

Synthesis Report: A Summary of Research on Information Disclosure

The Consumer Information Disclosure Series

By

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The National Council on Competition and the Electric Industry

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The Consumer Information Disclosure Series

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Consumer Research on Tracking Approaches and Product versus Supplier Labeling

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Executive Summary

Customer choice for electricity service is happening quickly. By the end of 1998, millions of customers will be able to choose among competitive electricity suppliers for the first time. It will be a new experience. Customers have not had to make such choices since the earliest days of the industry.

One key to a successful transition to a competitive market will be whether customers are able to make reasonably informed choices. Well-informed customers will help the newly competitive market to function more efficiently. At the same time, if customers believe they have adequate information available to them, they are far more likely to embrace the industry decision to move to a competitive environment as a sound policy decision.

In November 1996, The National Association of Regulatory Utility Commissioners (NARUC) considered the development of retail competition and the readiness of customers to effectively participate in the emerging retail electricity market. At its annual meeting that year, it adopted a *Resolution in Support Of Customer Right-To-Know and Product Labeling Standards for Retail Marketing Of Electricity* and identified the need to provide retail consumers with clear and uniform disclosure to compare price, price variability, resource mix and environmental characteristics of their electricity purchases. Following NARUC's resolution, the National Council on Competition and the Electric Industry (the National Council), a joint undertaking of state utility regulators and state legislators, initiated a major research effort to provide the consumer and policy research needed by states and others to implement the resolution.

The research had many facets, but the core of it was very simple: researchers employed modern consumer research techniques to ask customers what information would be useful. Customers said that the critical issues for them were the price they would be charged and the environmental characteristics of the electricity generation they would be purchasing.

In fact, the National Council's research project consists of more than a dozen specific tasks, focusing not only on customers desires, but also on related issues—how could the information customers were requesting be developed, and what would be an effective means to convey that information. The research also solicited input on information disclosure from a broad variety of other stakeholders, including utility and nonutility suppliers, customer representatives, environmental organizations, and utility regulators, and other policymakers. This report summarizes that research.

Appendix A contains model state legislation on the issue and appendix B contains a brief summary of the National Council's Conference on Consumer Information Disclosure that was held in Chicago, Illinois, on May 13 and 14, 1998.

Goals of Disclosure

To most observers, disclosing basic facts to retail customers serves three essential purposes.

- **Allows customers to make the choices they wish to make and thereby achieves customer-driven outcomes.** Customers can find the product and services they want and the prices they are willing to pay. Firms that sell what customers want will thrive; those that do not will suffer.
- **Enhances customer protection.** Presenting basic information in a uniform format allows customers to compare directly terms and products among competing suppliers with a minimum of confusion. Consumers are less likely to be confused either by complex price offers or by unclear claims or mistaken beliefs about environmental characteristics.
- **Makes the electricity market more efficient.** Disclosure drives prices down and forces competitors to supply the types of products and services consumers want. Suppliers that offer what customers want at the lowest prices will be more easily identified and rewarded.

Other goals occasionally were proffered for disclosure, but have not been accepted. For example, information disclosure is seen as objective, not subjective, so the disclosure label should not act as a sales tool, proclaiming a particular product to be the cheapest, the cleanest, or in some other way better than competitive products. Similarly, information disclosure should not be relied upon to meet other policy goals such as cleaning up the environment or moving the country toward some socially desirable mix of generating sources. Information disclosure or not, a private electricity market is subject to the same imperfections as any other private market. There is no reason to assume that disclosure might obviate the need for, say, continuing environmental regulation of electricity generation or government support for clean, innovative generation technologies.

Knowing disclosure goals, however, is not the same as knowing what and how information is best disclosed. With the assistance of the National Council's research, we now know that consumers want and need information about price, resource mix and emissions to make informed electricity purchasing decisions. Early and consistent findings throughout the research show 1) that price is the most important factor in consumer choice and price comparisons are difficult for consumers to make without simple uniform price disclosure; and 2) consumers care about how their power is produced and consumers' current beliefs about how their electricity is produced is very different from how it actually is produced. Disclosure of basic information—in a simple, understandable and uniform fashion—allows consumers to make informed purchasing choices.

Research Questions and Findings

The National Council research addressed three primary questions: What information do customers need? How can it best be conveyed? How can the information be developed? For each, there are several key findings.

What information do consumers need to make informed choices in a competitive electricity market?

- *Consumers want and need standard, uniform disclosure by all suppliers.* Even before the National Council research began, polls of customers in Maine, New Hampshire and Texas showed that uniform disclosure was preferred by a large majority of customers. On the other hand, market research shows that voluntary disclosure, where suppliers could choose partial or no disclosure, made it more difficult for customers determine which products were low cost or had desirable environmental characteristics.
- *Disclosure of effective prices by all sellers is necessary for consumers to make cost comparisons.* From the retail choice pilot programs, we found that customers were frustrated when price was not disclosed in a uniform format. Other research shows that, when price information is presented for all products, customers can easily identify the low price product. Where price is not disclosed in a uniform label, or where it is disclosed for some products but not others, performance suffered.
- *Simple uniform disclosure of fuel mix and emissions is needed for consumers to identify their preferred electricity service. Consumers believe that their sources of power are cleaner and greener than they actually are.* In the baseline study, 82 percent of customers felt that environmental factors were very important in choosing an electricity source. All products need an environmental label, in part so that customers can better understand the environmental characteristics of all products, including those that do not make environmental claims in their marketing.

How can the information best be conveyed to consumers?

- *The disclosure should include a simple uniform label (figure 1) showing the essentials of price, contract terms, fuel mix and emissions.* The format shown in the label works best, but several other options perform reasonably well. The critical points are that the format is easily understood by customers and that customers can directly compare products to one another.
- *Disclosure also should include a Terms of Service brochure to supplement the information on the label and provide other important consumer protection information.* In addition to the disclosure label, customers should be provided with more detailed information when they sign up for service and periodically thereafter. This information would include items such as all charges and fees, customer rights and dispute resolutions, and a variety of other data.
- *Labels should appear in all written marketing materials, including direct mail advertising, internet ads and all newspaper and magazine ads over a minimum size.* For customers, it is critical that the most relevant information be readily available at the time they are deciding which product to buy.

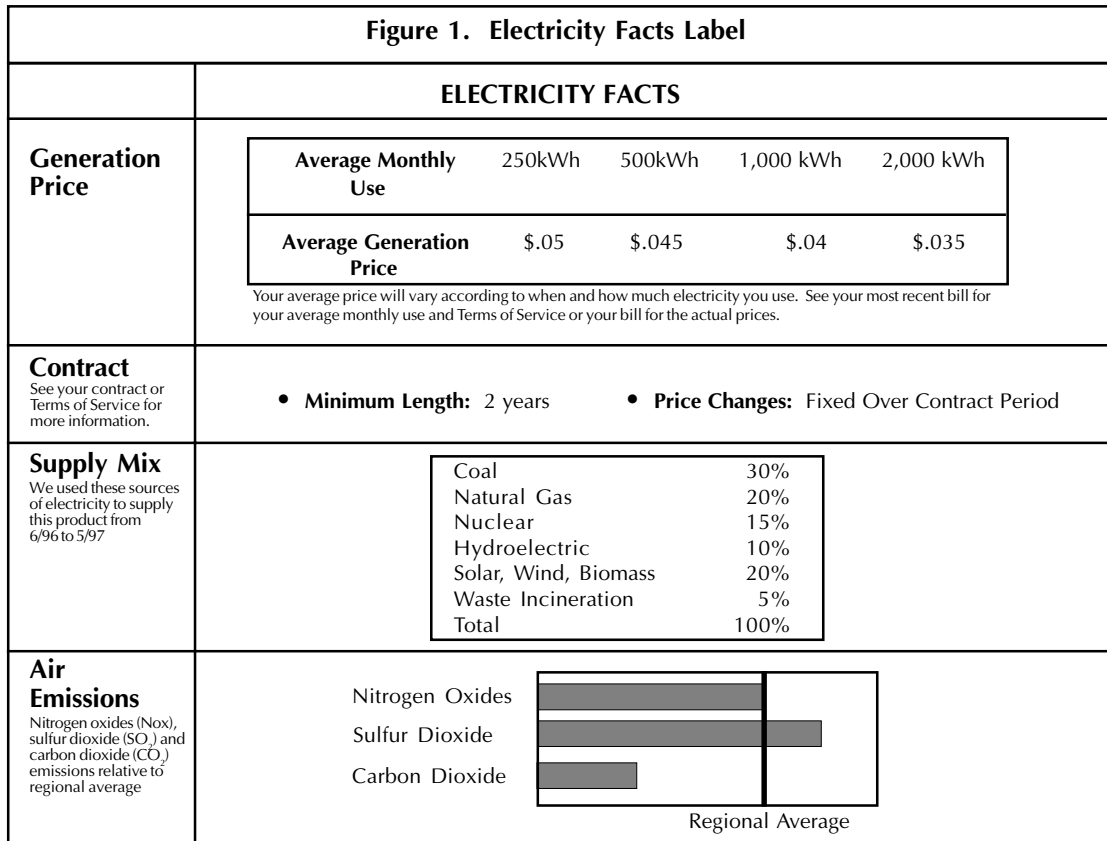
- *Simplicity in designing the label is essential.* There is a tendency to provide information that is more detailed and precise than needed for the consumer protection and consumer information task at hand. The consumer research, as well as the experience of the experts in similar areas, shows that providing too much information can be counterproductive. If material is not brief and to the point, customers will neither read nor use it.

How should the information be tracked, collected and verified?

- *Tracking and verification of the necessary information is practical and economical.* Several approaches are available, including approaches that build on the accounting mechanisms necessary for the power market to function and “tradable tags,” which would create a new market analogous to the market for sulfur allowances under the Clean Air Act Amendments. Preliminary consumer research, however, shows consumer confidence in the information provided and the likelihood of making choices based on fuel mix or emissions may suffer when a tradable tag approach is used.

Next Steps

Substantial research showing the form and content of information disclosure has been completed. The actual market for electricity, however, has barely begun. Ongoing review and analysis of consumer knowledge and behavior in an actual marketplace is the next logical step in assuring that consumer information needs are satisfied.



Introduction

The electric utility industry is undergoing unprecedented change, creating a unique opportunity for consumer choice to drive the electricity market. In November 1996, The National Association of Regulatory Utility Commissioners (NARUC) considered the development of retail competition and the readiness of customers to effectively participate in the emerging retail electricity market. At its Annual Meeting that year, it adopted a *Resolution in Support of Customer Right-To-Know and Product Labeling Standards for Retail Marketing of Electricity* and identified the need to provide retail consumers with clear and uniform disclosure to compare price, price variability, resource mix and environmental characteristics of their electricity purchases. Following NARUC's resolution, The National Council on Competition and the Electric Industry (the National Council), a joint undertaking of state utility regulators and state legislators, initiated a major research effort to provide the consumer and policy research needed by states and others to implement the resolution.

The National Council's research project consists of more than a dozen specific tasks (summarized in the box below.) Most of these have now been completed, and the results are available in a series of reports published by the Council. Copies are available from the council or the Council's web site <http://eetd.lbl.gov/NationalCouncil> or www.rapmaine.org.

This synthesis report summarizes the most important portions of all the preceding work. In a sense, this report serves as a guide to the Council's entire Consumer Information Disclosure Project and its extensive and rich research results.

Report Organization

This report consists of two main sections and two appendices. **Section one** focuses on four major questions that require attention when developing effective disclosure requirements:

- What information should be disclosed?
- Should disclosure be voluntary or mandatory?
- How should the information be displayed?
- How should the information be obtained, tracked and verified?

For each of these questions, we describe the issues, the policy options and draw on the findings of consumer and other research to offer concluding recommendations.

Section two presents a broader range of issues and questions that need to be considered and resolved when creating a uniform information disclosure system. This section relies heavily on the work of the New England states where a model regional rule for information disclosure was developed in 1997.

Appendix A contains model legislation. **Appendix B** contains a brief summary of the National Council's Conference on Consumer Information Disclosure that was held in Chicago, Illinois, on May 13 and 14, 1998.

The National Council's Research Agenda

In November 1996 The National Council on Competition and the Electric Industry initiated its Consumer Information Disclosure Project to assist state regulators and legislators address consumer information needs in a competitive electricity environment. The research agenda described here is designed to assist state regulators and legislators in addressing consumer information needs.

Options Identification and Tracking Overview This task identifies the major disclosure and labeling options for environmental characteristics and resource mix. The task also identifies the likely mechanisms that could be used to track transactions from generators through sellers, aggregators or marketers to retail buyers. (*Full Environmental Disclosure for Electricity: Tracking and Reporting Key Information*)

Model Electricity Consumer Protection Disclosures This task identifies the major disclosure options for pricing, contract and other consumer protection issues. It focuses on items that might be included in simple labels (e.g., price) as well as other items such as risk, and on important contract terms and conditions that might be provided to consumers in other materials. (*Model Electricity Consumer Protection Disclosures*)

Stakeholder Outreach The National Council has held three regional meetings to collect input from stakeholders on a variety of issues with particular emphasis on suggested label content and format.

Customer Focus Groups This task involves 19 customer focus groups in six states, including consumers who have participated in retail competition pilot programs. The groups provided feedback on the categories of information consumers want as well as their reactions to different marketing materials. (*Information Consumers Want in Electricity Choice: Summary of Focus Group Research*)

Baseline Tracking Survey This task consists of a nationwide telephone survey of 1,300 randomly selected consumers. The purpose of the survey was to collect information about knowledge, attitudes and practices concerning electricity service. The survey also establishes national and regional baseline data on the issues. (*Summary Report: Baseline Survey—Consumer Knowledge, Practices and Attitudes*)

Disclosure Testing The purpose of this research is to test labeling options for consumer acceptance, ease of use, comprehensibility and task performance (i.e., ability to perform label use tasks). One thousand consumers, recruited from eight shopping malls around the country, were put through a series of performance tests. Many labeling options were tested in a controlled, experimental setting that simulated realistic use situations to assess label performance quantitatively. (*Label Testing: Results of Mall Intercept Study*)

New England Project and Other Regional Disclosure Projects This task involves working with PUCs and stakeholders in the six New England states and making recommendations for uniform disclosure requirements. The experience gained in New England will be used in other regions. In each region, the council will work with commissions and all other stakeholders to develop uniform disclosure requirements that fit the needs of the regional market. (*Uniform Consumer Disclosure Standards for New England: Report and Recommendations to the New England Utility Regulatory Commissions*)

Consumer Acceptance of Alternative Tracking Approaches There are two approaches to tracking information that are used for disclosing information to consumers on fuel mix and emissions. One approach tracks contracts and the other uses tradable tags. A concern raised about the tradable tag approach is that it will suffer from a lack of consumer acceptance. The purpose of this research task is to assess consumer acceptance of alternative tracking approaches and determine whether and to what extent using one approach over the other influences consumer choice. (*Consumer Research on Tracking Approaches and Product Versus Supplier Labeling*)

Key Issues

This section focuses on four major issues that are raised when creating effective disclosure requirements.

- What information should be disclosed?
- Should disclosure be voluntary or mandatory?
- How should the information be displayed?
- How should the information be tracked?

For each of these questions we describe the issues, the policy options, the findings of consumer and other research, and offer a conclusion.

Overview of Research

Focus Groups were the first phase of consumer research. Although focus groups do not give statistically reliable opinion outcomes, they are useful in revealing consumer issues, points of view and preferences. A total of 19 focus groups were conducted between January and September 1997. Each group consisted of about 10 people. The specific sites (and number) of the focus groups are listed below:

- New Hampshire: Concord (2) and Londonderry (2)
- Massachusetts: Worcester (2)
- California: Fresno (2) and Santa Clara (2)
- Washington: Tacoma (2)
- Colorado: Denver (2)
- Ohio: One each in Toledo, Columbus, Cincinnati, Cleveland and Athens

A *Baseline Survey* was the second aspect of the council's consumer research. This consisted of a 1,300-person telephone survey that assessed consumers' attitudes, knowledge and practices relating to purchasing in a competitive environment. An important aspect of the baseline survey was an assessment of how consumers think their power is now generated.

The *Label Testing Study* (sometimes referred to as the mall intercept study in this report) was the richest source of data. This research primarily assessed consumers' performance rather than consumer opinions. Instead of finding out what consumers say they prefer, this study assessed consumers' ability to understand and appropriately use information to perform tasks that might arise when making choices among competitive suppliers. The study recruited 1,001 respondents at shopping malls in eight cities around the United States. Consumers were put through a series of tasks. Each task presented consumers with different electricity products, described with varying types of information and format. Tasks included identifying the lowest-price option, calculating monthly bills, and identifying the product with the lowest emissions or most supply from designated sources. Consumer performance in answering these questions, including the time to respond, was measured as a function of the content and format of presented information.

The *Tag Study* represents the most recent consumer research effort. This study focused on two issues. The primary question concerned how consumers reacted to information reflecting tradable tags (referred to as *certificates* in the study) and to information on the contract approaches to tracking. Consumers were asked a series of questions regarding two products, including which product was environmentally preferred, which product they would purchase, and how confident they were in these judgments. Consumers then were read descriptions of different tracking systems, and the series of questions was repeated. The second question addressed in the tag study concerned whether customers expected the label to reflect the fuel mix and emission characteristics for the *entire firm* selling the service or for one of several *products* offered by the firm.

What Information Should Be Disclosed?

What is the issue?

The NARUC resolution called for uniform disclosure of price, price variability, fuel mix and environmental characteristics. During the course of the research, we examined the wisdom and need for disclosure of these as well as for a wide range of other information. We also examined whether information should be disclosed in labels and in other materials provided to consumers.

What are the policy options?

There are a number of possibilities as to what could be disclosed. Four factors combine to reduce the list dramatically: the requirement of simplicity, consumer research on the factors of greatest importance and need, expert views on information priority, and the availability of information. The choices quickly narrow to the following: what belongs on a label, what belongs in a longer document containing greater detail about the contractual relationship between the buyer and seller, and what can be left to the ordinary marketing activities of competing suppliers.

What does the consumer research say?

All focus group participants had similar reactions to the question of what information should be disclosed.

- Most participants wanted a *variety of information* upon which to base their choice of a supplier. Although much of the original policy interest in information disclosure focused on environmental issues, focus groups made clear that information disclosure is a much broader consumer protection issue.
- Focus groups were quite *consistent in the factors that are important to participants* in choosing a supplier. The most important of these factors were price, service reliability, environmental information (including fuel mix and emissions), contract terms, company track record and customer service record.
- Of all the factors in their decisions, *price was usually the most important*. Even though suppliers might use different pricing structures for different products, participants wanted to be able to compare price in average cents per kilowatt-hour (kWh), like unit pricing in grocery stores.

- *Fuel or resource mix and emissions information are critical environmental attributes.* When presented with both, participants recognized that they did not represent the same thing, and they wanted to see both pieces of information.
- Consumers in the Northwest focus groups already were aware of the effect of hydroelectric resources on fish populations.¹

Price. With respect to price, New Hampshire focus group participants—all of whom had participated in the retail pilot—strongly emphasized that they had found it difficult to make price comparisons among offerings. Nearly all focus group participants wanted prices displayed in a simple, apples-to-apples manner. A New Hampshire poll of pilot program participants commissioned by the PUC showed that 84 percent of New Hampshire customers thought suppliers should be required to provide customers with uniform price information.²

The baseline survey found customers did not know how much they paid per kWh for electricity nor their own current energy usage. They did know the amount of their typical monthly bills. When asked how many kilowatt-hours of energy they use per month, more than three-quarters of consumers (77 percent) said they did not know. Similarly, 87 percent of consumers did not know how much they were charged per kilowatt-hour. This percentage is slightly lower among bill payers (86 percent) and higher among non-bill payers (92 percent).³ When asked what their total electricity bill was for the previous month, most people (94 percent) were able to guess.

The label testing study addressed the need for price, fuel and emission information in a quantitative fashion. When asked whether they had enough information to make a choice among three products, substantially more said they had enough information when all three products disclosed price information (see table 1).

The availability (and consistency) of price information strongly affected consumers' ability to correctly identify the low-price product. When price information was presented on all products, nearly all respondents (92 percent) correctly identified the low-price product. When no label (therefore no specific price information) was given, participants did not perform as well. However, respondents had the most difficult time identifying the low-price product when the label contained only environmental information or when one product was unlabeled, but others displayed a full label. Table 2 also shows that consumers' ability to correctly respond to the question suffers when labeling is voluntary.

1. It is especially important to give consumers information if it is information they do not already know. Consumers in the Northwest focus groups believed that substantially all their power came from hydroelectric resources, which is not true. Thus, it is important to give consumers fuel mix information. Because consumers seem to be well aware of the effects of hydroelectric resources on fish, adding a statement that hydroelectric resources affect fish is of less importance.

2. More specifically, 60 percent of customers *strongly agreed* that suppliers should be required to provide customers with uniform price information while 23.5 percent *somewhat agreed*.

3. Interestingly, focus groups with consumers who had participated in a pilot program found that consumers were very aware of electricity prices and monthly use. It seems that exposure to competition quickly educates consumers to become aware of these two items.

Table 1. Percent Who Claimed to Have Enough Information: Price	
Information Condition	Percent Who Claimed to Have Enough Information
<i>Price Formats</i>	
No product displays any type of label	22%
All products display price	56%*
Some products labeled	29%
All products have uniform labels, but price never shown	33%*
* Significantly different from no label condition at the 5 percent level.	

Table 2. Identification of Low-Price Product by Information Provision Condition		
Price Information Available to Respondent	Percent Who Correctly Identified the Low-Price Product	Percent Who Didn't Know or Refused to Name the Low-Price Product
No product displays any type of label	61%	25%
All products display price	92%	1%
Some products display price	52%	26%
All products have uniform labels, but price never shown	53%	24%

Reliability. Reliability, in the sense of uninterrupted supply and prompt service restoration in the event of an outage, was a frequently mentioned concern in the customer research. Reliability, however, is essentially the result of transmission and distribution system operation and is not affected by choice of supplier. All *Terms of Service* documents and customer bills should include the phone number of the complaint receiving agency so customers will know how to verify the business reputation of a supplier.

Fuel mix and emissions. The baseline survey and consumer focus groups showed that fuel mix and emissions information were important to customers. Consumers connected environmental friendliness with particular fuel types.

As shown in table 3, the label testing study found that including fuel mix and emissions information in the label substantially increased the number of consumers who believe they had enough information to make an informed choice. Emission information also is needed because two plants using the same fuel type can vary significantly depending on the quality of the fuel, the type of generation equipment and pollution controls. Disclosure of fuel mix and emissions information provides a straightforward way to capture these 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.

Information Condition	Percent Who Claimed to Have Enough Information
<i>Environmental Formats</i>	
No Labels, No Certification	21%
No Label: B and/or C Certified	23%
No Label: All Products Certified	22%
Consistent Label, No Price Information	33%*
Consistent Full Label	56%*
Full Label on One or Two Products	30%
A-Price, B-Fuel Mix, C- Fuel Mix and Emissions (group 17)	51%*

* Significantly different from no label condition at the 5 percent level.

Consumers were able to evaluate and balance fuel type and emission characteristics. A number of the consumer focus groups explored these issues in more detail. Consumers were asked to choose between two electricity products that had different fuel mixes. Consumers consistently selected the product with less coal and more gas and renewables. (Nuclear was not part of either product.) Consumers then were asked to choose between the same two products when both fuel mix and emission information were given. (The emission information showed the coal-based product had lower emissions than the alternative.) Customers uni-

formly changed their choice of product. Exploring the issue with consumers showed their preference and need to have both types of information.

Information is especially important when it is likely to affect a purchasing decision, and it is information consumers do not already know (or could readily gain from the product itself). Fuel mix, for example, has been found to be an important factor in consumers' choice of electricity supply. Yet, providing fuel mix information would not be important if consumers already knew the source of supply (or if they could readily determine it). The baseline survey, however, found consumers have very inaccurate views about the sources of their electricity. The main source of power nationally is coal. However, the majority of respondents did not name this source as the dominant one in their region (East-11.2 percent, Midwest-25.4 percent, South-17.3 percent, West-13.5 percent). Table 4 combines consumers' perceptions of the three most heavily used energy sources in their region. Nationally, the top fuel sources and percentages are roughly as follows: coal (60 percent), nuclear (20 percent), natural gas (10 percent), hydroelectric (8 percent) and oil (3 percent). Table 4 highlights the fact that most people generally are unfamiliar with their sources of electric power. Only about half the consumers tested could have even one of the top three sources of power in their region.

Table 4. Percentage of Consumers Who Believe Source Is One of the Top Three Sources Compared to the Actual Ranking of the Source								
Source	East		Midwest		South		West	
	Perceived %	Actual Rank	Perceived %	Actual Rank	Perceived %	Actual Rank	Perceived %	Actual Rank
<i>Coal</i>	<i>28%</i>	<i>2</i>	<i>42%</i>	<i>1</i>	<i>32%</i>	<i>1</i>	<i>23%</i>	<i>1</i>
<i>Nuclear</i>	<i>24%</i>	<i>1</i>	<i>29%</i>	<i>2</i>	<i>25%</i>	<i>3</i>	<i>17%</i>	<i>3</i>
<i>Natural Gas</i>	<i>50%</i>	<i>3</i>	<i>44%</i>	<i>3</i>	<i>40%</i>	<i>2</i>	<i>42%</i>	<i>4</i>
Hydroelectric	34%	4	26%	4	39%	5	<i>51%</i>	2
Oil	44%	5	18%	5	20%	4	18%	
Waste-to-energy	3%		4%		2%		1%	
Wood/Biomass	7%		4%		6%		5%	

Table 4. Percentage of Consumers Who Believe Source Is One of the Top Three Sources Compared to the Actual Ranking of the Source (continued)

Source	East		Midwest		South		West	
	Perceived	Actual	Perceived	Actual	Perceived	Actual	Perceived	Actual
	%	Rank	%	Rank	%	Rank	%	Rank
Wind	2%		3%		3%		17%	5
Geothermal	4%		4%		3%		7%	
Solar	11%		9%		12%		10%	

The label testing study found that both fuel mix and emissions were important to consumers and that emission information could override products chosen on the basis of fuel mix. We also found that fuel mix and emission information would override consumer choices made on the basis of an environmental certification.

What do the technical and policy research and experience say?

Policy and technical research sheds light on a few aspects of the issue. First, staff at the U.S. Environmental Protection Agency were asked to prioritize environmental information to include in disclosure. The three highest priorities were sulfur oxide, nitrogen oxide and carbon dioxide. Other air pollution information—including mercury, particulates, fine particulates and other air toxins—was in the next priority level for environmental information, followed by non-air impacts and radiation releases. The final list of recommended environmental information was limited to the top three air emissions based on priority and data availability. (Reliable nationwide data on particulates, mercury and other air toxics are not available.) With respect to emissions from nuclear plants, we found that consumers were aware that nuclear plants produced radioactive emissions and waste. Also, unlike emissions from fossil plants emissions did not vary significantly from nuclear plant to nuclear plant so emissions or waste information was not needed to distinguish between particular nuclear plants.

Other consumer information and consumer protection needs are addressed in the report on the New England Disclosure Project. The consumer protection report addressed the information needs that were not amenable to a uniform label format. The New England and consumer protection reports concluded that the trade-off between completeness and simplicity could be addressed, in part, by using uniform disclosure labels on all products and more complete disclosure in a separate document called the *Terms of Service*. The label is best designed to provide the concise source of the information a customer would find most useful in comparing products; it will not provide all the information a consumer needs to be fully informed about the product. The *Terms of Service* contains a more complete description of the information summarized in the label, as well as other important consumer protection information.

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 at least three business days following receipt of the *Terms*. (The proposed Maine Disclosure Regulation would provide a five-day right to cancel.) The right to cancel should be printed in bold letters on the *Terms of Service*.

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

- Price and other material contract terms
- Consumer rights
- Environmental information

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 describe the competitive product, but customer research has found 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 (i.e., Spanish).

Conclusion

Consumers want and need to receive essential price and environmental information in a uniform, easy-to-understand format from all sellers. Although they have little experience in purchasing electricity in a competitive market, they are experienced comparison shoppers; they want tools that will allow them to comparison shop for electricity. Customers generally know their current, total monthly bill but are not familiar with kWh prices, their monthly usage or with the sources of fuel used to generate the electricity they purchase. We found, however, that consumers quickly became aware of kWh use and prices once competition begins. A simple label containing prices at typical usage levels can be read and understood by typical customers. A *Terms of Service* document that contains greater detail about price, other contract terms and a statement of consumer rights is recommended to give customers the full array of information needed to select an electricity provider.

Fuel mix and emissions are the next most important factors that influence customer behavior. Reliability (in the sense of outages and restoration of power following an outage) was high on the list of consumer concerns. Because reliability is not affected by the choice of competitive suppliers it is left off the label. Clearly, consumer education on this point is needed. Customers use fuel mix and emissions information in making decisions and seem well able to make trade-offs between environmental factors and price.

Should Disclosure Be Voluntary or Mandatory?

What is the issue?

Should all retail electricity providers be required to disclose price, fuel mix and environmental information (mandatory disclosure) or should disclosure be a voluntary choice each supplier makes? The distinction between voluntary and mandatory disclosure can quickly be-

come confusing. For example, voluntary disclosure is sometimes called claims-based disclosure because only sellers who make an environmental claim would be required to disclose.⁴ But, when some say disclosure should be claims-based, they mean those who make environmental claims should be required to have a label disclosing their specific purchases, and all other sellers would be required to disclose on the basis of a residual system average or some similar default or generic basis. Others consider the latter alternative to be mandatory disclosure, with a default option.

For the purpose of this discussion, voluntary disclosure means sellers are not required to disclose anything. Mandatory disclosure means all sellers disclose information that may or may not include a default option. The pros and cons of a default disclosure option are addressed in chapter two.

What are the policy options?

The primary options are:

- **Voluntary and nonuniform form or content.** This option allows sellers to provide any information they wish, in any form. Existing U.S. Federal Trade Commission laws and marketing guidelines would apply, including the FTC's *Guidelines for the Use of Environmental Marketing Claims*, 16 CFR Part 260 (1996). FTC guidelines require that firms making environmental claims must possess reliable information to substantiate the claim, but the information is not required to be disclosed or displayed for consumer review.
- **Voluntary with uniform form and content.** This option has a standard label to be used by any seller that wishes to use it. In addition, sellers making environmental claims would be required to use the standard label.
- **Mandatory with a default option.** This option has a standard label. Some suppliers would be allowed to display fuel mix and emission information based on established default information such as the regional average mix, net of resources specifically claimed by other sellers.
- **Mandatory without a default option.** This option has a standard label. All suppliers would be required to show their own fuel mix and emission information. There would be no default label per se, although simplifying assumptions for fuel and emission characteristics might be used for some limited types of transactions.

What do the consumer research and experience say?

Several of the consumer research tasks addressed the general question of voluntary versus mandatory disclosure. Only limited consumer research directly addressed the question of using default values.

4. The term *claims-based* is derived from existing federal laws enforced by the Federal Trade Commission (FTC). The FTC requires that any seller who makes a claim, environmental or otherwise, be able to substantiate the claim with reliable evidence. The evidence supporting the claim must be in the claimant's possession at the time the claim is made. The evidence need not, however, be disclosed to the consumer. From the FTC's perspective, the label itself is a claim, and substantiation of the information in the label also must be in the seller's possession. In the case of the label, the information provided by the tracking system should satisfy the substantiation requirement.

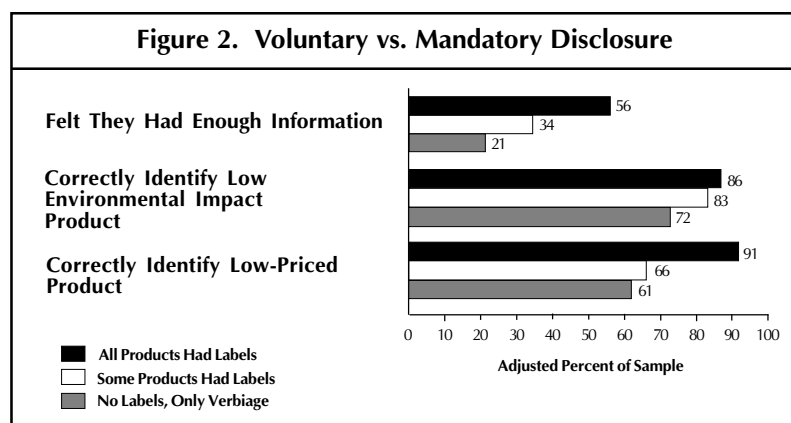
There was general agreement in all focus groups on the major issues, including the question of whether disclosure should be voluntary or mandatory. Most participants felt that standard information should be *required of all suppliers*. They did not believe it would be satisfactory if some companies made standard information available and others did not. They also felt that the requirement should be overseen by an independent entity, often mentioning state utility regulators.

The results of various, independent state surveys showed overwhelming consumer desire for mandatory disclosure. Typical were surveys conducted for the Maine and New Hampshire public utility commissions (PUCs), both of which found that more than 84 percent of consumers wanted all suppliers to be required to provide price and fuel mix information in a standardized format. The Maine study also surveyed business consumers and found that 75 percent wanted fuel mix disclosed by all suppliers. A similar poll of registered voters in Texas found that 84 percent wanted all suppliers to disclose price, fuel mix and emission information.

The baseline survey did not ask consumers this question directly, but several of its findings support mandatory disclosure. The survey found that a majority of consumers cared about environmental information and would use it in making purchasing decisions. The survey also found that consumers currently have an inaccurate understanding of how their power is being generated.

Some of the most compelling consumer research came in the mall intercept label testing study.

As figure 2 shows, customer desire for information was best met when all products were fully labeled. Almost 60 percent of consumers who saw full labels for all products felt they had enough information to choose between products. This compared to about 20 percent of respondents who saw no labels.



Even more compelling than the fact that customers want the information is that our research showed they needed it. We designed several experiments to examine differences between voluntary and mandatory disclosure schemes. As shown in figure 2, consumers' ability to perform typical shopping tasks—such as correctly identifying the lowest-cost option, calcu-

lating bills and determining which option had the fuel mix or emission characteristics they wanted—suffered when labels were voluntary. Consumers appear to perform better in correctly identifying the low environmental impact product because we treated two out of three possible choices as being a correct response. One product had low emissions and another product had high renewable content. Consumer performance in identifying either the low emission or the high renewable product would suffer if labeling were voluntary. In both price and environmental tests, performance also suffered when information was provided in non-uniform formats.

What do the technical and policy research and experience say?

Several policy reasons argue in favor of mandatory disclosure for all suppliers. First, early experience shows most consumers do not choose an alternative supplier. Because this leaves them with a default provider, usually the existing utility, regulators are concerned about market power and the design of the market. Research suggests that a combination of confusion and a sense that important information is lacking collectively contributes to a reluctance on the part of customers to switch providers. Information disclosure may help consumers overcome this apprehension and confusion.

Second, and most importantly, is that markets operate most efficiently when consumers have all information that reasonably influences their shopping decisions. Research shows that consumers have an inaccurate understanding about the source of their power and that knowing the source of power is important to the decision making process. Absent disclosure by all sellers, there is no realistic way for consumers to obtain this information. Likewise, research shows that price comparisons are very difficult without uniform price disclosure by all sellers.

Other consumer protection reasons flow from a combination of the conditions in the marketplace and the nature of the electric industry. Assume a utility serves consumers in a state that has moved to full retail access. Assume further that it has made purchases and investments over the years that include clean and green resources and that these resources have been prominently displayed in advertisements and other public relations materials. Suppose the utility decides to divide its resources into two products—one that is 100 percent clean and green and another that contains the remaining resources. The green product is labeled and marketed to local consumers as well as to consumers in surrounding areas. The other product is not labeled but is marketed as low cost to other consumers and sold to the former monopoly consumers who now are default customers. (As indicated above, the utility usually is the default service provider.)

Voluntary disclosure in this situation fails to protect consumers or competition. Monopoly consumers historically have been told that they were served by a particular mix of resources, including the clean and green resources. Consumers probably were reminded of these clean and green resources during debates about stranded costs. With voluntary disclosure, the utility could show a clean and green label to some consumers and show no label to others. (Results from the label testing study suggest that consumers do not necessarily punish a supplier that provides no label). Many consumers may stay with incumbent monopolies instead of switching to cleaner options on the mistaken belief that the monopolist's old, clean and green resources still were a part of their mix. If the utility were required to show all consumers

a label for all products, more consumers might be encouraged to switch to the clean and green product or to switch to a more attractive product offered by another supplier.

A similar example demonstrates the importance of disclosure even when there is no retail access. Assume the same facts as just described. Now also imagine that the state has no retail access, but there is retail access in a neighboring state. The utility's clean and green resources might have been the result of an integrated resource planning process or a deliberative polling process of the type used in Texas during the past few years. What if the utility decides to market power to consumers in the neighboring state and creates a product that consists of its entire supply of clean and green resources? What then is being sold to the utility's monopoly consumers? Without full disclosure by all sellers, the utility's consumers will be unaware that their clean and green resources are being sold to neighboring consumers and that, to meet native load demand, the utility has contracted for nongreen resources.

The proponents of voluntary disclosure argue that 1) existing consumer protection laws are adequate and 2) at most, labels should be required only of those sellers that make claims. Interestingly, many proponents of voluntary disclosure do support mandatory disclosure if a default label is available. This support is based on the fact that the availability of a default label reduces the cost of disclosure.

Tracking options and recommendations are discussed later in detail in this chapter. It is enough to state here that requiring tracking (a contracts or tradable tag approach) and reporting of fuel mix and emission information by all suppliers can be implemented in a reasonably efficient and economical manner, with or without the use of a default label.

Existing consumer protection laws do not require disclosure or labeling of the type we describe, even if specific environmental claims are made. Where labeling exists today—e.g., food labeling, appliance efficiency, gasoline octane ratings and consumer loans—it is a result of action by Congress or state governments, based on findings that labeling benefits consumer protection or improves the operation of markets.

Conclusions

All suppliers should be required to disclose price, fuel mix and emission information in a simple, uniform format. The ability of consumers to compare offerings and make informed, accurate and timely decisions depends upon whether the products are all substantially uniformly labeled. One of the most important reasons to require disclosure of fuel mix and emissions by all suppliers is that consumers' existing beliefs are so inaccurate. Several states already have addressed the voluntary/mandatory question. Where states have acted on the issue, they have required mandatory disclosure. Some states do allow for the use of default labels for suppliers that make no environmental claims.

How Should Information Be Displayed?

What is the issue?

Information can be conveyed in a number of ways. How the information is conveyed and whether the information is conveyed uniformly by all suppliers affects how well consumers are able to understand and use the information. What format(s) can be read and understood

most easily? Format choices include the use of words alone or a combination of words and graphs, bar charts, pie charts, percentages or other symbolic representation. Will the information be meaningful on its own or is a comparison needed? Should there be a uniform format?

What are the policy options?

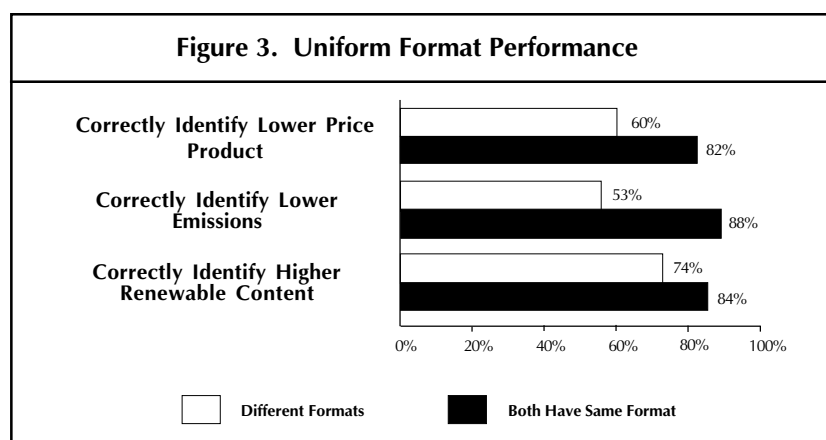
The main policy options are 1) which formats work best, 2) whether to require a uniform label format for all sellers or 3) whether to allow each seller to design its own label as long as some general content criteria is met, including how prices should be shown.

What does the consumer research say?

The extensive label testing study addressed the questions of what formats best convey information to consumers and whether it is important for the formats to be uniform across suppliers.

The study found that consumers' understanding of the information presented and their ability to use the information to make informed choices was substantially improved when all products were labeled in a uniform fashion. The study also found that some formats conveyed the information much better than others.

How does the uniformity of disclosed information affect consumer understanding and performance? Not surprisingly, respondents were better able to compare two products when information was disclosed on both products in the same format shown in figure 3. Eighty-two percent of respondents knew which product was more expensive when they were given information in the same format for both products. When shown different formats, only 60 percent could pick out the most expensive product. Eighty-four percent of the respondents who saw the same fuel mix format correctly identified which had higher renewable energy, while 74 percent of those who saw different formats identified the correct one. When asked which product created fewer air emissions, 88 percent answered correctly compared with only 53 percent correct when formats differed.



In a three-product experiment, nearly all respondents (92 percent) correctly identified the low-price product when all three products had uniformly presented price information. Respondents had difficulty identifying the low-price product where there were no labels or where labels contained only environmental information. Where some products were fully labeled

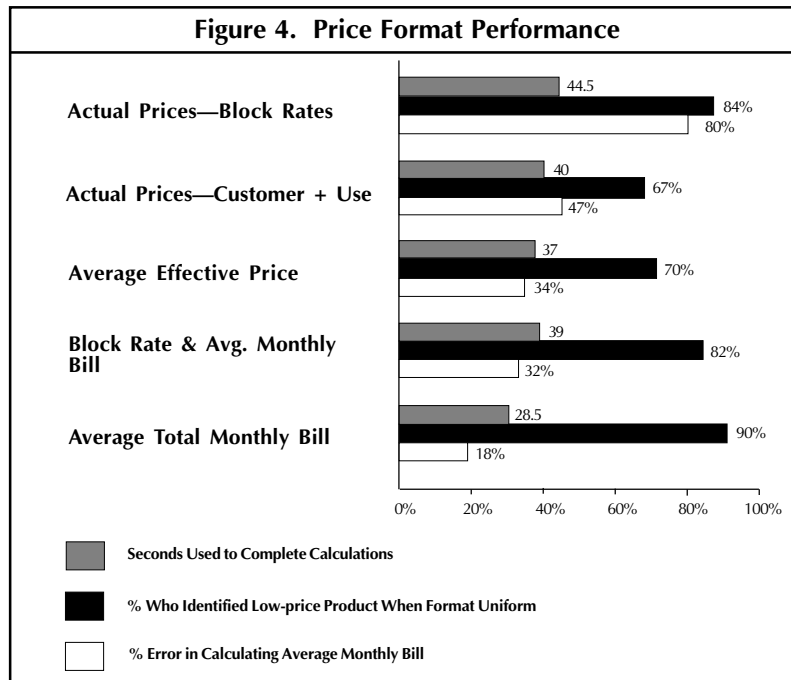
and others were not, as might occur if labeling were voluntary, 52 percent correctly identified the low-price option.

Another experiment asked respondents to determine which of three products was most environmentally sound. Given the product descriptions, two of the products were considered environmentally friendly. (One had the highest amount of renewable resources, and the other had the lowest emissions.) The study found that the types and consistency of information presented, the extent of difference in environmental attributes and individual characteristics all affected the respondent’s choice of the most environmentally friendly product. In general, the highest percentage of people was unable to pick the most environmentally friendly product when there was no label. Conversely, consistent environmental disclosure for all products produced the most correct responses. Experiments where only some products carried labels or had received environmental certification also showed high percentages of incorrect responses.

What label formats are most effective at conveying information to consumers?

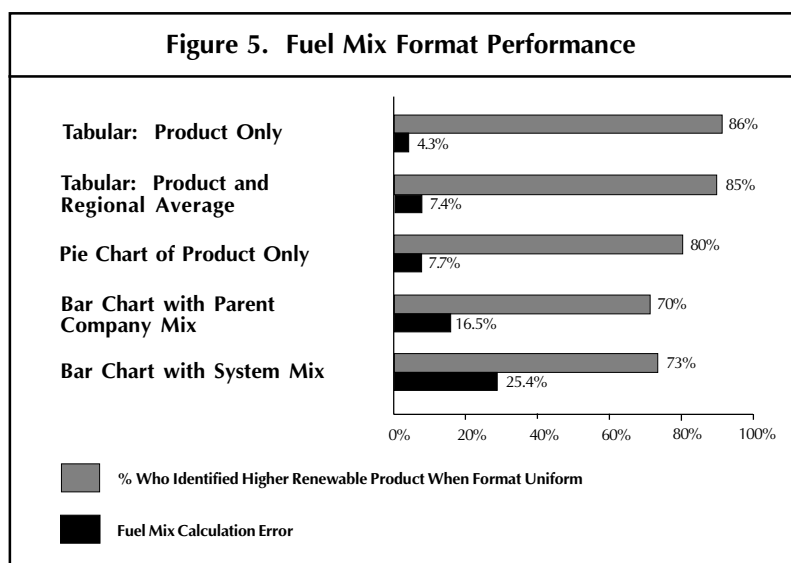
Price. The way price information was conveyed significantly affected consumers’ ability to use price information. We gave consumers labels that showed price information in several different formats, including average prices at stated usage levels, average monthly bills at stated usage levels, flat monthly fee plus usage charge and actual prices for a simple block price structure.

We asked each respondent to perform a number of tasks, including one to identify the lowest-cost option and calculate two monthly bills at 1,000 kWh and 2,000 kWh usage levels. As shown in figure 4, consumers had the most difficulty calculating monthly bills with block rate structures. (They made errors averaging 47 percent to 80 percent of the correct answer.) Consumers performed best with average monthly bill presentations (18 percent average error) and next best with average effective prices (34 percent average error).



The format also affected how long it took respondents to calculate answers. The average total bill format allowed respondents to answer the questions in less than 30 seconds, compared to about 45 seconds when the information was presented as block rates.

Fuel mix and emissions. We tested which formats were most effective in providing fuel mix and emissions information. Respondents were presented with information in different formats, including graphical and tabular styles, and then tested on their understanding of the information they had been given. With respect to fuel mix, the simple tabular formats generally allowed respondents to do the best. Pie charts and tabular formats, which included the regional mix for comparison, fared slightly worse. One experiment tested California's initial proposed disclosure format. Two parallel columns listed the percentages for the product's fuel mix and the fuel mix for the *net system power*. The complexity of this format caused respondents to perform significantly worse on all tasks. This result underscores the need to keep formats simple. With respect to emissions, we asked consumers to calculate the percentage of emissions of SO₂ or CO₂ and also to compare these percentages to the regional average. Performance was approximately the same for most formats. Only when emission information was given in the form of actual raw emission data (lbs/mwhr) did performance decline sharply. Figure 5 shows this relationship.



Conclusion

Consumers' understanding of the information presented and their ability to use the information to make informed choices improves substantially when all products are labeled in a uniform fashion. The research also shows that some formats convey the information much better than others, with the label below resulting in the best consumer performance. Other relatively successful variations are pie chart graphics (instead of the fuel mix table), tables listing emissions as a percentage of regional average emissions and price per kWh (instead of monthly bill displays). Average monthly bill formats achieved better results than price per kWh price information. We nevertheless suggest showing average price per kWh because,

once competition begins, consumers quickly become accustomed to comparing prices on this basis.

How Should Information Be Tracked?

What is the issue?

To disclose the fuel sources and emissions of a retail electricity product, we need to track electricity from specific electric generators to individual retail customers. This tracking mechanism must recognize that it is not possible to track electricity in a physical sense. Electric power flows according to physical laws, the geographical location of generation and customer use, and the nature of the electric transmission grid. When generator A sells the output of her plant to customer B, A is not able to direct the electric power that her plant produces to B. Instead, A generates the requisite amount of power, and B consumes it, with a series of meters and accounting structures overseeing the transactions to ensure that buyers and sellers are complying with their contractual agreements.

The reality of a complex electric grid is that it is not possible to know the physical source of any kilowatt-hour. With an interconnected grid, the power flow over the transmission system is ambiguous. All we really know is that electricity is put into the grid at certain points and 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 utility industry long ago developed mechanisms and settlements processes to track who generates, who consumes and who buys. Although 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.

What are the policy options?

There are two basic approaches to the tracking—the energy contract path (a settlements- or ISO- based approach) and the tagging approach. Although proponents of each sometimes draw stark distinctions between the two options, the approaches are similar in several respects. In fact, the two approaches can become largely indistinguishable, depending on how certain details are handled.

On a conceptual level, the approaches begin and end similarly. Initially, when a kilowatt-hour is generated, it also produces an identifier, which indicates its fuel source and emissions profile.⁵ At the other end, products would be disclosed based upon the identifiers held by the retail seller. The principal difference lies in the way identifiers go from generators to retail sellers.

5. The identifier also could contain other information. For example, in Massachusetts there is a statutory requirement that the labor content of generation be disclosed. In addition, retailers might wish other characteristics to be identified. For example, it would be possible to indicate where the generator was located, if a marketer believed this would increase demand for the product.

Under the energy contract path, the identifier is permanently tied to the kilowatt-hour with which it originated. Every time the kilowatt-hour changes hands, the identifier would change hands as well. The retail seller who owns or has a contract for a kilowatt-hour for a given hour also owns the identifier.

With tagging, the kilowatt-hour and the identifier can be traded independently. The retail firm would be obligated to have identifiers for all retail sales, but these identifiers would not necessarily bear any relationship to the kilowatt-hours the firm generated or purchased.

The energy contact path/transactions approach. This approach relies on the metering and accounting mechanisms that have been developed over the years in order for the electricity market to function. Settlement mechanisms were designed to perform three basic functions. First, to determine the sources and consumption of electricity by each company supplying power to the grid and/or taking power from it. Second, to know whether those that took power from the grid were entitled to do so.⁶ Finally, to identify the individual firms that were found to be using (or supplying) balancing power, i.e. power purchases to which they were not already entitled.

The information necessary to perform the settlements function is the same information that is needed for a tracking mechanism. In essence, the settlements agent (or an entity by some other name that may be an independent systems operator (ISO), a scheduling coordinator or a power pool) needs to know the sources of power and who owns title to it.⁷ From this, the agent can determine which generators supplied the needs of individual retail sellers.

A strength of the transaction 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. Although this falls short of physical tracking, it is as close as we are likely to get.

The details of the settlement process vary in different regions of the country. (Additional discussion of this approach appears in chapter two.) Where there is a tight power pool—for example in New England and New York—the pool acts as the settlement agent. In other regions, where pools are looser or nonexistent, the settlements process may be performed by the local utility that operates the control area. Mixed systems, such as the California pool where the settlements functions are shared between the ISO and individual firms, (acting as scheduling coordinators) also are possible. In general, some of the details of the local ap-

6. This is not simply a matter of protecting against dishonest behavior. The electric grid—and each supplier or user—must hold supply and demand in balance on a virtually instantaneous basis. As a result, firms often have complex contractual arrangements to support one another. For example, generating company A may normally have enough generation to meet its needs. However, this balance can be upset almost instantaneously if a generator trips offline or severe weather causes customer use to increase. In these cases, some mechanism is needed for determining, after the fact, the source and price of the electricity that company A was purchasing.

7. The settlements agent does not necessarily need to know the full chain of title to a particular kWh, just the original source and the final owner. If company A generated power and sold it to company B who, in turn, sold it to company C, then the agent would need to know about A and C, but would not necessarily need to know that a middleman, B, was involved.

proach to settlements must be reviewed in order to adopt the settlements information systems to the task of tracking transactions.

The tagging approach. The tagging approach is much like the transactions approach with the principal difference being that the identifications or tags that bear fuel and emission data are traded independently of the electricity.⁸ For example, a firm owning only nuclear generation might produce 1 million kWh of nuclear tags in a given period. In principle, this firm could sell its nuclear tags, buy 1 million kWh of hydroelectric tags, and then market its power as all hydroelectric. This market for tags is, in some respects, similar to the market for sulfur allowances under the Clean Air Act Amendments of 1990.

Tag proposals may vary in the treatment of a number of details. A tag approach might include the following principal points.

- Tags would be created simultaneously with generation for all sources of generation in a region.
- Tags could be bought and sold, independently of any trading in electricity.
- Periodically, perhaps every six months, the tag trading period would close, requiring that all retail sellers have adequate tags to cover their electricity sales.
- At the time of closing, any firm holding tags could choose between using the tags they own to label their sales or turning the tags over to a central tag pool. Any firm needing additional tags would be allowed to draw from the pool. Tags taken from the pool would have the average characteristics of all tags turned into the pool.⁹

Pros and cons. The tradability of tags is both this approach's greatest strength and greatest weakness. Tradability 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 hydroelectric-based product, it need not bother owning a single hydroelectric plant or finding a hydroelectric plant from which to buy power. Instead, it merely needs to enter the tag market and buy hydroelectric tags.

At the same time, however, this flexibility has created the concern that customers may see the approach as being fundamentally dishonest. For example, imagine a customer with strong environmental views who prefers not to support nuclear power and has a clear preference for hydroelectric and wind power. How might this customer respond when he or she discovers that Acme Electricity has been charging a relatively high price for 100 percent hydroelectric 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

8. A more complete description of tradable tags can be found in the report *Using Tradable Tags for Resource Disclosure* which is located on RAP's website at <http://www.rapmaine.org>.

9. 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 contracts approach, although we are not recommending it. See discussion below.

customers that when you buy X kWh of hydropower you can be assured that somewhere in the region a hydroelectric plant generated energy for you and you alone.

Despite this consumer concern, the tradable tag approach has some distinct advantages, particularly when compared to some versions of an energy contract path approach. In fact, if we could assume away the problem with customer acceptability, tags may be preferred.

Under an energy contract path 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.¹⁰ 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 tradable tags may provide other benefits as well. In some contracts-based proposals, certain implicit restrictions are placed on the owners' use of their resources. For example, if the settlement agent simply assigns system sales according to the average generation mix of the seller, then developing products with specific characteristics would be difficult. For example, the only way one could market a product that is heavily hydroelectric would be to own a significant amount of hydroelectric capacity or to enter unit contracts with the owners for the output of one or more hydroelectric generators.

What does consumer research say?

The latest consumer research performed in the second mall intercept study focused on consumer reaction to tradable tags (referred to as certificates in the study) and the energy contract path approaches to tracking. Like the label testing study, consumers were recruited from shopping malls in two cities—Los Angeles, Calif., and Albany, N.Y. Because the research was aimed at measuring whether purchasers of green products would be influenced by the choice of tracking systems, consumers in the test were screened for some level of sensitivity to environmental issues. Participants were asked a series of questions regarding two products, including which product was environmentally preferred, which product they would purchase, and how confident they were in their judgments. Consumers also were asked questions that probed certain aspects of each tracking system.

The study results are not yet fully analyzed, so the conclusions expressed below are tentative. It appears that when the alternative tracking systems were explained to consumers, the tradable tag system resulted in fewer consumers buying a green product and consumers expressing less confidence in their ability to identify the product with better environmental characteristics.

Specifically, we found that the consumer confidence rating dropped significantly more for the tradable tag approach than the contract path tracking approach. Likewise, significantly more

10. See the discussion of imports in chapter two.

people altered their choice (usually away from the green option) when hearing about tradable tags than when hearing about the contracts approach. With tradable tags, about 12 percent of consumers changed their choice from the green product to the other product (4 percent) or don't know (8 percent) compared to only 4 percent (3 percent changed to the green product and 1 percent changed to don't know) for those who heard the contract tracking explanation.

The main distinction between the two tracking approaches is that the identifier, or tag, can be traded separately in the tag approach. Consumers were asked whether they preferred that tags and electricity came from the same source. We found that more than 80 percent of those who saw tagging explanations said they would strongly prefer (45.6 percent) or prefer (34.7 percent) that electricity purchases and tags were required to come from same source. Conversely, those who saw the contract tracking approach were asked if they would accept a less precise system if it cost less. Almost three-quarters (74.2 percent) said they preferred the more precise (and costly) system.

One important caveat is that consumers were asked to rank on a 10-point scale how well they felt they understood the tagging and contract explanations. Tagging was not as well understood. The difference in understanding was large enough to explain some—but not all—of the differences in consumer response. Consumers do react differently (tagging is more likely to result in a decision not to make an environmental choice and in a greater loss in certainty), but this may be due to a poorer understanding of tradable tags and not necessarily to a distrust of the system. In either case, the research suggests that a tradable tags approach should be pursued cautiously and, if selected, should be combined with a larger public education effort and active support from all stakeholders.

Conclusion

An ideal tracking mechanism would have two primary characteristics. First, it would be accurate and accepted by customers. Second, it would allow market participants broad flexibility in developing products and making business decisions, so long as those products were accurately represented to customers. Neither the energy contract path nor the tag-based approaches appears to be obviously preferable. The best solution is not to pick the lesser of two evils but to look to approaches that combine the best features of both.

The weakness of the energy contract path approach is its lack of flexibility in dealing with system contracts and economy purchases. These weaknesses can be avoided by allowing sellers flexibility in creating wholesale products—that is, by allowing the seller to specify which generators are being used for wholesale—as well as specific retail—products.

If a tagging approach is chosen, it is important to pay careful attention to the issue of customer acceptance. At a minimum, it makes sense to limit the geographical scope of tags. Consumers are much less likely to have confidence in wind tags from California that appear in labels in New York. Second, the vulnerability of the tagging approach makes it important that all credible stakeholders agree with the use of tradeable tags. Third, prepare a thorough consumer education effort.

Other Issues

This chapter includes discussion of a number of other important issues that need to be considered in designing and implementing a disclosure protocol. It draws from the work prepared for and used by the New England Conference of Public Utility Commissioners (NECPUC) in designing its Model Disclosure Rule for the New England Region. The topics discussed address price, fuel mix, emissions and various other policy issues. Each topic sets out the key questions that need further attention, with a brief discussion of the major implications of possible resolutions. Each discussion concludes with a suggested recommendation based on the consumer and technical research.

Price Related Issues

1. *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?*

There are two reasons to limit the price display on the label to the price of the competitive generation portion of a consumer's total bill. 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 appearing in *The New York Times* (or any other regional newspaper) will 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.

- *Suggested Recommendation: Report only generation costs on labels.*

2. *How many usage levels should be shown?*

The risk of showing the average electricity price for a single level of use—500 kWh, for instance—is that suppliers could adopt price structures that mislead consumers. For example, a price structure of 2 cents per kWh for the first 500 kWh and \$1 per kWh for use in excess of 500 kWh would show 2 cents in the price portion of the label. Using a range of usage levels that covers most residential consumers eliminates this problem.

- *Suggested Recommendation: The label should show average prices at four usage levels—250 kWh, 500 kWh, 1,000 kWh and 2,000 kWh.*

3. How should the label deal with seasonal and time-of-use rates?

For seasonal and time-of-use rates, the price table should be calculated based on the costs for customers who have seasonal or daily usage patterns of the average consumer in the region.¹¹ The 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 who have unusual usage patterns to make comparisons.

- *Suggested Recommendation: Calculate average price tables based on load profiles for typical customers.*

4. How should the label deal with variable prices, such as prices that vary with the spot market 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 to minimize gaming opportunities, we recommend that the average prices represent the average price for a particular month for all suppliers. The label should clearly indicate this fact and refer consumers to the *Terms of Service* for more information.

- *Suggested Recommendation: The label should reflect the average price, based on the average electricity price during the last month of the most recent quarter. The label should indicate the basis of the displayed price.*

5. 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?

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 understand-

11. Use of average load profiles, in general, and regionwide load profiles, in particular, are good examples 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 probably is not the same in a given state or even in a given service territory. Nevertheless, our judgment 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 seasonal or time-of-use rates. Different profiles for groups of residential and nonresidential customers should be used only if usage patterns are so different that average price displays are misleading.

able way to compare prices without discouraging product innovation through price displays that create a bias against bundled products.

It is difficult, if not impossible, to determine the stand-alone price of electricity where a supplier offers it only 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 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 that offer multiple products and services, which we believe will happen. We also expect there will be discounts for buying multiple products from the same supplier. We have seen deep discounts on software when it is 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 The choice among these and other options must balance the need to give consumers reliable price information in a way that facilitates comparison shopping against the effect that price disclosure encourages or discourages product innovation. The first option is to exempt firms that offer bundled products 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 that want to make price comparisons difficult could bundle electricity with some trivial product 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. Although there is a clear potential for showing an unrealistically low price for electricity, 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.

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 electric-

12. Some PUCs require all suppliers to offer electricity 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 that offer bundled services also will offer electricity on an unbundled basis.

ity. 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.

- *Suggested Recommendation: Suppliers that offer electricity on both a bundled and unbundled basis should have the option to disclose price for bundled products 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. Suppliers that offer electricity only on a bundled basis should display the electricity price as the total cost of bundled services divided by the stated usage levels and should state that the price includes other services.*

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

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 understand the one-time inducements and factor the information into their choice of suppliers.

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

7. *What other price-related information should be disclosed on the label?*

There are two other items to display in the price section of the label: 1) whether price terms are fixed or guaranteed for some period of time or whether price will vary, and 2) 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 on page xii.

- *Suggested Recommendation: Label should indicate whether price terms are fixed and the period of time customers are obligated to stay with their supplier.*

Fuel Disclosure Related Issues

1. *How should fuel use be reported?*

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. The recommended fuel or resource types in New England were:

- Coal
- Nuclear
- Oil
- Natural gas
- Hydroelectric
- Solid waste incineration
- Solar, wind and biomass
- Imports from outside the region

Other regions might add geothermal or subtract resources that are unlikely to be available in the area. Some states or regions may wish to subdivide fuel categories—e.g., to divide hydroelectric into small and large plants, with a dividing line in the range of 30 megawatts (MW) to 80 MW. In addition, some retail suppliers may want the ability to track 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 consumer preference, we recommend that the component parts be broken out whenever a group contributes more than 5 percent of a product's mix. To further simplify the display to consumers, other sources comprising 5 percent or less of the mix may be combined into a single listing, provided the total contribution of the group does not exceed 10 percent of the total mix.

- *Suggested Recommendation: The supply sources should reflect the regional supply sources with special emphasis on sources that will be marketed to consumers. Combined categories like the solar, wind, and biomass category should be further broken out and listed separately whenever this category contributes more than 5 percent of a total mix.*

Emissions Disclosure Related Issues

1. What emissions data is available to support disclosure?

Emissions information for SO₂, NO_x and CO₂ is publicly available from the EPA and state environmental agencies. By 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 be gathered from publicly available sources, although the more efficient and timely source for the same data is to collect it directly from generators. Second, information that is made publicly available is not likely to warrant confidential treatment.¹⁴

14. 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).

Data on emissions of SO₂, NO_x and CO₂ is available from the EPA via the Internet. In the case of New England, approximately 68 percent of the emitting-generating capacity 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 the EPA's NO_x budget program is implemented.

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, CO₂ emissions can be reliably estimated using established emission factors or multipliers. SO₂ emissions also can be 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-42¹⁵ emissions factors can be used. For the 10 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,¹⁶ emissions limits for solid waste combustors recently set by the EPA¹⁷ and AP-42 emissions factors for wood and biomass facilities. Any facility using estimated data also could have the option of supplying more accurate data to the disclosure administrator.

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

Actual emissions factors from a generator can vary substantially from hour to hour, day to day, and season to season. 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 emissions 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 the U.S. EPA lead us to recommend, at least initially, that plant emissions (in grams per kWh) of SO₂, NO_x and CO₂ be based on a single annual emission factor. More frequent updates of the emission factors may make sense later depending on the U.S. EPA's progress on its new emission database. Dual fuel plants would include a separate emission factor for each fuel. These plants also should periodically report the mix of fuels they used.

- *Suggested 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.*

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

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

17. 40 CFR Part 60, *Federal Register* 60, 243, December 19, 1995.

3. *Can a transactions approach for a specific region be described more fully?*

To illustrate a transaction-based mechanism, we will begin with the National Council research in New England. As part of its normal operations, the local ISO (called ISO-NE) knows the:

- Hourly generation of every plant in the region;
- Generation firm or firms entitled to that output;
- Amount of power each retail seller takes off the transmission grid to meet its customers' needs;
- Electric energy contracts within the region or across the regional border where these contracts imply the purchase and sale of electricity.

Based on this, ISO-NE produces a monthly report, referred to as the hourly settlement report, showing the hourly sources of energy for each retail seller in New England.¹⁸ This report shows the load of the retail seller, the generation produced for it by every generating unit in which it had an entitlement (ownership or unit contracts), the amount of any system purchases¹⁹ and the amount of any purchases of spot power or balancing service (called adjusted net interchange [ANI] in New England).²⁰ In other words, ISO-NE routinely balances the hourly loads of each retail seller with its various sources of supply. If its supply sources are short, the difference is balanced by buying ANI. Each retail seller's sources of supply are tracked to a particular power plant or, in the case of system purchases and ANI, tracked to a supplier for which the mix of operating plants is known.²¹ With respect to imports, ISO-NE will know on an hourly basis how much of a retail seller's load is being met by imports and at least what entity is supplying the power. Depending on how neighboring systems implement North American Electric Reliability Council (NERC) Policy 3, ISO-NE will know more precisely the source of imported power.

18. Some retail sellers 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 retail seller might have its own loads attributed to its account, together with the loads of one or more small retail sellers for which it is acting as an agent. The large retail seller would have its own internal settlement process that would take into account the resources and loads of itself as well as of the other members of the sub-pool. This internal process presumably would mirror the general ISO-NE process and, to the extent that the ISO-NE process performed tracking, the sub-pool presumably would mirror this as well.

19. 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.

20. 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).

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

For system contracts (i.e., contracts for power that do not designate any particular unit), ISO-NE will know the aggregate sources of generation used by the seller to meet the requirements of the system contract but will need to determine which of the seller's resources should be considered the resources to be sold. The simplest—and probably the best—solution would be to allow the seller to designate the sold units. If the seller does not designate, 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. Again, the options are for the seller to designate specific units or for the ISO to assume that the sales are from all the seller's units, *pro rata*.²²

After electricity is tracked from generation to the retail customer, we still need to attribute fuel and emissions characteristics to the generation. ISO-NE currently does not plan to receive fuel or emission information. As discussed above, average emission factors for SO₂, NO_x and CO₂ 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.²³ ISO-NE could collect this information directly from generators and combine it with the settlement report information to produce the needed fuel and emission data for each retail seller.

3. *The transactions approach for other jurisdictions*

Where there is not a tight power pool with sole responsibility for the settlements function, the mechanics of the transactions approach change, although the basic techniques remain the same. For example, the restructured California market has a loose pool. California electricity suppliers schedule their operation through the ISO through scheduling coordinators that are under contract with the ISO. Scheduling coordinators are individual firms, although several firms could join together if they wished. Each coordinator is responsible for submitting an hourly schedule showing its electric loads and the resources it will use to meet the loads. The schedule must be balanced—that is, scheduled resources must equal expected loads, including line losses. If there is a need for balancing services, as might occur with an outage at a generating station, the coordinator may supply this service, buy balancing service from the ISO (the California Power Exchange) or contract for balancing service with some other scheduling coordinator.

Like the New England ISO, the California ISO has the information needed for a transaction-based tracking system. The areas that may need further work also are similar. These are the units used for wholesale transactions between scheduling coordinators and the ability to track where several firms join together as a single scheduling coordinator.²⁴

22. Having the seller designate the source and inform ISO-NE of it probably is 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 that supply their wholesale system sales and ANI to assure that these sales do not adversely affect their product mix that is sold to retail customers.

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

24. A similar issue arises where there is sub-pooling in New England.

Where there is no regional entity such as a pool or an ISO, the local utility responsible for the control area typically will have similar information. In particular, it will know its own load and generation, the loads and generation of any other utilities within its area, and the imports from and exports to other regions. Of course, where the control areas are relatively small, imports and exports may play a larger role than for a region such as New England or California.

4. *How should storage units be treated?*

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.

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

5. *Should reported emissions always reflect the emissions from the smokestack or should offsets be allowed?*

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

It is not clear how consumers will feel about 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 also is 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 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 that are 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 CO₂ equivalent of the methane not released to the air. Another example is allowing CO₂ offsets to the extent that 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.

- *Suggested Recommendation: Offsets should be allowed only in cases where the offset activity takes place in close proximity to the source of emissions or where the offset value can be verified.*

6. *How should border issues and imports and exports be treated?*

Regardless of whether a region chooses to track and disclose using tradable tags or a contracts approach, there will be questions about how to treat power imports to and exports from the region. Regions have been more or less defined based on the electrical characteristics. For the most part, electricity is produced and marketed within a region, and imports and exports make up a small fraction of total electricity market. For example, even though imports from outside New England have grown over the last five years, they have only gone from roughly 5 percent of the mix to around 15 percent.

Power imports require special consideration because less information about the source of power may be available. 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 any region. NERC Policy 3, however, was implemented July 1, 1997, and imperfections in the system still are being worked out.

The treatment of imports and exports is an issue because of gaming possibilities and policy considerations.²⁵ The primary considerations are:

Gaming. If there was disclosure in one region and no disclosure in the neighboring region, generators with undesirable characteristics could wash their power by exporting their power and importing an equal amount of power with more desirable characteristics. No actual power flows would occur and because the neighboring system has no disclosure, its importing of dirty power does no harm.

Market flooding and consumer deception. If retail competition and disclosure occur in some regions (or states), but not in others, then the effect of allowing imports of clean power will be to depress the value of desirable resources and deprive the exporting region's customers of desirable resources, with no notice or recourse.²⁶ Suppose in area A there is both retail choice and disclosure, and customers have a strong preference for hydropower. In adjoining area B, there is no retail choice or disclosure. Firms in both areas would have an incentive to sell their hydroelectric power in area A, since they cannot market it to customers in area B. The effect, then, would be an oversupply in area A, which would depress the price. The hydroelectric resources of consumer in area B would be sold, and without retail access or disclosure, they have no notice or recourse.

Verification problems. The most fundamental rule of a tracking system is that each kWh can be sold only once. Otherwise, there would be double counting of some generation, and other generation would be lost by the system. Within a region this should not be a problem. But outside the region, unless there is a similar tracking mechanism in place, there is a concern about data quality.

25. These considerations are, for the most part, common to both the contracts and tradable tag approaches.

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

Most of these issues are resolved 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. In this case, there is no need to treat imports differently from generation within the region.

Where these conditions are not met, power imports could be treated two ways. First, imports could be disclosed by a line in the fuel mix description stating *Imports from outside the region* or *Imports from _____*. Second, the resource mix for the imports could reflect the average emissions of the exporting region. In either option, emissions for the imports could be the average emissions of the exporting region.

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. Exports could be at the pro rata, average mix of the exporting firm to regions that do not have similar disclosure requirements.

- *Suggested 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.*

7. *Should there be a default system power label?*

Several stakeholders have suggested allowing firms to report the residual regional mix (the average regional fuel and emission mix, excluding disclosed resources). This default label would be available to any suppliers, whether or not their actual supply mix is known. This option is sometimes referred to as a claims-based system in which those suppliers that are not making claims could use the default label for some or all of their products. The main reason presented in favor of a default label is that it could make the tracking process simpler and less expensive because many products would share the same label. The three reasons presented against a default label are 1) it is inaccurate and allows those with the least desirable resources to show a better label; 2) allowing a default label might retard the development of a more complete tracking system that could be used for other purposes, such as a generation performance standard (GPS) or a renewable portfolio standard (RPS); and 3) the cost savings, if any, are small.

Three questions should be addressed when deciding whether or not to have a default option: 1) Who can use the default?; 2) What is the default?; and 3) What are the consequences to the seller who uses a default option?

With respect to who can use a default label, it may make sense to limit a default label to those suppliers who for one reason or another do not know their supply sources. This differs from a claims-based approach in that a seller's label would reflect his or her own resources even if a claim were not made. Thus, if one had a very limited or temporary tracking system capable of tracking only generation either owned by the seller or generation for which the seller had a specific unit contract, it would be reasonable to have a default label available for the residual. This is essentially what the New England states have proposed as an interim step, pending completion of a more complete tracking system at the New England ISO. In

New England, once the complete tracking system is in place at the ISO, there is little or no need for a default option.

With respect to what the default label would show, the most common suggestion is the use of the residual regional mix. This mix would change over time as sellers with the most desirable resources marketed those resources directly, causing the residual mix to become less desirable. The second suggestion is to have the default be a very dirty or undesirable mix. This suggestion responds to the concern that too many sellers with especially dirty sources would hide behind the much cleaner regional average. Having the default mix be a dirty mix will encourage sellers to disclose their actual mix. This option would reduce the likelihood that consumers would select a supplier with a label that was better than its actual mix.

One also might place reasonable restrictions on what sellers can do if they elect to use the default label. One main restriction might be to deny the seller the ability to make and market distinct products from the default label. For example, if the default label were 50 percent coal and 50 percent nuclear, the supplier might be restricted from marketing one product that was *100 percent emission-free nuclear* and another that was *100 percent domestic coal*.

Although it is likely that a tracking system that uses a default option is less expensive, the difference in cost is not large enough to dictate the policy choice. The cost savings and increased stakeholder acceptance needs to be balanced against the inaccuracies that are inherent in using a default option.

- *Suggested Recommendation: Default options should be made available when doing so saves a significant amount of time and money. Default options should not be generally available to any supplier for any purpose.*

Other Policy Issues

1. *Should disclosure information describe the product or the company?*

The tracking mechanism (regardless of whether tags, contracts or some hybrid approach) determines what resources a retail supplier uses to meet total load, as well as the fuels used and the emissions characteristics. This raises the question of whether the firm must use this overall mix to label all 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 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 two primary arguments in favor of the company approach. First, some customers are most interested in the total operations of the firm that 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 the firm's products was consistent with the overall fuel and environmental characteristics of the firm's sources.

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 that sell 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 change its mix appreciably only 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 that have 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 monitor. A firm that was attempting to circumvent the limitation of selling multiple products could adopt a number of strategies:

- Set up a wholly-owned subsidiary to market a second product.²⁷
- Set up a partially-owned subsidiary.²⁸
- 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.
- Enter into wholesale unit contracts with a nonaffiliated 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 sell 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 because the burden of reconciling 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 reconcile 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 that are

27. 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?

28. 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 parent companies?

soliciting their business, firms also should periodically provide customers with the combined fuel and emission disclosure for all the products sold in the region.²⁹

We reached this conclusion for three reasons. First, the tag study that explored alternative tracking issues also included a test of whether labels should reflect product or supplier information. The research found that most people who saw a label believed the label referred to product level attributes. Most consumers also said that product level disclosure would be more useful to them. The issue also was explored in a number of the early focus groups to determine consumer understanding of the product/supplier distinction and which level of information was most desirable. 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.³⁰

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 presents logical and historical consistency problems. The industry has a long history of considering the fuel mix and emissions effects of wholesale unit contracts and has always recognized the fuel mix effects 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 is barred from selling a similar product to a retail customer in Boston.

- *Suggested Recommendation: The product approach to disclosure should be used.*

2. Should labels disclose historical or prospective 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 in the future.

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

29. 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 that parent. We recognize that this company-wide disclosure is subject to the same gaming problems as company disclosure generally. However, the incentive for gaming is reduced or eliminated due to the allowance for product disclosure.

30. 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 about a company's performance in a wide range of areas.

resource mix is only of academic interest. There also is the issue of what a new firm or product, with no history to rely upon, 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 that is 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 Federal Trade Commission requires historical data for claims verification, in large part because it allows objective evaluation.

We recommend disclosure generally be based on a 12-month, rolling average of historic performance, to be updated quarterly or semiannually. For products based on new sources of generation, a projected label could be used initially. This would be replaced with historical performance data as it became available. The label also would indicate that the information was based on a projection.

Regulations also could include a reconciliation provision that periodically compares a seller's mix of historical supply sources to the mix of products it sells to consumers. The seller is required to keep any difference between these mixes to 10 percent.

- *Suggested 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.*

3. Where should the label appear?

The label will be most useful to customers if they have it at the time they are making their purchase decision and when they are paying their bills. To meet this need, the label should be included in written advertising materials, direct mail marketing materials, Internet advertising and customer bills. In the case of telemarketing, customers should be informed that information about 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 other's labels, and they could give consumers the comparative information directly. In this case, sending the consumer the label quarterly is probably adequate. In addition, sellers 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 also is 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 customers quarterly with (or on) their bills, if bills are mailed. Otherwise, they should be sent in a separate mailing.

California legislation does not require that labels appear in general circulation newspapers or magazines. The proposed disclosure rules in Massachusetts originally required printing the label in newspapers and magazine ads for specific products. This requirement was removed from the final rule because the Massachusetts label is fairly large, and suppliers argued that placing the label in ads would be expensive and burdensome.

In response to the Massachusetts rule, a study was commissioned to examine the reasonableness of requiring labels in full or abbreviated form to appear in newspaper ads. Thirty ads appearing in newspapers and magazines in California were selected and reviewed. The ads were drawn from a cross-section of large, medium and small circulation publications. Each ad was examined and advertising rates were reviewed to see what additional cost, if any, would have been incurred if labels were required to be included in the ad.

The study assumed that labels would be reformatted given the context and the desire to keep costs down. The label also shows information for three separate products because the study found that most ads were offering consumers more than one product.

For advertisements smaller than one-eighth of a page, the following notice would appear:

Electricity facts: For important standardized information about this product's price, fuel source, and air pollution levels, please contact 888-888-8000.

For all ads larger than one-eighth of a page, the following notice would be used:

Sources of where your power comes from and prices:									
Source of Power	Coal	Large Hydro	Natural Gas	Nuclear	Biomass	Geothermal	Small Hydro	Solar	Wind
Option 1	10	0	40	0	10	40	0	0	0
Option 2	0	20	0	0	0	50	0	0	30
Option 3	0	30	20	0	0	50	0	0	0
Average Generation Price based on monthly usage*				250 kWh		500kwh		1000 kWh	
Price does not include charge for delivery service	Option 1			Option 2			Option 3		

The study concluded that the reformatted labels could appear in newspaper and similar ads at little or no significant cost.

4. *Should disclosure be uniform throughout a regional market?*

With the emergence of a competitive retail electric industry, many regions are expected to become cohesive, single electricity markets, making it logical to pursue regionwide initiatives such as consumer information disclosure. In New England, a particularly close-knit region, the public utility commissioners of the six New England states initiated an effort, together with the National Council, to see whether and how uniform consumer information disclosure for the retail sale of electricity might be developed for use throughout the region.

The utility commissioners from the six New England states have agreed upon a model rule for disclosing standardized information to retail electricity customers throughout the New England region. The rule culminates a year of joint activity on information disclosure by the New England Conference of Public Utilities Commissioners (NECPUC)—the regional organization of utility commissioners for Maine, Vermont, New Hampshire, Massachusetts, Rhode Island and Connecticut.

The following statement accompanied the model rule:

This document is a model rule on uniform information disclosure developed by NECPUC staff. The model rule builds upon a project initiated by the National Council on Competition and the Electric Industry, and supported by NECPUC, to develop uniform information disclosure for retail electricity sales throughout New England. The purpose of the model rule is to provide a common starting point for commissions in the region developing information disclosure policies. The model rule does not represent any formal action or conclusion by any individual state commission. While NECPUC acknowledges that each New England state will be developing its own specific information disclosure policy, NECPUC continues to believe that a uniform regional approach is in the public interest for two reasons. First, such an approach will assist consumers in comparing suppliers' offers, thereby enabling consumers to make informed decisions about electricity suppliers in the region. Second, such uniformity will reduce supplier expenses attributable to compliance with different state requirements which, in turn, will lower the cost of electricity in the region.

NECPUC Commissioners
March 3, 1998

The New England PUCs created the following process for the effort:

- NECPUC (PUC commissioners from each of the six New England states) endorsed the project. Each state announced its support and notified interested parties. A steering committee with one PUC commissioner from each state was set up.
- The National Council on Competition and the Electric Industry adopted development of a New England project, intended to assist the New England states in achieving a uniform regional tracking and disclosure mechanism.
- A series of meetings with stakeholders was held for the purpose of identifying issues, points of view and possible solutions. The discussions allowed consensus to be reached on some, but not all issues.

- In November 1997, a National Council report (authored by RAP) that made a number of specific policy and action recommendations was delivered to the six states. The report was 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 sponsored by the National Council, from disclosure related research activities of the National Council and from the experience and insights the authors gained through discussions with state and federal agencies that have authority and experience with consumer information disclosure issues.
- A PUC staff committee comprised of representatives from each state considered RAP's recommendations and stakeholder comments and recommended uniform proposed rules to NECPUC (all commissioners in all states).
- The NECPUC adopted proposed rules that would be the subject of individual rulemaking proceedings in each state.

Commissions in the 11 western states have initiated a similar project, and commissions in some mid-Atlantic and midwestern states are considering similar actions.

- *Suggested Recommendations: Because electricity markets are most likely to be regional in nature, a regional disclosure protocol will be most efficient for sellers who are likely to market throughout a region. Adjoining states are advised to coordinate their disclosure activities.*

5. What is the relationship of the Federal Trade Commission to disclosure?

The FTC has broad consumer protection responsibilities that extend to many electric industry restructuring issues. With respect to consumer information disclosure, the FTC has the authority to prohibit *unfair or deceptive acts or practices*. This extends to all advertising or labeling that is false or misleading. It covers advertising a product's price and any environmental claims, expressed or implied.

Environmental claims are governed by the FTC's *Guides for the Use of Environmental Marketing Claims*. These guidelines provide that advertisers must be able to substantiate all objective environmental marketing claims. Substantiation consists of competent and reliable evidence, and the substantiation must be in the advertiser's possession at the time the claim is made. The substantiation need not be disclosed to consumers; it merely must be in the advertiser's possession.

The FTC generally does not require uniform disclosure or labeling in other markets unless directed to do so by Congress. Examples where the FTC has required uniform disclosure of one sort or another include the fuel rating rule, which requires uniform labels stating the level of octane to be posted on gasoline pumps; and the appliance labeling rule, which requires EnergyGuide labels to be placed on certain major home appliances to indicate energy usage information of the model being sold, compared to competing models. The FTC is principally a law enforcement agency, and therefore its normal approach to advertising is to monitor the market and initiate enforcement actions when it determines that companies have violated either the Federal Trade Commission Act or any of the other statutes or rules that the commission enforces.

State adoption of disclosure and labeling requirements interacts with FTC jurisdiction in several ways. First, state labeling requirements do not directly affect FTC jurisdiction or its ability to take action against advertisers that violate federal law. Nevertheless, the Commission would take state legal requirements into account when exercising its prosecutorial discretion to pursue any individual case.

Second, substantiation of environmental claims that relate to fuel mix or emissions necessarily relies on a tracking system of one sort or another. Different tracking systems are available, but conflicting results could easily occur if one supplier substantiated claims based on one approach to tracking, and a second seller substantiated claims using a different tracking approach. In such a circumstance, a single uniform tracking system might be required to avoid inconsistent outcomes. State adoption of disclosure and labeling requirements that include a statewide or regional tracking system could help the FTC evaluate environmental claims.

6. Is the information needed for disclosure confidential?

Some participants in the retail competitive electricity market have argued that information concerning fuel source and emissions should be treated as confidential trade secrets and not made public. A National Council research report examined the issue and found:

- The amount of deference appropriately extended to trade secrets depends largely on the purpose served by release of the information at issue. When the public interest in disclosure is large enough, legislatures and agencies have provided for (and courts have approved) the release of information—even if such a release caused the distinct appearance of a loss of competitive advantage.
- The public interest in developing a retail market, with meaningful choices for all consumers, together with the demonstrated interest on the part of a number of consumers to choose their electricity services based on energy source and environmental impact, suggests that the public interest for disclosure is likely to outweigh the interest in maintaining confidentiality.
- Labeling requirements and truth-in-advertising laws are complementary. Labeling provides immediate, standardized information on all like products. This supports informed comparison shopping. Truth-in-advertising laws deter industry from making false and misleading claims in their advertisements and even in required disclosure labels.

7. What other consumer protection information should be included 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 to help an ordinary customer understand the price design.

Conditions under which prices are subject to change. 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.

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 and 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?

The *Terms of Service* should clearly and prominently give information about the following 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 for the commission (or other appropriate agency).

Standard offers or default service. Customers need to know about standard offers and 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 who are threatened with disconnection? These should appear on the disconnection notice, since this is the time and place where it will be most useful to the customer.

Additional fuel mix and emission information. The *Terms of Service* should give consumers more information about fuel mix and emissions. With respect to fuel mix, an explanation might read as follows:

The electricity you consume comes from a regional 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 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.

With respect to emission information, the *Terms of Service* might include the following, which was suggested by the U.S. EPA in the course of the New England project.³¹

Emissions—Description of Pollutants—You have been provided with information about the three major air pollutants. The production of electricity releases other air pollutants and has other non-air related environmental impacts.

Sulfur Dioxide (SO₂) is formed by combustion of fuels containing sulfur, primarily coal and oil. Major health effects associated with SO₂ include asthma, respiratory illness and aggravation of existing cardiovascular disease. SO₂ 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 who have 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 (CO₂) is released when fossil fuels (including oil, coal and natural gas) and nonsustainable biomass are burned. CO₂, a greenhouse gas, is a major contributor to global warming.

31. The hydroelectric impacts section was drawn from proposed disclosure in Oregon.

Hydropower Project Impacts. Some hydropower dams contribute to the decline of fish and other wildlife populations.

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).

Appendix A. Model Legislation

Title AA: UNIFORM INFORMATION DISCLOSURE MODEL STATUTE

I. Purpose. The purpose of this statute is:

A. To inform and protect retail electricity customers by providing basic information about the retail purchase of electricity in a uniform format that permits and facilitates comparison shopping for electricity services, and

B. To improve the efficient operation of electricity markets by encouraging retail customers to make knowledgeable choices among retail electricity sellers.

II. Definitions. For the purposes of this statute, the following words shall have the meaning set forth in this section.

A. **Retail Seller:** Any entity that sells electricity to a retail customer in an amount that is not greater than XX KW or XX kWhrs annually (Residential and small commercial customers).

B. **Retail Customer:** Any purchaser of electricity for use in this state in an amount not greater than XXXXX.

C. **Label:** A prescribed statement of facts for each product offered for sale by a retail electricity seller in this state.

D. **Terms of Service:** A written document provided to retail customers and prospective retail customers that contains all contract terms and required statements of customer protections and rights.

E. **Commission:** The Public Utility Commission (state utility regulatory agency).

III. Labeling

A. Each electricity product sold by each retail seller shall bear a uniform label containing the following information in a succinct and easily understood format:

1. The average price offered for at least three typical usages for customers of similar size.
2. Length of contract period.
3. Whether the rate offered is fixed or variable.
4. The fuel mix for that product.

5. The emissions of NO_x, SO_x and CO₂ related to the fuel mix for that product (measured against a regional average?).

B. The label shall appear on all marketing materials sent to retail customers or prospective retail customers, in the Terms of Service document required by Section IV, in all written advertising materials, including newspapers, magazines and other written media and on the Internet. Any telephonic or other electronic solicitation shall inform customers they may obtain a copy of the disclosure label upon request.

IV. Terms of Service

A. All prospective retail customers shall be given a copy of the Terms of Service prior to the commencement of service. Retail customers shall have three business days following the receipt of the Terms of Service in which to cancel their agreement to purchase electricity.

B. The Terms of Service shall include:

1. The label required in Section V;
2. The actual price structure;
3. Contract details including length;
3. Contract cancellation procedures;
4. Required deposits;
5. Fees and penalties;
6. Disconnection terms;
7. Detailed statement of customer rights;
8. Toll-free number for service complaints;
9. Other terms or statements as specified by the public utilities commission.

C. The Terms of Service shall be written in easily understood, plain words and paragraphs and shall be provided in the same language as the original retail customer solicitation materials.

V. Commission Authority

The commission shall:

A. Enforce the provisions of this Title, notwithstanding any other authority held by any other state or federal agency;

B. Prescribe rules and regulations to implement this Title, including the specification of the system to be used to track and verify the information given on the label and in the Terms of Service.

VI. Fines, Penalties and Suspension of License

Compliance with this Title is a condition of licensure for the sale of retail electricity in this state. Failure to comply may result in fines of up to \$1,000 per day of violation and/or forfeiture or suspension of license.

Appendix B. Summary of Proceedings

A national conference on information disclosure was held on May 13-14, 1998 in Chicago, Illinois, to present and discuss the research findings and ongoing activities of the National Council's Consumer Information Disclosure Project. More than 100 participants—including state public utility regulators and staff members, state energy officers, consumer advocates, state legislators and legislative staff, regulated electric utilities, competitive electric service suppliers and environmental groups—attended the conference. (Agenda attached)

Plenary Sessions

The conference opened with a keynote address from Richard Cowart, chairman of the Vermont Public Service Board and chairman of the National Council. Chairman Cowart described the critical importance of the information disclosure project to the development and exercise of consumer choice in a competitive retail electricity market. The conference then heard from panels organized around four key disclosure research topic areas. Each panel was composed of stakeholders with differing interests who commented upon the research findings. Question and answer sessions followed each panel discussion.

The four plenary panel topics were:

- Should Information Disclosure Be Voluntary or Mandatory?
- Disclosure of Price and Contract Terms
- Disclosure of Fuel Mix and Emissions
- How Can Information Be Tracked?

The Honorable Betsy Moler, deputy secretary of the U.S. Department of Energy, addressed the conference at luncheon on the first day and described the Clinton administration's Electric Industry Competition Plan. Information disclosure and product labeling are key consumer protection provisions within the competition plan.

At the close of the first day of the conference, several questions were posed by the plenary session audience for discussion at the breakout sessions the following morning. The questions included:

- What is the goal of disclosure?
- What are the respective state, regional and federal roles in disclosure?
- What degree of accuracy is required for verification/tracking?
- How can policymakers ensure that disclosure serves and does not impede the market?
- What consumer education is needed?
- What are the implications for renewable energy?
- What are the respective roles of legislators and PUC regulators in shaping disclosure?

Breakout Group Results

On the second morning, the conference broke into four facilitated discussion groups. At the outset, each breakout group considered four questions posed by the conference:

- Should there be information disclosure to retail electricity customers?
- What should be disclosed?
- In what format?
- What tracking and verification method?

Following two hours of discussion within each group, the conference reconvened in plenary session to receive reports from each of the breakout groups. Although the discussions within each of the breakout groups varied, several common themes emerged. Each group agreed that a significant need existed for consumer information concerning the retail sale of electricity and that disclosure, at a minimum, is one key part of a broader consumer education responsibility. The importance of state actions and the need to work collaboratively within regions also was commonly identified in each discussion.

The breakout groups considered the positive role information disclosure can play in developing and improving the operation of retail electricity markets and the importance of not creating disclosure requirements that would unduly burden the market. One of the breakout groups placed particular importance on disclosure and labeling in aiding the development of greener/cleaner sources of electricity. Customers have shown a strong interest in purchasing from cleaner sources but need assistance in actually identifying what power sources are being offered. The importance of the link between fuel and emission information and the development of cleaner resources was also noted by the other groups. Each of the groups identified the uniform disclosure of price as essential to a competitive retail market for smaller-use customers. Residential customer and low-income advocates were particularly concerned that smaller-use customers may see few benefits from competitive retail electricity markets and thought that price information disclosure would help customers to better understand their purchase options.

Commissioner Karl McDermott of Illinois Commerce Commission summed up the reports of the breakout group discussions by presenting the closing session with the following outline.

Principles for Information Disclosure

- A. Disclosure should:
 - Facilitate market development
 - Not distort the market
 - Reflect what consumers want
 - Not wait for competition
 - Educate customers; tell what they want to know but do not otherwise know
 - Reduce fraud
 - Be factual, objective, verifiable
 - Mandatory, minimal and meaningful
- B. What should be disclosed?
 - Price, for which effective unbundling is crucial
 - Terms of Service
 - Fuel mix and emissions (NO_x, SO_x, CO₂ and nuclear waste)
 - Standardize on regional basis, eventually on a national basis

C. Where and when should information disclosure occur?

Advertising

Newspaper

Broadcast

Mail

Internet

800 numbers

Point of sale

In the Terms of Service document provided to each customer

Bills

PUCs

D. Tracking necessary data to verify disclosure:

Should be simple, cheap and as reliable as for similar commercial purposes

No consensus as to what method should be used

Details of tracking and tags not well understood by participants

E. Next Steps

States should consider the adoption of information disclosure

States within market regions should consider uniform protocols

The National Council should hold regional meetings and workshops

A report of the meeting should be prepared

Following the conclusion of the conference and in line with the recommendations of the conference, an initial meeting was held among the stakeholders from several western states to discuss the potential for a region-wide approach to labeling and information disclosure.