

Agriculture and Clean Energy Summit Toledo, Ohio

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Overview: ACES Opens Opportunities for Ag Energy

- Renewable Electricity Standard
- Success Stories
- Carbon allowances for agriculture
- Other program benefits for agriculture





Ag Energy and Low Carbon Energy

- Biofuels
- Biogas – manure digesters
- Wind power
- Solar power
- Biomass energy
- Energy Efficiency





Renewable Electricity Standard

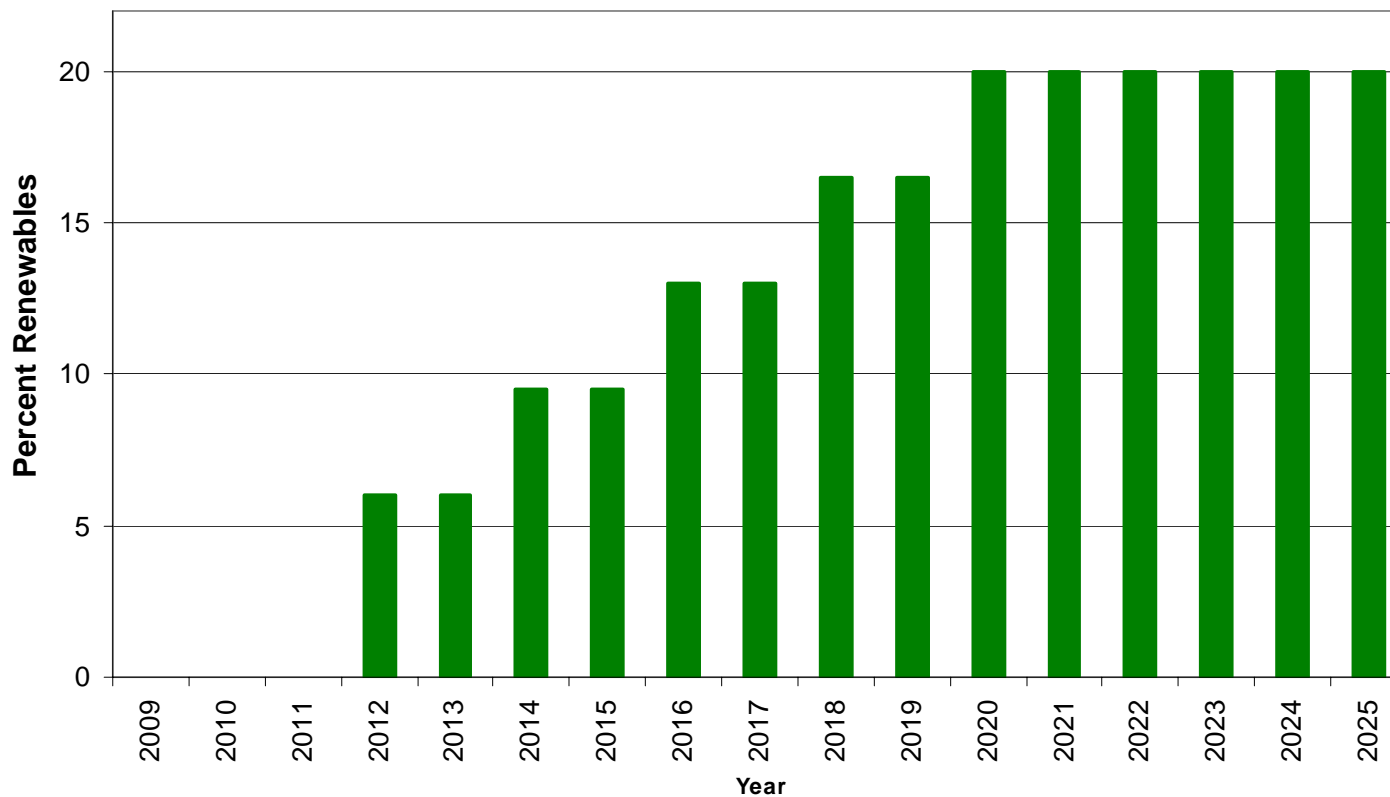
- Works like Renewable Fuels Standard
- Requires electric power retailers to provide a percentage of power from renewable resources
- Small utilities and rural electric cooperatives exempted
- Combined with energy efficiency standard
- Proven in the states – 21 states have an RES
- Provides Renewable Energy Credit trading across states.





ACES Renewable Electricity Standard

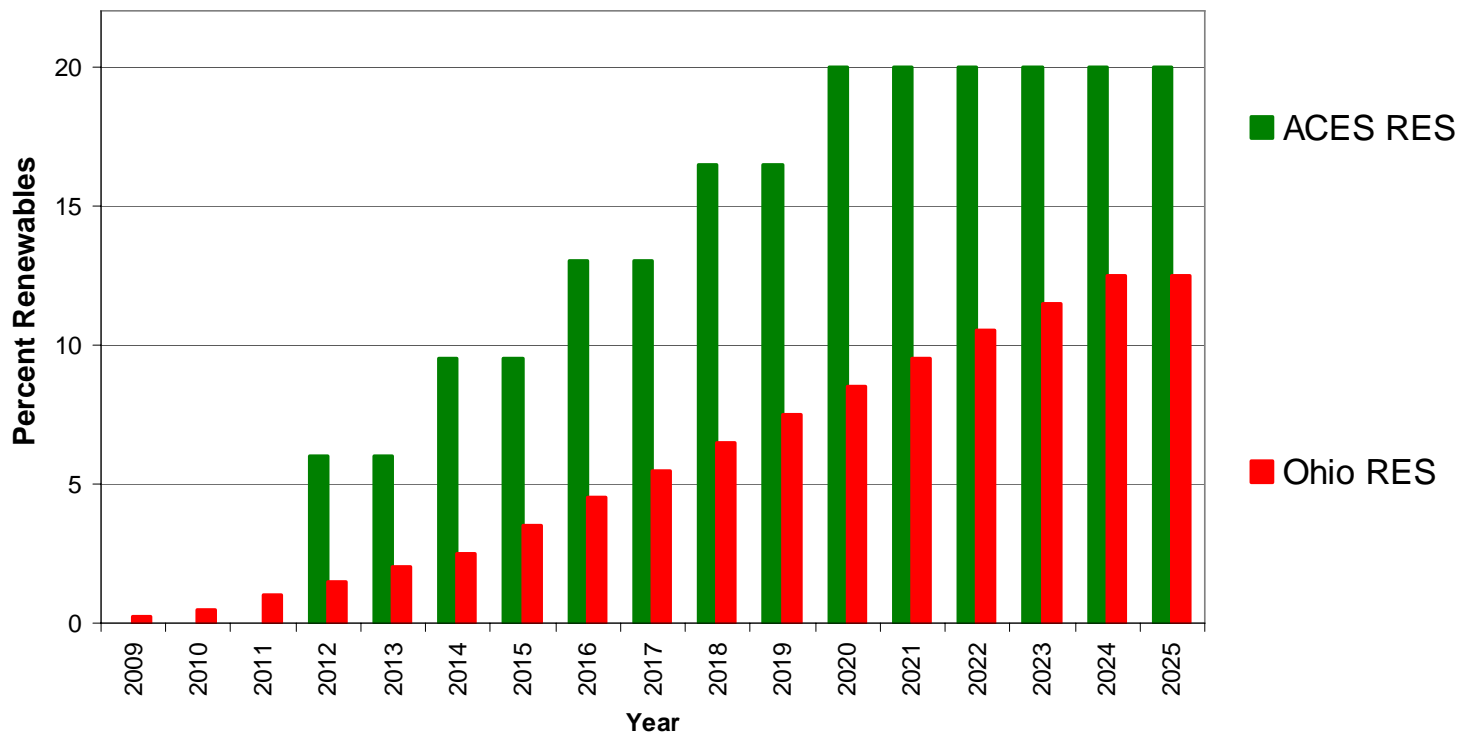
ACES Renewable Electricity Standard





Renewable Electricity Standards

Renewable Electricity Standard Comparison





Benefits of a Strong RES

- Stimulates billions in clean energy investments – much in rural America
- Increases farm income with
 - farmer-owned power generation,
 - biomass energy crop sales,
 - wind lease payments and
 - more
- Save money – energy efficiency cuts bills



Farm Energy Success Studies





Indiana Wind Power Project

- BP Wind Energy pays
 - \$7,500 base rental PLUS
 - Electric sales about \$2,500

"If you offer me the opportunity to have four towers that generate \$30,000 to \$40,000, that's a lot of corn and soybeans."

- Bruce Buchanan, Benton County





Show Me Energy Cooperative Kingsville, MO

- Use waste grass and seed residue from seed operation for fuel.
- Now converting 15 million pounds to biomass pellets with high BTU value
- \$95,000 grant.



- Company now organizing growers cooperatives for energy grasses





Show Me Energy Cooperative Kingsville, MO





Neppel Energy, Iowa Single Turbine Case Study

- Neppels own large grain and hog operation
- Faced annual electric bill of \$200,000+ per year
- Producing enough wind power for 400 Iowa homes.
- Electricity being purchased under long-term contract
- Dozens of small locally-owned wind projects have signed on in Iowa alone, many because of REAP grants.





Cozad Alfalfa Cozad, Nebraska

- Replaced natural gas boiler with biomass boiler in alfalfa pellet manufacture.
- Payback now in less than 5 years.
- Using sawdust that used to go into a landfill.
- Reduces waste, global warming pollution, saves money, improves financial health of Cozad Alfalfa.





Pinehold Gardens Oak Creek, Wisconsin

- 21-acre fruit and vegetable farm
- 2.5 kilowatt dual-axis tracker
- Produced more than expected: 4,400 kwh/year
- \$4,936 grant in 2005
- Installed second system in 2008, \$8,310 REAP grant





Five Star Dairy, Wisconsin

- Manure Digester: Elk Mound, Wisconsin
- An 800-head dairy, began operating its digester in June 2005.
- The digester generates up to 775 kW of electricity, enough power to supply 600 homes.
- 34 digesters funded in Wisconsin. Outreach key by Focus on Energy, Dept of Ag
- REAP Grant: \$108,000





Section 788: Support for Agriculture

- Funding for early adopters of carbon sequestration a likely priority.
- Broad discretion to USDA for other carbon reduction which *might* support clean energy activities
- Possible support for ag energy through state and local programs.





Low Carbon Energy Technology Development

- Incentives to deliver more efficient equipment to market sooner, cutting costs in process
- Accelerate energy efficiency technologies that will help agriculture cut energy consumption – and bills.
- Lighting efficiency standards
- Rebates for high efficiency motors
- Can do even more for agriculture!





National Bioenergy Partnership

- DOE to coordinate state, federal, and private sector programs that promote the deployment of sustainable biomass fuels and bioenergy technologies
- Support infrastructure development for biofuels.





Conclusion

Thank you for listening!

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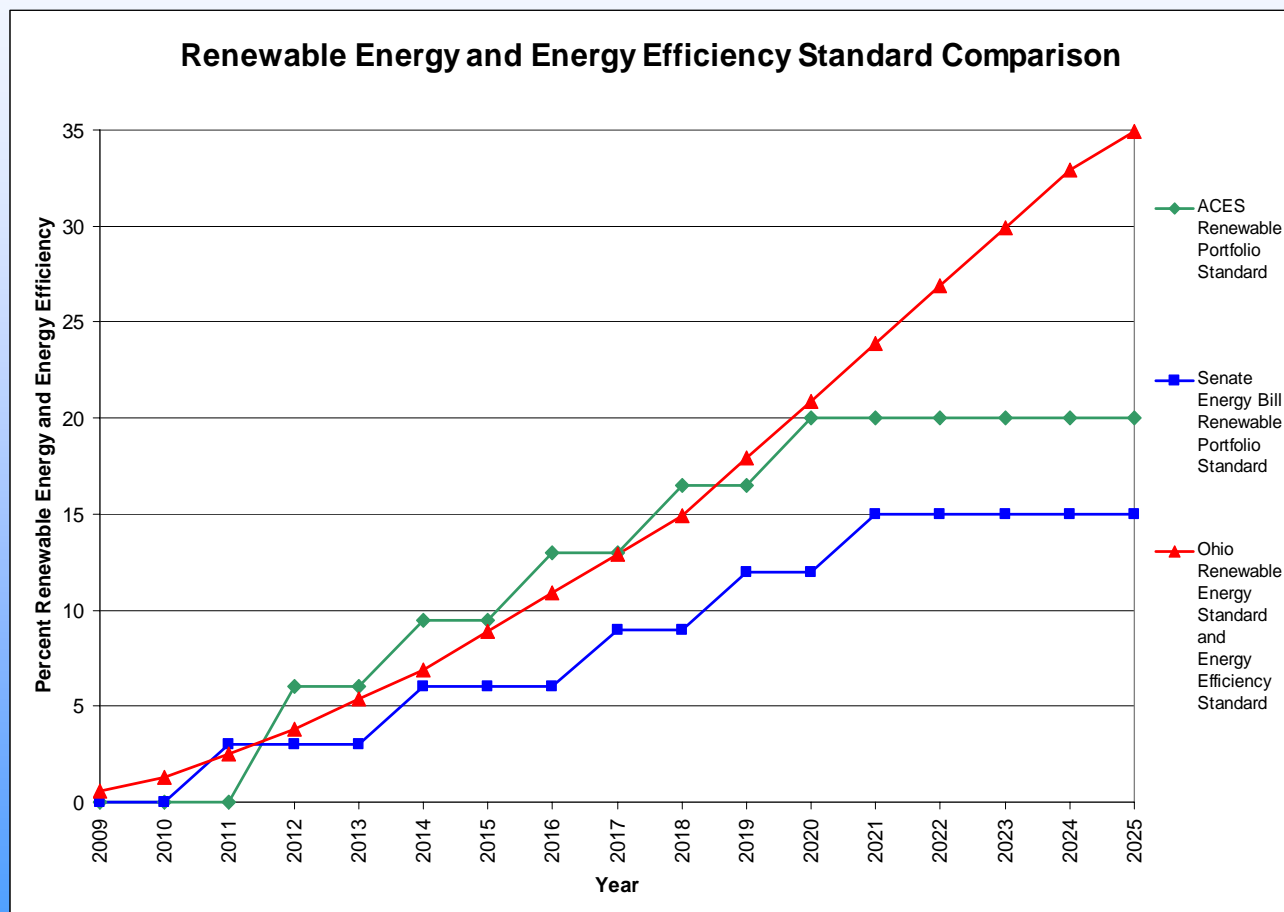






Federal Combined Efficiency and Renewable Electricity Standard

- Define: Functions like the RFS and builds renewable demand
- Requires electric power retailers to provide a percentage of power from renewable resources
- Small utilities and all rural electric cooperatives exempted
- Up to 2/5 of requirement may come from energy efficiency
- A 3x credit multiplier for distributed renewable generation
- Provide Renewable Energy Credit trading
- Compare to Ohio AES





Senate Can Improve

- Use carbon allowance sales for Farm Energy Fund to be used for low carbon farm energy development projects.
- Support broad-based energy efficiency technology deployment
- Build upon success of Farm Bill Energy Title programs
- Low-carbon, existing programs working well
- Rural Energy for America Program supports low carbon energy





Rural Energy for America Program (REAP)

- Formerly “Section 9006”
- Provides Grants and Loan Guarantees. Not direct loans.
- Eligible recipients include “**agricultural producers and rural small businesses**”
- Supports biofuels, manure digesters, biomass, solar, wind, geothermal and energy efficiency

