



IssuesLetter

Information Disclosure for Effective Customer Choice

Customer choice is happening quickly. Competitive markets and customer choice are expected to outdo traditional regulatory oversight in lowering costs, allocating risks and choosing new and clean resources. For this to happen, electricity customers like customers in any competitive market must be well informed. Initial evaluations of pilot retail competition projects demonstrate reasonable price, risk and environmental disclosure is critical.

Experiences in a range of markets from cars and appliances to loans and food show that markets work far better when customers have useful information to facilitate comparison shopping.

This Issuesletter explores ways for regulators to require that consumers be provided with important price, risk and environmental information. It focuses primarily on environmental information for three reasons. Customer choice pilot programs reveal a compelling consumer need for reliable information. The environmental benefits of customer choice, difficult enough to achieve with good consumer information, will be impossible to achieve without it. Finally, the environmental benefits delivered by the existing system are being rapidly eroded during the transition to customer choice.

What is Customer Choice?

Customer choice frees customers to choose their own electric company. The choice of companies (and the services they sell) will be broader than ever before. Many mixtures of energy products (electric, gas and electric combinations), energy management services, pricing and billing options, risk profiles and environmental characteristics will be sold by all sorts of companies, big and small. Long-time players in the electric industry will be joined by other energy sellers some new to this market and others entirely new to the business world. The only monopoly in a world of optimum customer choice will be the companies owning the electric wires, whose job it will be to transport the electricity from the seller selected by the customer.

Why Standardized Information?

The usefulness of information depends on customer knowledge. Telling consumers an appliance uses 100 kilowatt hours per year is only useful if the consumer already knows what a kilowatt hour is, and how much it costs. On the other hand, telling consumers that an appliance uses \$50 per year @ 7 per kWh and that similar appliances use between \$40 to \$60 per year provides consumers useful information for comparison shopping.

Likewise, comparisons of food prices were impossible until grocers started displaying each products unit price as x cents per ounce.

The need for standardized customer information will be especially important for electricity markets. Shopping for electricity will be a new experience for residential and commercial customers. This inexperience, together with the fact the product is totally intangible, means the prospect for misleading claims and customer confusion is very high.

Price, Risks and Environmental Characteristics Essential Information

The three key pieces of information needed to select an energy service provider are the price, risk and environmental characteristics of the product.

True Costs Price Plus Risk. For customers to compare one price offer against another, they need basic price information in a common format that reflects the true cost of energy choices. Monthly bills give a basic cost comparison. Requiring monthly consumption and average kWh price for each billing cycle will give an even more complete picture. But price information alone is not enough. In the absence of knowing the risk of price changes, customers will misunderstand price terms. Is a particular price offer fixed for some period of time? Will it change in relation to spot energy prices? Inflation? Fuel prices? How much can it change? Are there any charges for leaving a supplier before the end of a contract?

The home mortgage market offers a useful analogy for thinking about price and risk. The price of electricity is comparable to the interest rate. Fixed and adjustable interest rate options are comparable to different levels of price risk. Because the interest rate and risk factors can be misunderstood, the Federal Reserve Board, Regulation Z (Federal Truth-in-Lending Law) requires the Annual Percentage Rate (APR) to disclose total financing costs, including the risk of change under adjustable rate loans. This makes the APR a figure customers can rely on when comparing different mortgage options. States may impose their own disclosures if they meet or exceed the standards of Regulation Z. (Some states go further and limit the amount and frequency of change. Some also help consumers with comparison shopping by publishing summary data in local papers.)

Environment. As fundamental to the public interest as price and risk (and even more subject to confusion and misleading claims) are the environmental impacts of electricity purchases. These impacts are very large.

Roughly one third of all air pollutants comes from power plants. The impacts, however, vary considerably from one source to another.

Electric Utility Industry	
<i>Air Emission as Percent of US Total</i>	
SO ₂	72
NO _x	33
CO ₂	36
Fine Particulates	32
Mercury	23
<i>1993 U.S. EPA data</i>	

A data Market research done by utilities across the country, including Central and South West Corporation (serving customers in Texas, Louisiana and Arkansas), Sacramento Municipal Utility District, Northern States Power (Minnesota), Massachusetts Electric Company and Nevada Power Company showed that many customers were concerned about the environmental impact of electricity production. A significant number of customers responded that they would pay more for low- and non-polluting power. How are consumers to know whether they are a part of the solution or a part of the problem when they buy electricity?

New Hampshire's pilot retail choice program demonstrates that accurate disclosure of the environmental quality of electricity is a serious concern. Three percent of New Hampshire's customers are currently participating in a pilot program that permits them to choose their own retail seller of electricity. About 30 supplying entities have registered with the PUC. Ten to 15 are marketing to residential customers. Of these, six use the environment as a marketing tool. Marketing materials from these six claim the services are good for the environment, promise environmentally-sound forms of electricity and assert that no other utility is doing more to protect the environment. One seller gives away eco credits when you take steps to help the environment. Another offers a National Audubon Society bird feeder.

The good news here is that about half the sellers targeting residential customers are positioning themselves as environmentally responsible at least in New Hampshire. The bad news is that most of the claims are fuzzy generalizations that gloss over the environmental realities of electricity production and tell customers little about the environmental impacts of their purchase decisions.

The public health impacts, however, are so large that accurate disclosure is as justified for electricity as it is for nutrition, pharmaceutical or alcohol warnings. For informed customer choice to result in the development of clean resources, consumers need accurate environmental facts. Misleading claims can only lead to poor environmental choices which will permanently discredit customer choice as a means of achieving better environmental outcomes.

What Would an Environmental Disclosure Look Like?

Environmental disclosure should, at a minimum, list the ingredients of a seller's resource mix and indicate the percentage of power coming from each source.

One form of disclosure might look like this:

An alternative (or supplement) to the first label would use another feature of nutritional labeling as a model. In this case, the supplier would indicate the quantity of selected pollutants emitted per kWh generated (or

Fuel Facts	
Your electricity is generated from	
Nuclear	XX%
Coal	XX%
Oil	XX%
Natural gas	XX%
Renewables	XX%

saved) and compare it as a percentage to a reference level, for example regional, state or national average emissions per kWh, or to an ideal emissions level from a best system or cleanest plant (see box). It is this comparison that will make the information useful to individuals seeking to improve the environment through their power choices. An important question to be addressed is how emission allowances and offsets, including energy efficiency would be reflected in product labeling. Legislatures considering restructuring may want to require similar disclosures for sales of competing fuels.

Air Emission Facts		
Each of your kWh produces		
		% above or below reference
Sulfur Dioxides	YYmg	-ZZ%
Oxides of Nitrogen	YYmg	+ZZ%
Mercury	YYmg	+ZZ%
Fine Particulates	YYmg	-ZZ%
Carbon Dioxide	YYmg	-ZZ%

Electrons Cannot Be Traced

Some may wonder how environmental disclosure can really be made to work given that electrons can neither be directed to a particular customer nor traced from a specific power source to a customer. Fortunately, the goal of environmental disclosure is not to trace electrons. The goal is to inform customers about the resources their dollars are supporting. If more customers choose to buy from clean resources, the value and amount of these resources will increase. This goal can be fully achieved by tracing the dollars, rather than electrons, from customer to supplier.

The electricity delivery system can be visualized as a lake to which suppliers add water (electrons) at many different points, and consumers take water (electrons) out at many other points. In a competitive market, customers will take power from the grid and pay specific suppliers who either have delivered the power or have had others deliver it. What is known with certainty is which suppliers are paid and what power plants they use to add to the lake of electrons.

When and How Often Will Environmental Disclosure Occur?

Disclosure should be required for every sale, whether retail or wholesale. For residential and small commercial customers, disclosure should occur prior to signing a contract and at least every 12 months thereafter.

The required disclosure could either be of the sellers mix for the previous three, six or twelve months. Or it could reflect the sources expected to be held in the next three, six or twelve months, with some allowance given for deviations from the disclosed mix.

Verification of Disclosures

The disclosure to customers should be understandable and verifiable. Because electrons cannot be traced, disclosures will necessarily report averaged information. The easiest way to make such information public is to have rules requiring sellers to report basic

plant information (ownership or contractual rights, type of boiler, capacity rating) and fuel source data to the system dispatcher (ISO) or power exchange. The ISO or power exchange would report plant electricity production. A public electronic posting would permit customers, PUCs and competitors to verify claims. False reporting to the pool or ISO would carry penalties. False reporting to the customer could be handled by PUCs and could also be subject to ordinary fair trade practices enforcement.

Disclosure Works Well with System Benefits Charge and Portfolio Requirements

Informed customer choice is important but by itself will probably not produce results consistent with the long-run public interest. Many customers will choose the cheapest power even if it is more polluting. Because all environmental costs are not included in price, society will get more pollution than the market would produce if all customers paid the full cost of environmental damage.

There is precedent for linking disclosure with minimum public interest requirements in other industries. Car mileage ratings work together with fleet mileage standards. Appliance and food labels supplement energy efficiency and FDA standards.

Two types of public policy support for renewables and energy efficiency are on the table in many states. A system benefits charge incorporates the costs of these resources into the cost of distribution services. A portfolio standard requires minimum levels of investment in these resources. Either approach can work in conjunction with well-informed customer choice.

For example, suppose a system benefits charge is adopted and set at a level intended to fund 1000 MW of new renewables. If disclosure and customer choice yielded 1500 MW of renewable capacity, the system benefits charge could be reduced accordingly and/or the goal increased.

Similarly, meeting the requirements of a renewable portfolio standard (RPS) may be aided by informed customer choice. For example, a RPS might be set to assure 1000 MW of new renewables. Under a portfolio standard, sellers could either buy the required amount of power from renewable suppliers or buy credits from sellers who had more renewable energy than needed to satisfy their obligation. If environmental labels increased the amount of renewable energy purchased and 1500 MW of renewables were added, the goal could be increased or the oversupply of credits could be used to reduce costs.

Conclusion

Informed customers are an essential ingredient of efficient competitive markets. State regulators should require that standard and useful disclosure of price, risk and environmental information accompany the implementation of customer choice programs. Of these, environmental disclosure is especially important. Without it, there is no reliable way customers will get information on the environmental impacts of energy choices.

The expectation that the generation market will soon be fully competitive, down to the retail level, has restricted the ability of regulators to influence generation investment decisions. Market choices will replace regulation in determining what gets built. This will occur even in those states that have not yet decided to permit retail choice because utility managers will plan as if retail choice were coming. With the power to influence investment decisions now held by the customer, it is the role of the regulator to see that customers have the information they need to make well-informed decisions.

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