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Implications of a Federal Renewable Portfolio Standard: Will It Supplement or Supplant Existing State Inititives?

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IMPLICATIONS OF A FEDERAL RENEWABLE PORTFOLIO STANDARD: WILL IT SUPPLEMENT OR SUPPLANT EXISTING STATE INITIATIVES?

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RENEWABLE energy is a critical piece of the global energy puzzle. It is also a flourishing industry, with 2008 being the first year that, globally, "new power generation investment in renewables was greater than investment in fossil-fueled technologies."[1] The reasons for the push for renewables are not new. As stated by the United Nations Environmental Programme ("UNEP"), "the drivers that have propelled investment in the sustainable energy sector so dramatically for the past five years are still at work—climate change, energy insecurity, fossil fuel depletion, new technologies etc."[2] Notwithstanding the failure to reach an international agreement on a successor to the Kyoto Protocol in the recent climate change negotiations in Copenhagen, Denmark, it is clear that the world will continue to look to renewable energy as a key component of a sustainable future.

Like the rest of the world, the United States has recognized the importance of renewable energy. In order to promote renewable energy resources to their full potential, various policy measures and incentives have been implemented at all levels of government. At the state level, a majority of the states have taken it upon themselves to ensure a future for their citizens that include a place for renewable energy development by adopting a renewable portfolio standard ("RPS"). Thirty-five states and the District of Columbia have enacted some form of renewable energy legislation or regulation, whether through an RPS program, an alternative energy portfolio standard ("AEPS"), or a renewable energy goal. When so many states are taking action on the same area, however, it is unavoidable that an inconsistent patchwork of laws will arise, leading to difficulties in achieving the presumed objective of these initiatives: the promotion of renewable energy generation.

Because of the myriad of problems and inconsistencies that have arisen as a result of the interactions among the state programs, a national RPS is viewed as a

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1. GLOBAL TRENDS IN SUSTAINABLE ENERGY INVESTMENT 2009: ANALYSIS OF TRENDS AND ISSUES IN THE FINANCING OF RENEWABLE ENERGY AND ENERGY EFFICIENCY 11 (C. Greenwood et al. eds., U.N. Env't Programme & New Energy Finance, 2009).

2. *Id.* at 12.

means of eradicating inconsistencies by providing, among other things, uniform standards that will provide liquidity to a national renewable energy certificate ("REC")[3] market and give confidence to investors in renewable facilities who may be looking for reassurance. A national RPS could create uniform definitions of renewables, "diminish market distortions," "promote fairer competition," and allow "[r]atepayers in states with low-cost renewable resources [to] directly benefit [inasmuch as] price signals would flow unencumbered by the barricades erected at state lines."[4] Put succinctly, "a federal RPS is the most efficient and effective way to build a sustainable energy future in the U.S., and a well-designed policy can minimize disproportionate impacts such that these impacts do not act as a roadblock for an otherwise sound and important policy."[5]

At the federal level, both the House and the Senate have considered proposals that would have adopted a national RPS. On June 26, 2009, the U.S. House of Representatives passed the American Clean Energy and Security Act ("ACES"), which includes a federal standard that combines requirements for renewable electricity with energy efficiency standards.[6] Shortly thereafter, on July 19, 2009, the Senate Committee on Energy and Natural Resources considered and reported to the Senate floor the American Clean Energy Leadership Act of 2009 ("ACELA"), which also includes a federal renewable electricity standard.[7]

This article will examine the inter-relationship between possible federal RPS initiatives (ACES and ACELA) and existing state RPS requirements. Specifically, the article will consider whether the combined efficiency and renewable energy standard ("CERES") included within ACES and ACELA will ultimately stimulate additional investment in renewable energy or, alternatively, hinder its development. First, we provide an overview of the basics of state RPS programs. Next, we outline the significant details of ACES and ACELA relating to the renewable electricity standard ("RES"). Third, we describe the existing challenges under state RPS programs and the possible role of a federal RPS in addressing these challenges. A federal RPS can potentially supplement existing state RPS initiatives if it: (1) includes express provisions accommodating (rather

3. Also known as "renewable energy credits," or "green tags."

4. Benjamin K. Sovacool & Christopher Cooper, *The Hidden Costs of State Renewable Portfolio Standards (RPS)*, 15 BUFF. ENVTL. L.J. 1, 23 (2007) [hereinafter Sovacool & Cooper, *Hidden Costs*].

5. Shelley Welton, *From the States Up: Building a National Renewable Energy Policy*, 17 NYU ENVTL. L.J. 987, 997 (2008).

6. As discussed further below, ACES includes a "Combined Efficiency and Renewable Electricity Standard," or "CERES."

7. On September 21, 2010, a bipartisan group of U.S. Senators introduced S. 3813, which in all material respects tracks the elements of ACELA. The bill, which has 22 other co-sponsors in addition to Senator Bingaman (the primary sponsor of ACELA), includes a Renewable Electricity Standard requiring 3% renewable electricity by 2012, increasing incrementally to 15% by 2021. Qualified renewable energy sources include wind, solar, ocean, geothermal, biomass, landfill gas, incremental hydropower, hydrokinetic, new hydropower at existing dams, and waste-to-energy. As in the case of ACELA, S. 3813 would allow energy efficiency to be used to meet up to 26.67% of the RES requirement. This article focuses on ACELA and its successor, S. 3813, as the likely Senate counter-part to the federal renewable energy standard included in ACES.

than preempting) state-level RPS initiatives; (2) provides some means for addressing inconsistencies among state RPS policies and the difficulties that arise from the various tracking systems; and (3) includes some mechanism for handling the potential issues that might arise with RECs in the event a federal cap-and-trade program for greenhouse gas ("GHG") emissions is implemented. Finally, we evaluate the provisions of ACES and ACELA to determine whether these objectives are served by the proposed legislative measures.

I. OVERVIEW OF THE RENEWABLE PORTFOLIO STANDARD

A renewable portfolio standard ("RPS") is a policy requiring utilities to derive increasing percentages of their load from renewable sources of energy by a specific date. RPS programs typically include fixed dates by which specific percentages must be met, definitions of what energy sources/technologies are considered renewable, descriptions of which entities are regulated under the RPS, penalties for failing to comply with a specific RPS, and procedures on how the program will be administrated. Utilities are given flexibility in determining how to meet this standard. Generally, the utility may generate the renewable energy itself, purchase renewable energy from independent renewable energy generators, or purchase renewable energy credits ("RECs") on the market.

While there is currently no federally mandated RPS, several states have taken the initiative to establish either an RPS or a similar program geared toward the broadening of that state's energy portfolio. Alternatively, states may opt to have other types of similar energy policies such as renewable energy goals or Alternative Energy Portfolio Standards ("AEPS"). Renewable energy goals function in much the same way as RPSs except that the standards are not binding. Virginia, Florida, North Dakota, South Dakota and Utah have renewable energy goals. AEPSs also operate much like RPSs, except that utilities are required to supply a percentage of their load with energy derived from both renewable energy sources and other energy sources defined as "alternative." Currently, Pennsylvania, Ohio and West Virginia have AEPSs. The following table provides information on the various state RPS, AEPS, and renewable goals policies.

Table 1: Compilation of Current State Renewable Energy Policies, Goals, and Targeted Year of Attainment[8]

State	Program Type	Percentage	Year
Arizona	RPS	15%	2025
California	RPS	33%	2020

8. Union of Concerned Scientists, Renewable Electricity Standard Toolkit, http://go.ucsusa.org/cgi-bin/RES/state_standards_search.pl?template=main (last visited Sept. 21, 2010); Pew Center on Global Climate Change, Renewable & Alternative Energy Portfolio Standards, http://www.pewclimate.org/what_s_being_done/in_the_states/rps.cfm (last visited Sept. 21, 2010); Database of State Incentives for Renewables & Efficiency, http://www.dsireusa.org/ (last visited Sept. 21, 2010).

State	Program Type	Percentage	Year
Colorado	RPS	30%*	2020
Connecticut	RPS	23%**	2020
Delaware	RPS	20%	2019
Hawaii	RPS	40%	2030
Illinois	RPS	25%	2025
Iowa	RPS	105MW	-
Kansas	RPS	20%	2020
Maine	RPS	10%	2017
Maryland	RPS	20%	2022
Massachusetts	RPS	15%/7.1%/5.0%	2020/2009/2020
Michigan	RPS	10% + 1100 MW	2015
Minnesota	RPS	25%/30%	2025/2020
Missouri	RPS	15%	2021
Montana	RPS	15%	2015
Nevada	RPS	25%	2025
New Hampshire	RPS	23.8%	2025
New Jersey	RPS	22.5%	2021
New Mexico	RPS	20%*	2020
New York	RPS	29%***	2015
North Carolina	RPS	12.5%*	2021
North Dakota	Goal	10%	2015
Ohio	AEPS	25%	2025
Oregon	RPS	25%*	2025
Pennsylvania	AEPS	18%	2020
Rhode Island	RPS	16%	2019
South Dakota	Goal	10%	2015
Texas	RPS	5880 MW	2015
Utah	Goal	20%	2025
Virginia	Goal	15%	2025
Washington	RPS	15%	2020
Washington, DC	RPS	20%	2020
West Virginia	AEPS	25%	2025
Wisconsin	RPS	10%	2015

*Colorado, North Carolina, Oregon and New Mexico have less stringent standards for certain municipalities, cooperative electric associations and/or smaller utilities.

**For Connecticut, an additional 4% is required from certain CHP and other energy efficiency measures.

***An additional 1% is expected from voluntary markets.

In addition, states may employ individualized strategies to help them meet particular renewable energy objectives. For example, an RPS may require that a certain portion of the overall percentage must be met by a specific energy source. Tiers/classes achieve this through formally designated categories that group various sources together and apply specific percentages to each group. New

Hampshire, for example, has an overall standard of 23.8% by 2025, and its RPS goes a step further by creating four different classes—new renewables, new solar-electric, existing biomass, and existing small hydro—to ensure that 16%, 0.3%, 6.5% and 1.0%, respectively, were met by different renewable energy sources as defined by New Hampshire law.[9]

Carve-outs can be used to achieve similar results. Rather than specifically creating tiers, however, an RPS can simply specify a certain percentage to be met by a certain source. Multipliers are incentives that promote particular energy sources by allowing more than one REC to be created per MWh. These incentives are also used to promote the development of renewable energy sources within the state. For example, Colorado uses one set of multipliers (1.25/1.5x) to promote in-state generation generally and another (3x) to promote solar.[10]

Some states also permit RPS targets to be met by energy efficiency measures. The states of Hawaii, Michigan, North Carolina, Nevada, and West Virginia all allow energy efficiency to count towards a particular regulated entity's RPS obligations as long as it meets that particular state's requirements.[11]

II. FEDERAL RPS PROPOSALS

A. General Background

A major obstacle to enactment of a federal RPS is the disparate allocation of renewable resources in the various regions of the country. As illustrated in the maps below, each region of the country has its own unique blend of renewable resources with which to meet a renewable portfolio requirement.

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9. Database of State Incentives for Renewables & Efficiency: New Hampshire, http://www.dsireusa.org/incentives/incentive.cfm?Incentive_Code=NH09R&state=ME&CurrentPageID=1 (last visited Aug. 16, 2010).

10. Database of State Incentives for Renewables & Efficiency: Colorado, http://www.dsireusa.org/incentives/incentive.cfm?Incentive_Code=CO24R (last visited Aug. 16, 2010).

11. Database of State Incentives for Renewables & Efficiency: Hawaii, http://www.dsireusa.org/incentives/incentive.cfm?Incentive_Code=HI06R&re=1&ee=1 (last visited Aug. 16, 2010); Database of State Incentives for Renewables & Efficiency: Michigan, http://www.dsireusa.org/incentives/incentive.cfm?Incentive_Code=MI16R&re=1&ee=1 (last visited Aug. 16, 2010); Database of State Incentives for Renewables & Efficiency: North Carolina, http://www.dsireusa.org/incentives/incentive.cfm?Incentive_Code=NC09R&re=1&ee=1 (last visited Aug. 16, 2010); Database of State Incentives for Renewables & Efficiency: Nevada, http://www.dsireusa.org/incentives/incentive.cfm?Incentive_Code=NV01R&re=1&ee=1 (last visited Aug. 16, 2010); Database of State Incentives for Renewables & Efficiency: West Virginia, http://www.dsireusa.org/incentives/incentive.cfm?Incentive_Code=WV05R&re=1&ee=1 (last visited Aug. 16, 2010).

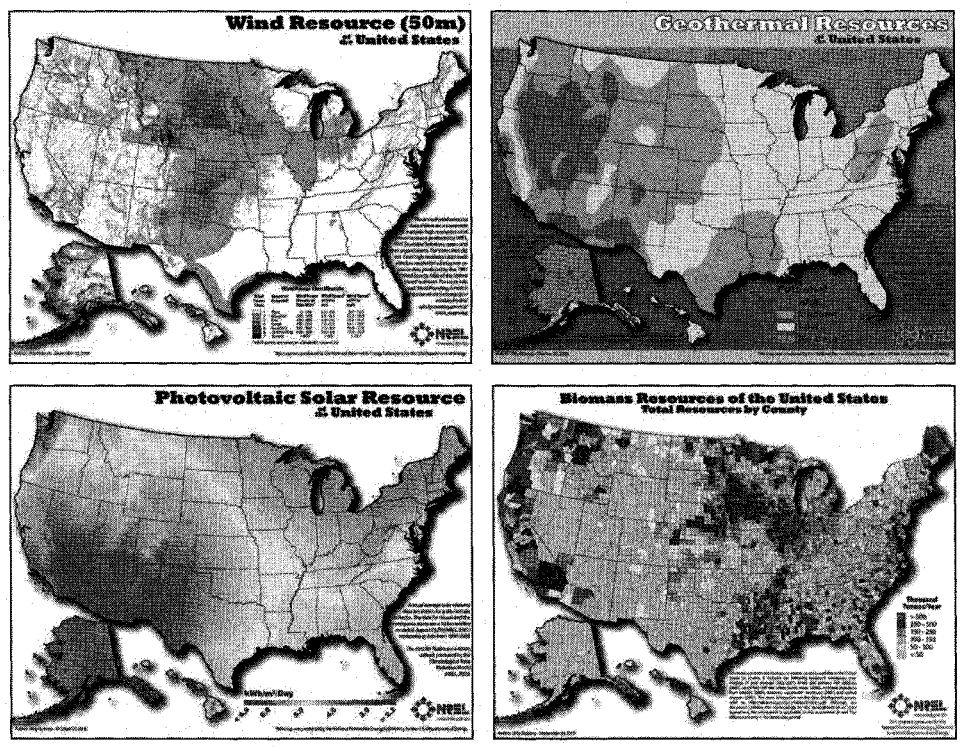

Figure 1. Maps provided by the National Renewable Energy Laboratory illustrating the wind, geotherman, solar, and biomass resource distribution across the country.[12]

The various renewable energy resources, however, have different price tags associated with them. National Renewable Energy Laboratory ("NREL") has compiled data on the average nation-wide capital costs of various renewable energy projects.[13] Wind resources, for example, are the most cost-competitive with fossil-fired resources—with an average capital cost of $1,679/kWh[14]—and those states with substantial wind resource potential (primarily the midwestern plains states) can achieve compliance with an RPS in a much more cost-effective manner than states with little or no wind resource potential (such as in the southeastern United States). Geothermal is also a relatively cost-competitive renewable resource (average capital costs of $3,201/kWh),[15] but its availability is limited primarily to the mountain west states. Solar photovoltaic ("PV") resources are by far the most expensive of these renewable resources (average

12. National Renewable Energy Lab, Dynamic Maps, GIS Data, & Analysis Tools, http://www.nrel.gov/gis/maps.html (last visited Sept. 21, 2010).

13. National Renewable Energy Lab, Energy Analysis: Energy Technology Cost and Performance Data, http://www.nrel.gov/analysis/costs.html (last visited Sept. 21, 2010).

14. *See id.*

15. *See id.*

capital costs of $5,578/kWh),[16] and are abundant in the southwestern and southeastern regions of the United States.

This unequal "endowment" of renewable resources across the regions of the United States results in a disparate economic impact of a federal RPS. While midwestern plains states could achieve compliance by reliance on relatively inexpensive wind resources, states in the southeastern United States would be forced to rely on more expensive biomass (average capital cost of $3,294/kWh) and solar PV to achieve compliance with RPS requirements. Alternatively, southeastern states could achieve compliance by purchasing RECs from the "renewable-resource endowed" states. In either case, however, the compliance costs would be higher in those regions of the country that are relatively less endowed with cost-effective renewable resources. For this reason (among others), many of the southeastern states do not have RPS requirements, and legislators from this region have generally not been supportive of federal RPS proposals.

At the same time, energy efficiency can be achieved at a relatively economical cost and, thus, the federal RPS proposals include provisions that allow procurement obligations to be fulfilled in part through investments in energy efficiency. Including these measures within federal RPS proposals provides some means of redressing the disparate economic impact associated with relative renewable resource endowments. With this backdrop of the regional tensions associated with federal RPS proposals, we now turn to the specific legislative proposals under consideration at the federal level.

B. The American Clean Energy and Security Act of 2009

1. *General Background*

The American Clean Energy and Security Act of 2009 ("ACES"),[17] also known as the Waxman-Markey Bill, provides legislation in the several areas, including clean energy, energy efficiency, reducing climate change pollution through a cap and trade program, transitioning to a green economy, and green job creation. It was introduced in the House on May 15, 2009. After just over a month of review, it was passed in the House on June 26, 2009 by a recorded vote of 219–212. It was then placed on the Senate Legislative Calendar on July 7, 2009 where it currently remains. Although widely associated with establishing the nation's first carbon cap-and-trade program, ACES also endeavors to create what would essentially serve as a federal RPS. ACES § 101 proposes to amend Title VI of the Public Utility Regulatory Policies Act of 1978 ("PURPA") (16 U.S.C. § 2601) by inserting § 610 entitled "Combined Efficiency and Renewable Electricity Standard," referred to by many as CERES.

16. *See id.*

17. The American Clean Energy and Security Act of 2009, H.R. 2454, 111th Cong. (2009) (as passed by the House of Representatives, June 26, 2009, unless otherwise noted).

2. *Renewable Electricity Standard*

Much like most state RPS programs, this renewable electricity standard, or RES, stipulates which entities are regulated, what sources are considered renewable, the percentages of renewable energy required, multipliers, and penalties, among other things. The regulated entities under ACES are retail electric suppliers, and they are defined as "an electric utility that sold not less than 4,000,000 megawatt hours of electric energy to electric customers for purposes other than resale during the preceding calendar year."[18] Renewable energy resources include "wind energy ... solar energy ... geothermal energy ... renewable biomass ... biogas derived exclusively from renewable biomass ... biofuels derived exclusively from renewable biomass ... qualified hydropower ... marine and hydrokinetic renewable energy ...."[19] The Required Annual Percentage is the percentage of the retail electric supplier's base amount that must consist of energy derived from either renewable energy sources or a specific combination of renewable energy sources and energy efficiency savings.[20]

Table 2: Required Annual Percentages and Targeted Year of Attainment of Renewable Energy Goals under ACES[21]

Calendar Year	Required Annual Percentage
2012	6.0%
2013	6.0%
2014	9.5%
2015	9.5%
2016	13.0%
2017	13.0%
2018	16.5%
2019	16.5%
2020	20.0%
2021-2039	20.0%

18. *Id.* at sec. 101, § 610(a)(18). It is interesting to note that the original draft of ACES defined "retail electric suppliers" as those selling not less than 1,000,000 MWh per year as opposed to the 4,000,000 MWh requirement found in the latest version. One possible reason for the increase may have to do with the burden the RES would place on small businesses and possibly ratepayers. According to congressional testimony from the American Public Power Association, this "1 million MWH threshold ... ignores the well-defined government definition of an electric utility small business" that has been set by the Small Business Administration to be those selling 4 million MWh or more. *Hearing to Review Discussion Draft Entitled the "American Clean Energy and Security Act of 2009" Before the House Energy and Commerce Committee*, 111th Cong. 4 (2009) (statement of the American Public Power Association), *available at* http://energycommerce.house.gov/Press_111/20090423/testimony_crisson.pdf.

19. The American Clean Energy and Security Act of 2009, sec. 101, § 610(a)(17)(A)-(H).

20. *See id.* at sec. 101, § 610(d)(2).

21. *See id.*

In order to meet these targets with renewable energy, each retail electric supplier must possess federal renewable electricity credits, or FRECs. Generally, 1 FREC will be issued to a generator for 1 MWh of electricity generated from renewable sources.[22] It is important to note that these credits do not replace state-issued RECs, but rather operate along side of them essentially creating two separate REC markets. This is an issue which will be discussed in greater detail in a subsequent section in terms of potential problems that may arise from this structure.

3. *Energy Efficiency*

ACES allows retail electric suppliers to meet the required annual percentage through measures other than renewable energy. They may also meet these targets by demonstrating that a portion of this requirement, not to exceed 25%, is met by energy efficiency (referred to as "demonstrated total annual electricity savings").[23] This component is what designates this standard as a combined efficiency and renewable energy standard.

ACES provides that the Federal Energy Regulatory Commission ("FERC") will prescribe standards for evaluating and approving electricity savings, but it provides a minimum threshold of requirements that must be met.[24] Flexibility is provided in that state governors may petition FERC to increase the 25% energy efficiency cap up to 40%,[25] meaning that in 2020, a successful petition could result in a state complying with the CERES by having 12% of its electricity provided by renewables and 8% of the target met by electricity savings.

4. *Demonstrating Compliance*

In order to satisfy the CERES, these retail electric suppliers must establish compliance to FERC each year. Compliance is established by submitting the requisite amount of FRECs and, if applicable, a report demonstrating electricity savings that occurred through energy efficiency measures.[26] Instead of submitting FRECs or proof of energy efficiency, however, retail electric suppliers may make payments of $25 for each credit or MW of energy efficiency it was required to demonstrate. These funds, in turn, are returned to the state to promote renewable energy and energy efficiency.[27]

22. *See id.* at sec. 101, § 610(e)(1).
23. *Id.* at sec. 101, § 610(b)(3).
24. *See id.* at sec. 101, § 610(f).
25. *Id.* at sec. 101, § 610(b)(4)(A).
26. *Id.* at sec. 101, § 610(b)(2).
27. *See id.* at sec. 101, §§ 610(g)(1),(3)(A), (B).

C. *The American Clean Energy and Leadership Act of 2009*

1. *General Background*

The American Clean Energy and Leadership Act of 2009 ("ACELA"),[28] also known as the Bingaman Bill, is in many ways similar to ACES. ACELA has essentially the same goals as ACES, including increased development of clean technologies and job creation, and it also amends PURPA to implement a federal renewable electricity standard ("RES") which incorporates an energy efficiency component. It was placed on the Senate Legislative Calendar on July 16, 2009, where it currently remains.

2. *Renewable Electricity Standard*

Under the RES included in ACELA, electric utilities selling 4,000,000 MWh or more are required to "obtain a percentage of the base quantity of electricity the electric utility sells to electric consumers in any calendar year from renewable energy or energy efficiency."[29] Although ACELA does not provide a definition of "electric utility," it does state that electric utilities "that sold less than 4,000,000 megawatt hours of electric energy to electric consumers during the preceding calendar year" are considered exempt.[30] Renewable energy sources from which these regulated entities might receive power include "solar, wind, or geothermal energy or ocean energy ... biomass ... landfill gas ... qualified hydropower ... marine and hydrokinetic renewable energy ... incremental geothermal production ... coal-mined methane ... qualified waste-to-energy; or ... another renewable energy source based on innovative technology, as determined by the Secretary through rulemaking."[31]

Similar to ACES, ACELA has a Renewable Energy and Energy Efficiency Requirement mandating that a certain percentage of the base quantity of electricity sold by an electric utility must consist of energy derived from either renewable energy sources or a specific combination of renewable energy sources and energy efficiency savings.[32] ACELA's requirements, however, are slightly less demanding than those under ACES.

28. The American Clean Energy and Leadership Act of 2009, S. 1462, 111th Cong. (2009).
29. *Id.* at sec. 132, §§ 610(b)(1), (f)(1).
30. *Id.* at sec. 132, § 610(f)(1).
31. *Id.* at sec. 132, §§ 610(a)(12)(A)-(I).
32. *See id.* at sec. 132, § 610(b)(1).

Table 3: Renewable Energy and Energy Efficiency Requirements and Targeted Year of Attainment of Renewable Energy Goals under ACELA[33]

Calendar Year	Required Annual Percentage
2011-2013	3.0%
2014-2016	6.0%
2017-2018	9.0%
2019-2020	12.0%
2021-2039	15.0%

Similar to ACES, ACELA's compliance mechanism is the FREC which is designed to operate along side of state-issued RECs, though the statute provides no further definition. It is important to note that unlike ACES, a FREC under ACELA represents 1 kWh rather than 1 MWh.[34]

3. *Energy Efficiency*

If a state governor petitions the Secretary of Energy (the Secretary), ACELA provides that federal energy efficiency credits may meet up to 26.67% of the percentage requirement for any year listed in the above table.[35] Under the statute, federal energy efficiency credits may be issued for "qualified electricity savings."[36] "Qualified electricity savings," in turn, includes electricity savings achieved either by the end user or by the "retail electricity distributor" that meet detailed measurement and verification requirements.[37] In addition, "the increment of electricity output of a new combined heat and power system that is attributable to the higher efficiency of the combined system ... shall be considered electricity savings under this subsection."[38]

4. *Demonstrating Compliance*

ACELA provides that electric utilities can meet the compliance standard by submitting to the Secretary either (1) the requisite amount of renewable energy credits, (2) federal energy efficiency credits (up to 26.67% of the percentage requirement), (3) alternative compliance payments of 2.1cents/kWh, or (4) some combination of these three methods.[39] The alternative compliance payments must be made directly to the state and used for the promotion of renewable energy and electric vehicles.

33. *See id.* at sec. 132, § 610(b)(1)(B).
34. *Id.* at sec. 132, § 610(c)(2)(E).
35. *Id.* at sec. 132, §§ 610(b)(2)(B), (i)(2).
36. *Id.* at sec. 132, § 610(i)(3).
37. *Id.* at sec. 132, §§ 610(i)(1), (4).
38. *Id.* at. sec 132, § 610(i)(5).
39. *Id.* at sec. 132, §§ 610(b)(2)(A)-(D).

ACELA incorporates what are known as "safety valve" provisions that come into play to limit the costs of complying with the measure. For example, electric utilities can petition for waiver of these requirements for the upcoming year "in order to limit the rate impact of the incremental cost of compliance of the electric utility to not more than 4 percent per retail customer in any year."[40] In addition, either the state public utility commission or the electric utility can request a variance from the Secretary to either suspend or reduce the requirements "on the basis of transmission constraints preventing delivery of service."[41]

III. THE ROLE OF A FEDERAL RPS IN SUPPLEMENTING RATHER THAN SUPPLANTING STATE RPS INITIATIVES

A federal RPS can potentially play a helpful role in supplementing existing state RPS initiatives and promoting additional investment in renewable energy resources. At a minimum, a federal RPS should contain express provisions accommodating (rather than preempting) state-level RPS initiatives. This would allow states with more aggressive or rigorous RPS requirements to maintain their policies. Second, a federal RPS could remedy the existing inconsistencies among state RPS policies—such as how the various states define "renewable"—and the difficulties that arise from the various tracking systems. Third, a federal RPS could include some mechanism for addressing the potential issues that might arise with RECs in the event a broader energy and climate bill with trading of carbon allowances is implemented. In this section, we will evaluate the provisions of ACES and ACELA to determine whether these objectives are served.

A. Preemption Issues

State action/legislation may be prevented by the federal government under the doctrine of preemption. Preemption occurs either where federal law explicitly states that the federal government alone will be permitted to regulate a particular area or where preemption is implied. Federal preemption may be implied through field preemption which occurs when the federal intent of a law is to regulate an entire area. States may continue to legislate in this area, however, if the federal law authorizes it through a savings provision. In the absence of a savings provision, the states would likely be preempted from creating their own renewable energy standards because Congress seems to intend to regulate the area of renewable energy development through the implementation of these federal benchmarks and related provisions.[42]

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40. *Id.* at sec. 132, § 610(d)(3)(C).

41. *Id.* at sec. 132, § 610(d)(3)(D).

42. For a general discussion of preemption, see RONALD D. ROTUNDA & JOHN E. NOWAK, 2 TREATISE ON CONST. L. § 12.2(b) (*The More Elaborate Three-Part Test of* Pennsylvania v. Nelson) (4th ed. 2010).

In this section, we evaluate ACES and ACELA to determine their impact on existing state RPS initiatives.

1. *ACES*

ACES avoids preemption issues by granting states broad authority over many aspects of renewable energy generation and associated federal requirements. The savings provision in ACES specifically provides that states retain the authority to set more stringent renewable electricity standards and to "regulate the acquisition and disposition of Federal renewable electricity credits by retail electric suppliers within the" state.[43] This includes the authority of states with more stringent percentages to "require such retail electric supplier to acquire and submit to the Secretary for retirement federal renewable electricity credits in excess of those submitted" under ACES.[44]

ACES also defers to states to some extent in terms of how FRECs are distributed. As mentioned earlier, 1FREC will be issued for 1MWh of electricity generated from renewable energy sources. It also says that where a state provides the option for retail electric suppliers to comply with an RPS through payments to that state, ACES will distribute FRECs proportionately according to the guidelines to be promulgated.[45] Again, these federal credits do not replace state-issued RECs, but rather operate along side of them essentially creating two separate REC markets.

Finally, ACES explicitly provides that states retain the ability to adopt renewable energy incentives. It expressly states that nothing in the legislation is intended to prevent a state from providing incentives for renewable energy generation in terms of setting electric rates. It amends PURPA § 210 to read the following:

> Notwithstanding any other provision of this Act or the Federal Power Act, a State legislature or regulatory authority may set the rates for a sale of electric energy by a facility generating electric energy from renewable energy sources pursuant to a State-approved production incentive program under which the facility voluntarily sells electric energy.[46]

2. *ACELA*

Although ACELA does not have an explicit savings provision, it is clear that it is not designed to preempt state authority in these areas. ACELA does not in any way prevent states from setting their own renewable energy/energy efficiency regulations and, in terms of coordination, "[t]he Secretary, in consultation with States having such renewable energy and energy efficiency

43. The American Clean Energy and Security Act of 2009, H.R. 2454, 111th Cong. sec. 101, § 610(k)(1)(A) (2009).

44. *Id.* at sec. 101, § 610(k)(1)(B).

45. *Id.* at sec. 101, § 610(e)(2)(A).

46. *Id.* at sec. 101, §102(o).

programs, shall, to the maximum extent practicable, facilitate coordination between the Federal program and State programs."[47]

While ACELA does not go into as much detail as ACES regarding the states' authority to deal with excess federal credits, it does say that if a utility has such credits, it "may transfer the credits to another electric utility in the same utility holding company system."[48] It also says that electric utilities will receive credits if they either comply with state RPA requirements or adhere to alternative compliance mechanisms provided by the state.[49]

3. *Analysis of Preemption Issue*

Both ACES and ACELA thus include the necessary savings provisions to accommodate, and not supplant, the existing state RPS programs. Both bills make clear that state programs will remain intact so long as they do not undermine the federal program. ACES has an explicit savings provision, and ACELA has a functional equivalent. In addition, both bills go beyond merely allowing state programs to continue operating by at times deferring to state guidelines, especially in terms of developing a national market.

B. Federal Standards and a Unified REC System

As the states developed their RPS programs and regional REC tracking systems evolved, differing standards as to what is included in a REC, who can trade with whom, where the REC must come from, etc., have emerged. Such inconsistencies hinder trading and hence inhibit the development of renewable energy projects that rely on RECs as a source of funding. According to one expert:

> "While state systems share similarities, there is a critical lack of consistent fungibility between RECs issued in different states and control areas ...[.] Thus, there are no real REC markets among or even within the states, only individual state regulatory compliance systems. The lack of a real national REC market for state RPS compliance creates an absence of liquidity for RECs and thus for investment capital as well."[50]

In particular, problems arise because of restrictions among the operating procedures of state/regional REC tracking systems and differences among states

47. The American Clean Energy and Leadership Act of 2009, S. 1462, 111th Cong. sec. 132, § 610(h)(1), (3) (2009).

48. *Id.* at sec. 132, § 610(c)(4).

49. *Id.* at sec. 132, § 610(h)(4)(a)(i), (ii).

50. CHRISTOPHER COOPER & BENJAMIN K. SOVACOOL, RENEWING AMERICA: THE CASE FOR FEDERAL LEADERSHIP ON A NATIONAL RENEWABLE PORTFOLIO STANDARD (RPS) 47 (2007) (Rep. No. 01-07), *available at* http://www.newenergychoices.org/dev/uploads/RPS%20Report_Cooper_Sovacool_FINAL_HILL.pdf (quoting Christopher B. Berendt, *A State-Based Approach to Building a Liquid National Market for Renewable Energy Certificates: The REC-EX Model*, 18 ELECTRICITY J. 54, 57 (2006)) [hereinafter COOPER & SOVACOOL, THE CASE FOR FEDERAL LEADERSHIP].

in terms of what qualifies as "renewable" for RPS purposes. A properly structured FREC trading system, however, could provide the consistency and predictability necessary to create a fluid national market to generate environmental benefits and support the development of renewable energy projects.

1. *REC Restrictions Among Tracking Systems*

Differences exist among the various REC tracking systems. In order to facilitate regulated entities in satisfying their obligations and to ensure proper tracking of RECs, regional and state REC tracking systems have been established throughout the country. There are currently seven operational systems: WREGIS (Western Renewable Energy Generation Information System), M-RETS (Midwest Renewable Energy Tracking System), ERCOT (Electric Reliability Council of Texas), APX NARR (APX North American Renewables Registry), PJM GATS (Pennsylvania, Jersey, Maryland Generation Attribute Tracking System), MIRECS (Michigan Renewable Energy Certificate System), and NEPOOL GIS (New England Power Pool Generation Information System).[51] Tracking systems in North Carolina and New York are still being considered and/or developed.

These tracking systems ensure proper tracking and verification of RECs by following their respective operating procedures. One essential function of these procedures is the prevention of double counting RECs. Double-counting occurs when one REC representing 1MWh of renewable generation is used to satisfy more than one RPS requirement.[52] For example, if a REC is not properly tracked, that REC may be used to satisfy two different classes/tiers of a state RPS, or it may be used for compliance in one state and purchased for compliance in another.[53]

Operating procedures also regulate which RECs may be traded on that particular system. When trading involves RECs from outside the system's control area, such trading is referred to as importing and exporting. In order to import or export in M-RETS, for example, the REC must come from a "Compatible Certificate Tracking System" in order to ensure that M-RETS

51. *See* U.S. Dep't of Energy, The Green Power Network: Renewable Energy Certificates (REC's)—National REC Tracking Systems Map (courtesy of the Environmental Tracking Network of North America), http://apps3.eere.energy.gov/greenpower/markets/certificates.shtml?page=3 (last visited Sept. 21, 2010).

52. Double-counting might also occur when a REC is used for compliance with an emissions trading program, but this issue will be discussed in a subsequent section.

53. PJM GATS, for example, requires all participating generators to have all of their generation tracked by GATS unless another tracking system has been certified as a Compatible Certificate Tracking System under its procedures to make sure that this other tracking system has sufficient standards which will allow PJM GATS to maintain the integrity of its program. GENERATION ATTRIBUTE TRACKING SYSTEM (GATS) OPERATING RULES 4, 60 (Revision 6, Sept. 2010), http://www.pjm-eis.com/~/media/59FB4081EE75444E95F01C52461E8633.ashx [hereinafter GATS OPERATING RULES].

verification standards are upheld.[54] A Compatible Tracking System, in turn, is defined as "a generation tracking system that has an operating agreement with the M-RETS Administrator regarding the conversion and transfer of Certificates between tracking systems."[55] WREGIS contemplates having a similar mechanism called a "Compatible Registry Tracking System."[56] As of the writing of this article, however, it appears that neither M-RETS nor WREGIS have compatible tracking systems, meaning that inter-system trading does not exist. PJM GATS formerly had a rule stating that exports may come only from states adjacent to the PJM GATS control area, though it has since been removed.[57] PJM GATS still retains complicated procedures that "external generators" must follow in order to be able to track RECs created within its system, including that it must be "prequalified" in at least one state's RPS within the PJM GATS control area.[58] NEPOOL GIS still retains a requirement of adjacency, stating that energy may be exported if "such Energy is exported from the GIS Generator to a purchaser in an adjacent control area with transmission rights over the ties from the Control Area," among other requirements.[59]

2. *REC Restrictions Among States*

Different states have different requirements as to what renewable sources can count towards each state's RPS. For example, only about half the states with some sort of RPS program list municipal solid waste as a potential source of qualified renewable energy, and only about a quarter allow energy efficiency measures to count towards an RPS. These standards also often apply to the characteristics of the generation that is imported into the state.

In addition, states have varied limitations on what RECs may be applied by regulated entities to meet each state's RPS. Such differences usually exist in order to retain benefits such as job creation and environmental improvement within the state. Others involve geographic limitations on where the REC may be generated. Ohio, for instance, requires that one-half of renewable energy must come from within Ohio, and the other half must be met by "resources that can be shown to be deliverable" into Ohio.[60] In contrast, Delaware broadens the scope and permits RECs issued by the PJM for generation tracked within its control area to count towards its RPS.[61]

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54. MIDWEST RENEWABLE ENERGY TRACKING SYSTEM, OPERATING PROCEDURES §§ 15.2, 15.2 (Apr. 2010), http://www.mrets.net/resources/M-RETS-Operating-Procedures.pdf [hereinafter M-RETS OPERATING PROCEDURES].

55. *Id.* at 75.

56. WESTERN RENEWABLE ENERGY GENERATION INFORMATION SYSTEM (WREGIS) OPERATING RULES § 17 (June 4, 2007), http://www.wregis.org/Documents.php.

57. GATS OPERATING RULES, *supra* note 53, § 12.

58. *Id.* §§ 6.3.3, 12.3.

59. NEW ENGLAND POWER POOL GENERATION INFORMATION SYSTEM OPERATING RULES, Rule 3.6(b)(y) (July 10, 2010), http://www.nepoolgis.com/ (click "GIS Operating Rules" hyperlink).

60. OHIO REV. CODE ANN. § 4928.64(B)(3) (LexisNexis 2009).

61. DEL. CODE ANN. tit. 26, §§ 352(6), 358(a) (2007).

3. *Problems Resulting from State Restrictions and Tracking Systems*

The various restrictions imposed by states can cause several problems impeding the development of a robust renewable energy industry. One problem is that of "free riders." Often, states that are downwind of upwind polluting states have the strongest motivation to implement environmental policies such as RPS programs to address these issues, and the upwind states do not feel the need to make such investments because they are not experiencing the environmental harm that their pollution causes.[62] Indeed, "some of these upwind states have rejected RPS mandates when they believed that such policies would raise compliance costs and encourage industries to flee to states with less stringent regulations."[63] Similarly, state restrictions on eligible renewable energy sources often result in utilities to export cheaper power to other states that accept that source of generation if the exporting state does not deem that generation eligible.[64] As a consequence, "it discourages the development of the most cost-competitive forms of renewable energy."[65]

Restrictions at the regional tracking level can cause similar problems. Arbitrary delineations between control areas, which disregard the upwind/downwind issue and place restrictions on trading, essentially perpetuate the environmental and financial inequities mentioned earlier, not to mention inhibit trading and reduce market liquidity. According to one report, "[i]nconsistent and limited REC markets prevent investors from guaranteeing a predictable return on renewable energy investments."[66]

4. *Analysis of a Federal Role in Clarifying Standards*

Neither ACES nor ACELA contains any provisions that offer much assistance on clarifying the definition of "renewable" or providing a national platform for the trading of RECs. Rather, both contemplate a Federal REC, or FREC, market operating alongside the state and regional REC markets. In fact, ACES and ACELA themselves contain different definitions of "renewable," thus contributing to, rather than help solve, the challenges on this issue. ACELA, for its part, includes "qualified waste-to-energy"[67] and "coal-fired methane,"[68] which are fuel sources excluded from ACES and are not widely included as renewable resources in most states' RPS provisions.

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62. Sovacool & Cooper, *Hidden Costs*, *supra* note 4, at 9. *See also* Shelley Welton, *From the States Up: Building a National Renewable Energy Policy*, 17 NYU ENVTL. L.J. 987, 997-98 (2008).

63. Sovacool & Cooper, *Hidden Costs*, *supra* note 4, at 9.

64. *Id.* at 10-11.

65. *Id.* at 11.

66. COOPER & SOVACOOL, THE CASE FOR FEDERAL LEADERSHIP, *supra* note 50, at 47.

67. The American Clean Energy and Leadership Act of 2009, S. 1462, 111th Cong. sec. 132, § 610(a)(12)(A)-(I) (2009).

68. *Id.*

Admittedly, it would be politically challenging for a federal RPS provision to play a strong role with respect to a standardized definition of "renewable." There is considerable federal-state tension already on energy issues, and it would be very unpopular at the state level for the federal government to take strong action to adopt a prescriptive and preemptive definition of "renewable." Moreover, as noted above, various states and regions have disparate "endowments" of renewable energy resources, and thus each state's "renewable" standard is designed to reflect the available renewable energy resources of that state as well as policy decisions regarding particular technologies to promote. In addition, the absence of significant cost-effective renewable energy resources may result in a state including energy efficiency as a means of achieving compliance, thus providing a more cost effective means of meeting an RPS requirement. The inclusion of energy efficiency within the RPS provisions of both ACES and ACELA—and thereby creating a combined efficiency and renewable energy standard, or CERES—is a recognition that the "safety valve" of including energy efficiency will be necessary for many states to achieve compliance with a renewable energy standard at a reasonable cost.

Notwithstanding the negative political implications of addressing this issue in federal RPS legislation, it is likely that a definitive federal role on this issue would advance the objective of providing more certainty in the renewable energy industry, and stimulate additional investment in renewable energy resources. At a minimum, a federal RPS provision could create a vehicle for reconciling the various definitions of "renewable" across the states. ACELA, for example, allows additional renewable energy resources to be included through a rulemaking process.[69] A federal RPS provision could include a nationwide standard for "renewable" and designate FERC as the agency to determine whether additional renewable energy resources could be included for purposes of the federal RPS. Similarly, FERC could be given responsibility for coordination and oversight of the state and regional REC markets, with a view towards ultimately migrating these markets toward a unified national REC market. This development, too, could be expected to stimulate additional investment in renewable energy resource, by providing some certainty as to the operating rules of the marketplace and reducing the administrative burdens associated with participating in separate state, regional and federal REC markets.

C. Federal Standards and Emission Markets

Federal RPS legislation could also provide some guidance on the challenging issues associated with the interrelationship between REC markets and emissions markets. As observed by a noted expert in the field, "[e]nvironmental markets for renewable energy and emission offset commodities are currently in a state of confusion."[70] The confusion arises because RECs are commonly defined to represent the "environmental attributes" or benefits

69. *Id.* at sec. 132, § 610(b)(1)(A), (B).

70. 1 MICHAEL GILLENWATER, REDEFINING RECS (PART 1): UNTANGLING ATTRIBUTES AND OFFSETS 16 (2007).

produced by generating electricity from renewable sources, and these environmental benefits can be defined to include emission reductions. Because the generation of electricity by a renewable facility *may* avoid or displace generation—and associated emissions—from a fossil fuel-fired plant, RECs have become popular with marketers, corporations and individuals as a means of offsetting their GHG emissions.[71]

REC attributes may be either primary or derived. Primary attributes are "[t]he direct air emissions from a renewable generator" whereas "[d]erived environmental attributes can be defined as the emissions *avoided* by virtue of renewable energy displacing conventional generation".[72] In other words, derived attributes represent the emissions avoided from a fossil plant that was "backed down" because of the generation provided from the renewable source. And therein lies the problem—what can you do with these seemingly avoided emissions?

1. *Voluntary Markets*

In voluntary REC markets, the RECs sold are not used for compliance purposes (meaning that they are probably from renewable generators in states without an RPS or perhaps generation above the RPS mandate). Rather, they are sold to voluntary purchasers such as individuals, schools and other "laypeople."[73] One of the main reasons people purchase RECs in these markets is because they believe they are promoting renewable energy sources by purchasing these "avoided" emissions.[74] At the outset, it would seem that inasmuch as a fossil plant backed down and therefore released less carbon because of the avoided emissions, the REC associated with the renewable generation that caused this should have a derived attribute of avoided emissions, equivalent to an offset.

According to experts, however, this is not the case. In actuality, under a carbon cap-and-trade system, the allowance that would have been used to permit the fossil plant to make that emission (had it not been for the renewable generation displacing the need for that energy) is now able to be sold on the market, thereby allowing another plant to emit, thereby keeping the cap intact.[75] This results in no net emissions reduction.[76] If there has been no reduction, the REC associated with that renewable generation cannot claim to be an offset

71. *Id.* at 2.

72. EDWARD A. HOLT & RYAN H. WISER, THE TREATMENT OF RENEWABLE ENERGY CERTIFICATES, EMISSIONS ALLOWANCES, AND GREEN POWER PROGRAMS IN STATE RENEWABLES PORTFOLIO STANDARDS 10 (2007).

73. *See generally* LORI BIRD ET AL., IMPLICATIONS OF CARBON REGULATION FOR GREEN POWER MARKETS (2007).

74. *Id.* at 11-15. *See also* HOLT & WISER, *supra* note 72, at 22.

75. BIRD ET AL., *supra* note 73, at 23. *See also* 2 MICHAEL GILLENWATER, REDEFINING RECS (PART 2): UNTANGLING CERTIFICATES AND EMISSION MARKETS 2 (2007).

76. *See* 2 MICHAEL GILLENWATER, REDEFINING RECS (PART 2), *supra* note 75, at 2.

because the additionality requirement has not been met,[77] leading to a group of misled voluntary REC purchasers.

One solution is to give emission allowances to renewable energy generators or by setting the carbon cap lower after having factored in renewable generation.[78] If renewables are given emission allowances, they can retire them, thereby ensuring that no other plant will purchase them to emit.[79] If the cap is set so as to account for renewable generation, those generators would also be able to make carbon emission reduction claims.[80] Indeed, the Northeast Regional Greenhouse Gas Initiative ("RGGI") has taken this approach in setting its cap, though other factors were also considered which may have diluted its effectiveness.[81]

2. *Compliance Markets*

Similar complications arise in the compliance markets as well. Each state has different standards for what attributes must be retired in order for that REC to be counted towards that state's RPS. Some states such as Arizona and Colorado require that all attributes, including derived attributes and emissions allowances, must be retired in order for the REC to meet counted towards RPS compliance.[82] On the other hand, some states such as Delaware and Pennsylvania do not require that emissions allowances be included for compliance.[83] Many states also do not specify or are ambiguous in their standards as to what must be retired for compliance.[84]

If emissions allowances are distributed to renewable generators under a cap-and-trade system, the states where retirement of all attributes, including emissions allowances, is required (or where the requirements remain ambiguous) may greatly impair the abilities of renewable generators to obtain financing. Many argue that the ability to sell the REC and emission allowance separately (i.e., unbundled) could potentially provide two revenue streams to support development of renewables.[85] As discussed earlier, though, it should be noted that this would not lead to emissions reductions under the RPS because there has been no net reduction in emissions.[86] If they are sold bundled, however, generators may not receive multiple revenue streams, but there will be emissions reductions when the REC and its emissions reductions are retired. Gillenwater provides the following discussion on the potential pitfalls of bundling RECs:

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77. *Id.* at 2, 3. "Additionality" means an emissions reduction beyond a "business as usual" scenario.

78. *Id.*

79. *Id.*

80. BIRD ET AL., *supra* note 73, at 23.

81. *Id.* at 51-52.

82. *See generally* HOLT & WISER, *supra* note 72, at § 3.3, 15-20.

83. *Id.*

84. *Id.*

85. BIRD ET AL., *supra* note 73, at 31-32.

86. *Id.*

> If a future federal GHG cap-and-trade scheme in the United States did allocate emission allowances to renewable generators (*e.g.*, through a set-aside or output-based allocation), does it make sense to require that these allowances be bundled with RECs? Many of these RECs, except those sold into the voluntary market, will be purchased by [load-serving entities] and then submitted to government authorities for compliance with an RPS. If allowances are inseparable from RECs, then state governments will effectively be taking possession of these allowances. Renewable generators will have received no financial benefit from the allocation. It is difficult to see how this arrangement would benefit renewable energy generators or, more importantly, lead to additional investments in renewable energy generation.... The only clear benefit to requiring that allowances be bundled with RECs is that it helps advocates of voluntary REC markets to continue to make claims that RECs are equivalent to emission offset credits even in the case of a cap-and-trade scheme covering the electric power industry. If REC marketers believe that their business is dependent upon the legitimacy of their emission reduction claims, then a perverse incentive has been created.[87]

While many potential problems have been identified, several members of the energy community have suggested possible solutions. To account for the complications that may arise in having dual REC systems with varying requirements, some have said that an additional attribute should be bundled with state RECs to indicate that the particular MWh may be used to meet federal compliance.[88] It has also been suggested that FRECs should be essentially devoid of any attributes whatsoever and think of them simply as "compliance credits."[89]

In order to address issues arising from the interaction between RECs and emissions markets, the Environmental Tracking Network of North America ("ETNNA"), acknowledging that none of the proposed renewable electricity standards indicate whether attributes will be associated with FRECs, has stated that "those wanting to use RECs for climate change purposes would need to purchase and retire both the REC and the FREC due to the additionality requirement for climate change benefits" in a dual system.[90] The ETNNA has published a white paper designed to make recommendations on how the nation's tracking systems may need to make technical changes in their databases to accommodate anticipated federal legislation.[91]

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87. 1 GILLENWATER, *supra* note 70, at 4-5.

88. Envt'l Tracking Network of N. Am. (ETNNA), White Paper: *System Changes to Serve a Federal RES* 5-6 (2009), *available at* http://www.etnna.org/images/PDFs/ETNNA-WHITEPAPER_System-Changes-to-Serve-a-Federal-RES-final1.pdf. *See also* Ed Holt & Associates, Inc., Federal-State RPS Interactions in Congressional Bills (PowerPoint presentation for webinar for the Clean Energy States Alliance) slide 6 (2009), *available at* http://www.cleanenergystates.org/JointProjects/RPS/Holt_april7_presentation.pdf.

89. Ed Holt & Associates, *supra* note 88, at slide 6.

90. Envt'l Tracking Network of N. Am. (ETNNA), *supra* note 88, at 3.

91. *Id.*

3. *Analysis of a Federal Role in Clarifying REC vs. Emissions Markets*

Given the "state of confusion" that currently exists in the environmental markets for renewable energy and emission offset commodities, federal RPS legislation could play a productive role in providing uniformity and certainty in these markets. This reduced uncertainty, in turn, should stimulate additional investment in renewable energy resources, as the REC and emissions markets become more liquid and robust. As in the case of prescriptive federal action regarding the definition of "renewable," however, it may be politically unpopular for federal legislation to provide strong guidance on this issue.

The key, according to Gillenwater, is to move away from an imprecise definition of RECs that uses ambiguous terms such as "environmental attributes" or "benefits," or that potentially could include indirect, off-site benefits.[92] As stated by Gillenwater, "[e]nvironmental markets function most efficiently with unambiguous and homogeneous tradable commodities that have clear ownership."[93] In short, REC markets (both voluntary and compliance) must be redefined in a manner that allows them to function without conflicting with emissions markets.

Measured by this objective, both ACES and ACELA fail to include any provisions that would reduce or eliminate the confusion in the REC and emissions markets. ACES provides that a FREC will be issued to a generator for 1MWh of electricity generated from renewable sources.[94] ACELA, for its part, does not define renewable energy credits, but requires the Secretary of Energy to promulgate regulations to administer the program.[95] (Conceivably, this delegation to the Secretary of Energy could result in a process whereby the relationship between the REC and emissions markets can be clarified; in the absence of clear guidance in the legislation, however, it is not clear that an outcome produced by such a process would be durable.)

IV. CONCLUSION—LOOKING FORWARD

The common objective of state and federal RPS programs is to stimulate additional electricity generation from renewable energy sources. States have moved forward aggressively, in the absence of federal action, to provide a suite of incentives and procurement obligations designed to promote investment in renewable energy resources. It is essential that a federal RPS not hinder or preempt the substantial progress that states have already made in developing and implementing RPS requirements. As described above, the two prominent federal legislative acts currently under consideration, ACES and ACELA, contain

92. 1 GILLENWATER, *supra* note 70, at 5.

93. *Id.*

94. The American Clean Energy and Security Act of 2009, H.R. 2454, 111th Cong. sec. 101, § 610(e)(1) (2009).

95. The American Clean Energy and Leadership Act of 2009, S. 1462, 111th Cong. sec. 132, § 610(c)(1) (2009).

specific savings provisions that should accommodate a co-existence of federal and state RPS initiatives.

Beyond mere accommodation, however, federal RPS legislation could play a strategic role in addressing fundamental issues that currently impede development of renewable energy resource in the United States. Conflicts among the states in their policies toward which resources are "renewable," and the associated impacts on efficient operation of state and regional REC markets and tracking systems, create uncertainty and impose administrative burdens that reduce the feasibility and attractiveness of investing in renewable energy resources. Similarly, RECs and emissions commodities currently cannot interact in a single marketplace without conflicts and confusion. While it is important to allow states to retain authority to make decisions based on their unique knowledge of the policies that are in the best interests of their citizens, such a disjointed approach to addressing these pressing national and global problems could surely benefit from the broader perspective that the federal government theoretically has the ability to provide. Decisive and comprehensive action in federal legislation to provide some uniformity in the classification of "renewable" resources, the definition of RECs, the parameters of REC tracking systems and markets, and the inter-relationship between the REC and emissions markets could reduce uncertainty and thus reduce the risks associated with investing in renewable energy resources, thereby stimulating additional investment in the renewable energy industry. As federal legislation continues to be drafted, debated, and negotiated, federal and state policymakers should recognize the complex issues that need to be addressed in comprehensive energy legislation and the positive impacts on renewable energy development that can result from resolving these issues in a well-designed federal RPS program.