offer lower prices in exchange for long-term commitments that they need in order to get critical financing. Consequently, a renewable energy generator can offer a lower price for a long-term commitment, whereas a fossil fuel generator will demand a higher price.

The Commission Should Require Electric Utility Distribution Companies to Comply with RES Requirements Through Long-Term Contracts.

The requirement that electric utility distribution companies include long-term energy purchases as a component of their procurement portfolio would avoid a significant problem such as currently experienced in Massachusetts. There, electric utility distribution companies have been complying with the state's RES requirements through alternative compliance payments (ACP), short-term purchases of renewable energy certificates (RECs) or, possibly, the combined purchase of both renewable energy and RECs. This has created conditions that prevent renewable energy generation from being developed in the region.

As described in a study by the Massachusetts Technology Collaborative,

“...renewable projects moving through the planning and permitting stages of development are having difficulty securing necessary financing for construction. Thus, fewer renewables have been developed in New England than expected. The primary reason is the lack of creditworthy entities in the region that are willing to enter into long-term agreements for the electric energy and RECs. The result is revenue uncertainty, which when coupled with the inherent risks of the New England REC market, presents market price risks which are very difficult for debt and equity project investors to assume” (Cory, 2004).

Massachusetts electric utility distribution companies have relied significantly on the ACP for compliance starting in the 2004 compliance year. This means that Massachusetts consumers are paying the highest possible price for RES compliance and to some extent, since RES compliance costs are going to the ACP, ratepayer money is not going directly to renewable energy developers who would be able to increase renewable generation if they had long-term contracts. This means Massachusetts consumers are missing out on many of the benefits of the significant benefits renewable energy can provide. The Commission, however, has included a provision in the Rhode Island RES regulations that address such a situation, and this approach will provide significant benefits to Rhode Island consumers.

A 2004 report from the Lawrence Berkeley Lab (LBL) focused on the role that renewable energy can play in hedging the risks associated with using natural gas to generate electricity. Natural gas prices are rising and increasingly volatile, but renewable energy resources are immune to fuel price risks because they can be sold under long-term fixed price contracts. When determining whether this is cost effective, buyers or their regulators need to compare the cost of renewables to the cost of hedged contracts with gas generators so that the price risk is comparable. Development of renewable energy, as well as increased energy efficiency, put downward pressure on future natural gas prices, providing benefits to all sectors of the economy. The authors conclude that renewable energy has a hedge value, plus the incremental value of lowering gas prices and credit risk and providing long-term price stability (Bolinger, 2004).

In another report from LBL in 2005, the authors show that renewable energy and energy efficiency can displace gas-fired electricity generation, reducing gas demand and putting downward pressure on natural gas prices and bills (Wiser, 2005a). The report finds that existing modeling studies generally show that each 1 percent reduction in natural gas demand nationwide is likely to lead to a long-term wellhead price reduction of 0.8 percent to 2 percent, with some studies showing more significant reductions. This means that renewable energy provides consumer gas savings conservatively estimated to be equivalent to at least \$10 to \$20 for each megawatt-hour of incremental renewable generation. From the analysis done for the 2005 LBL report, the net present value to New England consumers as a result of the state RES programs in the region is estimated to be between \$34 and \$85 million. New England's RES policies would generate national consumer benefits of between \$625 million and \$1.56 billion (Wiser, 2005b).

In addition to the Rhode Island RES statute and proposed regulations, there are several examples, both in the region and elsewhere, of regulators and legislatures deciding that long term purchases of renewable energy are in the best interest of customers.

In Connecticut, three utilities will be required to purchase renewable energy from 100 MW worth of generation, a substantial proportion of RES Class 1 requirement. These purchases will be through long-term contracts of at least 10 years. The new RES in New York, which relies on central procurement for RES compliance, will buy renewable energy through long-term contracts of at least 10 years. Other state RES programs with long-term purchase requirements include California, Colorado, Nevada, and New Mexico.

The Massachusetts Technology Collaborative, as the administrator of the state's Renewable Energy Trust fund, has developed a program to create contractual mechanisms that provide long-term purchase agreements for RECs. This program, the Massachusetts Green Power Partnership (MGPP), is described in a paper developed by MTC staff last year. In the paper, the authors conclude that relative to near-term market prices, long-term purchase deals for RECs are considerably less expensive. Using a competitive solicitation, the MGPP received bids from renewable energy project developers for 10-year RECs contracts at prices of approximately \$25 per MWh. When compared with the current RECs prices of around \$50 per MWh, it is obvious that

significant savings are available through long-term contracts. This demonstration is revealing as to the benefits of long-term contracts for RECs in New England.

Recently, we learned of an example of a beneficial long-term contract for renewable energy. The Massachusetts Municipal Wholesale Electric Company (MMWEC) announced that it will purchase the electrical output of the proposed Berkshire Wind project for 22 years. In making this commitment, MMWEC cited benefits such as the low cost, the contribution to fuel diversity, and the role in risk management of energy purchases. Throughout the contract, MMWEC will pay 3.65 cents per kWh instead of the current 10 cents market price. Based on the agreement with MMWEC, the project developers can now go for financing (Marcisz, 2004).

The RECs from the Berkshire Wind project are also under separate long-term agreement. The Rhode Island Renewable Energy Fund and a wholesale marketer with RES compliance obligations are buying RECs from the project's first five years of operation, and the RECs from operating years 6-10 are under agreement with the MTC through the MGPP. This combination of contracts means that while Massachusetts ratepayers will benefit from the RECs contracts under MGPP, they are losing out on the benefits that the long-term energy purchase is providing to MMWEC's customers.

From the results of the MGPP program focused on RECs and the power purchase agreement between MMWEC and Berkshire Wind, it is clear that the greatest benefits can be achieved through long-term bundled purchases of RECs and renewable energy.

What is more, the entities that are responsible for procuring RECs and renewable energy for Rhode Island customers will compete with buyers like MMWEC and the utilities in Connecticut, and New York. These buyers will mostly be using a competitive bidding process, and are certain to get better RECs and energy prices for this portion of their portfolios because they will be entering into long-term agreements with renewable generators. If the Rhode Island RES does not include a long-term contract requirement, the state's consumers will be left behind, bound to pay too much for RECs and miss out on the benefits that long term procurement of renewable energy can provide.

Long-Term Contracts for Renewable Energy are Well-Suited for Electric Utility Distribution Company Procurement

Renewable energy facilities have several unique characteristics that make them especially well suited for long-term contracts. These power plants do not rely on fossil fuels, so their forward pricing of energy is tied largely to the amortization of initial capital investment. In contrast, fossil fuel plants must price to account for future long-term fuel price risk in the form of a premium under a long-term arrangement. As a result, a renewable energy generator can offer a stable, lower price over the long term relative to a fossil fuel generator. Therefore, requiring electric utility distribution companies to enter into long-term contracts for RES compliance would be in the best interest of the customers.

We currently do not envision a scenario where the competitive retail market develops in such a way as would result in an electric utility distribution company having less than 14% (the RES new renewable target in 2019) of its current load, so the energy procured under such an arrangement would be highly likely to exceed the needs of the electric utility distribution company. Also, the certificates procured for RES compliance are fungible, and could be resold if the electric utility distribution company does not require them (i.e. if customers migrate at a much faster rate than they have been).

Finally, on this point, to the extent that the threat of customer migration causes distribution companies concern about buying more long-term renewable energy certificates (RECs) than their targets, the commission should apply a prudence test. If the RECs were procured prudently, then the electric utility distribution company should be allowed to recover the costs through its rates.

We also believe that the inclusion of a long-term component of end-use customer procurement that matches the RES compliance target would not significantly impact the overall price signal sent by the default service provider and therefore would not have a direct influence over the market dynamics that would influence the entry of competitive suppliers for these customer classes.

Long-Term Contracts for Renewable Energy Can Be Expected to Yield Lower Costs than Short-Term Contracts, and Lower Costs of RES Compliance.

There is ample evidence that long-term contracts correspond to lower costs of new renewable energy generation, and, importantly, no evidence has been presented to the contrary that we are aware of. In recent proceedings before the Massachusetts Department of Telecommunications and Energy, renewable energy developers such as UPC Wind Management LLC and enXco, Inc. notably have stated that they “can and will offer lower prices for longer-term commitments.”

A recent effort to explore the relationship of contract duration and price for renewable generation in New York concluded that lower prices were available through longer-term commitments when getting new renewable generation financing was at stake. As shown in Exhibit 1, the all-in price of RECs and energy may be roughly 12 to 28% less per MWh for 15 year versus 5-year commitments, and 10% less for 15-year commitments than 10 year commitments. Of greater interest is that when one considers the cost of the renewable premium, or the REC cost only, there is far greater leverage in longer term commitments: when subtracting the value of the commodity energy, the percentage decrease in REC pricing drops far more quickly as a function of contract duration.

Long-term contracts for renewable energy are expected to reduce RES compliance costs for electric customers for two reasons. First, unless long-term contracts are available to renewable energy generators, sufficient renewable energy to meet RES targets will not become available, and a greater proportion of compliance will be via the payment of ACP. With a trivial number of exceptions (most of which are subsidized), commercial-scale renewable energy generators in the United States have required long-term contracts

to attract capital. The lack of availability of long-term contracts to renewable generators in New England is a substantial barrier to attracting capital. Financing and securing permits are the two primary requirements to getting new renewable generation built.

Long-term Contracts for Renewable Energy Need Not Entail Any Likelihood of Stranded Costs

It is important to understand that a requirement for electric utility distribution companies to solicit, evaluate, and enter into prudent long-term contracts for renewable energy should not entail any likelihood of stranded costs arising later in time. Those who advance the stranded costs argument rely primarily on the purported uncertainties tied to load base over time (from day to day, month to month, and year to year) and suggest that distribution companies would be saddled with long-term contracts for RECs that may ultimately exceed their minimum RES obligations over time. But this argument is unfounded because (i) based on experience in any other competitive electricity market, the rate of customer migration away from electric utility distribution companies is unlikely to exceed the rate of annual increase in the RES target, and (ii) RECs can be re-sold to anyone who has RES compliance obligations.

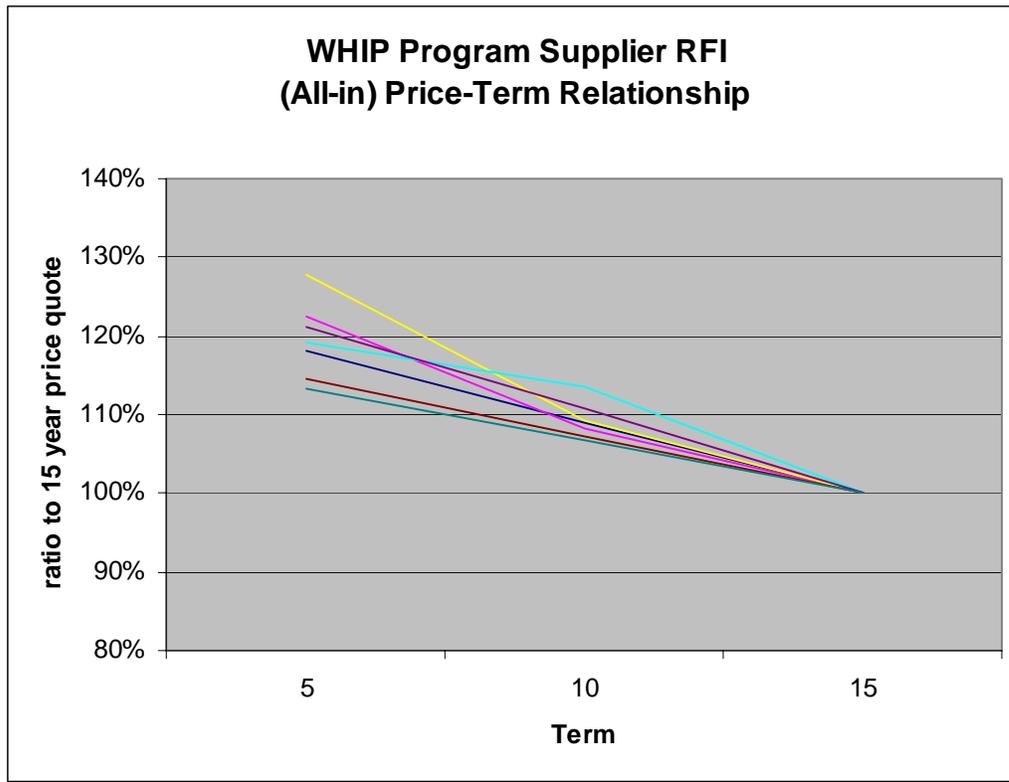
There is no reason why RECs purchased through long-term contracts in order to meet RES obligations in connection with serving end-use customers should not be able to be re-sold later in time, especially in connection with any actual migration of customers that reduces a company's RES compliance obligations. Under such circumstances, in the unlikely event that the company should be unable to sell its excess RECs purchased through a long-term agreement at a cost equal to or greater than the cost paid, it should be entitled to recover any shortfall so long as it was prudently incurred.

Again, UCS wishes to thank the Commission and those whose work is reflected in the proposed regulations and appreciates the opportunity to provide these comments.

Sincerely,

Deborah Donovan, Manager
New England Clean Energy Project

Exhibit 1



Source: Based on responses from several New York wind developers to requests for indicative pricing for contracts of various terms representing purchasing both energy and RECs at fixed price, or the financial equivalent, under New York State Energy Research and Development Authority's Wind Hedge Request for Information, 2004. (presented at a June 9, 2005 NYSERDA RES Technical Workshop by Jonathan Winer (LaCapra Associates))

Bibliography

Bollinger, M., R. Wyser, and W. Golove. 2003. *Accounting for Fuel Price Risk: Using Forward Natural Gas Prices Instead of Gas Price Forecasts to Compare Renewable to Natural Gas-Fired Generation*. Environmental Energy Technologies Division, Lawrence Berkeley National Laboratory. August 2003.

Cory, K, N. Bogen, and B. Sheingold. 2004. *Long Term Revenue Support to Help Developers Secure Project Financing*. Proceedings from Global Windpower 2004 Conference and Exhibition, March 2004.

Evolution Markets. 2005. Monthly Market Update, REC Markets, December 2004. Downloaded from http://www.evomarkets.com/assets/mmu/mmu_rec_dec_04.pdf

Marcisz, C. 2004. *Wind Farm Signs Deal to Sell its Electricity*. Berkshire Eagle, December 8, 2004.

Wiser, R., M Bollinger, and M. St. Clair. 2005a. Easing the Natural Gas Crisis: Reducing Natural Gas Prices through Increased Deployment of Renewable Energy and Energy Efficiency. Environmental Energy Technologies Division, Lawrence Berkeley National Laboratory. January, 2005.

Wiser, R. 2005b. Personal communication. January 2005.