

Energy and Conservation Credits and Incentives

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Notice

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Agenda



- ▶ Federal and State Climate Change Legislation and Policy
- ▶ Business Response to Climate Change
- ▶ Overview of Federal Incentives
- ▶ Overview of State Incentives
- ▶ Effectiveness of Renewable Initiatives
- ▶ Considerations around CCaSS tax incentives and policy
- ▶ Southeast State Incentives (Appendix)

Federal and State Climate Change Legislation and Policy



Objectives driving federal legislation

- ▶ Obama Administration energy objectives
 - ▶ Double domestic renewable energy production by 2013
 - ▶ Lower carbon emissions
 - ▶ Increase energy efficiency
 - ▶ Stimulate creation of “green” jobs
- ▶ Challenges
 - ▶ Collapse of traditional renewable energy monetization structures
 - ▶ Insufficient infrastructure (e.g., electricity transmission)
 - ▶ Lack of consensus among policymakers as to solution

Climate Change in Congress

▶ House

- ▶ American Clean Energy and Security Act of 2009 (H.R. 2454)
 - ▶ Passed by the House by 219-212 in June 2009

▶ Senate

- ▶ Six Committees have jurisdiction resulting in multiple bills
- ▶ American Clean Energy Leadership Act of 2009 (1462/Bingaman)
 - ▶ Passed by Energy and Natural Resources Committee in June, 2009
- ▶ Clean Energy Jobs and American Power Act of 2009 (1733/Boxer)
 - ▶ Passed by Environment and Public Works Committee in Nov. 2009
- ▶ American Power Act (Kerry-Lieberman)
 - ▶ Draft discussion released in May 2010
- ▶ Practical Energy and Climate Plan (3464/Lugar)
 - ▶ Introduced in June 2010

American Clean Energy & Security Act (HR 2454)

- ▶ National renewable electricity standard (RES)
 - ▶ 20% renewables by 2020
 - ▶ Can meet standard from electrical efficiency
 - ▶ Applies to retail electricity suppliers (4 million megawatt hours)
- ▶ Greenhouse gas emission reduction – Cap and Trade
 - ▶ Capped emission sources
 - ▶ 42% below 2005 levels in 2030; 83% below 2005 levels in 2050
 - ▶ Emission allowances
 - ▶ Banking and borrowing of allowances
 - ▶ Offsets – 2 billion tons with 50% from U.S.
 - ▶ Covered Entities
 - ▶ Electricity generators, refiners and others from 2012; Specified industrial sources from 2014; Local natural gas distributors from 2016
 - ▶ Carbon Market Oversight
 - ▶ Federal Energy Regulatory Commission to regulate cash market in allowances and offsets
 - ▶ Commodity Futures Trading Commission to regulate derivatives.

American Power Act (Kerry-Lieberman)

- ▶ Greenhouse gas emission reduction – Cap and Trade
 - ▶ Capped emission sources
 - ▶ 42% below 2005 levels in 2030; 83% below 2005 levels in 2050
 - ▶ Emission allowances
 - ▶ Annual Compliance Requirement with future borrowing allowed
 - ▶ Offsets allowed but limited and 75% must be domestic
 - ▶ Initial Price floor of \$12 per ton and ceiling of \$25
 - ▶ Covered Entities
 - ▶ Covers 7,500 major stationary sources of GHG emissions
 - ▶ Carbon Market Oversight
 - ▶ GHG instruments to be regulated in same manner as agricultural commodities
 - ▶ Trading must take place on an exchange cleared through a carbon clearing organization

Federal Carbon Reporting – US EPA Rule

- ▶ US EPA issued GHG rule in Sept. 2009
- ▶ Required reporting of GHG emissions effective Jan. 2010 (final rule) for facilities emitting over 25,000 tons/year of GHG
- ▶ US EPA has acted in spite of Congress' inaction – real carbon constraints now exist
- ▶ EPA's FY 2010 budget includes approximately \$600 million for EPA's Enforcement and Compliance Assurance program, representing the highest enforcement budget ever.
 - ▶ Reflects this Administration's strong commitment to vigorous enforcement of our nation's environmental laws and ensures that EPA will have the resources necessary to maintain a robust and effective criminal and civil enforcement program.

State Renewable portfolio standards

State	Amount	Year
AZ	15%	2025
CA	20%	2010
CO	20%	2020
CT	27%	2020
DC	20%	2020
DE	20%	2019
HI	40%	2030
IA	2015 MW	2015
IL	25%	2025
KS	20%	2020
MA	15%	2020
MD	20%	2022

State	Amount	Year
ME	10%	2017
MI	10%	2015
MN	25%	2025
MO	15%	2021
MT	15%	2015
NH	25%	2025
NJ	22.5%	2021
NM	20%	2020
NV	25%	2025
NY	24%	2013
NC	12.5%	2021
ND*	10%	2015

State	Amount	Year
OH	25%	2025
OR	25%	2025
PA	18%	2020
RI	16%	2019
SD*	10%	2015
TX	5,880 MW	2015
UT*	20%	2025
VT	20%	2017
VA*	12% of 2007	2022
WA	15%	2020
WI	10%	2015
WV	25%	2025

*Voluntary State Renewable Goal

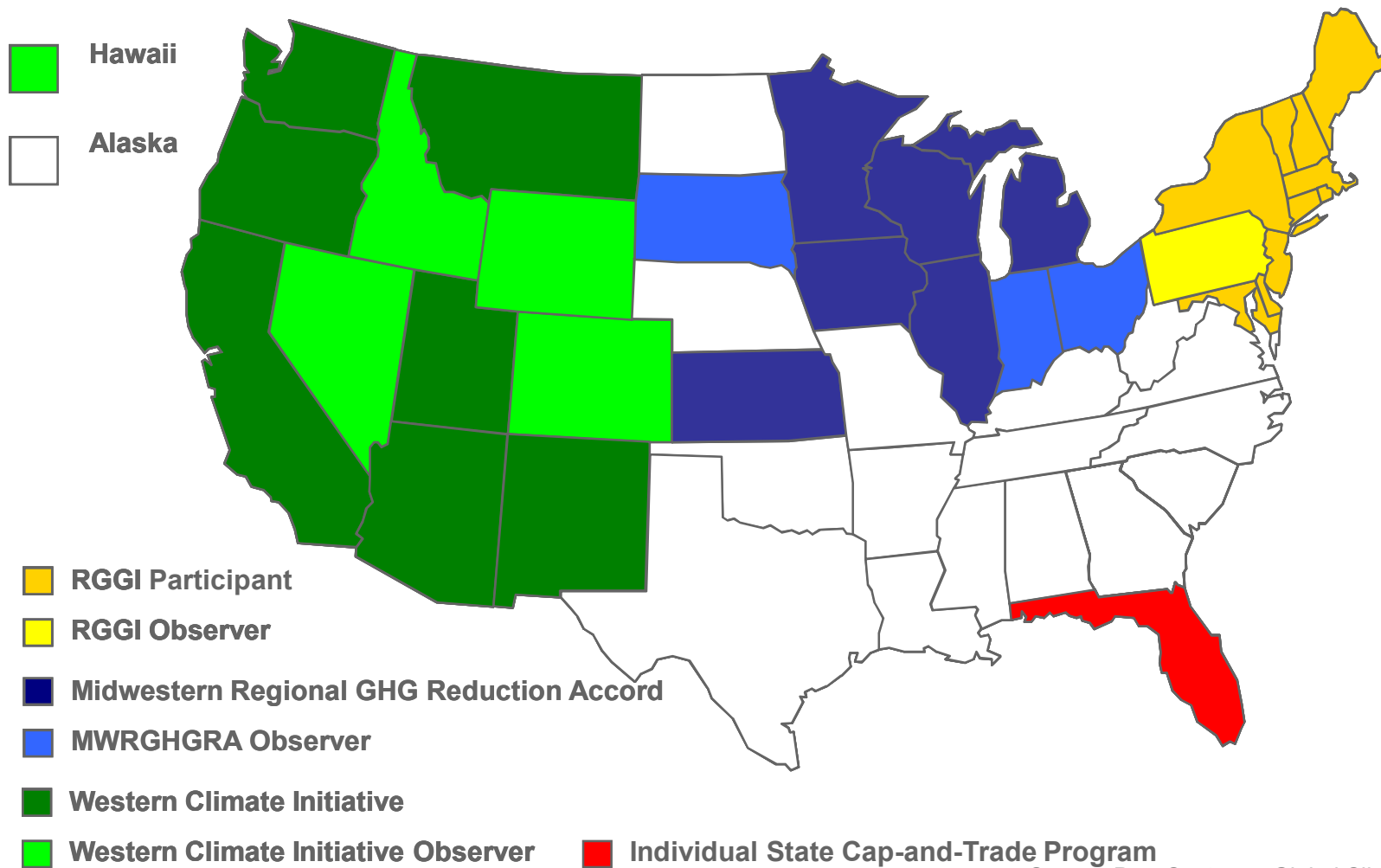
Source: Pew Center on Global Climate Change

State Greenhouse gas emissions targets

State	Target	State	Target	
ME	10% below 1990 levels by 2020	NJ	1990 levels by 2020	
NH		IL		
VT		CA		
MA		WA		
RI		MO		
NY		HI		
CT		NM		10% below 2000 levels by 2020
OR		AZ	2000 levels by 2020	
FL		CO	20% below 2005 levels by 2020	
MN		UT	2005 levels by 2020	
MD	MI	20% below 2005 levels by 2025	VA	30% below business as usual by 2025

Source: Pew Center on Global Climate Change

Regional Greenhouse Gas Reduction Initiatives



Source: Pew Center on Global Climate Change

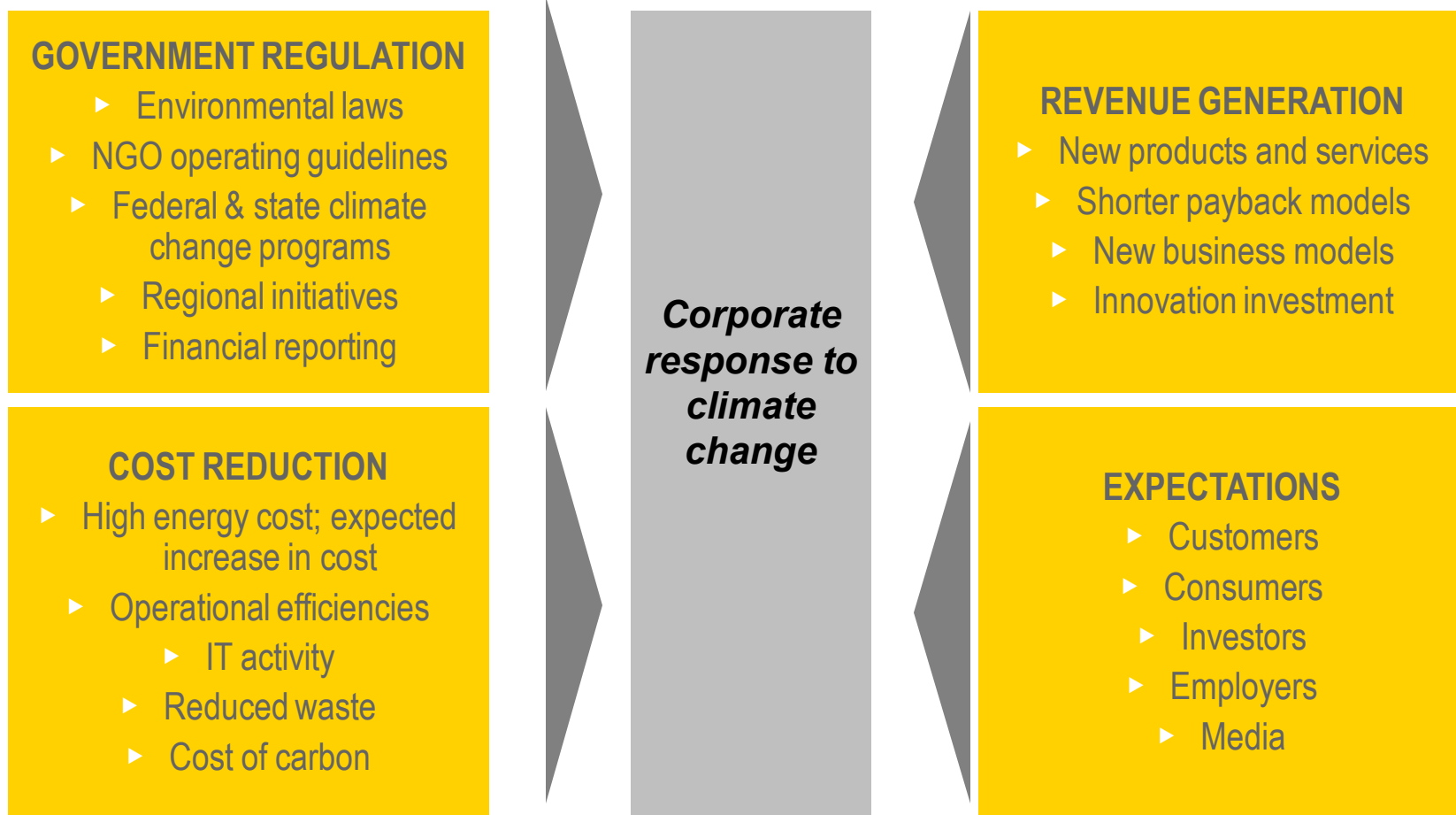
Benefits of cap-and-trade programs to participating states

- ▶ States serve as “policy laboratories” for climate change mitigation and adaptation
 - ▶ Participating states may exercise political pressure on future federal climate policy “from below.”
- ▶ Current measures will improve efficiency and reduce emissions,
 - ▶ Participating states may avoid more expensive measures that will have to be taken at a later date to address the same problem.
- ▶ Efficient electric generation means that there is less waste and less dependence on foreign energy sources.
 - ▶ It also means that there will be less pollution.
- ▶ Drive new energy efficiency and renewable energy investments.

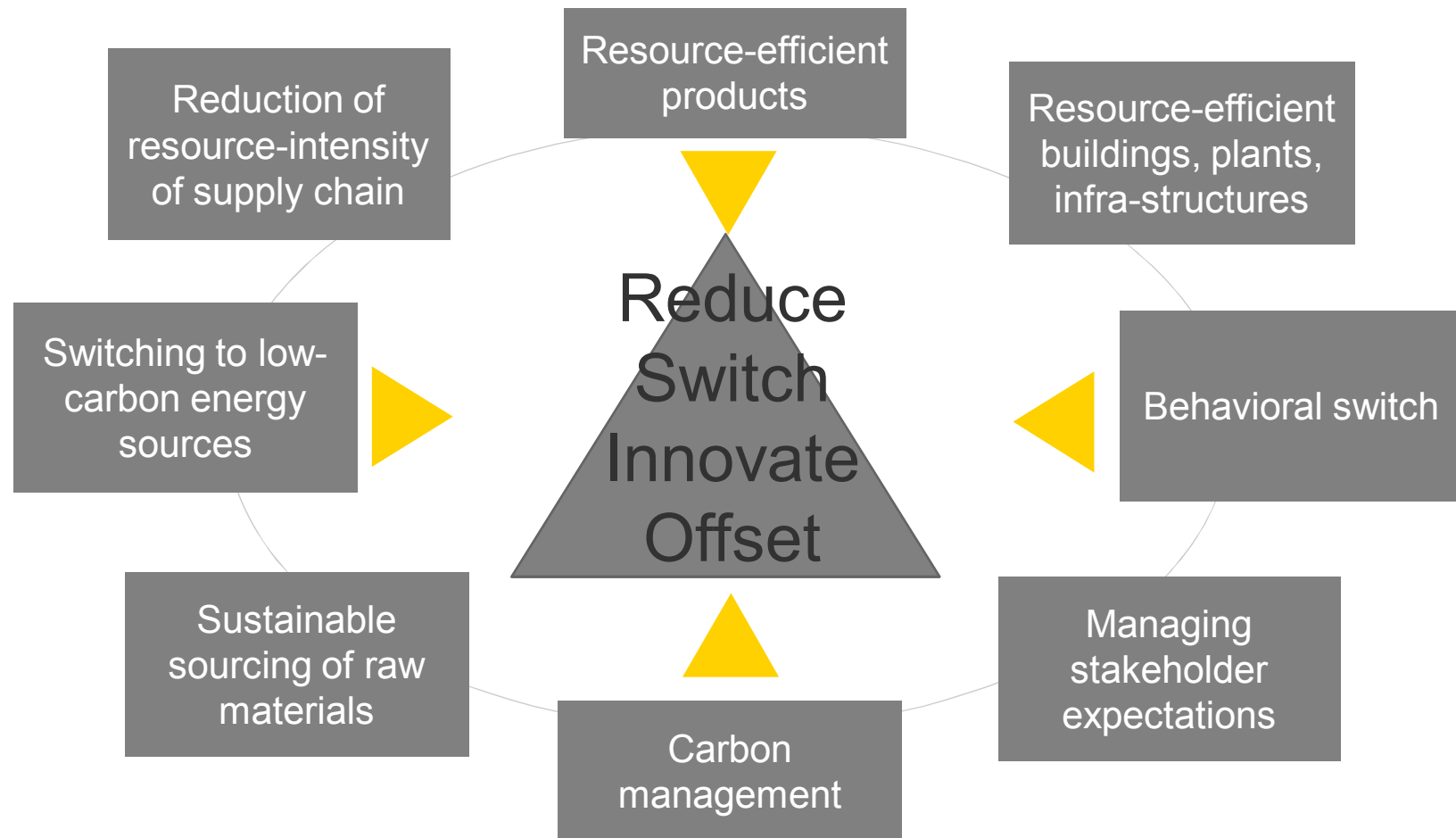
Business response to climate change



Drivers of corporate response



Business response to climate change



Business strategies to trigger CCaSS Incentives

- Renewable Energy Production
- Energy Efficient Buildings
- Energy Efficient Manufacturing
- Alternative Fuel and Energy Efficient Vehicles
- Recycling
- Commuting/Ridesharing
- Brownfield Reclamation
- Pollution Control Initiatives
- R&D Investment in Clean Technologies
- Green Collar Job Creation

Overview of Federal Incentives



Overview of Federal Incentives

▶ Reduce

- ▶ Deduction for Energy Efficient Commercial Buildings

▶ Switch

- ▶ Renewable Energy Production Tax Credit
- ▶ Renewable Energy Investment Tax Credit
- ▶ 1603 Grant in lieu of Tax Credit
- ▶ Federal Alternative Fuel Credits

▶ Innovate

- ▶ Advanced energy manufacturing investment tax credit
- ▶ DoE Loan Guarantee Program

▶ Offset

- ▶ Clean Development Mechanism
-

Tax Deduction for Energy Efficient Commercial Buildings (IRC 179D)

- ▶ \$0.30 to \$1.80 a square foot of the building up to the total costs of the energy-efficient property placed in service
- ▶ Accelerated depreciation of property
- ▶ Property installed meets energy efficiency targets for:
 - ▶ Interior lighting systems
 - ▶ Heating, cooling, ventilation and hot water systems
 - ▶ Building envelope
- ▶ Effective 1 January 2006 through 31 December 2013
- ▶ The deduction for a government-owned building can be allocated to the designer of the building
- ▶ Several pieces of legislation to expand, extend or modify program:
 - ▶ Rebates for energy efficient upgrades in new and existing buildings (S.B. 3079)
 - ▶ increase the max deduction from \$1.80 to \$3.00 (H.B. 4226 and S.B. 1637)
 - ▶ New energy efficiency ranging from \$0.15 to \$2.50 per s.f. (H.R. 2454)

Renewable Energy Production Tax Credit (IRC §45)

- ▶ Credit for electricity produced by the taxpayer from qualified energy resources at a qualified facility and sold by the taxpayer
- ▶ 2.2/1.1¢ per KWh for 10 years depending on technology
- ▶ Facilities must be placed in service by 12/31/2013 (12/31/2012 for wind)
- ▶ Eligible systems include solar, wind, biomass, geothermal, and hydropower
- ▶ Under the 2009 Stimulus Bill the taxpayer can now elect to take an 30% investment tax credit under Section 48 instead of a production tax credit

Renewable Energy Investment Tax Credit (IRC §48)

- ▶ Equal to the energy percentage (30% or 10%) of the basis of each energy property placed in service during the tax year
- ▶ 30 % Credit for:
 - ▶ Fuel Cells; Solar Energy; Small and eligible large wind; Closed and open loop biomass and other eligible renewable systems
- ▶ 10% Credit for:
 - ▶ Geothermal, Micro-turbine, Combined heat and power, and Thermal ground-water energy
 - ▶ Under the 2009 Stimulus Bill taxpayer can elect to take an investment tax credit of 30% rather than a production tax credit for wind, geothermal, biomass or hydropower
- ▶ Previously the basis of investment on which credit applied was reduced by other “subsidized energy financing”
 - ▶ Under the 2009 Stimulus Bill this has been eliminated and the credit can be taken on the full investment

ARRA Section 1603 Treasury Grant Program for Alternative Energy Investments

- ▶ Previously the Section 48 incentive could only be taken as a non-refundable tax credit
- ▶ It can now be taken as a grant
 - ▶ Under the 2009 Stimulus Bill a 1603 grant through the Department of the Treasury can be taken in lieu of the credit
- ▶ Value:
 - ▶ 30% of the basis of energy property for fuel cells, solar, wind, closed- and open-loop biomass, geothermal, landfill gas, trash, hydro-power, marine or hydrokinetic production.
 - ▶ 10% of the basis of energy property for micro-turbine, and combined heat and power systems.
- ▶ Timing
 - ▶ Must be placed in service by December 31, 2010 or begin construction by that date and be placed in service before January 1, 2014 (January 1, 2013 for wind).

Federal Alternative Fuel Credits

- ▶ Ethanol Tax Credit (Sec. 40)
 - ▶ Alcohol fuel credit, alcohol mixture credit, small ethanol producer credit (all expiring 12/31/10)
 - ▶ Cellulosic biofuel producer credit (expiring 12/31/12)
- ▶ Biodiesel and Renewable Diesel Tax Credit (Sec. 40A)
 - ▶ Biodiesel credit, biodiesel mixture credit, small agri-biodiesel producer credit and renewable diesel
 - ▶ all expired 12/31/09 but proposed extender to 12/31/10
- ▶ Alternative Fuel Credit (Sec. 6426(d))
 - ▶ Liquefied petroleum gas, P Series Fuels, compressed or liquefied natural gas, liquefied hydrocarbon, certain liquid fuel from coal, compressed or liquefied gas from biomass, liquid fuel derived from biomass
 - ▶ expired 12/31/09 but proposed extender to 12/31/10, except for black liquor; liquefied hydrocarbon expires 9/30/14

Excise Tax Credits

- ▶ IRC Sec. 34, 6421 & 6427 allow a refund of excise tax on ALL taxable fuels not used for taxable purposes e.g.
 - ▶ Non-highway uses.
 - ▶ Intercity, local, or school buses (not gasoline)
 - ▶ Use for farming purposes
 - ▶ Use by certain aircraft museums or in certain other aircraft uses
- ▶ IRC Sec. 34, 6426(d), 6426(e), and 6427(e) allow a refundable credit for alternative fuels which are:
 - ▶ Sold for use or used as a fuel in a motor vehicle or motorboat.
 - ▶ Alternative fuel does NOT NEED TO BE USED OFF-HIGHWAY.
 - ▶ Most commonly alternative fuel is Propane, but alternative fuel also includes compressed natural gas (CNG) and liquefied natural gas (LNG)
 - ▶ For this credit, Alternative fuel does not include ethanol, methanol, biodiesel, or renewable diesel.

Advanced energy manufacturing investment tax credit (IRC §48C)

- ▶ As part of the 2009 stimulus bill, the Treasury Department, in consultation with the DoE, awarded \$2.3 billion in tax credits
- ▶ 30% Investment Tax Credit for facilities engaged in the manufacture of renewable and advanced energy property
- ▶ Oversubscribed and full \$2.3 billion award in January 2010
- ▶ Obama's FY2011 budget proposed renewing the program and expanding it to \$5 billion.
- ▶ Several bills are currently working through Congress to approve this renewal and expansion

Department of Energy – Loan Guarantee Program

- ▶ U.S. Department of Energy's Innovative Loan Guarantee Program (Authorized under Energy Policy Act 2005)
 - ▶ U.S. DOE is authorized to issue loan guarantees for projects that "avoid, reduce or sequester air pollutants or anthropogenic emissions of greenhouse gases; and employ new or significantly improved technologies as compared to commercial technologies in service in the United States at the time the guarantee is issued."
 - ▶ Authorized to offer more than \$10 billion in loan guarantees
 - ▶ Originally set to expire on September 30, 2009.
- ▶ U.S. Department of Energy's Temporary Loan Guarantee Program (Authorized under Recovery Act 2009)
 - ▶ Extended program to September 30, 2011
 - ▶ Appropriated additional \$6 for loan program
 - ▶ Defined eligible technologies for new loan guarantees, including: Renewable energy projects that generate electricity or thermal energy and facilities that manufacture related components, electric power transmission systems, and innovative biofuels projects.

Department of Energy – Loan Guarantee Program

- ▶ Recent Awards
 - ▶ \$400M loan guarantee to Abound Solar Manufacturing to manufacture state-of-the-art thin-film solar panels in Indiana and Colorado (July, 2010)
 - ▶ \$1.45B loan guarantee to Abengoa Solar Inc to finance construction and start up of a concentrating solar power generating facility in Arizona (June 2010)
 - ▶ \$102M loan guarantee to US Geothermal Inc to construct a 22 MW geothermal power project in Oregon (June 2010)
- ▶ Application
 - ▶ DOE requests applications by issuing technology specific solicitations.
 - ▶ Currently, no open solicitations at this time for new applications.

Clean Development Mechanisms (CDM)

- ▶ CDM is a mechanism under the Kyoto Protocol that allows developed countries with a GHG reduction target to invest in projects that reduce emissions in developing countries.
 - ▶ CDM investments give rise to a project revenue stream via the sale of CERs, or Certified Emission Reduction units from the CDM.
- ▶ There is a standardized CDM project cycle that must be complied with:
 - ▶ Approval by the host country, registration with UNFCCC, periodic verification, etc.
- ▶ In addition, the project must meet the ‘additionality’ concept (proof that the project would not have happened anyway)

Overview of State Incentives



Overview of State Incentives

- ▶ Reduce
 - ▶ State Energy Programs
 - ▶ Incentives for LEED Buildings
- ▶ Switch
 - ▶ NYSERDA Combined Heat and Power Incentives
 - ▶ Arizona Renewable Energy Tax Credits
 - ▶ Ohio Department of Development Renewable Energy Program
- ▶ Innovate
 - ▶ California Sales Tax Exemption for Alternative Energy Manufacturing Equipment
 - ▶ Michigan Nonrefundable Business Activity Tax Credit
 - ▶ Mississippi Clean Energy Initiative
- ▶ Offset

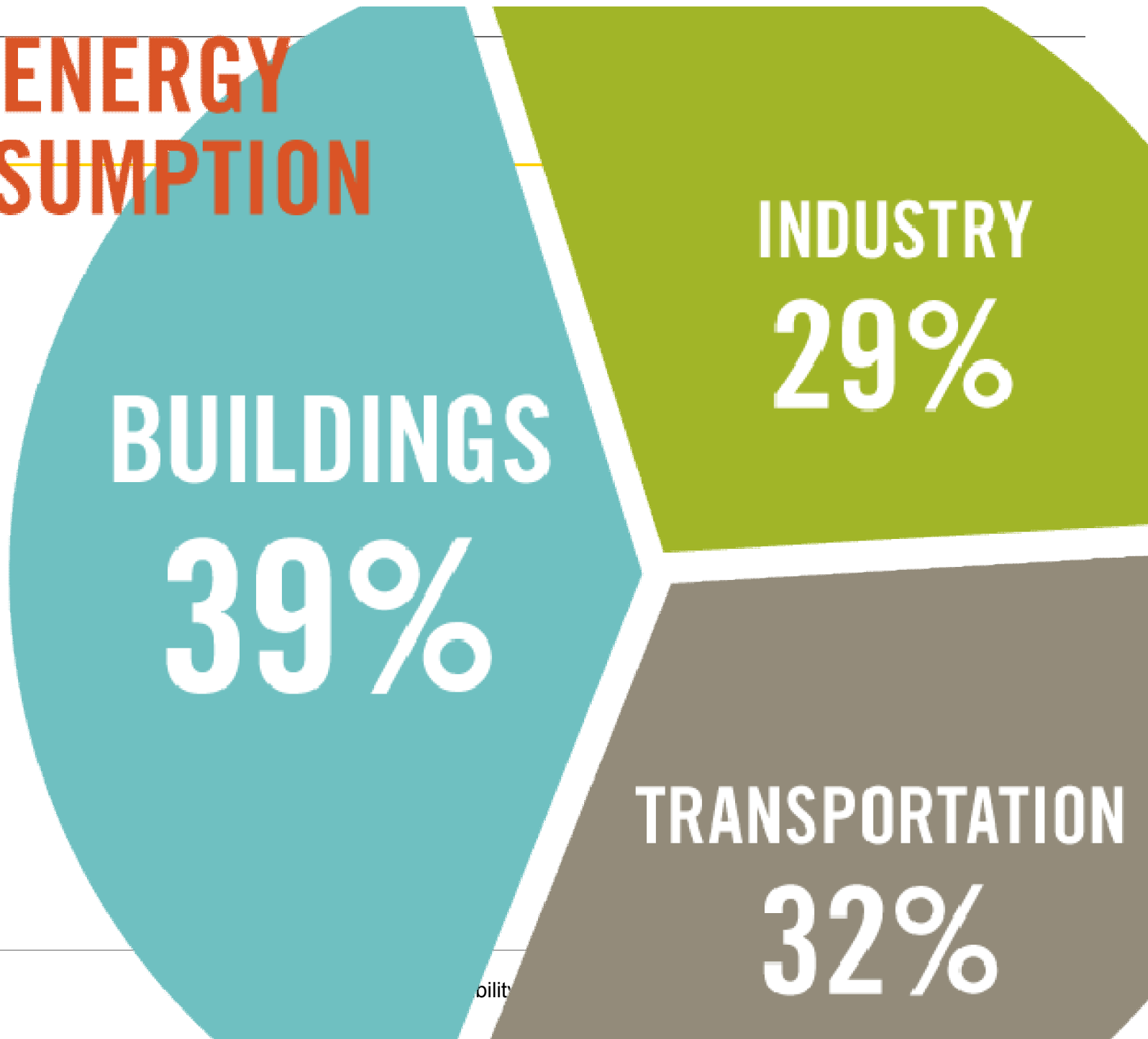
State Energy Program - Overview

- ▶ The Recovery Act appropriated \$3.1 Billion to the State Energy Program
- ▶ Funds were distributed to states based on a formula-basis and each state administers its own unique program around the goals related to renewable energy and energy efficiency
- ▶ Examples:
 - ▶ Ohio
 - ▶ \$42.5 million in grants to aid the deployment of renewable energy
 - ▶ \$8 million in grants to conduct commercial and residential building retrofits in existing and new construction to attain greater energy efficiency.
 - ▶ \$30 million to develop a revolving loan program to improve access to capital for energy efficiency and renewable energy programs
 - ▶ \$15 million in grants targeting industry efficiency projects
 - ▶ Mississippi
 - ▶ Energy Efficient Public Buildings - \$17M
 - ▶ Market Transformation & Technology Deployment - \$10M
 - ▶ Mississippi Job Protection through Energy Economic Development - \$10M
 - ▶ Administration - \$3.4M

LEED-Certified Buildings - Overview

- ▶ Leadership in Energy & Environmental Design (LEED®) is the nationally accepted benchmark for the design, construction and operation of high performance energy efficient buildings.
- ▶ LEED® gives building owners and operators the tools they need to have an immediate and measurable impact on their buildings' performance
- ▶ Administered by the US Green Building Council (USGBC)
- ▶ LEED® promotes a whole-building approach to sustainability by recognizing performance in five key areas of human and environmental health:
 - ▶ sustainable site development;
 - ▶ water savings;
 - ▶ energy efficiency;
 - ▶ materials selection; and
 - ▶ indoor environmental quality.

U.S. ENERGY CONSUMPTION



Incentives for LEED certification

- ▶ Various forms: legislation, executive orders, resolutions, ordinances, policies and incentives
 - ▶ **45** states
 - ▶ **202** localities
 - ▶ **138** cities
 - ▶ **36** counties
 - ▶ **28** towns
 - ▶ **34** state governments
 - ▶ **14** federal agencies or departments
 - ▶ **17** public school jurisdictions
 - ▶ **41** institutions of higher education

NYSERDA Combined Heat and Power (CHP) Incentives

- ▶ New York State Energy Research and Development Authority (NYSERDA) offers performance based incentives to promote the installation of clean, efficient, and commercially available CHP Systems that provide summer on-peak demand reduction
- ▶ Based on summer-peak demand reduction (kW), energy generation (kWh), and fuel conversion efficiency (FCE) achieved by the CHP system on an annual basis over a two-year measurement and verification (M&V) period
 - ▶ \$0.10/kWh generated + \$600/kW summer peak demand reduction
- ▶ Incentive capped at \$2M per project

Arizona Renewable Energy Tax Credits

- ▶ **Solar & Wind Investment Tax Credits**
 - ▶ 10% of installed costs up to \$25,000 per building per year
 - ▶ Applies to Solar (PV, water heat, space heat), Daylighting, Wind
 - ▶ Valid through December 31, 2012
 - ▶ Must apply

- ▶ **Renewable Energy Production Tax Credits**
 - ▶ Wind and Biomass: \$0.01/kWh, paid for 10 years; Solar: starting at \$0.04 and decreasing over time, paid for 10 years
 - ▶ 5 MW minimum system size
 - ▶ Valid between December 31, 2010 and January 1, 2021

Ohio Department of Development Renewable Energy Program

- ▶ Grants available for implementation of renewable energy projects limited to solar electric, wind electric, and solar thermal systems
 - ▶ Administered by Ohio Department of Development, Energy Office

- ▶ Requirements:
 - ▶ Installed in services are of AEP, Duke, First Energy of Dayton Power
 - ▶ Must be tied to electric grid
 - ▶ New equipment and installation requirements

- ▶ Value of Grant:
 - ▶ Solar: \$3.50/Watt installed
 - ▶ Limited at 50% of eligible systems cost or \$150,000
 - ▶ Wind: \$2.00/Watt installed
 - ▶ Limited at 40% of eligible system cost of \$200,000

California Sales Tax Exemption for Alternative Energy Manufacturing Equipment

- ▶ 100% exemption for state's sales and use tax for expenses related to the design, manufacture, production, or assembly of renewable energy equipment, combined heat and power equipment, and alternative transportation equipment in California
 - ▶ Renewable Energy includes: solar, biomass, wind, geothermal, hydroelectricity under 30 megawatts, or any other source of energy, the efficient use of which will reduce the use of fossil and nuclear fuels
- ▶ Projects must apply for an exemption through the California Alternative Energy and Advanced Transportation Financing Authority (CAEATFA) to receive the sales tax exclusion.
- ▶ The CAEATFA will publish a notice of the availability of project applications and deadlines for submission of project applications when they are available.

Mississippi Clean Energy Initiative

- Incentive for companies that manufacture systems or components used to generate renewable energy, including biomass, solar, wind and hydro generation.
- Eligible manufacturers are offered a 10-year exemption from state income and franchise taxes as well as a sales and use tax exemption to establish a plant or expand an existing production facility.
- To qualify, a business entity must have a minimum investment of \$50 million and create 250 full-time jobs.

Michigan Nonrefundable Business Activity Tax Credit

- ▶ Tax Credit for Businesses engaged in alternative energy research, development, and manufacturing
- ▶ Taxpayer and its qualified business activity must be certified by the Michigan Next Energy Authority
- ▶ Credit is equal to the lesser of:
 - ▶ (1) the amount by which a business's "tax liability attributable to qualified business activity" for the tax year exceeds the business's "baseline tax liability attributable to qualified business activity," or
 - ▶ (2) 10% of the amount by which the business's "adjusted qualified business activity" performed in Michigan, outside of a "Renaissance Zone," for a tax year exceeds such activity for the 2001 tax year

Effectiveness of Renewable Initiatives



Ernst & Young United States Renewable Energy Attractiveness Indices, Aug. 2009

- ▶ Tracks and scores investment in renewable energy by state
- ▶ Released Quarterly
- ▶ Calculation of Overall Score:
 - ▶ Long-term Wind (70%)
 - ▶ Long-term Solar (15%)
 - ▶ Biomass (10%)
 - ▶ Geothermal (5%)
- ▶ Components of Scoring
 - ▶ Strength of RPS
 - ▶ Planning and grid connection issues
 - ▶ Access to finance
 - ▶ Power offtake attractiveness
 - ▶ Tax Climate
 - ▶ Grant/Soft Loan Availability
 - ▶ Market Growth Potential
 - ▶ Current installed base
 - ▶ Resource quality and project size

Overall Renewables Index

▶ Top ranking states:

1. Texas (72)
2. New York (66)
2. California (66)
4. Oregon (63)
4. Massachusetts (63)

▶ SE states :

28. Florida (51)
31. North Carolina (50)
35. Georgia (46)
35. Louisiana (46)
39. Mississippi (44)
43. Virginia (43)
46. South Carolina (41)
47. Tennessee (40)
48. Arkansas (39)
50. Alabama (38)
51. Kentucky (34)

Wind Index

▶ Top ranking states:

1. Texas (80)
2. New York (72)
3. Illinois (68)
4. New Mexico (67)
4. Pennsylvania (67)

▶ SE states:

29. North Carolina (53)
32. Florida (50)
37. Georgia (47)
40. Virginia (46)
42. Louisiana (45)
42. Mississippi (45)
47. Tennessee (43)
48. South Carolina (42)
49. Alabama (39)
50. Arkansas (38)
51. Kentucky (35)

Solar Index

▶ Top ranking states:

1. California (82)
2. Arizona (73)
3. Hawaii (70)
3. Nevada (70)
5. New Jersey (68)

▶ SE states:

11. Florida (63)
23. North Carolina (52)
23. Louisiana (52)
25. Georgia (51)
36. Mississippi (47)
37. South Carolina (46)
37. Arkansas (46)
41. Alabama (44)
47. Virginia (40)
48. Tennessee (38)
49. Kentucky (37)

Biomass Index

▶ Top ranking states:

1. California (79)
2. Maine (76)
3. Massachusetts (69)
3. New Hampshire (69)
5. Oregon (66)

▶ SE states:

7. Florida (63)
10. Louisiana (61)
19. Mississippi (57)
23. Georgia (56)
23. North Carolina (56)
33. Alabama (50)
35. Arkansas (49)
38. South Carolina (47)
41. Virginia (44)
44. Tennessee (42)
48. Kentucky (41)

Geothermal Index

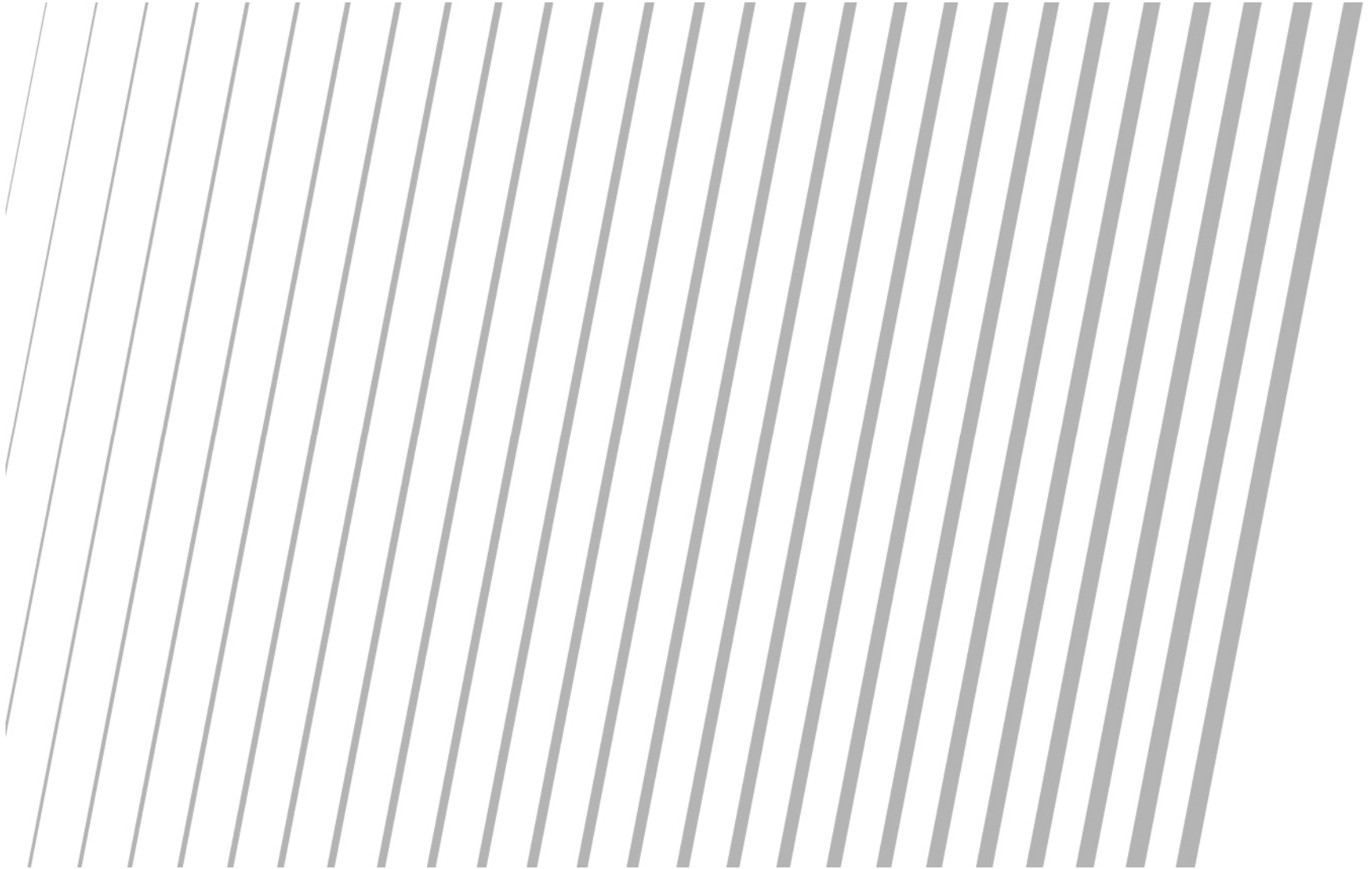
▶ Top ranking states:

1. California (77)
2. Nevada (71)
3. Massachusetts (69)
4. Maine (67)
5. Hawaii (66)

▶ SE states:

17. Louisiana (59)
20. Florida (57)
27. Mississippi (52)
33. North Carolina (50)
34. Georgia (48)
34. Arkansas (48)
41. South Carolina (47)
47. Tennessee (42)
48. Virginia (41)
49. Kentucky (38)
51. Alabama (33)

Considerations around CCaSS tax incentives and policy



Trends in State Tax Credits and Incentives

- ▶ Credit per gallon produced for Production of Alternative fuels
 - ▶ Ky. example \$1 per gallon of biodiesel produced or blended)
- ▶ Credit per kilowatt hour produced Production
 - ▶ (IA. example 1 cent per kilowatt hours for wind energy sold by the owner during taxable year)
- ▶ Federal Investment Credit Piggyback
 - ▶ MT – 35% of IRC Sec. 48 expenditures, reduced by the amount of the federal credits
 - ▶ GA – Credits for Energy Efficient measures covered by IRC Sec. 179D
- ▶ ARRA grants not reducing basis used in renewable energy tax credits
 - ▶ NC – modified investment tax credit to remove ARRA grants from the definition of “public funds”
- ▶ Sales Tax Exemptions for Clean Energy and Energy Efficiency
 - ▶ MS – enacted sales tax exemption for qualified businesses engaged in owning or operating clean energy facilities
 - ▶ CA - March, 2010 – expansion of a sales/use tax exclusion for eligible advanced transportation and alternative sources of energy projects
- ▶ Incentive to efficiency to reduce demand to meet RPS

CCaSS Considerations for Tax Administrators

- ▶ Considerations
 - ▶ Ability to increase the competitive position of your state for green industry and renewable energy
 - ▶ Be careful if choosing a specific technology (e.g. ethanol, biodiesel) due to unexpected consequences
 - ▶ Refundable or saleable credits are important to start-ups
 - ▶ Consider incentives for efficiency to reduce demand to meet RPS
 - ▶ Ability to stack federal, state and local incentives to increase ROI
 - ▶ Piggyback on existing federal CCaSS Incentives

Potential impacts of energy market & regulatory changes on State and Local Taxes

- ▶ State and local governments relying more heavily on gross receipts taxes may see an increase in gross receipts
- ▶ Cap and trade may increase prices due to the cost of certificates.
 - ▶ This may lead to increased total spending on affected goods and services
- ▶ There may be significant changes in local property taxes as a result of cap and trade.
- ▶ States with significant severance taxes, including oil and coal producing states, will likely see decreases in their revenues as demand for their production is reduced.
- ▶ There may be real redistributions of economic activity across the states.

Questions



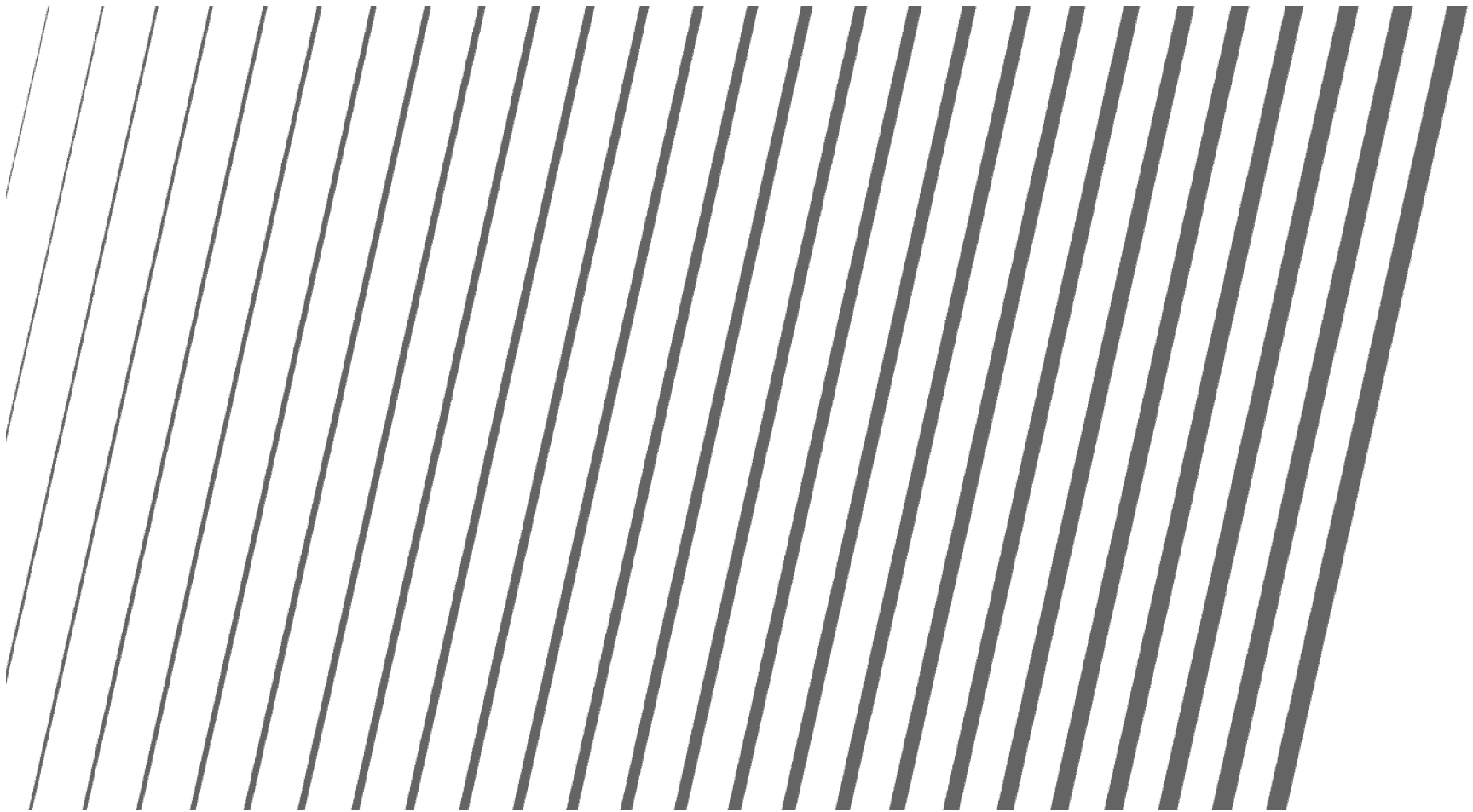
Useful Websites

- ▶ Ernst & Young Climate change and sustainability services
 - ▶ <http://www.ey.com/GL/en/Services/Specialty-Services/Climate-Change-and-Sustainability-Services>
- ▶ Ernst & Young Cleantech
 - ▶ [http://www.ey.com/US/en/Services/Strategic-Growth-Markets/CT Article Overview Page Main](http://www.ey.com/US/en/Services/Strategic-Growth-Markets/CT_Article_Overview_Page_Main)
- ▶ The *Database of State Incentives for Renewable Energy (DSIRE)*
 - ▶ <http://www.dsireusa.org/>
- ▶ U.S. Department of Energy – Stimulus Funding
 - ▶ <http://www.energy.gov/recovery/>
- ▶ Pew Center for Global Climate Change
 - ▶ <http://www.pewclimate.org/>
- ▶ United States Green Building Council (USGBC)
 - ▶ <http://www.usgbc.org/>

Questions

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South East State Incentives



Arkansas

- Wind Energy Manufacturing Tax incentive
 - Partial Income tax exemption for manufacturers of windmill blades or components locating in Arkansas.
 - Businesses must demonstrate investment, job creation, and must pay certain wages

Louisiana

- Tax Credit for Solar and Wind Energy Systems on Residential Property
 - 50% of the first \$25,000 of the cost of each system
 - May be applied to corporate or franchise taxes but the system must be installed at either a residence or a residential rental apartment complex.
- PACE Financing
 - Property-Assessed Clean Energy (PACE) financing effectively allows property owners to borrow money to pay for energy improvements.
 - The amount borrowed is typically repaid via a special assessment on the property over a period of years.
 - Louisiana has authorized certain local governments to establish such programs.

Mississippi

- Mississippi Clean Energy Initiative
 - Incentive for companies that manufacture systems or components used to generate renewable energy, including biomass, solar, wind and hydro generation.
 - Eligible manufacturers are offered a 10-year exemption from state income and franchise taxes as well as a sales and use tax exemption to establish a plant or expand an existing production facility.
 - To qualify, a business entity must have a minimum investment of \$50 million and create 250 full-time jobs.

Alabama

- Biomass Energy Program
 - State Grant Program to assist businesses in installing biomass energy systems
 - Program participants receive up to \$75,000 in interest subsidy payments to help defray the interest expense on loans to install approved biomass projects

Tennessee

- Sales and Use Tax Credit for Qualified Facility Manufacturing Clean Energy Technology
 - 99.5% sales and use tax credit paid on qualified tangible property
 - Qualifying manufacturers must make a minimum \$100 million investment, create and maintain 50 full-time jobs for 10 years that pay 150% above the Tennessee occupational average wage, and the taxpayer must be subject to the franchise and excise taxes.
- Wind Energy Systems Property Tax Exemption
 - 2/3 property tax exemption for wind energy systems
- Tennessee Clean Energy Technology Grant
 - Pilot grant program for businesses to install renewable energy systems at their facilities
 - Grant for 40% of installed costs up to \$75,000
 - projects

Kentucky

- Energy Efficiency Tax Credits
 - 30% Corporate tax credit up to \$500 for energy efficient HVAC or lighting installation
- Renewable Energy Tax Credit
 - Investment Tax Credit of \$3/W DC installed for Solar PV and 30% of eligible costs for other renewable energy property up to \$1,000
- Tax Credit for Renewable Energy Facilities
 - incentives to companies that build or renovate facilities that utilize renewable energy, which may include: up to 100% of the Kentucky income tax or the limited liability entity tax; sales and use tax incentives of up to 100%; a wage assessment of up to 4% for associated employees; up to 50% of capital investment
 - Facility must generate at least 50 kW of electricity from solar power or at least 1 MW from wind power, biomass resources, landfill gas, hydropower or similar renewable resources. The electricity must be sold to an unrelated party.
- Sales Tax Exemption for Manufacturing Facilities
 - 100% sales tax exemption on energy efficient manufacturing machinery and equipment
 - Must reduce energy consumption by 15%

Georgia

- Clean Energy Tax Credit
 - Corporate tax credits for renewable energy equipment and certain energy-efficient equipment installed and placed into service
 - 35% for renewable energy systems; \$0.60 per sf. for lighting retrofits, and \$1.80 for energy-efficient products
- Biomass Sales and Use Tax Exemption
 - 100% exemption for biomass materials used in the production of energy
- PACE Financing
 - Property-Assessed Clean Energy (PACE) financing effectively allows property owners to borrow money to pay for energy improvements.
 - The amount borrowed is typically repaid via a special assessment on the property over a period of years.
 - Georgia has authorized the expansion of "business improvement districts" to provide financing for the installation of renewable energy systems, energy efficiency or conservation improvements, and water efficiency or conservation improvements

Florida

- Solar Energy Systems Equipment Sales Tax Exemption
 - Solar energy systems have been exempt from Florida's sales and use tax since July 1, 1997
- PACE Financing
 - Property-Assessed Clean Energy (PACE) financing effectively allows property owners to borrow money to pay for energy improvements.
 - The amount borrowed is typically repaid via a special assessment on the property over a period of years.
 - Local governments were granted clear authority to create PACE financing programs in Florida

South Carolina

- Biomass Energy Tax Credit
 - 25% of eligible cost for landfill gas, Biomass, CHP/Cogeneration, Anaerobic digestion
 - Up to \$650,000 per year
- Solar Energy and Small Hydropower Tax Credit
 - 25% of eligible costs for solar water heat, solar space heat, PV, Solar Cooling, Day lighting, Small Hydroelectric
 - Up to \$3,500
- Biomass Energy Production Incentive
 - Performance-Based Incentive of \$0.01 per kWh / \$0.30 per therm for landfill gas, Biomass, CHP/Cogeneration, Anaerobic digestion
 - \$100,000 per year

North Carolina

- Renewable Energy Tax Credit
 - Tax credit equal to 35% of the cost of eligible renewable energy property
 - Up to \$2.5 M per installation
- PACE Financing
 - Property-Assessed Clean Energy (PACE) financing effectively allows property owners to borrow money to pay for energy improvements.
 - The amount borrowed is typically repaid via a special assessment on the property over a period of years.
 - Local governments were granted clear authority to make special assessments in order to finance installation
- Property Tax Abatement for Solar Electric Systems
 - Exempts 80% of the appraised value

Virginia

- Green Jobs Tax Credit
 - For every green job created with a yearly salary of \$50,000 or more, the company will earn a \$500 income tax credit for five years.
 - "Green jobs" are defined as jobs in the manufacturing and operation of renewable or alternative energy products and technologies used to generate electricity and energy.
- Solar Manufacturing Incentive Grant (SMIG) Program
 - Incentive is paid at a rate of up to \$0.75 per watt for panels sold in a calendar year, with a maximum of 6 MW
- PACE Financing
 - Property-Assessed Clean Energy (PACE) financing effectively allows property owners to borrow money to pay for energy improvements.
 - The amount borrowed is typically repaid via a special assessment on the property over a period of years.
 - Local governments were granted clear authority to establish loan program to provide financing for clean energy improvements