

Recent Federal Activities on Climate Change

Staff was asked to monitor legislative, administrative, and legal activity concerning climate change. Over the past several months there have been several important developments. Below is a summary of four topics: (1) Federal climate change legislation; (2) EPA's regulation of GHGs; (3) Federal RES/RPS legislation; and (4) Senate energy bill (S. 1462).

I. Federal Climate Change Legislation

Legislation pending in the U.S. Congress proposes to regulate and reduce national GHG emissions. Two leading climate change bills are reviewed below. In the House, Representatives Waxman and Markey sponsored the American Clean Energy and Security Act of 2009 (ACESA, Waxman-Markey, H.R. 2454), which passed by the House in June. In the Senate, Senators Kerry and Boxer introduced the Clean Energy Jobs and American Power Act (Kerry-Boxer, S.1733) in September. The Kerry-Boxer bill is incomplete and committee negotiations are ongoing. Both bills have many similar features although there are important differences.

In June 2009, The U.S. House of Representatives passed the American Clean Energy and Security Act (ACESA). This comprehensive energy/climate change bill sets an economy-wide 20% reduction (17% for covered sources) of GHG emissions below 2005 levels by 2020, increasing to 83% reduction by 2050. The bill requires the EPA to administer the reduction program but makes FERC the oversight body for the cash market in allowances and offsets. The bill calls for 85% of the 2012 allowances to be given away. This percentage will decrease every year until most free allocations are phased out in 2030. The bill also includes energy transmission provisions and creates a Federal renewable electricity standard. Under the bill, state and regional comprehensive climate change programs are preempted until 2017. For a more detailed analysis, please see the Federal legislation comparison chart below. Also see the official [Section-by-Section Summary](#).

In September, Senators Kerry and Boxer introduced their climate change legislation, the Clean Energy Jobs and American Power Act (S. 1733). (For detailed information on the bill, please see the [Section-by-Section Summary](#).) This bill is very similar to ACESA but does have some key differences. Both bills cover all six currently identified GHGs, nitrous fluoride, and any other anthropogenic gas designated as a GHG by the EPA. Covered emission sources are phased in over the first five years of each program. The bill does not include transmission or Federal RES provisions. The EPA will administer the program but the bill does not currently outline the market structure for allowances and offsets.

There are other differences. The Kerry-Boxer bill calls for the same economy-wide reduction goals as ACESA; however, whereas Waxman-Markey sets the target for *covered entities* at 17% below 2005 emission levels by 2020, Kerry-Boxer sets the covered entity 2020 target at 20% to match the economy-wide target. Like ACESA, the Kerry-Boxer bill provides for preemption of state and regional programs until 2017 however, Kerry-Boxer lifts the preemption if the Federal allowance auction has not occurred by March 31, 2011. Each of the bills provide for the auction of 15% of allowances in 2012. Waxman-Markey increases this number to over 70% by 2030 and beyond. Kerry-Boxer increases the amount auctioned to 18.5% in 2029 and beyond. (See Table 11 below for details on allocation breakdown). Most of the allocations in Waxman-Markey will be phased out by 2030. International offsets are allowed by both bills but with different conditions. Waxman-Markey allows 50% of offsets to come from international sources while Kerry-Boxer allows only 25% of the offsets to come from international sources. In both bills, if the number of domestic offsets does not reach a certain level, an additional number of international offsets will be allowed. Eligible offset projects are selected by the Administrator of the EPA in Waxman-Markey and by the President in Kerry-Boxer. Please see the chart below for more information.

Provision	Waxman-Markey (H.R. 2454)	Kerry-Boxer (S. 1733)
Targets	<ul style="list-style-type: none"> Economy-wide reductions (from 2005 levels): 3% by 2012; 20% by 2020; 42% by 2030; 83% by 2050 Covered sources reductions same as economy-wide except 17% by 2020 	<ul style="list-style-type: none"> Economy-wide reductions (from 2005 levels): 3% by 2012; 20% by 2020; 42% by 2030; 83% by 2050 Covered source reductions same as economy-wide
General Information	<ul style="list-style-type: none"> Amends the Clean Air Act to add Title VII and establishes cap-and-trade program Includes National RES provisions Includes transmission planning provisions Includes climate change adaptation 	<ul style="list-style-type: none"> Amends the Clean Air Act to add Title VII and establishes cap-and-trade program Does NOT include an RES/RPS provision Does NOT address transmission Includes climate change adaptation
Admin.	<ul style="list-style-type: none"> EPA 	<ul style="list-style-type: none"> EPA
Market Regulation	<ul style="list-style-type: none"> FERC: cash market in allowances and offsets Commodity Future Trading Comm.: derivatives mkt. 	<ul style="list-style-type: none"> Market Regulation TBD
Covered Entities	<ul style="list-style-type: none"> Electricity Generators (2012) Refiners and importers of petroleum-based and other liquid fuels (2012) Fluorinated gas manufacturers (2012) Emitters of nitrogen trifluoride (2012) Specified Industrial sources (2014) NG Local distribution companies (2016) 	<ul style="list-style-type: none"> Electricity Generators (2012) Refiners and importers of petroleum-based and other liquid fuels (2012) Fluorinated gas manufacturers (2012) Emitters of nitrogen trifluoride (2012) Specified Industrial sources (2014) NG Local distribution companies (2016)
Reporting/Registry	<ul style="list-style-type: none"> EPA will establish a Federal greenhouse gas registry and comprehensive reporting system 	<ul style="list-style-type: none"> EPA will establish a Federal greenhouse gas registry and comprehensive reporting system
Allowances	<ul style="list-style-type: none"> Emissions Allowances International Allowances Compensatory Allowances <ul style="list-style-type: none"> For destruction of fluorinated gases Non-emission use for which an unnecessary allowance was submitted 	<ul style="list-style-type: none"> Emissions Allowances International Allowances Compensatory Allowances <ul style="list-style-type: none"> For destruction of fluorinated gases Non-emission use for which an unnecessary allowance was submitted
Allowance Allocation Recipients	<ul style="list-style-type: none"> In 2012, 85% given away: <ul style="list-style-type: none"> 30% to LDCs 5% to merchant coal generators 15% to trade intensive-industries 15% to protect low income households 11.5% to states 9% to NG distributors 3% to car companies 2% to oil refineries 5% for REDD practices 4% for domestic and international adaptation Most allocations will be phased out by 2030 	<ul style="list-style-type: none"> In 2012, 85% given away, 81.5% after 2029 <ul style="list-style-type: none"> 30% to large LDCs .5% to small LDCs (e.g., rural cooperatives) 3.5% to merchant coal generators 1.5% to co. w/ long-term purchase agreements 4% to firms that work with steel, cement paper glass & chemicals (increases to 15% in 2014) 9% to natural gas distrib. (consumer protection) 3% to auto industry (down to 1% in 2018) 5% to power companies installing CCS 10.35% to states (down to 8.55% in 2014, 5-6% in 2016, and ≈4% in 2022 and beyond)
Allowance Auctions Proceeds Recipients	<ul style="list-style-type: none"> Strategic Reserve Fund Climate Change Consumer Rebate Fund Consumer Rebates 	<ul style="list-style-type: none"> Market Stability Reserve Fund Consumer refunds/rebates Investment in clean vehicle technology States for investment in renewable, efficiency, adaptation and GHG reduction Worker training and transition (nuclear as well) Agriculture and forestry 25% of allowances auctioned to reduce national debt
Borrowing	<ul style="list-style-type: none"> 2-yr rolling compliance: Unlimited borrowing from one vintage year in the future Up to 15% compliance met by borrowing allowances 2-5 vintage years in the future 8% premium ea. Year (paid in allowances) Must have 8% at the time of borrowing 	<ul style="list-style-type: none"> 2-yr rolling compliance: Unlimited borrowing from one vintage year in the future Up to 15% compliance met by borrowing allowances 2-5 vintage years in the future 8% premium ea. Year (paid in allowances) Must have 8% at the time of borrowing

Banking	<ul style="list-style-type: none"> • Unlimited 	<ul style="list-style-type: none"> • Unlimited
State & Regional Programs	<ul style="list-style-type: none"> • Preempts state & regional GHG cap-and-trade programs from 2012-2017 • Regulation of GHGs is allowed through other means during this time 	<ul style="list-style-type: none"> • Preempts state & regional comprehensive programs until 2017 unless no Federal auction is conducted prior to March 31, 2011 • If 2011 auction is delayed, states may not limit emissions at least 9 months from the first Federal auction through 2017.
Offsets	<ul style="list-style-type: none"> • 2 billion tons of qualified offsets • 50/50 domestic/international • If needed, up to an additional 1.5 billion tons worth of international offsets can be used • Starting in 2018. 5:4 offset credit to actual offset • Term Offsets: temporary compliance for offset projects spanning several compliance periods 	<ul style="list-style-type: none"> • 2 billion tons of qualified offsets • 75/25 domestic/international • If needed, up to an additional 750 million tons worth of international offsets can be used • Starting in 2018. 5:4 offset credit to actual offset • Term Offsets: temporary compliance for offset projects spanning several compliance periods
Qualified Offsets	<ul style="list-style-type: none"> • Offsets Integrity Advisory Board • EPA administrator to establish list of eligible projects from recommendations from Offsets Integrity Advisory Board • Early offset credit given for projects started between Jan. 1, 2001 and 3 years after enactment of Federal offset regulations, whichever is sooner • Forestry and land-use offsets are subject to additional environmental criteria 	<ul style="list-style-type: none"> • Offsets Integrity Advisory Board • President to establish list of eligible projects-from list of possibilities: <ul style="list-style-type: none"> • Fugitive methane emissions from coal mines, landfills, oil and gas distribution; • Agricultural, grassland, rangeland sequestration and management; and • Changes in carbon stocks attributed to land use change and forestry activities. • Forestry and land-use offsets are subject to additional environmental criteria • Early offset credit given for projects started between Jan. 1, 2001 and 3 years after enactment of Federal offset regulations, whichever is sooner
International Offsets	<ul style="list-style-type: none"> • May account for 50% of offsets • U.S. must be a party to an agreement or arrangement with the country • Deforestation reduction offsets must be from pre-listed countries, states or provinces 	<ul style="list-style-type: none"> • May account for 25% of offsets • U.S. must be a party to an agreement or arrangement with the country • Deforestation reduction offsets must be from pre-listed countries, states or provinces
Allowance Reserve	<ul style="list-style-type: none"> • Strategic reserve • Auctioned from reserve • Minimum Strategic Reserve Auction Price is \$28 for 2012 compliance year • Increase 5% (+ inflation) ea. year for 2013 & 2014 • 2015 on, 60% above a rolling 36-month average of the daily closing price each month for emission allowances with the same vintage 	<ul style="list-style-type: none"> • Market Stability Reserve • Auctioned from Reserve • Threshold price for allowances initially set at \$28 in 2012, to rise over time with inflation
Treatment of Coal & CCS	<ul style="list-style-type: none"> • Sets new coal-fueled power plant emissions standards for all plants permitted in 2009 or later. • Creates program for development and early deployment of CCS technology • Fossil-fuel-based utilities may create a Carbon Storage Research Corporation (by referendum) that will be a part of the Electric Power Research Institute and would be authorized to assess \$1 billion in fees each year to fund CCS development • Corp. would be part of EPRI and would assess \$1 billion in fees each year to fund CCS development 	<ul style="list-style-type: none"> • Sets new coal-fueled power plant emissions standards for all plants permitted in 2009 or later. • Creates program for development and early deployment of CCS technology • Fossil-fuel-based utilities may create a Carbon Storage Research Corporation (by referendum) that will be a part of the Electric Power Research Institute and would be authorized to assess \$1 billion in fees each year to fund CCS development • Create allowance incentive program
Nuclear	<ul style="list-style-type: none"> • Revision of loan guarantee program 	<ul style="list-style-type: none"> • Policy to remove financial and technical barriers
Enforcement	<ul style="list-style-type: none"> • Each ton of CO₂e not covered is a separate violation • Excess emission penalty (2 x auction clearing price for earliest vintage yr. in the last auction) 	<ul style="list-style-type: none"> • Each ton of CO₂e not covered is a separate violation • Excess emission penalty (2 x fair market value of an allowance)

II. Environmental Protection Agency:

On September 30, 2009, the EPA issued a proposed rulemaking to tailor the major source applicability thresholds for Greenhouse Gas (GHG) emissions under the PSD and title V programs of the Clean Air Act (CAA).¹ This proposed rulemaking is the latest action in a process that may lead to EPA's regulation of greenhouse gas emissions. A brief history and explanation follow.

Background

- **Oct. 1999:** Nineteen organizations filed a petition requesting that the EPA find four GHGs² to be air pollutants under Section 202 of the Clean Air Act and recognize its duty to regulate their emissions.³
- **Aug. 2003:** EPA concluded that it lacks authority under the CAA to regulate the GHGs.
- **April 2007:** The U.S. Supreme Court concluded that GHGs are air pollutants, as defined by Section 202 of the CAA. The EPA is thereby required to evaluate the science behind the global warming debate and determine whether GHGs are an air pollutant that cause or contribute to air pollution that may reasonably be anticipated to endanger public health or welfare.⁴
- **April 2009:** EPA issued a [proposed endangerment finding](#) and proposed cause and contribute finding.⁵ The proposed endangerment finding states that the science supports a finding that a mix of certain GHGs endangers public health and welfare of current and future generations. The proposed cause and contribute finding states that emissions of four of the GHGs from new motor vehicles and engines contribute to and cause the danger to public health and welfare. Comments on the proposed findings were due in June and affirmation of the findings is pending.
- **June 2009:** EPA granted California's request for a waiver of preemption under the CAA.⁶
- **Sept. 28, 2009:** EPA and the Department of Transportation (DOT) issued a joint "[Proposed Rulemaking to Establish Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards.](#)"⁷ (Light-Duty Vehicle Proposed Rule) Under the joint proposed rulemaking, the EPA proposes to regulate CO₂ and other GHGs from vehicles, and the DOT proposes to set Corporate Average Fuel Economy Standards (CAFÉ Standards) with regard to CO₂ and other GHGs.
- **Sept. 30, 2009:** The EPA issued a proposal for a "[Prevention of Significant Deterioration and Title V Greenhouse Gas Tailoring Rule.](#)" (GHG Tailoring Rule) This rule would set regulatory thresholds for regulation of GHGs under the CAA. (See the [Fact Sheet.](#))

Prevention of Significant Deterioration (PSD) Program

The PSD program is a preconstruction review program that issues permits to "new major stationary sources" and "major modifications" at existing major sources.⁸ The PSD program defines a "major stationary source" as a listed source that emits or has a potential to emit more than 100 tons per year (tpy) or any other (unlisted) source that emits or has the potential to emit more than 250 tpy of a particular pollutant.⁹ It defines a "major modification" as a physical change in, or change in method of operation of, a major stationary source that results in a net increase in emissions that is equal to or above the significance level set for the pollutant in question.

A key requirement of the PSD program is the application of best available control technology (BACT). BACT requires all new major sources or major modifications of existing major sources to

¹ For proposed rule see <http://www.epa.gov/nsr/actions.html#2009>.

² CO₂, methane, NO_x, HFCs

³ "Petition for Rulemaking and Collateral Relief Seeking the Regulation of Greenhouse Gas Emissions from New Motor Vehicles under Section 202(a) of the Clean Air Act."

⁴ *Massachusetts v. EPA*, 549 U.S. 497, 532 (2007). Also see 73 FR 44354 at 44397 (July 30, 2008).

⁵ [74 FR 18886 \(Apr. 24, 2009\)](#).

⁶ [74 FR 32744 \(July 8, 2009\)](#).

⁷ [74 FR 49454 \(Sept. 28, 2009\)](#).

⁸ The PSD program can be found in Part C of the Clean Air Act

⁹ CAA Section 169

conduct a review and decision process for each pollutant under PSD regulation whose emissions exceed its PSD significance level as part of the modification or new construction.

Title V of the Clean Air Act

The Title V program controls the operation of sources otherwise regulated under the CAA. Title V requires major sources (defined as sources that emit or have the potential to emit 100 tpy) to obtain operating permits. The permits consolidate all CAA requirements, including PSD, into one document. In addition, title V requires sources to track, report and annually certify their compliance status. Permit applications must be submitted within one year of the date the source becomes subject to regulations and must be renewed every five years. In some cases a compliance assurance monitoring (CAM) requirement applies, which requires source owners to design and conduct operations monitoring of add-on control devices. Permitting authorities, usually states, must fulfill a number of procedural requirements under Title V, including several notification requirements, public input requirements, and an 18-month decision timeline requirement.

EPA's Authority to Regulate GHGs

If the EPA affirms its proposed endangerment finding and cause and contribute finding, the EPA will be required to issue standards applicable to GHG emissions.¹⁰ The Light-Duty Rule sets standards for GHG emissions from vehicles, thereby subjecting GHG emissions to regulation under the CAA. Finalization of the Light-Duty Rule will trigger regulation of GHGs under the PSD program. The PSD program only regulates major sources that emit regulated pollutants at specified threshold levels.¹¹ Currently, GHGs are not regulated pollutants; however, once a pollutant is “subject to regulation” under the CAA, it meets the definition of a regulated pollutant and becomes subject to regulation—specifically BACT regulation¹²—under the PSD program.¹³ Because the Title V program regulates the operation of sources otherwise regulated under the CAA, regulation under the PSD program will subject a source to regulation under Title V. Once a pollutant is regulated under these programs, it is regulated for all sources under the program, moving and stationary. Thus, the promulgation of a vehicle GHG emissions standard will subject stationary sources to regulation.

Current default regulatory thresholds for air pollutants under the PSD program are 250 tons per year (tpy) of actual or potential emissions. The Title V threshold is 100 tpy. GHG emissions are usually measured in thousands of tons per year. If GHGs are regulated at the current PSD and Title V thresholds, the number of regulated sources and associated permits would overwhelm the EPA and state agencies and greatly burden the public. New pollutants become subject to PSD and title V regulation as soon as, and even before, a rule controlling the pollutants is promulgated.¹⁴ *This means that any source that exceeds the threshold will be subject to PSD and title V regulation immediately upon the promulgation of the Light-Duty Rule.* Small sources that were previously unregulated because they were under established thresholds for other air pollutants would find themselves suddenly burdened with the costs of permitting and subject to requirements and operating standards—including BACT requirements—previously applicable only to major sources.

In addition, state agencies would be overwhelmed, if not completely paralyzed by the number of new permit applications, which would be greater than the current inventory of permits. Major new or modified sources that exceed the applicability thresholds for air pollutants under PSD and Title V would have to obtain appropriate permits. In the case of Title V sources, the source owner would have one year

¹⁰ *Mass. v. EPA*, 549 U.S. at 533.

¹¹ Section 169 CAA.

¹² Best Available Control Technology

¹³ Clarification of “subject to regulation” is pending. The current interpretation is that it includes only those pollutants subject to control, not just monitoring and reporting. The EPA is reconsidering this position and may expand the definition. For more information see “EPA’s Interpretation of Regulations that Determine Pollutants Covered by Federal Prevention of Significant Deterioration Permit Program,” Dec. 18, 2008 (“The Interpretation Memo”); and “Reconsideration of Interpretation of Regulations that Determine Pollutants Covered by the Federal PSD Permit Program,” 74 FR 51535.

¹⁴ See the PSD Interpretation Memo.

to submit an application for a permit and the state would have to process those applications within eighteen months. States would have to handle an enormous number of applications, notifications, public comments, and requests for information. Agency resources would be depleted.

In order to prevent this problem, the EPA issued the GHG Tailoring Proposed Rule, which proposes a GHG threshold of 25,000 tpy. This will pull only the largest emitters under CAA regulation. EPA also proposes a significance level between 10,000-25,000 tpy for major modifications to existing facilities. Significance levels are pollutant-specific thresholds that identify when a modification is considered major and therefore subject to regulation. If a pollutant is not assigned a significance level the amount of increase needed to trigger regulation is “any increase.” There are currently no significance levels for GHGs under the CAA; therefore, sources would be subject to regulation for any increase in GHG emissions. Setting the significance level will raise the threshold that modifications must surpass before they become subject to regulation.

General Effects on GHG Emitting Sources of EPA Regulation of GHGs

When a source performs a BACT review under the PSD program, it is also required to conduct a review of its impact on ambient air quality to determine whether any NAAQS or PSD increment violations will result. Currently, there are no NAAQS or PSD increments for GHGs. So, an analysis of NAAQS and PSD increments would be unnecessary for GHG emissions. However, if PSD is triggered for one pollutant, all regulated NSR pollutants emitted from that source become subject to PSD requirements. *This means that if a source triggers BACT review because of its GHG emissions, it will be required to conduct an analysis of NAAQS and PSD increments, air quality, additional impacts and Class 1 requirements for each of the NSR pollutants it emits in significant amount.*¹⁵ This could subject sources to regulation of emissions for which they have never been regulated.

Existing coal plants, for example, that undertake a major modification that results in a net increase in GHG emissions of 10,000 tpy CO₂e or more per year will be subject to regulation under the PSD and Title V programs. Once the source is subject to regulation under the PSD program for GHG emissions increases, it must conduct appropriate analyses for all regulated PSD pollutants that it will emit in significant amounts.

Finally, the EPA’s Proposed Endangerment Finding addresses the mixture of six GHGs, rather than separate pollutants. The Light-Duty Vehicle Proposed Rule proposes that the group of four GHGs be considered as one pollutant for purposes of vehicle emissions regulation. This could make it easier for entities to surpass the proposed threshold because it uses the aggregate emission of all the GHG rather than the individual emission level as its measure.

III. Federal Renewable Electricity Standards (RES):

Both Bingaman’s draft energy legislation (S. 1462) and the American Clean Energy and Security Act (ACESA, H.R. 2454) include RES provisions. The recently released legislation drafted by Senators Kerry and Boxer (The Clean Energy Jobs and American Power Act, S.1733) does not have any RES/RPS provisions.

Bingaman’s draft legislation directs utilities that sell electricity for purposes other than resale to obtain 15% of their electricity from renewable sources or energy efficiency savings by 2021. Bingaman’s bill would allow utilities to meet up to about 27% of their 15% goal with energy efficiency. ACESA sets a 20% in 2020 target and provides that up to 25% of that target may be met by energy efficiency savings (40% by successful gubernatorial petition in certain years). Both bills create a Renewable Energy Credit (REC) trading scheme, whereby RECs can be traded, bought and sold on a national market in order to spread compliance in an economically efficient manner. Neither bill preempts or otherwise limits existing or future state RES/RPS programs, and both bills have provisions to incorporate compliance with state programs into the Federal program.

¹⁵ Class 1 requirements govern those sources located within 100 kilometers of a Class 1 areas (e.g., national parks) as defined in the Clean Air Act.

Below are some key areas that merit attention as these bills make their way through Congress.

Complexity of the Federal RES Program and reconciliation with State Programs

Both the Waxman/Markey and Bingaman RES proposals will require a sophisticated system to manage compliance and track the flow of RECs between the Federal programs and 30-plus different state programs. Such a system must be able to track several elements, including (1) trading of state and Federal RECs, (2) alternate compliance payments, (3) reported levels of renewable energy generation, and (4) banking. In their current state, both bills lack necessary details about this system. In addition, pending Federal legislation lacks detail about how State and Federal programs will be reconciled. The implications of creating a national RES on top of existing and different state RPS systems has not been fully analyzed or evaluated at this time. There may be potential gaps and complications that could develop between a future federal system and the myriad of state RPS programs. It remains to be seen whether Congress will provide more guidance on these issues. If not, the details will be left up to administrative rulemaking.

Actual Results of the Federal RES Program may be lower than the current programs under states

There is some question as to whether either proposed federal RES program will result in an increase in renewable energy generation above the business-as-usual scenario that includes current state RPS programs.

A Federal Program Will Redistribute the Renewable Energy Burden

Both bills allow for the transfer and trade of RECs. This allows the burden of renewable energy generation to be distributed by a market mechanism, which may result in the most efficient and cost-effective generation planning. Those areas that lack enough renewable energy resources to meet the standard will have the option to buy excess energy from areas with an abundance of renewable resources. This can cut two ways. If the market does not successfully distribute the burden, i.e., the price of generating renewable energy is not accurately reflected in the price of a REC, then either the generator or the purchaser will have a heavier burden.

For more information on both the Bingaman and ACESA RES programs, please see the Federal RES Comparison below.

Waxman-Markey & Bingaman Renewable Electricity Standard Legislation Comparison of Key Provisions

Provision	Waxman-Markey (H.R. 2454)	Bingaman (S. 1462)
Goal	<ul style="list-style-type: none"> • 20% by 2020 	<ul style="list-style-type: none"> • 15% by 2021
Breakdown of Goal	<ul style="list-style-type: none"> • 6% in 2012 & 2013 • 9.5% in 2014 & 2015 • 13% in 2016 & 2017 • 16.5% in 2018 & 2019 • 20% in 2020 – 2039 	<ul style="list-style-type: none"> • 3% in 2011 – 2013 • 6% in 2014 – 2016 • 9% in 2017 – 2018 • 12% in 2019 – 2020 • 15% in 2021 – 2039
Regulated Entities	<ul style="list-style-type: none"> • Retail electric suppliers of ≥ 4 million MWh/year 	<ul style="list-style-type: none"> • Electric utilities that “sell electricity to electric customers for a purpose other than resale...”
Renewable Resources	<ul style="list-style-type: none"> • Wind • Solar • Geothermal • Renewable Biomass • Qualified hydropower • Marine and hydrokinetic • Biogas derived exclusively from renewable biomass • Biofuels derived exclusively from renewable 	<ul style="list-style-type: none"> • Wind • Solar • Geothermal • Biomass • Qualified hydropower • Marine and hydrokinetic • Ocean • Landfill gas • Incremental geothermal production

	biomass	<ul style="list-style-type: none"> Coal-mined methane Qualified waste-to-energy Other (as determined by Secretary)
Means of Compliance	<ul style="list-style-type: none"> Submit federal RECs (75% of goal) Increase energy efficiency (25% - 40% of goal) Alternative Compliance Payment (ACP) 	<ul style="list-style-type: none"> Submit federal RECs (approx. 75% of goal) Submit energy efficiency credits (26.67% of goal) Alternative Compliance Payment (ACP)
Provisions for “Surplus” Federal RECS	<ul style="list-style-type: none"> Can be sold, or traded No specific provision for retirement 	<ul style="list-style-type: none"> Federal RECs are tradable May transfer to another utility in the same utility holding company system
REC Multipliers	<ul style="list-style-type: none"> 3 credits per MWh for distributed renewable generation 	<ul style="list-style-type: none"> 2 credits for generation on Indian land 3 credits for distributed renewable generation 3 credits for generation from algae 1-1.5 credits for CHP from biomass (depending on efficiency level)
Trade RECs?	<ul style="list-style-type: none"> Yes 	<ul style="list-style-type: none"> Yes
Bank REC	<ul style="list-style-type: none"> Up to 3 years from current compliance period 	<ul style="list-style-type: none"> RECs for renewable generation (those not obtained under the multiplier) may be used for 3 years from issuance
State-Federal Compliance Parity	<ul style="list-style-type: none"> Federal RECs issued for generation, purchase of renewable generation, or purchase of state RECs Federal RECs issued for state ACP payments (equal to amount of generation resulting from payment) 	<ul style="list-style-type: none"> Federal RECs issued for generation, purchase of renewable generation, or purchase of state RECs Federal RECs issued for alternative compliance methods, including ACP (based on amount of renewable energy generated as result)
Role of Energy Efficiency	<ul style="list-style-type: none"> May count for up to 25% of goal Governors may petition FERC to increase to 40% in a given compliance period 	<ul style="list-style-type: none"> Federal energy efficiency credits May count for up to 26.67% of goal
Use of Alternative Compliance Payments	<ul style="list-style-type: none"> Paid to State fund Permitted State uses: <ul style="list-style-type: none"> Deploy renewable energy technologies OR Implement cost-effective energy efficiency programs Further restrictions for ACP from central procurement states 	<ul style="list-style-type: none"> Paid to State fund Permitted State uses: <ul style="list-style-type: none"> Increase quantity of renewable generation from in-state source, Promote electric drive vehicles in State, OR Offset costs of carrying out program through Direct grants to consumers or Energy efficiency investment
Alternative Compliance Payment (ACP) Levels	<ul style="list-style-type: none"> May meet all or part of obligation \$25 per MWh, adjusted for inflation 	<ul style="list-style-type: none"> 2.1 cents per kWh No restriction on how much ACP can cover
Interaction with State Programs	<ul style="list-style-type: none"> “preserve integrity and incorporate best practices” of state/tribal programs Rely upon state/tribal tracking systems 	<ul style="list-style-type: none"> To extent possible, facilitate coordination between the federal and state programs
Renewable Generation Requirement Floor (Lowest predicted overall increase)	<ul style="list-style-type: none"> 12% (without taking into consideration the exempt entities which would lower this number) See NREL’s Comparative Analysis of Federal Renewable Electricity Standards 	<ul style="list-style-type: none"> Approx. 11% taking into consideration the allowance of energy efficiency Decreased once exempt entities are considered No modeling results available for this version of the bill
Exemptions	<ul style="list-style-type: none"> Entities with retail electricity sales of less than 4 million MWh 	<ul style="list-style-type: none"> PUC or utility can petition to change requirements for a period of time if transmission constraints prevent delivery of service
Non-Compliance Penalty	<ul style="list-style-type: none"> Pegged to the cost of the ACP Double the ACP x the number of lacking RECs, electricity savings, or ACPs 	<ul style="list-style-type: none"> Pegged to the cost of the ACP # Kwh sold in violation x 200% of ACP

IV. Senate Energy Bill (S.1462)

The American Clean Energy Leadership Act of 2009 (ACELA) addresses six major areas: clean energy deployment, energy efficiency, energy security, responsible production of traditional resources, innovation and workforce, and energy markets. Two of the biggest areas covered by the legislation are transmission expansion and siting and a Federal Renewable Energy Standard. Key elements of the legislation are identified below.

Clean Energy Technology Development

Renewable Electricity Standard (RES):

- Utilities selling 4 million MWh of electricity or more per year will be required to obtain a portion of their energy from renewable resources as follows:
 - 3% in 2011-2013
 - 6% in 2014-2016
 - 9% in 2017-2018
 - 12% in 2019-2020
 - 15% in 2021-2039
- Up to 26.67% of the standard can be realized through energy efficiency improvements. Federal Energy Efficiency Credit will be issued for this portion of the program.
- Allowable renewable resources under the bill include wind, solar, geothermal, biomass, qualified hydropower, marine and hydrokinetic, ocean, landfill gas, incremental geothermal production, coal-mined methane, and qualified waste-to-energy. Others may be added at the discretion of the Energy Secretary.
- Renewable energy credits (RECs) will be issued for every MWh of renewable energy generated by covered utilities. RECs may be traded, bought and sold on a REC market. Some generation is eligible for bonus RECs. (e.g., distributed generation can earn 3 RECs per MWh.)
- Compliance with the Standard may be met in the following ways: produce the specified amount of electricity or efficiency savings; purchase renewable energy or efficiency savings; purchase RECs or energy efficiency credits from entities who have an excess; or make alternative compliance payments (ACP) at a rate of 2.1 cent per kilowatt hour.
 - ACPs are paid directly to the State for renewable energy development, customer grants, energy efficiency programs, or promotion of electric drive vehicles.
 - There is no restriction on how much of its obligation a utility may meet with the ACP.
- For utilities in states with State RES programs, compliance with the state program, including ACP payments to the State program, will be credited with Federal RECs.
- The bill does not restrict State RES/RPS programs.

Transmission Expansion & Siting

- The Federal Energy Regulatory Commission (FERC) will coordinate and approve transmission plans for “high-priority transmission projects” in the Eastern and Western interconnections.
- Transmission plans must include an evaluation of available and potential renewable generation. The Secretary is instructed to conduct nation-wide location-constrained resource assessments.
- FERC can preempt state siting decisions for “high-priority transmission projects.”
 - The bill amends the Energy Policy Act and removes the requirement that a line be in a NIETC designation in order for FERC to preempt a state siting decision. Instead, a project must be “high-priority.” (i.e., the line must be ≥ 345 kV AC, ≥ 300 kV DC or a renewable feeder line.)
 - States get first opportunity to site the line.
 - FERC may site if the state
 - Fails to approve the project within one year;
 - Rejects an application; or

- Imposes unreasonable conditions on the permit.
- The Department of the Interior is the lead agency for coordinating environmental review of proposed transmission projects.
- FERC will set cost allocation methodology, giving deference to cost allocation proposals supported by broad agreement of states.

Increased Renewable Energy Production on Federal Land:

- The bill requires the BLM to undertake a programmatic environmental impact statement on solar development on Federal land.
- The Forest Service is to do the same for wind, solar and geothermal.
- The Secretary of Energy is directed to establish pilot projects and establish a leasing program, if warranted by the results of the pilot projects.

Additional Provisions:

- ACELA creates the Clean Energy Deployment Administration (CEDA) within the Department of Energy and charges it with establishing an attractive investment environment for the development and deployment of clean energy technologies.
- The bill also creates a Clean Energy Investment Fund that will allow collected monies to be used to support clean energy technology development and deployment.
- ACELA contains several provisions aimed at increasing current knowledge about the relationship between energy and water. Specifically, it:
 - Directs the National Academy of Sciences, Secretary of Energy, Bureau of Reclamation, and Energy Information Administration to study various areas within the energy and water topic;
 - Creates a grant program to aid in the deployment of energy technologies that reduce the consumption of water; and
 - Encourages the integration of decisionmaking processes for both resources.

Energy Efficiency

Manufacturing and Consumer Good Efficiency:

- The bill includes provisions to improve manufacturing efficiency, consumer product efficiency and building efficiency. Provisions for research and planning in the manufacturing sector are aimed at decreasing its carbon footprint. The bill bolsters the Energy Star program and the DoE's appliance standards for consumer goods.

Building Efficiency:

- The bill directs the DOE to set energy savings improvement targets for residential and commercial national model building energy codes at 30% in 2010 and 50% after 2016.
- The bill creates grant programs for State energy efficiency retrofit programs and the Home Energy Retrofit Finance Program.
- Includes clarifying provisions related to energy savings performance contracts that will enhance the ability of federal agencies to meet goals for renewable energy and efficiency.