Yes, Virginia, You Can Get There From Here:[1] New Jersey's New Policy Framework For Guiding Ratepayer-Funded Efficiency Programs

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ABSTRACT

Several states have recently enacted utility restructuring legislation that requires electric and gas utilities to collect a system benefit charge (SBC) to fund energy-efficiency and renewable energy programs for several years or longer. New Jersey is one of the first states to develop a comprehensive plan for how to invest these funds in the newly competitive energy industry. In the course of developing this plan, efficiency advocates have begun to work with utilities and utility regulators to craft a new policy framework in which to set energy-efficiency program priorities and guide program planning, implementation, and evaluation.

Like many states, New Jersey's existing regulations are geared toward acquiring efficiency savings as substitutes for supply. Over the years, however, energy-efficiency program design has shifted to emphasizing permanently influencing the markets in which energy-efficiency decisions are made. The new policy framework suggests revising regulations of "demand side management" programs to recognize a new focus on energy efficiency and market transformation. It also suggests changes to the regulation of the transmission and distribution utility to promote least cost, targeted investments in efficiency and clean energy resources that can improve reliability as well as bring environmental benefits.

Introduction

Background

New Jersey passed restructuring legislation in early 1999, calling for specific spending for clean energy programs funded through a systems benefit charge on electric and gas (SBC) for 2000-2007. (New Jersey State Assembly, 1999) The legislation directed the Board of Public Utilities (BPU) to conduct a comprehensive resource assessment (CRA) of potential savings from new efficiency and renewable programs to inform its decisions about which programs to fund and who should administer them. Many parties besides the state's

[1] Virginia is randomly chosen from the many United States and Canadian Provinces that have yet to adopt systems benefits charges to fund energy-efficiency programs, and that might benefit from New Jersey's new efficiency policy framework.

electric and gas utilities participated in the evidentiary phase of the CRA proceeding, including the Natural Resources Defense Council (NRDC).

In February 2000, NRDC reached a comprehensive settlement of the CRA proceeding with all but one of New Jersey's electric and gas utilities.[2] (New Jersey Utility/NRDC Settlement Agreement, 2000) The settlement calls for $423 million in funding for three statewide efficiency and renewable programs over 2000-2003, with all but two renewables programs administered by the state's utilities.

Table 1 shows total annual funding for efficiency and renewables programs for the state as a whole through 2003. Besides three renewables programs, the settlement provides for the portfolio of efficiency programs in Table 2 (which shows the statewide program budget for 2000 and 2001). The agreement also calls for a collaborative process involving NRDC and the utilities to guide, plan, evaluate, and report on program progress.[3]

Table 1. Four-Year Funding for New Jersey Clean Energy Program (millions)

Program Area	2000	2001	2002	2003	4-Yr Totals
Efficiency	$ 64.05	$ 91.80	$ 97.80	$ 97.50	$ 351.15
Renewables	$ 5.95	$ 16.20	$ 22.20	$ 27.50	$ 71.85
Totals	$ 70.00	$ 108.00	$ 120.00	$ 125.00	$ 423.00

Policy Goals and Objectives

New Jersey's legislators and regulators have established the following policy goals for ratepayer-funded energy efficiency and renewable energy programs:

- address existing market barriers to technologies and practices
- deliver maximum environmental benefits;
- transform markets;
- capture lost opportunities; and
- make energy services more affordable for low-income customers

[2] Other intervenors participated in the proceeding, and negotiated a separate settlement proposal with the Division of Ratepayer Advocate. Rockland Electric is not a signatory to the utility/NRDC settlement proposal.

[3] Two of the authors (Coakley and Plunkett) are collaborative consultants collaborative; Bryk is NRDC's representative in the collaborative process.

Table 2. New Jersey Clean Energy Program Budgets, 2000 – 2001 (thousands)

Programs	Budgets $	
	2000	2001
Residential		
Residential HVAC - Electric	9,975	12,074
Residential HVAC - Gas	5,716	7,577
Residential Windows	408	1,068
Residential Low Income	13,301	14,572
Residential New Construction	11,180	15,854
Residential Retrofit	844	984
Residential Lighting	787	2,047
Residential Appliances	557	1,204
Non Residential		
Commercial/Industrial Construction	13,221	28,168
Building Operation & Maintenance	571	705
Compressed Air	400	399
Other New Programs		
Appliance Cycling Maintenance	6,060	6,060
Schools EE&R Education	1,030	1,088
Renewables		
Customer Sited Clean Generation	2,975	8,100
Grid-Supply Clean Energy Generation	1,488	4,050
Renewable Market Development	1,488	4,050

These are some of the same goals declared in law and regulation in other states where responsibility for energy-efficiency programs has been fundamentally altered, such as Vermont. (Vermont PSB, 1999) To these the authors add the following recommendations for energy-efficiency program policy goals:

1. *Support economic development.* Energy efficiency investments lower energy bills, thereby increasing businesses' profitability and productivity, and consumers' disposable income. Some efficiency measures more directly improve productivity through enhancements to manufacturing processes and working environments. These effects provide an economic stimulus for the states in which they are implemented. The size of these benefits from different programs matters when deciding between competing energy-efficiency programs.
2. *Lower energy bills for state and municipal facilities.* All electric and gas ratepayers are taxpayers. Consequently, energy cost savings from state and municipal facilities are particularly equitably distributed among the state's ratepayers.
3. *Leverage regional and national resources.* A variety of market transformation initiatives are underway or in the planning stages in national residential, commercial and industrial markets. States can obtain maximum benefits by

developing and operating their programs in close coordination with regional and national market transformation initiatives.

4. *Provide cost-effective savings.* The energy-efficiency programs should be worthwhile investments, both for states as a whole and for ratepayers in particular.
5. *Achieve consistency in statewide program design, implementation and funding.* Programs seeking to transform markets must be consistent statewide in their design and implementation. Coordinated implementation will lower costs, increasing cost-effective savings achieved. In addition, all ratepayers should support these programs in equal measure. Disparities in funding levels across utility service territories is likely to create an uneven playing field for utilities and efficiency and clean energy providers, as well as unequal access to program benefits for consumers.

The New Jersey policy framework consists of five main elements, which the authors believe will help the achieve the foregoing policy goals:

- Program administration
- Economic assessment
- Program evaluation
- Shareholder incentives
- Reporting and regulatory review

Program Administration

States including Vermont and New York have decided to transfer program administration from distribution utilities to independent administrators. The two chief advantages of such independent program administration are

- Elimination of the utility's disincentive to reduce energy sales margin through aggressive efficiency savings
- The effectiveness and economy of a single, unified approach to program design and implementation in statewide markets

States such as Connecticut and Massachusetts (and apparently California) have opted for the advantages of using the existing distribution utility infrastructure for program administration. Dedicated and experienced utility staff can make all the difference in how effectively programs create savings and influence markets. Utilities can also take advantage of their universal access to energy distribution customers to market energy efficiency programs comparably widely, inexpensively, and effectively.

The challenge for regulators is to secure as much as possible the benefits of independent administration while capitalizing on the advantages of utility administration. As with independent program administrators, utility administrators should have to meet a set of minimum performance requirements. And just as with independent administrators, failure to meet minimum performance requirements should be grounds relieving the utility administrator of the responsibility for program administration.

New Jersey's settlement agreement provides for program administration by the state's energy utilities. The settlement also calls for a statewide clean energy collaborative with the responsibilities listed in Table 3.

Table 3. Role of Collaborative in Statewide Clean Energy Program Planning and Implementation

a. Finalize as necessary consistent statewide program designs and plans that are to be implemented no later than January 1, 2001.
b. Assist with the implementation of pilot and demonstration projects.
c. Coordinate and integrate evaluation as a key element of statewide program planning, implementation and refinement.
d. Help to ensure the integrity of programs by building regulatory and public understanding and support for them.
e. Determine the extent to which utilities have met individual performance targets, and recommend to the Board on or before May 1 of each year the level of performance incentive it should award the utilities for the previous program year.
f. Prepare regular reports to the Board, including annual proposed updates to program goals, performance requirements and metrics to be filed with the Board by October 1 for the next calendar year.
g. File program plan updates as needed.
h. Conduct informal meetings with and prepare status reports for Board staff and other interested parties.
i. Ensure programs are implemented as effectively as possible and consistent with this settlement agreement.
j. Conduct long-term strategic planning and seek to identify new opportunities for energy efficiency and renewable energy investments.
k. Coordinate the programs with other related national and regional program efforts.

New Jersey's settlement also calls for the following minimum requirements for the state's utility program administrators:

- Adhere to the affiliate relations standards to be adopted by the Board;
- As set forth in each program plan, meet the agreed upon minimum performance requirements for each program;
- File timely program plan updates and evaluation reports;
- Incorporate results of program evaluation into program implementation plans in a timely fashion;
- Maintain statewide consistency in program design and implementation; and
- Properly and adequately staff and implement programs.

The agreement also provides for regulatory enforcement of these minimum requirements:

> "Upon failure of any program administrator to meet any of these requirements, any Party may move that the Board open a proceeding for such administrator to show cause why the Board should continue to permit it to administer these programs. The Board may also open such a

proceeding on its own initiative regardless of whether or not any party so moves." (Agreement at 17)

One advantage of independent program administration is notably missing in New Jersey: the utility/NRDC settlement provides over the four-year term of the agreement that distribution utilities may recover lost sales margin from efficiency programs. (Agreement, pp. 7-9). Other states, such as Massachusetts, have not permitted utility recovery of sales margin lost to program savings.

Economic Assessment

The economic value of the resources saved by publicly-supported efficiency programs is a key consideration to state regulators (utility commissions are after all considered economic regulators), and to legislators who in most cases establish the SBC funding for efficiency programs. The New Jersey collaborative has agreed that cost-effectiveness analysis will be used to

- Inform program planning
- Demonstrate the relative economic value of programs
- Assess program results
- Guide program implementation.

The New Jersey settlement requires cost-effectiveness analysis to count all resource costs and savings, which in practice is the Total Resource Cost (TRC) test, plus externalities. (CRA Stipulation 2/8/00, Paragraph B.1.b.). This is the primary test to assess the relative economic value of the New Jersey Clean Energy Programs.

In the TRC test plus externalities, benefits will include the value of all resource savings to New Jersey (e.g., electricity, natural gas, oil and water). Costs will include direct program costs and customer contributions toward program measure costs. The test results will be provided to show the net present value of net program benefits as well as the ratio of benefits to costs. The collaborative has established a task force to recommend consensus assumptions for avoided resource costs, and to assist program teams in conducting cost-effectiveness analysis needed for program planning and implementation.

Program Evaluation

Under current regulations in many states, the purpose of program evaluation is to assure adequate monitoring and verification of the level of short-term kilowatt-hour savings produced by energy-efficiency programs. New policy goals and objectives for energy-efficiency programs require a new approach to program evaluation. Program evaluation must provide sufficient and timely information for the following specific purposes:

1. *Optimizing programs.* Program administrators will be responsible for redirecting and improving programs as soon as possible to better meet policy and program goals and objectives. This will require rapid feedback from the field and the marketplace. Accordingly, evaluation must provide relatively rapid access to information. Conversely, less emphasis is warranted on post-hoc analysis of program results than in current measurement and verification (M&V) protocols.

2. *Measuring program savings.* The public, the legislature, and utility regulators will judge the programs based on their energy, economic, and environmental savings. Evaluation must support findings of how much electricity, natural gas, and other resources the programs actually save.
3. *Gauging market effects.* Where programs are designed to change markets to increase energy efficiency, evaluation should focus on market effects. The market transformation objective requires information beyond traditional program impacts. Evaluation must gauge effects in the marketplace that are the primary purpose of market transformation. Such market effects include changes in specific attitudes and behaviors, as well as structural elements of markets (e.g., prices, availability, delivery channels) that are related to program activity and indicate the extent of progress toward market transformation. Observable indicators of these market effects must be carefully defined in advance and tracked over time (often years) to assess the extent to which the program strategies are permanently dislodging barriers to specific energy-efficiency market opportunities.
4. *Identifying new opportunities.* New efficiency technologies and new efficiency market segments create new efficiency opportunities. Evidence of unserved or underserved markets under current program design and implementation can also suggest new opportunities for efficiency gains. Evaluation should be planned and conducted to help program administrators recognize and pursue emerging efficiency opportunities. This may include market assessments (e.g., baseline studies for specific energy uses, technologies or practices) as part of research, development and planning prior to program implementation.
5. *Judging administrator performance.* Program administrators should be awarded performance incentives for achieving the Board's policy goals and objectives. Program evaluation is an essential part of evaluating the performance of program administrators. These rewards should provide compensation based on a balance between indicators of market change and indicators of savings directly achieved. This balance will encourage a focus on market effects, and provide that savings are reliable and customers are well served.

The settlement agreement deals explicitly with the Collaborative's approach for developing and carrying out evaluation plans. (Agreement, Attachment 3). The collaborative has established an evaluation team of utility staff and collaborative advisors to develop and apply a methodology for claiming savings, assessing administrator performance, and calculating lost revenue.

Performance Incentives

The opportunity to earn incentives can encourage program administrators to meet policy goals and objectives. To be effective, performance incentives for program administrators should be structured and applied with the following basic principles.

First, performance incentives need to be simple, clear and strong enough to motivate program management. Incentive mechanisms can be ineffective and even counter-productive if they are perceived as ambiguous, unattainable, or difficult to understand and act on.

Performance incentives also need to be consistent with the state's policy objectives, and carefully designed not to provide perverse incentives. They also should be consistent with state's policy regarding allowed rate of return for other regulated services.

Second, performance incentives should be commensurate with potential program benefits and available program funding. The size of the potential incentives should vary progressively with the magnitude of the benefits achieved through effective management. Conversely, diverting too many resources to administrator incentive payments would unduly detract from the public benefits achieved by the programs.

Third, performance incentives should be tied to both long-term as well as near-term program objectives. The size of incentive awards should depend on achievement of a set of well-defined performance goals for indicators of energy savings and market changes. Program evaluation should play a major role in measuring administrator performance with regard to these objectives.

Finally, performance incentives should be calculated and rewarded on an annual basis. Regulators should establish a relatively streamlined process for applying the incentive mechanism relying on annual performance reviews.

New Jersey's settlement calls for performance incentives for each utility. This consists of a maximum level for all program expenditures of 12% for the four-year term of the agreement. Utilities can earn up to these maximum incentive levels according to performance on a variety of target indicators. Table 4 provides the maximum incentive allowed each utility by program under the settlement for program year 2000.

Table 4: Program Administrator Performance Incentives for Electric and Gas Utilities

Programs	Statewide	Electric Utilities	Gas Utilities
Residential			
Residential HVAC – Electric	$ 738,889	$ 738,889	$ -
Residential HVAC – Gas	$ 423,407	$ -	$ 423,407
Residential Windows	$ 30,222	$ 22,815	$ 7,407
Residential Low Income	$ 985,259	$ 607,481	$ 377,778
Residential New Construction	$ 828,148	$ 565,185	$ 262,963
Residential Lighting	$ 58,296	$ 58,296	$ -
Residential Appliances	$ 41,259	$ 41,259	$ -
Non Residential			
Commercial/Industrial Construction	$ 1,081,801	$ 970,291	$ 111,510
Building Operation & Maintenance	$ 103,610	$ 95,475	$ 8,135
Compressed Air	$ 76,000	$ 76,000	$ -
Renewables			
Customer Sited Clean Generation	$ 220,370	$ 108,296	$ 112,074

Reporting and Regulatory Review

Reporting and regulatory review for the New Jersey Statewide Clean Energy Collaborative consists of the following elements.

1. *Four year plan.* New Jersey utilities and NRDC filed an initial joint four-year statewide energy-efficiency program plan for approval by the BPU as part of the settlement agreement. This plan contains the program portfolio with documentation supporting regulatory approval. Supporting material provides descriptions of program designs, implementation milestones (including transition plans) projected program savings and market effects, and other evidence that the plan meets the goals and objectives set forth above. Supporting evidence also included a demonstration that the program portfolio is designed to meet these objectives, and plans for statewide program cost-effectiveness analysis and evaluation. The four-year plan also included the program performance indicators to be used in utility-specific proposals for performance incentives in 2000, the transition year between the status quo and the full statewide program implementation in 2001.
2. *Annual updated program plans, goals and budgets.* Each October starting in 2000, administrators will provide for regulatory review and approval a detailed plan including program goals and budgets and proposed performance incentives. The plan will also detail specific program modifications (compared to the four-year statewide plan or previous budget approvals), provide a program implementation schedule, and, where desired, a detailed performance incentive proposal. The plan update will also provide evidence supporting regulatory approval (e.g., updated cost-effectiveness analysis).
3. *Annual claims for performance incentive awards.* Each May, the collaborative will work with the utility program administrators to prepare incentive claims based on performance against approved program goals, including energy savings, participation, and indicators of market effects.
4. *Occasional updates.* The collaborative will provide informal written quarterly updates and convene informal update meetings to keep regulators and interested parties informed of program progress and results.

Under the settlement agreement, the collaborative parties agree to

> ... work together to explore the costs and benefits of targeting clean distributed resources to reduce transmission and distribution costs. They also agree to explore and promote, if appropriate, alternative forms of regulation for the transmission and distribution utility that remove any potential disincentive to promote investments that reduce throughput.

The collaborative will also seek consensus on revised energy-efficiency regulations by the end of the year for recommendation to the BPU.

Conclusions

At this writing New Jersey is four months into implementation of a settlement agreement still not approved by the BPU. The collaborative parties have agreed that the most sensible course is to proceed as if the settlement agreement will be approved. The alternative would be to act as if would not be approved, which would have involved either ceasing program operations altogether, or continued to operate the patchwork of different utility programs previously approved by the BPU. While the existing programs all had their strengths, their collective market impacts were constrained by one simple problem: they were not uniform across state markets. Multiple utility administration would have unnecessarily raised costs and/or reduced savings achieved (by diverting fixed budgets away from efficiency products and services to unproductive overhead).

The collaborative is currently focusing on establishing processes for joint planning and implementation activities for ten efficiency programs by six electric and gas utilities — and one national environmental advocacy organization involved in efficiency and renewable utility collaboratives throughout the U.S. With so many perspectives and so little time, it will be a daunting challenge to realize the best of both worlds — independent and utility program administration. Hopefully, future research and reporting will reveal the relative strengths and weaknesses of New Jersey's system of statewide program administration compared with approaches taken in Connecticut, Massachusetts, California, Vermont and New York.

REFERENCES

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