TRUST AND THE GREEN CONSUMER: THE FIGHT FOR ACCOUNTABILITY IN RENEWABLE ENERGY CREDITS

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Renewable energy credits ("RECs")—commodities representing a megawatt-hour of renewable electricity but tradable separately from the electricity itself—developed to encourage renewable energy investment and to allow individuals and corporations without direct access to renewable energy to subsidize its construction. RECs can be sold voluntarily or applied to state-imposed renewable energy purchase obligations. These state mandates, known as renewable portfolio standards, have contributed dramatically to the demand for RECs. Yet, despite their popularity, RECs are regulated inconsistently: neither federal nor state consumer protection law fully mitigates the opportunities they create for deceptive advertising. This Comment critiques the existing regulatory scheme (or lack thereof) for renewable energy credits, demonstrating the gaps that opportunistic advertisers can use to greenwash and offering policy rationales for closing them by imposing a cohesive, national regime. In light of recent movements from the Federal Trade Commission toward regulation of deceptive advertising in the renewable energy industry, this Comment proposes several features that a national regulatory system must include to restore consumer confidence and promote accountability in state renewable portfolio standards.

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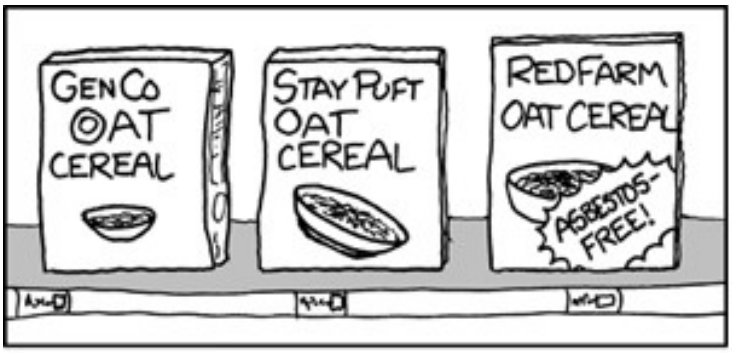
INTRODUCTION



I HATE WHATEVER MARKETER FIRST REALIZED YOU COULD DO THIS. [1]

Renewable energy generation is a fundamental component of proposals to combat global climate change because of the potential of alternative energy sources to reduce greenhouse gas ("GHG") emissions.[2] Correspondingly, policy options for encouraging or compelling renewable energy development abound.[3] One of the most prominent incentives in the United States is the renewable energy credit ("REC"), a commodity representing the environmental benefits of renewable energy

1. Randall Munroe, xkcd, http://xkcd.com/641/ (last visited Feb. 21, 2010) (providing an example of "exaggerated feature" deception); *see infra* text accompanying note 152.

2. *See generally* S. Pacala & R. Socolow, *Stabilization Wedges: Solving the Climate Problem for the Next 50 Years with Current Technologies*, 305 SCIENCE 968 (2004).

3. Among the most popular of many policy tools applied both domestically and internationally are production tax credits ("PTCs") and feed-in tariffs ("FITs"). *See generally* KARLYNN CORY, TOBY COUTURE & CLAIRE KREYCIK, NAT'L RENEWABLE ENERGY LAB., TECHNICAL REPORT NO. NREL/TP-6A2-45549, FEED-IN TARIFF POLICY: DESIGN, IMPLEMENTATION, AND RPS POLICY INTERACTIONS 1 (2009), *available at* http://www.nrel.gov/docs/fy09osti/45549.pdf; RYAN WISER, MARK BOLINGER & GALEN BARBOSE, ERNEST ORLANDO LAWRENCE BERKELEY NAT'L LAB., TECHNICAL REPORT NO. LBNL-63583, USING THE FEDERAL PRODUCTION TAX CREDIT TO BUILD A DURABLE MARKET FOR WIND POWER IN THE UNITED STATES 1 (2007), *available at* http://eetd.lbl.gov/EA/emp/reports/63583.pdf; Lin Gan, Gunnar S. Eskeland & Hans H. Kolshus, *Green Electricity Market Development: Lessons from Europe and the US*, 35 ENERGY POL'Y 144 (2007). This Comment does not presuppose that renewable energy credits ("RECs") are necessarily the optimal method for stimulating renewable energy development. However, the use of RECs is a clear trend in the United States, and thus the problems created by RECs deserve attention.

and capable of being purchased by consumers or applied to state energy portfolio requirements separately from electricity.[4] RECs have two primary purposes. First, RECs provide consumers with the option of subsidizing renewable energy by allowing them to pay a premium to renewable energy generators.[5] Second, RECs provide flexibility for entities subject to renewable energy purchasing requirements: instead of developing their own capacity to generate renewable energy, these entities can subsidize the development of renewable resources by other parties who may find it cheaper or easier.[6]

Unfortunately, RECs have failed to adequately address either of these purposes. Information asymmetry prevents consumers from being able to verify the accuracy of claims made about RECs, and as demand for renewable energy and green products has increased, consumers are bombarded with evermore-frequent claims about nebulous environmental benefits.[7] RECs similarly fail to provide sufficient financial flexibility because, in the absence of a national policy, states promulgated diverse definitions, increasing transaction costs and discouraging open trade.[8] Meanwhile, the current legal framework for consumer protection, as applied to RECs, is inadequate and has thus far failed to achieve its mission of protecting consumers from manipulation.[9]

Yet, despite their flaws, RECs are not a dead-letter policy tool. Both the market and the political realm have determined that the virtues of renewable energy are worth encouraging and even subsidizing, and RECs are taking on new importance as increasing numbers of states mandate renewable energy

4. For the sake of simplicity, this Comment focuses only on RECs as opposed to other tradable environmental commodities, such as energy savings credits ("ESCs") or carbon offsets. ESCs are property rights attributed to amounts of electricity that are not used compared to a business-as-usual scenario. Carbon offsets, which exist in a unique legal regime separate from RECs, involve reducing, destroying, or sequestering carbon by an amount equal to that being produced in another arena, with a net effect of zero. *See* Aimee Barnes, *REC vs. Carbon Offset: Do You Know the Difference?*, GREENBIZ.COM, Mar. 12, 2009, http://www.greenbiz.com/blog/2009/03/12/rec-vs-carbon-offset-do-you-know-difference.

5. *See, e.g.*, ED HOLT & LORI BIRD, TECHNICAL REPORT NO. NREL/TP-620-37388, EMERGING MARKETS FOR RENEWABLE ENERGY CERTIFICATES: OPPORTUNITIES AND CHALLENGES 7–10 (2005), *available at* http://apps3.eere.energy.gov/greenpower/resources/pdfs/37388.pdf.

6. Michael Gillenwater, *Redefining RECs—Part 1: Untangling Attributes and Offsets*, 36 ENERGY POL'Y 2109, 2110–11 (2008).

7. *See infra* Part III.A.

8. *See infra* Part II.A.

9. *See infra* Part II.B.

purchasing requirements for regulated utilities.[10] Moreover, proposed federal legislation would create a national renewable energy standard that regulated entities could meet by generating or purchasing "Federal" RECs distinct from those required at the state level.[11] But because these proposals add a layer of complexity to REC markets by creating separate instruments rather than encouraging the development of a unified market by states,[12] they ultimately do not solve the problems outlined above.

This Comment critiques the current framework for regulating RECs and suggests how to transform ad hoc enforcement and market confusion into a cohesive regime. Part I discusses the role of renewable energy in utility regulation, and Part II describes the problems created by RECs within the current, weak consumer protection framework. Part III analyzes existing REC regulation (or lack thereof) as an example of market failure and a violation of the public rights theory. Finally, Part IV offers suggestions for improving the federal consumer protection regime as it relates to REC markets.

I. ELECTRICITY REGULATION AND RENEWABLE ENERGY MARKETS

Electricity regulation is undeniably complex, implicating actors at the federal, state, and local levels. The nature of electricity on the grid—which follows electric charge rather than contract paths between energy traders—both justifies and further complicates this already convoluted scheme.[13] Moreover, adding renewable resources to the electricity generation mix provides environmental benefits but strains the nation's current transmission infrastructure. In addition, the methods

10. *See infra* Part I.D.

11. American Clean Energy and Security Act of 2009, H.R. 2454, 111th Cong. § 101 (2009), *available at* http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=111_cong_bills&docid=f:h2454pcs.txt.pdf (proposing to add provisions for federal renewable electricity credits to the Public Utility Regulatory Policies Act of 1978 ("PURPA")); *see also* American Clean Energy Leadership Act of 2009, S. 1462, 111th Cong. § 132 (2009), *available at* http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=111_cong_bills&docid=f:s1462pcs.txt.pdf (proposing to add provisions for federal renewable electricity credits to PURPA).

12. *See* S. 1462, § 132 ("[N]othing in this section diminishes any authority of a State or political subdivision of a State to adopt or enforce any law or regulation respecting renewable energy or energy efficiency, or the regulation of electric utilities.").

13. *See infra* Part II.A.1.

chosen by policymakers to mandate and encourage renewable energy development create new challenges for regulators and consumer advocates alike. Section A sketches the basics of electricity regulation for conventional resources. Section B briefly considers barriers to renewable energy development that exist within this conventional scheme. Next, Section C introduces some commonly accepted traits of RECs, and Section D canvasses the markets in which they are traded.

A. A Brief Summary of Electricity Regulation in the United States

The electricity industry has three components: generation, transmission, and distribution.[14] While the majority of electricity is generated by utility-owned, coal-fired power plants, an increasing amount is provided by independent power producers, many of which utilize renewable resources.[15] Because electricity cannot be stored on a large scale, supply must be balanced to meet demand: enough electricity must be generated at all times to meet basic consumer demand ("baseload") and additional capacity must be available during periods in which demand is higher ("peak load").[16] The transmission system, which helps to manage this balancing process, is a high-voltage, interconnected network that moves electricity from generators to distributors.[17] The Federal Energy Regulatory Commission ("FERC"), an independent administrative agency, regulates interstate and wholesale transmission and sales of electricity across this network.[18]

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14. JOSEPH P. TOMAIN & RICHARD D. CUDAHY, ENERGY LAW IN A NUTSHELL 262 (2004).

15. FRED BOSSELMAN ET AL., ENERGY, ECONOMICS, AND THE ENVIRONMENT: CASES AND MATERIALS 751 (2d ed. 2006). Independent power producers are "qualifying facilities" ("QFs") under PURPA. *Id.* at 758.

16. TOMAIN & CUDAHY, *supra* note 14, at 262.

17. BOSSELMAN ET AL., *supra* note 15, at 753.

18. Federal Power Act, 16 U.S.C. § 824(b)(1) (2006) ("The provisions of this subchapter shall apply to the transmission of electric energy in interstate commerce and to the sale of electric energy at wholesale in interstate commerce . . . ."); *see also* Fed. Energy Regulatory Comm'n, What FERC Does (Oct. 1, 2009), http://www.ferc.gov/about/ferc-does.asp. FERC enforces transmission reliability to prevent outages with the assistance of the nonprofit North American Electric Reliability Corporation ("NERC") and seven regional transmission organizations ("RTOs"). *See* Energy Policy Act of 2005, Pub. L. No. 109-58, § 1211(a), 119 Stat. 594, 941 (codified in scattered sections of 42 U.S.C.), *available at* http://www.epa.gov/oust/fedlaws/publ_109-058.pdf; Fed. Energy Regulatory Comm'n, Regional Transmission Organizations (RTO) / Independent System Operators

After electricity is transmitted from generators to distributors, distribution entities reduce the voltage of electricity for retail sales to residential and industrial consumers.[19] Retail sales are regulated by the states through public service or public utility commissions ("PUCs").[20] All fifty states and the District of Columbia have PUCs equipped with powers to issue electricity provider licenses, set retail rates, mandate reporting, and make decisions related to transmission siting.[21] PUCs primarily regulate investor-owned utilities ("IOUs"), which are for-profit companies[22] that sometimes operate across several states and may be subject to both FERC authority for wholesale purchases and state regulation for retail sales.[23] IOUs and three other types of utilities—municipally-owned, rural electric cooperatives, and federally-owned—conduct the final step of distribution by selling electricity to end consumers.[24]

Both generation and distribution underwent changes in the last several decades as state and federal actors attempted to foster a competitive market out of a heavily regulated industry. Increasing electricity prices in the 1970s and 1980s led to calls for competition among generators to reduce prices for consumers,[25] and FERC responded by requiring utilities with interstate transmission facilities to open them up for use by in-

(ISO) (Feb. 5, 2010), http://www.ferc.gov/industries/electric/indus-act/rto.asp [hereinafter FERC, RTO/ISO]. The seven RTOs are the California Independent System Operator, the Electric Reliability Council of Texas, the Southwest Power Pool, the Midwest ISO, the Pennsylvania, New Jersey, Maryland Interconnection, the New York ISO, and the New England ISO. *See* FERC, RTO/ISO, *supra*. Several western states are not covered by ISOs or RTOs. *See id.*

19. BOSSELMAN ET AL., *supra* note 15, at 754.

20. *Id.* at 763.

21. Nat'l Ass'n of Regulatory Utility Comm'rs, About NARUC, http://www.naruc.org/about.cfm (last visited Feb. 14, 2010); TOMAIN & CUDAHY, *supra* note 14, at 109–10.

22. They are known as "public utilities" because they are "affected with a public interest." Munn v. Illinois, 94 U.S. 113, 125–26 (1876) (quoting Sir Matthew Hale, *De Portibus Maris*, *in* 1 HARG. LAW TRACTS 78 (1787)).

23. *See* TOMAIN & CUDAHY, *supra* note 14, at 264, 271–72.

24. *Id.* at 263. Municipal utilities, which may be regulated at the state or local level, are typically operated by local governments to sell electricity at retail. BOSSELMAN ET AL., *supra* note 15, at 757. Federal power entities include independent government corporations, like the Tennessee Valley Authority, that are regulated federally. *Id.* Cooperatives are member-owned organizations and may be able to opt out of state regulation. *Id.* at 758. For instance, Colorado allows its cooperatives to opt out of state regulation based on a vote of the membership. COLO. REV. STAT. § 40-9.5-103 (2009).

25. BOSSELMAN ET AL., *supra* note 15, at 818–19.

dependent generators at nondiscriminatory prices.[26] Many states also attempted to foster retail competition, animated by goals of achieving lower-priced electricity, improved service, innovation, and environmental improvements.[27] However, the rush to increase competition through deregulation stalled after California's energy crisis of 2000–2001.[28] Figure 1 shows that by early 2010, twenty-eight states retained their regulated markets, fourteen were deregulated, and eight had suspended their deregulation efforts.[29] Accordingly, the regulation of electricity remains diverse at the state level.

26. *See, e.g.*, Promoting Wholesale Competition Through Open Access Non-Discriminatory Transmission Services by Public Utilities; Recovery of Stranded Costs by Public Utilities and Transmitting Utilities, 75 F.E.R.C. ¶ 61,080 (1996) (codified at 18 C.F.R. pts. 35, 385) (facilitating open-access, non-discriminatory transmission for the electricity industry); Pipeline Service Obligations and Revisions to Regulations Governing Self-Implementing Transportation Under Part 284 of the Commission's Regulations, 59 F.E.R.C. ¶ 61,030 (1992) (codified at 18 C.F.R. pt. 284) (facilitating functional unbundling and non-discriminatory transmission for the natural gas industry).

27. MATTHEW H. BROWN & RICHARD P. SEDANO, NAT'L COUNCIL ON ELEC. POLICY, A COMPREHENSIVE VIEW OF U.S. ELECTRIC RESTRUCTURING WITH POLICY OPTIONS FOR THE FUTURE 2–5 (2003), *available at* http://www.ncouncil.org/Documents/restruc.pdf.

28. During that time, extreme weather conditions—high temperatures plus a drought that affected hydropower generation—contributed to increased electricity costs within the state. Meanwhile, deregulation laws forced California's IOUs to purchase electricity on the skyrocketing spot market but simultaneously limited their ability to pass-through the increasing cost to customers, eventually bankrupting them and leading to power blackouts. FED. ENERGY REGULATORY COMM'N, THE WESTERN ENERGY CRISIS, THE ENRON BANKRUPTCY, AND FERC'S RESPONSE 1 (2005), *available at* http://www.ferc.gov/industries/electric/indus-act/wec/chron/chronology.pdf.

29. U.S. Energy Info. Admin., Status of Electricity Restructuring by State (Jan. 2010), http://www.eia.doe.gov/cneaf/electricity/page/restructuring/restructure_elect.html.

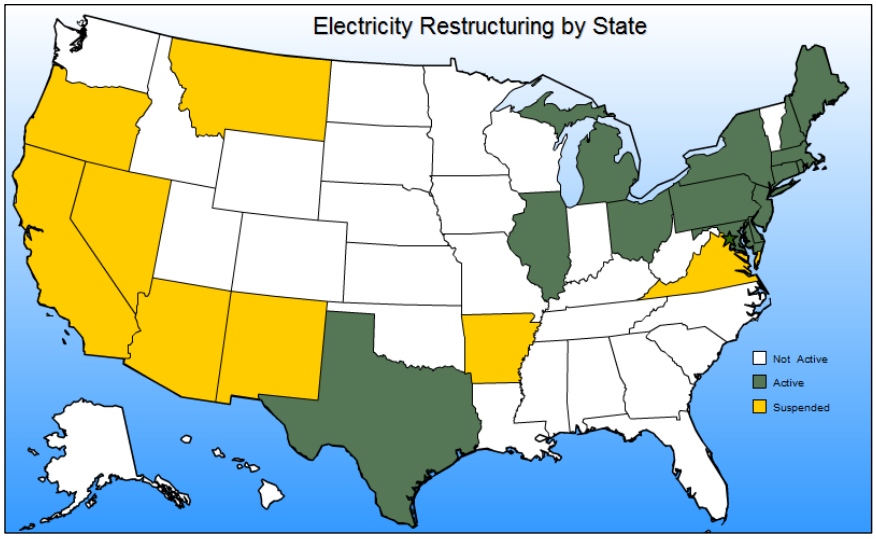

Fig. 1: Restructuring of Retail Electricity Markets as of January 2010[30]

B. Renewable Energy Consumption

The Environmental Protection Agency ("EPA") defines renewable energy, also called green power, as "energy from indefinitely available resources . . . whose generation has zero [or] negligible environmental impacts, whether through reduced emissions or minimal environmental disruption."[31] Biomass, geothermal, hydroelectric, solar, and wind are the dominant

30. *Id.*

31. U.S. Envtl. Prot. Agency, Green Power Basics: What Is Green Power?, http://www.epa.gov/greeningepa/greenpower/basics.htm (last visited Feb. 21, 2010) (listing wind, wave, tidal, small-scale hydropower, biomass, landfill gas, geothermal, and solar power as types of renewable energy). While "power" is expressed in watts (typically megawatts ("MW") or kilowatts ("kW")) and describes "energy transfer per unit of time," energy is the actual work generated by a physical system during a given time period, and is measured in megawatt-hours ("MWh") or kilowatt-hours ("kWh"). Danish Wind Indus. Ass'n, Energy and Power Definitions, http://guidedtour.windpower.org/en/stat/unitsene.htm (last visited Feb. 21, 2010); *see also* INCENTIVES RESEARCH, INC., A PRIMER ON ELECTRIC POWER FLOW FOR ECONOMISTS AND UTILITY PLANNERS (1995), *available at* http://mydocs.epri.com/docs/public/TR-104604.pdf.

forms of renewable energy in the United States.[32] Between 2003 and 2007, consumption of energy from these sources as a percentage of total U.S. energy consumption hovered between 6 and 7 percent, and reached 7.3 percent in 2008.[33] This amount is slightly less than the 8.5 percent of total energy consumption met by nuclear power and a mere fraction of the 83.4 percent sourced from fossil fuels—including coal, natural gas, and petroleum.[34] However, renewable energy is big business. In 2008, despite the global economic crisis, investors poured $155 billion worldwide (about $30 billion in North America) into renewable energy projects, particularly wind and solar.[35] Additionally, the American Recovery and Reinvestment Act of 2009 ("ARRA")[36] allocated billions of dollars in the form of research and development, grants, tax credits, and loans for renewable energy and energy efficiency projects at the federal, state, and local levels.[37] Policymakers increasingly view the generation of renewable electricity, coupled with energy efficiency measures, as a means to achieve national energy independence and to mitigate climate change.[38]

Despite increased political interest and funding, substantial barriers to effective use of renewable resources exist in the United States. The first is cost. While renewable resources themselves are usually free, the technology required to capture them and convert them into electricity may be expensive com-

32. U.S. Energy Info. Admin., U.S. Energy Consumption by Energy Source, 2003–2007 (May 2009), http://www.eia.doe.gov/cneaf/solar.renewables/page/rea_data/table1_1.html.

33. *Id.*; U.S. Energy Info. Admin., U.S. Energy Consumption by Energy Source, 2004–2008 (July 2009), http://www.eia.doe.gov/cneaf/alternate/page/renew_energy_consump/table1.html [hereinafter U.S. Energy Consumption, 2004–2008].

34. U.S. Energy Consumption, 2004–2008, *supra* note 33.

35. UNITED NATIONS ENV'T PROGRAMME & NEW ENERGY FIN., GLOBAL TRENDS IN SUSTAINABLE ENERGY INVESTMENT 2009, at 10–12 (2009), *available at* http://sefi.unep.org/fileadmin/media/sefi/docs/publications/UNEP_SEFI_Global_Trends_Report_2009_f.pdf.

36. Pub. L. No. 111-5, 123 Stat. 115 (2009) (to be codified in scattered sections of 6, 19, 26, 42, 47 U.S.C.), *available at* http://www.gpo.gov/fdsys/pkg/PLAW-111publ5/pdf/PLAW-111publ5.pdf.

37. Mark C. Kalpin & Michael D. Bain, *American Recovery and Reinvestment Act of 2009 Provides Additional Funding for Renewable Energy and Clean Technologies*, WILMERHALE, Feb. 18, 2009, http://www.wilmerhale.com/publications/whPubsDetail.aspx?publication=8792.

38. Scholars have suggested that GHG emissions could be stabilized at current levels by 2050 by massively ramping up existing technologies, including those used to generate wind and solar electricity. *See* Pacala & Socolow, *supra* note 2, at 971.

pared to conventional methods of generation.[39] The second barrier is that some renewable resources, such as wind and solar power, are intermittent, meaning that utilities remain suspicious about their ability to provide a consistent baseload sufficient to meet consumer demand.[40] Additionally, transmission is currently inadequate to capitalize on the diversity of available resources.[41] As a sprawling patchwork of infrastructure, the transmission grid does not always reach the windiest or sunniest locales and cannot store energy generated by intermittent natural sources or transmit it across vast distances.[42] Moreover, the grid is "dumb": it does not track electricity in a manner that allows utilities to allocate it efficiently.[43] Despite these barriers, however, electricity consumers possess an ability to contribute to the development of renewable energy re-

39. Conventional generation appears less expensive in part because analysts typically do not take into account the social cost of the attendant environmental externalities, including air and water pollution, extraction damages, and even global climate change. However, some renewable resources, such as photovoltaic panels, are approaching "grid parity"—the point at which renewable energy can be generated at or below the cost of baseload generation. *See* Martin LaMonica, *Solar-Power Prices Slide Toward "Grid Parity,"* GREEN TECH, Feb. 24, 2009, http://news.cnet.com/8301-11128_3-10170650-54.html.

40. *See, e.g.*, Noelle Straub & Peter Behr, *Energy Regulatory Chief Says New Coal, Nuclear Plants May Be Unnecessary*, N.Y. TIMES, Apr. 22, 2009, http://www.nytimes.com/gwire/2009/04/22/22greenwire-no-need-to-build-new-us-coal-or-nuclear-plants-10630.html (noting concerns that intermittent power sources must be supported by baseload capacity, but quoting FERC Chairman Jon Wellinghoff as stating "I think baseload capacity is going to become an anachronism" because of the potential to scale up and "shape" renewable energy).

41. *See, e.g.*, AM. WIND ENERGY ASS'N & SOLAR ENERGY INDUS. ASS'N, GREEN POWER SUPERHIGHWAYS 5–6 (2009), *available at* http://www.awea.org/GreenPowerSuperhighways.pdf.

42. David Talbot, *Lifeline for Renewable Power*, TECH. REV., Jan.–Feb. 2009, at 43–44, *available at* http://www.technologyreview.com/energy/21747/.

43. In order to address these problems, policymakers and utility companies advocate the creation of a "smart grid," which "enables real-time communication between the consumer and utility." XCEL ENERGY, INC., XCEL ENERGY SMART GRID: A WHITE PAPER 2 (2008), *available at* http://smartgridcity.xcelenergy.com/media/pdf/SmartGridWhitePaper.pdf. Smart grids would apply sophisticated automation throughout the grid, possibly including meters that help consumers to visualize their electricity consumption and monitoring that allows utilities to direct electricity where it is needed. *Id.* at 4. ARRA earmarks $4.5 billion in part for smart grid development, including "expenses necessary . . . to modernize the electric grid [and] to include demand responsive equipment." American Recovery and Reinvestment Act, Pub. L. No. 111-5, div. A, tit. IV, 123 Stat. 115, 138 (2009) (to be codified in scattered sections of 6, 19, 26, 42, 47 U.S.C.). Theoretically, a smart grid could help balance intermittent renewable energy sources in order to improve the overall efficiency of the transmission system.

sources, primarily through the purchase and retirement of RECs.

C. Characteristics of RECs

The currency of renewable energy development is the REC. RECs are "tradable commodit[ies] separate from the actual electrons"[44]—in other words, fungible economic goods that can be traded or sold either bundled with or separate from renewable electricity itself.[45] Essentially, a REC is a commodity distinct from electricity but equivalent to one megawatt-hour ("MWh") of actual electricity generated from renewable resources. REC ownership is frequently allocated between a renewable energy generator and a purchaser (such as a public utility) by contract.[46] RECs were developed during electricity restructuring with the hope that, because they could be traded separately from electricity injected into a grid, they would create a financial incentive to invest in renewable energy instead of cheaper, fossil fuel-based electricity.[47] The existence of a distinct REC market allows individuals, corporations, and even environmentally conscious utilities not subject to state renewable energy purchase requirements to subsidize the development of renewable energy.

REC trading is decentralized such that there is limited oversight for whether actual renewable electricity generation matches the RECs claimed by generators. However, RECs may be verified through contract paths[48] or by independent regional tracking organizations which match each MWh of renewable electricity generation with a unique serial number encoding descriptive attributes such as year of generation ("vintage"),

44. K.S. CORY & B.G. SWEZEY, NAT'L RENEWABLE ENERGY LAB., TECHNICAL REPORT NO. NREL/TP-670-41409, RENEWABLE PORTFOLIO STANDARDS IN THE STATES: BALANCING GOALS AND IMPLEMENTATION STRATEGIES 3 (2007), *available at* http://www.nrel.gov/docs/fy08osti/41409.pdf.

45. LORI BIRD, CLAIRE KREYCIK & BARRY FRIEDMAN, TECHNICAL REPORT NO. NREL/TP-6A2-44094, GREEN POWER MARKETING IN THE UNITED STATES: A STATUS REPORT (11TH EDITION) 1 (2008), *available at* http://www.nrel.gov/docs/fy09osti/44094.pdf. However, it is unclear whether RECs provide any legal recognition, such as property rights, to environmental benefits. *See* Gillenwater, *supra* note 6, at 2117–18.

46. REC ownership is discussed in more detail in Part II.A.3.

47. *See generally* Gillenwater, *supra* note 6, at 2110.

48. The American Bar Association's sample contract for REC transfer is discussed in more detail in note 84.

energy source, and geographic origin.[49] Serial numbers ensure that RECs can be tracked across sales, creating a chain of custody that helps prevent fraud. Participants in a REC tracking system can use serial numbers to ensure that RECs are removed from circulation ("retired") once they are either matched to a state compliance objective or sold to a consumer.[50] Figure 2 illustrates the life cycle of a REC, from generation to retirement. When a REC is retired, it can no longer be traded or sold. Accordingly, retiring RECs while maintaining legally binding production objectives and high consumer demand should lead to the production of new renewable energy.[51]

Fig. 2: Life Cycle of a REC[52]

These tracking systems substantiate REC generation to varying degrees but may rely on self-reporting by generators.[53] They also manage the applicability of RECs to different jurisdictions, a process that eases (but does not eliminate) the difficulties inherent in the interstate REC trade.[54] Participation in these organizations may be either voluntary or mandated by state law.[55]

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49. *See* APX, INC., CREATING A TRUSTED ENVIRONMENTAL COMMODITY 9–10 (2008), *available at* http://www.apx.com/documents/APX-Trusted-Environmental-Commodities.pdf.

50. CORY & SWEZEY, *supra* note 44, at 3.

51. This is one conception of "additionality," which will be discussed in Part II.B.4.

52. APX, INC., *supra* note 49, at 8.

53. *See infra* Part IV.C.

54. APX, INC., *supra* note 49, at 9–10. For instance, system *X* verifies that RECs generated in state *A* meet the statutory requirements of states *B* and *C*.

55. *See, e.g.*, Definition and Attributes of Renewable Energy Credits for Compliance with the California Renewables Portfolio Standard, Rulemaking 06-02-012, at 44 (Cal. Pub. Util. Comm'n Aug. 21, 2008) (decision), *available at* http://docs.cpuc.ca.gov/word_pdf/FINAL_DECISION/86954.pdf (defining a REC for compliance with California law as "a certificate of proof, issued through the Western Renewable Generation Information System").

D. Subsidizing Renewable Energy Development Through Voluntary and Compliance Markets

End users of electricity—ratepayers who purchase electricity from utilities in regulated and deregulated markets—subsidize the development of renewable energy in two ways. First, consumers may participate in voluntary markets by purchasing RECs.[56] For instance, individual and corporate customers can pay third parties who purchase RECs directly from renewable generation sources and retire them on the customers' behalf.[57] Utility ratepayers can also pay premiums that subsidize either REC purchases or direct investment in renewable energy capacity by their electricity provider.[58] By purchasing or contributing to the purchase of RECs, individuals and corporations take them off the market and receive "bragging rights" that they are subsidizing renewable energy.[59]

Second, states may mandate that certain types of utilities (for instance, IOUs) purchase specified quantities of renewable energy or RECs, thus creating a "compliance market" for the trade of these commodities.[60] When utilities purchase renewable electricity or RECs under state mandates, they pass on the added cost to all ratepayers, not merely those who wish to support renewable energy. These markets are not exclusive: consumers who are dissatisfied with the amount of renewable energy that utilities purchase under state obligations may voluntarily subsidize renewable energy separately from what

56. *See generally* U.S. ENVTL. PROT. AGENCY, GUIDE TO PURCHASING GREEN POWER 1 (2004), *available at* http://www.epa.gov/grnpower/documents/purchasing_guide_for_web.pdf.

57. *See, e.g.*, Renewable Choice Energy, About Renewable Choice, http://www.renewablechoice.com/about-renewable-choice.html (last visited Feb. 25, 2010).

58. *See, e.g.*, Xcel Energy, Windsource, http://www.xcelenergy.com/Colorado/Residential/RenewableEnergy/Windsource_/Pages/WindSource.aspx (last visited Feb. 21, 2010).

59. For instance, Starbucks bolsters its sustainability credentials in part through its purchase of wind RECs from 3Degrees Group, Inc., a REC-trading company whose products are Green-e certified. *See* Starbucks Coffee Co., Starbucks Shared Planet: Environmental Stewardship, http://www.starbucks.com/SharedPlanet/environmentalInternal.aspx?story=energyConservation (last visited Feb. 14, 2010); 3Degrees, Our Mission, Our Vision, http://www.3degreesinc.com/about/ (last visited Feb. 14, 2010).

60. LORI BIRD & ELIZABETH LOKEY, NAT'L RENEWABLE ENERGY LAB., TECHNICAL REPORT NO. NREL/TP-670-42096, INTERACTION OF COMPLIANCE AND VOLUNTARY RENEWABLE ENERGY MARKETS 1 (2007), *available at* http://www.nrel.gov/docs/fy08osti/42096.pdf.

they pay on their utility bills to meet compliance obligations. Consumer participation in each of these markets will be discussed in turn.

From 2004 to 2008, voluntary markets for renewable energy increased an average of 41 percent per year.[61] Approximately 850 utilities in forty-six states now provide 160 different optional green pricing programs.[62] As of 2009, these utilities provided over half of all electricity consumers in the United States with the opportunity to purchase renewable energy.[63] Green pricing allows customers to pay a premium, often a few cents per one-hundred kilowatt-hour ("kWh") block, in order to subsidize renewable energy development.[64] Regrettably, these voluntary programs frequently experience low participation rates, with only about 2.2 percent of eligible utility customers nationwide opting in, although the most popular programs attained 5 percent to 21 percent participation in 2008.[65] Yet customers who did participate in green pricing programs had high retention levels, with utilities reporting program drop-outs at 5.5 percent on average in 2008.[66] Although the vast majority of green pricing participants—about 95 percent—are residential consumers, about three-quarters of renewable energy consumption by volume is attributable to commercial and industrial buyers.[67]

While the voluntary market is growing, the compliance market for green power is swiftly overtaking it in volume. Voluntary purchases of renewable energy in 2008 composed only about 0.6 percent of all electricity sold in the United States, of which about 71 percent was sourced from wind.[68] However, driven in large part by public support for renewable energy and

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61. LORI BIRD, CLAIRE KREYCIK & BARRY FRIEDMAN, TECHNICAL REPORT NO. NREL/TP-6A2-46581, GREEN POWER MARKETING IN THE UNITED STATES: A STATUS REPORT (2008 DATA) 4 (2009), *available at* http://www.nrel.gov/docs/fy09osti/46581.pdf.

62. *Id.* at 8, 37–38 app. c, tbl.c-1 (showing that only Arkansas, Louisiana, Tennessee, and West Virginia have no customers participating in utility green pricing programs).

63. *Id.* at 1.

64. *Id.* at 8. In 2008, the premium ranged from -$0.01/kWh (a savings) to $0.088/kWh, with a median of $0.015/kWh. *Id.*

65. *Id.* at 11.

66. *Id.*

67. *Id.* at 5, 10–11. NREL's figures for the number of green pricing customers are based on regulated markets only.

68. *Id.* at 3. About 86 percent of the energy sold on voluntary markets in 2008 was from "new" sources (those brought online after 1997). *Id.* at 5.

the potential for job creation, states began to impose upon themselves renewable portfolio standards ("RPSs"), which allowed them to force retail electric providers to purchase specified amounts of renewable energy as part of their power mix.[69] As of early 2010, twenty-nine states and the District of Columbia had instated RPSs and another six states added nonbinding goals, all seeking to make renewable energy compose as much as 40 percent of the electricity mix within various time frames (Figure 3).[70]

While the voluntary market included 24 billion kWh of renewable energy and state RPSs required 23 billion kWh of renewable energy in 2008, by 2012, an estimated 100 billion kWh of renewable energy may be needed to meet state mandates alone.[71] Yet despite this large projected increase in renewable energy capacity, RECs, which are commonly used to meet these requirements, remain inconsistently regulated.

69. NANCY RADER & SCOTT HEMPLING, NAT'L ASS'N OF REGULATORY UTIL. COMM'RS, THE RENEWABLES PORTFOLIO STANDARD: A PRACTICAL GUIDE ix–xi (2001), *available at* http://www.naruc.affiniscape.com/associations/1773/files/rps.pdf.

70. North Carolina Solar Center, DSIRE: Database of State Incentives for Renewables & Efficiency, Summary Maps, http://www.dsireusa.org/summarymaps/index.cfm (select "Renewable Portfolio Standards" PowerPoint file) (last visited Apr. 1, 2010).

71. BIRD, KREYCIK & FRIEDMAN, *supra* note 61, at 3, 6–7. Moreover, this number is steadily increasing. On March 22, 2010, Colorado passed legislation raising its state renewable energy requirement from 20 percent by 2020 to 30 percent by 2020. Press Release, Office of Gov. Bill Ritter, Jr., Gov. Ritter Signs Historic Renewable Energy Bill (Mar. 22, 2010), *available at* http://www.colorado.gov/cs/Satellite?c=Page&childpagename=GovRitter%2FGOVRLayout&cid=1251573387639&pagename=GOVRWrapper.

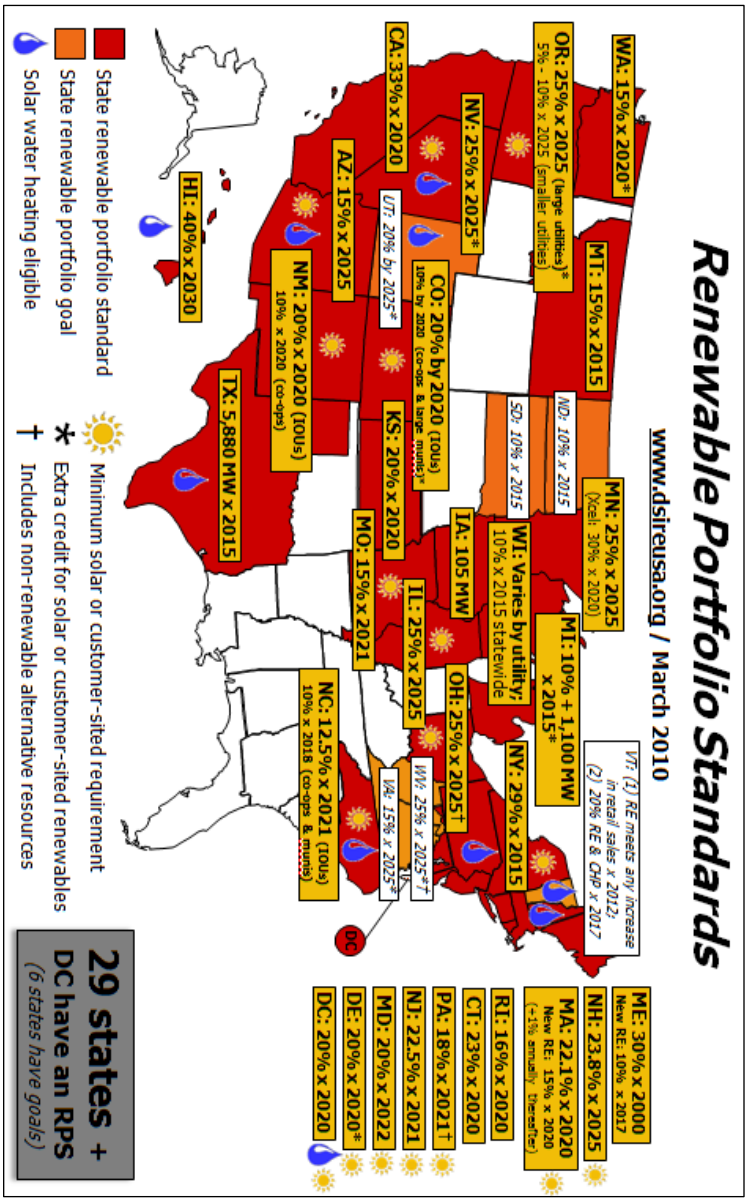

Fig. 3: State Renewable Portfolio Standards and Goals, March 2010[72]

72. North Carolina Solar Center, *supra* note 70.

II. THE INADEQUACIES OF EXISTING REC CERTIFICATION

Consumers know that electricity powers their light bulbs, but they may not understand other attributes of electricity, such as how it is generated and regulated.[73] Unfortunately, RECs raise further barriers to consumer understanding of electricity markets because existing consumer protection laws have failed to address the financial, contractual, and linguistic complications that RECs create. Section A discusses those characteristics of RECs that make them problematic as an instrument to promote renewable energy development. Drawing from these points, Section B considers existing regulatory mechanisms that affect REC markets—primarily federal and state consumer protection efforts—and explains why they have thus far been insufficient to mitigate the problems these commodities create. Finally, Section C summarizes these points and paves the way for consideration of why reform of REC markets is advisable if consumers are to continue to subsidize renewable energy development.

A. A Flawed Policy Tool

RECs are confusingly defined and poorly regulated, creating consumer protection problems. Some of these problems relate to murky concepts that confuse advertisers and consumers alike, increasing the risk of deception. For instance, because RECs can be unbundled from actual electricity in the grid, consumers may misunderstand the nature of the electricity they receive. Other problems are grounded in the practicalities of law and policy. The definition of a REC—which generally includes the environmental benefits or attributes of one MWh generated from a renewable resource[74]—remains legally and practically imprecise. In the absence of a clear definition, mi-

73. *See* Melea Press & Eric J. Arnould, *Constraints on Sustainable Energy Consumption: Market System and Public Policy Challenges and Opportunities*, 28 J. PUB. POL'Y & MARKETING 102, 107 (2009); *see also supra* Part I.A.

74. *Compare* 4 COLO. CODE REGS. § 723-3-3652(n) (2010) (including "non-energy attributes, including any and all credits, benefits, emissions reductions, offsets, and allowances" in the definition of a REC), *and* N.M. CODE R. § 17.9.572.7(E) (Weil 2010) (defining a REC as representing "all of the environmental attributes associated with the generation of renewable energy"), *with* 73 PA. STAT. ANN. § 1648.2 (West 2008) (defining an "alternative energy credit" as "one megawatt hour of electricity from an alternative energy source," lacking environmental attributes).

sallocation and misinterpretation of environmental benefits can lead to double counting as RECs are resold improperly or counted more than once for compliance. Similarly, "additionality," which broadly seeks to ensure that incentives for renewable energy will directly contribute to the provision of increasing amounts of new generation capacity, has legitimate cost containment ends but may distract both consumers and politicians with complex but inconclusive tests. Each of these concerns will be addressed in turn.[75]

1. Unbundling and the Nature of the Grid

The first problem with communicating to customers what they are receiving when they purchase green energy is that there are no "green electrons." Electrons do not flow like water;[76] rather, "[e]nergy flowing onto a power network or grid *energizes the entire grid*, and consumers then draw undifferentiated energy from that grid."[77] In other words, many different sources of electricity pool into a network of high- and low-voltage wires—the grid—meaning that the electricity received by an individual consumer may be composed of energy from some or all of any number of generators.[78] Consequently, energy from a specific generator cannot be traced to an individual recipient. For example, suppose that a wind turbine sells its power to an IOU. It may not provide the electricity it produces directly to the utility, but both parties connect to the same grid.

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75. Although leakage is an issue in carbon cap-and-trade regimes, it will not be discussed here. Leakage might generally be thought of as the difference between consumption and production within a nation's (or state's) borders. It describes the likelihood that industries subject to regulation will outsource high-emitting tasks to locations not subject to the cap, such that even as the amount of carbon released in one region of the world appears to decrease, it is offset by increases of carbon released in other places. *See, e.g.*, REG'L GREENHOUSE GAS INITIATIVE, POTENTIAL EMISSIONS LEAKAGE AND THE REGIONAL GREENHOUSE GAS INITIATIVE (RGGI): EVALUATING MARKET DYNAMICS, MONITORING OPTIONS, AND POSSIBLE MITIGATION MECHANISMS ES-1 (2007), *available at* http://www.rggi.org/docs/il_report_final_3_14_07.pdf (describing the leakage debate in the U.S. context). Leakage will no longer be a concern, at least between states, once RECs can be traded nationally.

76. Brief for Electrical Engineers, Energy Economists and Physicists as Amici Curiae Supporting Respondents at 5, New York v. Fed. Energy Regulatory Comm'n, 535 U.S. 1 (2002) (No. 00-568).

77. *Id.* at 2.

78. U.S. Envtl. Prot. Agency, Green Power: Tags vs. Delivered Products 1, *available at* http://www.epa.gov/greeningepa/documents/greentags.pdf (last visited Apr. 1, 2010).

While the turbine produces an amount of electricity equal to that purchased by the utility, the exchange is set by contract rather than by tracing the path of electrons.

RECs similarly follow paths set by contract rather than physics. Because RECs represent the environmental attributes of renewable energy instead of the renewable energy itself, they can be sold separately from the actual electricity produced by renewable generators. Accordingly, if a REC is unbundled from electricity, that electricity may no longer be considered "green" even if it was generated by a renewable resource, and alternatively, electricity derived from conventional generation, if it is sold bundled with RECs, may be considered "green" because environmental attributes have been purchased for and allocated to it.[79] In essence, if a renewable energy generator contracts to sell a utility a number of RECs equivalent to the amount in MWh of electricity that the utility purchases, the electricity could be considered "green." However, if the generator keeps the RECs when it sells the electricity to the utility, even though the electricity is generated by renewable resources, the utility should not call its purchase "green." Ironically for consumer protection purposes, if REC disclosure is not required, a utility that purchases electricity from a coal-fired power plant could (in theory) purchase an equivalent number of RECs from a REC broker and call that proportion of electricity "green."[80]

2. A Patchwork of Definitions

Furthermore, RECs are confusing in part because their attributes are unclear. As Figure 4 illustrates, RECs include both "primary" and "derived" attributes.[81] Primary attributes are basic identifying information, including the type of renewa-

79. *See, e.g.*, HOLT & BIRD, *supra* note 5, at 50–51.

80. ENVTL. MKTG. SUBCOMM. OF THE ENERGY DEREGULATION WORKING GROUP, NAT'L ASS'N OF ATT'YS GEN., ENVIRONMENTAL MARKETING GUIDELINES FOR ELECTRICITY 6 (1999), *available at* http://www.naag.org/assets/files/pdf/Green Marketing.pdf (the second document in the PDF file) ("However, under a tagging system, a supplier of power that is advertised as '50% hydro, 50% natural gas' may actually buy all of its electricity from a nuclear power plant, but has the right to claim a 'hydro-gas' mix because it also purchased unique tags from 'hydro-gas' generators.").

81. ENVTL. TRACKING NETWORK OF N. AM., TREATMENT OF ENVIRONMENTAL ATTRIBUTES ACROSS TRACKING SYSTEMS 5, 7 (2008), *available at* http://www.etnna.org/images/PDFs/ETNNA-Environmental-Attribute-Paper-Final.pdf.

ble resource, vintage, and location of the generator.[82] Derived attributes are the indirect benefits of renewable energy generation, including avoided emissions of carbon dioxide ("CO_2") and other pollutants, which presumably accrue where renewable energy is produced instead of conventional generation derived from fossil fuels.[83]

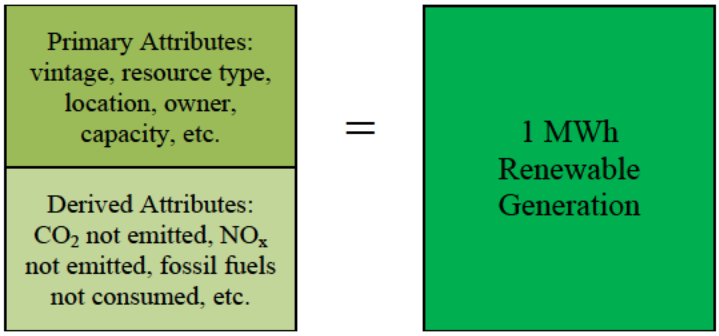

Fig. 4: Conceptualizing REC Components

States differ in how they define RECs, particularly with regard to these derived attributes.[84] Definitions used by states with REC legislation—some of which simply characterize a REC as representing a MWh of renewable generation and others which explicitly lay out specific environmental attributes that RECs incorporate—are summarized in Figure 5.

82. *Id.* at 5.

83. *Id.* at 7.

84. An ad hoc working group, which included members of the American Bar Association's Section of Environment, Energy, and Resources ("SEER") subcommittees, the Renewable Energy Resources Committee and Special Committee on Energy and Environmental Finance, the Environmental Markets Association, and the American Council on Renewable Energy, developed a Master Renewable Energy Certificate Purchase and Sale Agreement to suggest how RECs might be divided. However, this agreement fails to specify what attributes are included in a REC. *See, e.g.*, MASTER RENEWABLE ENERGY CERTIFICATE PURCHASE AND SALE AGREEMENT 5, *available at* http://www.abanet.org/environ/committees/renewableenergy/RECMasterContract.pdf (defining "Environmental Attribute").

REC as a unit of production (1 MWh)	DC, ME, MD, NV, NM, NC, PA, TX, WI
REC as undefined "attributes" of renewable generation	CT, DE, FL, IL, MA, MI, MN, MT, ND, OH, OR, RI, SD
REC as defined "attributes" of renewable generation	CA, CO, NH, NJ, WA

Fig. 5: Basic REC Definitions Applied by State[85]

California and Colorado provide among the most specific definitions. The California PUC defines "Environmental Attributes" of RECs to mean "any and all credits, benefits, emissions reductions, offsets, and allowances . . . attributable to the generation from the Unit(s), and its displacement of conventional energy generation."[86] The Colorado PUC defines a REC as "a contractual right to the full set of non-energy attributes, including any and all credits, benefits, emissions reductions, offsets, and allowances . . . directly attributable to a specific amount of electric energy generated from an eligible energy resource."[87] Yet these definitions can be problematic because they open up the possibility that RECs could be conflated with offsets for nitrogen oxide ("NO_x"), sulfur dioxide ("SO_2"), and other emissions that are already regulated by the EPA under cap-and-trade programs.[88] Similarly, while the generation of renewable energy may contribute to reductions in CO_2 emissions, RECs are not equivalent to carbon offsets.[89] Therefore, these definitions could not only confuse price signals across environmental commodity markets,[90] but impede interstate trade of RECs.

85. ENVTL. TRACKING NETWORK OF N. AM., *supra* note 81, at 4–5.

86. Definition and Attributes of Renewable Energy Credits for Compliance with the California Renewables Portfolio Standard, Rulemaking 06-02-012, at 12 (Cal. Pub. Utils. Comm'n Aug. 21, 2008) (decision), *available at* http://docs.cpuc.ca.gov/word_pdf/FINAL_DECISION/86954.pdf.

87. 4 COLO. CODE REGS. § 723-3-3652(n) (2010).

88. *See generally* U.S. ENVTL. PROT. AGENCY, ALLOWANCE MARKETS ASSESSMENT: A CLOSER LOOK AT THE TWO BIGGEST PRICE CHANGES IN THE FEDERAL SO_2 AND NO_x ALLOWANCE MARKETS (2009), *available at* http://www.epa.gov/airmarkets/resource/docs/marketassessmnt.pdf.

89. Gillenwater, *supra* note 6, at 2116–18; *see also infra* Part II.A.3.

90. Gillenwater suggests that because RECs are substantially cheaper than offsets, customers who believe that RECs reduce carbon emissions will opt to pur-

3. The Risk of Double Counting RECs

Because RECs are intangible, poorly understood, and unavailable for personal verification by residential consumers, there are substantial risks that they could be unfairly resold or counted multiple times. For instance, the same REC might be both counted for compliance and sold to a consumer, or a single REC might be counted for compliance in multiple states, even though in each case the REC should have been retired after it was counted for the first time. Double-counting practices arise due to divergent state laws, sloppy tracking, and uncertain ownership. Although double counting is not always illegal,[91] it is potentially deceptive in two ways.

First, double-counting practices may be deceptive even when these practices are allowed under state law if they remain unclear to consumers. For instance, conscientious consumers who opt into voluntary green pricing programs may subsidize renewable energy that would have been generated anyway under a state RPS, while freeriding consumers who do not opt in pay less for the same environmental benefits.[92] A very limited number of states allow regulated utilities that purchase RECs to sell those same RECs to their customers on the voluntary market. While the majority of states with RPSs prohibit mingling the voluntary and compliance markets, at least five fail to address this specifically, and two states—Wisconsin and Arizona—appear to allow consumers' voluntary purchases under green pricing programs to count toward individual utilities' compliance requirements under state RPSs.[93] Under these programs, consumers may believe that they are

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chase them instead of offsets, even though the role of RECs in offsetting carbon is unclear. Gillenwater, *supra* note 6, at 2117.

91. *See infra* text accompanying notes 98–104.

92. EDWARD A. HOLT & RYAN H. WISER, ERNEST ORLANDO LAWRENCE BERKELEY NAT'L LAB., TECHNICAL REPORT NO. LBNL-62574, THE TREATMENT OF RENEWABLE ENERGY CERTIFICATES, EMISSIONS ALLOWANCES, AND GREEN POWER PROGRAMS IN STATE RENEWABLES PORTFOLIO STANDARDS 22 (2007), *available at* http://eetd.lbl.gov/ea/emp/reports/62574.pdf.

93. *See, e.g.*, 225 MASS. CODE REGS. 14.07(1) (2010) ("A Retail Electricity Supplier shall demonstrate . . . that RPS Class I Renewable Generation Attributes used for compliance have not otherwise been, nor will be, sold, retired, claimed, used or represented as part of electrical energy output or sales, or used to satisfy obligations in jurisdictions other than Massachusetts."); *see also* BIRD & LOKEY, *supra* note 60, at 11 (listing states that allow, prohibit, or fail to address double counting of voluntary green purchases by consumers for RPS compliance).

purchasing a REC above and beyond those that utilities must acquire under state law.

Double counting can also be deceptive because if a REC is counted for compliance multiple times, or sold to multiple consumers, the risk arises that ratepayers or consumers may provide multiple payments for the same unit of renewable energy produced.[94] RECs may be counted toward compliance requirements multiple times if the methods used to track them are insufficiently rigorous, thus keeping them in circulation when they should have been retired based on representations to consumers. While this problem could arise in a private, contractual scheme, regional tracking systems, which denote retired RECs, are likely capable of mitigating it.[95] Independent certification programs also work to limit this problem.[96]

Windfall payments to renewable energy generators might also occur where REC ownership is unclear. FERC decisions have heightened this risk. Because RECs were not traded actively until well after the passage of the Public Utilities Regulatory Policies Act of 1978 ("PURPA"),[97] initial contracts under PURPA did not allocate ownership of RECs between the qualifying facility ("QF") that generated the renewable electricity and the purchaser of the electricity.[98] When states began to institute RPSs, both generators and utilities sought to capture the value of newly created RECs. In 2003, the owners of several waste-to-energy QFs petitioned the FERC for a declaratory order stating that PURPA contracts did not convey RECs to utilities that purchased electricity from the QFs.[99] FERC agreed, holding that the amount paid to QFs—the avoided costs that the utility would have spent to generate the electricity itself—did not include environmental attributes:

94. *See* BIRD & LOKEY, *supra* note 60, at 10.

95. *See infra* Part IV.C.

96. *See infra* Part II.B.3.

97. 16 U.S.C. §§ 2601–2645 (2006).

98. EDWARD A. HOLT ET AL., ERNEST ORLANDO LAWRENCE BERKELEY NAT'L LAB., WHO OWNS RENEWABLE ENERGY CERTIFICATES? AN EXPLORATION OF POLICY OPTIONS AND PRACTICE 3 (2006), *available at* http://eetd.lbl.gov/ea/EMS/reports/59965.pdf. This is problematic because if the QF receives the RECs, the utility must pay an additional premium to obtain RECs for compliance purposes, whereas if the utility receives the RECs, the QFs are stripped of an incentive to expand renewable generation capacity.

99. Am. Ref-Fuel Co., 105 Fed. Energy Reg. Comm'n Rep. (CCH) ¶ 61,004, at ¶¶ 1–3 (Oct. 1, 2003).

> Significantly, what factor is not mentioned in the Commission's regulations is the environmental attributes of the QF selling to the utility. This is because avoided costs were intended to put the utility into the same position when purchasing QF capacity and energy as if the utility generated the energy itself or purchased the energy from another source. In this regard, the avoided cost that a utility pays a QF does not depend on the type of QF, i.e., whether it is a fossil-fuel-cogeneration facility or a renewable-energy small power production facility. The avoided cost rates, in short, are not intended to compensate the QF for more than capacity and energy.[100]

Strangely, FERC did not stop at this holding: it further asserted that state law governed ownership of RECs.[101] Therefore, "a state may decide that a sale of power at wholesale automatically transfers ownership of the state-created RECs, [and] that requirement must find its authority in state law, not PURPA."[102] In the years since FERC's decision to devolve authority over REC ownership to the states, several states have implemented regulations that assign RECs to one party or the other under PURPA contracts. As of 2006, sixteen states had made this leap, with ten of these states determining that power purchasers owned RECs under existing contracts and six deciding that, under new contracts, QFs retained REC ownership unless specifically allocated otherwise.[103]

Litigation on REC ownership at the state level continues. For example, the City of Boulder sold hydroelectricity to Public Service Company of Colorado ("PSCo") under power purchase agreements that predated Amendment 37, Colorado's voter-enacted RPS, and were therefore silent on REC allocation.[104] In 2005, the Colorado PUC awarded RECs generated from hydropower to PSCo under the argument that Amendment 37 was approved by voters with the intent to encourage utility investment in renewable energy, not to provide a windfall to

100. *Id.* ¶ 61,004, at ¶ 22 (emphasis omitted).
101. *Id.* ¶ 61,004, at ¶ 24.
102. *Id.*
103. EDWARD A. HOLT ET AL., WHO OWNS RENEWABLE ENERGY CERTIFICATES: AN EXPLORATION OF POLICY OPTIONS AND PRACTICE 7 (2006), *available at* http://eetd.lbl.gov/EA/emp/reports/rec-ownership.pdf.
104. Press Release, City of Boulder, Boulder Settles Renewable Energy Credits Lawsuit (Feb. 16, 2007), *available at* http://joomla.ci.boulder.co.us/index.php?option=com_content&view=article&id=6600:feb-16-2007-boulder-settles-renewable-energy-credits-lawsuit-&catid=585:2007-news-releases&Itemid=2525.

preexisting generators.[105] Boulder brought suit in 2006, leading to a settlement in which the city and PSCo will split the estimated 450,000 RECs equally until the power purchase agreement ends in 2017.[106] Accordingly, FERC's lack of guidance leads states and parties to improvise with regard to REC ownership, perhaps with costly results.

Just as the ownership of RECs under a long-term contract may be disputed, so too can the ownership of derived attributes of RECs. Ownership of attributes such as emissions reductions may be uncertain because of broad statutory definitions that often include an extensive list of environmental benefits, among them climate change mitigation.[107] Although RECs are defined in various ways, they have not yet been legally recognized as a property right that allows the holder to claim a certain number or type of environmental benefits.[108] Therefore, because of these diverse definitions, there is a possibility that renewable energy could be counted both in a REC market and valued as a carbon offset in a different market.[109] For instance, some states, such as California, explicitly define RECs to include "any avoided emissions of [GHGs]."[110] If a renewable energy generator were to sell a REC in a state that defines RECs as does California, and then sold a carbon offset from the same unit of generation (based on the proposition that more renewable energy leads to less conventional generation), the sale of the REC might have been artificially high, as it contained environmental attributes that were then sold separately.

Moreover, the generator's assumption—that RECs and carbon offsets are equivalent—is probably false. Renewable energy creates only indirect emissions reductions, which are

105. COLO. PUB. UTILS. COMM'N, DOCKET NO. 05R-112E, IN THE MATTER OF THE PROPOSED RULES IMPLEMENTING RENEWABLE ENERGY STANDARDS 4 CCR 723-3, at 32–33 (2005), *available at* http://www.dora.state.co.us/puc/docketsdecisions/decisions/2005/C05-1461_05R-112E.pdf.

106. Press Release, City of Boulder, *supra* note 104; *see generally* CITY OF BOULDER CITY COUNCIL, AGENDA ITEM 6A (2007), *available at* http://joomla.ci.boulder.co.us/files/Clerk/Agendas/2007/02-20-07/6a.pdf.

107. *See supra* Part II.A.2.

108. Gillenwater, *supra* note 6, at 2117.

109. *See id.* at 2116–17.

110. Definition and Attributes of Renewable Energy Credits for Compliance with the California Renewables Portfolio Standard, Rulemaking 06-02-012, at 15 (Cal. Pub. Utils. Comm'n Aug. 21, 2008) (decision), *available at* http://docs.cpuc.ca.gov/word_pdf/FINAL_DECISION/86954.pdf.

difficult to verify.[111] A wind farm does not offset carbon emissions itself, but it could if the electricity it generates reduces the need for electricity from a coal-fired power plant. Yet because utilities must maintain a specified amount of easily dispatchable baseload power, which is often coal-fired, renewable energy may add to the electricity supply rather than supplant it.[112] As these examples show, clarity in tracking, contracts, and regulatory policy are helping to reduce the risk of double counting in the United States However, other concepts, such as additionality, have not been addressed as successfully.

4. The False Complexity of Additionality

The meaning of additionality is widely debated, but the broad idea animating it is that of financial "cause and effect"[113]: i.e., the premium a consumer spends on a REC should cause a MWh of renewable electricity to be generated. When consumers voluntarily participate in utility green pricing programs, they do so with the belief that the premiums they pay for green power are helping to subsidize the development of green power that goes beyond what is required by law and is new rather than preexisting.[114] Additionality thus expresses the desire of consumers and regulators alike to establish a measurable connection between a voluntary payment and the generation of more renewable energy.[115] There are numerous

111. *See* OFFSET QUALITY INITIATIVE, MAINTAINING CARBON MARKET INTEGRITY: WHY RENEWABLE ENERGY CERTIFICATES ARE NOT OFFSETS 4 (2009), *available at* http://www.climatetrust.org/pdfs/JuneBrief.pdf. A further complication may occur depending on the type of renewable energy developed. For instance, the flooding of land to create hydroelectric power may generate carbon dioxide and methane emissions as vegetation dies. *See, e.g.*, L. D. Danny Harvey, *The Exchanges Between Fearnside and Rosa Concerning the Greenhouse Gas Emissions from Hydro-Electric Power Dams: An Editorial Comment*, 75 CLIMATIC CHANGE 87, 88 (2006).

112. *See, e.g.*, U.S. DEP'T OF ENERGY, DOE/GO-102008-2567, 20% WIND ENERGY BY 2030: INCREASING WIND ENERGY'S CONTRIBUTION TO U.S. ELECTRICITY SUPPLY 88 (2008), *available at* http://www1.eere.energy.gov/windandhydro/pdfs/41869.pdf ("Wind power cannot replace the need for many 'capacity resources,' which are generators and dispatchable load that are available to be used when needed to meet peak load.").

113. Gillenwater, *supra* note 6, at 2112.

114. CLEAN AIR-COOL PLANET, A CONSUMERS' GUIDE TO RETAIL OFFSET PROVIDERS vii (2006), *available at* http://www.cleanair-coolplanet.org/ConsumersGuidetoCarbonOffsets.pdf.

115. While additionality is more relevant in carbon markets, it has been applied to REC markets as well. Gillenwater, *supra* note 6, at 2112.

tests for additionality, but none is universally accepted. Because the ultimate goal is to "ensur[e] that the commodity sold in the market actually represents a change in behavior," tests may be criticized for allowing too many false positives (activities that do not improve generation over business-as-usual levels) or negatives (excluding activities that do contribute to extra generation).[116]

The simplest test for additionality is the initiation date test, which considers all renewable energy generated after a given point in time to be additional.[117] For example, the Green-e certification program considers renewable energy "new" if it comes from generators built after January 1, 1997.[118] The regulatory test presumes that when renewable energy is purchased voluntarily instead of applied to an RPS, it is additional because it is beyond what is required by law.[119] This test is largely irrelevant, as most states now explicitly prohibit allocating voluntarily purchased RECs to meet RPS requirements.[120] Finally, there is a "but-for" test which asks whether the environmental benefit would have been realized without the payment for the REC.[121] This test is most accurate at the project level, rather than the market level, because voluntary REC purchases after a renewable energy generating plant is constructed do not cause the plant to produce more energy.[122]

Additionality is also relevant to determining whether a party to a REC contract is receiving excessive revenue compared to the true market value of the traded RECs. If a renewable energy generator receives state or federal subsidies that help it be built, and then later receives tradable RECs for actual generation, it could be earning windfall profits.[123] This

116. *Id.*
117. *Id.* at 2113.
118. *See infra* Part II.B.3.
119. Gillenwater, *supra* note 6, at 2113.
120. BIRD & LOKEY, *supra* note 60, at 9; *see also supra* text accompanying note 93. Although this practice is a type of double counting, it is also a violation of additionality concepts because it falsely suggests to consumers that they are purchasing green power in excess of that already mandated by state law.
121. Gillenwater, *supra* note 6, at 2113 (noting that this discussion is difficult because it is "counterfactual").
122. *Id.*
123. *See* Supplemental Answer Testimony and Exhibits of Richard P. Mignogna at 38, *In re* Application of Public Serv. Co. of Colo. for an Approval of its 2007 Renewable Energy Standard Compliance Plan, No. 06A-478E (Colo. Pub. Utils. Comm'n Mar. 9, 2007) [hereinafter Mignogna Testimony].

may violate financial additionality principles if the renewable energy generator would have been constructed even without the additional funding provided by the RECs.

Colorado's PUC has expressed concerns about counting RECs for compliance that have been generated in states with extensive funding for renewable energy generators. The problem emerged in the context of PSCo's plan to meet the state's RPS by purchasing 16,000 solar RECs from 3 Phases Energy Services, a corporation that purchases, aggregates, and sells RECs.[124] PSCo could not provide information on the sources of the RECs, other than that they would be from California.[125] However, under the California Solar Initiative ("CSI"), IOUs in the state pay eligible small-scale renewable energy generators, such as homeowners with rooftop solar panels, a per-kWh incentive for selling them electricity.[126] According to the California Public Utilities Commission, small-scale generators who receive incentive payments from IOUs under CSI and other programs also retain RECs, "consistent with the long-term goal of making the solar industry self-sufficient."[127] Since the generators keep their RECs, California IOUs that purchase the associated electricity cannot count those RECs for RPS compliance;[128] however, California law does not appear to preclude homeowners who receive incentives under the CSI program from selling RECs for compliance in other states, potentially leading to windfall profits.[129] While this discussion involves speculation, it demonstrates the policy problems inherent in additionality, and their potential to confuse.

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124. *Id.* at 39; *see also* Chris Rauber, *3 Phases Plugs into Middle of Green Energy Boom*, S.F. BUS. TIMES, Nov. 24, 2006, http://sanfrancisco.bizjournals.com/sanfrancisco/stories/2006/11/27/story8.html.

125. Mignogna Testimony, *supra* note 123, at 39.

126. CAL. PUB. UTILS. COMM'N, CALIFORNIA SOLAR INITIATIVE: PROGRAM HANDBOOK 1, 3–4, 6 (2009), *available at* http://www.gosolarcalifornia.org/documents/CSI_HANDBOOK.PDF.

127. Methods to Determine the Renewable Energy Credits from Renewable Distributed Generation, Rulemaking 06-03-004, at 28–29 (Cal. Pub. Utils. Comm'n Jan. 11, 2007) (opinion), *available at* http://docs.cpuc.ca.gov/WORD_PDF/FINAL_DECISION/63678.PDF.

128. *Id.* at 4.

129. *See* Mignogna Testimony, *supra* note 123, at 38 n.14. CSI may reduce proportionately the payments provided to participants who receive other incentives, but this appears to apply only to amounts paid under subsidy programs by the same IOUs who provide the CSI payments; accordingly, REC purchases by out-of-state IOUs are not covered by this provision. CAL. PUB. UTILS. COMM'N, *supra* note 126, at 38–39.

In sum, careless treatment of RECs can lead to numerous legal and policy difficulties, of which four are most problematic: unbundling RECs from electricity; the existence of diverse definitions; the risk of double counting; and the concept of additionality. While these difficulties are implicit in the use of RECs, existing consumer protection schemes have failed to clamp down on their harmful effects. The next Section considers federal, state, and independent efforts to protect consumers through REC regulation. Despite—or perhaps because of—the numerous parties participating in REC markets, a cohesive regulatory regime has not emerged.

B. Existing Regulatory Schemes Fail to Address These Problems

Several approaches, developed by both public agencies and non-governmental organizations, exist for the verification of green marketing claims, but few specifically address green energy. The Federal Trade Commission ("FTC") created a set of guidelines for green marketers, but it pursues complaints on a case-by-case basis rather than as part of a comprehensive enforcement effort. The National Association of Attorneys General ("NAAG") developed FTC-like guidelines specific to green power marketers, but NAAG's recommendations, despite being crafted under the auspices of state attorneys general, have not been adopted legislatively by any states and remain strictly advisory.[130] States in turn have approached green energy disclosure issues in a variety of ways, leading to difficulties for marketers who work across state lines and customers who lack clear and understandable guidelines. Accordingly, the Center for Resource Solutions' Green-e Energy program, which provides independent third-party verification of RECs, has been the most successful method of improving consumer faith in renewable energy markets. Yet, Green-e Energy still has flaws that impede its success, most notably its limited ability to punish program violations.

This Section considers federal, state, and independent consumer protection efforts that apply to RECs. Subsection 1, which examines federal enforcement practices, surveys FTC authority to regulate deceptive advertising under Section 5 of

130. *See infra* Part II.B.2.b.

the FTC Act,[131] and describes how guidelines developed by the FTC have failed to prevent the REC policy problems suggested in Section A. Subsection 2 looks at state efforts to protect consumers from deceptive practices with regard to green energy, including the adoption of the FTC's guidelines for environmental advertising, the development of separate disclosure policies for electricity, and the creation of the NAAG guidelines. Finally, Subsection 3 briefly describes the Center for Resource Solutions' Green-e Energy program, an independent certifier that attempts to provide a trustworthy verification signal to consumers. All of these efforts to promote truthful green advertising coexist, yet together they have been unable to effectively police a profusion of potentially misleading claims. The regulatory and voluntary schemes that exist to manage green power claims are incomplete, leaving the market ripe for manipulation.

1. The Limits of Federal Enforcement

Historically, the FTC's approach to green advertising claims has been to apply its authority to regulate deceptive advertising on a case-by-case basis. To this end, it has created guidelines that give environmental marketers examples of how to avoid making false claims. Unfortunately, none of these examples addresses RECs, although recent moves by the FTC suggest that it may provide guidelines focused on green energy in the near future.[132] The FTC's general authority and specific environmental guidelines are addressed below.

a. Federal Trade Commission § 5 Authority

The FTC Act[133] allows the Commission to prohibit unfair advertising practices either by promulgating industry-specific rules or through administrative adjudication. Section 5 of the

131. 15 U.S.C. §§ 41–58 (2006).

132. The FTC recently showed new interest in reforming the Green Guides by holding a series of workshops and requesting comments on issues related to green power marketing. Press Release, Fed. Trade Comm'n, FTC Reviews Environmental Marketing Guides, Announces Public Meetings (Nov. 26, 2007), http://www.ftc.gov/opa/2007/11/enviro.shtm. However, the massive expansion of the renewable energy market, particularly through state renewable portfolio standards, may already outstrip any attempt by the FTC to enforce green power standards on a case-by-case basis. *See supra* Part I.D.

133. 15 U.S.C. §§ 41–58.

FTC Act prohibits "unfair or deceptive acts or practices in or affecting commerce."[134] Deception under § 5 contains three components: "there must be a representation, omission or practice that is likely to mislead the consumer"; it must be material; and it must be deceptive from the point of view of a reasonable consumer.[135] Material misrepresentations are those that are "likely to affect a consumer's choice of . . . a product."[136] The representation is determined by the advertisement as a whole, including whether consumers can "easily evaluate" the product.[137] However, the FTC also notes that "in many circumstances, reasonable consumers do not read the entirety of an ad."[138] The FTC has used these general principles, applicable to all categories of advertisements it regulates, to create guidelines for environmental marketers.

b. Environmental Marketing Claims under FTC § 5

In the 1980s and 1990s, "environmental advertising mushroomed"[139] and led to both consumer concerns about deception and industry fears of "differing or inconsistent standards"[140] that might emerge if states began to pursue divergent enforcement strategies. In response to these concerns, but wary that comprehensive regulation would infringe on the EPA's authority to craft environmental policy,[141] the FTC pur-

134. *Id.* § 45(a)(1).

135. Cliffdale Assocs. Inc., 103 F.T.C. 110 app. at 175–76 (1984) (reprinting FTC Policy Statement on Deception).

136. *Id.* at 182.

137. *Id.* at 181.

138. *Id.*

139. Roscoe B. Starek, III, Comm'r, Fed. Trade Comm'n, Prepared Remarks Before the Intellectual Property Law Committee of the Chicago Bar Association Young Lawyers Section, A Brief Review of the FTC's Environmental and Food Advertising Enforcement Programs (Oct. 13, 1995), http://www.ftc.gov/speeches/starek/rbsgre.shtm [hereinafter Starek, A Brief Review].

140. Roscoe B. Starek, III, Comm'r, Fed. Trade Comm'n, Prepared Remarks Before the Alliance for Beverage Cartons and the Environmental Symposium, The Federal Trade Commission's Green Guides: A Success Story (Dec. 4, 1992), http://www.ftc.gov/speeches/starek/egstarek.shtm [hereinafter Starek, A Success Story].

141. *See* Glenn Israel, *Taming the Green Marketing Monster: National Standards for Environmental Marketing Claims*, 20 B.C. ENVTL. AFF. L. REV. 303, 319 (1993) (noting that, in 1991, Commissioner Mary Azcuenaga opposed FTC rulemaking in this area while Chairperson Janet Steiger "stated that the FTC should rise to the green claims challenge and promptly issue green marketing guidelines"); *see also* Starek, A Success Story, *supra* note 140 ("[T]he Commission's ju-

sued case-by-case enforcement coupled with the development of the Guides for the Use of Environmental Marketing Claims ("Green Guides").[142] Therefore, rather than promulgating trade regulation rules, the FTC developed guidelines that marketers can use to determine whether their advertisements are legally acceptable.[143] In contrast to the comprehensive regulatory scheme promulgated by the FTC to regulate funeral industry practices by providing specific definitions, barring specific practices, and mandating specific disclosures,[144] the Green Guides provide general definitions and "do not represent the only permissible approaches to qualifying a claim."[145] The Green Guides "provide the basis for voluntary compliance with [§5 of the FTC Act] by members of industry"[146] and apply to words, logos, symbols, brand names, marketing in different media, packaging, etc.[147] Their focus is "consumer perception"—not just what advertisements explicitly convey, but what they imply as well.[148]

The Green Guides incorporate five principles that help to define what "deception" is in context.[149] First, claims must be

risdiction extends only to advertising and marketing of claims to consumers. The Commission does not have jurisdiction to set environmental policy . . . .").

142. 16 C.F.R. pt. 260 (1992) (amended in 1996 and 1998).

143. The FTC may create "interpretive rules" and "rules which define with specificity" unfair or deceptive acts, but it may not "develop or promulgate any trade rule or regulation with regard to the regulation of the development and utilization of the standards and certification activities pursuant to this section," which would seem to limit its policy action in areas like defining life-cycle analysis. 15 U.S.C. § 57a(a) (2006).

144. *See* 16 C.F.R. §§ 453.1–.9 (2009).

145. 16 C.F.R. § 260.3 (2009); *see also id.* § 1.5 ("Industry guides are administrative interpretations of laws administered by the Commission for the guidance of the public in conducting its affairs in conformity with legal requirements. They provide the basis for voluntary and simultaneous abandonment of unlawful practices by members of industry. Failure to comply with the guides may result in corrective action by the Commission under applicable statutory provisions.").

146. 16 C.F.R. § 260.1 (2009).

147. 16 C.F.R. § 260.2 (2009); *see also* Starek, A Brief Review, *supra* note 139 ("The Guides are administrative interpretations of FTC policy, laws, and cases. They are voluntary and apply to all forms of marketing of products and packages to the public. They do not preempt state and local laws or regulations. The Guides reiterate basic Commission law by requiring that all express and implied material environmental claims about objective product attributes be substantiated by competent and reliable evidence.").

148. Starek, A Brief Review, *supra* note 139.

149. J. Thomas Rosch, Comm'r, Fed. Trade Comm'n, Address at the American Conference Institute's Regulatory Summit for Advertisers and Marketers: Responsible Green Marketing 6 (June 18, 2008), *available at* http://www.ftc.gov/speeches/rosch/080618greenmarketing.pdf.

substantiated: advertisers must have a "reasonable basis" for their claims about a product's attributes before they advertise.[150] Second, claims must not be "open-ended" or "applicable only in quite limited circumstances."[151] Third, claims should avoid "dangling" comparisons that fail to place a comparison in context.[152] Fourth, marketers should avoid "exaggerated feature claims" that promote the presence or absence of a component or feature that is irrelevant to consumers.[153] Finally, advertisers should avoid "using terms that consumers don't generally understand."[154] These principles are established through a series of examples that, while not exhaustive, are intended to provide "safe harbor[s]" for advertisers who operate close to them.[155]

Legal results under the Green Guides remain slim. Between 1990 and 2000, the FTC pursued only thirty-seven cases of deceptive green advertising.[156] Although the FTC acknowledges that the Green Guides apply to renewable energy,[157] only a handful of energy cases have been litigated, all with regard to energy efficiency claims.[158] Most cases involved the use of

150. Thompson Med. Co., 104 F.T.C. 648 app. at 839 (1984); *see also* 16 C.F.R. § 260.5 (2009) ("[S]ubstantiation will often require competent and reliable scientific evidence, defined as tests, analyses, research, studies or other evidence . . . .").

151. Rosch, *supra* note 149, at 7.

152. *Id.* at 7.

153. *Id.* at 7–8 (internal quotation marks omitted). For an example, see *supra* note 1 and accompanying illustration.

154. *Id.* at 8.

155. 16 C.F.R. § 260.3 (2009). The examples in the Green Guides demonstrate overstatement, inappropriate comparisons, and the correct use of terminology such as "biodegradable" and "recycled content." *See id.* § 260.7. For instance, the Green Guides suggest that a claim that a product can be recycled is deceptive if very few facilities across the nation can accept it for recycling. *See id.* § 260.7(d). Additionally, an aerosol spray labeled "ozone-friendly" because it lacks chlorofluorocarbons (illegal ozone-depleting substances) could be deceptive if it actually contains volatile organic compounds that contribute to smog, since the labeling conveys "that the product is safe for the atmosphere as a whole." *See id.* § 260.7(h) ex.2.

156. Bureau of Consumer Prot., Fed. Trade Comm'n, Environment Enforcement Page, http://www.ftc.gov/energy/ (follow "Environment" hyperlink; then follow "Enforcement" hyperlink for a list of cases in which environmental claims were pursued) (last visited Feb. 25, 2010).

157. *See* Fed. Trade Comm'n, Advertising Retail Electricity and Natural Gas: A Powerful Opportunity, http://www.ftc.gov/bcp/edu/pubs/business/energy/bus47.shtm#environ (last visited Feb. 25, 2010).

158. *See, e.g.*, Kryton Coatings Int'l, Inc., No. C-4052 (Fed. Trade Comm'n June 14, 2002), *available at* http://www.ftc.gov/os/2002/06/krytondo.htm (concerning unsubstantiated R-value claims for building coatings); *see also* Rosch, *supra* note 149, at 14 n.40 (discussing FTC energy efficiency cases since 2000).

products that offered health benefits or used generic terms such as "recyclable."[159] A prototypical deceptive claim is depicted in *In re Mobil Oil Corp*.: labels on Hefty trash bags stated that the bags, among other things, "[d]egraded in sunlight" and were "[l]andfill safe."[160] According to the FTC, Hefty represented that its bags "will completely break down, decompose, and return to nature in a reasonably short period of time after consumers dispose of them as trash." The FTC found these claims insufficient because Mobil Oil Corp. lacked substantiating evidence at the time the product was released.[161]

Nevertheless, recent efforts by the FTC suggest that it may be willing to make deceptive green power claims a higher priority. As of early 2010, the Obama administration had filed seven greenwashing complaints, including one against Kmart Corp.[162] Moreover, the FTC has been engaged in reviewing the Green Guides since 2007.[163] In early 2008, the FTC held three public meetings to discuss updates to the Green Guides related to green buildings and textiles, green packaging, and, notably, RECs and carbon offsets.[164] The FTC identified ten areas for discussion at the workshop, including the nature of REC and carbon offset markets, third-party verification, marketing trends, and problems of double counting and additionality.[165] Moreover, the FTC noted that, for RECs and offsets, "the potential for deception is greater than with more tangible products" and that determining whether consumers understand what they receive when they purchase these products must be addressed.[166] The FTC received seventy-seven comments from industry organizations, businesses, and consumers with regard to RECs and offsets.[167] That the FTC found it appropriate to

159. *See generally* Stephen Gardner, *How Green Were My Values: Regulation of Environmental Marketing Claims*, 23 U. TOL. L. REV. 31 (1991).

160. 116 F.T.C. 113, 114 (1993).

161. *Id.* at 115.

162. Gabriel Nelson, *FTC Moves May Signal Start of 'Greenwashing' Crackdown*, N.Y. TIMES, Feb. 3, 2010, http://www.nytimes.com/gwire/2010/02/03/03greenwire-ftc-moves-may-signal-start-of-greenwashing-cra-90834.html.

163. Press Release, Fed. Trade Comm'n, *supra* note 132.

164. *Id.*

165. Guides for the Use of Environmental Marketing Claims; Carbon Offsets and Renewable Energy Certificates; Public Workshop, 72 Fed. Reg. 66,094, 66,097 (Nov. 27, 2007) (to be codified at 16 C.F.R. pt. 260).

166. *Id.* at 66,096.

167. *See* Fed. Trade Comm'n, Public Comments to Guides for the Use of Environmental Marketing Claims: Carbon Offsets and Renewable Energy Certificates, http://www.ftc.gov/os/comments/carbonworkshop/index.shtm (last visited Feb. 25, 2010).

discuss these issues indicates that it may be willing to step into a more prominent position with regard to green advertising. However, as of the time of publication, the FTC has not released any revisions to the Green Guides.[168]

2. State Efforts

Although the FTC's Green Guidelines can be used by state consumer protection agencies, they do not preempt separate state laws.[169] Subsequently, a patchwork of different state schemes has arisen out of the lack of binding federal standards for defining environmental marketing terms. This Subsection considers how unique state programs affect both the voluntary and compliance markets and the NAAG Guidelines, which were developed by states for states, but have thus far gained little traction.

a. Development of Separate State Policies

State laws have emerged to address environmental advertising problems, but they have provided only limited guidance to consumers and participants in renewable energy markets. Some states define or prohibit specific environmental marketing terms; others have established unique, statewide labeling programs; and some have adopted the FTC's Green Guides di-

168. Moreover, prior efforts to introduce broader environmental marketing legislation have failed. In the 1990s, Congress rejected three bills that would have extended unified federal control over enforcement of green marketing requirements. The most prominent proposal was the Environmental Marketing Claims Act of 1991, S. 615, 102d Cong., sponsored by Senator Frank Lautenberg (D–N.J.). Senator Lautenberg's goal was to create "commonly understood terms for environmental claims" in order to combat a "hodgepodge of unsupported claims, misleading labels and self-serving advertisements." Frank R. Lautenberg, *Environmental Marketing Claims Act: Pulling the "Green" Over Our Eyes*, 16 SETON HALL LEGIS. J. 305, 307 (1992). The Act would have required the EPA to promulgate regulations standardizing such terms as "recyclable" and "ozone neutral" so as to ensure that claims are made only with the "best available scientific information." S. 615, §§ 6(b)(1), 6(b)(3). Senator Lautenberg selected the EPA and not the FTC as the primary regulatory agency because of its past experience in environmental standard-setting. *See* Lautenberg, *supra*, at 310–11.

169. 16 C.F.R. § 260.2(b) (2009) ("Because the guides are not legislative rules under Section 18 of the FTC Act, they are not themselves enforceable regulations, nor do they have the force and effect of law. The guides themselves do not preempt regulation of other federal agencies or of state and local bodies governing the use of environmental marketing claims. Compliance with federal, state or local law and regulations concerning such claims, however, will not necessarily preclude Commission law enforcement action under Section 5.").

rectly or developed a more stringent version of them.[170] For instance, Rhode Island, Indiana, and California all adopted by reference the Green Guides, making them enforceable under state law.[171] In addition, California provides that terms such as "ecologically friendly" and "earth friendly," which were not defined in the Green Guides, may only be used when the advertiser maintains supporting documentation that includes "[a]ny significant adverse environmental impacts directly associated with the production, distribution, use, and disposal of the consumer good" and makes that information available to the public.[172] In many states, however, consumer protection laws that could be used to bring claims for unfair or deceptive practices in renewable energy markets are weak. For instance, seven states—Colorado, Indiana, Iowa, Mississippi, Oregon, South Dakota, and Texas—"prohibit only a closed list of specific deceptive acts" rather than generally barring deceptive practices, and may prevent consumers from participating in enforcement or require them to prove that advertisers engaged in deceptive practices knowingly.[173] Furthermore, sixteen states exempt utility companies from liability for deceptive advertising.[174]

170. *See* E. Howard Barnett, *Green with Envy: The FTC, the EPA, the States, and the Regulation of Environmental Marketing*, 1 ENVTL. LAW. 491, 504–06 (1995).

171. CAL. BUS. & PROF. CODE §§ 17580–.5 (West 2008); IND. CODE § 24-5-17-2(b) (2006); R.I. GEN. LAWS § 6-13.3-1(2) (2001).

172. CAL. BUS. & PROF. CODE § 17580(a) (West 2009).

173. CAROLYN L. CARTER, NAT'L CONSUMER LAW CTR. INC., CONSUMER PROTECTION IN THE STATES: A 50-STATE REPORT ON UNFAIR AND DECEPTIVE ACTS AND PRACTICES STATUTES 11 (2009), *available at* http://www.consumerlaw.org/issues/udap/content/UDAP_Report_Feb09.pdf.

174. *Id.* at 15 (listing Alabama, Delaware, Florida, Louisiana, Maryland, Michigan, Montana, Nebraska, New Hampshire, New Jersey, Ohio, Oklahoma, Rhode Island, Utah, Virginia, and Washington).

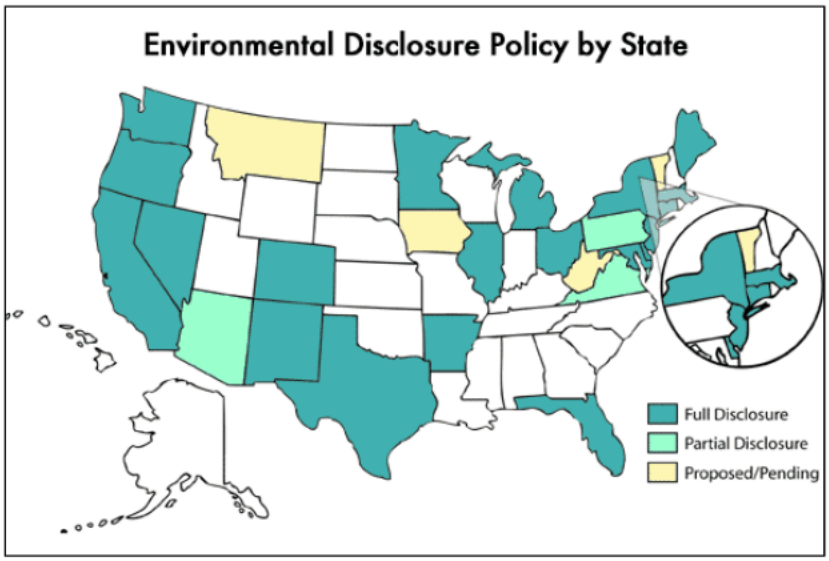

Fig. 6: Environmental Disclosure Policy by State, 2002[175]

Some laws do apply to utility disclosure, however. As Figure 6 shows, several states, particularly those with restructured markets, have developed full or partial disclosure policies that require retail electricity providers to offer customers certain information about their fuel resource mix.[176] Of those states that require some form of disclosure, most force utilities to provide information about their fuel mix and some mandate disclosure of pollutant emissions, although these requirements may apply to different regulated entities and the figures may be calculated by different methods.[177] Figure 7 depicts a sam-

175. Office of Energy Efficiency and Renewable Energy, Dep't of Energy, Map of Environmental Disclosure Policy by State, http://apps3.eere.energy.gov/greenpower/resources/maps/disclosure_map.shtml (last visited Feb. 25, 2010).

176. *See* Office of Energy Efficiency and Renewable Energy, Dep't of Energy, Green Power Network: Disclosure Policies, http://apps3.eere.energy.gov/greenpower/markets/disclosure.shtml (last visited Feb. 25, 2010) (defining partial disclosure policies as those "that are not mandatory, do not apply to all retail electricity suppliers, or do not result in direct disclosure to consumers").

177. *See id.*; *see also* Office of Energy Efficiency and Renewable Energy, Dep't of Energy, Table of Environmental Disclosure Requirements by State—Aug. 2002, http://apps3.eere.energy.gov/greenpower/pdfs/disclosure_0802.pdf (last visited Feb. 25, 2010); RICHARD P. SEDANO, NAT'L COUNCIL ON COMPETITION & THE ELEC. INDUS., THE REGULATORY ASSISTANCE PROJECT, ELECTRIC PRODUCT

ple label used by California utilities. While this labeling requirement begins to address consumer protection needs, it affects only certain retail providers in certain states, precluding uniform development.

POWER CONTENT LABEL

ENERGY RESOURCES	PRODUCT NAME* (projected)	2007 CA POWER MIX** (for comparison)
Eligible Renewable	**55%**	**10%**
-- Biomass & waste	10%	<1%
-- Geothermal	11%	2%
-- Small hydroelectric	13%	6%
-- Solar	10%	<1%
-- Wind	11%	2%
Coal	**16%**	**32%**
Large Hydroelectric	**12%**	**24%**
Natural Gas	**16%**	**31%**
Nuclear	**1%**	**3%**
Other	**<1%**	**0%**
TOTAL	**100%**	**100%**

* 50% of this product is specifically purchased from individual suppliers.

** Percentages are estimate annually by the California Energy Commission based on electricity sold to California consumers during the previous year.

For specific information about this electricity product, contact Company Name. For general information about the Power Content Label, contact the California Energy Commission at 1-800-555-7794 or www.energy.ca.gov/consumer

Fig. 7: California's Power Content Label[178]

Unfortunately, these state policies do not effectively address the problems caused by utilizing RECs to encourage renewable energy development. The New York Public Service Commission ("NYPSC") is one example of a state agency that has struggled for over a decade to develop an effective environmental disclosure program for energy. NYPSC first issued

DISCLOSURE: A STATUS REPORT 18–19 (2002), *available at* http://www.ncouncil.org/Documents/disclosure_final.pdf.

178. Cal. Energy Comm'n, California's Power Content Label, http://www.energy.ca.gov/sb1305/power_content_label.html (last visited Feb. 25, 2010).

environmental disclosure regulations in 1998, requiring retail sellers of electricity to provide information on their fuel mixes and pollutant emissions.[179] The original RPS ordered by NYPSC in 2004 prohibited the transfer of RECs separately from renewable energy, and deferred the creation of a REC trading market until 2009. Accordingly, New York utilities could only meet their compliance requirements by purchasing electricity from renewable generators that were interconnected to the state power grid (the New York Independent Service Operator or "NYISO"), rather than purchasing RECs from renewable generators outside the NYISO spot market while continuing to use conventional electricity.[180] This policy changed in 2006, when NYPSC authorized REC trading unbundled from the purchase of electricity.[181] However, the disclosure labels continue to list fuel mix attributes and pollutant emissions without specifying whether unbundled RECs will be used to meet state RPS requirements.[182] As a result, consumers may not know the geographic origin or vintage of their renewable energy. Many states' policies require utilities to disclose their fuel mix without providing a similarly clear disclosure of how they are fulfilling RPS requirements.[183]

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179. Competitive Opportunities Regarding Elec. Serv., Case 94-E-0952, slip op. at 22–24 (N.Y. Pub. Serv. Comm'n Dec. 15, 1998) (opinion and order adopting environmental disclosure requirements and establishing a tracking mechanism), *available at* http://documents.dps.state.ny.us/public/Common/ViewDoc.aspx?DocRefId={F46FEA38-434A-4682-8FC8-797C0F26B2B3}.

180. *See* Motion of the Comm'n Regarding a Retail Renewable Portfolio Standard, Case 03-E-0188, slip op. at 56 (N.Y. Pub. Serv. Comm'n Sept. 24, 2004) (order regarding retail renewable portfolio standard), *available at* http://documents.dps.state.ny.us/public/Common/ViewDoc.aspx?DocRefId={B1830060-A43F-426D-8948-F60E6B754734}; Motion of the Comm'n Regarding a Retail Renewable Portfolio Standard, Case 03-E-0188, slip op. at 36–42 (N.Y. Pub. Serv. Comm'n Apr. 14, 2005) (order approving implementation plan, adopting clarifications, and modifying environmental disclosure program), *available at* http://documents.dps.state.ny.us/public/Common/ViewDoc.aspx?DocRefId={601B2105-AD06-4FB0-8A7B-C4CFAF43BE9A}.

181. *See generally* Motion of the Comm'n Regarding a Retail Renewable Portfolio Standard, Case 03-E-0188 (N.Y. Pub. Serv. Comm'n June 28, 2006) (order recognizing environmental attributes and allowing participation of projects with physical bilateral contracts), *available at* http://documents.dps.state.ny.us/public/Common/ViewDoc.aspx?DocRefId={99B37D71-602B-47F1-8989-5729836A3809}.

182. See N.Y. Pub. Serv. Comm'n, Environmental Disclosure Label Program, http://www3.dps.state.ny.us/e/energylabel.nsf/ (last visited Feb. 25, 2010), for a selection of labels issued by New York utilities.

183. See generally Office of Energy Efficiency and Renewable Energy, Dep't of Energy, Green Power Markets: Disclosure Policies, http://apps3.eere.energy.gov/greenpower/markets/disclosure.shtml (last visited Feb. 25, 2010), for a list of different states' electricity disclosure policies.

b. National Association of Attorneys General Guidelines

The National Association of Attorneys General ("NAAG") adopted the Environmental Marketing Guidelines for Electricity ("NAAG Guidelines") in 1999 out of concerns that deregulation would lead to fraud in marketing by retailers of green power products.[184] Rather than promoting radical changes to law, the NAAG Guidelines state that "it is still possible to interpret existing consumer protection law to set forth [these] standards."[185] Consequently, the NAAG Guidelines adopt the principles underlying the FTC's Green Guides—deception, substantiation, and avoidance of false comparatives—and apply them to electricity market participants, providing new "safe harbor" examples that the Green Guides lack.[186]

The NAAG Guidelines provide examples that at least begin to address the four major problems created by RECs: unbundling, attribute definitions, double counting, and additionality. First, the NAAG recommends that the use of RECs be disclosed because of the nature of the grid.[187] For instance, advertising hydropower as "from the river to your door" is deceptive because it falsely implies that one can "track electricity directly from the generator to the user."[188] Second, while the NAAG does not explicitly advocate for unified definitions for what RECs stand for, it does acknowledge that general claims about REC attributes are problematic. For example, claims about environmental attributes may need to be limited if they only

184. In the early 1990s, the NAAG issued two reports that dealt with more general environmental claims such as those addressed by the FTC Guides. The first report is available online and provides examples similar to those in the FTC Guides. CAL. ATT'Y GEN. ET AL., THE GREEN REPORT: FINDINGS AND PRELIMINARY RECOMMENDATIONS FOR RESPONSIBLE ENVIRONMENTAL ADVERTISING (1990), *available at* http://www.p2pays.org/ref/24/23677.pdf.

185. ENVTL. MKTG. SUBCOMM. OF THE ENERGY DEREGULATION WORKING GROUP, *supra* note 80, at 2.

186. For instance, the general description of a company as "environmentally friendly" is deceptive if it provides electricity products sourced from fossil fuels as well as renewable resources. *Id.* at 13 ex.1. For comparison, see the FTC's Green Guides at 16 C.F.R. § 260.7(a) (2009).

187. ENVTL. MKTG. SUBCOMM. OF THE ENERGY DEREGULATION WORKING GROUP, *supra* note 80, at 7 ("If a tagging system is adopted, the Attorneys General also recommend that disclosure be made so that consumers understand the meaning of tagging-based claims.").

188. *Id.* at 18 ex.4.

impact a small geographic area.[189] Additionally, because electricity generated by a hydropower facility may contribute to flooding and the release of GHGs from organic matter, it should not be labeled "emissions-free."[190] Third, the NAAG specifically states that double counting should be prohibited, although it does not advocate a particular verification methodology, such as a regional REC-tracking system.[191] Fourth, NAAG addresses additionality through examples suggesting that companies should avoid representing that their electricity is of recent vintage or was developed above business-as-usual requirements without substantiation.[192] In contemplating these four concepts, the NAAG Guidelines began to fill a regulatory gap that allowed green electricity marketers excessive leeway in making claims.

Despite their usefulness, the NAAG Guidelines are advisory rather than binding because states have failed to adopt them.[193] Similarly, although the FTC suggests them as a resource for retail electricity marketers subject to state laws,[194] it has resisted formally adopting the NAAG Guidelines, probably in part because of differences in opinion as to what information consumers should receive.[195] Unfortunately, this means that

189. *Id.* at 11–12 (noting that CO_2 emission reductions are not localized benefits).

190. *Id.* at 19 ex.8.

191. *Id.* at 7 ("The Attorneys General do not take a position on which method of substantiation—auditable contract paths, tradable certificates, or some other method—a state should adopt.").

192. *Id.* at 10 ex.2, 16.

193. Based on searches of state statutes regarding advertising deception. While several states do require full or partial disclosure of electricity sources, *supra* Figure 6, as Part II.B.2.a. discussed, these regimes do not address the problems RECs cause as thoroughly as do the NAAG Guidelines.

194. *See* Fed. Trade Comm'n, Advertising Retail Electricity and Natural Gas: A Powerful Opportunity, http://www.ftc.gov/bcp/edu/pubs/business/energy/bus47.shtm (last visited Mar. 23, 2010).

195. For instance, the FTC suggested a small number of important changes to the NAAG Guides which, subsequently, were not adopted by the NAAG. Among these changes, three were particularly relevant. First, the FTC recommended that the NAAG not require disclosure of the use of RECs, under the twin beliefs that advertising REC use would confuse rather than aid consumers, and that companies generally are not required to disclose their substantiation methods so long as substantiation exists. Bureau of Consumer Prot., Fed. Trade Comm'n, Revised Draft of Proposed Environmental Marketing Guidelines of Electricity (Aug. 12, 1999), http://www.ftc.gov/be/v990012.shtm. Second, the FTC suggested that advertising would become unwieldy if environmental attributes of electricity had to be disclosed on a life-cycle basis. *Id.* Finally, the FTC noted that increased disclosure requirements could chill environmental claims that might otherwise be legitimate and beneficial to consumer choice. *Id.*

one of the more detailed and coordinated efforts to provide guidance for renewable energy markets lacks the force of law.

3. Voluntary Certifiers

The proliferation of environmental marketing claims by utilities and REC providers led to the creation of independent organizations that certify green energy. The Green-e program, developed by the non-profit Center for Resource Solutions ("CRS"), is "the nation's leading independent consumer protection program for the sale of renewable energy and greenhouse gas reductions in the retail market."[196] Green-e Energy was CRS's first certification program, starting in 1997, and it currently provides three green power products: REC certification, verification of utility green pricing programs, and verification of competitive renewable energy products for retail electricity providers in restructured markets.[197] Across these three products, and accounting for resale of RECs, "Green-e Energy certified nearly 17.4 million 'unique' MWh in 2008."[198] Accordingly, Green-e Energy products could account for almost three-quarters of the voluntary renewable energy market.[199] As Figure 8 shows, RECs compose the majority of Green-e Energy sales. Moreover, 99.5 percent of all certified RECs were purchased by commercial rather than residential consumers in 2008.[200]

196. Ctr. for Res. Solutions, Green-e, http://www.green-e.org/ (last visited Feb. 13, 2010). REC aggregators, such as Sterling Planet, generally purchase Green-e certified RECs for retail sale. *See* Sterling Planet, What We Do, http://www.sterlingplanet.com/what-we-do/ (last visited Feb. 13, 2010).

197. CTR. FOR RES. SOLUTIONS, 2008 GREEN-E VERIFICATION REPORT 4–5 (2009), *available at* http://www.green-e.org/docs/2008%20Green-e%20Verification%20Report.pdf.

198. *Id.* at 4.

199. This figure is based on 24 million MWh in the voluntary market. *See supra* text accompanying note 72; *see also* CTR. FOR RES. SOLUTIONS, *supra* note 197, at 4–5.

200. CTR. FOR RES. SOLUTIONS, *supra* note 197, at 8 tbl.7.

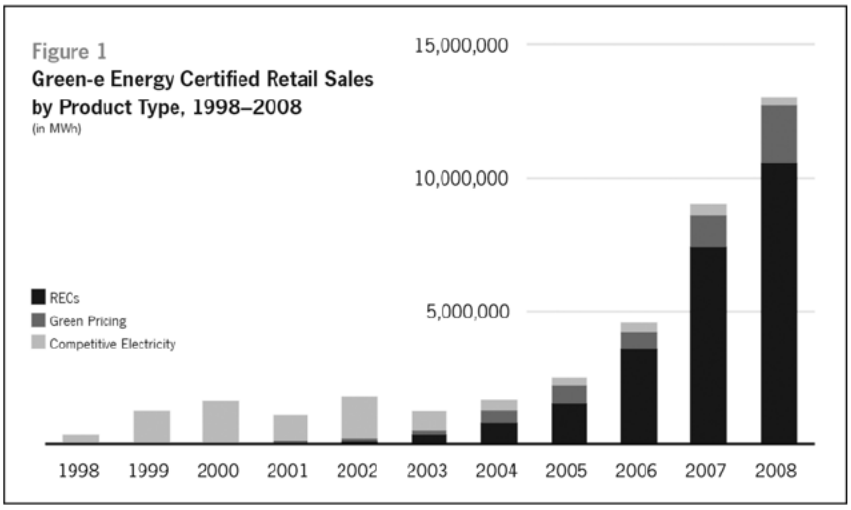

Fig. 8: Green-e Energy Certified Retail Sales by Product Type, 1998-2008 ("MWh")[201]

Use of the Green-e Energy logo indicates that the RECs were generated within the year they were sold from generators built in 1997 or later, include all environmental attributes (even emissions reductions), have not been double counted, and have not been purchased by consumers in addition to being counted for compliance.[202] Certification is voluntary, and may be sought by power producers, utility purchasers, or governmental agencies.[203] The certification process requires annual auditing in which participants must submit contracts, Product Content Labels, and billing statements from generators and

201. *Id.* at fig.1.

202. CTR. FOR RES. SOLUTIONS, GREEN-E ENERGY NATIONAL STANDARD VERSION 1.6, at 5–7 (2008), *available at* http://www.green-e.org/docs/energy/Appendix%20D_Green-e%20Energy%20National%20Standard.pdf. Use of the Green-e Energy logo also requires acceptance of consumer disclosure requirements. *See* CTR. FOR RES. SOLUTIONS, APPENDIX B: GREEN-E ENERGY CODE OF CONDUCT AND CUSTOMER DISCLOSURE REQUIREMENTS 7–8 (2008), *available at* http://www.green-e.org/docs/energy/Appendix_B-National_Code_of_Conduct_Cust_Disclosure.doc.

203. For instance, the cities of Longmont, Loveland, and Estes Park in Colorado sought Green-e certification for the Medicine Bow, Wyoming wind farm from which they purchase electricity. Platte River Power Auth., The Environment: Renewable Energy, http://www.prpa.org/environment/renewables.htm (last visited Feb. 13, 2010); *see also* TOWN OF ESTES PARK, OPTING FOR RENEWABLES: RENEWABLE ENERGY PURCHASE PROGRAM (2008), *available at* http://www.estesnet.com/LightPower/Renewable%20Purchase%20Brochure%200808.pdf.

utilities.[204] In addition, CRS conducts twice-annual, in-house "marketing compliance reviews" to ensure that its customers are following its disclosure policies.[205]

As an independent certifier, CRS works carefully to maintain its reputation. It frequently comments on, and urges stakeholders to comment on, state actions that affect REC regulation.[206] It also issues market advisories when its products are compromised. In 2008, for example, CRS issued an advisory for participants in the voluntary market in Texas based on double-counting risks that emerged from a new regulation granting non-wind renewable generators both a REC and a separately tradable "compliance premium" for each MWh.[207]

However, CRS faces challenges in maintaining its dominant market position because of states' treatment of RECs. For instance, individual states are looking to take over REC verification on their own.[208] Additionally, as a non-profit, CRS has limited capability to bring suit against those who violate its policies, and it has received little support from states in its efforts. In 2007, it decertified Clean and Green, a REC marketer based in Boulder, Colorado, for failing to follow through on auditing requirements.[209] CRS notified Colorado Attorney Gen-

204. Ctr. for Res. Solutions, Green-e Energy Verification, http://www.green-e.org/getcert_re_veri.shtml (last visited Feb. 13, 2010).

205. *Id.*

206. Press Release, Ctr. for Res. Solutions, California Market Advisory: California Energy Commission Draft Report on RPS Compliance Issues (Feb. 11, 2010), http://www.resource-solutions.org/pressreleases/2010/021110.htm (urging individuals to support a draft decision by the California Energy Commission barring Southern California Edison from claiming RECs under a wind energy contract predating the state's RPS).

207. Press Release, Ctr. for Res. Solutions, Texas Market Advisory and Green-e Energy Policy Update (Mar. 24, 2008), http://www.resource-solutions.org/pressreleases/2008/032408.htm.

208. Michigan and Missouri are among the states who have started this process. Michigan's Public Service Commission adopted the Michigan Renewable Energy Certification System ("MIRECS") to manage its state RPS. *See* Press Release, APX, Inc., APX Launches Michigan Renewable Energy Certification System (Oct. 30, 2009), http://www.apx.com/news/pr-APX-Launches-Michigan-Renewable-Energy-Certification-System.asp; *see also* Michigan Renewable Energy Certification System (MIRECS), Frequently Asked Questions, http://www.mirecs.org/about/FAQ.asp (last visited Mar. 24, 2010). Missouri's RPS requires its PUC to "select a program for tracking and verifying the trading of renewable energy credits." MO. REV. STAT. § 393.1030.2 (2009).

209. Letter from Jan Hamrin, President, Ctr. for Res. Solutions, to Gerry Dameron, Clean and Green (Nov. 7, 2007), *available at* http://www.green-e.org/docs/energy/Clean%20and%20Green%20Decertification.pdf; Rob Luke, *De-Certification Puts REC Self-Regulation to Test*, ECOSYSTEM MARKETPLACE, Apr. 12, 2008,

eral John W. Suthers of the corresponding potential consumer protection problem,[210] but the Colorado Attorney General's office has not pursued litigation against Clean and Green.[211] This interaction unfortunately suggests that despite CRS's attempts to police REC markets, its efforts will not receive legal support in the absence of a stronger regulatory command to prosecute fraudulent green power claims.

C. Summarizing the Problems with the Current Scheme

While the Green Guides provide a safe harbor for environmental claims that square with the examples they provide, the FTC has failed to keep pace with the proliferation of environmental claims within the last decade.[212] Fortunately, it has signaled a willingness to reconsider its earlier stance against providing specific green power guidelines. But in the meantime, the lack of federal guidance has allowed states to step in, creating conflicting definitions of RECs that preclude the development of a national market.[213] Moreover, although Green-e Energy offers a chance at standardization, its current non-profit structure fails to command consumer protection actions from state governments.

Despite these problems, both the market and the political realm have determined that the virtues of renewable energy are worth not only encouraging, but also subsidizing.[214] Increasing numbers of consumers report that they consider the environmental impacts of products they buy.[215] Additionally, even as carbon offset markets grow in size and importance, REC markets remain viable elements of both state RPSs and proposals to develop federal renewables objectives.[216] Finally, the time is ripe for developing a system of defining, verifying, and tracking RECs because the FTC has indicated a willing-

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http://www.ecosystemmarketplace.com/pages/dynamic/article.page.php?page_id=5787&section=home&eod=1.

210. Letter from Arthur O'Donnell, Executive Dir., Ctr. for Res. Solutions, to John W. Suthers, Attorney Gen. (Jan. 30, 2008), *available at* http://www.green-e.org/docs/energy/Clean%20and%20Green%20Letter%20to%20Attorney%20General.pdf.

211. Luke, *supra* note 209.

212. *See infra* Part III.A.1.

213. *See supra* Part II.B.2.

214. *See supra* note 3.

215. *See infra* Part III.A.

216. *See supra* Part I.D.

ness to step into an environmental policy role in order to protect consumers. Part III considers the theoretical underpinnings for improving enforcement in REC markets.

III. INFORMATIONAL REGULATION: A GREEN POWER IMPERATIVE

"Sunlight is said to be the best of disinfectants,"[217] and in this vein, information regulation is an increasingly prominent "alternative to command-and-control regulation."[218] In the face of limited state and federal management of REC markets, stronger regulation of renewable energy marketing claims is justified both to repair REC markets and to promote accountability when states require utilities to purchase renewable energy. Section A briefly sketches how the unique nature of green claims causes consumers, green or otherwise, to be deceived—green consumers' self-expressed willingness to pay more does not always compare favorably to their actual purchases, suggesting that distrust is creating market failure. Section B then applies the public rights theory of expression to REC markets, suggesting that the lack of effective disclosure regulation impedes the democratic process.

A. The Failure of the Voluntary Market

Market failure occurs when the nature of a good or the actions of participants lead to inefficient resource allocation.[219] Inefficiency may occur for many reasons, including the existence of externalities[220] or the problem of public goods,[221] but

217. LOUIS D. BRANDEIS, OTHER PEOPLE'S MONEY 92 (1914).

218. Cass R. Sunstein, *Information Regulation and Informational Standing:* Akins *and Beyond*, 147 U. PA. L. REV. 613, 618–19 (1999).

219. Economist.com, Economics A–Z, Market Failure, http://www.economist.com/RESEARCH/ECONOMICS/alphabetic.cfm?letter=M#marketfailure (last visited Feb. 25, 2010); *see also* Francis M. Bator, *The Anatomy of Market Failure*, 72 Q.J. ECON. 351, 351 (1958) ("What is it we mean by 'market failure'? Typically, at least in allocation theory, we mean the failure of a more or less idealized system of price-market institutions to sustain 'desirable' activities or to estop 'undesirable' activities.").

220. *See generally* Garrett Hardin, *The Tragedy of the Commons*, 162 SCIENCE 1243 (1968) (presenting the view that when many people benefit from a good but do not experience proportionate burdens, overuse will occur because consumers fail to internalize the harmful effects of their consumption).

221. Public goods are non-rivalrous (consumption by some does not prevent consumption by others) and non-excludable (people who have not paid for the good cannot be barred from using it), meaning that a large number of individuals have

the most relevant reason for the purposes of environmental marketing[222] is information asymmetry. In essence, green[223] products are "credence goods": consumers lack the information needed to understand, test, or verify many of the unique attributes that marketers use to distinguish their products—instead, they must rely on the marketers' own claims when deciding whether to purchase the product.[224] Claims that mislead customers with regard to an environmental practice, product, or service are known as "greenwashing."[225]

As credence goods, environmental marketing claims are fundamentally different from other marketing claims in three ways. First, they may be extremely technical or scientific; for example, stating "CFC-free" rather than "more suds."[226] Not only are such claims difficult to understand, but consumers are largely incapable of testing them. Electricity marketing makes these problems worse: "[b]ecause electricity is a complex and intangible product—one cannot take it off the shelf and examine the package before purchasing—it presents a challenge for consumers to visualize or experience the benefits of differentiated electricity products."[227] Second, environmental claims frequently must be considered "in the context of the use or disposal" of the good being purchased, but consumers may

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the incentive to "freeride" on the benefits created by a few. Examples are national defense and national parks. JOHN B. TAYLOR, ECONOMICS 395–97 (5th ed., 2007). Freeriding is relevant to the discussion of green power because many consumers may not feel compelled to subsidize renewable energy because other consumers already do, generating benefits such as cleaner air for the rest of the population.

222. Marketing is "the application of consumer research and advertising techniques to further the sale of consumer products or ideas and values." Ellen P. Goodman, *Stealth Marketing and Editorial Integrity*, 85 TEX. L. REV. 83, 84 n.2 (2006).

223. Although "green" is a nebulous term, it will be used in this Comment as shorthand for goods, including electricity, with a lesser environmental impact than similar products.

224. *See* John M. Church, *A Market Solution to Green Marketing: Some Lessons from the Economics of Information*, 79 MINN. L. REV. 245, 273–74 (1994).

225. TERRACHOICE GROUP INC., THE SEVEN SINS OF GREENWASHING 1 (2009), *available at* http://sinsofgreenwashing.org/findings/greenwashing-report-2009/ (follow "Greenwashing Report 2009" hyperlink).

226. Barnett, *supra* note 170, at 496. *But see* Church, *supra* note 224, at 274–75 ("Many environmental attributes, however, are not credence qualities, but search qualities. For example, one brand's use of less packaging than a competitive brand is an observable attribute."). Since Church's proposition only holds with observable attributes, it seems to leave green energy and green buildings at the very least outside its scope.

227. Jochen Markard & Edward Holt, *Disclosure of Electricity Products—Lessons from Consumer Research as Guidance for Energy Policy*, 31 ENERGY POL'Y 1459, 1459 (2003).

not be able to obtain information about these processes or compare them against those used by other products.[228] Finally, many environmental terms do not have an accepted definition.[229] RECs, which states define differently, exemplify this problem.[230] While green claims in general are nebulous and difficult for consumers to verify, green power claims add extra layers of complexity, providing ample opportunities for greenwashing. Subsection 1 considers how the risk of greenwashing affects consumers and Subsection 2 illustrates how information regulation helps remove that risk to prevent market failure.

1. Green Consumers and Greenwashing

Fearing deception or manipulation, consumers have long been hostile to advertising.[231] However, the credence nature of green products is especially problematic for two reasons: first, the number of consumers who express a willingness to "buy green" continues to rise, and second, consumers voice distrust of green marketers. Both of these problems will be discussed in turn, demonstrating that they are not actually contradictory.

Far from being an endangered species of minimalists and "austere idealist[s],"[232] an increasing number of consumers identify a willingness to purchase "environmentally-friendly" products.[233] Over the past few years, numerous studies by corporations, industry associations, and academics alike emerged to quantify Americans' changing attitudes about green purchasing. A 2009 survey of approximately 6,500 consumers at eleven major retailers found that 54 percent "use sustainability as part of their personal formula for recognizing product val-

228. Barnett, *supra* note 170, at 497.

229. *Id.*

230. *See supra* Part II.A.2.

231. *See generally* BETTY FRIEDAN, *The Sexual Sell*, *in* THE FEMININE MYSTIQUE 206 (1963) (decrying the use of advertising to present an idealized and damaging image of womanhood); VANCE PACKARD, THE HIDDEN PERSUADERS (1957) (exposing attempts by advertisers to manipulate consumers psychologically).

232. GROCERY MFRS. ASS'N & DELOITTE, FINDING THE GREEN IN TODAY'S SHOPPERS: SUSTAINABILITY TRENDS AND NEW SHOPPER INSIGHTS 6 (2009), *available at* http://www.gmabrands.com/publications/greenshopper09.pdf.

233. Whether this translates to actual behavior is less certain, as has been noted by some commentators. *See* Church, *supra* note 224, at 268 ("We do not know, however, how a well-informed consumer would prioritize environmental issues or how those priorities would affect purchasing decisions.").

ue," either as a guidepost or a tie-breaker.[234] Not only do consumers seek green products, they appear willing to at least consider paying higher prices for them. Fifty-one percent of Americans agree that they would pay a premium for green products.[235] Forty to eighty percent of residential consumers would pay extra for green energy.[236]

However, consumers may be paying lip service to popular environmental values while simultaneously ignoring them when it comes time to make their purchases. In 2008, a survey of 2,000 Americans found that the majority exhibited moderate to strong environmental inclinations, but that their actual behavior had not yet caught up.[237] The reasons behind this gap are unclear, but three suggestions emerge. First, green products tend to cost more than conventional products.[238] While some consumers may pay a premium, others are unable or unwilling. Second, consumers are incentivized to freeride on the green purchases of others, including governmental entities, when seemingly inexhaustible natural resources are at stake.[239] For instance, an individual may not feel as though her purchase of recycled paper instead of conventional paper has a substantial impact on water use, forest resources, or carbon dioxide emissions (particularly if the recycled paper is more expensive). Finally, the gap between willingness and reality could derive from consumer distrust.[240] Indeed, as more

234. GROCERY MFRS. ASS'N & DELOITTE, *supra* note 232, at 4, 7.

235. *BBMG Study Finds 'Green Trust Gap*,*'* CHLOREGY, Mar. 24, 2009, http://www.chloregy.com/home/awards/4904-bbmg-study-finds-green-trust-gap.

236. RYAN WISER ET AL., NAT'L RENEWABLE ENERGY LAB., TECHNICAL REPORT NO. NREL/TP.620.25939, GREEN POWER MARKETING IN RETAIL COMPETITION: AN EARLY ASSESSMENT 13 (1999), *available at* http://eetd.lbl.gov/EA/EMS/reports/42282.pdf.

237. Press Release, GfK Custom Research N. Am., Green Gets Real . . . Current Economic Environment Subduing Green Enthusiasm but Driving Practical Action, http://www.gfkamerica.com/newsroom/press_releases/single_sites/003698/index.en.html (last visited Feb. 25, 2010). Seventeen percent identified as "environmental activists" while about 37 percent engaged in easy actions, such as recycling. *Id.* A further 13 percent indicated that they are open to environmentalism in general but lack sufficient information to act on their inclinations. *Id.* A final third of the sample either valued economic concerns over environmental ones or rejected environmentalism entirely. *Id.*

238. *See, e.g.*, Ernest Beck, *Do You Need to be Green?*, BUSINESSWEEK, Summer 2006, http://www.businessweek.com/magazine/content/06_25/b3989601.htm.

239. Melissa Schweisguth, *Moving Green Consumer Purchasing from 'Me' to 'We,'* GREENBIZ.COM, Nov. 24, 2009, http://greenbiz.com/blog/2009/11/24/green-consumer-purchasing-we-me.

240. Kate Galbraith, *Paying Extra for Green Power, and Getting Ads Instead*, N.Y. TIMES, Nov. 17, 2009, at B1, *available at* http://www.nytimes.com/2009/11/

consumers have expressed a willingness to purchase green products, more companies have an incentive to manipulate nebulous environmental terms, making it difficult for consumers to separate the legitimate wheat from the greenwashing chaff.[241] In the late 1980s and early 1990s, products making generic environmental claims, "eco-friendly," for example, were "introduced at a rate 20–30 times greater than that of other goods."[242] Information asymmetries between marketer and buyer may discourage consumers from spending extra for products whose claims they cannot verify.

The potential contribution of information asymmetry to consumer distrust cannot be overlooked. Despite the rosy projections of willingness-to-buy, ultimately, 68 percent of consumers are skeptical about corporate efforts to promote green products.[243] A recent report on "conscious consumerism" found that 23 percent of American consumers say that they "have 'no way of knowing' if a product is green or actually does what it claims," a problem the report dubbed the "green trust gap."[244] Consumer skepticism of green claims, regardless of veracity, "degrades a communications environment in which participants are unnecessarily disbelieving."[245] This skepticism has driven them insatiably toward information seeking. As noted by a frequently cited 1994 study synthesizing historical data on public perceptions of advertising, "[s]ix decades of survey data indicate that most consumers—often, roughly two-thirds or

17/business/energy-environment/17power.html (describing anger of ratepayers in Durango, Colorado who discovered that the premiums they paid for green power were being invested in solar panels at a school in another city); *see also* Press Release, Fla. Pub. Serv. Comm'n, PSC Terminates FPL's Sunshine Energy Program (July 29, 2008), *available at* http://www.psc.state.fl.us/home/news/index.aspx?id=428 (noting that only 20 percent of the $11.4 million collected from customers during the program's five-year life had gone to the development of renewable energy facilities; the other 80 percent went to "marketing and administrative costs").

241. Church, *supra* note 224, at 246 ("The inherent conflict is clear: consumers will buy environmentally beneficial products to induce greater corporate environmental responsibility, yet manufacturers, striving for greater profits, may have an incentive to inflate, or even lie about, the environmental attributes of their products.").

242. Abhijit Banerjee & Barry D. Solomon, *Eco-Labeling for Energy Efficiency and Sustainability: A Meta-Evaluation of US Programs*, 31 ENERGY POL'Y 109, 109 (2003).

243. Press Release, GfK Custom Research N. Am., *supra* note 237.

244. *BBMG Study Finds 'Green Trust Gap,' supra* note 235 (quoting BBMG CONSCIOUS CONSUMER REPORT: REDEFINING VALUE IN A NEW ECONOMY (2009)).

245. Goodman, *supra* note 222, at 113.

70%—think that advertising is often untruthful, it seeks (perhaps successfully) to persuade people to buy things they do not want, it should be more strictly regulated, and it *nonetheless provides valuable information*."[246] Accordingly, 77 percent of consumers indicated that they sought information to make socially and environmentally responsible purchases so as to "make a positive difference."[247] Simultaneously, a new wave of deception claims related to green products, particularly household cleaners, has emerged, with lawyers warning of an imminent "explosion" in consumer protection cases.[248]

Compelled disclosure may be able to supplant the information asymmetries created by credence goods by providing consumers with accurate information upfront, giving them a fair chance to buy products that accord with their personal philosophies, and avoiding excessive litigation. If consumers are interested in seeking information, the information disclosed to them should be accurate and verified.

2. Fostering Market Innovation

Compelled disclosure works in two directions. It allows consumers to select products they desire based on accurate claims. It also allows retailers to market more effectively to those consumers who make purchases with priorities other than price in mind. Nutrition labeling exemplifies this benefit. In the absence of the uniform label requirement, food manufacturers "had no way to distinguish their healthy soups or cereals from those that made sham claims."[249] Ultimately, then, "government-mandated nutritional labeling . . . helped [corporations] justify charging higher prices for healthier foods and

246. John E. Calfee & Debra Jones Ringold, *The 70% Majority: Enduring Consumer Beliefs About Advertising*, 13 J. PUB. POL'Y & MARKETING 228, 236 (1994) (emphasis added).

247. *BBMG Study Finds 'Green Trust Gap,' supra* note 235 (internal quotation marks omitted). Green buyers frequently look to consumer reports (29 percent), certification seals or labels (28 percent), and product ingredients (27 percent), while only 11 percent consider product packaging statements and a mere 5 percent review company advertising. *Id.*

248. Tresa Baldas, *Claims of 'Greenwashing' on the Rise*, NAT'L L.J., June 8, 2009, at 6, *available at* http://www.law.com/jsp/cc/PubArticleCC.jsp?id=1202431342143.

249. MARY GRAHAM, DEMOCRACY BY DISCLOSURE: THE RISE OF TECHNO-POPULISM 69 (2002).

helped them improve their corporate images."[250] Even where incentives seem natural, government may have a large role to play through mandates:

> One might expect disclosure to be particularly robust where the public will not view the information as bad news. For example, it seems natural that food manufacturers with a relatively good nutritional story to tell would disclose nutritional information. Kraft and Nabisco could then compete on nutritional value or Kraft could use nutritional information to distinguish its premium brands like Progresso. So one might think, and yet the market did not produce widespread disclosure of nutritional information until federal regulation required it. It was the regulation that created a market for nutritional information that now appears to be strong.[251]

Accordingly, when markets are inefficient—as is the case with green products in general, and green power specifically—government may be able to play a corrective role.[252] Compelling actors who generate and sell RECs to make accurate disclosures about their environmental impact could create a more robust market for renewable energy.

B. Safeguarding the Compliance Market with the Public Rights Theory

Information regulation may be democracy-enhancing as well as market-enhancing.[253] A public rights perspective encourages governmental attempts to mandate certain disclosures about products in cases of market failure.[254] Under this

250. ARCHON FUNG ET AL., THE POLITICAL ECONOMY OF TRANSPARENCY: WHAT MAKES DISCLOSURE POLICIES EFFECTIVE? 16 (2004), *available at* http://www.hks.harvard.edu/taubmancenter/transparency/downloads/effectiveness.pdf.

251. Goodman, *supra* note 222, at 139.

252. Joseph Stiglitz, *Distinguished Lecture on Economics in Government: The Private Uses of Public Interests: Incentives and Institutions*, 12 J. ECON. PERSP. 3, 4 (1998) ("In particular, it has been shown that in the presence of imperfect information or incomplete markets, the economy will not be Pareto efficient; in other words, there will always be some intervention by which the government can make everyone better off ." (citation omitted)).

253. *See* Sunstein, *supra* note 218, at 618–19.

254. *See* Goodman, *supra* note 222, at 137–38 ("As a general matter, government mandated disclosure will be desirable only when markets fail to produce information that would enhance public welfare. Mandated environmental disclosure falls into this category because entities like power plants and incinerators lack market incentives to disclose information about the negative externalities

theory, the government has an affirmative obligation to "safeguard the 'public rights' of discourse."[255] Perhaps the purest expression of public rights theory is in election jurisprudence, where advertising sources must be identified to enable the audience to consider the import of sponsorship.[256] At the very least, it limits bad actors: "[a] statute that requires companies to place 'eco-labels' on their products may produce little in the way of consumer response, but shareholders and participants in the democratic process may attempt to punish those whose labels reveal environmentally destructive behavior."[257] Accordingly, disclosure mandates are viable in the green power arena because accurate and complete information about local power supplies or REC availability and quality can influence consumers' political expression.[258] Specifically, consumers may wish to know whether the electricity in their pool is generated locally or sourced from out-of-state RECs, and they may wish to know what vintage or type of RECs they are purchasing.[259]

Yet while comprehensive disclosure of green energy attributes is justified under multiple theories, the current legal structure is insufficient to adequately protect consumers from information asymmetries. In the context of surging consumer interest, information asymmetries have created market failure and consumer distrust, and the failure of government actors to properly regulate products advertising environmental attributes constitutes a violation of public rights theory. The growing willingness of consumers to seek out products that promise reduced environmental impact means that transparency is increasingly vital as a means to correct seemingly insurmountable information asymmetries. Transparency provides benefits to producers as well by allowing them to more effectively market a green energy product that might otherwise be a mere commodity. Sadly, in the context of environmental

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that their activities impose on the public. Mandatory disclosure regimes enable the public to force firms to internalize these costs. This type of regulation will be unnecessary where market forces themselves generate the desired information.").

255. *Id.* at 130.

256. *Id.* at 131–32; *see also* David Weil, The Benefits and Costs of Transparency: A Model of Disclosure Based Regulation 5 (revised Oct. 28, 2008), *available at* http://ssrn.com/abstract=316145 (noting that the Federal Election Campaign Act tries to "redress lack of information necessary for full civic participation").

257. Sunstein, *supra* note 218, at 619.

258. Press Release, Office of Gov. Bill Ritter, Jr., *supra* note 71 (noting that Colorado enacted its RPS by popular vote).

259. *See infra* Part IV.

advertising, this clarity is often lacking. Part IV discusses how this might be rectified.

IV. ALTERNATIVE REGULATORY SCHEMES

While green consumers exist, marketers of renewable energy and other environmental products are able to capitalize on their enthusiasm at the expense of clear disclosure. Current regulatory schemes provide opportunities for deceptive marketing to supplant honest purveyors in both voluntary and consumer markets. Accordingly, creating nationally accepted standards has three ultimate benefits. First, it gives consumers more fluency in the market, allowing them to better choose between competing options. This is uniquely imperative with environmental products, where significant information asymmetries exist because of difficult-to-verify attributes, and where health and safety command special attention. Second, it gives marketers, generators, and utilities clear guidance in determining whether they are protected from ad hoc FTC enforcement. Finally, uniform definitions will reduce transaction costs by allowing nationwide REC-trading and simplifying complex provisions in state RPSs.[260]

This Part suggests methods for developing a national market in which RECs can be freely traded with their integrity intact. Section A describes why federally promulgated, national standards are desirable and asserts that the FTC's incipient desire to regulate REC marketing, coupled with the EPA's institutional knowledge, make them the logical agencies to develop REC definitions. Section B speculates on approaches these regulators might take in crafting definitions. Finally, Section C suggests integrating currently existing regional REC tracking systems to promote nationwide monitoring and enforcement.

A. Why National Definitions Are Necessary and Where Authority to Create Them Lies

What must be disclosed to consumers by utilities, REC trackers, and other green power brokers depends, under the

260. Michael Gillenwater, *Redefining RECs—Part 2: Untangling Certificates and Emissions Markets*, 36 ENERGY POL'Y 2120, 2120 (2008) ("[W]hen traded in separate markets, poorly defined commodities will more easily come into conflict and cause confusion among market participants.").

FTC's current framework, upon what a consumer would find clear and understandable. Viewing disclosure from a consumer perspective requires an awareness of bounded rationality. Lacking unlimited time and cognitive capacity, individuals often must resort to assumptions and heuristics in order to make consumption decisions; in the context of disclosure, this means that "[o]nly information that penetrates these sometimes severe economies of decision-making affects users' calculations and actions."[261] Therefore, information must be valuable, compatible, and comprehensible in order to be useful to consumers.[262] The more effort it takes for a consumer to interpret and use the information, or the more subject it is to misinterpretation, the less likely that disclosure will have the effects regulators desire.[263] This can become a conundrum for some marketers: for instance, Tesco, a British grocery chain, decided to begin disclosing the carbon footprint of its products, with an intermediary step of marking imported items with an airplane symbol.[264] Critics promptly noted: " 'What does it mean to say a bag of chips contains 75 grams of carbon?' asks Steve Howard, CEO of the Climate Group in London. 'I have a PhD in environmental physics, and it doesn't mean a thing to me.' "[265]

Value, compatibility, and comprehensibility can all be enhanced by governmental regulation, which (ideally) infuses a disclosure regime with credibility.[266] Transparency mechanisms do not necessarily require organizations to change specific practices, but they do require the provision of certain information to the public, which in turn is expected to incorporate that information into its decision-making processes.[267] Governmental regulation offers benefits that independent intermediaries do not: government can mandate standardized disclosure and make its programs accountable through the democratic process.[268] In part because governmental support increases

261. FUNG ET AL., *supra* note 250, at 10.
262. *Id.* at 10–11.
263. *Id.* at 13.
264. Sir Terry Leahy, CEO, Tesco, Tesco, Carbon and the Consumer (Jan. 18, 2007), *available at* http://www.tesco.com/climatechange/speech.asp.
265. Heather Green & Kerry Capell, *Carbon Confusion*, BUSINESSWEEK, Mar. 6, 2008, at 052, *available at* http://www.businessweek.com/magazine/content/08_11/b4075052454821.htm.
266. Bernhard Truffer et al., *Eco-Labeling of Electricity—Strategies and Tradeoffs in the Definition of Environmental Standards*, 29 ENERGY POL'Y 885, 891 (2001).
267. *See* FUNG ET AL., *supra* note 250, at 1, 6.
268. *Id.* at 1–2.

consumer awareness, it "is the most critical factor for the success of a labeling program."[269]

Furthermore, consumers indicate strong support for disclosure mandates with regard to renewable energy.[270] With FERC having shown itself unwilling to tackle RECs,[271] the authority to preempt state definitions to the extent necessary to create common disclosure policies and allow a national market to develop should be placed jointly with the FTC and the EPA. Both agencies have relevant capabilities and expertise. Under its guiding statute, the FTC may prohibit specific unfair practices when it believes them to be "prevalent," meaning that it has evidence of a "widespread pattern of unfair or deceptive acts or practices."[272] Traditionally, the FTC regulates in areas in which consumers are judged to be vulnerable, such as the purchasing of a home or funeral services, by specifically prohibiting certain marketing practices.[273] Green marketing claims fit within both of these criteria. First, greenwashing is believed to be widespread. A study of 2,219 products displaying environmental claims found that 98 percent included language that risked misleading customers.[274] Second, consumers of green energy are uniquely vulnerable because of the nature of the good, which they cannot test and verify.[275] Accordingly, green marketing claims are viable candidates for FTC regulation. Uncomfortable with jumping into the environmental policy-making fray, the FTC has refused until recently to set nationally accepted definitions for green marketing terms, yet its

269. Banerjee & Solomon, *supra* note 242, at 121. A study comparing five environmental labeling programs—Green Seal, Scientific Certification Systems, Energy Guide, ENERGY STAR, and Green-e—found that the Energy Guide and ENERGY STAR programs both had substantially greater market penetration due to governmental mandates and higher consumer recognition, with one in six consumers being at least influenced to purchase an appliance by its ENERGY STAR rating. *Id.* at 116, 119–21.

270. Markard & Holt, *supra* note 227, at 1465 (noting that in New Hampshire, where the market was recently deregulated, consumers expressed particular interest in mandatory oversight).

271. *See supra* Part II.A.3.

272. 15 U.S.C. § 57a(b)(3)(B) (2006).

273. *See* Victor E. Schwartz & Cary Silverman, *Common-Sense Construction of Consumer Protection Acts*, 54 U. KAN. L. REV. 1, 9 n.26 (2005).

274. *See* TERRACHOICE GROUP INC., *supra* note 225, at 3. The claims were determined to be deceptive based on comparison to "best practices" guides for environmental disclosure, including those by the FTC and the International Organization for Standardization.

275. *See supra* Part III.A.

new efforts to revise the Green Guides to cover RECs represent a sea change.[276]

In addition to its role in promulgating and defining environmental standards, the EPA has experience in labeling programs under the Federal Insecticides, Fungicides, and Rodenticides Act of 1947[277] ("FIFRA") and through the ENERGY STAR program, a joint venture with the Department of Energy.[278] FIFRA requires the registration and standardized labeling of pesticides,[279] and ENERGY STAR is a well-known labeling program that notifies consumers about the power consumption of household electronics.[280] Although the EPA presumably will be burdened in the next few years by the possibility of regulating carbon dioxide emissions under the Clean Air Act,[281] it has the expertise to participate in the definitions process.

B. Crafting Specific Definitions of RECs

If federal agencies step in to regulate RECs by developing unifying definitions, they should proceed under three assumptions. First, the use of RECs themselves should be disclosed to consumers. Second, defining what attributes RECs include will involve a complicated negotiation, and the result will strongly impact existing contractual arrangements and regulatory policy. Third, measuring additionality for RECs creates unnecessary complications that need not be addressed by federal agency rulemaking. Each of these assumptions will be addressed in turn.

1. REC Purchases Should Be Disclosed

Currently, a utility may buy one MWh of electricity from a coal-fired power plant and one REC and then promote the environmental attributes of that power. While some states require

276. *See supra* text accompanying notes 163–68.

277. 7 U.S.C. § 136 (2009).

278. Energy Star, About Energy Star, http://www.energystar.gov/index.cfm?c=about.ab_index (last visited Apr. 2, 2010).

279. 7 U.S.C. §136a(c) (2009); 40 C.F.R. § 156.10 (2009).

280. *See* Energy Star, How a Product Earns the Energy Star Label, http://www.energystar.gov/index.cfm?c=products.pr_how_earn (last visited Apr. 2, 2010).

281. U.S. Envtl. Prot. Agency, Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act, http://www.epa.gov/climatechange/endangerment.html (last visited Apr. 2, 2010).

utilities to disclose their power mix[282] and the NAAG Guidelines recommend informing customers if RECs are purchased,[283] the existing regulatory scheme does not connect these policies to require disclosure to customers (in either compliance or voluntary markets) of the type, vintage, and origin of RECs in the power mix of their retail electricity provider. The Renewable Energy Marketers Association ("REMA") stated in its comment on updates to the FTC Guides that

> If a REC has the same effect as renewable electricity, we question whether it is a meaningful distinction or a necessary consumer protection to continue this practice. If there is no effective difference in environmental benefits between RECs and renewable electricity, we do not believe it is deceptive not to make a prominent disclosure of the use of RECs.[284]

Rather, the opposite is true: REC information should be disclosed to customers, in part so that they can judge whether the electricity in their area is generated by renewable or nonrenewable sources and whether their local utility is adding renewable capacity in their state or purchasing attributes from abroad.[285] Similarly, consumers in states where retail competi-

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282. *See supra* Part II.B.2.a.

283. *See supra* Part II.B.2.b.

284. Comment from Renewable Energy Marketers Ass'n, Comment on FTC Project No. P074207 4 (Jan. 25, 2008), *available at* http://www.ftc.gov/os/comments/carbonworkshop/533254-00028.pdf.

285. This is because, although CO_2 is a global problem, other pollutants from electricity generation contribute to local environmental problems. *See* Lily N. Chinn, Comment, *Can the Market Be Fair and Efficient? An Environmental Justice Critique of Emissions Trading*, 26 ECOLOGY L.Q. 80, 108 (1999) (noting that air pollutants that cause smog, such as volatile organic compounds and nitrogen oxide, have local and regional effects); *see also* RUSSELL LEE ET AL., OAK RIDGE NAT'L LAB., ADDRESSING ENVIRONMENTAL EXTERNALITIES FROM ELECTRICITY GENERATION IN SOUTH CAROLINA 2, 4–5 (2007), *available at* http://solar.gwu.edu/Resources.html (select "Fossil Fuels" link, then click on report) (comparing the local and regional effects of many pollutants emitted during electricity generation to the global externalities of CO_2 and other GHGs). Perhaps indicating a desire to improve local air quality and health as much as to improve local economies, some states provide that RECs generated in-state have extra weight for the purposes of RPS compliance. *See, e.g.*, 4 COLO. CODE REGS. § 723-3-3654(f) (2010) ("For purposes of compliance with the renewable energy standard, each kilowatt-hour of eligible energy generated in Colorado shall be counted as 1.25 kilowatt-hours of eligible energy."). However, this approach may have Dormant Commerce Clause implications. *See generally* Kirsten H. Engel, *The Dormant Commerce Clause Threat to Market-Based Environmental Regulation: The Case of Electricity Deregulation*, 26 ECOLOGY L.Q. 243 (1999) (proposing modifications of Commerce

tion is allowed may have a particular interest in determining whether they will purchase retail electricity from a utility that buys RECs or installs renewable energy itself.[286] Requiring disclosure will, however, lead to complicated arguments regarding what precise attributes a REC includes.

2. Specifying REC Attributes

The FTC and EPA might apply one of two approaches to create national definitions specifying REC attributes, although both have flaws. The first option is to define specifically what "environmental benefits and attributes" RECs include. The second option is to strip RECs of these "benefits and attributes," making them equivalent to, simply, one MWh of renewable energy generation.

If the FTC chooses only to edit its Green Guides to incorporate renewable energy terminology, green power marketers may have examples to emulate, but many of the fundamental problems with green power marketing will not be addressed. Instead, promulgating regulations in concert with the EPA that define green power terminology and prohibit specific practices could transform FTC enforcement under § 5 from an ineffective, extemporaneous system that requires unspecific "substantiation" to an effective framework that defines RECs, double counting, and other commonly used terms.[287] Renewable energy marketers would be required to follow definitive rules or be subject to penalties, making the FTC's decision to enforce more concrete while simultaneously helping marketers and customers alike engage in clear discourse. However, with this approach come both enormous complexity and the risk that entrenched interests, such as public utilities or conventional power generators, might use their leverage to dilute the results.[288] Moreover, it is unclear what this effort would do to preexisting RECs. For instance, ongoing REC contracts made before national definitions are imposed could be the source of

Clause doctrine that would allow states to retain the benefits of environmental goods).

286. *See* Galbraith, *supra* note 240.

287. Barnett, *supra* note 170, at 508–09, similarly suggested a cooperative venture.

288. *See*, *e.g.*, GRAHAM, *supra* note 249, at 80 (noting that, with regard to nutritional labeling, "[a] variety of political pressures led to the exclusion of foods that totaled nearly half of the public's food purchases").

conflicts over the ownership of environmental attributes included in or excluded from RECs, akin to the disputes between utilities and generators that occurred under PURPA.[289]

The second option is to forsake any environmental attributes language at all for RECs, and to simply construe them to represent one MWh of renewable generation. This has two primary benefits. First, regulation for the purpose of meeting RPSs would be simpler, as utilities would not have to verify whether RECs purchased across state lines and verified by different certification programs are eligible for compliance. Second, denying that RECs include emissions offsets prevents environmental commodity markets from becoming confused, leading to complicated fights for ownership. This is particularly true when discussing emissions like CO_2. Renewable energy generation may produce direct and indirect emissions reductions. Direct emissions reductions—such as those that occur when landfill gas methane is captured to generate electricity instead of being released into the atmosphere—belong to the owner of the generator.[290] Therefore, claiming that RECs associated with electricity generated from landfills contain emissions reductions is relatively uncontroversial. Indirect emissions reductions, however, imply that the generation of a unit of renewable energy replaced the generation of a unit of nonrenewable energy: yet "[d]ue to the complex operations of the electric power grid, it is difficult to establish unambiguous causal linkages between renewable energy generation and changes in generation at other power plants on the grid."[291] Allowing a REC owner to claim indirect emissions benefits, then, could be deceptive. Defining RECs to include only primary attributes, such as location and vintage, rather than derived attributes, such as indirect emissions, prevents needless complexity but still provides consumers with information about their electricity origins.

This proposal has one major flaw: the possibility of alienating voluntary consumers, who may find RECs less desirable if they are unable to claim credit for the environmental benefits they produce. However, because those benefits are uncertain and potentially deceptive to begin with, this may not be a substantial concern. Accordingly, an attributes-free REC may be

289. *See supra* Part II.A.3.
290. Gillenwater, *supra* note 6, at 2117.
291. *Id.*

the proper path, and indeed seems in tune with recent congressional proposals.[292]

3. The Irrelevance of Additionality

The concept of additionality—which attempts to establish a direct financial connection between a REC premium and a renewable energy investment[293]—adds unnecessary complexity to green power purchases, and subsequently should fade from the REC lexicon. In compliance markets, it is unnecessary because RPS quotas are designed to drive the development of new renewable energy generation.[294] The relevant issue is generating enough renewable energy or purchasing enough qualifying RECs to meet the statutory minimum, and whether the resource would have been developed but for the enactment of an RPS makes no difference.

Additionality is more viable as a concept in voluntary markets, but it is still flawed when applied to RECs for two major reasons. First, the income from RECs is extremely limited, meaning that they likely do not "provide sufficient income certainty to alter investment decisions."[295] A second and related problem is that long-term contracts are generally required in order to obtain financing for energy resources, meaning that additionality can only be evaluated, if at all, at the inception of a project.[296] Therefore, a utility's contract to purchase RECs might contribute to additionality, but voluntary consumer purchases would not because they only occur after the investment decision is made and the RECs are transferred to the utility for retail sale. Removing additionality concerns, like stripping RECs of confusing environmental-benefits language, helps both to simplify REC trading and to promote consumer understanding.

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292. *See supra* notes 11–12 and accompanying text. After the basic meaning of a REC is agreed upon, states may still seek flexibility in determining which renewable resources they wish to promote with RECs as part of RPS regimes. A completely open national market could lead to equity concerns, as states that lack cheap renewable resources may be forced to purchase RECs from those with an abundance of inexpensive RECs from wind energy. While allowing states a modicum of choice in which resources they incentivize is desirable for equity reasons, such an effort could potentially raise Dormant Commerce Clause concerns that are not within the scope of this Comment.

293. *See supra* Part II.A.4.

294. *See* Gillenwater, *supra* note 6, at 2113.

295. *Id.* at 2115.

296. *Id.*

C. Interlocking Regional REC Trackers

The creation of national definitions at the federal level will be aided through improvements in REC tracking systems to make them more transparent and accountable. Currently, six regional and certain state-level REC tracking systems coexist in the United States. (Figure 9).[297] All six regional tracking organizations are administered with a database developed by APX, Inc.[298] Generally, each tracking system uses a web-based database that creates a unique serial number for each MWh of renewable energy generated within the service area, as well as tracking information about origin, vintage, and power type, and which states within the service area may legally accept the REC for compliance (however, states are required to verify this).[299] Essentially, a chain-of-custody is created for RECs generated and transferred within the region.

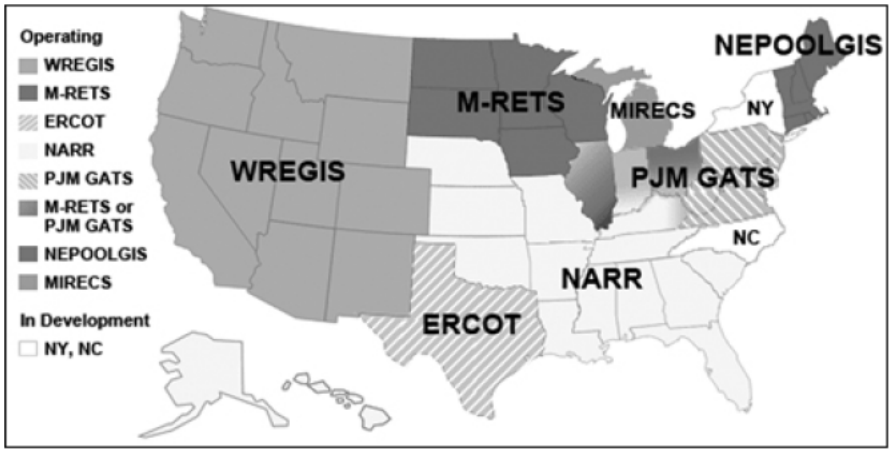

Fig. 9: North American REC Markets, 2009[300]

Because all of these systems rely on the same database, integration to a national REC tracking system could be relatively

297. U.S. Envtl. Prot. Agency, REC Tracking, http://www.epa.gov/grnpower/gpmarket/tracking.htm (last visited Apr. 1, 2010).

298. *See* APX, Inc., Renewable Energy Market Infrastructure, http://www.apx.com/environmental/renewable-energy-market-infrastructure.asp (last visited May 23, 2009).

299. APX, INC., *supra* note 49, at 9–10.

300. U.S. Envtl. Prot. Agency, *supra* note 297.

easy. Indeed, APX, Inc., the company that manages these tracking systems, may be able to establish a national database "at no extra expense to the participating systems."[301] Such a database could be maintained by state public utility commissions or regional transmission organizations,[302] which would audit renewable energy generators within their territory. State PUCs have varying levels of funding and competence, but may be best suited to analyze renewable energy generated in their own backyards, particularly where small-scale household generators are involved.

A national REC-tracking system provides the opportunity to inject additional accountability to the market. Currently, the regional tracking systems require different information for verification: for instance, the North American Renewables Registry requires documentation in the form of metering records and independent confirmation,[303] while WREGIS relies in large part on self-reporting.[304] Creating a single accounting format, possibly based on the Green-e program, would ensure that RECs are consistently verified and truly fungible. Because RECs can only be retired for one purpose, this ensures that voluntary purchases are not being counted toward compliance and helps prevent conflicts over ownership. Additionally, the database could be altered so that renewable energy generators are required to disclose all governmental incentives and subsidies as part of the REC verification process, preventing windfall compensation to renewable energy generators. Throughout this process, improved verification and trading procedures must be coupled with accurate and complete disclosures in order to fully inform consumer choice.

In order to be effective, all actors in voluntary and mandatory REC markets should be compelled to participate in tracking systems. This mandate, although challenging, could be accomplished in a few ways. First, states could make participation in a REC tracking system a condition for RPS compliance; that is, utilities could not count RECs towards

301. ENVTL. TRACKING NETWORK OF N. AM., INTER-REGISTRY REC TRANSFERS WHITEPAPER 11 (2009), *available at* http://www.etnna.org/images/PDFs/ETNNA-Inter-registry-Import-Export-final-8-25-09.pdf.

302. *See supra* note 208.

303. *See* APX, Inc., FAQ, http://narenewables.apx.com/about/FAQ.asp (last visited May 23, 2009).

304. W. RENEWABLE ENERGY GENERATION INFO. SYS., WREGIS OPERATING RULES 10–11 (2007), *available at* http://www.wregis.org/uploads/files/73/20070704_WREGIS_Operating_Rules_1v1_Final.doc.

compliance unless they were routed through a tracking system. This does not effectively protect the voluntary market, however. An alternate option is to make participation in a REC tracking system a condition for interconnection of renewable energy generators to the grid, although coordinating interconnection policies among FERC and state PUCs adds additional complexities. Simultaneously, this requirement could not be so burdensome as to discourage renewable energy generators from interconnecting to the grid, effectively promoting conventional generation.

Despite the challenges inherent in creating nationally recognized REC definitions and unifying regional tracking systems, benefits will devolve to consumers and regulators alike from a streamlined system—among them REC fungibility and the ability to monitor and prevent double counting and double compensation. These suggestions only begin to address the problems inherent in the current, patchwork regulatory system. Prompt federal action (which has so far been lacking in this field) is necessary to ensure that the benefits and drawbacks created by renewable energy generation are clearly and honestly conveyed.

CONCLUSION

This Comment serves as a brief illustration of the many complexities that emerge in attempting to regulate marketing in a complex field like green power. Growing environmental consciousness among consumers and weak supervision at the state and federal levels create a market ripe for manipulation. Unfortunately, the problems this booming market creates are worse for credence goods such as renewable energy. Because RECs are not consumable in the conventional sense of many green products, it is nearly impossible for individuals to verify and compare marketers' claims. Not only are RECs conceptually obtuse, but they differ in meaning across state lines; and even if consumers turn to guidance documents by the FTC, NAAG, or CRS, they may find little support from state or federal government when it comes to actually holding marketers responsible for their claims. Accordingly, distrust currently proliferates where green products are sold, and this distrust harms honest marketers as well as consumers.

However, refining green power terminology and the structure of the REC market, coupled with alterations to federal au-

thority and increased accountability, could make renewable energy concepts more clear to consumers. Making RECs equivalent across state lines and routing them through a single, national tracking system will reduce ownership conflicts and double compensation to generators. Moreover, defining a REC as a unit of renewable electricity generation rather than an environmental benefit will prevent consumers from falsely construing renewable energy as an automatic CO_2 reduction. Reforming REC markets in these ways will reduce the risk that bad actors can make false claims based on private contracts. Simultaneously, simpler conceptions of RECs could improve consumer understanding and lead to an increase in renewable energy demand. Finally, reforming green power markets will allow more complete expression of the legislative desire to subsidize renewable energy through RPSs.

Federal leadership is imperative to drive this unification process. As has been noted, "[s]o long as people are not choosing perfectly, it is at least possible that some policy could make them better off by improving their decisions."[305] Because the FTC is considering updating its Green Guides, now is an excellent time to begin reforming the field of green power.

305. Cass R. Sunstein & Richard H. Thaler, *Libertarian Paternalism Is Not an Oxymoron*, 70 U. CHI. L. REV. 1159, 1163 (2003).