



**Summary of  
25x'25  
ACTION PLAN**

Charting America's Energy Future

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## Charting America's Energy Future

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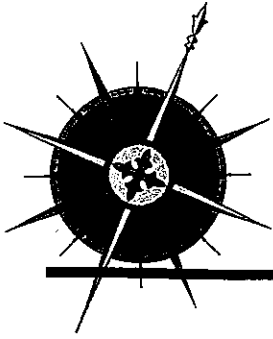
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### 25x'25 Vision

*By the year 2025, America's farms, ranches and forests will provide 25 percent of the total energy consumed in the United States, while continuing to produce safe, abundant and affordable food, feed and fiber.*

February 2007



# Section 1: Executive Summary

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As the 21st century unfolds, America has an opportunity to chart a new course for its energy future – one that uses our abundant natural renewable energy resources<sup>1</sup> to steer us to new economic opportunities and jobs, more robust national security, and a cleaner, healthier environment. Our nation's farmers, ranchers and forest landowners have set a bold vision to provide solutions from the land to meet our energy needs. The right policy framework is needed, however, to realize the vision.

The *25x'25 Action Plan: Charting America's Energy Future*, provides that policy framework and serves as a map for the public and policy makers to use in setting a new course for America. The Action Plan outlines specific steps needed to put our nation on the path to achieve the 25x'25 goal: *By the year 2025, America's farms, ranches and forests will provide 25 percent of the total energy consumed in the United States, while continuing to produce safe, abundant and affordable food, feed and fiber.* While energy demand in the United States is projected to increase 24 percent by 2025,<sup>2</sup> this Action Plan, combined with strong efficiency measures, provides a roadmap for safely, securely, and profitably meeting America's energy needs. Specifically, the Action Plan calls for supportive policies in each of five areas:

- Increasing production of renewable energy
- Delivering renewable energy to markets
- Expanding renewable energy markets
- Improving energy efficiency and productivity

- Strengthening conservation of natural resources and the environment

## A Strong Coalition of Support

In consultation with the more than 400 groups that have endorsed the 25x'25 vision and have collaborated in this process, the 25x'25 Steering Committee has assembled this plan for accelerating the transition to America's renewable energy future. These 400 groups make up the 25x'25 Alliance, a grassroots coalition of agricultural, forestry, business, labor, environmental and civic organizations working to advance renewable energy solutions from our nation's farms, ranches and forests and other working lands, and give the plan a very broad base of support. The plan is based on the principles of partnership, commitment, sustainability, efficiency and opportunity. To achieve the 25x'25 vision, the Alliance urges all Americans to join our efforts to:

1. Work with policy makers and the public to establish and sustain commitment to 25x'25 as a national goal, and to establish and fund necessary enabling policies to achieve this goal.
2. Join in an education campaign to build public awareness and develop new partnerships and alliances to carry the vision forward.

## A Winning Strategy for America

Producing 25 percent of America's energy from renewable sources will yield significant economic development, national security, and environmental benefits. Achieving the 25x'25 goal will:

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<sup>1</sup> Renewable energy is any naturally occurring, theoretically inexhaustible source of energy, such as biomass, solar, wind, tidal, wave, geothermal and hydroelectric power that is not derived from fossil or nuclear fuel.

<sup>2</sup> Energy Information Administration, U.S. Department of Energy ("EIA") (2007). *Annual Energy Outlook*, <http://www.eia.doe.gov/oiaf/aeo/index.html>.

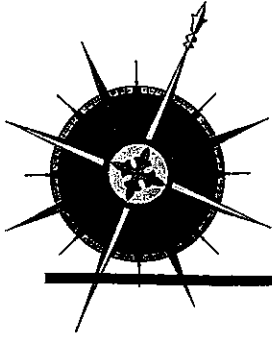
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- Increase farm income by \$180 billion, including \$37 billion in 2025 alone.
- Generate \$700 billion in new economic activity annually.
- Create 4 million to 5 million new jobs.
- Reduce oil consumption by 2.5 million barrels per day – 10 percent of U.S. projected consumption in 2025.
- Reduce carbon dioxide emissions by 1 billion tons – two-thirds of projected emissions growth by 2025.
- o 800 billion kilowatt-hours of renewable electricity and boosting renewable heating and cooling with \$3.7 billion in new tax incentives.
- Ensure that renewable energy gets from rural areas to urban and suburban consumers by:
  - o Creating an expanded network of pipelines, rail lines, ports and other shipping facilities, and new pipeline and shipping opportunities for renewable fuels and feedstocks.
  - o Building new transmission lines with \$3 billion in new tax incentives and improved planning.
  - o Expanding availability of E85 fuel pumps through \$100 million in new incentives, targeted requirements and analyzing infrastructure needs.

## Policy Recommendations

As a first step to put America on the path to a new energy future, 25x'25 is recommending policy makers adopt 35 specific actions, including an investment of only 5 percent of what America spent on imported oil in 2006 for renewable energy programs. These actions correct energy market rules and prices to better achieve the economic development, national security and environmental benefits that renewable energy provides. These recommendations will:

- Increase energy efficiency:
  - o Energy efficiency always should be America's highest-priority energy resource and the energy option of first choice.
- Increase renewable energy production to:
  - o 65 billion to 86 billion gallons per year of biofuel production by providing \$808 million in new funding to expand research, development and deployment; new incentives for farmers, ranchers and forest landowners to use agricultural and forestry residues and grow dedicated energy crops for cellulosic biofuels production; and for the new generation of refineries to turn those crops and feedstocks into fuels.
- Expand renewable energy markets by:
  - o Ensuring that 50 percent of registered vehicles in 2012 are flex-fueled through a new "glide path play or pay" annual obligation for automakers.
  - o Increasing consumer purchases of renewable electricity by increasing federal government purchases to 25 percent by 2025 and a new national Renewable Energy Credit trading market.
  - o Advancing renewable heating and cooling and other uses of renewable energy with \$995 million in new funding for government, small business and residential systems.
- Enhance natural resource conservation and energy efficiency to:
  - o Improve soil and water quality and wildlife habitat by establishing a new Residue Management Assistance Program and increasing funding for existing Farm Bill and other conservation programs by \$3.2 billion.
  - o Enable more farmers, ranchers and forest landowners to adopt renewable energy and energy efficiency projects by increasing funding for the Energy Title of the Farm Bill by \$1 billion.



## Section 2: Summary of Policy Recommendations

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In consultation with the more than 400 groups that have endorsed the 25x'25 vision and have collaborated in this process, the 25x'25 Steering Committee has assembled the following recommendations for accelerating the transition to America's renewable energy future. This initial set of recommendations will be updated and expanded in subsequent reports as technological advances and policy initiatives change our nation's energy future.

Today, renewable energy represents just 6 percent of the energy consumed in the United States, and the Energy Information Administration projects energy demand, absent accelerated improvements in energy efficiency, will increase 24 percent by 2025. To reach the 25 percent goal set forth by our vision statement, America must rapidly increase energy efficiency and production of renewable energy, move that energy to consumers, and ensure that renewable energy has a market. Supportive policies are needed in each of five areas:

- Increasing production of renewable energy
- Delivering renewable energy to markets
- Expanding renewable energy markets
- Improving energy efficiency and productivity
- Strengthening conservation of natural resources and the environment

To deliver the economic, security and environmental benefits of renewable energy to all Americans, 25x'25 is proposing that the government increase funding for programs to meet the 25x'25 goal by \$13 billion annually and \$66 billion over the next five years. This taxpayer investment in renewable energy will yield substantial benefits for all Americans by putting the country on the path to create \$700 billion in new eco-



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nomie development, reducing dependence on imported oil by 10 percent and cutting carbon dioxide emissions by 1 billion tons.

The United States paid more than \$250 billion for imported oil in 2006. By investing a small fraction of that figure in renewable energy, we can reduce our dependence on oil, create new economic opportunities here at home and reduce greenhouse gas emissions.

## 25x'25 New Funding Requirements<sup>3</sup>

Near-Term Actions (1-3 years)	Annual Cost (Additional Costs in million US\$)	5 Year Cost
<b>Farm Programs</b>		
Feedstock Residue Management Assistance Program	\$8 <sup>4</sup>	\$175
Farm Bill Energy Title		
9006	\$250	\$1,250
9010	\$150	\$750
Other	\$600	\$3,000
<b>Expanded Conservation Programs</b>		
Conservation Security Program	\$2,000	\$10,000
Environmental Quality Incentives (EQIP)	\$1,000	\$5,000
Farm and Ranchland Program	\$300	\$1,500
Envir. Improvement/easement programs	\$360	\$2,180 <sup>5</sup>
<b>Energy Programs</b>		
Expanded RDD&D	\$800	\$4,000
Fund Cellulosic Programs		(existing appropriations)
Biorefinery Grant Program		(existing appropriations)
Loan Guarantee Program		(existing appropriations)
Liberty Energy Installations	\$60	\$300
Residential and Small Business Rebate	\$250	\$1,500
Sun Grant Research Initiative	\$75	\$375
<b>Tax Programs</b>		
Renewable Electricity Production Tax Credit (PTC)	\$2,900	\$15,000
Clean Renewable Energy Bonds (CREBs)	\$500	\$2,500
Renewable Transmission Upgrades and Connections	\$3,000	\$15,000
Renewable Heating and Cooling Production Credit	\$300	\$1,500
Expanded E85 Fuel Pump Credit	\$100	\$500
<b>Total</b>	<b>\$12,653</b>	<b>\$64,530</b>

### Increasing Production

A tremendous ramp-up of renewable energy production – for electric power, transportation fuels and thermal uses – will be needed to meet the 25x'25 goal. Specific renewable energy production objectives include:

- Producing 65 billion to 86 billion gallons per year of biofuels
- Generating 800 billion kilowatt-hours per year of renewable electricity
- Rapidly increasing the role of renewable energy in industrial, commercial, institutional and residential facilities
- Further lowering the costs of renewable energy so that it is competitive with fossil fuels

<sup>3</sup> This summary includes additional funding for both existing and new programs. Total costs of these programs would include existing funding and these additional recommendations. These numbers are not adjusted for inflation.

<sup>4</sup> Annual costs for the Feedstock Residue Management Program will increase over time. Annual costs will begin at \$8 million and increase to \$75 million with a 5-year total of \$175 million.

<sup>5</sup> Some program costs increase annually.

- Developing a new array of value-added renewable products.
  - Producing 250 million gallons of cellulosic ethanol by 2012 as called for in the Renewable Fuels Standard.
  - Building a new generation of cellulosic biofuel and biodiesel plants.
  - Developing significant cellulosic feedstock supplies from agricultural and forestry residues and dedicated biomass feedstocks.
  - Building new centralized and decentralized renewable electricity generation facilities.
  - Expanding local ownership of facilities and domestic manufacturing of renewable energy technologies.
  - Expanding opportunities for producer and community ownership of facilities and domestic manufacturing of renewable energy technologies.
  - Improving support for and addressing community concerns about renewable energy facilities.
- Sustainably increasing agricultural and forestry crop energy yields while enhancing environmental benefits.
  - Harvesting, storing, transporting and utilizing biomass feedstocks.
  - Improving cellulosic ethanol and other cellulosic biofuel processing pathways.
  - Developing industrial, commercial, residential and other stationary applications for renewable energy.
  - Lowering the costs of wind, solar, geothermal and other forms of renewable electricity.
  - Developing small-scale and distributed energy technologies.
  - Producing supplementary biobased products that create additional value.

**The following are 25x'25 near-term policy recommendations for achieving the 25x'25 vision.**

**Accelerate Renewable Energy Production**

25x'25 recommends two key actions to accelerate renewable energy production. The first is to focus and expand federal research, development, demonstration and deployment (RDD&D) programs at the Departments of Agriculture and Energy by:

- Establishing a national goal for research, development, demonstration, and deployment that would reduce the costs of renewable energy production by at least 45 percent by 2025. This goal is consistent with the National Renewable Energy Laboratory's current goals.
- Sharply increasing funding for renewable energy RDD&D. RDD&D should focus on:

The second is to expand and extend direct financial incentives for renewable energy production by:

- Continuing existing incentives for the biofuels industry.
- Providing full appropriations for the implementation of loan guarantees for cellulosic refineries and the biorefinery grant program under the Energy Policy Act of 2005. Initial commercial-scale cellulosic biofuel refineries are high-risk investments, and Congress included the loan guarantees and the grant program to ensure that pioneer plants would be built.
- Expanding Section 9010 of the Farm Bill to create a pilot transition assistance program for farmers, ranchers and forest landowners to establish and produce biomass feedstocks for future biofuel and biomass plants.
- Establishing a new investment tax credit of 50 percent for specific conservation improvements to create a new incentive for farmers, ranchers and forest landowners to improve their land. Eligible improvements would include forest management practices, installation of drainage improvements,

and investments in soil pH and fertility enhancements on farms, ranches and forests.

- Increasing and expanding the two critical renewable electricity tax incentives – the Production Tax Credit (PTC) and the Clean Renewable Energy Bonds (CREBs) – and making them long-term and stable. Unless Congress acts, both of these tax incentives expire at the end of 2008.
- Establishing a \$1.25 per million BTU federal heating and cooling tax credit for the use of renewable energy resources in thermal applications in the industrial, commercial, institutional and residential sectors.

## Deliver Renewable Energy to Markets

Delivering renewable energy to markets will require significant infrastructure improvements for transporting renewable fuels and feedstocks as well as transmitting and distributing electricity. Key infrastructure objectives are to:

- Create an expanded network of pipelines, rail lines, ports and other shipping facilities, and new pipeline and shipping opportunities for renewable fuels and feedstocks.
- Build and better manage transmission and distribution systems.
- Allow all renewable electricity producers access to the grid to get power to markets.
- Expand distributed generation for locally produced power.

To ensure that renewable fuels and feedstocks get to market, 25x'25 recommends:

- The Secretaries of Agriculture and Energy conduct a study of comprehensive infrastructure needs for the renewable fuels sector and recommend need-

ed action to ensure delivery of renewable fuels and feedstocks to market.

- Expanding the existing federal tax credit for E85 pumps, raising the \$30,000 cap to \$50,000, applying it to each station that installs an E85 pump, and increasing the percentage that can be claimed from 30 percent to 50 percent, but phasing this out over time.
- Requiring owners or operators of more than 10 retail filling stations to have 10 percent of their stations E85 in any area in which Flexible Fuel Vehicle (FFV)<sup>6</sup> registration exceeds 8 percent. The EPA should report annually on the percentage of FFVs registered in each area of the country. If any of the 10 retail gasoline stations were new or upgraded, they also would be required to have at least one E85 pump.
- Expanding grant programs for E85 corridors.
- Requiring open access for renewable natural gas and other products at reasonable rates to existing energy infrastructure such as gas pipelines and distribution facilities.

To ensure that electricity gets to market, America should ensure the national electricity grid adequately accommodates renewable energy. To do so, 25x'25 recommends:

- The Federal Energy Regulatory Commission (FERC) should require open and inclusive regional transmission planning processes as part of its Open Access Transmission Tariff (OATT) rule.
- Congress should cut through electricity grid funding gridlock by expanding the use of tax-exempt financing for upgrades and new connections to the grid for renewable electricity.
- Each state should simplify renewable interconnection to the electricity grid by adopting interconnection standards and procedures.

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<sup>6</sup> A car or truck that can run on any blend of unleaded gasoline up to 85 percent ethanol (E85).



It is essential that the public be able to access high-quality information on renewable technologies, feedstock, policy and markets. 25x'25 recommends policy makers:

- Fully fund and extend for five years the existing authorizations for the Sun Grant Research Initiative.
- Direct land grant universities and other universities working with existing resources at the Sun Grant Research Initiative to centralize, improve and disseminate a central, searchable database of biomass and other renewable energy resources within one year.

## Build the Renewable Energy Market

The nation must build thriving retail and wholesale renewable energy markets that deliver safe, reliable and affordable renewable energy to customers. Key objectives are to:

- Increase consumer demand for renewable fuels, feedstocks and electricity.
- Increase the number of flex-fueled vehicles.
- Increase the number of biofuels pumps to deliver fuel to the customer.
- Simplify consumer purchase of renewable energy.

To ensure that substantial markets for biofuels are built, 25x'25 recommends:

- Fully appropriating funds for the implementation of the EAct 2005 reverse auction program for cellulosic ethanol to produce 250 million gallons by 2012. In a reverse auction, sellers compete to provide a good or service at the most competitive price. This will help spur a competitive market for cellulosic biofuels.
- That the Secretary of Energy, in consultation with auto manufacturers and other experts, establish a "glide path play or pay" annual obligation for automakers to reach production targets of 50 percent

FFV registration by 2012 or pay a \$1,000 per-vehicle fee into an E85 infrastructure development fund.

- Increasing RDD&D funding for battery development for plug-in and flex-fuel plug-in hybrid and all-electric vehicle technology.

To ensure thriving renewable electricity markets, 25x'25 recommends:

- Directing the Secretary of Energy to work with the private sector to create a national Renewable Energy Credit trading system – a single market where buyers and sellers can come together to trade Renewable Energy Credits.
- Increasing the federal government purchase of renewable electricity to 10 percent in fiscal years 2010 through 2014, 15 percent in 2015, 20 percent in 2020 and 25 percent in 2025.
- State and local governments also should adopt their own requirements to purchase renewable electricity for their own use, which are similar to the federal government's self-imposed requirements.

To promote extended uses and applications for renewable energy, 25x'25 recommends:

- Creating a new "Liberty Energy Installation" program that would provide competitive grants to 10,000 government and private sector facilities to replace existing fossil fuel-based heating and cooling systems with renewable based systems within five years. The program would continue at five-year intervals through 2025.
- Directing public institutions such as universities, hospitals, government facilities and the military to use a minimum of 10 percent renewable energy in 2010, increasing 5 percent every five years to 25 percent renewable energy by 2025 for onsite thermal energy generation in existing facilities by 2025, and to consider renewable technologies as their first choice for all new capacity.

- Extending, expanding and fully funding the residential and small business rebate program in Section 206 of the Energy Policy Act of 2005 to a cap of \$5,000 per installed system that uses renewable thermal or electrical resources.
- Accelerating and expanding the current bio-based product certification system in Section 9002 of the Farm Bill and the USDA BioPreferred program to ensure easy identification and proper valuation of biobased products in the market.

## Improve Energy Efficiency and Productivity

Key objectives are to:

- Make energy efficiency improvements the option of first choice in all energy decisions.
- Reduce overall energy demand growth through strong energy efficiency measures to make it easier to meet our renewable energy objective.
- Have agriculture and forestry play a leadership role in seizing energy efficiency opportunities.
- Align regulatory incentives so the investments in energy efficiency receive a higher rate of return than investments in energy supply and infrastructure.

## Protect and Enhance Natural Resources

Key objectives are to:

- Conserve natural resources and protect the environment.
- Improve soil and water quality, improve wildlife habitat and make efficient use of all resources.
- Ensure that working agricultural, forest and grazing lands remain working lands.

To accomplish these objectives, 25x'25 recommends:

- Increasing funding for the USDA (NRCS) Environmental Quality Incentives Program to assist farmers, ranchers and forest landowners to install biodigesters, conserve water, control erosion, improve soil, water and air quality and wildlife habitat through the production of bioenergy products.
- Creating a new Feedstock Residue Management Program that provides transition assistance for proper use of agricultural and forestry feedstock residues for cellulosic biofuels (focused on the environmentally responsible collection, storage and transportation of residues).
- Expanding the Conservation Security Program to provide incentive payments to farmers, ranchers and forest landowners who produce feedstocks using methods that reduce soil erosion and improve soil, water and air quality and conserve natural resources.
- Reauthorizing the Conservation Reserve Program and maintaining provisions that allow for the production of biomass energy feedstocks consistent with conservation and habitat values.
- Increasing funding for Section 9006 of the Energy Title of the Farm Bill to enable more farmers, ranchers and forest landowners to install renewable energy and energy efficiency projects.
- Increasing funding for existing conservation programs such as the Farm and Ranchland Protection, Forest Legacy and land improvement and easement programs which help ensure a stable, available agricultural and forest land base that will produce America's future food, feed and fiber, as well as many of our energy needs while enhancing natural resources and wildlife habitat.

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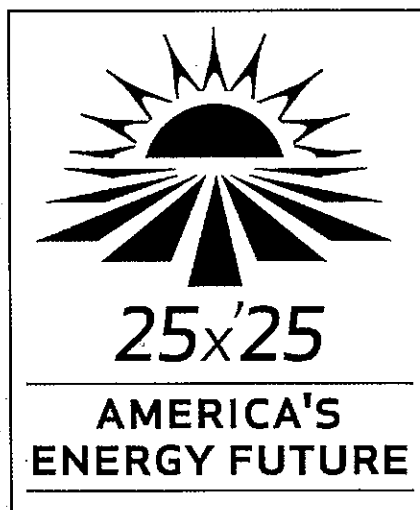
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The 25x'25 Action Plan was written by the 28-member 25x'25 National Steering Committee in consultation with more than 400 25x'25 Alliance partners. Though the views and recommendations in the Action Plan were drawn from repeated consensus-seeking discussions among those 400 Alliance partners, the policy recommendations in the Plan should be attributed to the 25x'25 National Steering Committee rather than to individual Alliance partners.

The complete 25x'25 Action Plan is available at [www.25x25.org](http://www.25x25.org).



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