REPORT OF THE RENEWABLE ENERGY AND DEMAND-SIDE MANAGEMENT COMMITTEE

This report summarizes a selection of key legislative, regulatory and judicial developments in renewable energy and demand-side management, at both the federal and state level, during the January 2008, to December 2008, time frame.[1]

I. RENEWABLE ENERGY

A. Federal Government Activity

1. Enacted Legislation

The Energy Improvement and Extension Act of 2008 (2008 Act), embedded in the Emergency Economic Stabilization Act of 2008[2] that President Bush signed into law on October 3, 2008, provided an estimated seventeen billion

1. This report was prepared by the following Committee members: Contributing Editor – Jeffery S. Dennis; Contributors - Tom Campbell, Joshua Zimmerman and Jason Morris; Charles Middlekauff, Evelyn Lee, Bea Heise, and Mary Gandesbery; Laura Smith Morton; Andrew McLain; Richard Heinemann.

2. The Emergency Economic Stabilization Act of 2008, Pub. L. No. 110-343, Division B (2008) (hereinafter 2008 Act).

dollars in various tax incentives for the renewable energy sector.[3] Among the host of tax incentives offered by the 2008 Act for the renewable energy industry,[4] wind and solar power sectors garnered the largest dollar-for-dollar share.[5] Incentives provided under the 2008 Act for wind power included a brief extension of the production tax credit (PTC) as well as a variety of incentives or microturbines and residential-scale wind projects.[6] For the solar industry, the 2008 Act extended the existing investment tax credit for solar energy facilities and eliminates the cap on an existing tax credit for investments in residential solar.[7]

Extension of the PTC for Electricity Produced by Certain Renewable Energy Facilities. The "renewable electricity production credit," or PTC, under Section 45 of the Tax Code provides a tax credit, based on the amount of kilowatt-hours of electricity produced, for "qualified facilities" that generate electricity from "qualified energy resources" placed in service before a specified date.[8] The 2008 Act extended the PTC for a number of "qualified facilities,"[9] including a one-year extension for wind facilities placed in service before January 1, 2010.[10] The PTC extension alone is estimated to have a nearly six billion dollar tax effect.[11]

Residential Energy-Efficient Property Tax Credit. Section 25D of the Tax Code allows for a thirty percent credit for investments in residential solar and fuel cell properties.[12] The 2008 Act extends through 2016 the credit available for solar property[13] and adds residential small wind and geothermal heat pumps

3. UNITED STATES SENATE COMM. ON FIN., ENERGY, EXTENDERS, AMT AND DISASTER TAX PROVISIONS IN THE "EMERGENCY ECONOMIC STABILIZATION ACT OF 2008" (2008), http://finance.senate.gov/sitepages/leg/LEG%202008/100208%20Economic%20Stabilization%20Summary.pdf (hereinafter FINANCE COMM. REP.).

4. The 2008 Act also provides notable incentives for investments in several renewable technologies such as hydrokinetics, fuel cells, geothermal, and open-loop biomass facilities. 2008 Act, *supra* note 1, at §§ 101-9.

5. FINANCE COMM. REP., *supra* note 3 (indicating relative estimated values of each incentive provision).

6. For example, the 2008 Act expanded the scope of "qualified energy property" under Section 48 of the Tax Code, 26 U.S.C. § 48, removed or raised the caps on this tax credit, and extended the sunset for the credit in certain instances. 2008 Act, *supra* note 1, at § 101. Specifically, the 2008 Act extends through 2016 the thirty percent tax credit for investments in solar energy property and fuel cell property and the ten percent tax credit for commercial microturbines. 2008 Act, *supra* note 1, at §§ 101, 103. For discussion of PTC, see below.

7. 2008 Act, *supra* note 1, at § 103.

8. Section 45 defines "qualified energy resources" as wind, closed-loop biomass, open-loop biomass, geothermal energy, solar energy, small irrigation power, municipal solid waste, and qualified hydropower. 26 U.S.C. § 45(c)(1)(A)-(H) (2006).

9. The 2008 Act also extended the PTC by two years for other of "qualified facilities" such as biomass, geothermal, solar, small irrigation and landfill gas, to January 1, 2011 and for marine and hydrokinetic energy facilities until 2012. 2008 Act, *supra* note 1, at §§ 101-3. Section 102 authorizes a production tax credit applicable to hydrokinetic projects having a nameplate capacity of 150 kilowatts or greater and producing power by January 1, 2012. 2008 Act, *supra* note 1, at § 102.

10. 2008 Act, *supra* note 1, at § 101.

11. FINANCE COMM. REP., *supra* note 3.

12. 26 U.S.C. § 25D (2006).

13. 2008 Act, *supra* note 1, at § 103(a)(1).

as qualifying property.[14] Significantly, the 2008 Act also eliminated the $2,000 cap on the thirty percent tax credit available for solar facilities.[15] Removal of this cap means the credit can now be applied to the total cost of photovoltaic solar facilities.[16]

2. FERC Actions

Interconnection Queue Issues. One of the most prominent issues directly impacting renewable energy on the Federal Energy Regulatory Commission's (FERC or Commission) 2008 agenda was generator interconnection procedures.

In late 2007, the Commission held a technical conference on interconnection queuing practices, where it heard concerns regarding the timeliness with which transmission providers were processing the requests for interconnection in their queue.[17] Participants at that conference described significant increases in new generating projects entering the queue, particularly new wind plants and other renewable energy projects. This increase in demand for generator interconnection service created significant backlogs in the interconnection queue in some regions, particularly in Regional Transmission Organization and Independent System Operator (RTO/ISO) regions. Adding to the backlogs, interconnection requests often require several restudies as the proposed project changes or as other proposed generating projects drop out of the queue.

Following the technical conference, the FERC issued an order expressing concern over the reported delays in processing interconnection queues, and directing RTO/ISOs (where it found queue backlogs particularly significant) to report on their efforts to resolve interconnection queue processing issues.[18] That order also provided guidance regarding some actions RTO/ISOs could take to address interconnection queue problems. The offered guidance ranged from hiring more staff to process interconnection requests, which would not require filing tariff changes at the FERC, to making tariff changes to require increased deposits to enter the interconnection queue, eliminate steps in the interconnection process (such as certain studies), or prioritize interconnection requests in a manner other than the "first-come, first-served" approach of Order No. 2003.[19]

During the balance of 2008, several RTO/ISOs filed proposals to reform their interconnection procedures in response to the Commission's order. The FERC issued orders during the year approving the reforms proposed by Midwest

---

14. 2008 Act, *supra* note 1, at §§ 106(c)-(d).

15. *Id*. at § 106 (b)(1)(A).

16. For other facilities, the following caps apply: $2,000 for solar water heating; $500 for each half KW of capacity of qualified fuel cell property; $500 for each half KW of capacity of wind turbines for which qualified small wind energy property expenditures are made (up to $4,000); and $2,000 for any qualified geothermal heat pump property. 26 U.S.C. § 25D (2006); 2008 Act, *supra* note 1, at § 106(c)(2), (d)(2).

17. In Order No. 2003, the Commission adopted standardized interconnection agreements and procedures, including standard procedures and timelines for processing interconnection requests. Order No. 2003, *Standardization of Generator Interconnection Agreements and Procedures*¸ F.E.R.C. STATS. & REGS. ¶ 31,145 (2003), 68 Fed. Reg. 49,846 (2003) (subsequent rehearing orders omitted).

18. *Interconnection Queuing Practices*, 122 F.E.R.C. ¶ 61,252 (2008).

19. *Id.* at PP 10-18.

Independent Transmission System Operator, Inc. (Midwest ISO) and California Independent System Operator (CAISO).

The reforms approved for Midwest ISO establish a "first ready, first served" approach to managing its queue.[20] These new interconnection procedures include a pre-queue phase with simplified study procedures intended to identify projects that require few transmission system upgrades, allowing such projects to proceed to a "fast lane" queue apart from other projects.[21] The FERC also approved Midwest ISO's plans to impose new technical and financial milestones that generators must meet to maintain their position in the queue, increase the deposits required to enter and maintain queue position (an effort to prevent "speculative" projects from entering the queue), and limit the ability of generators to suspend projects and still stay in the queue.[22]

For CAISO, the FERC approved the use of "clustering" interconnection requests for study purposes, rather than studying each individual interconnection request in the order it was received under the Order No. 2003 approach.[23] Under the approved procedures, CAISO will accept interconnection requests during two four-month periods each year, and then "cluster" them into electrically-connected groups for study, rather than lining them up for study in a "first-come, first-served" queue.[24] In approving this process, the FERC rejected requests for a separate queue for wind plants.[25] CAISO's new approved procedures also require increased deposits and more information from generators, and consolidated certain interconnection studies.[26]

Hydrokinetic Developments. Hydrokinetic energy projects generate electricity from the motion of waves, tides, or currents, the flow of inland waterways, and ocean temperature differentials.[27] At present, there are over 100 conceptual designs for converting hydrokinetic energy into electricity.[28] Although no such project has entered full-scale commercial operation to date in the United States, projects are being proposed in Alaska, California, Hawaii, Louisiana, Maine, New York, New Jersey, Oregon, Rhode Island, and Washington.[29]

This year saw a continuation of a jurisdictional dispute between the Department of the Interior (DOI) and the Commission over the regulation of

---

20. *Midwest Independent Transmission System Operator, Inc.*, 124 F.E.R.C. ¶ 61,183 (2008).

21. *Id.* at PP 32-45.

22. *See generally id.* at PP 46-111.

23. *California Independent System Operator Corp.*, 124 F.E.R.C. ¶ 61,292 (2008).

24. *Id.* at P 33.

25. *Id.*

26. *Id.*

27. LICENSING HYDROKINETIC PILOT PROJECTS, FERC STAFF WHITE PAPER 1 (2008), http://www.ferc.gov/industries/hydropower/indus-act/hydrokinetics/pdf/white_paper.pdf (hereinafter *Hydrokinetic Pilot Project Procedures*). *See also* OCS ALTERNATE ENERGY & ALTERNATE USE PROGRAMMATIC EIS, OCEAN WAVE ENERGY, http://ocsenergy.anl.gov/guide/wave/index.cfm (last visited Mar. 17, 2009) (hereinafter OCS PROGRAMMATIC).

28. REPORT TO CONGRESS, POTENTIAL ENVIRONMENTAL EFFECTS OF MARINE & HYDROKINETIC ENERGY TECHNOLOGY, U.S. DEP'T OF ENERGY iii (November 21, 2008).

29. CONGRESSIONAL RESEARCH SERV., ORDER CODE RS22721, WAVE, TIDAL, & IN-STREAM ENERGY PROJECTS: WHICH AGENCY HAS THE LEAD? 1 (2008).

hydrokinetic projects on the Outer Continental Shelf (OCS).[30] This dispute played out in two forums in 2008: one in a preliminary permit application before the Commission, noted below, and the other in a rulemaking proceeding by the DOI's Minerals Management Service (MMS).[31] In both proceedings, the other agency filed formal comments raising objections to the other's jurisdiction. Since neither agency has ceded jurisdiction to date, both agencies are continuing with independent, but parallel, processes to regulate hydrokinetic resources.[32]

In *Pacific Gas & Electric Company*,[33] the Commission for the first time asserted jurisdiction over MMS' objection in a licensing proceeding for a group of hydrokinetic pilot projects proposed in California and OCS waters. The case involved the issuance of preliminary permits for two projects consisting of approximately 200 wave energy conversion devices, which, in total could generate approximately eighty megawatts.[34] The DOI formally intervened, arguing that Section 388 of the Energy Policy Act of 2005 (EPAct) provides exclusive jurisdiction to the DOI to authorize hydrokinetic projects on the OCS.[35] On rehearing, the Commission issued a lengthy opinion setting forth a legal basis for the Commission's jurisdiction under Part I of the Federal Power Act (FPA) for hydroelectric projects on the OCS. The Commission relied on a savings clause in Section 388 of EPAct for the conclusion that the Commission retained exclusive authority over hydrokinetics on OCS waters.[36] It argued that the Commission's authority to regulate hydrokinetic energy was clear under FPA Sections 4(e) and 23(b)(1), and, therefore, EPAct Section 388(p) expressly preserves the Commission's authority to regulate hydrokinetic energy on the OCS.[37] Thus, the Commission rejected the DOI's rehearing request and issued the permit.

In April 2008, Commission staff issued a white paper that provides a new expedited licensing process for hydrokinetic test projects.[38] Such test projects–or

---

30. *See, e.g., Id.*

31. Notice of Proposed Rulemaking, *Alternative Energy and Alternate Uses on the Outer Continental Shelf*¸ 73 Fed. Reg. 39,376 (2008). The FERC staff filed comments in this rulemaking, asserting Commission jurisdiction over all hydrokinetic projects. FERC STAFF COMMENTS, ALTERNATIVE ENERGY AND ALTERNATE USES ON THE OUTER CONTINENTAL SHELF: PROPOSED RULE (RIN 1010-AD30) (2008).

32. As noted below, the FERC has adapted its existing permitting and licensing processes originally created for hydroelectric dams to hydrokinetic energy facilities. For more information on FERC's regulatory process for hydrokinetics, *see generally* FERC, HYDROPOWER-INDUS. ACTIVITIES (2008), http://www.ferc.gov/industries/hydropower/indus-act/hydrokinetics.asp. The DOI has completed a Programmatic Environmental Impact Statement for and has initiated a rulemaking proceeding. OCS PROGRAMMATIC, *supra* note 27. For more information on the DOI's regulatory process *see generally* OFFSHORE ENERGY & MINERALS MGMT, ALTERNATIVE ENERGY PROGRAMS (2008), http://www.mms.gov/offshore/AlternativeEnergy/index.htm.

33. *Pacific Gas and Electric Company*, 122 F.E.R.C. ¶ 62,228, *order on rehearing*, 125 F.E.R.C. ¶ 61,045 (2008).

34. *Pacific Gas and Electric Company*, 122 F.E.R.C. ¶ 62,228 at P 5 (noting that the project will be located half a mile to ten miles offshore).

35. *Pacific Gas and Electric Company*, 125 F.E.R.C. ¶ 61,045 at P (2008) (The DOI argued that the Commission did not have the jurisdiction to "to award any authorization that is intended to include portions of the OCS").

36. *Id*. at P 56.

37. *Id*. at P 61.

38. *Id*. at P 12. The Commission made clear, however, that the starting point for the *Hydrokinetic Pilot Project Procedures* remains the Commission's Integrated Licensing Process. 18 C.F.R. § 385.214 (2008).

pilot projects–are small, short-term projects intended to test the operation of new technologies in field conditions.[39] Under the Commission's prior policy, pilot projects were not permitted to recover revenues for sales of test electricity to the grid.[40] Recognizing this disincentive and the need to balance "the needs of entities interested in testing new technology [and] . . . the risk of adverse environmental effects" the Commission proposed amending its Integrated Licensing Process (ILP) to better suit the needs of hydrokinetic developers.[41] The staff white paper outlines a general procedure under which Commission staff may, on a case-by-case basis, waive certain existing requirements to adapt the Commission's existing ILP to new hydrokinetic test projects.[42] This adapted ILP process provides new reduced application requirements[43] and the possibility of a shortened review timeframe[44] for hydrokinetic pilot projects meeting certain criteria, including having a small scale, limited duration, and minimal environmental impact. In addition to these procedural changes intended to expedite the pilot licensing process, the *Hydrokinetic Pilot Project Procedures* allows pilot project applicants to receive revenues from the sale of electricity generated by the pilot project.[45]

3. Selected Other Federal Agency Activity

Programmatic Environmental Impact Statement to Evaluate Utility-Scale Solar Energy Development on Federal Lands. On May 29, 2008, the Office of Energy Efficiency and Renewable Energy (EERE), Department of Energy (DOE), and the Bureau of Land Management (BLM) announced that they will prepare a Programmatic Environmental Impact Statement (PEIS) to evaluate utility-scale solar energy development on federal lands in Arizona, California, Colorado, New Mexico, Nevada, and Utah.[46]

The PEIS is intended to assess the environmental, social, and economic impacts associated with solar energy development and to help expedite environmental analysis for future site-specific projects.[47] The agency-specific programs instituted by a PEIS would establish environmental policies and

39. *Hydrokinetic Pilot Project Procedures*, *supra* note 27, at 1.

40. *Verdant Power, LLC*, 112 F.E.R.C. ¶ 61,143 at PP 6-7 (2005) (finding that Verdant Power, LLC (Verdant) could conduct test activities that introduced electric power to the interstate electric grid where Verdant proposed to mitigate its impact on the grid by providing power at no cost and compensation for displaced power sales to local utilities).

41. *Hydrokinetic Pilot Project Procedures*, *supra* note 27, at 3.

42. *Id*. at 2-3.

43. *Id*. at 3.

44. *Id*. (stating that "[s]taff's goal is to provide expedited procedures through which a Commission decision can be rendered in as few as six months after the filing of the application").

45. Because the Federal Power Act precludes sales of power from hydroelectric facilities without prior approval from the Commission, 16 U.S.C. § 817(1) (2006), the Commission's prior policy required applicants to show that their pilot project testing would effectively have no net impact on the grid or on interstate commerce. *Verdant Power, LLC*, 112 F.E.R.C. ¶ 61,143 at P 6 (allowing pilot license where applicant proposed limiting its impact by providing power to an end user at no cost and to compensate the local utilities for displaced power).

46. Notice of Intent, *Prepare a Programmatic Environmental Impact Statement to Evaluate Solar Energy Development*, 73 Fed. Reg. 30,908 (2008).

47. *Id*.

mitigation strategies for DOE supported solar energy projects on BLM-administered lands or other federal, state, tribal, or private lands.[48]

Currently, the BLM processes solar energy right-of-way applications for lands under its Solar Energy Development Policy.[49] The 125 existing applications are for land covering almost one million acres. During work on the PEIS, the BLM will focus attention on the 125 applications already received for these rights-of-way and will defer new applications until after the Final PEIS is issued.[50]

DOI Lifts Moratorium on Applications for Solar Energy Development on Federal Lands. On July 2, 2008, the BLM publicly reversed its position on considering applications for solar energy rights-of-way on public lands and stated that it would lift a previously imposed moratorium.[51] Initially, the BLM initially announced that only existing rights-of-way applications already pending before the agency would be processed during preparation of national programmatic EIS. Consideration of any new applications for solar energy development on federal lands would be suspended until the PEIS was complete. Under heavy political pressure and objections to the delay by solar energy advocates and the public, BLM revisited its decision, announcing that it had reversed course and would consider new applications while the PEIS was prepared.

Anticipating objection from environmental groups, the BLM made clear that it will not violate the requirements imposed by the National Environmental Policy Act (NEPA) by processing applications before the national PEIS is completed.[52] Instead, BLM intends to conduct project-specific EISs for the existing 125 rights-of-way applications and any new applications that are filed while it drafts the PEIS.

BLM projects that a draft of the solar PEIS will be completed in Spring 2009. The final PEIS is anticipated to be issued in the Spring of 2010 with the Record of Decision to follow.[53]

Geothermal Parcels on Public Lands Successfully Leased by the BLM. On August 5, 2008, the BLM successfully auctioned lease parcels for geothermal energy resources on public lands in Nevada.[54] In terms of dollars bid, it is the largest geothermal sale ever. All thrity-five parcels offered in the first competitive auction with lease parcels formally nominated by the public were sold for $28.2 million, and covered a total of 105,211 acres. Successful bidders

---

48. *Id*.

49. BUREAU OF LAND MGMT, INSTRUCTION MEMORANDUM NO. 2007-097 REGARDING SOLAR ENERGY DEVELOPMENT POLICY (2007), http://www.blm.gov/wo/st/en/info/regulations/Instruction_Memos_and_Bulletins/national_instruction/2007/im_2007-097__.html.

50. For more information, *see generally* SOLAR ENERGY DEV. PIES, INFO. CENTER, *http://solareis.anl.gov*.

51. *Notice to Extend Public Scoping Comment Period*, 73 Fed. Reg. 38,443 (2008).

52. BUREAU OF LAND MGMT, SUMMARY OF PUBLIC SCOPING COMMENTS (2008), http://solareis.anl.gov/documents/docs/Scoping_Summary_Report_Solar_PEIS_Final.pdf.

53. *Id.*

54. BUREAU OF LAND MGMT, BLM OFFERS LANDS FOR GEOTHERMAL LEASING (2008), http://www.blm.gov/nv/st/en/info/newsroom/2008/august/blm_offers_lands_for.html.

in the August fifth sale included ENEL Geothermal LLC, Standard Steam Trust, LLC, Oski Energy LLC, and Magma Energy US Corp.

The BLM held another competitive lease sale for parcels in Utah, Idaho, Oregon, and Washington on December 19, 2008.[55] In Utah, forty-four parcels on 144,372 acres were sold for $5,695,772. The parcels in Idaho, Oregon and Washington were sold for a total of $846,853. The highest bidder in the auction for the Utah and Oregon/Washington parcels was Ormat Nevada, Inc., and for the Idaho parcels, Kodali, Inc., both out of Reno, Nevada.[56]

Half of the United States' geothermal energy production occurs on federal land, much of it in California and Nevada, and ninety percent of potential resources are located on public land. The BLM manages twenty-nine geothermal power plants in California, Nevada, and Utah.[57] Under the competitive leasing provision of the Energy Policy Act of 2005, 245,695 acres of public lands have been leased bringing in fifty-seven million dollars in bids.[58] According to this competitive leasing process, proceeds from the sale of geothermal leases are distributed fifty percent to the state, twenty-five percent to the county, and twenty-five percent to the Federal government.[59]

Geothermal energy is generated from geological heat sources stored in the Earth's crust that can be accessed for direct use or electric power generation. According to a report issued on August 7, 2008, by the Geothermal Energy Association, geothermal power projects have continued to grow in the United States, with 103 projects now underway in thirteen states.[60] Currently, geothermal energy accounts for approximately 8.5% of renewable energy generation in the United States.[61]

BLM Issues Final PEIS for Geothermal Leasing. On November 15, 2008, the BLM and United States Forest Service (FS) issued the Final PEIS for Geothermal Leasing.[62] The Final PEIS identifies, in compliance with NEPA and CEQ regulations, those lands with geothermal potential that are open or closed to leasing and sets forth a "comprehensive list of stipulations, best management practices, and procedures to serve as consistent guidance for future leasing and development on public and []FS lands."[63] The project area is the Western United

---

55. BUREAU OF LAND MGMT, BLM UTAH GEOTHERMAL LEASE SALE RESULTS (2008), http://www.blm.gov/ut/st/en/info/newsroom/2008/december/blm_utah_geothermal.html.

56. *Id*.

57. BUREAU OF LAND MGMT, RENEWABLE ENERGY AND THE BLM: GEOTHERMAL (2008), http://www.blm.gov/pgdata/etc/medialib/blm/wo/MINERALS__REALTY__AND_RESOURCE_PROTECTION_/energy.Par.69359.File.dat/09factsheetmap_Geothermal.pdf.

58. BUREAU OF LAND MGMT, RECORD GEOTHERMAL LEASE SALE GENERATES $28 MILLION IN BIDS, SALE UNDERSCORES COMMITMENT TO RENEWABLE ENERGY (2008), http://www.blm.gov/wo/st/en/info/newsroom/2008/august/NR_08_08_2008.html.

59. *Id*.

60. GEOTHERMAL ENERGY ASS'N, UPDATE ON U.S. GEOTHERMAL POWER PRODUCTION AND DEVELOPMENT (2008), http://www.geo-energy.org/publications/reports/Industry_Update_March_Final.pdf.

61. BUREAU OF LAND MGMT, PLAN FOR PROMOTING EFFICIENT RESPONSIBLE GEOTHERMAL ENERGY DEVELOPMENT ON FEDERAL LANDS OPEN FOR COMMENT (2008), http://www.blm.gov/wo/st/en/info/newsroom/2008/june/NR_06132008.html.

62. U.S. DEP'T OF INTERIOR ET AL., FINAL PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT FOR GEOTHERMAL LEASING IN THE WESTERN UNITED STATES (2008), http://www.blm.gov/wo/st/en/prog/energy/geothermal/geothermal_nationwide/Documents/Final_PEIS.html.

63. *Id.* at 1-2.

States (Alaska, Arizona, California, Colorado, Idaho, Nevada, New Mexico, Montana, Oregon, Utah, Washington, and Wyoming) and the planning area is the "defined area of geothermal potential."[64] Certain lands are closed to leasing, including National Park Service lands, lands within a National Recreation Area, and Indian trust or restricted lands within or outside the boundaries of an Indian reservation.[65] The site-specific impacts not analyzed by the PEIS will be assessed by local BLM and FS offices through a separate analysis under the NEPA for each step of geothermal development. Such a NEPA analysis could "tier" to the Final PEIS.[66] The Final PEIS will directly impact development of competitive leases issued under the Geothermal Steam Act and recently issued regulations found at 43 C.F.R. §§ 3000, 3200, 3280.

BLM Issues the Final PEIS Designating Energy Corridors On Federal Land In The 11 Western States. On December 1, 2008, the BLM, DOE, and the U.S. Forest Service released the Final PEIS designating West-Wide Energy Corridors.[67] The Final PEIS was crafted in accordance with the mandate of section 368 of the Energy Policy Act of 2005, which sought in particular to improve reliability and remedy the lack of transmission capability found in the current Western Grid, given the "interconnected nature of the electricity transmission and congestion issues currently facing the West."[68]

Approximately 6,112 miles of energy corridors in eleven western states for multimodal energy transport with a width of 3,500 feet have been designated by the Preferred Proposed Action in the Final PEIS for oil, gas, and hydrogen pipelines and electricity transmission and distribution facilities.[69] These corridors would be incorporated into the relevant land use and resource management plans through amendment. The vast majority of the proposed corridors fall within public lands managed by BLM. As the Final PEIS addresses only programmatic issues, each proposed transmission line or facility to be located within a corridor will be subject to a project-specific NEPA review which would "tier" off the NEPA analysis in the Final PEIS on public lands.

Developments in Federal Regulation of Alternative Energy on the Outer Continental Shelf. Under the EPAct of 2005, the DOI acquired the authority to manage alternative energy or related use projects on the OCS.[70] Under EPAct Section 388, MMS has the power to "grant a lease, easement, or right-of-way" on the OCS for facilities which "produce or support production, transportation, or transmission of energy from sources other than oil and gas."[71] In January of 2008, following the issuance of the Final PEIS for the OCS Alternative Energy and Alternate Use (AEAU) Program, MMS published the Record of Decision

64. *Id.* at 1-24.

65. 30 U.S.C. § 1014; 30 C.F.R. § 3201.

66. 40 C.F.R. 1508.28. 43 C.F.R. § 46.140.

67. U.S. DEPT. OF ENERGY ET AL., FINAL PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT, DESIGNATION OF ENERGY CORRIDORS ON FEDERAL LAND IN THE 11 WESTERN STATES (2008), http://corridoreis.anl.gov//documents/dpeis/index.cfm.

68. *Id.*

69. *Id*.

70. 43 U.S.C § 1337(p)(1)(c).

71. Environmental Policy Act 2005, Pub. L. No. 109-58, § 338, 119 Stat. 594 (2005).

implementing the PEIS.[72] The Record of Decision adopts fifty-two Best Management Practices for AEAU projects to be sited on the OCS.

On April 18, 2008, pursuant to the Interim Policy on Offshore Alternative Energy Resource Assessment and Technology Testing issued in late 2007,[73] MMS designated five areas as priorities for alternative energy research. Using Lease Form MMS-0001,[74] requestors can obtain limited-term leases authorizing data collection and technology testing subject to compliance with relevant federal statutes, and assuming they gain necessary approvals for the construction and placement of associated structures on the OCS lease area. Leases issued under the interim policy are not guaranteed priority rights for commercial sale or distribution.[75] As of the date of publication, the MMS was considering fifteen lease areas off of New Jersey, Delaware, Georgia, Florida, and California and anticipated issuing limited leases in 2009.

On July 11, 2008, the MMS published proposed regulations for AEAU on the OCS.[76] The rule covers: (1) Leasing Process and Issuance (Subpart B); (2) Site Assessment and Construction & Operations Plans (Subpart F); (3) Conduct of Approved Plan Activities, including Environmental & Safety Monitoring & Inspections; (4) Bonding and Payments (Subpart E); (5) Decommissioning (Subpart I); and (6) Alternate Use (Subpart J).[77] After reviewing almost 300 comments from the public, MMS submitted the Final Rule for the AEAU Program to the Office of Management and Budget for review and approval in November. Although the Department expected to finalize the Rule by the end of 2008, it was unable to do before the change in Administration.

In 2008, under the Alternative Energy Environmental Studies Program, the MMS also awarded seven new ocean environmental studies worth $3.8 million.[78] The program collects information for pre-lease needs such as basic characterization of the environment.[79]

B. State Government Activity

1. Renewable Portfolio Standard Update

In 2008, there were a number of events that impacted the development of state renewable portfolio standards. As discussed below, five states adopted a

---

72. For more information, *see generally* MINERALS MGMT SERV., ESTABLISHMENT OF AN OCS ALTERNATIVE USE AND ALTERNATIVE USE PROGRAM (2007), http://www.ocsenergy.anl.gov/documents/docs/OCS_PEIS_ROD.PDF.

73. 72 Fed. Reg. 62,673 (2007).

74. Notice-Correction, *Nominations Received and Proposed Limited Alternative Energy Leases on the Outer Continental Shelf (OCS) and Initiation of Coordination and Consultation*, 73 Fed. Reg. 21,152 (2008).

75. *Id*.

76. Proposed Rule, *Alternative Energy and Alternate Uses of Existing Facilities on the Outer Continental Shelf*, 73 Fed. Reg. 39,376 (2008).

77. *Id*.

78. MINERALS MGMT SERV., ENVIRONMENTAL STUDIES PROGRAM FACT SHEET (2009), http://www.mms.gov/ooc/PDFs/AE_EnvironmentalStudiesFactSheet.pdf.

79. A description of the plan for the program for 2009-2011 can be found at: MINERALS MGMT SERV., OFFSHORE ENVIRONMENTAL STUDIES PROGRAM, FISCAL YEARS 2009-2011 STUDIES DEVELOPMENT PLAN, ALTERNATIVE ENERGY (2009), http://www.mms.gov/offshore/AlternativeEnergy/Assets/PDFs/AE_SDP_2009_2011_FINAL.pdf.

renewable portfolio standard (RPS) for the first time, another three states enacted legislation amending their existing RPS and one state, Missouri, increased its renewable portfolio standard through a voter-approved initiative. Finally, three states committed themselves to either developing an RPS or increasing their existing RPS, through the use of executive orders and, in one instance, through a memorandum of understanding with the DOE.

California. On November 17, California Governor Arnold Schwarzenegger signed an Executive Order to increase California's Renewable Energy Standard to thirty-three percent by 2020.[80] Governor Schwarzenegger also announced that he would propose legislation "that will codify the new higher standards and require all utilities, public and private, to meet the 33 percent target and spread implementation costs across all ratepayers with safeguards for low-income customers."[81]

Florida. On June 25, Florida enacted House Bill 7135.[82] This law requires the Public Service Commission to develop a renewable portfolio standard by February 1, 2009.[83] Specifically, the law states that "[t]he commission shall adopt rules for a renewable portfolio standard requiring each provider to supply renewable energy to its customers directly, by procuring, or through renewable energy credits."[84] The law further states that the Commission shall have authority to provide annual cost recovery and incentive based adjustments to "incentivize renewable energy."[85] Finally, the law states that the Commission has additional authority to adopt compliance measures and to excuse noncompliance if the Commission determines that supply of renewable energy or renewable energy credits is not adequate to satisfy the demand for such energy or that the cost of securing renewable energy or renewable energy credits is cost prohibitive.[86]

Hawaii. In January, Hawaii Governor Linda Lingle, signed a Memorandum of Understanding with the DOE to establish the Hawaii Clean Energy Initiative.[87] The goal of the Hawaii Clean Energy Initiative is to use renewable resources–such as wind, sun, ocean, geothermal, and bioenergy–to supply seventy percent or more of Hawaii's energy needs by 2030.[88] On October twentieth, the Hawaii Electric companies signed an agreement with the Governor based on the goals stated in the Hawaii Clean Energy Initiative.[89] Under this

---

80. Press Release, Office of the Governor of California, Governor Schwarzenegger Advances State's Renewable Energy Development, Exec. Order No. S-14-08 (Nov. 17, 2008), http://gov.ca.gov/index.php?/press-release/11073/.

81. *Id.*

82. FLA. STAT. § 366.92 (2008).

83. *Id*.

84. *Id*. at § 366.92(3).

85. *Id*. at § 366.92(3)(b)(1).

86. *Id*. at § 366.92(3)(b)(2).

87. Press Release, Governor Linda Lingle, Hawaii and U.S. Department of Energy Partner to Make Hawaii a "World Model" for Clean Energy Economy (January 28, 2008), http://hawaii.gov/gov/news/releases/2008/hawaii-and-u.s.-department-of-energy-partner-to.

88. *Id.*

89. Press Release, Governor Linda Lingle, State and Hawaiian Electric Strike Sweeping Agreement for Hawaii's Energy Future (Oct. 20, 2008), http://hawaii.gov/gov/news/releases/2008/state-and-hawaiian-electric-strike-sweeping.

agreement the state electric utilities committed to generate forty percent of their power from renewable resources by 2030.[90]

Kentucky. On November twenthieth, Kentucky Governor Steve Beshear announced a comprehensive energy plan titled Intelligent Energy Choices for Kentucky's Future.[91] The plan sets a goal to triple Kentucky's renewable energy generation by 2025.[92] The plan sets forth a strategy to establish both a Renewable and Efficiency Portfolio Standard as well as an Alternative Transportation Fuels Standard.[93] If the plan becomes mandatory, the Renewable and Efficiency Portfolio Standard will require twenty-five percent of Kentucky's energy needs in 2025 to be met through renewable resources and energy efficiency efforts.[94]

Maryland. On April twenty-fourth, Maryland enacted Senate Bill 209.[95] This bill amended Maryland's existing renewable portfolio standard by accelerating the time for its implementation and requiring an increased percentage of the RPS to come from "Tier 1 renewable sources."[96] On the same day, Maryland enacted Senate Bill 348.[97] This bill amended the definition of Tier 1 renewable sources to include "poultry litter-to-energy."[98] Already included in this definition is energy generated from solar, wind, biomass, methane from landfill mass, geothermal, ocean, fuel cells, and small hydroelectric power plants.[99]

Massachusetts. On July second, Massachusetts enacted Senate Bill 2768.[100] This bill enacted significant changes to Massachusetts' existing RPS. The bill divided renewable energy into two classes based on the year the generating facility commenced operations.[101] The bill also expanded the definition of a renewable energy source.[102] Under the amended law a Class I renewable energy generating source is one that began commercial operation after December 31, 1997, and generates electricity using solar, wind, ocean, fuel cells, landfill gas, energy generated by new hydroelectric facilities, low emission advanced biomass, marine or hydrokinetic energy or geothermal energy.[103] A Class II renewable energy generating source is one that began commercial operation

90. *Id.*

91. Press Release, Governor Steve Beshear's Communications Office, Governor Beshear unveils first-ever comprehensive energy plan (Nov. 20, 2008), http://www.governor.ky.gov/pressrelease.htm?PostingGUID={3CCA56DD-7541-4A32-AD02-E1D6BF07CC53}.

92. *Id.*

93. *Id.*

94. *Id.*

95. MD. CODE ANN. [PUB. UTIL. COS.] § 7-703.

96. *Id.*

97. MD. CODE ANN. [PUB. UTIL. COS.] § 7-701.

98. *Id.*

99. *Id.*

100. 2008 MASS. ACTS Ch. 169 § 32.

101. *Id.*

102. *Id.*

103. *Id.*

before December 31, 1997, and generates electricity using solar, wind, ocean, fuel cells, landfill gas, or energy generated by existing hydroelectric facilities.[104]

Michigan. On October sixth, Michigan enacted Public Act 295, otherwise known as the Clean, Renewable and Efficient Energy Act.[105] This Act requires utilities to generate ten percent of their retail electric sales from renewable energy sources by 2015.[106] Under the Act, utilities can meet a limited amount of their mandated requirement through the use of energy optimization and advanced cleaner energy systems.[107] Under the act "renewable energy resource" includes biomass, solar and solar thermal energy, wind energy, kinetic energy of moving water, geothermal energy, municipal solid waste, and landfill gas produced by municipal solid waste.[108]

Missouri. On November fourth, Missouri voters adopted Proposition C, otherwise known as the Clean Energy Initiative, a ballot initiative that repealed the state's voluntary renewable energy objective, enacted in 2007, and replaced it with a mandatory portfolio standard of fifteen percent by 2021.[109] The initiative sets intermediate objectives for the use of renewable energy. Specifically, under the initiative, no less than two percent of a utility's sales must come from renewable energy sources for calendar years 2011 through 2013, no less than five percent for calendar years 2014 through 2017, no less than ten percent for calendar years 2018 through 2020, and no less than fifteen percent beginning in 2021.[110] Additionally, the initiative creates a solar set-aside and mandates that at least two percent of each portfolio requirement must be derived from solar energy.[111] Under the initiative, utilities can comply with the RPS mandates by purchasing renewable energy credits.[112] These renewable energy credits or "RECs" are tradable certificates of proof that one megawatt-hour of electricity has been generated from renewable energy sources.[113] The initiative requires the Missouri Public Service Commission, within one year of the effective date of the initiative, to select a program for tracking and verifying the trading of RECs.[114]

Ohio. On May first, Ohio enacted Substitute Senate Bill 221.[115] Under this act, twenty-five percent of all retail electric sales must come from electricity generated from alternative energy resources by 2025.[116] The act defines "alternative energy" to include both renewable energy resources as well as "advanced energy resources."[117] Advanced energy resources, are defined as any

104. *Id.*
105. 2008 MICH. PUB. ACTS page no. 8.
106. *Id*.
107. *Id.*
108. 2008 MICH. PUB. ACT page no. 4.
109. MO. REV. STAT. § 393.1030.1 (2008).
110. *Id*.
111. *Id.*
112. *Id.*
113. MO. REV. STAT. § 393.1025(5) (2008).
114. MO. REV. STAT. § 393.1030.1(2) (2008).
115. OHIO REV. CODE ANN. § 4928.64 (2008).
116. OHIO REV. CODE ANN. § 4928.64(B) (2008).
117. *Id.*

method or technology that increases the generation output of an electric generating facility without additional carbon dioxide emissions.[118] The definition of advanced energy also explicitly includes clean coal, advanced generation III nuclear energy technology, as well as advanced solid waste conversion technology.[119] The act creates a number of intermediate benchmarks that mandate specific percentages of electricity to be generated from renewable energy sources, with a corresponding specific mandate for solar energy.[120] These benchmarks increase on a yearly basis starting in 2009 and going through 2024.[121] At least half of a utility's alternative energy must come from renewable sources while the other half may be generated from advanced energy resources.[122] Finally, the act allows a utility to meet its obligation under the new law by purchasing qualified renewable energy credits.[123]

South Dakota. On February twenty-first, South Dakota adopted House Bill 1123.[124] Under this act, South Dakota set an objective that ten percent of all electricity sold at retail within the state come from renewable energy and recycled energy sources by 2015. The new law, however, is merely aspirational. The law states that "[the] objective is voluntary, and there is no penalty or sanction for a retail provider of electricity that fails to meet this objective."[125]

Utah. On March eighteenth, Utah adopted Senate Bill 202, otherwise known as the Municipal Electric Utility Carbon Emission Reduction Act.[126] This bill establishes a renewable portfolio goal of twenty percent by 2025.[127] The new law, however, only requires electric utilities to meet this requirement if it is "cost-effective to do so."[128] Under the Utah Code, as amended by the Senate Bill 202, "[c]ost-effectiveness . . . is determined using any criteria applicable to the municipal electric utility's acquisition of a significant energy resource established by the municipality's legislative body."[129] This section, in turn, lists a number of factors that are taken into consideration to determine cost-effectiveness.[130] These include whether use of the RPS will "most likely result in the acquisition, production, and delivery of electricity at the lowest reasonable cost to the retail customers," as well as an assessment of long-term and short-term impacts, risks, reliability, financial impacts on the affected utility, and other factors determined by the Utah Public Service Commission to be relevant.[131]

118. OHIO REV. CODE ANN. § 4928.01(A)(34) (2008).
119. OHIO REV. CODE ANN. § 4928.64 (2008).
120. OHIO REV. CODE ANN. § 4928.64(B)(2) (2008).
121. *Id.*
122. OHIO REV. CODE ANN. § 4928.64(B)(1) – (2) (2008).
123. OHIO REV. CODE ANN. § 4928.65 (2008).
124. H.B. 1123, 2008 Leg., 83d Leg. Assembly (SD 2008).
125. *Id*.
126. *Id*.
127. *Id*.
128. UTAH CODE ANN. § 10-19-201(1)(a) (2008).
129. UTAH CODE ANN.§ 10-19-201(2) (2008).
130. UTAH CODE ANN. § 54-17-302 (2008).
131. UTAH CODE ANN. § 54-17-302(3)(c)(i) (2008).

2. State Measures to Address Siting Issues

Many states took action in 2008 to address the unique problems and issues arising from siting renewable energy facilities.

Florida. On June twenty-fifth, Florida amended its state comprehensive plan to include a new land use policy. Specifically, this policy was added to "[p]rovide for the siting of low-carbon-emitting electric power plants, including nuclear power plants, to meet the state's determined need for electric power generation."[132] This policy was enacted in tandem with Florida's amended energy policy promoting an increased use of renewable energy resources and low-carbon-emitting electric power plants.[133] This policy, however, is merely aspirational and does not provide for any specific measures or requirements to promote the siting of low-carbon emitting electric power plants.

Massachusetts. The Massachusetts Department of Energy Resources issued a model by-law "to assist cities and towns in establishing reasonable standards for wind power development."[134] The stated purpose of this model by-law is to provide for "the construction and operation of wind energy facilities and to provide standards for the placement, design, construction, monitoring, modification and removal of wind facilities that address public safety, minimize impacts on scenic, natural and historic resources of the city or town and provide adequate financial assurance for decommissioning."[135] The model ordinance addresses many issues including design standards for wind energy facilities, rules relating to shadow flicker and sound, as well as height and setback requirements.[136]

North Carolina. The North Carolina Wind Working Group, a coalition of state government, non-profit and wind industry organizations, published a model wind ordinance to provide guidance for communities seeking to promote wind energy.[137] The model ordinance addresses issues such as setback requirements as well as restrictions on noise and shadow flicker.[138] The model ordinance also differentiates between wind energy facilities, dividing them into "small," "medium," or "large," depending on the generation capacity of the given facility.[139] Under the model ordinance, small wind energy facilities, which are capable of generating twenty kW or less, are permitted in all zoning districts, including residential zones, subject to obtaining a building permit.[140] Large and

---

132. FLA. STAT. § 187.201(15)(b)(8) (2008).

133. FLA. STAT. § 187.201(11)(a) (2008).

134. MASSACHUSETTS DEP'T OF ENERGY RESOURCES, MODEL AMENDMENT TO A ZONING ORDINANCE OR BY-LAW: ALLOWING CONDITIONAL USE OF WIND ENERGY FACILITIES (2008), http://www.mass.gov/Eoeea/docs/doer/renewables/wind/model-wind-bylaw-0810.pdf.

135. *Id.*

136. *Id.*

137. NORTH CAROLINA SOLAR CENTER, INCENTIVES FOR RENEWABLES AND EFFICIENCY, http://www.dsireusa.org/library/includes/incentive2.cfm?Incentive_Code=NC18R&state=NC&CurrentPageID=1&RE=1&EE=1 (last visited Mar. 18, 2009).

138. NORTH CAROLINA WIND WORKING GROUP, MODEL WIND ORDINANCE FOR WIND ENERGY FACILITIES IN NORTH CAROLINA (2008), http://www.ncsc.ncsu.edu/Documentation/Files/NC%20Model%20Wind%20Ordinance_June%202008_FINAL.pdf.

139. *Id.*

140. *Id.*

medium wind energy facilities, however, require special use permits for use in residential and commercial zoning districts.[141] Additionally, large wind energy facilities must obtain a special use permit for use in agricultural and industrial zones as well.[142]

Ohio. On June twenty-fourth, Ohio enacted Amended Substitute House Bill 562.[143] That legislation, among many things, directed the Ohio Power Siting Board to adopt certification rules for the construction, operation, and maintenance of electric generation wind facilities.[144] On September fifteeth, the Power Siting Board issued for comment its proposed rules to implement certification requirements for electric generation wind facilities.[145] After receiving multiple comments from renewable energy companies, as well as local individuals, the Power Siting Board adopted its final rules on October twenty-eighth.[146] Under the new rules, any entity that wishes to site an electric generation wind facility that is capable of generating five or more megawatts of electricity must obtain a certificate of environmental compatibility and public need from the Power Siting Board.[147]

3. State Initiatives to Spur Development of Transmission for Renewable Energy

States in 2008 also addressed the need to develop additional transmission infrastructure to deliver the energy generated from renewable resources to load centers. The following are some examples of the actions states took in 2008.

Arizona. Arizona released the Final Draft of the Fifth Biennial Transmission Assessment prepared by the Arizona Corporation Commission.[148] As part of this assessment, the Arizona Corporation Commission prepared an evaluation of the available transfer capacity of existing transmission lines for renewable energy sources.[149] The assessment includes a plan intended to promote efforts to bring available renewable resources to load centers.[150] This plan includes a description of the location, amount and transmission need of renewable resources in Arizona.[151]

Michigan. Michigan enacted Public Act 295.[152] Under this act the Michigan Public Service Commission may issue an expedited siting certificate for a transmission line to an electric utility to facilitate the transmission of electricity generated by wind energy conversion systems located in "wind energy

141. *Id.*

142. *Id.*

143. H.B. 562, 2008 Leg., 127 Gen. Assem., (Ohio 2008).

144. Opinion and Order of the Ohio Power Siting Board, Case No. 08-1024-EL-ORD (Oct. 28, 2008), *available at* http://dis.puc.state.oh.us/TiffToPDf/A1001001A08J29A75719B41910.pdf.

145. *Id.*

146. *Id.*

147. *Id.*

148. ARIZONA CORP. COMM'N, FIFTH BIENNIAL TRANSMISSION ASSESSMENT (2008), http://www.azcc.gov/Divisions/Utilities/Electric/Biennial/2008%20BTA/BTA%20Report%202008%2010_14_08.pdf.

149. *Id.*

150. *Id.*

151. *Id.*

152. 2008 MICH. PUB. ACT page no. 28.

resource zones."[153] To obtain a certificate for expedited siting the utility must show that the proposed transmission line will facilitate transmission of electricity generated by wind energy, the proposed transmission line has received federal approval, the transmission line does not represent an unreasonable threat to the public convenience, health, and safety, and the proposed route is feasible and reasonable.[154]

4. Offshore Wind Proposals Move Forward in Several States

Several states on the East Coast took action in 2008 toward developing offshore wind generating facilities.

Delaware. On June 23, 2008, Bluewater Wind executed a negotiated Power Purchase Agreement with Delmarva Power to sell the utility up to 200 MW of power from an offshore wind park to be constructed approximately 11.5 miles off the coast of Rehoboth Beach, Delaware.[155] Under the twenty-five year contract, Bluewater Wind's facility is expected to produce an output of up to 600 MW. Bluewater anticipates construction will begin in 2011, though it must await federal permitting approval from the DOI to site the wind farm on the OCS.

Rhode Island. In October 2008, Rhode Island selected Deepwater Wind LLC, to design, build, finance and operate a wind generation facility in the waters off the Rhode Island coast.[156] The project, anticipated to cost approximately $1.5 billion, will be located in state and federal waters and is expected to generate over 400 MW of power for Rhode Island. The state's plan for the project requires that Deepwater Wind build its manufacturing facility in Rhode Island. The first phase will be sited in state waters and is expected to be complete in late June 2012. The second phase will be placed in federal waters and, while expected to be complete by 2013, must await the release of the DOI's final regulations governing alternative energy production on the OCS, before the requisite permits can be secured.

New Jersey. In September 2008, the New Jersey Board of Public Utilities (BPU) awarded a grant of four million dollars to Garden State Offshore Energy, a joint venture between PSEG Renewable Generation and Deepwater Wind, for development of an offshore wind farm.[157] Garden State, which as the preferred developer would proceed with any necessary environmental and wind resource studies and permitting on state and federal levels, proposes installation of ninety-six wind turbines approximately twenty miles off the coast of Atlantic City. The over one billion dollar project, four million dollars of which would come from New Jersey as an upfront offset to the studies to be conducted by Garden State,

153. *Id*.

154. *Id.*

155. DELAWARE PUB. SERV. COMM'N, REPORT ON FINAL POWER PURCHASE AGREEMENT BETWEEN DELMARVA POWER AND BLUE WATER WIND DELAWARE LLC (2008), http://www.ocean.udel.edu/Windpower/DE-Qs/NEO%20Report%207-3-08%20FINAL.pdf.

156. US OFFSHORE WIND COLLABORATIVE, STATUS OF OFFSHORE WIND DEVELOPMENT BY STATE (2008), http://offshorewind.net/Other_Pages/Links%20Library/Sept%202008%20Status%20of%20US%20Offshore%20Wind%20Development%20by%20State.pdf.

157. *Id*.

is expected to generate approximately 345.6 MW of power.[158] The earliest date for construction likely would be 2010.

On October 22, 2008, New Jersey issued its Energy Master Plan, which includes the establishment of an Offshore Wind Planning Group to consider environmental and economic impacts and various financing models to support development of offshore energy.[159] The Plan encourages the four companies that lost the offshore wind farm bid to continue to work with the State Governor's office, in order to achieve 1000 MW of power from offshore wind energy by 2012 and at least 3000 MW by 2020.

5. California Update

Generally. California statutes establish a goal of twenty percent renewable energy by December 31, 2010.[160] To accomplish this goal, the California Public Utilities Commission (CPUC) and the utilities that it regulates have established ambitious programs to develop renewable energy resources and implement a RPS. Since 2004, California's three largest investor-owned utilities (IOUs) have conducted annual solicitations to solicit proposals for renewable energy resources. The solicitations typically result in long-term power purchase agreements (PPA) between the utility and a renewable developer. The utilities have also pursued bilaterally negotiated agreements to facilitate the development of renewable resources.

The California IOUs have a wide variety of renewable resources in their portfolios: bioenergy (from biomass, landfill gas, municipal solid waste and digester gas); geothermal; small hydro; conduit hydro; wind; solar photovoltaics; and solar thermal. While wind and geothermal power were the major renewables offered in early solicitations (i.e., 2004-2006), the 2007 and 2008 solicitations produced a large number of solar proposals.

The CPUC, California Energy Commission (CEC), utilities and interested stakeholders have identified barriers to new renewable resource development and are working to address these barriers. One of the most significant barriers is the lack of available transmission. Many proposed, large renewable resources are located in remote areas and a significant amount of transmission investment is required to bring the energy from these renewable resources to load. In 2008, the California Renewable Energy Transmission Initiative (RETI) was launched to help identify transmission projects needed to accommodate renewable energy goals, facilitate transmission corridor designations, facilitate permitting for transmission and generation siting, and to support future energy policy.[161] The Phase 1A report in the RETI process, issued on May 21, 2008, describes the resource valuation methodology, assumptions and resource information to be used in Phase 1B.[162] Phase 1B results, contained in RETI's January 2009 report, provide a high-level analysis using the methodology developed in Phase 1A. It

158. *Id*.

159. NEW JERSEY, ENERGY MASTER PLAN, http://www.nj.gov/emp/ (last visited Mar. 18, 2009).

160. A.B. 64, 2008 Leg. (Cal. 2008).

161. CALIFORNIA ENERGY COMM'N, RENEWABLE ENERGY TRANSMISSION INITIATIVE, http://www.energy.ca.gov/reti/index.html (last visited Mar. 18, 2008) (CEC website describing the RETI process and including various RETI reports and comments).

162. *Id*.

groups potential renewable projects into "competitive renewable energy zones" or "CREZs" based on "geographic proximity, development timeframe, shared transmission constraints, and additive economic benefits."[163] The CREZs were ranked according to a number of factors, including "cost effectiveness, environmental concerns, [and] development and schedule certainty."[164] Phase 2 will then refine the analysis and Phase 3 is intended to come up with suggested transmission project(s) that will connect renewable resources in remote locations to a statewide high voltage transmission grid.

In addition to work on transmission barriers, Governor Schwarzenegger has also mobilized state resources to address renewable energy challenges. On November 17, 2008, Governor Schwarzenegger issued Executive Order S-14-08 that established a Renewable Energy Action Team (REAT) to create a one-stop process for permitting for renewable projects, streamlining the application review process to speed up permit processing.[165] The REAT is a joint collaboration between the CEC and the California Department of Fish and Game.[166] The REAT will also establish long-term conservation plans and develop a best management practices manual to help renewable project applicants design projects that minimize environmental impacts.[167]

CPUC Developments. In 2008, the CPUC continued to refine the terms and conditions for standard form contracts offered by the California utilities to renewable developers. In CPUC Decision 08-04-009, the commission compiled and updated certain "non-modifiable" terms and conditions that must be included by the utilities in all renewable contracts.[168] Non-modifiable terms must be included in all renewable contracts and cannot be modified by the utility or the renewable developer.[169] There are currently four non-modifiable contract terms required by the CPUC.[170] The CPUC also approved certain "modifiable" terms and conditions in the decision.[171] The utilities and a renewable developer can amend modifiable terms and conditions, but the CPUC required that any modifications be consistent with Commission orders and California law.[172]

The CPUC also addressed pricing for renewable power in 2008, as it is required to do under the legislative mandate to determine the "market price of electricity for terms corresponding to the length of contracts with eligible renewable resources"[173] This market price is typically referred to as the Market Price Referent or "MPR." The MPR is intended to reflect the cost of developing and operating a natural gas-fired generation facility, as a proxy for determining

---

163. CALIFORNIA ENERGY COMM'N, RENEWABLE ENERGY TRANSMISSION INITIATIVE, DOCUMENTS, http://www.energy.ca.gov/reti/documents/index.html (last visited Mar. 18, 2008).

164. *Id*.

165. Exec. Order No. S-14-08 (Nov. 17, 2008), http://gov.ca.gov/executive-order/11072/.

166. *Id*.

167. *Id*.

168. Order Instituting Rulemaking to Continue Implementation and Administration of California Renewables Portfolio Standard Program, 08-04-009 Cal. Pub. Util. Comm'n (2008), http://docs.cpuc.ca.gov/published/FINAL_DECISION/81269.htm.

169. *Id*.

170. *Id.*

171. *Id.*

172. *Id.*

173. CAL. [PUB. UTIL.] CODE § 399.15(c) (2008).

market prices that are then used to evaluate the cost of renewable projects. In 2003, the CPUC established the initial parameters, inputs and calculation methodology for the MPR. Since that time, the CPUC has re-calculated the MPR on an annual basis, and recently determined the MPR for 2008.[174] The MPR is then used to determine a benchmark price for renewable energy provided under an agreement.

The CPUC has also periodically reviewed the MPR inputs and calculation methodology. In 2008, the CPUC issued a decision revising portions of the MPR formula, including the gas cost forecasts used in the calculation, capacity factor, installed capacity costs and cost escalation.[175] The added cost of offsetting carbon emissions created by the typical gas-fired electric generation facility was made a permanent factor in the MPR in recognition of California's legislated cap on CO_2 emissions.[176] Several parties had requested that the MPR be kept confidential so that renewable energy developers would not use it as a "price target" when negotiating PPAs. However, the CPUC denied this request.[177]

In 2008, the CPUC approved certain banking and shaping transactions to facilitate out-of-state deliveries of renewable energy.[178] As in-state renewable resource development opportunities in California become scarcer, the utilities are procuring more renewable resources from out-of-state generators. For a variety of reasons, including limited transmission capacity, it has become necessary for renewables purchasers to receive electricity at times other than when the renewable power is generated. The generation is "banked" in the local energy market and system power is delivered, along with the green attributes under a "firm" schedule that is "shaped" to specific delivery hours. The CPUC also issued a decision addressing the RPS responsibilities of electricity providers other than the large IOUs in California.[179] This decision provides rules and requirements applicable to smaller IOUs, IOUs that serve customers in California and other states (i.e., multi-jurisdictional utilities) and electricity marketers. In 2008, the CPUC required utilities to file standard offers to pay the MPR price for output from renewable resources sized 1.5 MW or smaller. Statewide, up to 500 MW of these units may take advantage of the streamlined standard offer contracts. Each utility is being assigned a pro-rata share of the statewide capacity obligation by the CPUC.[180]

Finally, in 2008, the CPUC addressed renewable energy credits or "RECs" to be used to satisfy California renewable requirements.[181] RECs convey the renewable attribute of the electricity and are recorded in a database used to

174. CPUC Resolution E-4214 (Dec. 18, 2008).

175. CPUC Decision 08-10-026.

176. *Id*.

177. *Id*. at 34-35.

178. CPUC Resolution E-4160 (Apr. 10, 2008).

179. CPUC Decision 08-08-029.

180. S.B. 380, 2008 Leg. (Cal. 2008) *amending* CAL [PUB. UTIL.] CODE § 399.20 enacted an increase in the statewide cap on these contracts from 250 MW to 500 MW and extended the purchase requirement from wastewater and water treatment facilities to all retail customers within the IOUs' territories and increased the facility size from 1 MW to 1.5 MW capacity or less.

181. *Proposed Decision Authorizing Use Of Renewable Energy Credits For Compliance With The California Renewables Portfolio Standard*, issued October 29, 2008 in CPUC Rulemaking 06-02-012.

monitor renewable generation throughout the area covered by the Western Electricity Coordinating Council (WECC). A REC signifies that one megawatt hour (MWh) of electricity has been generated by an eligible renewable energy resource and has been delivered, along with its renewable attribute, to its destination. In an August 2008 decision, the CPUC defined the attributes of RECs that could be used for compliance with California's renewable energy requirements.[182] In late 2008, a CPUC Administrative Law Judge issued a Proposed Decision regarding the criteria and use of RECs by utilities to satisfy their compliance requirements.[183]

C. Judicial Decisions Impacting Renewable Energy

The following judicial decisions relate to the renewable energy sector, including ownership of renewable energy credits, and opposition to renewable energy projects, particularly wind. The list includes decisions that have been decided both in state and federal courts in calendar year 2008 and is intended to be representative, if not comprehensive. In some instances, decisions are reported which involve subsequent appellate review of cases decided earlier.

Renewable Energy Credits, Value, and Ownership. As discussed in the 2007 Report of the Renewable Energy Committee,[184] the Supreme Court of the State of Connecticut in *Wheelabrator Lisbon, Inc. v. Dep't of Pub. Util. Control*,[185] held that the Connecticut Department of Public Utility Control (DPUC) appropriately determined that a contract between a renewable energy producer (Wheelabrator Lisbon) and an electric utility purchaser conveyed renewable energy credits along with electric power. A parallel 2008 decision in the federal courts reached the same result.[186] In the federal appeal, the Wheelabrator Lisbon challenged the DPUC decision on the grounds that it effectively modified the terms of an agreement in a manner prohibited by §210(e) of the Public Utility Regulatory Policies Act of 1978 (PURPA).[187] The Court of Appeals upheld the district court's decision in finding that the DPUC's decision regarding Wheelabrator's transfer of renewable energy attributes was not pre-empted by federal law.[188] The Court of Appeals reasoned that the DPUC's decision did not modify the electric power agreement, but rather constituted an exercise of its authority to interpret a provision of the agreement.[189] The Court also agreed with the district court that the FERC's 2003 decision in *American Ref-Fuel*[190] did not pre-empt the 2004 DPUC decision and that it, in fact, explicitly acknowledged that state law governs the conveyance of RECs.[191]

---

182. CPUC Decision 08-08-028.

183. *Proposed Decision Authorizing Use Of Renewable Energy Credits For Compliance With The California Renewables Portfolio Standard*, *supra* note 181.

184. 29 ENERGY L.J. 274 (2008).

185. Wheelabrator Lisbon, Inc. v. Connecticut Dep't of Pub. Util. Control, 931 A.2d 159 (Conn. 2007).

186. Wheelabrator Lisbon, Inc. v. Connecticut Dep't of Pub. Util. Control, 531 F.3d 183 (2nd Cir. 2008).

187. 16 U.S.C. § 824a-3(e); *Wheelabrator Lisbon*, 531 F.3d at 184.

188. *Wheelabrator Lisbon*, 531 F.3d at 189.

189. *Id.*

190. *American Ref-Fuel Company*, 105 F.E.R.C. ¶ 61,004 (2003).

191. *Wheelabrator Lisbon*, 531 F.3d at 190.

Interpreting RPS Obligations. In *Indeck Maine Energy, LLC, v. Commissioner of the Division Energy Resources*,[192] a biomass facility operator sued the Massachusetts Division of Energy Resources (DER) in order to seek rescission of certain statements of qualification that were allegedly issued improperly to various operators participating in the state's renewable energy portfolio standard program.[193] The issue was whether the owner or operator of a renewable energy generating unit that is an authorized participant in a state-mandated renewable energy portfolio standard program may be deemed a competitor in a regulated industry with standing to challenge a governmental action that threatens its competitive position.[194] In rejecting the lower court's decision, the Court of Appeals held that the legislation which created the state's renewable portfolio standard program had in effect created a market for renewable credits that would not otherwise have existed and that because the state agency that administers the program is responsible for exclusively determining the annual percentage of the electricity portfolio that must be comprised of renewable energy and thus that must be purchased from the market established by the regulatory scheme, the DER exercises "considerable discretion" over the present and future demand for renewable energy credits.[195] The court then held that the plaintiffs showed sufficient injury to establish standing so as to meet the regulated industry exception by alleging that the DER's failure to adhere to certification procedures permitted an influx of inappropriately granted renewable credits into the market.[196] The case was remanded for further proceedings.

Opposition to Renewable Energy Projects. In *Center for Biological Diversity, Inc.., v. FPL Group, Inc.*,[197] a California Court of Appeals affirmed a trial court's judgment dismissing an action by a group of environmental advocates who had alleged that the defendant/owner-operator of a wind turbine electric generation facility were killing and injuring raptors, and other birds, in violation of the public trust doctrine.[198] In so holding, the Court of Appeals embraced and expanded the scope of the public trust doctrine to encompass the protection of wildlife as well as wildlife habitat.[199] However, the court found that the plaintiffs in this proceeding could not maintain their action because they had brought their complaint against the wrong parties.[200] As beneficiaries of the public trust, the plaintiffs should have proceeded against the governmental agency, or "trustee," that authorized the use of the wind turbines generators at issue, and not against the party allegedly harming trust property (i.e., the wind developer).[201] The court went on to demonstrate that, in its view, the responsible

192. Indeck Maine Energy LLC v. Comm'r of the Div. Energy Resources, 888 N.E.2d 994 (Mass. Ct. App. 2008).

193. *Id.* at 996.

194. *Id.* at 997.

195. *Id.* at 1000.

196. *Id.* at 1002.

197. Center for Biological Diversity, Inc. v. FPL Group, Inc., 166 Cal. App. 4th 1349 (Cal. App.1st Dist. Sept. 2008).

198. *Id.* at 1355.

199. *Id.* at 1360.

200. *Id.* at 1366.

201. *Id.* at 1369.

public agencies had not ignored their concern for the wildlife at issue and had, in fact, attempted to mitigate the harm to birdlife by imposing appropriate conditions and restrictions on the operation of the turbines.[202]

In *Taxpayers Citizens Group. v. Secretary Office of Environmental Affairs*,[203] the Superior Court of Massachusetts dismissed a challenge to the state's Secretary Office of Environmental Affairs' issuance of a final environmental impact report certificate for a proposed commercial wind energy facility consisting of 130 wind turbine generators over twenty-five square miles of a subtidal area.[204] The plaintiff was a group of ten taxpayers organized under Massachusetts law. The court held that a general desire to further environmental protection is not sufficient to confer standing under Massachusetts law; specifically, the plaintiffs' interest in preserving the integrity of the sea bed water and air space, as well as its members' proximity to a road where project-related cable was to be dug and laid, did not amount to an injury to a specific private property or legal interest.[205]

In *Residents Opposed to Kittitas Turbines v. The State Energy Facility Site Evaluation Council*,[206] the Supreme Court of Washington upheld the governor's final decision to approve a site certification application from a wind power developer in accordance with the pre-emption provisions of a state statutory wind siting scheme.[207] In this case, a wind energy company filed an application with the Energy Facility Site Evaluation Council (EFSEC) for site certification of a wind facility.[208] The Energy Facility Site Locations Act (EFSLA), under which the application was filed, expressly preempts certification decisions for certain kinds of energy facilities by other governmental entities, as long as a public hearing is held to determine whether the application is consistent with local land use plans and zoning laws and so long as the certification includes conditions to protect local interests.[209] After confirming that EFSLA applies to wind turbines, the court applied standard principles of statutory construction to find that the application of the governor's pre-emption authority was not in conflict with subsequently acted state zoning statutes.[210] The court further held that the final environmental impact statement (FEIS) issued by the EFSEC was adequate because it contained a reasonably thorough discussion of relevant aspects of the probable environmental consequences of the agency's certification even though it did not examine "every conceivable viewpoint" in analyzing the sufficiency of various turbine set-back distances as a mitigation measure for the visual impact of the turbines.[211] After dispensing with several other issues pertaining to EFSEC's use of evidence outside the FEIS and alleged bias on the

202. *Id.* at 1370-71.

203. Taxpayers Citizens Group v. Secretary Office of Envtl Affairs, 2008 Mass. Super. LEXIS 334 (Mass. Supp., September 10, 2008).

204. *Id.* at *2.

205. *Id.* at *12.

206. Residents Opposed to Kittitas Turbines v. The State Energy Facility Site Evaluation Council, 197 P.3d 1153 (Wash. 2008).

207. *Id.* at 1157.

208. *Id.*

209. *Id.* at 1158.

210. *Id.* at 1169.

211. *Id.* at 1171.

part of EFSEC members, the court concluded by affirming the appropriateness of granting the request for preemption by recognizing the developer's demonstrated willingness to compromise with the county authorities, having agreed to reduce the project from 120 turbines to less than sixty turbines in order to meet setback concerns and plausibly explaining that further reductions would render the project uneconomical.[212]

In *Mountain Communities for Responsible Energy v. Public Service Commission of Wets Virginia*,[213] the West Virginia Supreme Court of Appeals upheld a final order of the West Virginia Public Service Commission (WVPSC) granting conditional authority to Beach Ridge Energy LLC to build a wind-powered wholesale electric generating facility.[214] A non-profit environmental group and a property owners' group had challenged the WVPSC's decision on the grounds that the Commission had failed to balance the interest of the public, the general interest of the state and local economy, and the interests of the energy company.[215] The court found that the Commission record contained ample evidence of the Commission's attempt to balance such interests.[216] The court also held that the Commission had no duty to appoint special technical experts to conduct independent studies to evaluate the concerns raised by the intervening parties opposed to the proposed project.[217]

II. DEMAND-SIDE MANAGEMENT

A. Federal Government Activity

1. The FERC Issues Final Demand Response Regulations

In October 2008, the FERC issued Order No. 719, adopting final regulations in a proceeding it began in 2007 to assess the status of competition in wholesale electric markets, and to consider improvements to the operation of those markets.[218] Order No. 719 covers four issue areas: (1) demand response and market pricing during periods of operating reserve shortage; (2) long-term power contracting; (3) market monitoring; and (4) RTO/ISO responsiveness to customers, stakeholders, and consumers.

With regard to demand response and market pricing during periods of operating reserve shortage, the FERC largely adopted the proposals it set out in its earlier advanced notice of proposed rulemaking (ANOPR) and notice of proposed rulemaking (NOPR). Order No. 719 adopts an overarching requirement that RTO/ISOs establish policies and procedures in their market

212. *Id.* at 1174-1177.

213. Mountain Communities for Responsible Energy v. Pub. Serv. Comm'n of W. Va., 665 S.E.2d 315 (W. Va. 2008).

214. *Id.* at 318.

215. *Id.* at 324.

216. *Id.* at 326.

217. *Id.* at 331.

218. Order No. 719, *Wholesale Competition in Regions with Organized Electric Markets*, 125 F.E.R.C. STATS. & REGS. ¶ 61,071, 73 Fed. Reg. 64,100 (2008) (to be codified at 18 C.F.R. pt. 35).

rules to ensure that demand response[219] resources are treated comparably to more traditional supply-side (i.e., generation) resources. Fundamentally, this overarching requirement mandates that RTO/ISOs accept bids from demand response resources in their markets for certain ancillary services (subject to certain minimum technical requirements that each region may adopt).[220]

RTO/ISOs are also required to adjust their market rules to eliminate, during a system emergency, the "deviation charges" that are normally assessed to buyers who take less energy in real-time than originally planned, in other words, buyers who voluntary reduce their demand during such emergencies may not be assessed deviation charges.[221] Order No. 719 also requires RTO/ISOs to permit entities that aggregate retail customers (ARCs) to bid demand response offers on behalf of those customers directly into their wholesale markets, unless the laws or regulations of relevant state regulatory agencies forbid aggregated retain customers from bidding demand response into such markets.[222]

In connection with its demand response provisions, Order No. 719 adopts new "scarcity pricing" requirements. Specifically, the rule requires RTO/ISOs to modify their rules governing market prices to allow energy prices to rise during periods of operating reserve shortage (i.e., where demand for electricity threatens system reliability) to "more accurately reflect the true value of energy."[223] This mandate will require RTO/ISOs to increase or eliminate the bid caps that are currently in place to prevent wholesale electricity prices from rising above certain levels. The rule requires that RTO/ISO market rules meet six criteria, including improving reliability by reducing demand and increasing generation during operating reserve shortages, encouraging entry and retention of demand response and generation resources needed during emergencies, adequately mitigating potential market power and gaming, and providing comparable treatment of all resources.[224] The FERC expects that these market reforms will encourage greater participation by demand response resources in the markets, and support reliability by reducing demand during periods of supply shortage.

2. Demand-Side Management Programs in RTO/ISOs

California ISO. As a result of FERC Order 719, the CAISO is also considering how to integrate demand response into the CAISO's markets. In December 2008, the CAISO began an effort to begin to implement Order No. 719 to allow demand response to be bid into the CAISO's markets, including bids from utilities, other load-serving entities and demand response aggregators. The CAISO recently indicated that after a stakeholder process, it intends to submit a proposed tariff for demand response in April 2009.[225]

---

219. "Demand response" is defined by the FERC to mean "a reduction in the consumption of electric energy by customers from their expected consumption in response to an increase in the price of electric energy or to incentive payments designed to induce lower consumption of electric energy." 18 C.F.R. § 35.28(b)(4).

220. Order No. 719, *supra* note 218, at 64,107.

221. *Id.* at 64,114.

222. *Id.* at 64,119.

223. *Id.* at 64,124.

224. *Id.* at 64,130.

225. CAISO, STANDARD ADEQUACY CAPACITY PRODUCT (2009), http://www.caiso.com/2362/2362736c18e60.pdf.

In 2009, other RTOs will also likely be making changes in their demand response and demand-side management programs in response to Order No. 719.

B. State Government Activity

1. General Update on California Developments

The CPUC reviews and approves budgets and plans for demand response programs submitted by application every three years by the three large IOUs. The IOUs submitted their three-year plans in 2008 for the 2009-2011 time period, and expect a final CPUC decision on their applications in the first half of 2009. In 2008, the CPUC also adopted protocols for estimating the amount of electric load reduction during demand response events.[226] These protocols are used for long-term planning to determine the impact of demand response on load and resource needs and the cost-effectiveness of specific demand response programs based on the expected load impacts.

The CPUC also reviewed specific IOU demand response programs outside of the three-year demand response application process. For example, the CPUC approved Pacific Gas and Electric Company's (PG&E) proposed air conditioning direct load control program, in which residential and small commercial customers authorize PG&E to install an air conditioning switch or programmable communicating thermostat that is remotely activated by the utility to provide demand response under certain conditions.[227] Participating customers receive a nominal monetary incentive. Southern California Edison (SCE) already had an approved air conditioning load control program.

In early 2008, the CPUC approved plans for Southern California Edison, San Diego Gas & Electric and Pacific Gas & Electric to charge customers nearly $4.6 billion to install millions of smart meters at homes and businesses. Southern California Edison plans a $1.7 billion rollout of 5.3 million new meters from 2009 to 2012. San Diego Gas & Electric will spend $570 million to roll out 1.4 million new meters by 2011. San Francisco-based Pacific G&E will spend $2.3 billion to install 10.2 million new meters by 2011. The California PUC has acknowledged that the smart meters selected for installation "'are less sophisticated and less expensive than a broadband system.'"[228] These "less sophisticated" meters will cost less, however the meters will not be able to perform as many of the potential "smart" applications.

The CPUC also approves specific demand response contracts between an IOU and third parties. In 2008, the CPUC approved contracts for aggregated demand response between SCE and a number of third parties that either aggregated demand response load or provided demand response directly[229] and modifications to PG&E's contracts with several demand response providers.[230]

---

226. CPUC Decision 08-04-050.

227. CPUC Decision 08-02-009.

228. David Lazarus, *Consumer Confidential: 'Smart Meters' Aren't Up to Speed*, L.A. TIMES, Apr. 20, 2008, at C-1.

229. CPUC Decision 08-03-017.

230. CPUC Decision 08-06-015.

Finally, on September 18, 2008, the CPUC adopted the state's Long Term Energy Efficiency Strategic Plan (Plan).[231] The Plan sets forth four "Big Bold Strategies" for significant energy savings:

> (1) all new residential construction in California will be net zero by 2020; (2) all new commercial construction in California will be zero net energy by 2030; (3) the Heating, Ventilation, and Air Conditioning (HVAC) industry will be reshaped to ensure optimal equipment performance; and (4) all eligible low-income homes will be energy-efficient by 2020.[232]

As part of implementing the Plan, the PUC's regulated utilities have filed applications seeking authorization for over $3.7 billion of energy efficiency programs for the 2009-2011 calendar years.

2. State Measures Addressing Energy Efficiency

In 2008, dozens of states implemented energy efficiency laws and many governors filed executive orders demanding energy efficiency from state agencies. A common theme among the state laws and executive orders is that states must set an example of energy efficiency by revamping efficiency requirements for state buildings, offices, and construction projects. In addition, states such as Kentucky and Missouri added tax incentives to stimulate energy conservation efforts. The following is an alphabetical list of the 2008 energy efficiency laws, regulations, and executive orders.

Arizona. By executive order, Arizona Governor Janet Napolitano established a new requirement for state agencies to conduct an analysis of their energy usage by January 15, 2009 and to identify what is required to meet their goals.[233] Governor Napolitano called on the Department of Administration to immediately initiate energy performance contracts for all state agencies that are failing to meet their energy reduction goals. The Department of Administration must report on its progress on a quarterly basis starting April 1, 2009. Without specifying particular measures, the Order also directed the Arizona Energy Office to accelerate efforts to promote the use of energy performance contracts as an appropriate financing mechanism to fund energy efficiency for school districts and local governments.

Colorado. Colorado's solar access laws prohibit any residential covenants that restrict solar access. In 2008, Colorado extended protections to installations of wind turbines that meet the statewide interconnection rules, and several energy efficiency measures including awnings, shutters and other shade structures, garage fans, energy efficient outdoor lighting, retractable clotheslines, and evaporative coolers.[234] The new law provides some exceptions to allow for aesthetic requirements that do not significantly increase the cost of the device or decrease its performance.[235] The Colorado bill further protects owners of solar or wind-energy systems by awarding reasonable attorney fees to the prevailing

---

231. CALIFORNIA ENERGY EFFICIENCY STRATEGIC PLANNING, http://www.californiaenergyefficiency.com/index.shtml (last visited Mar. 18, 2009).

232. *Id*.

233. Exec. Order No. 2008-29 (Dec. 16, 2008), http://www.azgovernor.gov/dms/upload/EO_2008_29_SDOC3904.pdf.

234. H.B. 1270, 66th Gen. Assem., 2nd Sess. (Colo. 2008).

235. *Id.*

party in any court case involving the significant increase in the system's cost based on aesthetic requirements.

Florida. Florida passed an energy efficiency bill in June 2008.[236] The wide-ranging bill increases energy efficiency requirements for state-owned buildings and directs state agencies to purchase fuel-efficient vehicles. Energy efficiency codes for building construction are strengthened, making new buildings at least fifty percent more energy efficient by 2019 and increasing energy efficiency requirement for some appliances such as swimming pool equipment and water heaters.[237]

The Florida bill also requires that state-financed buildings must comply with the United States Green Building Council (USGBC) Leadership in Energy and Environmental Design (LEED*) rating system, the Green Building Initiative's Green Globes rating system, the Florida Green Building Coalition standards, or a nationally recognized, high-performance green building rating system.[238] The Department of Management Services has been directed to adopt the USGBC's LEED standards for New Construction (LEED-NC) for all new buildings, and to strive for Platinum Level certification in order to comply with the bill. The Department of Management Services must also renovate all existing buildings they own and operate on behalf of client agencies to earn certification under LEED for Existing Buildings (EB). The bill mandates that new leasing agreements for office space by any state agency must meet Energy Star building standards.[239]

Idaho. In May 2008, Idaho enacted legislation called the Energy Efficient State Building Act to reduce the significant amount of energy consumed by state facilities.[240] The Idaho bill requires that all "major facility projects" must be designed, constructed and certified to meet a target of at least ten percent to thirty percent better efficiency than a comparable building on a similar site. The Idaho bill provides an escape clause whereby major facility projects are only required to meet the efficiency target to the extent it is "fiscally prudent" and to the extent it is practical and feasible.[241] The term "target" makes the bill more aspirational rather than a bottom-line requirement. A major facility project is defined as a project constructed by a state agency or for use by a state agency that is larger than 5,000 gross square feet of conditioned space.[242] Also included in the definition are building renovation projects greater than 5,000 gross square feet with a project cost greater than fifty percent of the assessed value of the existing building.

---

236. FLA. STAT. § 187.201 (2008) (codifying H.B. 7135).

237. *Id*.

238. DATABASE OF STATE INCENTIVES FOR RENEWABLES & EFFICIENCY (DSIRE), FLORIDA INCENTIVES FOR RENEWABLE ENERGY, ENERGY CONSERVATION IN PUBLIC BUILDINGS, http://www.dsireusa.org/library/includes/incentive2.cfm?Incentive_Code=FL04R&CurrentPageID=1&RE=1&EE= (last visited Mar. 18, 2009).

239. *Id*.

240. H.B. 422, 59th Leg., 2nd Spec. Sess. (Idaho 2008).

241. *Id.*

242. *Id*.

Indiana. In June 2008, Governor Mitch Daniels issued an executive order establishing an energy efficient state buildings initiative.[243] Governor Daniels' order noted that the Indiana Department of Administration (DOA) has constructed five new buildings utilizing energy efficient design which were certified by the USGBC as meeting LEED* standards.[244] Because of the cost effective success of the previous buildings, the DOA must develop design standards for all new state buildings which require a cost-effectiveness analysis of the building with a goal of achieving energy efficiency. The new DOA standards will apply to all state agencies, departments, boards, offices, commissions, and public universities. Energy efficiency can be demonstrated through design which achieves either: a Silver rating on the USGBC LEED* rating system, a two globes rating under the Green Globes rating system, an EPA Energy Star building rating, or an equivalent rating under a system accredited under the American National Standards Institute (ANSI).[245] In a concession to local interests, the order also specifies that Indiana hardwood lumber should be considered for use in all projects as a local source material.

Iowa. In February 2008, Governor Chet Culver issued Executive Order Number 6, rescinding a 2005 energy efficiency order and providing for a fifteen percent further reduction in the use of natural gas, fuel oil, electricity, and water in state buildings within five years.[246] In calculating the new energy reduction goal, the Energy Excellent Buildings Task Force will also take into account growth in the state workforce and changes in building operations. The order noted that by

> "greening" the state's own office building footprint,. . .Iowa could produce a "quadruple bottom line" impact of: (1) building our new green building clean technology businesses and industries; (2) creating new "green collar" jobs in the building retrofit and renewable energy sectors in Iowa; (3) saving taxpayers money in the long-term by cutting state office energy consumption; and (4) reducing greenhouse gas emissions, all while deploying green building technologies that already exist.[247]

Governor Culver has also unveiled a broad Green Government Initiative, which created a Sustainable Materials Task Force and a Biofuels Task Force. The Sustainable Materials Task Force is charged with efficient "procurement, operations and disposal of all materials used in state government."[248] Among the principles the Sustainable Materials Task Force should support are local purchasing, materials with recycled content, and products with resource efficient manufacturing processes. The Biofuels Task Force must focus on increasing biofuel use in state vehicles, decreasing miles driven by state employees, and increasing the efficiency of the state vehicle fleet.[249]

Governor Culver created a task force that must complete an audit of current state practices and submit the data to the Green Government Steering Committee

---

243. Exec. Order No. 08-14 (June 24, 2008), http://www.in.gov/legislative/iac/20080709-IR-GOV080541EOA.xml.pdf.

244. *Id.*

245. *Id*.

246. Exec. Order No. 6 (Feb. 21, 2008), http://das.gse.iowa.gov/greenbuyer/ex_ord_6.pdf.

247. *Id.*

248. *Id*.

249. *Id*.

by December 1, 2008. Using the audit data, a Master Plan will then be developed outlining the development, implementation, and augmentation of state policies for meeting the energy efficiency goals.

Kentucky. In April 2008, Kentucky enacted legislation to improve the energy performance of all state-owned and state-leased buildings.[250] Beginning July 1, 2009, all construction or renovation of public buildings for which fifty percent or more of the total capital cost is paid by the state must be renovated or designed to meet "high-performance building" standards. The 2008 bill defined a "high-performance building" as:

> a public building that is designed, constructed and capable of being operated in a manner that: (a) [i]ncreases environmental performance and economic value over time; (b) [s]afeguards the health of occupants; (c) [e]nhances satisfaction and productivity of workers through energy-efficient systems; (d) [i]ncorporates environmentally friendly materials and products; and (e) [r]educes waste.[251]

This legislation also requires that all building leases for the state or any of its agencies meet the same high-performance building standards after July 1, 2018. Public buildings must also incorporate Energy Star-qualified products if life cycle cost analysis determines they are cost-effective.

The Kentucky bill additionally provides an array of state tax credits beginning in 2009 and continuing until 2015.[252] State income tax credits can be received for the installation of upgraded insulation, energy-efficient windows and doors, qualified water heaters, central air conditioning, and furnaces. The total tax credit for the installation of residential energy efficient appliances is limited to $500 per taxpayer. In addition, the bill creates a $500 per dwelling tax credit for installation of solar space or water heating and solar photovoltaic systems.[253] In order to receive the tax credit, the energy efficient appliances and systems must be installed by a certified installer by the North American Board of Certified Energy Practitioners (NABCEP).

Louisiana. In January, Governor Bobby Jindal issued an order requiring the Division of Administration (DOA), in consultation with state agencies, to set energy efficiency goals for state facilities, office buildings, or complexes for fiscal years 2009 through 2011 by July 30, 2008.[254] The Order also required the DOA to "review its purchasing practices of all materials to ensure 100% compliance with existing state requirements related to energy conservation."[255] Governor Jindal ordered the DOA to "adopt best energy purchasing practices and to develop or increase standards for purchases of such products as appliances, light bulbs, smart chargers, and computers using Energy Star as a minimum standard."[256] The DOA must "develop average fuel economy goals for the state automobile fleet and take all necessary measures to assure that those

250. H.B. 2, Gen. Assem., Reg. Sess. (Ky. 2008).

251. *Id*.

252. *Id*.

253. *Id*.

254. Exec. Order 08-08 (Jan. 30, 2008), http://doa.louisiana.gov/osr/other/bj08-08.htm.

255. *Id*.

256. *Id*.

goals are met by 2010. . .includ[ing] expanding the number of hybrid and other fuel efficient vehicles" in the state fleet.[257]

Maryland. On April 24, 2008, Governor Martin O'Malley signed into law a bill requiring each gas and electric company to develop and implement programs and services to encourage and promote the efficient use and conservation of energy by consumers, including gas and electric companies.[258] The bill mandates that the gas and electric companies must adopt ratemaking policies that provide cost recovery and financial incentives for the promotion of efficient use and conservation of energy. The Maryland Public Service Commission will oversee the energy efficiency programs. The PSC must file a report with the state government on the status of the conservation programs as well as recommendation for appropriate funding starting on February 1, 2009 and every two years thereafter.[259]

Also on April 24, 2008, the Governor signed the Maryland High Performance Buildings Act, effective July 1, 2008.[260] The law requires that capital projects involving the construction or major renovation of state buildings meet the criteria for classification as a "high performance building."[261] Similar to many other states, the law defined "high performance building" as buildings that achieve at least a silver rating under the U.S. Green Building Council's LEED* green building rating system, or a comparable numeric rating on an approved, nationally recognized system.[262] The bill requires that "major renovations" must meet the high performance building standards. A "major renovation" is considered to be any project that has a scope of 7,500 square feet or greater; reuses the building shell for the new construction; and involves the replacement of the heating, ventilating, and air conditioning, electrical, and plumbing systems.[263] Unoccupied buildings such as warehouses, garages, maintenance facilities, transmitter buildings, pumping stations, and other similar types of buildings are exempt from the "high performance" requirement. As with many state building efficiency laws, the bill contains an escape clause in that the high performance requirement may be waived if it is determined to be impractical by Maryland Green Building Council.[264]

Massachusetts. Massachusetts enacted an energy efficiency goal on July 2, 2008.[265] The 2008 law includes numerous provisions to promote the development of renewable energy, clean energy and energy efficiency programs.[266] In regard to energy efficiency, the law requires investor-owned utilities to meet resource needs first through cost-effective energy efficiency

257. *Id*.

258. H.B. 608, Gen. Assem. (Md. 2008).

259. *Id*.

260. S.B. 208, Gen. Assem. (Md. 2008).

261. *Id*.

262. *Id*.

263. *Id*.

264. *Id*.

265. S.B. 2768, Gen. Sess. (Mass. 2008).

266. Press Release, Governor Patrick Signs Energy Bill Promoting Cost Savings, Renewable and Clean Energy Technology (July 2, 2008), http://www.mass.gov/?pageID=gov3pressrelease&L=1&L0=Home&sid=Agov3&b=pressrelease&f=080702_bill_energy_clean&csid=Agov3.

improvements. The bill aims to curtail energy consumption in several ways. It requires electric and gas utilities to procure energy efficiency before they buy more power, and it adopts more efficient energy codes for buildings across the state. One section of the bill sets up a home energy scoring program, which brings the efficiency of a structure into the equation when buying or selling a home.[267]

A new Green Communities program comes into effect under the new law, offering benefits to municipalities that make a commitment to efficiency and renewable energy. The state Division of Energy Resources, which is expanded and elevated into the Department of Energy Resources, will now include a Green Communities Division to provide technical and financial assistance to municipalities for energy efficiency and renewable energy efforts.[268]

Minnesota. In May 2008, Minnesota enacted S.F. 2706, Sustainable Building Guidelines 2030.[269] The bill empowers the Commerce Commissioner in conjunction with the Center for Sustainable Building Research at the University of Minnesota to coordinate and implement the development of new cost-effective energy efficient performance standards for buildings. The guidelines must focus on achieving the lowest possible lifetime cost for new building and major renovations while allowing for continual energy conservation improvements.[270] These standards should be designed to achieve energy consumption reductions of sixty percent in 2010 based on a 2003 baseline.[271] The standards increase ten percent every five years towards an ultimate target of ninety percent in 2025.[272] The new guidelines must be incorporated into the mandatory state-funded building guidelines as soon as practical and updated every three to five years to incorporate all cost-effective energy efficiency measures.

Missouri. In July, Governor Blunt signed into law a bill allowing an income tax deduction for either the cost of a home energy audit conducted by an energy auditor certified by the Department of Natural Resources (DNR) or for the cost of implementing any recommendations made in any such energy audit, or for both activities.[273] The deduction is limited to $1,000 per year, up to $2,000 cumulative lifetime total deduction per taxpayer. The bill also created the "Show Me Green Sales Tax Holiday."[274] For 2009 and every year thereafter, during the seven-day period beginning on April nineteenth and ending April twenty-fifth, all sales of Energy Star certified new appliances will be exempt from state sales tax.

Additionally, the Missouri bill mandated that all state construction and renovations of buildings larger than 5,000 square feet shall comply with minimum energy efficiency standards.[275] Under the new law, the DNR is

267. S.B. 2768 § 5, Gen. Sess. (Mass. 2008).

268. S.B. 2768 § 7, 12, Gen. Sess. (Mass. 2008).

269. S.F. No. 2706, 2007-2008th Legis. Sess. (Minn. 2008).

270. *Id*.

271. *Id*.

272. *Id*.

273. S.B. No. 1100, 1181, 1262, 1263 94th Leg., 2d. Sess. (Mo. 2008).

274. *Id.*

275. *Id.*

required to establish energy efficiency standards for state buildings at least as stringent as the 2006 International Energy Conservation Code (IECC) rather than the current ASHRAE Standard 90 by January 1, 2009. The new DNR standards will apply equally to both state-leased and state-owned buildings for which the building design process or the lease begins after July 1, 2009.[276] In an effort to avoid economic waste while seeking energy savings, waivers may be granted to these requirements if compliance is expected to exceed the energy cost gained or if the requirements would compromise safety.

Nebraska. On April 16, 2009, Nebraska Governor Dave Heineman signed into law the Low-Income Home Energy Conservation Act.[277] The law allows public utilities to develop energy conservation programs for their low-income customers. The public utilities will be able to designate up to five percent of the state sales tax collected from customers to be deposited into an Energy Conservation Improvement Fund.[278] The utilities must match all deposits made into the fund. Based on federal poverty guidelines, customers will be eligible for grants from the fund.

New Hampshire. In 2008, New Hampshire created an Energy Efficiency and Sustainable Energy Board (Board) to promote and coordinate energy efficiency, demand response, and sustainable energy programs in the state.[279] The members of the Board include participants from the public utilities commission, consumer advocates, and business and industry leaders. The creation of the Board was driven in large part by the passage of HB 1434, which allows New Hampshire to participate in the Regional Greenhouse Gas Initiative (RGGI), a ten state effort to cap and reduce greenhouse gas emissions from electric generating plants.[280] A key aspect of RGGI is the creation of the Greenhouse Gas Emissions Reduction Fund (RGGI Fund), which the new law directed must be "'used to support energy efficiency, conservation and demand response programs to reduce greenhouse gas emissions generated within the state,'" and to reduce energy bills for New Hampshire electric customers. The Board is directed to "'provide recommendations at least annually to the public utilities commission on the administration of energy efficiency and renewable energy funds under the commission's jurisdiction.'"[281]

New Jersey. In November, the New Jersey Board of Public Utilities (BPU) and New Jersey Clean Energy Program announced a joint venture to provide community groups the necessary resources to distribute Energy Star qualified compact fluorescent light bulbs (CFLs) and educate New Jersey residents about how to save energy, money, and help protect the environment with energy efficient lighting.[282] By distributing 500,000 CFLs, through discounted prices

276. *Id*.

277. LB 1001, 100th Leg., 2nd Sess. (Neb. 2008).

278. *Id*.

279. H.B. 1561, Reg. Sess. (N.H. 2008).

280. H.B. 1434, Reg. Sess. (N.H. 2008); NEW HAMPSHIRE PUB. UTIL. COMM'N, ENERGY EFFICIENCY AND SUSTAINABLE ENERGY BOARD (2008), http://www.puc.nh.gov/EESE%20Board/HB1561%20Energy%20Efficiency%20&%20Sustainable%20Energy%20Board%20Annual%20Report%2012-1-08.pdf (hereinafter Sustainable Energy Board).

281. Sustainable Energy Board, *supra* note 280.

282. NEW JERSEY BOARD OF PUBLIC UTILITIES, NEW JERSEY'S CLEAN ENERGY PROGRAM (2008), http://www.njcleanenergy.com/files/file/Press%20Releases/20081106.pdf.

and donations, the partnership hopes to achieve energy savings of $5.8 million each year and reduce carbon dioxide emissions by more than 330 million pounds over the life of the CFLs.

New Jersey enacted a state law aimed at reducing energy consumption by the state government.[283] The New Jersey law requires the state to purchase Energy Star product but provides several exceptions to the energy efficient purchase requirements. The law requires that "unless it is inconsistent with public interest or unreasonably costly" the state government of New Jersey is now required to purchase only Energy Star products "when available."[284]

North Carolina. In July, North Carolina passed new standards governing energy efficiency for major facility construction and renovations involving state, university and community college buildings.[285] The new law is based on finding that public buildings can be built and renovated using sustainable, energy-efficient methods that save money, reduce negative environmental impacts, improve employee and student performance, and make employees and students more productive. Under the new standard, buildings shall be designed and constructed so that the calculated energy consumption is at least thirty percent less than the energy consumption for the same building as calculated using the standards under American Society of Heating, Refrigerating, and Air Conditioning Engineers (ASHRAE) 90.1-2004 (Standard 90).[286] For every major facility renovation, the construction should obtain a twenty percent reduction in calculated energy consumption. The bill also prevents the state from purchasing a building that fails to meet the energy efficiency requirements in effect at the time the building under consideration for purchase was constructed or renovated.

Ohio. In May 2008, Ohio enacted a broad electric industry restructuring bill. As part of the sweeping legislation, utilities are required to implement energy efficiency programs to achieve incremental reductions in energy savings each year and cumulative energy savings of twenty-two percent by the end of 2025.[287]

Oklahoma. In May 2008, the governor of Oklahoma signed legislation requiring the state to develop a high-performance building certification program for state construction and renovation projects.[288] The Oklahoma Department of Central Services (DCS) will determine the building standard although it must meet the certification guidelines of either the USGBC LEED* system or the Green Building Initiative's Green Globes rating system.

The new requirement will apply to new construction or "substantial renovation" projects that begin the design phase after July 1, 2008 in buildings larger than 10,000 square feet.[289] "Substantial renovations" are projects that cost in excess of fifty percent of the replacement value of the facility.[290] State

283. N.J. STAT. ANN. § 52:34-6.4 (2008).

284. *Id.*

285. S.B. 1946, Gen. Assem., 2007 Sess. (N.C. 2008).

286. *Id*.

287. S.B. 221, 127th Gen. Assem. (Ohio 2008).

288. H.B. 3394, 51st Leg. (Okla. 2008).

289. *Id*.

290. *Id*.

construction and renovation projects are defined as projects in which state funds or state-insured funds constitute at least fifty percent of the project cost. State agencies are directed to meet the highest level of certification attainable if the increased initial costs, taking into account the time value of money, can be recouped in five years or less.[291]

South Carolina. In June, Governor Sanford signed into law an energy conservation plan for South Carolina state agencies and public school districts. Under the law, state agencies and schools must submit energy conservation plans to the State Energy Office for buildings in use as of July 1, 2008.[292] The goal of the plans should be to reduce energy use by one percent annually for five years beginning July 1, 2008. The law also sets an ultimate goal of reducing energy use twenty percent by July 1, 2020 relative to 2000 levels.[293] Energy conservation products, such as compact fluorescent bulbs, should be purchased if they are found to be cost-effective over a five-year time horizon. The energy reduction goals do not apply to buildings designed, constructed, and maintained under the Sustainable Construction Act of 2007.

South Dakota. In March 2008, South Dakota enacted legislation mandating the use of high performance building standards in new state construction and renovations.[294] The new standard requires state building projects achieve USGBC LEED* silver certification, a two-globe rating on the Green Building Initiative Green Globe rating system, or a comparable numeric rating from another accredited sustainable building certification program. The law applies to all new construction projects and renovations by state agencies, departments, or institutions that cost more than $500,000 or include more than 5,000 square feet of space.[295] Buildings without heating, ventilation, and air conditioning systems are exempt from the efficiency standards.

Tennessee. On December 16, 2008, Governor Phil Bredesen issued Executive Order 59, seeking to lead the state of Tennessee by example in the area of energy efficiency.[296] The Governor's Task Force on Energy Policy estimated that state agencies spent approximately sixty-two million dollars on energy costs in 2007. In order to achieve significant reductions in state government energy bills, the order requires future office equipment, appliances, lighting, and heating and cooling products and systems purchased by state agencies to be Energy Star qualified when available. The order further stipulates that purchasing contracts that do not allow Energy Star qualified equipment as options shall not be renewed.

Vermont. In March 2008, Vermont enacted legislation setting forth building energy efficiency goals.[297] The bill sets forth the goals of the state:

> (1) to improve substantially the energy fitness of at least 20 percent of the state's housing stock by 2017 (more than 60,000 housing units), and 25 percent of the

---

291. *Id*.

292. H.B. No. 4766, Gen. Assem., 117th Sess. (S.C. 2008).

293. *Id*.

294. S.B. No. 188, 83d Leg. Sess. (S.D. 2008).

295. *Id*.

296. Exec. Order No. 59 (Dec. 16, 2008), http://www.tennesseeanytime.org/governor/AdminCMSServlet?action=viewFile&id=1313.

297. S.B. 209, Gen. Assem. (Vt. 2008).

> state's housing stock by 2020 (approximately 80,000 housing units); (2) to reduce annual fuel needs and fuel bills by an average of 25 percent in the housing units served; (3) to reduce total fossil fuel consumption across all buildings by an additional one-half percent each year, leading to a total reduction of six percent annually by 2017 and 10 percent annually by 2025; (4) to save Vermont families and businesses a total of $1.5 billion on their fuel bills over the lifetimes of the improvements and measures installed between 2008 and 2017; and (5) to increase weatherization services to low income Vermonters by expanding the number of units weatherized, or the scope of services provided, or both, as revenue becomes available in the home weatherization assistance trust fund.[298]

The new law requires that the Vermont Department of Buildings and General Services issue a report containing recommendations on how to increase the use of biodiesel fuels in all state buildings to at least five percent biodiesel by December 31, 2009 and to at least ten percent biodiesel by 2012.[299] The report must uncover any obstacles to increasing biodiesel use in state buildings and a work plan to increase biodiesel use.

3. State Measures and Decisions Concerning Advanced Metering Infrastructure and "Smart Meters"

In 2008, many state utilities began deployment of smart meters to residential customers. Smart meters are electrical meters with two-way communication ability typically used to measure electricity usage.[300] Smart meters have the ability of providing real-time reads and power outage notification. Smart meters allow utilities to adjust prices during peak electricity usage periods.

In conjunction with smart meters, utilities are implementing "smart grids," sometimes known as "advanced metering infrastructure." Smart grids are supposed to offer several advantages over traditional versions. Smart grid technologies are intended to allow customers to determine when, where, and how they use their energy.[301] Smart grids will allow alternative pricing methods to the traditional "average monthly rate" residential customers typically pay. The smart grid systems will offer various levels of "real-time" pricing, where prices rise during certain segments of the day. Combined with smart meters, the smart grids are self-monitoring, meaning they can identify overloads in the system and prevent blackouts; are more secure against human attacks and natural disasters; give users real-time information about their consumption, paving the way for variable pricing, smart appliances, and more efficient usage. Smart grid systems promise to be compatible with sources of green power.

Few states passed laws or regulations regarding smart meters or smart grids, but a number of public utility commissions authorized the deployment of smart meters throughout their service areas during the past year. The following is an alphabetical list of the utility commission approved and announced smart meter rollouts in 2008 (California developments in this area are detailed above).

---

298. *Id*.

299. *Id*.

300. DOE, THE SMART GRID: AN INTRODUCTION (2008), http://www.oe.energy.gov/DocumentsandMedia/DOE_SG_Book_Single_Pages(1).pdf.

301. *Id*.

Alabama. Alabama Power began installing smart meters throughout Birmingham, Alabama in May 2008. Alabama Power announced it would continue installation of 1.2 million smart meters to all of its customers throughout the state until 2011. Alabama Power said the installation of the meters should not cause any inconvenience to customers, other than a ten or fifteen minute interruption in service.[302]

Colorado. The Public Service Company of Colorado in conjunction with Xcel Energy announced plans to make Boulder, Colorado the nation's first fully integrated Smart Grid City in March 2008.[303] Xcel said Boulder was chosen because of its geographic concentration, ideal size and access to all grid components. Boulder was also ideal because it's home to the University of Colorado and several federal institutions, including the National Institute of Standards and Technology, which already is involved in smart grid efforts for the federal government. Xcel plans to install smart meters at all 50,000 homes in the Boulder service area.

Delaware. Delmarva Power received approval from the Delaware Public Service Commission (PSC) to install smart meters at more than 300,000 electric and gas customers in September 2008. Delmarva said that customers can expect to receive the new meters as early as fall 2009 yet the full integration of features will take much longer.[304]

District of Columbia. In July 2008, the District of Columbia Public Service Commission issued an Order approving the revised smart-meter tariff proposed by Pepco and the District of Columbia Smart Meter Pilot Program, Inc., (SMPPI).[305] Pepco announced it would begin the smart meter program involving approximately 1,200 homes in July 2008. The SMPPI program must measure: "(1) customer reduction in electricity consumption during peak times; (2) customer changes in overall consumption; (3) customer satisfaction with different pricing options and technologies; (4) usefulness of the selected technologies; and (5) value of presenting additional pricing information to customers."[306]

Florida. Florida Power & Light Company continued the deployment of 50,000 smart meters in May 2008 after a successful trial run involving 50,000 smart meters that ended in January 2008.[307]

Hawaii. Hawaii will be getting a smart grid under a new contract announced December 23, 2008 between Hawaiian Electric and Sensus Metering Systems. Sensus said that Hawaiian Electric, which provides electricity for nintey-five percent of Hawaii's residents, plans to install Sensus FlexNet smart

---

302. *Alabama Power to Install New 'Smart Meters' for Customers*, ABC 33/40, May 15, 2008, http://www.abc3340.com/news/stories/0508/520221.html.

303. *Xcel Energy Announces First Smart Grid City in the Nation*, TRANSMISSION AND DISTRIB. WORLD, Mar. 13, 2008, http://tdworld.com/distribution_management_systems/xcel-energy-smart-grid-city/.

304. *Utility Moving Forward on 'Smart' Meters for Delaware Customers*, DELMARVA POWER, Sept. 17, 2008, http://www.delmarva.com/welcome/news/releases/archives/2008/article.aspx?cid=1038.

305. Order No. 14166, *Formal Case No. 1002, In the Matter of the Joint Application of Pepco and the New RC, Inc. for Authorization and Approval of Merger Transaction*, D.C. Pub. Serv. Comm'n (2007) at 7.

306. *Id.*; *Residential Pilot to Test "Smart Metering" for DC Electric Customers*, PEPCO, July 15, 2008, http://www.pepco.com/welcome/news/releases/archives/2008/article.aspx?cid=1000.

307. *Florida Power and Light installing nation's most technologically advanced network of 'smart meters' from Silver Springs Networks*, FPL, May 27, 2008, http://www.fpl.com/news/2008/052708.shtml.

meters for 430,000 residential and commercial electric customers, subject to approval of the Hawaii Public Utilities Commission.[308] The financial terms of the fifteen year agreement were not disclosed by Sensus.[309]

"Hawaiian Electric, part of Honolulu's Hawaiian Electric Industrie(s HE), first teamed up with Raleigh, N.C.-based Sensus back in October 2006. After a successful trial involving 500 smart meters on Oahu, Hawaiian Electric"[310] increased the rollout to 3,000 meters in early 2007. Under the December 23, 2008 deal, the new meters are expected to be installed between 2009 and 2015, including 19 tower sites placed throughout Oahu, Maui, and the Big Island to provide two-way network communication for the system.[311]

Idaho. In August 2008, Idaho Power filed an application with the Idaho Public Utilities Commission (IPUC) requesting a Certificate of Public Convenience and Necessity that would authorize the utility's advanced metering infrastructure (AMI) deployment plan. Idaho Power's plan is to convert, over three years and at a capital cost of up to seventy-one million dollars, "nearly all" its customer's current meters to smart meters. The capital cost "does not include the accelerated depreciation of the existing metering infrastructure or the operation and maintenance benefits associated with the deployment of the new AMI technology."[312] The utility intends to begin the project in January 2009.[313]

In September 2008, the IPUC issued an Order providing notification of Idaho Power's application as well as soliciting comments about the AMI plan.[314] Unless the IPUC receives comments requesting that hearings be held, the IPUC will consider the utility's filing via a "Modified Procedure."[315] Through a Modified Procedure, the IPUC would not hold hearings about Idaho Power's application but would instead communicate with parties to the proceeding through "written submission." Any comments on the proposed deployment of smart meters had to be filed by December 9, 2008.[316]

Illinois. In September 2008, the Illinois Commerce Commission issued an Order approving a rate increase of about $270 million for Commonwealth Edison (ComEd) that would fund, in part, the first phase of the utility's smart grid project, including the deployment of 200,000 smart meters. The increased rates will mean that customers paying an average monthly bill of eighty-one

---

308. *Hawaii will get 'smart' electric meters*, PAC. BUS. NEWS, December 23, 2008, http://www.bizjournals.com/pacific/stories/2008/12/22/daily21.html.

309. *Id*.

310. David Ehrlich, *Hawaii Electric in Smart Meter Deal With Sensus*, EARTH2TECH, December 23, 2008, http://earth2tech.com/2008/12/23/hawaiian-electric-in-smart-meter-deal-with-sensus/.

311. *Id*.

312. Order No. 30726, *Application of Idaho Power Company for a Certificate of Public Convenience and Necessity to Install Advanced Metering Infrastructure (AMI)Technology Throughout its Service Territory*, Idaho Pub. Util. Comm'n (2009) at 3.

313. Lawrence F. Spencer, *Idaho Power Files Application with Idaho Public Utilities Commission Regarding Advanced Metering Infrastructure*, REUTERS, August 4, 2008, http://www.reuters.com/article/pressRelease/idUS201471+04-Aug-2008+PRN20080804.

314. Order No. 30726, *supra* note 312.

315. *Id*.

316. Press Release, Idaho Pub. Util. Comm'n, PUC taking comments on Idaho Power's automated meter installation plan (September 15, 2008), http://www.puc.idaho.gov/internet/cases/elec/IPC/IPCE0816/staff/20080915PRESS%20RELEASE.HTM.

dollars will pay approximately $4.50 more to offset the cost of the smart meters. The Commission also directed its Staff and ComEd to establish an AMI-workshop process and the Statewide Smart Grid Collaborative.[317]

The AMI workshops are to help set the "goals, timelines, evaluation criteria and Phase 0 technology selection criteria" for ComEd's smart grid project.[318] Since ComEd's deployment of the initial phase of the project depends on the work of the AMI workshops, the workshop series is expected to begin and conclude within six months.

Indiana. As part of the test phase, Indiana Michigan Power began installing nearly 10,000 smart meters in selected homes and businesses in the South Bend, Indiana during the fall of 2008.[319]

Louisiana. Cleco Power LLC installed 450 smart meters in New Orleans during the summer of 2008.[320] Over 100 customers in St. Tammany Parish also have a smart thermostat installed in their home. The smart thermostat receives signals from Cleco notifying the customer of time of use pricing (TOU) including an alert when critical peak pricing (CPP) is in effect. Cleco's program will run through September 2009 and Cleco will present its findings to the Louisiana Public Service Commission by the end of 2009.[321]

Maryland. Baltimore Gas & Electric (BGE) launched a smart meter pilot program in July 2008.[322] More than 3,000 gas and electric customers in Baltimore and Westminster will participate in the utility's AMI pilot program. The pilot was approved by the Maryland Public Service Commission (PSC) in July 2008 and runs from July to November 2008. Upon approval by the Maryland PSC, BGE plans to implement its AMI program system-wide beginning in 2009. "Meter installations should be completed by 2012."[323]

Massachusetts. In February 2008, the Massachusetts Department of Public Utilities (DPU) approved a rate increase for Fitchburg Gas & Electric that will allow $4.5 million of AMI investment in base rate to residential customers versus the $5.2 million Fitchburg requested.[324] The boost will increase the average monthly customer bill by $2.85 per month, although low-income customers will only see a $.99 increase. Under the August 2007 plan proposed by Fitchburg the average customer would have paid an additional $7.47 per

317. NATIONAL COUNCIL ON ELECTRICITY POLICY, DEMAND RESPONSE AND SMART METERING POLICY ACTIONS SINCE THE ENERGY POLICY ACT OF 2005 (2008), http://www.ncouncil.org/documents/NCEP_Demand_Response_1208.pdf (hereinafter Smart Metering Policy).

318. *Id*. at 27.

319. AMERICAN ELEC. POWER, SOUTH BEND SMART METERS (2008), http://www.indianamichiganpower.com/news/southbendpilot/.

320. *Cleco Power launches demand response study*, METERING.COM, October 29, 2008, http://www.metering.com/Cleco/Power/launches/demand/response/study.

321. *Id*.

322. *Baltimore Gas & Electric Company Launches "Smart Meters" Pilot Program Intended to Help Customers Better Monitor and Manage Electricity Usage*, CONSTELLATION ENERGY, July 21, 2008, http://ir.constellation.com/releasedetail.cfm?ReleaseID=327372.

323. *Id*.

324. MASSACHUSETTS DEP'T OF PUB. UTIL., DPU SLASHES FITCHBURG RATE INCREASE (2008), http://www.mass.gov/Eoca/docs/dte/pressrelease/22908dpufgerhr.pdf.

month. The DPU demanded a required report within six months on plans for demand response and conservation programs under the AMI strategic rollout.[325]

Michigan. In July 2008, the Michigan Public Service Commission (MPSC) issued an Order to set minimum functionality standards for AMI. The MPSC noted that many AMI pilots are scheduled to commence in the coming year and guidance is needed to describe minimum functionality criteria and standards necessary for the rate recovery of this infrastructure development.[326]

Ohio. Governor Strickland signed into law Senate Bill 221 in May 2008.[327] In accordance with the requirements of the energy efficiency bill, in July 2008, FirstEnergy Corp, Duke Energy Ohio, and AEP Ohio filed their Electric Security Plan (ESP) with the Public Utilities Commission of Ohio.[328] Each utility's ESP included provisions for a smart grid or smart metering.

- First Energy Corp revealed plans to conduct an AMI pilot program using advanced metering capable of displaying real time energy usage to approximately 500 individual residential customers. The purpose of the AMI pilot is to determine whether a program that combines summer time-of-day generation rates with real time energy usage information can effectively change customer behavior and energy consumption.[329]
- Duke Energy proposed a smart grid system that will transform the company's transmission and distribution system into an integrated, digital network, similar to a computer network. The company expects that the smart grid will produce operating efficiencies, enhanced customer and utility information and communications, innovative services and other benefits. Smart meters will provide real-time energy usage information and the smart grid system will enable consumers to manage their energy usage more closely. This system will provide a platform for innovative energy efficiency programs and time-of-use rates, which will increase conservation and shift energy demand away from peak usage periods.[330]
- AEP Ohio proposed to implement phase one of its gridSMART initiative. The gridSMART initiative will improve the information provided to customers with which they can control their energy consumption through modern grid management. The cost breakdown of the first phase of

325. *Id*.

326. MICHIGAN PUB. SERV. COMM'N, MPSC SEEKS COMMENTS ON POTENTIAL STANDARDS FOR ADVANCED METERING INFRASTRUCTURE (2008), http://www.michigan.gov/mpsc/0,1607,7-159-16400_17280-195331--,00.html.

327. S.B. 221, 127th Gen. Assem. (Ohio 2008).

328. Smart Metering Policy, *supra* note 317.

329. *Id*.

330. *Id*.

> gridSMART is estimated to be $19.7 million of operations and maintenance and $89.2 million of capital investment.[331]

Oklahoma. Oklahoma Gas & Electric began installing 6,600 smart meters in Oklahoma City residences in July 2008.[332] The initial trial included twenty-five homes with an electronic "dashboard" where customers can compare their consumption to that in similar homes as well as throughout the Oklahoma Gas & Electric system. Oklahoma Gas & Electric serves 660,000 customers including 69,000 in western Arkansas.[333]

Oregon. In May 2008, the Oregon Public Utility Commission (OPUC) approved a $132.2 million AMI system implementation for Portland General Electric (PGE).[334] The AMI rollout will take place over two and half years and will include installation of 850,000 smart meters.[335] PGE has indicated that it expects to use the smart meters, which will be fully deployed by 2010, to facilitate future demand response and direct-load-control programs. PGE also anticipates creating a web portal through which customers using the smart meters can access information about their daily energy consumption. The OPUC found that premature early retirement of old meters is not financially imprudent based on the potential savings from the installation of the smart meters. PGE reported that by 2011 the smart meters will yield annual operating savings of eighteen million dollars.[336]

Pennsylvania. In October 2008, Governor Rendell signed into law legislation requiring smart meter deployment.[337] Under the law, electric distribution companies are required to file a smart meter deployment plan that would provide smart meters to all customers within ten years. The law also requires utilities to furnish smart meter equipment to any customer that agrees to pay the cost of the smart meter and in all new building construction. The customer-paid installation fee eases the burden on utilities to bear the costs of installing the smart meters. However, skeptics surmise that far fewer customers will typically choose to pay for and then benefit from the technology.[338]

Texas. CenterPoint Energy Houston Electric received approval for advanced meter information network (AMIN) under which smart meters and related infrastructure are to be installed beginning March 2009.[339] Smart meters will be installed beginning with 145,000 units in 2009, 500,000 units in 2010

---

331. *Id*.

332. Erik Olsen, *Smart Meters Open Market for Smart Apps*, NYTIMES.COM, October 7, 2008, http://greeninc.blogs.nytimes.com/2008/10/07/smart-meters-open-market-for-smart-apps/; *Smart meter test in Oklahoma*, SMARTMETERS.COM, June 23, 2008, http://www.smartmeters.com/the-news/257-smart-meter-test-in-oklahoma.html.

333. Olsen, *supra* note 332.

334. *PGE receives OK for smart meters*, PORTLAND BUS. J., May 6, 2008, http://www.bizjournals.com/portland/stories/2008/05/05/daily24.html.

335. *Id*.

336. *Id*.

337. H.B. 2200, Gen. Assem. (Pa. 2008).

338. *Pennsylvania governor signs state energy conservation bill*, SMARTMETERS.COM, October 16, 2008, http://www.smartmeters.com/the-news/139-pennsylvania-governor-signs-state-energy-conservation-bill.html.

339. Tom Fowler, *Regulators OK CenterPoint's plan for 'smart meters'*, HOUSTON CHRONICLE, December 18, 2008, http://www.chron.com/disp/story.mpl/hotstories/6171677.html.

and every year thereafter until all 2.2 million customers in the Center Point area have the new units. The system is expected to cost about $640 million to deploy. Customers will be charged $3.24 per month for two years before the fee drops to $3.05 per month for ten years, coming to a total of $443.76 average cost per customer.[340]

CenterPoint initially asked for a test phase using about 250,000 meters. But Houston officials, electric retailers and the Texas PUC pressed the utility for a full roll-out of the system as quickly as possible because of the potential the meters will moderate peak demand for power and help consumers manage costs.

In October, Oncor announced it reached a settlement with the Texas PUC to begin its rollout of three million smart meters throughout its delivery system in north Texas by 2012.[341] As part of the smart meter plan, residential customers would pay less than $2.35 per month surcharge for eleven years. Oncor will be requesting permission from the state regulator to allow the company to distribute monitors to low-income consumers free of charge. A final hearing to approve the settlement was cancelled in December 2008 and has yet to be rescheduled.[342]

Vermont. In March 2008, Governor Douglas signed into law the Energy Efficiency and Affordability Act of 2008.[343] The new law directs Vermont's Public Service Board (VPSB) to investigate "opportunities for Vermont electric utilities cost-effectively to install advanced 'smart' metering equipment capable of sending two-way signals and sufficient to support advanced time-of-use pricing during periods of critical peaks or hourly differentiated time-of-use pricing."[344] After the VPSB investigation, each utility is required to file plans for deploying smart meters and TOU pricing, provided that the utility serves a territory where such a deployment is "appropriate and cost-effective."[345]

In August 2008, Central Vermont Public Service (CVPS) and the Vermont Department of Public Service launched a collaborative smart-grid pilot program open to participation by any utility in the state. The collaboration, according to the utility and the state agency, will establish "templates and standards for new meter and communications technology."[346] It will also develop CVPS SmartPower, "a systematic program to analyze and install the latest in metering technology over several years."[347] CVPS and the Vermont Department of Public Service expect that ultimately CVPS SmartPower will yield expanded time-of-day rate programs and new real-time rate programs. The capital investment for CVPS SmartPower is estimated to be forty million dollars.[348]

---

340. *Id*.

341. *North Texas Consumer to get Smart Meters*, SMARTMETERS.COM, February 10, 2008, http://www.smartmeters.com/the-news/374-north-texas-consumers-to-get-smart-meters-.html.

342. *Id*.

343. S.B. 209, Gen. Assem. (Vt. 2008).

344. *Id*.

345. *Vermont to investigate smart metering*, METERING.COM, March 26, 2008, http://www.metering.com/node/12104.

346. *State, CVPS, announce new "smart" grid plans*, CENTRAL VT. PUB. SERV., Aug. 1, 2008, http://www.cvps.com/AboutUs/news/viewStory.aspx?story_id=190.

347. *Id*.

348. *Id*.

Virginia. Dominion Power announced in June 2008 that they would begin installing 200,000 smart meters at trial locations around the Commonwealth of Virginia.[349] Some of the 200,000 smart meters will be coupled with smart thermostats that can be adjusted up and down by the smart meter in conjunction with the power company's computer. Dominion Virginia Power's president said the expected energy savings from the smart grid system would eliminate the need for two power plants, the utility would otherwise have to build and delay the need for two other plants.[350]

349. Carolyn Shapiro, *Dominion Virginia Power proposes energy conservation plan*, THE VIRGINIAN PILOT, June 20, 2008, http://hamptonroads.com/2008/06/dominion-virginia-power-proposes-energy-conservation-plan.

350. *Id*.

RENEWABLE ENERGY AND DEMAND SIDE MANAGEMENT COMMITTEE

Gearold L. Knowles, Chair
Jeffery S. Dennis, Vice Chair

Paul N. Belval
Gunnar Birgisson
Darrell Blakeway
Thomas C. Briggs
Linnea Brown
Thomas H. Campbell
James P. Cargas
Paul D. Chancellor
Adrianne E. Arnold Cook
Joan E. Drake
Sedina Eric
Lynn M. Fountain
Douglas W. Frankenthaler
Stephen K. Gardner
Mary Beth Gentleman
Jeffrey C. Genzer
David J. Gilles
B. Benjamin Haas
Daniel A. Hagan
Terry E. Hall
Stephanie Lovejoy Hamilton
Philip Q. Hanser
Sanford L. Hartman
Richard A. Heinemann
Stephen A. Herman
David W. Hunt
Thomas C. Jensen
Paula N. Johnson
Steven M. Kramer
Ariel C. Lager
Mollie Lampi
Leslie E. LoBaugh, Jr.
Duncan R. MacKay
Andrew McLain
Charles R. Middlekauff
Phil Mone
Laura S. Morton
Jodi L. Moskowitz
Adrian D. Newall
Carolyn Pengidore
D. Cameron Prell
Matthew E. Ross
Michael J. Schewel
Monica A. Schwebs
Charles R. Sensiba
Steven A. Shapiro
Steven M. Sherman
Abraham Silverman
Edna Sussman
Michael A. Swiger
F. Alvin Taylor
Terry W. Tolliver
Elaine M. Walsh
William W. Westerfield
Emily S. White
Tanya M. Willacy
Anthony C. Wilson
John M. Wingate
Scott A. Zimmermann
Bryan D. Zumwalt