The New England Disclosure Project:
A Project of the National Council on Competition
and the Electric Industry

Uniform Consumer Disclosure Standards for New England:

Report and Recommendations to the
New England Utility Regulatory Commissions

By the Regulatory Assistance Project
Tom Austin
David Moskovitz
Cheryl Harrington

October 6, 1997

Acknowledgments

For the past seven months, the authors have worked with public utility regulatory commissions and other stakeholders in New England in an effort to develop a uniform regional approach to consumer information disclosure. Our efforts and this report are part of the National Council on Competition and the Electric Industry's Consumer Information Disclosure Project. These activities are funded primarily by the U.S. Department of Energy and the U.S. Environmental Protection Agency.

This report benefitted from the work and the insights of many people. Our largest debt goes to the stakeholders (listed in Appendix A) who attended the meetings and who, through their comments, helped improve this report immeasurably. We thank Jonathan Raab of Raab Associates Ltd., the facilitator for the disclosure meetings and author of the description of them in Section 2, and Gillian Wright of EPA who assisted with the portion of Section 3 addressing emissions.

Naturally, the views expressed in this report and any errors are attributable to the authors, not to those of any funder or those who have been kind enough to offer assistance.

Executive Summary

In March 1997, the public utility commissioners of the six New England states initiated an effort to see whether and how uniform consumer information disclosure for the retail sale of electricity might be developed for use throughout the region. The New England states have long been served by a highly coordinated power pool, and utility regulators in the region have a shared history of cooperation on many regulatory issues. With the emergence of a competitive retail electric industry, the New England region is expected to become a cohesive, single electricity market, making it ideal for region-wide initiatives, such as consumer information disclosure.

The New England Information Disclosure Project is part of a larger, comprehensive information disclosure research project of The National Council on Competition in the Electric Industry (National Council), a collaborative undertaking of state utility regulators and state legislators. The Regulatory Assistance Project (RAP) is the manager of the National Council research project and has served as the primary advisor to the New England project.

This report makes a number of specific policy and action recommendations to the six states. It is informed by input from a broad group of stakeholders gathered during a series of nine meetings held in New England, from three national workshops on information disclosure, from the related research activities of the National Council, and from the experience and insights RAP has gained through discussions with state and federal agencies with authority and experience with consumer information disclosure issues.

Goals

The three most important goals of disclosure are to:

1. Allow customers to make the choices they wish to make and thereby achieve customer- preferred outcomes
2. Enhance customer protection
3. Make the electricity market more efficient

Fundamental to disclosure is a simple label that is informative, succinct, easily understood and widely available. Simplicity is a central and recurring theme. Throughout the process leading to this report the authors, regulators and stakeholders have needed to resist a temptation to make labels more detailed and precise than needed for consumer protection and consumer information purposes. A relentless focus on the goals of information disclosure and the practices and standards for information disclosure for other consumer products and services is essential.

The Label

A basic uniform label is recommended as the first and most important disclosure vehicle. Consumer research shows the label should convey four pieces of key information: price, contract terms, fuel mix, and air emissions. The sample label in Figure 1, developed by the Massachusetts Division of Energy Resources, shows how the key information might be displayed in a format acceptable to customers.

Product Information

After much thought and discussion, the report recommends that the information disclosed on the label be based on product rather than company level information. Company-wide information should be provided periodically to customers. With the exception of some allowances for the unique circumstances of new products, disclosure should rely on recent historical information.

The model rule also includes a reconciliation provision that periodically compares an LSE's mix of historical supply sources to the mix of products it sells to consumers. The LSE is required to keep any difference between these mixes to ten percent.

Price

The price portion of the label price should reflect only the average price for the generation services. Limiting price disclosure to generation services allows suppliers selling across a wide geographical area to use a single label without regard to differences in distribution charges. If distribution costs were included, it would be impossible to include a label in a *Boston Globe* ad that reaches consumers in many different service areas.

The average price information needs to be given at several, typical usage levels to allow customers to identify the one most closely matching their own.

One-time cash or other price inducements should not be reflected in the disclosure of average electricity price. Prices for time-of-use (TOU) rates should be based on consistent load profiles for customers, with the usage levels shown. Finally, suppliers that offer bundled products have the option to disclose price either by rolling the cost of all goods into the price of electricity or by disclosing the same electricity price for both the bundled and unbundled version of the product.

Contract Terms

This contract terms section of the label should indicate both the duration of the contract and whether the contract price schedule is fixed over the contract period or how it varies (e.g. with the Consumer Price Index, spot market, etc.).

Supply Mix

Supply sources are recommended to be limited to the sources shown in Figure 1. To simplify the presentation of the information, sources comprising less than five percent of the total mix can be combined provided that no combined group represents more than ten percent of the total mix.

Emissions

Emissions of sulfur dioxide, nitrogen oxides and carbon dioxide are the most important to report, and they are best expressed compared to the regional average emissions. Emission tracking should be based on a single, simple emission factor for each emission, at each plant. Pumped storage units should report the characteristics of the electricity used to pump the water uphill.

We recommend that the label not reflect emission offsets such as tree planting and retiring old cars unless there is either a readily available and generally agreed upon calculation or a governmental or credible independent third party determination of the value of the offset. Landfill gas projects are examples of the first exception. Carbon dioxide emissions from landfill gas projects can be reduced to reflect the CO_2 equivalent of the methane not released to the air. An example of the second type of exception is allowing CO_2 offsets to the extent biomass projects use fuel harvested from operations certified as using sustainable forest practices by Smartwood Scientific Certification Systems or any other independent group approved by the Forest Stewardship Council.

Tracking

There are two primary tracking approaches, settlements and tradeable tags, and each have strengths and weaknesses. The recommended tracking approach is a hybrid of the two. The tradeable tag approach is not recommended at this time because of uncertainty about consumer acceptance. Features of the tag approach, however, are recommended to be added to a proposed ISO-NE settlement system.

Disclosure rules for imports depend on whether comparable tracking and disclosure occurs in the neighboring regions. If the neighboring region has a tracking system and disclosure system similar to the one in New England, power from that region would be tracked and disclosed in New England in the same manner as in-region generation. Otherwise imports should be labeled as imports and the average emissions of the exporting company (or region if company data is not available) should be reflected in

emission disclosure. Exported power would be labeled at the pro rata, average mix of the exporting firm.

If needed, an interim system can be implemented to track unit contracts and entitlements.

The tracking systems do not specifically include a generally available default option, but one could be added.

Terms of Service

The report recommends that customers receive a document called *Terms of Service* containing all of the material terms of services, i.e detailed information on price, contract terms, consumer rights, substantiation of marketing claims and environmental impacts. This would be provided at the time customers enter into the purchase contract, with sufficient time to review the terms and cancel without penalty, and annually thereafter. A National Council report focusing on the form and content of the *Terms of Service* will be issued later this fall.

Administrative Issues

ISO-NE should serve as the disclosure administrator if it can demonstrate a commitment to disclosure and an interest in protecting retail customers.

Specific costs and time estimates for the ISO-NE to implement the recommended tracking functions have not been made. We did retain a private contractor who has worked with similar tracking from source to sink for the North American Electric Reliability Council (NERC). She believes she could provide tracking at a fairly low cost and in a short period of time.

Enforcement

Proposed model rules are presented in the report and recommended for adoption by each be adopted by each state commission. Coordination in New England is best achieved by all states using the same rules for disclosure. Labeling and disclosure requirements should be established as a condition of a retail seller's license. Compliance failure could result in sanctions ranging from warnings to revocations of licenses.

Next Steps

With the establishment of a multi-state, staff level team working on disclosure issues, the six New England states have already taken an important step toward coming up with uniform rules, applicable throughout the region. To achieve uniform and enforceable disclosure requirements in the region, we recommend both that the Commission staff team start with the model rules included in this report, and after modifying them as

necessary, each state initiate a rulemaking proceeding based on a uniform proposed rule. Each state should require that parties filing comments on the rule file a copy of their comments in every other state in the region. The PUC staff team should consider the comments filed in all states and to the extent possible recommend a uniform, final rule.

1. Introduction and Background

Customer choice is happening quickly. In 1998, millions of retail customers in New England and around the country will begin to choose their own suppliers of electricity. Lessons from other markets and early experience from pilot retail competition projects have shown that giving customers reliable information, preferably in a standardized format, is critical. Reflecting this, the National Association of Regulatory Utility Commissioners (NARUC) passed a resolution in November 1996 calling for uniform disclosure standards including price, price variability, resource mix and the environmental characteristics of electricity purchases.[1] The resolution concludes that:

> ***The National Association of Regulatory Utility Commissioners (NARUC), ... believes that the electric industry should facilitate informed customer choice that will promote efficient markets, resource diversity, and environmental quality; and***
>
> ***NARUC supports initiatives leading to minimum, enforceable, uniform standards for the form and content of disclosure and labeling that would allow retail and wholesale consumers easily to compare price, price variability, resource mix, and environmental characteristics of their electricity purchases; and***
>
> ***NARUC urges states adopting retail direct access programs to include enforceable standards of disclosure and labeling that would allow retail consumers easily to compare the price, price variability, resource mix, and environmental characteristics of their electricity purchases.***

The full resolution can be found in Appendix C.

New England Governor's have also expressed an interest in disclosure and adopted an important resolution in the summer of 1997.

> ***NOW, THEREFORE, BE IT RESOLVED, that the New England Governors' Conference, Inc. fully supports current efforts initiated by the National Council on Competition and the Electric Industry and the New England Governors' Conference to develop enforceable, uniform standards for the form and content of disclosure and labeling that wold allow retail and wholesale consumers to easily compare the price, fuel and emissions characteristics of potential electricity purchases; and***

---

[1] Disclosure is factual and objective. For example a particular purchase might be 40 percent coal, 30 percent gas and 30 percent geothermal power. It does not address subjective claims, such as whether a particular purchase is good or bad, clean or dirty.

BE IT FURTHER RESOLVED, that the New England Governors' Conference, Inc. encourages state officials to participate in the research effort and seek consensus so that consumers across the region, when retail choice is available to them, will have the benefit of consistent, easily understandable information regarding the electricity they purchase.

The full resolution can be found in Appendix B.

Shopping for electricity is a new experience for consumers. Experience with pilot programs showed a high level of consumer confusion as complex price structures made it difficult to compare competing offers and the intangible nature of the commodity made it nearly impossible for customers to determine the sources of their power or to verify whether sellers' claims were true. Without a common language that provides an accurate, objective basis for comparing claims of competitive suppliers, customers will find it difficult, or in many cases impossible, to compare the price, fuel and emissions characteristics of potential electricity purchases. In fact, in some of the retail choice pilots, misleading claims were common.[2] Customer focus groups conducted with pilot program participants in New Hampshire and Massachusetts confirm that consumers strongly dislike making the "apples to oranges" comparisons with which they have been presented.

Standardized, consumer-friendly labeling and disclosure is required in many sectors of the retail economy such as food, automobiles and consumer credit to correct informational imbalances between seller and buyers and to provide a uniform basis for comparison of material terms. A uniform disclosure mechanism for retail electricity sales will give customers an accurate, objective basis for comparing price and environmental claims of competitive suppliers.

---

[2] Some argued that a number of the environmental claims made in the pilots violated existing laws regarding environmental claims used in marketing and that, had the law been adequately enforced, some, or perhaps all, of these abuses would not have occurred. They may be correct in arguing that some of the abuses in the pilots were, in fact, in violation of the current Federal Trade Commission (FTC) guidelines.

However, even if we could assume adequate funding of the FTC's enforcement activities, relying solely on existing law would fall far short of the proposed disclosure in a number of respects. There would be no uniform price information; absent some type of environmental claim, there would be no fuel or environmental information at all; and if an environmental claim were made, it would only provide the same information as the disclosure label if the marketer wished to make broad environmental claims regarding both fuel and emissions.

A disclosure policy covering price, fuel mix and emissions will also protect suppliers from unfair trade practice claims by setting clear rules of the road. It protects against customers having difficulty comparing prices and a backlash aimed at environmentally-benign resources by helping to insure that customers get what they want and pay for. Depending on the level of customer demand, it can result in cleaner resources and less pollution.

2. The New England Disclosure Project —State Solutions to Multi-State Issues

In November 1996, the National Council on Competition and the Electric Industry (National Council) began a comprehensive information disclosure project. With input from DOE, EPA. FTC, FDA, EIA and FERC, a multi-part research effort was designed.[3] The research effort includes consumer research modeled by staff of the FDA and draws on FDA's substantial experience with the food labeling efforts. The project guides policy and technical research into a variety of labeling and tracking issues and seeks stakeholder input through a series of regional disclosure meetings. The Regulatory Assistance Project (RAP) serves as the project manager of these activities. In February 1997, the National Council added the task of working with the New England States to develop a uniform, regional disclosure mechanism.

New England is a likely place to conduct this effort. Over the past few years, the New England states and their PUCs have increasingly turned their attention toward restructuring the electric utility industry to allow greater competition, particularly by allowing customers to choose among several competitive suppliers of generation. Each of the six states has favored disclosure of fuel mix, and several want suppliers to disclose environmental emissions as well.

While the individual states have kept themselves apprised of developments in neighboring states, the authority to act resides within each state. At the same time, many competitive issues, including disclosure, have strong regional overtones. Through the New England Power Pool (NEPOOL), the electricity supply in the region has been tightly integrated for years. More recently, the Energy Policy Act of 1992 and the move toward competition have meant that the market for electricity, at least in New England, is region wide.

One of the goals of the New England Disclosure Project is to facilitate coordination among the states to fashion consistent, if not uniform, state requirements for information

---

[3] FTC and FDA staff have provided informal advice because of their significant experience with disclosure and consumer information in other industries. Although staff of the EPA, DOE, FTC, and FDA have been informal advisors on consumer disclosure issues, none has taken any position regarding the specific disclosures presented in this report.

disclosure. Widely disparate state disclosure requirements are undesirable for many reasons. Competitive firms prefer uniform requirements to avoid higher marketing and administrative costs. Regulators, consumer advocates and consumers prefer uniform requirements so consumers more easily recognize, understand and use the disclosed information when choosing a supplier. Uniform requirements throughout a large region also reduce the possibility that firms might have an incentive to "game" the system.

In recognition of the regional nature of the power market, each of the New England PUCs formally expressed interest in the New England Disclosure Project and agreed to consider the results in their state proceedings.[4]

2.1 Gaining Input — Disclosure Stakeholder Meetings

The New England PUCs asked RAP, as part of its work, to solicit the opinions of stakeholders within the region. This was done in consultation with a Steering Committee composed of a commissioner from each of the New England States[5]. Commissioner Janet Gail Besser of the
Massachusetts Department of Public Utilities chairs the Steering Committee and, in that role, has
served as the primary contact person.

A major vehicle used to consider and design mechanisms to accomplish uniform information disclosure were nine public meetings that were held from April through September 1997, including a session to review an earlier draft of this report. The meetings were intended to engage interested persons in a deliberative process to identify issues and options related to disclosure of electricity pricing, fuel mix and emissions and analyze the strengths and weaknesses of each option. Although RAP was also interested in understanding the areas where participants were in agreement and where they diverged, the meetings were not intended to be a formal consensus-seeking process. Throughout this report, we will point out where there was fairly broad agreement among the participants. However, individual attendees at the meetings may disagree on some specific points.

---

[4] Representatives of the NY PSC have attended the regional meetings. RAP has also kept representatives of the NJBPU informed of progress. If the six New England States agree on uniform disclosure requirements, that will increase the likelihood that uniformity can be extended to NY and the PJM region. This would benefit suppliers and consumers.

[5] Steering Committee: Janet Gail Besser, Chair, MA; Reginald Smith, CT; Heather Hunt, ME; Susan Geiger, NH; James Malachowski, RI; Richard Sedano, VT

Attendance at these meetings came from a broad range of stakeholder groups. While the term meeting is used, in essence these were working groups where successive meetings built upon the input from earlier sessions. A number of interests were represented at all meetings. Attendance averaged approximately 50 people per meeting, and a total of 60 organizations attended at least one meeting (See Appendix A for complete list of attendees).

The first three meetings were conducted by Tom Austin of RAP, and the remaining six were facilitated by Dr. Jonathan Raab, President of Raab Associates, Ltd.[6] In addition to facilitating the six meetings, Dr. Raab took lead responsibility for designing the agendas and drafting the meeting minutes. The agendas for the final five meetings were developed with input from an Advisory Committee:

Advisory Committee Members

PUCs	Paul Peterson (VT) and Lucy Johnston (MA) — Shared Position
Energy Offices	Deena Frankel (VT) and Julie Michaels (MA) — Shared Position
Electric Utilities	Liz Hicks (NEES)
Marketers	Dan Allegretti (ENRON)
Generators	Alyse Gray (IEC)
Environmental	Ian Goodman (Goodman Group)
Consumer Advocate	Bill McAvoy (MA AG Office)

In all his meeting efforts, Dr. Raab worked closely with Tom Austin. Together they kept the Steering Committee apprised through Commissioner Besser.

Stakeholders who attended the meetings explored both what should be disclosed to customers in the form of an information label, and what type of tracking mechanism should be used to support and verify the information contained in such a label.

Discussions at early meetings followed presentations by RAP, other attendees and invited presenters on a range of disclosure topics. The primary problems to be solved and possible solutions were introduced. Over the course of the spring, the meetings were used to develop criteria for evaluating the success of disclosure mechanisms. In addition, many meeting participants served on subcommittees that met between meetings to develop proposals for the full group to consider. There were subcommittees for 1) price

[6] Funds for the facilitation services were generously provided by the National Council on Competition and the Electric Industry, Massachusetts Division of Energy Resources, New England Power, Enron, the Competitive Power Coalition, All/Energy, Maine Public Advocate, Green Mountain Power, Central Maine Power, Eastern Utilities Associates, MMWEC, and Unitil Corporation.

issues; 2) consumer interface; 3) tag-based tracking; 4) ISO-based tracking; 5) GMP's hybrid tracking; and 6) legal issues. Over time, the price issues and consumer interface committees merged, and the various tracking committees, while continuing to develop proposals independently, also participated in some joint meetings and created several joint products. Dr. Austin participated in many of these subcommittee meetings. Dr. Raab stayed abreast of the progress in each meeting and facilitated one, all-day joint meeting of the tracking committees.

By July, lists had been developed of issues where there was general agreement and of issues with continued thorniness. A draft version of this report was written in August 1997 and circulated for feedback to the stakeholders who attended the meetings and to other interested parties.

2.2 Other Report Input

The recommendations in this report are RAP's. They are based upon information gathered during the New England meetings and during a series of national workshops. They also draw on information gained from the broader research activities of the National Council, experience and insights gained from RAP's interaction with many state and federal agencies with authority or experience with disclosure issues and ongoing discussions with a wide variety of stakeholders.

3 Price, Fuel and Environmental Disclosure

3.1 Disclosure Goals

At one of the early meetings, three fundamental goals of disclosure were generally agreed upon.

1. Allow customers to make the choices they wish to make and thereby achieve customer- preferred outcomes
2. Enhance customer protection
3. Make the electricity market more efficient

The list is interesting not only for what it includes — which are three clearly desirable goals — but also for what it omits. Items that were ultimately considered to be secondary included:

1. Encourage renewable resources
2. Improve the environment
3. Comply with the PUC's request that disclosure be adopted
4. Provide mechanism to substantiate marketing claims
5. Provide mechanism to enforce a portfolio requirement.

In other words, the primary goals of disclosure are to assist customers in making their own resource choices, not to achieve a resource mix desired by policy makers, assist marketers in substantiating any claims they may make or assist in other state regulatory functions. Of course, it is possible that the outcome of customer choice, informed by disclosure might (or might not) be to encourage cleaner generating sources or help marketers substantiate their advertising claims. These outcomes, however, are secondary to the direct purpose of disclosure — to provide information to consumers.

Closely related to these goals is the central and recurring theme of simplicity. Throughout the process that led to this report, the authors, regulators and stakeholders have tended to want to provide information that is much more detailed and precise than needed for the consumer protection and consumer information task at hand. It is essential to be relentless in focusing on the purpose of information disclosure and the practices and standards for information disclosure for other consumer products and services.

There are many examples where balancing simplicity and precision has helped to resolve tough choices. For instance, in an effort to protect customers from inaccurate or imprecise claims, some stakeholders have concluded that claims relating to resource mix or emissions should be prohibited. Yet experience from other consumer product areas, such as food and recycled products, show that such information is useful to consumers, even though the accuracy required is only plus or minus ten percent. Knowing that precision is not required helps resolve this and many other policy and technical issues in favor of simple and practical disclosure options.

3.2 Proposed Label

Designing an effective disclosure label involves a number of tradeoffs. The most basic is resolving the conflict between providing all the information a customer might desire and developing a succinct and easily understood label. Consumer research and experience gained by the FDA and FTC in other areas convinced us to place a high value on simplicity.

The Massachusetts Division of Energy Resources (MDOER) took a lead role in developing the proposed label. At least for now, we recommend the use of the label shown in Figure 1. Except for a few minor changes, the recommended label is drawn from the MDOER proposal.[7]

---

[7] Some parties also proposed that certain additional information be shown on the back of the label to assist consumers in understanding the label and its significance. The additional information included definitions, clarifying comments and a description of the three air pollutants reported and the associated environmental and health impacts. We recommend that all of the information suggested be included in the *Terms of Service* rather than the reverse side of the label. Our reasons for not recommending that the back of the label be used for this purpose are 1) the label will appear in many places, such as newspapers and Internet web sites, where the back of the label is a press account of

One of the next phases of the National Council's research is to test six labels with consumers around the country. A label, like the one shown here, will be tested along with a similar label. The difference is that fuel facts are shown in a tabular form, similar to the display used in food labels. Research thus far suggests a slight consumer preference for the pie chart form. However, pie charts suffer from one shortcoming — supply sources with zero contribution are simply absent from the chart. In a tabular format, on the other hand, these sources would be listed with a zero. Additional research, to be completed later this fall, will explore this issue further.

3.3 Price Disclosure

Disclosure of price information is a good example of the tradeoff between simplicity and completeness. Price is the primary concern of most customers who shop, or expect to shop, for electricity. Not surprisingly, in a poll of New Hampshire customers who participated in the competition pilot, 71 percent of customers who changed suppliers stated that price was a strong consideration in their decision .[8] No non-price consideration was nearly as important. Other surveys and the focus group research found similar sentiments.[9]

Despite the fact that price was most important, focus group research conducted by the National Council showed consumers had difficulty comparing price offers, even when the price structures differed in very minor ways. Focus groups in New Hampshire strikingly revealed that customers found it difficult to make price comparisons among offerings. Practically all focus group participants wanted prices displayed in a simple, "apples-to-apples" manner. The New Hampshire poll showed that 84 percent of New

---

unrelated content or the inside of a computer screen, 2) the size of the label will not always allow all of the information to appear in a readable font size and 3) food labels and other similar disclosures having at least as much of a need for additional information have not opted for a back of the label approach. On the other hand, where placing information on the back of the label so is practical, it should be encouraged.

[8] R. Kelly Meyers, UNH Survey Center, "Survey Report of Retail Competition Pilot Program in New Hampshire" Prepared for the New Hampshire Public Utilities Commission," January 31, 1997.

[9] See (1) Alan S. Levy *et al*, Information Disclosure for Electricity Sales: Consumer Preferences from Focus Groups," The National Council on Competition and the Electric Industry, July 1997, and (2) Maine Public Utilities Commission Customer Surveys, Appendix 4, Electricity Utility Industry Restructuring, Docket 95-462, Report and Recommended Plan, Decision. 31, 1996.

Hampshire customers thought suppliers should be required to provide customers with uniform price information.[10] Similar results have been obtained from polls in other states.

The stakeholders' discussion of price disclosure focused on six questions:

Should the label disclose the price for competitive generation, or should it report the combined price including generation, transmission, distribution and any other regulated services?

Recommendation: Report only generation costs on labels.

Most stakeholders preferred that the label report generation costs only, and not other regulated charges such as transmission and distribution costs. There were two reasons for this position. First, the goal of the label is to help customers choose among competitive generation firms. Customers will pay the same regulated charges no matter what supplier they choose. Second, most competitive suppliers will be marketing to many customers, including customers who are served by different distribution companies. If labels reported the combined generation and monopoly price, different labels would be required for each monopoly service area, and this would add significant costs. In addition, such labels could not be used in many forms of marketing. For example, an advertisement in the *Boston Globe* would be targeted at customers serviced by a number of distribution companies. No single label could include the total costs to all customers. By limiting the label to generation charges, a single label would apply equally to every prospective customer.

Should the label report actual price schedules, or should it provide a table which allows for direct comparison with other products?

Recommendation: Provide a simplified average price table in the label and show actual price schedules in the Terms of Service.

Suppose a firm offered customers a product priced in a relatively simple manner, such as a $5 per month customer charge, $0.04 per kWh for the first 500 kWh and $0.03 per kWh for any additional kWh.

One option would be to simply report each of these elements directly on the label. The advantages of this approach would be that it is simple to administer and would allow customers to determine what their cost would be for any level of use. The disadvantage is this information would not allow customers to directly compare costs of this product to the costs of alternative products with prices that have different price structures.

---

[10] More specifically, 60.0 percent of customers "strongly agreed" that suppliers should be required to provide customers with uniform price information while 23.5 percent "somewhat agreed".

The other option is a simple table. Using the same charges as in the example above, this would be:

Monthly Usage	Average Price
250 kWh	6.0 cents per kWh
500 kWh	5.0 cents per kWh
1000 kWh	4.0 cents per kWh
2000 kWh	3.5 cents per kWh

Since the table for all products offered each customer class would be based on identical usage levels, this table allows easy comparisons. A similar tabular approach was also attractive to customers in the focus groups.

It is important to show the average price for several levels of monthly usage. Using only one or two usage levels creates two problems. First, it is possible that firms could structure their prices so that costs were particularly low only for the usage points listed on the table. Second, the table does not allow customers to determine costs for their own usage levels outside the range of level. We believe both problems can be mitigated by providing costs for several different usage levels, with the highest level being at least 2000 kWh for residential customers .

In any event, we recommend giving customers both types of information. The label should include a table showing average generation prices at the usage levels shown above and shown on the label in Figure 1. In addition, the actual generation prices and price structure should be included in the *Terms of Service* described in Section 5 below.

How should the label deal with seasonal and time-of-use rates?
Recommendation: Calculate average price tables based on consistent load profiles for typical customers.

For seasonal and time-of-use rates, the price table should be calculated based on the costs for customers with seasonal and/or daily usage patterns of New England customers.[11] The

[11] Use of average load profiles, in general, and regionwide load profiles in particular, is a good example of balancing precision and simplicity. We recognize the average load profile of a 500 kWh per month residential consumer is not the same throughout the region. It is probably not the same in a given state or even in a given service territory. Nevertheless, our judgement is that the load profiles are close enough so that the effect on average monthly prices are within the .05 cents per kWh tolerance range we recommend in the draft model rule. In addition, using different load profiles for customers in different states or service territories would require retail marketers to prepare multiple labels, (and avoid newspaper ads) whenever they wished to offer

same load profiles should be used by all suppliers. The recommended label indicates to customers that their costs may differ if their usage patterns are not typical. The *Terms of Service* would include the specific charges for seasonal and time-of-use rates to assist customers with unusual usage patterns in making comparisons.

How should the label deal with variable prices such as prices that vary with the spot market price?

Recommendation: The label should reflect the average price, based on the prices of electricity on the last Wednesday of the most recent quarter. The label should indicate the basis of the displayed price.

Variable prices, including prices based on spot market prices will, by definition, be changing constantly. Consumers will receive the exact pricing terms in any service contract and in the required *Terms of Service*. The label will tell the consumer that the average prices displayed are variable (as opposed to fixed). Consumer familiarity with fixed versus variable rate loans and mortgages will make it easier for consumers to understand variable priced electricity.

To facilitate comparison shopping — particularly comparison shopping between products using variable pricing — and minimize gaming opportunities, we recommend that the average prices represent a snapshot on a particular day for all suppliers. The label should clearly indicate this fact and refer consumers to the *Terms of Service* for more information.

How can price be disclosed for bundled products? For example, what if a firm offers electricity to customers who also receive Internet access or cable television service at a bundled rate?

Recommendation: Suppliers have the option to disclose price either by rolling the cost of all goods into the price of electricity or by disclosing the same electricity price for both the bundled and unbundled version of the product.

The issue of how to display average prices when electricity is bundled with other products is particularly difficult. It involves a careful balance between giving customers an understandable way to compare prices without discouraging product innovation though price displays that bias against bundled products.

---

seasonal or time-of-use rates. Different profiles for groups of residential and non-residential customers should be used if only if usage patterns are so different that average price displays are misleading.

It is difficult, if not impossible, to determine the stand-alone price of electricity where a supplier only offers it as part of a bundled product with a single price.[12]

It is not clear whether bundled products will be common. In the telecommunications market, for example, the move to competition has resulted in a fewer, not more bundled products as compared to the regulated market of 15 years ago.

Bundled products and services should not be confused with suppliers offering multiple products and services, which we believe that suppliers are likely to do. We also expect there will be discounts for buying multiple products from the same supplier. We have seen deep discounts on software when bought as part of a larger package, discounts on insurance if the consumer has home and auto insurance with the same supplier, lower service charges if checking and savings accounts are with a single bank, and discounted prices if multiple telephone services such as Caller ID, Call Waiting and Call Forwarding are bought as a package. An electricity firm might sell either electricity or Internet access and offer a discount to customers who purchase both.
Where a supplier's **only** electricity offer is bundled with other services, there are three options.[13] Firms offering bundled products could be exempted from the requirement to report price. In this case, the price section of the label would indicate that electricity price information is not available separately. This option is not recommended because suppliers wishing to make price comparisons difficult could bundle electricity with some trivial product simply to avoid disclosing price in the label and, at the same time, could display price information in their marketing materials in a fashion that places their product at an advantage.

The second option is to require the supplier to allocate the total price between the bundled products and disclose the allocated price of electricity, with an added note that the price is available only if the consumer purchases specific other services or products shown in the *Terms of Service*. This option is better than the first. While there is a clear potential for gaming, the note on the label and the unbundled prices in the *Terms of Service* may be enough to discourage suppliers from showing artificially low electricity prices in the label.

---

[12] These problems caused some stakeholders to recommend that PUCs require all suppliers offering bundled electricity to also offer it on an unbundled basis.

[13] Based on experience in other markets, we do not expect there will be many circumstances in which sellers will offer electricity only if consumers buy a bundled product. Most sellers offering bundled services will also offer electricity on an unbundled basis.

The third option is to calculate an electricity price based on the total price paid for all bundled services, with an added note that other services are included in the price of electricity. We believe this option is better than the first and may be better than the second. This option should discourage suppliers from limiting their electricity offers to bundled products, a move which may be desirable, at least in the early years of retail electricity competition. On the other hand, under this option the label will be seen in conjunction with other marketing materials created by the supplier. This contrasts with natural gas price comparisons being experimented with by the Ohio PUC. In the Ohio price comparisons, the consumer is given a single page comparing the average prices of all suppliers. Any bundling of services or other complexities of price offers are necessarily limited in this type of disclosure.

We recommend that firms that offer electricity on **both** a bundled and unbundled basis (with or without a discount for buying multiple products), have the option of disclosing price in one of two ways. The supplier could elect to roll the costs of all goods into the disclosed average price of electricity as described in the third option above, or it could report the unbundled electricity price for both the bundled and unbundled version of the product.

How should one-time price inducements be reflected in price disclosure?

Recommendation: Price inducements should not be reflected in the disclosure of average electricity price.

A related issue is the treatment of one-time sales inducements. In New Hampshire, several firms used inducements such as bird feeders or cash to attract new customers. Focus groups in New Hampshire and elsewhere found that customers preferred price disclosure that ignored inducements. Given a clear electricity price, consumers seem to be able to recognize the one-time inducements.

What other price related information should be disclosed on the label?
Recommendation: Label should indicate whether price terms are fixed and the period of time customers are obligated to stay with their supplier.

There are two other items to display in the price section of the label. The first is whether the price terms are fixed or guaranteed for some period of time or whether the price will vary. The label should also indicate whether customers can switch to another supplier at will or whether, if they accept the offer, they will be obligated to remain with the chosen firm for a specific period of time.

A sample of the recommended price disclosure portion of the label is shown in Figure 1.

3.4 Fuel Disclosure

Consumer research in New England and nationally[14] shows that customers want to know the sources of the power they purchase and that a number would base their purchase decisions, at least partially, on the supplier's power sources. Recognizing this, all New England states have expressed a desire for uniform mandatory disclosure of fuel mix.

Fuel disclosure requires three fundamental steps.

1. **Precise definition.** What is to be reported? What categories of fuel will we use? Is data available to determine the fuel source?

2. **Tracking mechanism.** How will we track electricity through the transmission network? Once we know the fuel type for individual generating units, how do we determine which units serve which Load Serving Entities (LSEs) and their customers? (LSEs are firms that sell competitive generation at retail.)

3. **Assurance of accuracy.** How can we have reasonable assurance that the disclosure material which LSEs provide their customers accurately reflects the fuel source determined by the tracking mechanism?

How should fuel use be reported?

Recommendation: Eight supply sources should be used in the label. The "solar, wind, and biomass" category should be further broken out and listed separately whenever this category contributes more than five percent of a total mix.

Determining which specific fuels to report is largely a matter of developing a list that is reasonably short, while still differentiating among the major fuel types, particularly those where customers may exhibit strong preferences. Over the course of the stakeholder meetings, the participants focused on seven basic fuel categories. As discussed in Section 4, we recommend adding imports as an additional category. The recommended fuel or resource types are:

1. Coal
2. Nuclear
3. Oil
4. Natural Gas
5. Hydro-electric
6. Solid Waste Incineration
7. Solar, Wind, and Biomass

[14] See Myers, Levy *et al*, and Maine PUC, *op. cit.*

8. Imports from outside the region (New York, New Brunswick, Quebec)

The first four are self explanatory. Hydro-electric and solid waste are broken out because they are larger than the items grouped together in the final category and because a number of customers may have clear opinions, both pro and con, on their desirability. Solar, wind and biomass are grouped to reduce the total number of sources because all are generally perceived by the public as "renewable", and because none are large sources.

While the label would list these eight sources, the tracking mechanism would have the ability to trace generation back to individual generating plants. This is desirable for two reasons. Some states may wish to subdivide fuel categories, e.g. to divide hydro-electric into small and large plants, with a dividing line in the range of 30 to 80 MW. In addition, some LSEs may want the ability to track back to specific plants to support marketing claims, e.g. this product is from local generators, or this product is produced with union labor.

The decision to combine solar, wind and biomass into a single category was difficult. Focus group research suggests that solar, wind and biomass should be stated separately. To balance the need for simplicity against the consumer preference, we recommend that the component parts be broken out in the pie chart whenever a group contributes more than five percent of a product's mix.

To further simplify the display to consumers, other sources comprising five percent or less of the mix may be combined into a single listing, provided the total contribution of the group does not exceed 15 percent of the total mix.

3.5 Emissions Disclosure

Disclosure of emissions information is important for two reasons. First, though fuel type provides some information about environmental impacts of electricity generation, the connection between fuel type and pollution impacts is indirect and may not be well understood by many consumers. Second, the environmental impacts of a particular fuel type can vary significantly, depending on the type of generation equipment and the pollution controls used. Disclosure of emissions information provides a straightforward way to capture differences. It recognizes low-emissions generation and avoids implied discrimination against a particular fuel type (e.g. coal) where there is a wide range of emissions across plants.

A number of the consumer focus groups conducted for the National Council explored these issues in more detail. Consumers were asked to choose between two electricity products with different fuel mixes. Consumers consistently selected the product with less coal and more gas and renewables. (Nuclear was not part of either product.) Consumers were next asked to choose between the same two products, but this time both fuel mix and emission information were given. The consumers in the focus groups were given

emission information that showed the coal-based product had lower emissions than the alternative. Customers uniformly changed their choice of product. Exploring the issue with consumers showed their preference and need to have both types of information.

Which pollutant emissions should be disclosed?

Recommendation: Where emissions disclosure is required, sulfur dioxide, nitrogen oxides and carbon dioxide should be reported.

Emissions information should be disclosed for those pollutants emitted in significant amounts by electric generators, those having recognized environmental and public health impacts, and for those where reliable data is readily available. Many stakeholders concluded that emissions of three pollutants — sulfur dioxide (SO_2), nitrogen oxides (NO_x) and carbon dioxide (CO_2) should be disclosed.

As part of the National Council's broader research effort, we also asked staff of the USEPA to prioritize emission information. Their top three choices for consumer disclosure were the same three pollutants.

These pollutants are key contributors to a number of air pollution problems, including acid rain, fine particulates, ground-level ozone and global climate change. Generating plants burning fossil fuels, biomass or solid waste emit one or more of these pollutants. Electric utilities are the largest source of SO_2 emissions, and are a major source of NO_x and CO_2 emissions.[15] SO_2 and NO_x emissions are monitored through several federal and state environmental regulatory programs, including EPA's Acid Rain Program and the upcoming NO_x Budget Program. CO_2 emissions are monitored through the Acid Rain Program and can be reliably estimated using simple multipliers.

In choosing which emissions to monitor, we looked at three primary criteria: Emissions had to have an important impact; the data necessary for disclosure had to be reasonably available from relatively reliable sources (we tried not to impose new monitoring requirements); and the disclosure of emission facts had to add information beyond what is implied by fuel disclosure.

These criteria caused us to exclude some potential types of emissions. Mercury, for instance, is emitted from coal-burning electric plants and from solid waste incinerators, and there is growing concern about its environmental and public health impacts. Despite these concerns, accurate disclosure of mercury emissions does not appear feasible at this time. Mercury emissions from electric generation are neither widely nor frequently monitored. In addition, mercury emissions can vary widely depending on the mercury

---

[15] EPA Brochure on National Air Quality: Status and Trends, October 1996, EPA-454/FERC-96-008.

content of the fuel. As a result, the uncertainties associated with estimating mercury emissions are high.[16]

Disclosing the generation of nuclear waste or nuclear radioactivity was also rejected, though for different reasons. While nuclear issues are very important to some customers, radioactive emissions do not seem to vary greatly from one nuclear plant to another. Thus, simply telling customers what portion of their power comes from nuclear plants seems adequate.

What format should be used for emissions disclosure?

Recommendation: Emissions should be presented in grams per kilowatt-hour, and the label should allow comparison to the regional average emissions of each reported emission.

Emissions are normally measured in units of grams per kilowatt-hour, and this provides a simple objective format to supply information to customers. The only concern is that most customers will find it difficult to interpret the statement that a certain electricity purchase contains XX grams per kilowatt-hour of sulfur dioxide. Food labels faced a similar problem as many customers had trouble interpreting a statement that a certain food product contained XX grams of fat.

The solution is to find a simple mechanism for comparison similar to the way that fat content is compared to the amount of fat in a representative diet. In our recommended label, emissions are compared to the average level of emissions for all generators within the New England region. Other alternatives considered include using the level of emissions within a each state, or, moving in the other direction, within the whole country.

Pending completion of additional consumer research currently underway by the National Council, we also recommend the emission information in the label for a product be truncated at zero percent (due to offsets, emissions of CO_2 could be negative for a plant, but not for a product) and 200 percent. This allows the use of bar chart displays where the regional average appears midway along the bar.

There are some advantages of relying on the regional emissions levels. Using a national average would result in customers comparing their purchases to a market which is, to a large degree, not available to them. On the other hand, because most of the electricity consumed in New England is produced in the region, the regional mix is a reasonably good characterization of the alternatives available to customers. Using a state level emission average would mean using the average emissions of what LSEs are selling in

[16] Personal communication, Marika Tatsutani, Northeast States for Coordinated Air Use Management (NESCAUM).

the state rather than the emissions of plants located in the state. Given the nature of the region's electricity market, any LSE in any state could easily be selling from any of the region's power plants. A regional average benchmark also makes sense because it allows LSEs to have a single label for all of the New England states and because the tracking system we recommend easily calculates and updates the region's average emissions. .

What emissions data is available to support disclosure?

Conclusion: Emissions information is available to support disclosure.

Emissions information for SO_2, NO_x, and CO_2 is publicly available from the EPA and environmental agencies in the New England states. Combining EPA data, state data and established estimation techniques, it is feasible to compile reasonably accurate emissions information for disclosure purposes. The fact that the information is publicly available is important for two reasons. First, the information used for disclosure could literally be gathered from publicly available sources, although the more efficient and timely source for the same data is to collect it directly from generators. (See discussion of ISO-NE tracking in Section 4.) Second, information that is made publicly available is not likely to warrant confidential treatment.[17]

Data on emissions of SO_2, NO_x and CO_2 is available from EPA over the Internet for the approximately 68 percent of the emitting-generating capacity in New England that is subject to the Acid Rain Program. Similar data on NO_x emissions is expected to be available for an additional 22 percent of emitting capacity beginning in the summer of 1999 when EPA's NO_x Budget Program is implemented.

[17] See National Council Report, "Disclosure of Fuel Mix and Emissions by Retail Electric Service Providers: Issues of Confidentiality vs. Public Right to Know" (Hempling, July 1997)

Table 1. Breakdown of Emissions Data Available for New England Emitting Generation Capacity

Percent of Emitting Generation Capacity	SO_2	NO_x	CO_2
EPA Emissions Tracking System: Acid Rain Program	68 %	68 %	68 %
EPA Emissions Tracking System: NO_x Budget Program	NA	22 %	NA
CO_2 Emissions Multipliers	NA	NA	32 %
Emissions Estimation Factors[1]	32 %	10 %	-
Total	100 %	100 %	100 %

[1]May be source-specific or non-source specific AP-42 estimators. Estimation factors require fuel use and heat rate data to calculate emissions.
NA = Data not available from this source.
Data includes Utility and Non-Utility Generation

The remaining emissions data can be estimated using a combination of existing data and established methods. For the 32 percent of emitting generation capacity not covered by Acid Rain Program data, CO_2 emissions can be reliably estimated using established emission factors or multipliers. SO_2 emissions can also be reliably estimated for these sources, most reliably with information on the sulfur content of the fuel and source-specific estimation factors developed in the permitting process for large sources. In the absence of source-specific estimation factors, EPA's more generic AP-42[18] emissions

[18] AP-42 refers to Compilation of Emission Factors, Volume I: Stationary Point and Area Sources, AP-42, January 1995.

factors can be used. For the ten percent of NO_x emitting generation capacity not covered by the Acid Rain Program data or the NO_x Budget Program data, emissions can be estimated using a combination of detailed emissions factors accounting for control technologies developed by Acurex Environmental Corporation,[19] emissions limits for solid waste combustors recently set by EPA[20] and AP-42 emissions factors for wood and biomass facilities. Any facility using estimated data could also have the option of supplying more accurate data to the disclosure administrator.

---

[19] Phase II NO_x Controls for the MARAMA and NESCAUM Regions, EPA-453/R-96-002, November 1995.

[20] 40 CFR Part 60, Federal Register Volume 60, No. 243, December 19, 1995.

Databases of Emissions Information

EPA Disclosure Database
The Acid Rain Division at EPA is in the process of developing the Generation and Emissions Data Base (GEDB) which is expected to be publicly available by Spring 1998. It will include data on emissions and fuel mix by power plant, electric generating company, power control area and NERC region. This database could a baseline of data for disclosure purposes.

ISO New England Emissions Data
ISO-NE (formerly the New England Power Pool, or NEPOOL) annually compiles historical emissions information and makes projections of emissions for the entire ISO-NE grid. The emissions projections are based on confidentially submitted information from the pool members, including emissions estimation factors (estimated rates of emission by input fuel type, frequently based on the rate allowed in their permits), fuel type and projected fuel consumption, and heat rates. The historical emissions information uses monitored emissions data provided by members when available, and estimation factors when emissions data is not available. For small, infrequently run units, ISO-NE often uses EPA's AP-42 estimation factors. ISO-NE does not currently verify the accuracy of the emissions rates submitted to them but does verify the heat rate and generation data carefully.[21] We have no reason to believe the data used by ISO-NE is different from the publicly available data used by EPA.

How should emission information collection be simplified for tracking and reporting purposes?

Recommendation: Plant emissions should be calculated based on single emission factors (x grams per kWh) for each of the three pollutants reported on the label.

Actual emissions factors from a generator can vary substantially from hour to hour, day to day, and seasonally. In part this is due to fuel quality changes and in part it is because the efficiency of the plant and its pollution control equipment varies depending on whether the plant is operating at partial or full capacity. On the other hand, fuel mix and emission information disclosed to consumers will necessarily be based on longer term operations of several plants.
Our review of the available data and recommendations received from USEPA lead us to recommend, at least initially, that plant emissions (in grams per kWh) of SO_2, NO_x and CO_2 be reduced to a single annual emission factor. This means the quarterly updates of emission information on the label would reflect changes in emissions due to changes in fuel mix, not the emission factor itself. More frequent updates of the emission factors may make sense later depending on the the USEPA's progresses on its new emission

[21] Personal communication, Kevin Mankowski, ISO New England.

data base. Dual fuel plants would include a separate emission factor for each fuel. These plants should also periodically report the mix of fuels they used.

How should storage units be treated?

Recommendation: Storage units should report the characteristics of the electricity sent to storage.

Energy storage facilities such as pumped storage, compressed air or batteries require special consideration. When generating electricity, they produce no emissions. Yet because emissions are produced when other sources of generation are used to pump water, compress air or charge batteries, storage units should report the characteristics of the electricity sent to storage. If other forms of electricity storage become common, they should be treated in a similar manner.

Should reported emissions always reflect the emissions emitted from the smokestack or should offsets be allowed?

Recommendation: Offsets should only be allowed in limited circumstances. Specifically, CO_2 emissions from landfill gas projects should be reduced to reflect the CO_2 equivalent of the methane not released to the air, and biomass units should be allowed to reduce reported CO_2 if their fuel is certified as being harvested using sustainable forestry practices.

Some suppliers might choose to offset emissions with actions like tree planting, retiring old cars or pollution reductions at non-generating facilities. Two considerations influence our recommendation; the availability of reliable non-controversial data and consumer acceptance.

It is not clear how consumers will react to some types of offsets. For example, how will consumers react to offsets on labels of an electricity product sold in Maine produced by retiring old cars in California? It is also not clear that the emission reductions from such a program can be readily computed or obtained from a governmental or independent entity. For these reasons, we recommend disclosing emissions to reflect offsets only when reliable estimates of the emission value produced from these types of actions are available and acceptable (from either the government or an independent third party). Also, at least until there is more experience with consumer acceptance, we recommend limiting offsets to activities in close proximity to the source of the emissions. Landfill gas projects are an example where carbon dioxide emissions from landfill gas projects can be reduced to reflect the CO_2 equivalent of the methane not released to the air. Another example is allowing CO_2 offsets to the extent biomass projects use fuel harvested from operations certified as using sustainable forest practices such as by Smartwood Scientific Certification Systems or any other independent group, approved by the Forest Stewardship Council.

4. Tracking Issues

Once the fuel and environmental characteristics of each power source are established, the next step is to associate, or "track", the output of that unit with customer usage. For example, if a specific plant put 100 million kWh of natural gas fired electricity into the supply system, then some customers, somewhere use that electricity (after accounting for line losses).

Is it possible to know where the electricity at a customer's meter came from? This simple question has a complex answer because electricity follows the laws of physics, not the computations of accountants. With an interconnected grid, the power flow over the transmission system is ambiguous. About the best one can say is that power is put into the grid at certain points and is taken out at other points. Which generator produced the power that went through a particular customer's meter is, in a physical sense, indeterminate, except in a very few cases.

The fact that electrons cannot be traced from a customer back to a source has not impaired the ability of power producers and power suppliers to plan their systems, choose what to build and what to buy, inform consumers and others of the supplier's fuel mix or emissions, or most importantly, transact hundreds of billions of dollars of business. For market purposes, it is sufficient to know which firms are selling into the grid, which are buying from it and where losses are occurring.

Long before "restructuring" entered the lexicon, utilities developed mechanisms and settlements processes to track who generates, who consumes and who buys. While the details vary from place to place, they all share a common, basic design. For each buyer, the electrical energy taken from the system must be matched by an amount equal to the buyer's purchases, plus losses incurred in delivering such amounts to the buyer's system by the sellers. This is the basis for the dollar payments.

Physical energy flow data is essentially irrelevant to the dollar flow for wholesale purchases and sales,. Buyers pay for kWh received from the system at a particular place; sellers are paid for kWh delivered to the system. Except for questions of system reliability, and sometimes transmission pricing, the dollar flow is more important than the energy flow. Dollar flows dictate financial risks and rewards of power plant investment, expansion, operation and retirement decisions, and these are the decisions that result in more or less environmental harm.

There are two basic approaches to the tracking — the settlements- (or ISO) based approach and the tagging approach. The choice between these two has been discussed at some length, both in the stakeholder meetings in the New England Disclosure Project and more broadly. In part, this is because the choice has some significant implications for disclosure and for the electricity marketplace. But the debate has also reflected, at least

occasionally, a misunderstanding of the differences between the two approaches. In fact, the approaches are quite similar in a number of respects and can be made more so depending on how they are designed.

Each of the alternative approaches to tracking begin by offering its own specific tracking convention as an alternative to physical tracking. Conceptually, both approaches begin with each kilowatt-hour (kWh) of generation having an associated piece of information we call an ID (identification) showing the fuel and emissions characteristics of the generating unit. Under the settlement approach, when a kWh is sold, the ID is sold along with it. Under the tag approach, the ID can be sold independently of the kilowatt hour.

4.1 The Settlement (ISO) Approach

The settlements approach uses the data on unit ownership and transactions which must be collected for the electricity market to settle accounts.[22] An earlier National Council report entitled *Full Environmental Disclosure for Electricity: Tracking and Reporting Key Information* describes settlement processes generally. Our shorter discussion here is based on that report and the more specific aspects of settlements proposed and currently being designed for ISO-NE.

The principal strength of the settlement approach is its plausibility to consumers. If you have a kilowatt-hour generated by a natural gas plant, and you sell it, then the buyer has a natural gas kilowatt-hour. While this falls short of physical tracking, it is as close as we are likely to get.

In New England, the settlement process will need to collect all the information for this tracking approach. Specifically, the ISO-NE will know

1. Hourly generation of every plant in the region
2. Generation firm or firms which are entitled to that output
3. Amount of power each LSE takes off the transmission grid to meet its customers' needs
4. Electric energy contracts within the region or across the regional border where these contracts imply the purchase and sale of electricity

This information is adequate to link generators to customers and is readily available in the sense that the ISO needs to track it for the electricity market to function.

---

[22] The settlements process is needed to be make certain that those who generate more electricity than they need to serve their customers are compensated by those who take more power off the transmission grid than they put into it.

ISO-NE, in the normal course of its operations, will produce a report, referred to as the hourly settlement report, showing the hourly sources of energy for each LSE in New England.[23] This report would show the load of the LSE, the generation produced for it by every generating unit in which it had an entitlement (ownership or unit contracts), the amount of any system purchases[24] and the amount of any Adjusted Net Interchange (ANI).[25] In other words, ISO-NE routinely balances the hourly loads of each LSE with its various sources of supply. If its supply sources are short of its load the difference is balanced by buying ANI. Each of the LSE's sources of supply are tracked back to a particular power plant, or in the case of system purchases and ANI, it is tracked back to a supplier whose mix of operating plants is known.[26] With respect to imports, ISO-NE will know on an hourly basis how much of an LSE's load is being met by imports and at least what entity is supplying the power. Depending on how neighboring systems implement NERC policy 3, ISO-NE will know the source of imported power more precisely.

---

[23] Some LSEs may not participate in the pool directly but will be affiliated with an entity that deals with the ISO on its behalf. For example, a large LSE might have its own loads attributed to its account, together with the loads of one or more small LSEs for whom it is acting as an agent. The large LSE would have its own internal settlement process which would take into account the resources and loads of itself as well as of the other members of the "sub-pool". This internal process would presumably mirror the general ISO-NE process and, to the extent that the ISO-NE process performed tracking, the sub-pool would presumably mirror this as well.

[24] In New England, power purchases fall into one of two categories. A "unit" purchase is one where the buyer has a right to a specified portion of the output of a specified generation unit. The buyer would be entitled to power only to the extent the unit operated. A "system" contract is one in which the buyer receives a specified amount of power, say 10 MW, for a given hour, independently of the operation of any specific generation unit.

[25] Adjusted Net Interchange (ANI) energy sales occur when a participant's generation does not precisely match its load obligations (including losses). For example, if ACME has 100 MW of resources producing electricity in a given hour, and it needs only 90 MW to serve its customers, it is deemed to be selling 10 MW into the pool (ANI = 10 MW). Conversely, if it has resources of 140 MW but needs 150 MW to serve its customers, then it is buying 10 MW from the pool (ANI = -10 MW).

[26] Currently, imports, system contracts and ANI account for about 12 percent, 10 percent and 15 percent respectively of total sales.

For system contracts, ISO-NE will know the aggregate sources of generation used by the seller to meet the requirements of the system contract. However, if the seller does not provide more information to the ISO, or ISO-NE does not apply agreed-upon accounting rules, ISO-NE will not know what portion of the seller's generation the seller intends to use to serve its own load and what portion supplies the system contract. In the absence of some way for the seller to designate the source, a logical accounting rule assumes the seller's load and the system contract are both being met by the average of all the seller's supply sources. Similarly, for sales to ANI, ISO-NE will know the aggregate sources of generation used by the seller to meet the seller's load plus the sales to ANI. If the seller does not provide more information or ISO-NE does not apply accounting rules, ISO-NE will not know the specific sources. Later, we discuss proposed modifications to the current settlement process that will allow sellers to designate the sources of their system sales and ANI.[27]

Understanding the breadth and depth of the settlements system is important for two reasons. It indicates that settlements-based tracking provides a sound foundation for disclosure tracking, and it shows where more flexibility of settlements-based tracking would be useful.

Two limitations of the ISO-NE settlement mechanism are relevant. First, ISO-NE does not currently plan to receive fuel or emission information. As discussed in Section 3.5 above, we believe that average emission factors for SO_2, NO_X, and CO_2 for each plant are adequate for disclosure purposes and can be readily obtained, along with fuel type data from generators, and verified from public sources.[28] We recommend that ISO-NE collect this information directly from generators and combine it with the settlement report information to produce the needed fuel and emission data for each LSE.

Second, the contract options that can be readily administered in the settlement process are very limited. This may not present a problem if all electricity is required to be a single, fungible commodity, but it does begin to present problems as electricity from substantially different sources is viewed by buyers as separate products. We describe the issue here and recommend a solution in Section 5 below.

---

[27] Having the seller designate the source and inform ISO-NE of it is probably simpler and more efficient than developing accounting rules. In most cases, particularly where sellers also serve retail customers, sellers will have an incentive to designate the sources supplying their wholesale system sales and ANI to assure that these sales do not adversely affect their product mix sold to retail customers.

[28] One area where additional information may be required is dual fuel units, where the generator would need to indicate which fuels were being used.

ISO-NE will, as part of the settlement process, track very long and complex chains of title. This is needed for its hourly determinations of who owes whom for what. Thus, if A owns a 100 MW plant and contracts to sell the output to B for a year, who sells to C for a month, who sells to D for a week, who sells to E for a day, who sells to F for an hour, ISO-NE will know the full A-B-C-D-E-F chain of title, and they will know that in a given hour, F owns the output of A's 100 MW plant.
But ISO-NE has thus far designed its system to accommodate only two traditional types of contracts — unit contracts and system contracts. The A-F example above is for a unit contract. For these types of contracts, it is plain enough to see how the plant's emission rate and fuel type can be tracked. Unit contracts have certain drawbacks. For instance, if the plant is unavailable in a given hour, the holder of the contract must contract for backup power from other sources or buy power from the POOL's spot market (called ANI by ISO-NE). In contrast, if A had sold a system contract, F would not be at risk for an outage. A would provide 100 MW to F from A's mix of supply resources.

Suppose F and A agreed that A would sell up to 100 MW depending on F's load. The contract would specify that the load would be met by available hydro, gas to the extent hydro was unavailable, and system power to the extent hydro and gas were unavailable. This contract has some of the attributes of a unit contract and some of the attributes of a system contract. In effect, this is a system contract in which the parties have designated the sources of supply. As currently proposed, ISO-NE would have trouble administering this contract unless the parties could reform the contract into a series of unit and system contracts. The hybrid tracking system we recommend allows these kinds of agreements to be made for disclosure purposes, without requiring ISO-NE to do any additional tasks.

4.2 The Tagging Approach

As noted above, the tagging approach is much like the settlements approach with the principal difference being that the IDs or tags which bear fuel and emission data are tradeable independently of the electricity.[29] For example, a firm owning only nuclear generation might produce one million kWh of nuclear tags in a given period. In principle, this firm could sell its nuclear tags, buy one million kWh of hydro tags, and then market its power as all hydro. This market for tags is, in some respects, similar to the market for sulfur allowances under the Clean Air Act Amendments of 1990.

A fairly detailed tag proposal was presented by several participants in the New England project. The principal points were:

1. Tags would be created simultaneously with generation.
2. Tags could be bought and sold, independently of any trading in electricity.

[29] A more complete description of tradeable tags can be found in a paper on RAP's website at http://www.rapmaine.org

3. Periodically, perhaps every six months, the tag trading period would close, requiring that all retail sellers have adequate tags to cover their electricity sales.
4. At the time of closing, anyone holding tags could choose between using the tags they own to label their sales or turning the tags over to a central tag pool. Anyone needing additional tags would be allowed to draw out of the pool. Tags taken from the pool would have the average characteristics of all tags turned into the pool.[30]

[30] This feature allows retailers to label their products with a default mix regardless of their actual generation sources or the tags they hold. A similar feature could be added to the settlements approach, though we are not recommending it. See discussion in section 4.3.

Pros and Cons

The tradeability of tags is both its greatest strength and greatest weakness. Tradeability could create more flexible and liquid markets for both electricity and environmental characteristics than a simple ISO system. Traders can buy and sell electricity (or generating plants) without regard to the representations they make to their customers about the sources of their electricity. In other words, if a firm wishes to market a 100 percent hydro-based product, it need not bother owning a single hydro plant or finding a hydro plant to buy power from. Instead, it merely needs to enter the tag market and buy hydro tags.

But at the same time, this flexibility creates the widely-shared concern that customers may see the approach as being fundamentally dishonest. For example, imagine a customer with strong environmental views who hates nuclear power and has a clear preference for hydro and wind power. How might this customer respond when (s)he finds out the Acme Electricity has been charging her a relatively high price for 100 percent hydro and wind power even though it generated all its electricity from coal and nuclear sources. Proponents of tags are quick to point out that under the tag approach, we can fairly tell customers that when you buy X kWh of hydro power we can assure you that somewhere in the region a hydro plant generated energy for you and you alone. However, it is not at all clear that this explanation will be adequate.

Despite this concern, the tradeable tag approach has some distinct advantages, particularly when compared to some versions of a settlements-based approach. In fact, if we could assume away the problem with customer acceptability, tags may be preferred.

Under a settlements-based approach, the owner of an environmentally preferable resource will see the market for its output driven in part by the availability or cost of transmission. This means that any generator's market area cannot extend beyond the area where it can economically wheel (transmit) its output. However, since tags can be shipped at virtually no cost, the market area for clean environmental characteristics will be as broad as we are willing to allow.[31] Thus, it is possible, for example, that wind power from Maine could be available to customers in Rhode Island, even if transmission constraints do not allow the transaction to be made.

The flexibility of tradeable tags may provide other benefits as well. In some settlements-based proposals, certain implicit restrictions are placed on the owners' use of their resources. For example, as proposed in ISO-NE, the only way one could market a product that is heavily hydro is to own a significant amount of hydro capacity or to contract with the owners for the output of one or more hydro generators. It is not possible to buy

[31] See the discussion of imports, below.

predominantly hydro power from the NEPOOL Energy Exchange although this ability could be added (see section 4.3).

Despite these positive attributes, because of uncertainty about consumer acceptance, we do not recommend using a full tradeable tag approach at this time. Consumer acceptance may not be a long-term barrier, but the risk of poor customer acceptance undermining disclosure is too high. Our conclusion is bolstered by four additional pieces of information. First, there has been no customer research testing customer reaction to a tag-based approach. We tried to cover this issue as part of the National Council's consumer research efforts, but the complexity of the task was beyond what could be done in the broader-based focus groups. Second, tag proponents apparently have not conducted consumer research or if they have, they have not made the results available. Third, more than one supplier opposing tags has said if tags are used, its green products would not be based on tags, and its marketing would include attacks on the credibility of green claims based on tags. Finally, so far as we can determine, a tag-like mechanism has never been used for any consumer product.[32] Before a full tradeable tag mechanism is adopted, it is critical to have reasonable certainty that it will be accepted by customers.

4.3. Recommended Tracking Approach

Recommendation: The best solution is to find systems that marry the best features tradeable tags and settlements-based approaches.

An ideal tracking mechanism would have two primary characteristics. First, it should be accurate, and accepted by customers. Second, it should allow market participants broad flexibility in developing products and making business decisions, so long as those products are accurately represented to customers. Neither the settlements nor the tag based approaches appear to do a good job of meeting both criteria..

The best solution is not to pick the lesser of two evils but to look to approaches which marry the best features of both. At the stakeholder meetings, we investigated hybrid approaches, focusing on a settlements-based approach that had much of the flexibility of the tagging proposal.

The weakness of the settlements-based approach, as originally conceived, was its lack of flexible in dealing with system contracts and ANI. Our recommendation includes a method to allow buyers and sellers the flexibility to disaggregate system purchases and

---

[32] Perhaps the closest analogy is the market for tradeable sulfur emission credits under the Clean Air Act Amendments. However, this market was created to allow firms to respond to a Congressional mandate, not to allow consumers to choose the power sources they wish to receive.

ANI. This achieves much of the flexibility of tradeable tags with less risk of poor customer acceptance.[33]
In a simple ISO settlement system, we would assume system purchases and sales through ANI come from each of the seller's units pro rata. Thus if A sells 100 MW in a systems contract to B, we assume the sources were a pro rated mix of A's units that were online in a given hour. ANI sales would be treated on a similar pro rata basis.[34]

When combined with the limited types of contracts administered by ISO-NE, this pro rata solution is relatively rigid. For example, suppose a generating company owning a number of different generators of various fuel types wished to sell the output of a portion of its hydro to an LSE interested in marketing a "green" product. A system contract would not be viable because the buyer would be buying the overall pro rata mix of the generating company, including all of the different fuel types. In fact, the only option that would allow the LSE to buy a hydro product would be for the two firms to enter into a unit contract for one or more of the generating company's hydro units. This is problematic because unit sales contracts are becoming increasingly rare in New England. The reason for this is that with a partial unit sale, say 50 MW out of a 100 MW unit, it is not clear which firm determines the plant's bidding and operating strategy. Because of this, firms have become less willing to offer unit contracts and prefer system contracts instead. Prior to restructuring, this was not an issue because plants were under the control of the pool itself, not the individual firms with rights to the output.

We suggest allowing more flexibility for both system purchases and ANI. This could be implemented in an ex ante or ex post manner. An after-the-fact process would have four steps:

1. The ISO would produce a draft tracking report periodically, perhaps once a month. This draft would be based on simple pro rata allocation of system purchases and ANI.

2. Firms purchasing from the ANI pool could negotiate with firms selling into the pool for the rights to claim particular resources which were sold into the pool

---

[33] In this hybrid, the retail seller would still have a contract for power from a generator with the characteristics claimed by the retail seller. This contrasts to tradeable tags where a connection between the power contract and the mix of available sources the seller has to fulfill the contract is not necessary.

[34] While the pro rata approach is conceptually simple, there may be some computational difficulties if there are a number of circular sales patterns, e.g. A sells to B who sells to C, who sells to A. This problem may be resolvable mathematically or may require adopting some type of allocation convention.

under step one. That is, suppose a firm bought 100 MWH out of the pool in a given month. It could negotiate with a firm who sold 100 MWH of hydro into the pool for the right to claim that the energy it received was hydro. In some respects, this is like tagging. The difference lies in the quantities which can be traded. The firm selling hydro tags can only sell them to the extent that it sold hydro into the pool. The buying firm can only buy tags up to the point that it made pool purchases. Because of this limitation, the customer acceptance advantage of the settlements-based approach is maintained; tags are only traded as part of an electricity trade.

3. For system purchases and sales, a similar procedure would be used. A firm buying under system contracts would have a period of time to negotiate with its sellers to earmark which of the seller's generating units would be credited with providing the power. These negotiations could also occur up front, at the time the buyer and seller strike the deal for the original system purchase. Again, the only limitation is that trading in attributes can neither exceed the monthly generation of the attribute by the seller nor the amount of energy purchased by the buyer.

4. The parties report back to ISO-NE the trades they have agreed upon, and ISO-NE issues a final monthly report after taking into account how trading has shifted (including both increases and decreases) the allocation of desirable resources. Parties would not be obligated to report any other details of their transactions, such as the prices at which the transactions took place.

An ex ante approach is also possible. With respect to ANI, all purchasers with an interest in their sources of supply would submit bids (monthly for the sake of simplicity) for power from particular types of resources. The bid price would reflect the value of the fuel source or emission attributes over and above the market price for ANI energy. For example, an LSE could normally expect to receive some amount of energy from ANI each month. The LSE could submit a bid of, say one mill per kWh to be allocated to any hydro sold to the ANI up to some level. This may be the LSE's ANI purchases. ISO-NE could stack the bids against the resources and allocate ANI supply characteristics accordingly.

Another version of an ex ante would simply have the seller and buyer agree in advance, as to how sources would be allocated to system power sales. For example, if a buyer wants 100 MW of system power and does not care about the source, the seller would simply designate which of their sources were supplying the 100 MW load.. If the buyer wanted certain types of supplies to be used, negotiations between the parties would establish the supply sources and the prices. In either event the seller would inform ISO-NE of the allocation in time to be reflected in the regular settlement reports.[35]

[35] This would be a straight forward option for sellers that serve retail loads as well as selling in the wholesale market. By designating the sources of system sales and ANI the

The key difference between the recommended approach and tagging is that identification "tags" would be allowed to be traded only as part of an energy transaction. For example, A could buy 10 MWH of hydro from B only if A bought 10 MWH of electricity. This approach, while similar in a number of respects to the Green Mountain Power proposal, differs in that system power and ANI allocations do not rely on "hourly closing".[36]

Should there be an interim tracking system?

Recommendation: If needed, an interim system can be implemented to track unit contracts and entitlements in the same way as the recommended approach.

As discussed in Section 6 below, we believe that with clear direction from the six New England states, it is possible to have the recommended tracking system in place by the April 1, 1998 date for the new ISO-NE system. In the meantime, or in the event the states wish to give ISO-NE more time (or if more time is, in fact, required by ISO-NE), a tracking and disclosure system based on unit contracts and entitlements can be implemented on an interim basis. While the interim approach described below is less effective than the recommended hybrid tracking and disclosure system, we believe it would still be valuable and credible for consumers who have expressed a strong interest in obtaining uniform comparative information at the onset of retail access. Beginning retail access without a uniform disclosure system in place would be far more problematic than dealing with the issues arising from an interim system.

In the interim system, LSE fuel mix and emissions characteristics would be identified by the LSE's unit contracts/unit entitlements and a regional average value for the LSE's power exchange and system purchases. Unit contracts/unit entitlements information for LSEs will be readily available from ISO-NE even before the new settlement process is in place on April 1, 1998. For LSE's power exchange and system purchases, the generation characteristics will not be reported initially by the ISO, since no tracking process will be

---

seller could most easily assure that wholesale sales did not adversely effect the mix of resources dedicated to retail sales.

[36] Relying on hourly closing for system contracts and ANI is possible but we do not recommend it for two reasons. First, the increased precision is probably not worth the added effort, particularly given the general level of accuracy we believe must be achieved (+/- ten percent). System contracts and ANI comprise about 20 percent of LSE energy supplies. The likely difference that hourly versus monthly reporting would make on labels is expected to be small. Our settlements consultant has advised us that hourly closing for the allocation of supply sources making up these sales can be done but it is significantly easier and cheaper to perform this task monthly.. Second, monthly closing is somewhat more flexible, particularly for owners of non-dispatchable renewable facilities.

in place. Rather, to approximate this information, regional default values for fuel mix and emissions would be developed. This can be accomplished by summing all of the region's generation in a given period and subtracting the unit contract purchases/unit entitlements directly assigned to LSEs. Imports would be treated in the same manner as the recommended system.

With the exception of how power exchange and system purchases are tracked, the interim system would be identical to the recommended hybrid. The interim system and final hybrid will share many key attributes including: the development of a database for fuel and emissions information from generation sources, the label format and customer communication documents such as the *Terms of Service*. Therefore, an interim disclosure system will provide many of the key components necessary for the recommended hybrid system and will provide the necessary foundation that must otherwise be in place to implement the hybrid system.

We recommend that the interim tracking and disclosure system be uniform throughout New England to the greatest extent possible. To that end, we also recommend that development and implementation of the interim system be closely coordinated by New England PUCs and other stakeholders. Finally, the attached model rules specify the period during which the interim tracking system can be used. The end date was included to emphasize that time is being provided to implement the recommended tracking system, not to delay the resolution of key tracking issues.

What about hourly closing for system contracts and ANI?

Recommendation: The proposed hybrid tracking approach uses hourly closing for unit contracts and plant ownership and monthly closing for system contracts and ANI.

The ISO-NE settlements system closes hourly. The following example illustrates what hourly closing means. Assume a firm only owns a single hydro plant. In the first hour, the plant generates one MWH, but the firm's customers consume two MWH. The firm buys the additional MWH from ANI through the pool In the second hour, the hydro unit generates three MWH, and customers again consume two MWH. Here the firm meets it entire load with hydro and sells its excess into the pool. ISO-NE treats each hour in isolation so the firm supplies 50 percent of its load from hydro and the remainder from ANI in the first hour. In hour two, the firm is 100 percent hydro and is selling its excess to ANI. The firm's average fuel mix is 75 percent hydro and 25 percent ANI. Without hourly closing, we would note that over both hours, the firm generated four MWH from hydro, and its customers used four MWH and thus could report that it met its load with 100 percent hydro.

We do not believe that hourly closing is required for consumer protection and information disclosure. We believe it is adequate to match supplier load and generation

over a monthly or even longer period. Yet because ISO-NE's normal tracking and reporting is already on an hourly basis, at least for plants an LSE owns or has under a unit contract, deviating from hourly closing for these resources would only add an unnecessary step.

As indicated earlier, some modification to the settlement system is necessary for system contracts and ANI. In order to make the modification, we deviated from hourly closing. Our recommended modification relies on a monthly ex post or ex ante allocation of supply sources to serve system contracts or ANI. With this feature, the firm described above that bought energy from ANI in hour one and sold hydro to ANI in hour two could essentially recapture its hydro resources.

How should border issues and imports and exports be treated?

Recommendation: Labeling rules for imports should depend on how tracking takes place in neighboring regions. Exported power would be labeled at the pro rata, average mix of the exporting firm.

Power imports from outside New England have historically been a significant portion of the regional energy mix. Over the past five years, power imports have increased from roughly five percent of the mix to around 15 percent. Power imports require special consideration because less information is currently available from ISO-NE about the sources of generation outside the region. In theory, NERC Policy 3 requires source-to-sink (generator to final wholesale buyer) tracking of all power purchases and sales between control areas. This means data should be available for all sales to and from NEPOOL participants. NERC Policy 3, however, was implemented July 1, 1997, and bugs in the system are still being worked out. Our recommendations for resolving border issues assumes that NERC Policy 3 is not fully functioning or that neighboring systems (NY Power Pool, Quebec, and New Brunswick) adopt similar tracking systems and agree to share information.

The treatment of imports and exports also needs to be sensitive to gaming possibilities and policy considerations .[37] The primary considerations are:

1. **Market flooding and consumer deception.** If retail competition and disclosure occur in some regions (or states), but not in others, then the effect will be to depress the value of desirable resources and deprive the exporting region's customers of desirable resources, with no notice or recourse.[38] Suppose in area A there is both retail choice and disclosure, and customers have a strong preference for hydro power. In an adjoining area B, there is no retail choice or disclosure. Firms in both areas would have an incentive to sell their hydro into area A, since they cannot market it to customers in area B. The effect, then, would be an oversupply in area A which would artificially depress the price. Consumers in area B would have their hydro resources sold and without retail access or disclosure, they have no notice or recourse.

2. **Verification problems**. The most fundamental rule of a tracking system is that each kWh generated must serve a single kWh of use (ignoring losses). Otherwise,

---

[37] These considerations are, for the most part, common to both the settlements and tradeable tag approaches.

[38] It should be noted that the same phenomenon could occur in New England as states move to retail competition on different time schedules.

there would be double counting of some generation, and other generation would be lost by the system. Within New England, this should not be a problem. But outside the region, unless there is a similar tracking mechanism in place, there is a concern over data quality.

Some parties argued that power imports should be allowed, though it is not clear how they would address the concerns above. In addition, MMWEC has a particular concern about the treatment of certain unit contracts it has with the New York Power Authority (NYPA).[39] Other parties felt that imports required special treatment, at least at the present time.

We recommend that if an adjoining region has a similar tracking mechanism in place and adopts similar disclosure requirements (with or without retail choice) to inform consumers that their resource mix has changed, there is no need to treat imports differently from generation within the region.[40] Where these conditions are not met, power imports would be disclosed by a line in the fuel mix description stating "Imports from outside New England" or "Imports from _____", here the regional source would be filled in the blank. Most imports would come from New York, Quebec or New Brunswick. If the power was purchased under a contract with a firm outside the adjoining control area, i.e. from the Pennsylvania-Jersey-Maryland pool, it would indicate a "New Jersey Region". Emissions data should reflect the emission profile of the exporting region.

We recommend allowing one exception to the power import rules. Existing unit purchase contracts from outside the region, such as the MMWEC purchase, could disclose fuel mix and emissions based on the characteristics of the units being purchased. Continuation of an existing unit contract cannot reasonably be considered "gaming."

Power exports to other regions also need to be considered to protect against local firms exporting their dirty power while retaining the cleaner units to be sold at a premium.

---

[39] Letter from Jay Dwyer, MMWEC, to David Nickerson, New England Power, dated June 23, 1997.

[40] For similar reasons, we also recommend states consider how to treat purchases from states without full disclosure. If a state or part of a state does not have retail access or disclosure, one option is to assume that retail sales by its regulated generation supplier made outside its exclusive service territory come from its supply mix on a pro rata basis. The issue is resolved in all New England states regardless of the status of retail competition and required disclosure. Consumers without retail choice should receive disclosure materials periodically so they know if their monopoly supplier has sold their more desirable resources to surrounding area with retail access.

Exports, regardless of the type of contract, would be at the pro rata, average mix of the exporting firm to regions which do not have similar disclosure requirements.

Should there be a default system power label?

Recommendation: The recommended interim tracking system includes a default option to the extent suppliers rely on system contracts or ANI. The proposed tracking system essentially includes only one limited type of a default option.

Several parties suggested it would be desirable to allow firms to report the average, regional fuel and emission mix, excluding those resources dedicated to serving products that do not carry the default label. This default label would be available to any suppliers, whether their actual supply mix is known or not.

Two reasons are presented in favor of a default. First, some suppliers prefer it. Second, it could make the tracking process simpler since many products would share the same label.

There are two problems with a default option. First, if a supplier can readily determine its supply mix (i.e. it relies on its own plants and unit contracts), showing a default label instead of actual supplies fails to give consumers accurate information. Second, allowing a default label might make it difficult to expand the tracking mechanism to serve other purposes, such as a Generation Performance Standard (GPS). For this purpose, we assume the GPS to be a requirement that no power sold in a given state be dirtier than some specified standard. A default label is not consistent with a GPS if the underlying tracking mechanism lacks unit specific data. What would be possible is a tracking system that keeps track of all units (units within new England as well as neighboring systems). Then, after every firm has been attributed specific resources, firms might be allowed to swap their resources for the default system label. Of course, this option would forfeit one of the principle arguments in favor of the default label — simplicity.

The tracking system we propose does not automatically produce a region-wide, average default label (although it could be modified to do so).[41] The recommended tracking system tracks all unit contracts, unit entitlements, system contracts, ANI and imports. The system also allows supply sources making up system contracts and ANI to be allocated on a market basis. At least until better data becomes available, the recommended tracking system does not provide emissions information for most imports

[41] Adding a more expanded default option to our recommended system would not be difficult. At the end of a reporting period, each LSE that wanted a default label could contribute its label to a common pool and withdraw a label equal to the weighted average of all of the contributed labels.

from outside the six state region. (We assume that proponents of a GPS want the system to apply to imports.)[42]

[42] This report does suggest two features which could be termed defaults, though not in the sense that a firm could opt to choose a region-wide mix in lieu of its own resource mix. Under our recommended approach, any seller or LSE could use a single label derived from the tracking system (i.e sell only one product) for all of its products and thereby avoid any further internal tracking and bookkeeping.

The recommended interim tracking system includes a different default option, though still not as broad as that discussed above. In the interim tracking system, all ANI purchases are the same regional average resource and emissions mix.

5. Policy Issues

There are a number of policy issues that are common to any of the tracking mechanisms we have discussed.

Should disclosure information describe the product or the company?

Recommendation: Use the product approach to disclosure.

The tracking mechanism (regardless of whether tags, settlements or the recommended hybrid approach) determines what resources a supplier or LSE uses to meet total load, as well as the fuels used and the emissions characteristics. This raises the question as to whether the firm must use this overall mix to label all of its sales or whether the firm should be allowed to package differing percentages of its resources into different products. For example, suppose a firm's resources are 50 percent nuclear and 50 percent natural gas. Under the company approach, it must sell a 50-50 mix to all of its customers. Under the product approach, it could develop two or more products, For example, it could sell a 100 percent natural gas mix to half its customers and an all-nuclear mix to the other half.

There are three primary arguments in favor of the company approach. First, some customers are most interested in is the total operations of the firm who wants his or her business. The second argument is that a products-based approach will be difficult to enforce. Some mechanism would be needed to make sure that the weighted average of the sales of all of the firm's products was consistent with the overall fuel and environmental characteristics of the firm's sources.

The third argument is that using a company approach means much of the region's existing renewable supply will essentially be removed from the consumer market. This would increase the likelihood that customer demand will lead to the addition of more new renewables. The logic is that companies like Northeast Utilities (NU), with significant renewable capacity, would be unable to market "green" energy because consumers would not buy from a company whose label showed large fractions of nuclear and coal supply.

Proponents of the product approach cite five considerations related to their argument. First, in other markets, firms are not prohibited by regulation from selling multiple products. In fact, many markets are characterized by firms selling a number of products, each targeted to a specific sector of the market. Second, the company approach would make it difficult for incumbent firms to offer environmentally-preferable products. A large, existing company could only change its mix appreciably by selling off its existing units or by making huge investments in new resources. The company approach forces each firm to pursue only one market niche. This would discourage large firms from focusing on relatively low-volume markets. Third, the company approach would tend to penalize existing firms with relatively unattractive resource mixes. Fourth, many

generating companies operate nationally or internationally. Should the firm's generation in California or Indonesia be considered in developing the company-wide mix? Finally, the company approach would be difficult, if not impossible, to police. A firm trying to get around the limitation of selling multiple products could adopt a number of strategies:

1. Set up a wholly-owned subsidiary to market a second product.[43]

2. Set up a partially-owned subsidiary.[44]

3. Enter into a non-ownership arrangement with a partner. For example, Acme Genco causes a new marketing firm to be created (with no ownership interest) and sells the rights to several of its units to that firm. The firm then markets power based on the units over which it has rights.

4. Enter into wholesale unit contracts with a non-affiliated entity. For example, if Acme is effectively barred from the green retail market because its mix is predominantly non-green, it can enter into unit contracts and selling its green output to an entity that markets green power at retail. If the market supports a higher price for green power, Acme will receive all or part of the price premium.

Both the company and the product approaches raise enforcement issues, with the enforcement problems of the company approach appearing more formidable. This is particularly true since the burden of reconciling all of its multiple products can, in the first instance, be placed on the multi-product firm. If it is marketing several source-differentiated products, it will need to be able to demonstrate that each of its products is accurately labeled.

We recommend using the product approach to disclosure. However, assuming suppliers sell more than one product, they will be required to file periodic statements with state regulators and the disclosure administrator reconciling their company-wide fuel and emissions information with the sum of the products they sell. Because some customers are interested in the full activities of firms looking for their business, firms should also

---

[43] It could be argued that setting up a separate subsidiary should be acceptable, since the subsidiary is, itself, a "company." If this argument is acceptable, the product approach should be adopted. If it is acceptable to market different products through different subsidiaries, why not simply allow the parent to market different products and save the administrative costs of setting up multiple corporations?

[44] If a firm's stock is owned in equal shares by three other companies, how would we attribute the subsidiary's sources to its three parents?

periodically provide customers with the combined fuel and emission disclosure for all the products sold in New England.[45]

We reach this conclusion for three reasons. First, the company versus product approach to disclosure was explored in a number of the National Council's focus groups. We were interested in consumer understanding of the distinction and which level of information was most desirable. With respect to consumer understanding, we found consumers had little difficulty understanding the company/product distinction. Most consumers drew analogies to other consumer markets where firms supply multiple products. Although most consumers wanted product information, there was no clear or strong preference that information be conveyed one way or the other.[46] The label testing phase of the National Council's research effort will explore this issue in more detail and on quantitative basis. Results of this research will be available in December.
Second, in light of the consumer research, the gaming and enforcement problems associated with a company approach do not seem to be worth the effort. If consumer research had shown that the product approach led to significant consumer confusion, our conclusion might have been different.

Finally, imposing the requirement that only company-wide information be disclosed runs into logical and historical consistency problems. New England has a very long history of considering the fuel mix and emissions impact of wholesale unit contracts and has always recognized the fuel mix impact on the buyer and the seller. When, for example, Boston Edison buys a unit contract for Wyman 4 from Central Maine Power (CMP), CMP's sale of Wyman 4 is the same as CMP selling a product. This raises the legitimate question of why CMP can sell a product to Boston Edison but be barred from selling a similar product to a retail customer in Boston.

The unit contract option also undermines the view that a company approach keeps existing renewables off the market. If NU had to report its mix on a company-wide basis,

---

[45] This could be done once a year and would be a report of full mix of all products sold in the region by the firm, including any fully-owned subsidiaries. If the firm itself is a wholly-owned subsidiary, it should be included in the company-wide disclosure of its parent, together with any other wholly-owned subsidiary of the that parent. We recognize that this company-wide disclosure is subject to the same gaming problems as company disclosure generally. However, the incentive to play games is reduced or eliminated due to the allowance for product disclosure.

[46] We do not suggest that company level information is not of significant importance to some consumers. Coop America Quarterly, is one of several consumer magazines that routinely gives consumers information on a company's performance in a wide range of areas.

it would probably enter into unit contracts selling the output of its renewable capacity to a green marketer rather than forgoing the opportunity to tap into the green market altogether.

Should labels disclose historical or prospective information?

Recommendation: With the exception of some allowances for the unique circumstances of new products and new generating facilities, resource mix and emissions disclosure should rely on historical information.

A label could indicate the resource mix of a product for some recent historical period, or it could focus on the resources a firm expects to use during some future period. Initially, there was wide disagreement in the meetings over which was preferable.

The advantage of prospective disclosure is that if it is accurate, it will target the product the customer will be buying. Proponents argue that this is truly what is relevant and that historic resource mix is only of academic interest. There is also the issue of what a new firm or product, with no history to rely on, would disclose under the historic approach.

Proponents of historic disclosure argue that prospective disclosure presents almost unlimited opportunities for gaming. The only entity capable of predicting a product's future mix is the firm producing it. Prospective disclosure is seen as allowing firms to make largely unverifiable claims and to place those claims on a government-sanctioned label where there will be the appearance of authority. In general, the FTC requires historical data for claims verification, in large part because it allows for objective evaluation.

From these polar positions, the stakeholders generally supported historical disclosure, with some allowance for the unique circumstances of new products and generators. We recommend disclosure be based on a twelve month, rolling average of historic performance, updated quarterly.

For products based on new sources of generation, a projected label could be used initially. This would be replaced with historical performance as it became available. The label would also indicate that the information was based on a projection.

The model rule also includes a reconciliation provision that periodically compares an LSE's mix of historical supply sources to the mix of products it sells to consumers. The LSE is required to keep any difference between these mixes to ten percent.

Where should the label appear?

Recommendation: The label should be widely available.
The label will only be useful to customers if they have access to it. A subcommittee of the stakeholder's group considered this issue and proposed that the label be widely available. Specifically, the label should be included in monthly bills, written advertising materials, direct mail marketing materials and Internet advertising. In the case of telemarketing, the subcommittee also suggested that customers be informed that

information on price, fuel use and emissions is available and given the option of either listening to abbreviated information over the phone or receiving a written copy of the label by mail or fax.

Providing the label with monthly bills requires a little further discussion. First, the most persuasive reason to provide the label in or with monthly bills is so consumers have the information more readily available when they are solicited by competing suppliers. On the other hand, competing suppliers will know each others labels and they could give consumers the comparative information directly. In this case, sending the consumer the label quarterly is probably adequate. In addition, LSEs should be given the option of providing the information to customers directly, rather than requiring that it be included in bills sent out by others. It is also conceivable that some customers will be billed electronically, so inclusion in the monthly bill may not always be feasible. On balance, we recommend that an updated label be sent to consumers quarterly with (or on) their bills, if bills are mailed. Otherwise, they should be sent in a separate mailing.

We recommend that labels appear in the following places:

- **Bills**. Labels should be on bills or be sent to consumers quarterly.
- **Written advertising** materials describing one or more products**.** The label would not be required in "image" ads on television or radio. It would also be desirable to exempt print ads which are too small to allow a legible label to be included.
- **Direct mail marketing materials**.
- **Telemarketing**. Customers should be informed that information on price, fuel use and emissions is available and given the option of either listening to abbreviated information over the phone or receiving a written copy of the label by mail or fax.
- **Internet**. The label should be disclosed in Internet advertising. It could appear on a separate page, so long as a readily identifiable icon was available to access that page.

  Contract. The label should be included in any contract or other formal explanation of terms provided to the customer.

What information is needed beyond the label?

Recommendation: All additional consumer information should be provided in a single document entitled Terms of Service. This should be provided to the customer at the time of the purchase agreement and annually thereafter and should include information on the following: price and other material contract terms, consumer rights, substantiation of marketing claims and environmental impacts.

The label is designed to provide a concise source of the information a customer would find the most useful in comparing products; it will not provide all of the information a consumer needs to be fully informed about the product. A more complete description of the terms by which the product is offered and the consumer protections applicable to the

purchase are also required. The question of what information beyond the label is needed and the format by which it should be provided was considered by the Consumer Interface committee. It is also the subject of ongoing research as part of the National Council's consumer information research project. The recommendations here draw upon the work of both, but are not yet synthesized into a single prototype document. A draft of the National Council's report on this topic with a recommended disclosure document is expected this Fall.[47]

Several formats have been suggested to complete the disclosure of consumer information beyond the information on the label. Most frequently considered formats are: "back of the label," prospectus and brochure. Our recommendation is that all additional consumer information be provided to the customer at the time of the purchase agreement in a single document entitled *Terms of Service* and annually thereafter in the customer's bill. Whenever any material terms are changed, a new *Terms of Service* should be provided to the customer.

In most transactions, the customer is likely to agree to accept a service either by telephone or in response to a mail solicitation. If customers do not have the *Terms of Service* at the time of the agreement, they should be given the right to cancel the contract, without penalty for up to three days, following the receipt of it. This right to cancel should be printed in bold letters on the *Terms of Service*.

The *Terms of Service* should always include the label and also provide additional detailed information in four areas:

- Price and other material contract terms
- Consumer rights
- Substantiation of marketing claims
- Environmental impacts

The *Terms of Service* should be written simply and avoid terms not easily understood by the public. For example, regulatory and utility insiders tend to use the words "generation" or "energy" to denote the competitive product, but customer research has revealed that the word "electricity" is best understood by the ordinary purchaser. The *Terms of Service* and label should use the same language used when the customers initially agreed to purchase from the supplier.

The *Terms of Service* may be issued either by a seller providing combined electricity and delivery services or by a competitive seller of electricity services. It is not intended to be issued by a seller offering only delivery services. The *Terms of Service* for a regulated

[47] The stakeholders meetings spent only a few hours on these and related issues.

distribution company that does not sell competitive services will continue to be subject to ordinary regulatory jurisdiction.

Price And Other Material Contract Terms

There are a number of explanations of price and contract terms that need to be spelled clearly out in the *Terms of Service*.

Itemized prices. Prices should be in standard units for each service or product. Where a competitive generation seller also is providing delivery service, the prices for all regulated and unregulated services provided should be shown. Customers should be informed that the actual electricity price they will pay will vary, depending upon the amount and timing of use.

Structure of price offers. Which components are fixed (i.e. a customer charge)? What prices will be charged for energy (and demand)? How, if at all, do these prices change depending on the volume of use? Are there price variations based on time or season of use? Any feature of the price design that is not fixed in a single, flat kWh charge should be explained so an ordinary customer will have a reasonable grasp of the price design.

Conditions under which prices are subject to change. For example, if the electricity price is fixed for a period of time, the time period should be clearly stated. If the price will vary according to a spot market price or some other index, the formula, or criteria, for determining the change should be described.

Origin of customer's electricity. Customers need to know that electricity comes from the mix of sources dispatched into the grid and that their individual choice of supplier will determine the fuel mix used to deliver electricity into the grid on the customer's behalf. An explanation might read as follows:

> The electricity you consume comes from the New England power grid. It includes electricity from many power plants. The grid transmits electricity throughout the region, as needed to meet customer requirements. When you choose an electricity supplier, that supplier will add electricity to the grid to match your needs. There is no way to know the physical origin of the electricity you actually receive at your meter. Nevertheless, your choice of supplier will determine the fuel mix and emission characteristics of the electricity your supplier provides to the grid to meet your electricity requirements. The pie chart on the label shows the fuel mix used by the electricity supplier over the most recent 12 months. The air emissions released by this fuel mix are shown at the bottom of the label.

Contract length. The *Terms of Service* should state the length of the contract, with start and end dates, along with payment due dates. The *Terms* may need to be printed with blank spaces for start and end dates, similar to consumer credit applications. Spaces can be filled in when contracts are entered into. Any event that will terminate the contract, such as the customer moving away, should be clearly described.

Fees and penalties. What are the fees for late payments, charges for bad checks, penalties for contract cancellation? What other fees and penalties are there?

Payment allocation. How are bill payments allocated between regulated and unregulated services?

Deposit conditions. What deposits are required? How is interest paid on the deposit? How is the deposit recovered? Under what conditions is a deposit forfeited?

Separate billing. Unless a single bill is being issued for both generation and delivery (transmission & distribution) services, there also needs to be a statement printed in bold letters indicating that this bill is only for generation (energy) services and that the customer will be billed separately by the local utility for delivery of services.

Customer service. Who should be called to report service quality or outage problems?

Consumer Rights

The *Terms of Service* must clearly and prominently give information on consumer rights.

Right to rescind the transaction within three business days, along with the toll free number.

Bill dispute. How can a customer dispute a bill with the supplier? This should include the supplier's toll free telephone number, a statement of the customer's right to refer the dispute to the public utilities commission (or other public agency with jurisdiction) and a toll free number of the commission (or other appropriate agency).

Standard offers or default service. Customers need to know about standard offers and/or default services, where they should call to receive these services and any rights regarding financial assistance or energy management services.

Protections against disconnections. What additional rights and protections are there for customers threatened with disconnection? These should appear on the disconnection notice, since this is the time and place most useful to the customer. This paper does not describe the disconnection notice.

Market Claim Substantiation

The supplier may make a variety of substantive claims about its product or services. Factual claims such as "renewable energy", "union made " or "made in New England" should be explained with enough detail to allow an ordinary customer to understand the basis for the claim. In the case of "renewable energy", a description of the generating source and its location should be included. For "union", a description of the power plant, its location and the associated unions should be given.

Environmental Information

A brief description of the major air pollutants disclosed on the label should be provided. The following format was suggested by the USEPA:

Emissions - Description of Pollutants - You have been provided with information on the three major air pollutants. The production of electricity releases other air pollutants and has other non- air related environmental impacts.
Sulfur Dioxide (SO_2) is formed by combustion of fuels containing sulfur, primarily coal and oil. Major health effects associated with SO_2 include asthma, respiratory illness and aggravation of existing cardiovascular disease. SO_2 combines with water and oxygen in the atmosphere to form acid rain as well, which raises the acid level of lakes and streams and accelerates the decay of buildings and monuments.
Nitrogen Oxides (NO_x) form when fossil fuels (e.g. oil, coal, and natural gas) and biomass are burned at high temperatures. They contribute to acid rain and ground-level ozone (or smog), and may cause respiratory illness in children with frequent high level exposure. NO_x also contributes to pollution of lakes and coastal waters which is destructive to fish and other animal life.
Carbon Dioxide (CO_2) is released when fossil fuels (including oil, coal and natural gas) and non-sustainable biomass are burned. CO_2, a greenhouse gas, is a major contributor to global warming.
The information on emissions is intended to inform customers about the impact of the production of electricity on air quality. For more information about these and other environmental impacts of non-fossil and fossil-fueled generation plants, please contact _____ (e.g. EPA, state DEP).

Are there legal questions raised by disclosure?

Recommendation: While commissions and state legislature should exercise care in crafting a disclosure mechanism, in order to reduce susceptibility to legal challenge.

Two members of the stakeholders group, Chris Kallaher of Energy Research Group and representing Edison Electric Institute and Michael Stoddard on behalf of Conservation Law Foundation, formed an impromptu sub-committee to consider four legal questions raised by various disclosure proposals: Does mandatory disclosure constitute "forced speech" in violation of the First Amendment? Does implementation of disclosure afoul of the commerce clause? Do aspects of information required for meaningful disclosure would raise issues of confidentiality? How might a disclosure mechanism compare and overlap with the existing Federal Trade Commission framework for preventing deceptive trade practice? Three memoranda presenting the research on these issues were distributed during the stakeholder meetings and a summary presentation was also made. Stoddard characterized his research as indicating that the legality of any proposal would depend on the facts and process by which it was adopted. To reduce susceptibility to any possible legal challenge, commissions and state legislatures should exercise care in crafting a disclosure mechanism in order .

While it is not possible to do full justice to these memoranda in a brief summary, it is useful to cover a few highlights. A key element of whether disclosure would constitute "forced speech" is how the State articulates a logical and substantial interest in disclosure. Here the connection between disclosure and consumer protection, lower pollution levels and resource diversity are important State interests. States should also take care to assure that the disclosure requirements are not too broad or burdensome.

6. Administrative Issues

Administratively, disclosure requires that the following four tasks be performed:

1. Develop a list of fuel sources and emissions for each resource.

2. Oversee and perform the tracking functions.

3. Assure, through periodic spot checks, that the disclosed price, fuel and emissions information is accurate.

4. Modify the disclosure system, as necessary, and resolve disputes which arise.

These functions might all be performed by the same entity, or they could be divided among two or more bodies. Related to these functions are issues of cost and cost recovery.

The first two tasks have been discussed at some length earlier in the report. We recommended that the required emission information be reduced to a single emission rate for each pollutant at each plant. This information, as well as the type of fuel used in each facility, should be based on the data reported to federal and state environmental regulators and reported by each generator to ISO-NE. We also recommended that ISO-NE perform and oversee the tracking functions.

The third task, assuring that data is accurate, should in many cases, not require major effort by the administrator. For many products — food is a good example — checking the accuracy of disclosure or marketing statements is often the responsibility of other market participants. For example, if I suspect that my competitor's yogurt has more fat than the label indicates, I can hire an independent lab to test his yogurt and bring an action against him if that is called for. This same mechanism will be partially, but not completely, effective for electricity disclosure. The key issue is whether competitors can easily confirm or refute each other's statements. For price disclosure, this mutual policing will probably be effective, but this mechanism may not work as well for fuel and emissions disclosure. First, while fuel and emissions of each generator should be readily available, the tracking information might not be. If it is not, the administrator — not the competitor — will need to take primary responsibility. Second, even if tracking information is available, mutual policing probably will not work where individual firms offer multiple products. Tracking information would be adequate to allow a firm to know, in aggregate, the resources of its competitors, but it would not be able to check for double counting without knowing the total sales of each of the competitors' products. This information will presumably be competitively sensitive and therefore not available for purposes of mutual policing. The administrator must have access to this product sales data but only under protective arrangements that insure the data is not disclosed.

The fourth task — modifying the disclosure system as necessary and resolving disputes — also requires elaboration. Even if the initial disclosure mechanism is perfect, it will still need to respond to the evolution of the market. For example, if a new generation technology becomes available, some entity needs to decide whether a new fuel type is created or whether the technology relies on a fuel from one of the existing categories.

At one extreme, we could decide that the disclosure mechanism could only be modified by holding regulatory proceedings in each of the New England states. On the other hand, it may be more practical to allow the administrator to resolve most or all of these issues, perhaps in consultation with a committee made up of representatives of some or all of the region's PUCs.

Who should be the administrator?

Recommendation: If ISO-NE can demonstrate both interest in and a commitment to protecting retail customers, it should serve as the administrator.

The most obvious candidate for the role of administrator is ISO-NE. If the recommended tracking proposal is adopted, the ISO must have a role in tracking. But beyond that, having the ISO as the administrator has several other advantages. It already exists as an institution, so no new entity needs to be created. It already needs to handle a wide variety of confidential data, and, presumably the same protections could be extended to the confidential data associated with disclosure. And the ISO already has a "regulatory" role in that it is the first line of defense against market power abuses.

There are three reasons the ISO might not be a good choice: The ISO is embarked on a very aggressive internal restructuring effort, and now may not be a good time to add new duties; it is not clear that the ISO wants the job; and most fundamentally, the ISO may simply not have the required level of independence, at least at this time.

To be truly effective, the administrator of the disclosure system (like all functions of the ISO) must be dedicated to protecting the interests of retail customers by making sure, at very least, that customers are being provided with accurate and timely information. It cannot identify itself with suppliers' interests. Policy makers in New England will need to decide whether ISO-NE has the needed independence.

Some other entity could also be charged with the role of administrator. Perhaps this could be done under the auspices of NECPUC, the New England Governors' Conference or by some private entity.

If the problems discussed above can be resolved, we recommend that ISO-NE be the administrator. We recommend that the states begin discussions with the ISO Board of Directors to investigate the ISO's interest in the role and consider the issues of independence and resource availability.

How are tracking and disclosure services provided most cost effectively?

Recommendation: The administrator, after determining the cost of tracking and disclosure, should decide whether this function is better performed in-house or by a private contractor.

Tracking and disclosure are not free. We have attempted to determine the range of costs and schedules for ISO-NE to implement the recommended tracking system. ISO-NE has not directly provided any cost or time estimates except to say that they will implement no additional requirements until after April 1, 1998. At an early meeting, Paul Shortly of ISO-NE said the set-up costs might fall in the $3-5 million range. Subsequently, ISO-NE staff have also said that there are no specific cost estimates, partly because they have not received a specific tracking proposal agreed upon by all six states.[48]

[48] The issue of cost has been explored in consumer focus groups. Consumers understand that providing the information they want has a cost that will ultimately be reflected in the price they pay. At $5 million per year, an amount which appears much

RAP retained the services of a firm with expertise in tracking systems for gas, oil and electricity to help us understand the tracking capabilities of ISO-NE, the modifications that would be needed for disclosure purposes and to provide an independent assessment of the cost and time needed to implement the disclosure recommendations. The consultant met with the staff of the ISO-NE and had several follow-up telephone conversations with ISO-NE staff and their software contractors.

Because the consultant is in the business of providing these types of services to ISOs, she could provide an estimate of what the firm would charge to take the monthly ISO-NE settlement report, combine it with fuel and emission data and provide a monthly disclosure report to each LSE. The preliminary estimate is that the firm could provide the services for about $50,000 per month, a fraction of what it would likely cost ISO-NE. There would be no up-front or software development charge. If ISO-NE could provide the service for less, it should do so. On the other hand, if its costs are higher or it lacks the personnel or financial resources, it should be encouraged to find a firm with expertise in this area.

How will disclosure requirements be adopted and enforced?

Recommendation: The proposed model rules should be adopted by each state commission. Labeling and disclosure requirements should be established as a condition of a retail seller's license. Compliance failure should result in sanctions and penalties.

The obligation of electricity sellers to provide a label and *Terms of Service* are proper conditions to maintain a license to sell electricity at retail. Each of the New England states intends to have a licensing requirement for all retail sellers of electricity. The licensing requirements are usually not complex, but they should include the obligation to label and disclose product information in the agreed-upon, standardized format.

To achieve the desired regional uniformity in labeling requirements, it makes sense for the requirements to be set out in common commission rules adopted in each state. State rulemaking processes (simultaneous if possible) will allow for public hearings on the labeling and disclosure requirements. They would also allow the commissions of each New England state to track the progress of the labeling requirements in each of the other states. Appendix D includes model rules reflecting the recommendations in this report.

---

too high, the cost of disclosure is .004 cents per kWh, or about two cents per month, for a typical consumer. This is well below what consumers say they would pay for the information.

The labeling and disclosure requirements should be established as a condition of maintaining a retail seller's license. Failure of sellers to comply should give rise to sanctions and penalties and, in cases of aggrieved failure, the loss of a license. It is important to have intermediate penalty steps, short of loss of license as well. Penalties that are too severe can be too blunt a tool to achieve compliance, and the point is to achieve compliance.

In addition to the jurisdiction a state utility commission will have over labeling and disclosure under its licensing authority, there are some existing state and federal laws that will also apply to labeling and disclosure. State Attorneys General will have jurisdiction under each state's Unfair Trade Practices Act (mini-FTC law), and the FTC itself will have jurisdiction under the FTC Act. This shared jurisdiction is true of most commercial transactions, including many types of food and product labeling. State Attorneys General and the FTC, as practical matter, can be expected to defer to rules and enforcement decisions adopted by state utility commissions in those states where the utility commission is actively overseeing the area of retail electricity product labeling and disclosure.

Other federal laws, enforceable by the FTC and by the US Justice Department, such as The Equal Credit Opportunity Act, The Fair Credit Disclosure Act and The Fair Debt Collection Act are also expected to apply to the retail sale of electricity but should not pose any problem or conflict with the state utility commission labeling and disclosure requirements considered here.

7. Next Steps

With the establishment of a multi-state, staff level team working on disclosure issues, the six New England states have already taken an important step toward coming up with uniform rules, applicable throughout the region. To achieve uniform and enforceable disclosure requirements in the region, we recommend both that the Commission staff team start with the model rules included in this report, modifying them as necessary and that each state initiate a rulemaking proceeding based on a uniform proposed rule. Each state should require that parties filing comments on the rule file a copy of their comments in every other state in the region. The PUC staff team should consider the comments filed in all states and to the extent possible recommend a uniform, final rule.

APPENDIX A

PARTICIPANTS AND ATTENDEES OF NEW ENGLAND DISCLOSURE PROJECT

Judy Silvia, AIM
Arthur Pearson, Allenergy
Rebecca Bachelder, Allenergy
Bob Rossignol, Alternate Power Source
Julie Hashem, Barakat & Chamberlin, Inc.
Jeff Brandt, Brown University
Paul Davis, Boston Edison Company
J. Russell Burke, Boston Edison Company
Carol Butler, CBM Assoc
Suzanne Daycock, CEED
Patricia Hart, Central Maine Power Company
James H. Fisher, Central Maine Power Company
Eugenia Balodimas, Citizens Lehman Power
Neil O'Brien, Competitive Power Coalition
Neal Costello, Competitive Power Coalition
Mark Bennett, Conservation Law Found
Lew Milford, Conservation Law Foundation
Michael Stoddard, Conservation Law Foundation
Joseph Chaisson, Conservation Law Foundation
Alyse Gray, Continental Energy Corp
Bob Granquist, CT Dept of Public Utility Control
Douglas Short, Douglas Short Consulting Inc
Malcolm Ticknor, Duke Louis Dryfus
Elaine Hunt, Eastern Utilities
Edward Holt, Ed Holt & Associates
David Dworzak, Edison Electric Institute
Marc Goldsmith, Energy Research Group
Chris Kallaher, Energy Research Group
Gretchen Braun, Energy Research Group
Malcolm Jacobson, Enron
Sue Nord, Enron
Dan Allegretti, Enron
Larry Alexander, Environmental Futures, Inc
John Abe, Environmental Futures, Inc
Norman Willard, EPA New England
Michael Kenyon, EPA New England CAA
Rick Morgan, EPA Washington
Thomas Tarpey, Essex Hydro Associates
Larry Boisvert, EUA Service Corporation

Robert Granger, Ferriter Scobbo
Roman Piaskoski, General Services Admin
Tom Rawls, Green Mountain Power Company
Karen O'Neill, Green Mountain Power Company
Joseph Keyser, Green Mountain Power Company
Andy Greene, Greene Energy & Env. Co.
Gillian Wright, Harvard University
Edward Collins, Jr., Int Brotherhood of Elec. Workers
Gerald Browne, ISO-NE
James Dumont, Keiner & Dumont PC
Bill McAvoy, MA Attorney General
Todd Helwig, MA Attorney General EPD
Jacob Moss, MA DEP
John Maker, MA Dept of Public Utilities
Daljit Singh, MA Dept of Public Utilities
Jeannie Ramey, MA Dept of Public Utilities
Paul Hibbard, MA Dept of Public Utilities
Lucy Johnston, MA Dept of Public Utilities
Gene Fry, MA Dept of Public Utilities
Nils Bolgen, Massachusetts Div. of Energy Resources
Dan Sardo, Massachusetts Div. of Energy Resources
Julie Michals, Massachusetts Div. of Energy Resources
Linooa Davidson, MA DPU Consumer Div
Jay Dwyer, MA Mun. Wholesale Electric Co
Eric Bryant, Maine Public Advocate
Mitch Tannenbaum, Maine Public Utilities Commission
Denis Bergeron, Maine PUC
Michael Hager, Mass. Electric
Jim Baptiste, McDermott/O'Neill & Assc.
Geoff Keith, MJ Bradley & Assoc
Michael Bradley, MJ Bradley & Assoc
Jerrold Oppenheim, National Consumer Law Center
Paul Shortley, NEPOOL
Jim Sinclair, NEPOOL
Rich Bolbrock, NEPOOL
Marika Tatsutani, NESCAUM
Barbara Kates-Garnick, New Energy Ventures
Michelle McGee, New England Electric System
Carol Feldman Bass, New England Electric System
John Shea, New England Governors' Conference
David Nickerson, New England Power Company
Tom Kaslow, New England Power Company
Elizabeth Hicks, New England Power Company
Todd Bohan, New Hampshire PUC

Gary Milbury, NH DES
Andy Bodnorik, NH DES
Jack Ruderman, NH Gov's Energy Office
Jeremy Ladd, NHDES-ARD
Mark Kowal, Northeast Utilities
Richard Kellner, Northeast Utilities
Ken Burke, Northeast Utilities
Martin Insogna, NY DPS
Harvey Tress, NY Public Service Commission
James Gallagher, NY Public Service Commission
Stephen Boksanski, Off of Sen. Bernstein
Jeff Palumbo, OLDESNE
W. Robert Keating, Pan Energy Corp
Jim Booth, R.W. Beck
Jonathan Raab, Raab Associates, Ltd.
Vinnie Cameron, Reading Mun. Lt. Dept.
Robert Grace, ReGen Technologies
John Milano, Rhode Island PUC
Mary Kilmarx, Rhode Island PUC
Catherine Salisbury, SERSG
Karina Lutz, Sierra Club RI Chapter
John Molinda, Strategic Energy Ltd
Bruce Biewald, Synapse Energy Eco. Inc.
James Irving, Taunton Mun Light Plant
Ian Goodman, The Goodman Group. Ltd
David Moskovitz, The Regulatory Assist Project
Tom Austin, The Regulatory Assist Project
Alan Nogee, Union of Concerned Scientists
Sheryl Wookey, UNITIL
Scott Long, UNITIL
Deborah Jarvis, Unitil, Reg Services
Sandra Waldstein, Vermont Public Service Board
Paul Peterson, Vermont Public Service Board
Deena Frankel, VT Dept. of Public Service
Tom Dunn, VT Dept. of Public Service
Steve Klionsky, Western MA Electric

APPENDIX B

A Resolution in Support of Customer "Right to Know"
and Product Labeling Standards for the Retail Marketing
of Electricity in New England

WHEREAS, millions of New England consumers will have the opportunity to choose among competitive electricity generation suppliers as early as next year; and

WHEREAS, the production of electricity imposes substantial environmental impacts; and

WHEREAS, informed customer choice depends on clear and uniform disclosure of facts related to the price, fuel source, and environmental characteristics of their electricity purchases to understand the implication of their product choice and to allow product comparisons; and

WHEREAS, the New England Governors' Conference, through its recent sustainable energy report, developed in conjunction with the six New England states and the U.S. Environmental Protection Agency, issued a recommendation for consistent labeling across the region by electricity suppliers; and

WHEREAS, consumer "right-to-know" measures are now being considered in several New England states, and coordinated research could assist the states by developing minimum, uniform standards for each state's consideration;

NOW, THEREFORE, BE IT RESOLVED, that the New England Governors' Conference, Inc. fully supports current efforts initiated by the national Council on Competition and the Electric Industry and the New England Governors' Conference to develop enforceable, uniform standards for the form and content of disclosure and labeling that wold allow retail and wholesale consumers to easily compare the price, fuel and emissions characteristics of potential electricity purchases; and

BE IT FURTHER RESOLVED, that the New England Governors' Conference, Inc. encourages state officials to participate in the research effort and seek consensus so that consumers across the region, when retail choice is available to them, will have the benefit of consistent, easily understandable information regarding the electricity they purchase.

ADOPTION CERTIFIED BY THE NEW ENGLAND GOVERNORS' CONFERENCE, INC. on June 3, 1997.

APPENDIX C
NARUC Resolution

RESOLUTION IN SUPPORT OF CUSTOMER "RIGHT-TO-KNOW"
AND PRODUCT LABELING STANDARDS FOR
RETAIL MARKETING OF ELECTRICITY

WHEREAS, at least 30 million consumers in six states will begin choosing among competitive electricity providers in early 1998 and retail access to competing electricity suppliers is under consideration in many other states; and

WHEREAS, electricity purchases make up a significant portion of the budget of many households;

WHEREAS, the production of electricity imposes very substantial environmental impacts; and

WHEREAS, pilot retail access programs have shown that customer confusion and misleading claims are highly likely; and

WHEREAS, clear and uniform disclosure will promote efficiency through informed product comparisons; and informed customer choice cannot occur in a retail electricity market without full disclosure of all relevant and important facts; and

WHEREAS, the desirability and feasibility of such disclosure is clearly established in nutrition labeling, uniform food pricing, truth-in-lending and many other federal consumer protection programs; and

WHEREAS, the National Association of Regulatory Utility Commissioners (NARUC) at its November, 1994 meeting adopted a resolution on competition and stranded benefits calling for new proposals to preserve environmental and diversity benefits in a more competitive marketplace; and

WHEREAS, The NARUC at its July, 1996 meeting adopted principles to guide the restructuring of the electric utility industry which included market-based mechanisms to promote effective consumer choice and to preserve renewable resources, resource diversity, and environmental protection; now therefore be it

RESOLVED, that The National Association of Regulatory Utility Commissioners (NARUC), convened at its 108th Annual Convention in San Francisco, California believes that the electric industry should facilitate informed customer choice that will promote efficient markets, resource diversity, and environmental quality; and be it further

RESOLVED that the NARUC supports initiatives leading to minimum, enforceable, uniform standards for the form and content of disclosure and labeling that would allow retail and wholesale consumers easily to compare price, price variability,

resource mix, and environmental characteristics of their electricity purchases; and be it further

RESOLVED that the NARUC urges states adopting retail direct access programs to include enforceable standards of disclosure and labeling that would allow retail consumers easily to compare the price, price variability, resource mix, and environmental characteristics of their electricity purchases.