

NASEO 2014 Mid Atlantic Regional State Energy Offices Meeting

25x'25: Progressing Towards the Goal

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Valley Forge, PA



Bringing the Vision to Life

25x'25: A National Alliance

- Formed through a grant from the Energy Future Coalition
- Organized to explore agriculture and forestry's role in America's energy future
- Evolved to now include conservation, environment, business, defense and rural development organizations and leaders




Nearly 1,000 Partners Strong:



JOHN DEERE



A Touchstone Energy® Cooperative 



Finding the ways that work



Vision for a Sustainable World



Lending support to rural America™



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Today's Energy Paradigm

- Fossil fuel **resources are finite**
- Global energy **consumption is increasing** (nearly 30% by 2030)
- The world **population is growing** (9+ billion by 2050)
- Fast-developing **economies** like India and China **are demanding more resources**
- Greenhouse gas **emissions are increasing** (World carbon dioxide emissions expected to increase by 1.9% annually between 2001 and 2025)



America's Mega Challenges

National Security



Economy



Environmental Degradation



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Need a portfolio approach to meet future energy needs

- Increase energy efficiency/productivity
- Capture wind, solar, hydro, and geothermal energy where feasible
- Provide biomass for generating heat and power and for producing liquid transportation fuels



The 25x'25 Vision

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



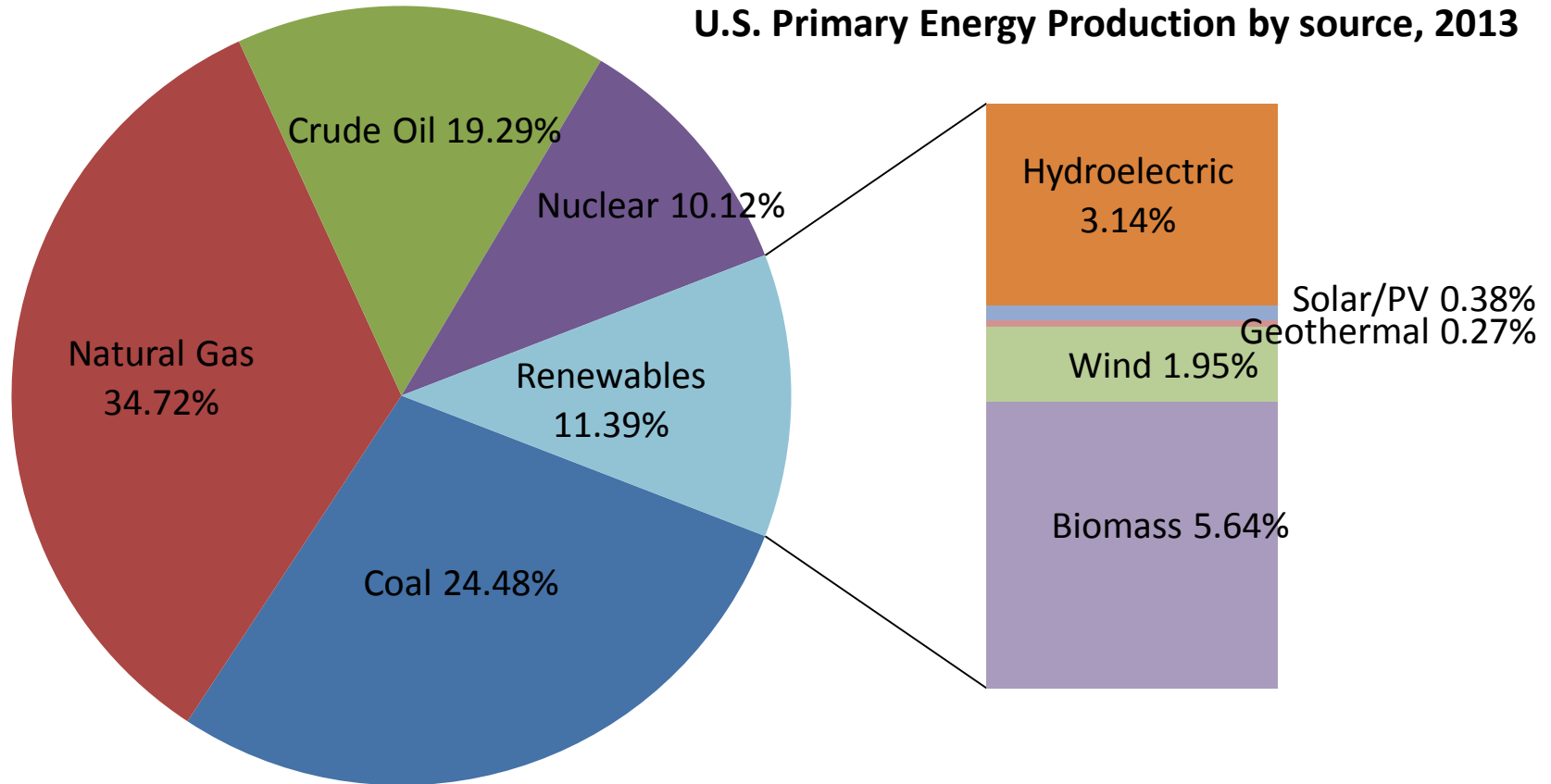
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Where are we now?

2013 Total Energy Production: 81.66 Quad BTU

2013 Renewable Energy Production: 9.30 Quad BTU

U.S. Primary Energy Production by source, 2013



Source: U.S. Energy Information Administration



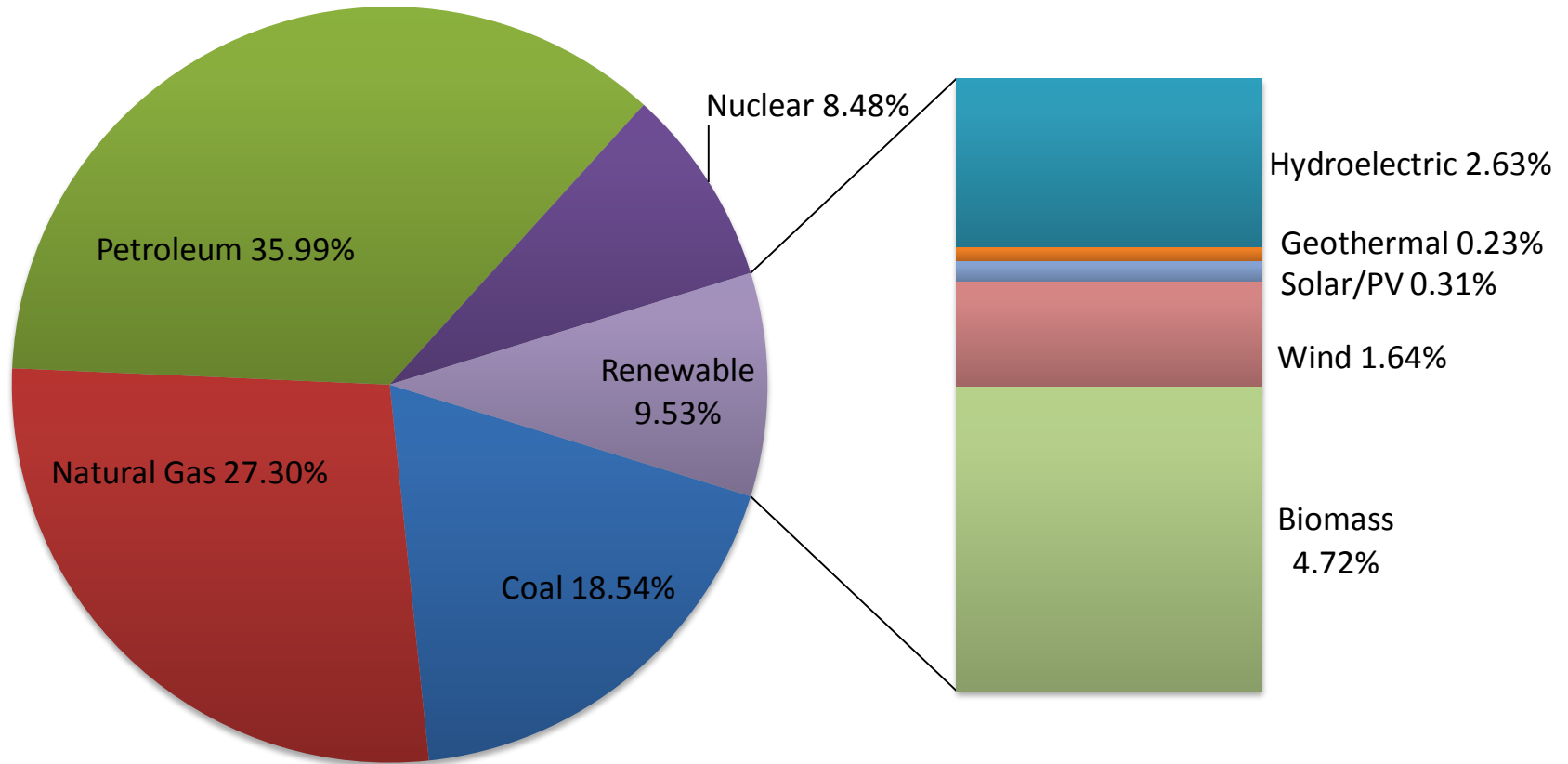
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Where are we now?

2013 Total Energy Consumption: 97.53 Quad BTU

2013 Renewable Energy Consumption: 9.29 Quad BTU

U.S. Primary Energy Consumption by source, 2013



Source: U.S. Energy Information Administration



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2014 Goals

1. Reframe the national agriculture energy conversation: benefits of renewable energy and adaptation strategies
2. Facilitate national biofuel framework plan
3. Protect federal RFS and states' RES
4. Ensure biogenic carbon accounting rules allow for full benefits of biomass energy
5. Support rural electric cooperative distributed renewable energy pilot programs



Challenges

- Infrastructure remains one of the biggest challenges in bringing renewable energy online.
 - Transmission lines need to be modernized and expanded to tap into rural sources of electricity, especially wind.
 - Biofuels need expanded pipelines, rail, ports and other shipping facilities to get to urban consumers; expansion of blender pumps and flex fuel vehicles are also needed.
- Significant long term *public and private investment* is needed to achieve a new, renewable energy future.
- Policy Uncertainty



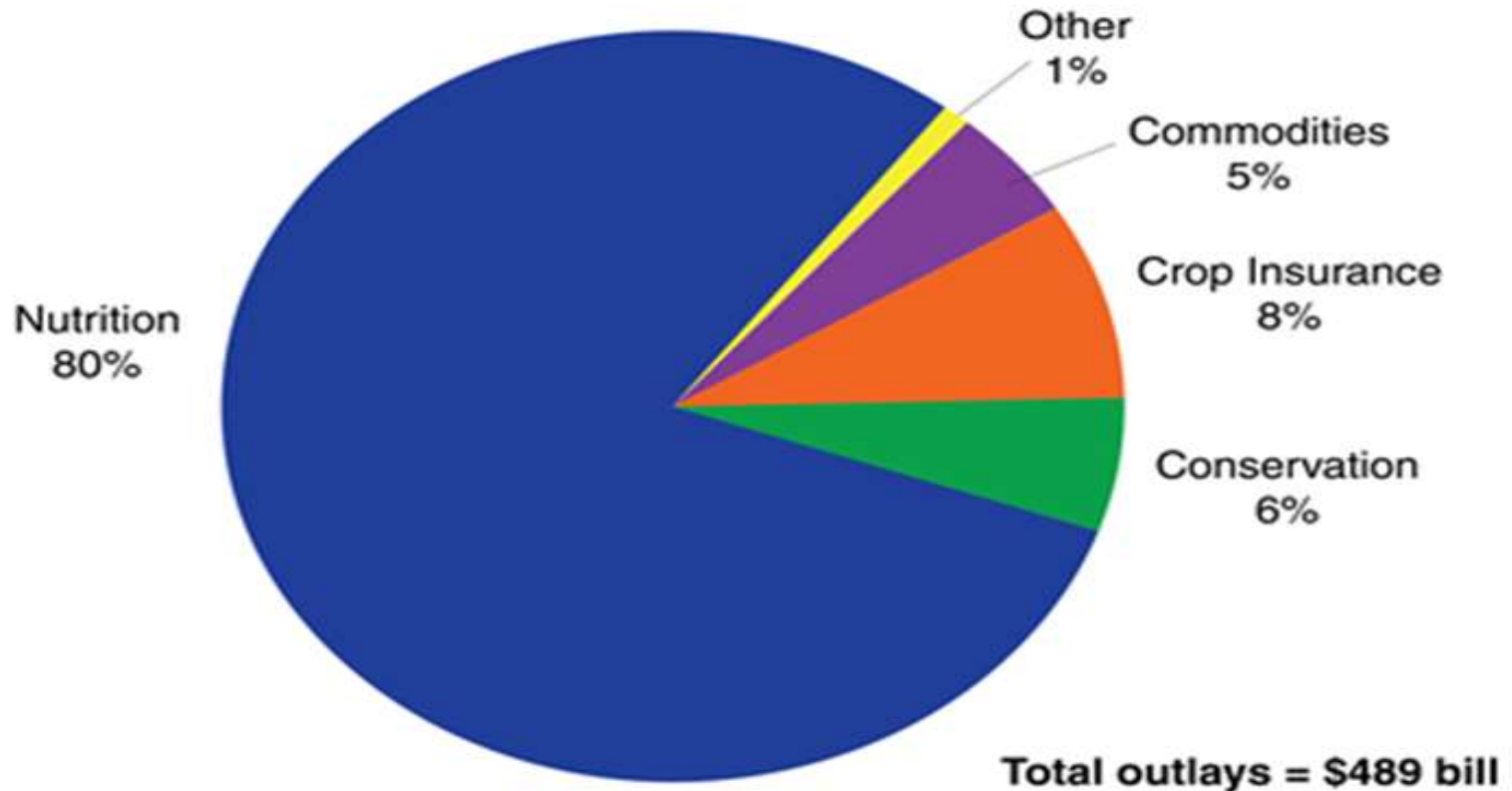
Unresolved Issues

- Renewable Electricity Standards (RES)
- Transmission (siting and financing)
- Definition of renewable biomass
- Indirect land use issues
- Expired/expiring tax credits (PTC/ITC)
- Federal debt/sequestration
- RFS2/ethanol blend wall/E15
- Assessing costs and impacts of GHG regulation and legislative efforts to stop Admin actions



AGRICULTURAL ACT OF 2014 – HR 2642

Projected Outlays under the 2014 Farm Act, 2014-2018



Source: USDA Economic Research Service using data from Congressional Budget Office, Cost Estimates for the Agricultural Act of 2014, Jan 2014.



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Energy Title

(Mandatory Funding In Millions)

| <u>Program</u> | <u>2008</u> | <u>2014</u> |
|---------------------------------|----------------|--------------|
| Biobased Marketing | \$9 | \$15 |
| Biorefinery Assistance | \$320 | \$200 |
| Repowering Assistance | \$35 | \$12 |
| Bioenergy for Advanced Biofuels | \$300 | \$75 |
| Biodiesel Fuel Education | \$5 | \$5 |
| Rural Energy for America (REAP) | \$255 | \$250 |
| Biomass R & D | \$118 | \$12 |
| Rural Energy Self-Sufficiency | \$20 | \$0 |
| Biomass Crop Assistance | \$? | \$125 |
| TOTAL | \$1,062 | \$694 |



| Title IX of the Agriculture Act of 2014 (H.R. 2642) | | | | | | Mandatory Funding | |
|-----------------------------------------------------|----------------------------------|---------------|---------------|--------------|--------------|-----------------------|--------------|
| | | | | | | Discretionary Funding | |
| Section | Total | 2014 | 2015 | 2016 | 2017 | 2018 | |
| 9002 | Biobased Markets Program | \$15,000,000 | \$3,000,000 | \$3,000,000 | \$3,000,000 | \$3,000,000 | \$3,000,000 |
| | | \$10,000,000 | \$2,000,000 | \$2,000,000 | \$2,000,000 | \$2,000,000 | \$2,000,000 |
| 9003 | Biorefinery Assistance | \$200,000,000 | \$100,000,000 | \$50,000,000 | \$50,000,000 | | |
| | | \$375,000,000 | \$75,000,000 | \$75,000,000 | \$75,000,000 | \$75,000,000 | \$75,000,000 |
| 9004 | Repowering Assistance Program | \$12,000,000 | \$12,000,000 | | | | |
| | | \$50,000,000 | \$10,000,000 | \$10,000,000 | \$10,000,000 | \$10,000,000 | \$10,000,000 |
| 9005 | Bioenergy Program for Advanced | \$75,000,000 | \$15,000,000 | \$15,000,000 | \$15,000,000 | \$15,000,000 | \$15,000,000 |
| | | \$100,000,000 | \$20,000,000 | \$20,000,000 | \$20,000,000 | \$20,000,000 | \$20,000,000 |
| 9006 | Biodiesel Fuel Education Program | \$5,000,000 | \$1,000,000 | \$1,000,000 | \$1,000,000 | \$1,000,000 | \$1,000,000 |
| | | | | | | | |
| 9007 | Rural Energy for America Program | \$250,000,000 | \$50,000,000 | \$50,000,000 | \$50,000,000 | \$50,000,000 | \$50,000,000 |
| | | \$100,000,000 | \$20,000,000 | \$20,000,000 | \$20,000,000 | \$20,000,000 | \$20,000,000 |
| 9008 | Biomass Research and Development | \$12,000,000 | \$3,000,000 | \$3,000,000 | \$3,000,000 | \$3,000,000 | |
| | | \$100,000,000 | \$20,000,000 | \$20,000,000 | \$20,000,000 | \$20,000,000 | \$20,000,000 |
| 9010 | Biomass Crop Assistance Program | \$125,000,000 | \$25,000,000 | \$25,000,000 | \$25,000,000 | \$25,000,000 | \$25,000,000 |
| | | | | | | | |



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Biorefinery Assistance Program

Section 9003

- Provides loan guarantees to accelerate development of advanced biofuel, renewable chemical and biobased product manufacturing facilities
- \$200 million front loaded over three years; 2nd largest funded Title IX program.
- Development, construction, retrofit projects remain eligible as before.



Bioenergy Program For Advanced Fuels

Section 9005

- Grant program designed to encourage the production of advanced biofuels, excluding corn starch ethanol
- \$75 million over five years (\$15 million/year).
- Advanced biofuels include production of biodiesel, biogas and wood pellets.



Rural Energy For America (REAP)

Section 9007

- Competitive grant and loan guarantee program for ag producers, rural businesses and electric cooperatives
- REAP received the highest level of funding in the 2014 Farm Bill, \$250 million at \$50 million per year.
- Newly created 3-tier application process for projects below \$80K; \$80K-\$200K; above \$200K. The smaller the grant, the more streamlined the application process.
- Funding for flex fuel pump installation disallowed



Projects Eligible for REAP Funding

■ Energy Efficiency Improvements:

Any projects that save energy (electricity, propane or natural gas, or diesel fuel) are eligible. Examples include dairy pumps and cooling systems, weatherization of poultry houses, efficient lighting and ventilation, irrigation equipment, industrial motors and supermarket refrigeration systems.

■ Renewable Energy Systems:

These can include small and large wind turbines, active or passive solar energy systems, geothermal heating and cooling, anaerobic using food or livestock waste, systems using or producing biomass fuels, or facilities producing ethanol or biodiesel. Blender pumps no longer eligible.



Biomass Research and Development Initiative (BRDI)

Section 9008

- A competitive program funding research, development, and demonstration for feedstock, biofuel, and bioproduct development received
- Program jointly administered with DOE;
- Funding reduction reflects USDA's transitioning toward commercial scale programs, through the Biorefinery Assistance Program, Farm To Fleet, and DoD-USDA funded Navy biofuels program.



Biomass Crop Assistance Program (BCAP) Section 9010

- Cost share program to support the establishment and production of eligible crops for conversion to bioenergy.
- Third largest Title IX program funded at \$125 million.
- Now includes a more detailed list of eligible crops; excluded materials include bagasse, algae and woody material used in other markets.
- One-time payments to establish BCAP crops are limited to \$500/acre (\$750/acre for socially disadvantaged farmers).
- Provides Collection, Harvest, Storage & Transportation (CHST) matching payments up to \$20/dry ton of biomass.



Rural Energy Savings Program (H.R. 4785)

- 2014 Farm Bill authorizes \$75 million/year in discretionary funds over five years to improve energy efficiency in rural America. Places the program into statute for the first time.
- The program provides zero percent loans to cooperatives for relending to customers and paid back through monthly utility bills. Electric Cooperatives have been advocating since 2010 for an energy efficiency program similar to models in South Carolina and Kansas.
- USDA has a similar program under its administrative authority through the Rural Utility Service that was finalized in December 2013.



Energy for Economic Growth Project

- Launched in 2011 by the 25x'25 Alliance to explore how incentive policies might be used to accelerate economic development and distributed renewable energy generation through rural cooperatives and other power providers serving rural communities.



Energy for Economic Growth Project - Phase I (2012-2013)

- Examined how incentive-based rate structures have been utilized in Europe to accelerate the deployment of distributed energy generation in rural areas.
- Conducted a national review to identify candidate rural utility partners for exploring incentive programs.
- Held a Renewable Energy Study tour in Germany to provide potential utility partners with more information on incentive policies.



Tour Findings

1. The transition from centralized to decentralized generation has created economic, national security, and environmental benefits.
2. Individual energy producers and rural communities have been major beneficiaries.
3. Societal support.
4. Incentive policies were part of a long-range energy security plan.
5. Incentive policies offer transparency, longevity, and certainty

Energy for Economic Growth Project - Phase II Path Forward

- Develop an information exchange program between U.S. and German energy cooperatives.
- Initiate collaborative dialogues on renewable energy with rural utilities in partnership with the National Rural Electric Cooperative Association.
- Join with the Cooperative Research Network in developing models of how small-scale generation can be effectively implemented without altering existing power portfolios and obligations.
- Partner with rural electric utilities in piloting and evaluating business and member engagement models for deploying distributed generation renewable energy technologies (e.g. wind, solar, biomass and hydro).

The Path Forward

- The 25x'25 goal is achievable and significant progress has been made, but there is more to be done - all forms of renewable energy must increase production.
- Policy makers and stakeholders must understand that this is a critical need for a **comprehensive national energy policy** that addresses our environment, invigorates our economy and enhances our national security.

Ernie Shea
25x'25 Alliance
Executive Committee



Thank you!
www.25x25.org



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