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Supporting Renewable Generation Through Green Power Certification: The Green-e Program

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TABLE OF CONTENTS

Abstract 1

Introduction 1

Green Power: A New Market Opportunity? 2

Why Certify? 3

The Green-e Program 5

Early Results 12

Next Steps 15

Conclusions 15

Acknowledgments 16

Endnotes 16

ABSTRACT

With the advent of retail competition in the supply of electricity to end-use customers, individuals and businesses will be given the opportunity to purchase electricity from “green power” sources. Based on market research and early experience with green power marketing, some customers are clearly willing to pay a premium for environmentally-preferable sources of electricity supply. Yet there have also been concerns that customer confusion, vague marketing claims, and “apples and oranges” comparisons will limit the potential market penetration of green power products.

Environmental certification programs are increasingly seen as important tools for achieving environmental objectives, and are intended to alleviate some of the concerns listed above and to increase product and marketer credibility. The Green-e Renewable Electricity Branding Program is the first U.S.-based effort to certify green power products that meet certain environmental standards. The voluntary Green-e program also helps create consumer confidence in these certified products through a marketer code of conduct, disclosure provisions, and a public education campaign. This article details the development, design, and results of the Green-e program to date.

INTRODUCTION

The production and use of electricity is, arguably, the single most environmentally damaging human activity. Electricity generation plants alone are major contributors to health and environmental problems such as urban and rural ozone, acid rain, fine particulate pollution, nitrogen deposition, climate change, and toxic air pollutants. In the U.S., electricity generation from coal, natural gas, and oil is responsible for 66% of all sulfur dioxide, 29% of all nitrogen oxides, 36% of all carbon dioxide, and 21% of all mercury emitted annually. Hydropower plants can damage river ecosystems, flood forested areas, and impact indigenous peoples. Nuclear power plants produce much of this nation’s nuclear waste.

Though no energy source is completely benign, by offsetting conventional power supplies, renewable energy offers society a host of environmental benefits. Yet, in the U.S. at least, renewable resources, including solar, wind, geothermal, biomass, and hydropower, contribute just 12% of total electricity supply, with most of that coming from large hydroelectric facilities. Non-hydro renewables contribute only about 2% of the nation’s electricity.

While impressive cost reductions have been made over the last twenty years, non-hydro renewables are still generally more expensive than traditional sources of generation. As a result, these technologies have historically been supported through a web of public policies at the state and federal levels, including tax incentives, set asides, above-market contracts, and grants. The continuation of these and other policies will, no doubt, be critical for the survival of the renewable industries at least in the near-term.

Today, however, a new market opportunity is available to support these clean energy sources. The restructuring of the power sector is creating dramatic changes in the organization and operation of the electricity industry in the United States. Retail competition, or the ability of consumers to choose their electricity supplier, is being introduced on a state-by-state basis, beginning in places such as

California, Massachusetts, and Pennsylvania. In these and other states, as vertically integrated and regulated utilities lose their dominance, new competitive suppliers of electric service are emerging.

The onset of competition offers both great opportunities and great challenges for consumers. For the first time, individual consumers can direct their dollars toward electricity supply companies offering green power products, that is, products that include renewable electricity. Though there are numerous examples of green consumer products, from recycled paper to organic foods, there are few products whose purchase could have as significant an environmental benefit as green power.

Based upon market research and early experience with both utility green power programs and retail competition, it is clear that some consumers are willing to pay a premium for green electricity products. Yet, as with other green product markets, consumer confusion and skepticism, vague marketing claims, “apples and oranges” comparisons, and in some cases simple lack of motivation in the face of complex decisions may limit the potential for this green power market to develop.

With the introduction of retail electric competition in the U.S., both these opportunities and challenges were brought into sharp focus. Therefore, in anticipation of the April 1, 1998 start-date for full retail competition in California, and in the hope of overcoming some of the barriers to the green power market, the non-profit Center for Resource Solutions launched the nation’s first green power certification program, called the Green-e Renewable Electricity Branding Program. After providing an overview of early experience with green power marketing, this article details the development, design, and results of this innovative certification program.

GREEN POWER: A NEW MARKET OPPORTUNITY?

Electric utilities have historically been charged by industry regulators with providing a commodity product to their franchised ratepayers at low cost and high reliability. Under past extensive economic regulation, product and service differentiation has, understandably, been limited. As retail competition is introduced, however, electric suppliers are increasingly following the lead of other competitive markets by differentiating their products and targeting unique services to niche markets. But can a product like electricity be differentiated?

Though a number of energy service providers continue to follow the dictum of low cost, some companies are betting their future on the development of new markets for premium-priced, environmentally-preferable, renewable energy products. After all, consumer surveys consistently report that the majority of residential consumers are willing to pay a slight premium for renewable energy.¹ It even appears that some business customers are also interested in greening their electricity purchases.² But what has actual experience with green power marketing looked like?

- ◆ In a regulated context, approximately 40 U.S. utilities now offer green power programs to their customers by allowing them to support renewable energy through price premiums or donations on their monthly electricity bills. Growth in the number of these green power programs has been rapid as only 3 programs were in operation in 1993. Though results are mixed, participation rates of 1-3% of residential customers are typical within the first two years of program operation, with each participant generally paying \$2.50 to \$10 per month extra. As of May 1998, approximately 45,000 residential customers around the country were

participating in these programs, and more and more business customers are expressing interest every day.³

- ◆ Recent experience in Massachusetts and New Hampshire, where limited retail competition pilots were established, confirms that power marketers will offer “green” power products in a competitive context as well. Though the results of small pilot programs are difficult to decipher, 20-30% of the consumers that switched providers selected green power products. Yet, only a small number of consumers switched providers, the price premiums paid on the green products were relatively low, and as will be discussed below, the “greenness” of the green products has been questioned.⁴
- ◆ Experience in California offers the first real test of green power marketing in fully competitive conditions. California opened its doors almost completely to retail competition in April 1998 and today nearly all of the companies marketing to residential customers offer green power products. Customer switching thus far has been relatively low, however. As of August 1998, perhaps 25,000 residential customers had selected one of the 14 green power products offered by the 6 green power retailers in California. Product premiums range from just \$4 to \$20 per month relative to non-green electricity offerings. Larger customers have also announced green power purchases or commitments, from Toyota Motor Sales USA and Patagonia to the City of Santa Monica and St. Aidain’s Episcopal church.⁵
- ◆ The advent of green power marketing is not simply a domestic activity. Green power marketing programs are, in fact, sprouting up in countries such as Canada, Australia, the U.K., Germany, Sweden, Switzerland, and the Netherlands. Participation and results of these programs appear consistent with those in the U.S.

Experience with green power marketing to date has been mixed and there has been considerable debate on the merits and drawbacks of green marketing as a tool for commercializing renewable energy technologies.⁶ Yet, based on the early evidence provided above, it is clear that at least a niche market of consumers are willing to pay a premium for green power products, and that growth in the green power market is occurring at a rapid pace. Moreover, with only 2% of total electricity supply currently coming from non-hydro renewable resources, even a niche market of 1-3% of residential customers could constitute an important market opportunity for the renewable industries.

WHY CERTIFY?

Though the evidence presented above suggests that green power marketing may be able to make a meaningful difference for the environment and for renewable energy, to do so at least two key challenges will have to be overcome. First, the green power products themselves will have to be of high environmental quality so that product purchases clearly make a direct positive impact on the supply of renewable energy. Second, it is critical that consumers are educated about their product choices, and are ensured that they will get what they pay for when selecting a green power product.

Credibility of the product and the company are key.⁷ Research indicates that consumers often do not link their electricity use with environmental harm, generally have inaccurate ideas about the resources currently used to generate their electricity, and wonder if they will get what they pay for if they buy

green power.⁸ Many consumers exposed to competitive electricity markets find it overwhelming and easier to do nothing, are concerned about the reliability of their new provider, and expect exaggerated or misleading advertising claims by green power marketers.⁹

As a result, early competitive markets are very likely to be marked by consumer confusion, skepticism, and inertia. Experience in the New Hampshire and Massachusetts retail competition pilot programs confirms these fears, and demonstrates that some suppliers have an incentive to use misleading environmental claims and inferior green products to attract customers. In both of these pilot programs, green claims varied widely and the environmental benefits of some of the green products were questioned. Indeed, based on this experience, trends in the competitive green power market seemed to be tracking those in other green markets where, amid the rush of businesses to engage in environmental marketing, there has been increasing skepticism over the truthfulness of green claims.¹⁰ Seven out of ten Americans now dismiss the environmental claims of most manufacturers.¹¹

It is in response to these challenges that the Center for Resource Solutions created the voluntary Green-e certification program. The effectiveness of various forms of product labeling has been debated¹² and certification programs are not uniformly hailed,¹³ but certification programs are generally viewed as one of several *non-regulatory* tools that can be used to achieve environmental objectives.¹⁴

The function of a certification mark is to provide impartial third-party endorsement to aid buyers in overcoming some of the problems of product selection, to prevent false and misleading advertising, and to spur suppliers to compete in offering environmentally-preferable products.¹⁵ Ideally, all consumers would have access to the information necessary to make product purchase decisions. In the real world, however, information is rarely free or evenly distributed among market participants, and private firms do not always have the correct incentives to provide accurate, reliable, and comparable information on product offers.¹⁶ By making information more available, visible, and understandable, environmental certification programs seek to overcome problems associated with access to information and reduce the prevalence of false and/or misleading advertising. In short, certification helps assure consumers that they are getting what they pay for.

Product certification has been used in marketing since the Underwriters Laboratories began operation in 1894, but the introduction of environmental certification is a relatively recent event. Certification programs have rapidly become widespread in consumer markets for environmental goods, however, from sustainably-harvested forest products and organic foods to dolphin-safe tuna and energy-efficient computers. Today, there are at least 25 certification programs operating worldwide.

Though the Green-e is the only green power certification program up and running in the U.S, several other similar efforts are underway, from the individual green product endorsements of non-profit environmental groups and a green power rating program that is in the latter stages of development, to mandatory fuel source and air emissions labeling requirements of energy service providers. Nor is certification entirely a U.S. activity, with green power certification programs operating in Australia, Canada, Sweden, and the Netherlands.

THE GREEN-E PROGRAM

Program Mission and Design

Creating environmentally-preferable electricity products provides consumers with choices that can make a positive difference in the environment, encourages the development and deployment of clean renewable energy technologies, and opens exciting new market opportunities for entrepreneurs in the energy sector. The Green-e program, developed by a broad-based stakeholder group working with the non-profit Center for Resource Solutions, is a voluntary program designed to educate the public about the benefits of renewable energy and to provide a means by which electricity customers can easily identify renewable-based electricity products that meet the program's technical standards. The Green-e brand, like the recycling logo and other certification marks, offers customers a generic way of quickly identifying electricity products certified by the Green-e. Elements of the program include:

- the trademarked Green-e brand,
- a resource disclosure label,
- a summary price, terms and conditions of service disclosure statement,
- an information verification process,
- a professional code of conduct for participating companies, and
- an education campaign to inform consumers about the benefits of choosing an electricity product bearing the Green-e brand.

The Green-e was designed initially for the direct access market in California and was launched in October 1997, but with moderate changes the program is also being extended to other states.

Given the opportunities that green marketing presents, but also the very real challenges, there are four key goals of the Green-e certification program, as embodied in its mission statement:

1. Bolster customer confidence in retail electricity products containing renewable energy.
2. Expand the retail market for electricity products incorporating renewable energy.
3. Provide customers clear information about retail green electricity products to enable them to make informed purchasing decisions.
4. Encourage the development of electricity products that minimize air pollution and reduce greenhouse gas emissions.

The Green-e provides benefits to green power marketers, electricity customers, and renewable energy developers. Marketers are able to use the brand (displayed in Figure 1) in their promotional material to bolster customer confidence in their eligible green electricity products. Because the brand was designed to be easily recognized and to denote an electricity product of superior environmental value offered by a company committed to responsible customer practices, it will help customers select among competing electricity offers. In addition, the Green-e brand may be used by end-use customers who obtain their electricity from a certified green power product as a marketing tool to publicize their support for renewable energy and the environment. Finally, by

Figure 1. The Green-e Brand



fostering the development of the green power market, the program helps support existing and new renewable projects and developers.

Certification Requirements

The centerpiece of the Green-e program is the trademarked Green-e brand. To use the Green-e brand, electricity products must meet or exceed certain threshold criteria. Marketers that meet these criteria for one or more products can use the brand if they also agree to abide by the Green-e program’s rules and standards of professional conduct.

Product Requirements: Without credible standards, any certification program is bound to fail. Electricity products bearing the Green-e brand in California must therefore meet or exceed the product-based requirements listed in Table 1 (in other states, these standards may be altered slightly to meet regional concerns). These requirements, which include renewable energy supply, new renewables supply, emissions, and no-nuclear standards, ensure that products certified by the Green-e will be “cleaner” (i.e. lower air emissions) and “greener” (i.e. more renewable energy) than most other electricity products.

Two overriding goals influenced the design of these product eligibility requirements. First, the requirements had to be strict enough so that the brand would signify products that are significantly “cleaner” and “greener” than most other electricity offerings. Second, the Green-e program did not want to establish standards that were so strict as to out-price the market and therefore inadvertently reduce customer purchases of renewable energy products.

To ensure that marketers meet all eligibility requirements, product verification is conducted through an annual audit. Marketers are required to provide all necessary information for substantiation.

Table 1. Product Eligibility Requirements in California

Requirement	Details
Renewable Electricity Supply	The product must include at least 50% renewable energy supply averaged over one year. The Green-e adopts the California State definition of renewables, which includes biomass (landfill gas, agricultural and forest products, and other waste fuels), geothermal, solar, wind, and small hydro ($\leq 30\text{MW}$).
Emissions from the Non-Renewable Portion of the Product	The non-renewable portion of an eligible product must have an emissions rate per kWh for SO ₂ , NO _x , and CO ₂ that does not exceed the average emissions rates for the fossil portion of system power. In no event may the total fossil emissions from an eligible product exceed the average system power emissions rate.
Nuclear Power	The product may not include nuclear energy supply other than what is contained in any system power purchased for the product.
New Renewable Energy Supply	By 1999, the Green-e program will create a standard that includes a requirement for “new” renewable energy supply (i.e., the creation of new renewable kilowatt-hours that were not previously available in the marketplace). This standard will be prospectively incorporated into the minimum criteria, and will be periodically reviewed and adjusted as necessary to meet the goals of the program.

Marketer Requirements: Though certification proceeds on a product-by-product basis, marketers wishing to participate must also meet additional requirements that ensure that customers receive useful and reliable information on product offers and that marketers meet high standards of professional and ethical conduct:

- ◆ ***Fuel Source Disclosure:*** Marketers must provide a disclosure statement to prospective customers that lists the resources from which the green power product being marketed will be generated (prospective disclosure). Marketers must also provide consumers an annual report that reports data on the resources used during the past year to generate the electricity purchased by the customer (historic disclosure).
- ◆ ***Price, Terms and Conditions of Service Disclosure:*** Marketers must provide all customers, at the time of subscription, a one-page summary of price, terms and conditions of service, written in clear, easily understood language. Marketers must also abide by standardized pricing and contract length disclosure in direct mail.
- ◆ ***Ethical Guidelines:*** Marketers must abide by specific ethical guidelines in product marketing, the provision of product information, and the treatment of customers.

To be eligible to use the brand for their certified electricity products, marketers must abide by these guidelines in all of their business practices, not solely for those products eligible for brand usage.

To ensure that these standards are met, marketers sign a detailed Code-of-Conduct and periodic compliance review procedures are undertaken by Green-e staff. Marketers that do not comply or that use deceptive or unethical practices/advertising will be denied the right to use the Green-e brand and may be subject to other penalties.

Fees: Most environmental certification programs are at least in part funded by suppliers.¹⁷ Modest fees are therefore levied on marketers for participation in the Green-e, including: (1) an annual, fixed, per product fee, and (2) a cost-based verification fee. Significant additional funds are received from private foundations and governmental sources. In fact, during its first year, more than 90% of total funds have come from these later two sources.

Governance

Worldwide, most environmental certification programs have been created and administered by government agencies. Governmental involvement can often improve a program's economic stability and legal protection, and can provide immediate program recognition and credibility.

The Green-e, on the other hand, is primarily a stakeholder-driven, non-governmental effort. Ongoing governance of the program is provided by an independent oversight board, the Green Power Board, which ensures that the program's standards and policies are appropriate and necessary to meet its stated goals and objectives, and that certification and verification are handled in a credible and effective manner. The Board is comprised of representatives of stakeholder groups that support the greater use of renewable resources, work for consumer protection, and promote improvement in the environment.

To enhance the credibility of the Green-e, marketers are not formally represented on the Board. However, a Power Marketers' Advisory Committee makes suggestions to the Board on the feasibility and practicality of various implementation details. Finally, an Ad Hoc Governmental Advisory Committee comprised of representatives of various state and federal government agencies will be asked periodically to provide input and recommendations to the Board.

In a formal survey of U.S. green power markets, 8 of 10 marketers stated an explicit preference for a certification program run by a nonprofit group over a government-administered effort.¹⁸ This is the governance structure adopted by Green-e, which offers two critical benefits over the more common government-run certification programs:

- First, by working collaboratively with multiple stakeholders, the Green-e has been created much more rapidly and responsively than might have been possible under a government-run program. Speed in program implementation was especially important because it allowed marketers to design their products around the program before direct access began in California, rather than redesign existing products after April 1, 1998, when direct access was already underway.
- Second, state and federal governmental bodies in the U.S. have generally been reluctant to initiate multiple-criteria, environmental certification programs. Though single-criteria efforts such as EPA's Energy Star have been created, a non-governmental body often has greater leeway in defining "green" products based on multiple criteria and can often play a stronger advocacy role in promoting the program.

EARLY RESULTS

The Green-e program was created under the premise that, if designed appropriately, green power marketing can make a meaningful difference for the environment and renewable energy, and that a certification program can help improve the prospects for creating a successful green power market. Has the program begun to meet these lofty goals?

In general, certification can support the development of green markets in two distinct ways. First, certification can inform and influence consumer product purchases (consumer influence). Second, certification can spur suppliers to compete in offering environmentally-preferable products, and can improve the environmental quality of those products (supplier influence). The effect of various certification efforts has been debated, and empirical evidence of the impact of environmental certification on product sales is scarce. Moreover, for the Green-e at least, the program is still young and has yet to undergo a thorough evaluation. Nonetheless, promising anecdotal results as well as responses from a marketer survey suggest that Green-e is already having a positive influence.

Consumer Influence

A key goal of the Green-e program, and other certification efforts, is to provide a simple tool for consumers to use when selecting among competing product offers. By enhancing the credibility of the certified products and companies that offer those products, and by helping to inform and educate

consumers about their green power options, consumer confidence in and purchases of certified green power products are expected to increase.

As evidenced by electricity service marketing material in California, green power providers clearly believe that the Green-e can enhance the credibility of their companies and products. All retail marketers receiving Green-e certification tout the brand in their advertising to potential customers. Moreover, several environmental groups are promoting the Green-e to their members. At least one large business customer, Patagonia, has made Green-e certification a precondition in their green power purchase; other business customers, including Toyota Motor Sales USA, have used the Green-e in their promotion material. Finally, in the survey of U.S. marketers cited earlier, third-party certification of green power products ranked as one of the most important programs or policies that could be developed to encourage the green power market.

Consumer-based market research also suggests a role for green power certification. Though the results are somewhat mixed, in a mall-intercept study of consumers, Green-e certification was found to be a useful supplement to mandatory disclosure labels. Specifically, in a 2-product experiment, when individuals were asked to rank electricity products in terms of their environmental impacts, Green-e certification had a separate, significant effect on both the environmental rating of a product and on the reported likelihood of purchase of that same product.¹⁹

Despite promising early signs, however, it will clearly take some time and a significant expenditure of funds for the majority of consumers to become familiar with the Green-e, knowledgeable about the certification standards, and influenced in their product purchases by Green-e certification. In addition, some consumers will always mistrust the validity of certification efforts and will want more detailed information on product offers. The Green-e therefore does not expect immediate large-scale results in penetrating the residential customer market with the Green-e message. As the Green-e public education campaign ramps up and as marketers and environmental organizations invoke the Green-e, however, the program should obtain greater customer recognition.

Supplier Influence

In addition to helping consumers identify green products, a certification program may also be designed to influence the behavior of suppliers, and to increase the quality of the products and marketing materials offered by those suppliers. It is evident from dialogue with marketers, and from the products being introduced, that the Green-e program has already helped positively shape the electricity products and marketing material being offered and distributed in California.

As of September 1998, 11 power marketing companies have received certification in California for 17 distinct renewable-based electricity products (see Table 2). Five of these companies, the Automated Power Exchange, Bonneville Power Administration, Enron Wind Corp., PacifiCorp and Foresight, are expected to emphasize the wholesale market for green power at least in the near term. The others target retail markets, either for residential customers, larger commercial customers, or both. All of the *major* green power companies in California, and a large fraction of the smaller companies, have at least one product certified by Green-e.

In an early survey of the green power marketers participating in the Green-e, four out of five indicated that the program had helped them design their green power products and marketing

strategies by establishing minimum standards that must be met or exceeded. Thus, by establishing program guidelines early on, many marketers have designed their products and marketing material around the Green-e standards.

Table 2. Green-e Program Participants

Company	Product Name	Resource Content
Retailers		
Edison Source	EarthSource 50	50% renewables, 50% system power
	EarthSource 100	100% renewables
	EarthSource 2000	100% renewables (including 10% new renewables)
Enron Energy Services	Earth Smart Power	50% renewables (including new wind), 50% large hydro and natural gas
Green Mountain Energy Resources	Wind for the Future	75% renewables (including 10% new wind), 25% large hydro
	75% Renewable Product	75% renewables, 25% large hydro
Keystone Energy Services	EarthChoice 50	50% renewables, 50% large hydro
	EarthChoice 100	100% renewables
PG&E Energy Services	Clean Choice 50	50% renewables (including 12.5% new renewables), 50% large hydro
	Clean Choice 100	100% renewables (including 25% new renewables)
Sacramento Municipal Utility District	Greenergy	100% renewables (including new renewables)
Wholesalers		
Automated Power Exchange	Green Power Market	100% renewables
Bonneville Power Administration	Endorsed Small Hydro/Wind	100% renewables (90% small hydro, 10% new wind)
Enron Wind Corp.	TBD	100% new wind
Foresight Energy	EcoPower	100% renewables
PacifiCorp	Green Power 1	75% renewables, 25% large hydro
	Green Power 2	75% renewables (including 10% new wind), 25% large hydro

For example, early in the program definition phase, many marketers expressed concern that they could not meet a 50% renewable threshold requirement and still have a competitive product. A 100% renewable product was considered highly unlikely. Though only time and actual market experience will tell, of the 17 products certified so far, 13 go beyond the 50% renewables requirement to provide 75% or 100% renewables content. Also, a key factor from an environmental perspective is that 6 of the 11 *retail* products have a commitment to including some “new” renewables over time. As the Green-e standard for new renewables takes affect, additional products will also be including some new resources. While product improvement is certainly possible, the overall environmental quality of the products offered in California is much higher than many expected based on experience in New Hampshire and Massachusetts.

Finally, as noted earlier, marketers with certified products must meet customer information requirements and standards for professional conduct. It is evident that these standards, and the

subsequent review of marketing material by Green-e staff, have improved the amount and type of information being provided to California consumers by Green-e participating marketers. A recent report by a consumer advocacy group, for example, suggests that of the electricity service providers operating in California, the Green-e certified green power providers offer some of the best and most detailed customer information.²⁰

NEXT STEPS

There remains an immense amount of work to be done with respect to the Green-e program. Next steps in program design include the following:

- ◆ ***New Standards:*** The existing product-based standards are just a starting point, and were developed to get the ball rolling in the right direction with the recognition that more stringent standards would be developed over time. Green-e has recently adopted a standard for new renewable energy supply, and hopes to soon set more defensible guidelines for “low impact” hydropower. Green-e also continues to work on, and hopes to ultimately incorporate energy efficiency into a “Green-e plus” type of certification program.
- ◆ ***Regional Rollout:*** The concerns that led to the creation of the Green-e in California are also present in other regional markets where retail competition is being introduced. Green-e therefore intends to expand the geographical reach of the program as more markets open for retail competition. With modest changes in program design, Pennsylvania Green-e was launched in July 1998, and ongoing discussion continue in the New England region.
- ◆ ***Business Customers:*** Though the program is currently focused primarily on residential customers, as markets have opened in California it has become increasingly obvious that demand for green power by businesses is more promising than initially expected. Some business customers clearly find value in purchasing green power purchases. Consequently, Green-e continues to consider the development of additional products and programs that might better appeal to these larger customers.
- ◆ ***Public Education:*** As with all certification efforts, consumer awareness of and confidence in the program are essential. To enhance the value of the Green-e brand and to help consumers make more informed purchasing decisions, a public awareness campaign is being launched around the Green-e.

CONCLUSIONS

The Green-e was designed to integrate a range of performance criteria behind a single, recognized brand, and to create a positive force for the successful development of green power markets that deliver real environmental and consumer benefits. For companies interesting in selling green power, Green-e offers the credibility that is required to attract customer purchases. For smaller consumers, the brand provides a useful decision tool to facilitate product comparison and choice. And for business customers, more-and-more of whom are finding value in purchasing green power, the Green-e offers a minimum standard to consider in their electricity purchases. Moreover, for these larger

customers, the Green-e brand offers a marketing tool to publicize their commitment to and support of renewable energy and the environment.

It is important to recognize, however, that a voluntary certification program will not solve all of the problems that renewables face in the new competitive market. Nor will green power marketing be a panacea for the renewables industries. There will continue to be a need for traditional public policy levers, including environmental regulations, tax incentives for renewables, mandatory environmental disclosure and labeling requirements, customer protection regulations, and appropriately designed rules for the new competitive market. There will also be a need for environmental and consumer groups to remain vigilant for marketing abuses.

Nonetheless, certification programs can supplement other legislative, regulatory, private, and non-profit efforts to encourage the market for clean energy resources. Together, a combination of approaches may be able to create a viable, customer-driven market for clean energy technologies, and will hopefully demonstrate the role that market forces can have in harnessing support for broader environmental and renewable energy policy objectives.

Within this coordinated suite of policy and market options, Green-e will continue to evolve and change as the market itself unfolds, as the sophistication of the Green-e program increases, and as the program seeks to meet the sometimes competing needs of suppliers, customers, and the environment. Throughout the process, Green-e will work with others to manage the transition between what is now an immature, undercapitalized, emerging market, and what we all ultimately hope will be a robust, credible, and sizable customer-driven market for renewable energy.

AUTHOR BIO

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