RENEWABLE ELECTRICITY
Policies Should Encourage the Growth of Renewable Electricity and Keep Consumer Bills Affordable

Electric Cooperatives are Leaders in Providing Renewable Electricity to Consumers.

For several years, electric cooperatives have worked to increase our capacity to generate electricity from renewable resources. Cooperatives receive approximately eleven percent of their power from renewable sources, with about nine percent coming from hydropower and two percent coming from other renewable sources. Currently, 755 co-ops (nearly 90 percent) offer renewable energy options to consumer-owners. In 2008, co-ops saw 65 percent growth in their non-hydro renewable capacity.

Cooperatives use several tools to invest in renewable electricity. For example, cooperatives worked with Congress to create the Clean Renewable Energy Bonds Program (CREBs) in the Energy Policy Act of 2005. CREBs give the not-for-profit utility sector an incentive for building renewable electricity projects because most co-ops cannot use the Production Tax Credit available to for-profit entities. Many cooperative-owned projects are underway already using CREBs and with funding provided through the American Recovery and Reinvestment Act, even more projects should be possible. Moreover, thanks to amendments to the 2008 Farm Bill, cooperatives have greater access to Rural Utilities Service (RUS) funding for building or acquiring renewable generation resources.

Electric cooperatives are going beyond simply tapping federal programs. Many cooperatives have joined the National Renewables Cooperative Organization (NRCO). NRCO is designed to facilitate the development and deployment of renewable resources for electric distribution and generation cooperatives. NRCO allows member cooperatives to invest in renewable generation projects, no matter their location. This helps get renewable electricity into the nation's fuel mix, while reducing its cost for cooperatives in areas that have less access to affordable renewable electricity.

A Renewable Electricity Standard is a Mandate for Distribution Utilities

A Renewable Electricity Standard (RES), also known as a Renewable Portfolio Standard (RPS), is a mandate. An RES tells a distribution utility to sell renewable electricity from approved sources as a set percentage of its total annual retail electricity sales. The utility certifies the sales by submitting an amount of "renewable electricity credits" equivalent to the sales requirement. If the utility cannot meet the mandate through actual sales of renewable electricity, it can buy credits on the open market for the kilowatt hours of sales it lacks or pay a fee to the government.

The House and Senate are examining different versions of such a mandate, and the Obama Administration has stated that it wants to "ensure 10 percent of our electricity comes from renewable sources by 2012, and 25 percent by 2025." In 2007, the latest year for which the

Energy Information Administration has reliable data, non-hydro renewable electricity provided 2.5 percent of the nation's electricity sales.

Whether a mandate to reduce CO_2 emissions comes from Congress or EPA, another mandate on sales of renewable electricity is not needed. Under either alternative, utility investments in renewable electricity will expand. By telling utilities how to achieve these reductions and which renewable electricity to purchase, the additional RES mandate will reduce a utility's flexibility and raise costs for consumers.

The RES Mandate in-depth:

House of Representatives: "American Clean Energy and Security Act of 2009"

The House Energy and Commerce Committee, chaired by Rep. Henry D. Waxman (D-CA), is considering an RES contained within the provisions of the draft "American Clean Energy and Security Act of 2009."

Requirements: The mandate starts at 6 percent in 2012, increases to 8.5 percent in 2014, and reaches 25 percent in 2025. Utilities with annual retail sales of less than one million MWh are exempt. Sales of electricity generated by hydropower or the combustion of municipal solid waste are "backed out", meaning a utility only calculates its obligation to sell renewable energy based on its sales of all other forms of non-renewable generation.

Eligible and Ineligible Resources: Not all renewable resources count toward meeting the mandate. Allowable renewable resources are wind, solar, geothermal, marine, biomass and landfill gas. The RES does not fully recognize hydropower's renewable nature. Only in limited circumstances, generally where a hydropower facility has become more efficient or has added capacity since 2001, does hydropower count as a renewable resource. The RES does not give any credit for utilities' sale of emission-free nuclear power.

The governor of any state can ask DOE each year to let utilities meet 20 percent of that year's requirement with energy efficiency. However, DOE can only grant this request if all utilities (not just co-ops) in the state are in compliance with the EERS for that year.

Credits and Compliance Payments: An included utility certifies its compliance with the RES by turning in "renewable energy credits" to the Department of Energy. The utility can obtain these credits by either actually distributing renewable electricity or buying credits to make up for what it can't distribute. As well, utilities unable to meet the mandate can make "alternative compliance payments" costing the lower of either: 1) 200 percent of the average market value of the previous year's credit; or 2) five cents for every kilowatt hour of renewable electricity required but not sold. DOE will adjust this amount over time for inflation. The payments go into a "Renewable Electricity Deployment Fund" and some are returned to utilities subject to the mandate.

Senate: Senate Energy and Natural Resources Draft Legislation

Sen. Jeff Bingaman (D-NM), Chairman of the Senate Energy and Natural Resource Committee, has put forth a somewhat different RES proposal, with provisions that give utilities more flexibility to meet the mandate.

Requirements: The Senate RES requires that four percent of energy sold come from renewable sources in 2011, and 12 percent by 2016. By 2021, it requires that twenty percent of energy sales come from renewable sources. Utilities with annual retail sales of less than four million megawatt hours a year are exempt. Sales of electricity generated by hydropower or the combustion of municipal solid waste are "backed out", meaning a utility only calculates its obligation to sell renewable energy based on its sales of all other forms of non-renewable generation.

Eligible and Ineligible Resources: Like the House bill, not all renewable resources count toward meeting the mandate. Solar, wind, ocean, geothermal and biomass are deemed eligible renewable resources. This RES also does not fully recognize hydropower as a renewable resource. Only under limited circumstances, generally where a hydropower facility has become more efficient or has added capacity since 2006, can hydropower be counted. The RES does not give any credit for utilities' sales of emission-free nuclear power.

The treatment of energy efficiency in the Senate RES marks a key difference from the overall House approach. The Senate, instead of mandating a separate, additional energy efficiency resource standard (EERS), allows utilities to meet up to 25 percent of the RES through energy efficiency.

Credits and Compliance Payments: An included utility certifies its compliance with the RES by turning in "renewable energy credits" to the Department of Energy. The utility can obtain these credits by either actually distributing renewable electricity or buying credits to make up for what it can't distribute. Utilities unable to meet the standard can make "alternative compliance payments" of three cents per kilowatt hour (an amount which will adjust over time for inflation). The compliance payments go into a fund which DOE will distribute to states for their renewable energy priorities.

The Triple RES Challenge: Availability, Affordability and Transmission:

Renewable Electricity Supplies aren't Uniformly Available

Electric co-op consumers' demand for power has grown and continues to expand at twice the national average for utilities - over two percent per year - because people are moving into electric co-op territory. Electric co-ops have to provide more generation to meet new demand.

In some parts of the country, significant renewable resources are not readily available and therefore cannot help meet the new capacity needs. For example, the Southeast lacks adequate wind or solar resources and there isn't enough biomass to make up the difference. The Midwest can't rely on consistent sunshine for solar power. Even where sun and wind are plentiful, the intermittent nature of the supply means it must be backstopped with other generation, usually gas turbines.

To overcome the challenges of limited supply of renewable electricity in some regions, the RES should allow states to define what counts as a renewable resource for at least half of the federal standard.

Renewable Electricity is Costlier

Electricity produced from renewable sources can be considerably more expensive than electricity produced from traditional sources. Furthermore, purchasing renewable electricity from out-of-state sources will be very burdensome and result in transferring massive amounts of money from local ratepayers to out-of-state producers. Even where renewable resources are plentiful, renewable electricity often costs more to generate. While new coal and natural gas-fired plants produce electricity, on average, for less than seven cents per kilowatt-hour (kWh), generating electricity from new renewable electric plants is significantly more costly. For example, electricity produced with biomass costs over 9 cents per kWh. Moreover, wind energy costs 11 cents per kWh and solar thermal energy costs 21 cents per kWh (before taking into account generous production and investment tax credits)[1].

The Nation Lacks Adequate Transmission to Deliver Increased Renewable Electricity Supplies

On top of that, electric cooperatives would be often required to pay additional transmission fees to use the grid to import renewable power from other states. Transporting significant new quantities of renewable power between the "have" and have-not" regions will require significant, lengthy, and costly upgrades to the cross-country transmission system. Transmission to handle the new renewable energy supplies should be in place before policies can be developed to accommodate the new demand for renewable energy. Congress is not moving quickly enough to solve the tough questions of siting, planning and cost allocation.

A recent study[2] examined the current grid serving the eastern half of the country against goals like the RES. The study concluded that if the "U.S. wants to get 20 percent of its

[1] NRECA calculations based on capacity cost and fuel price assumptions from the U.S. Energy Information Administration, Annual Energy Outlook 2009.

[2] "Joint Coordinated System Plan 2008." Organizations responsible for electric-system reliability in roughly half the states, including the Midwest Independent System Operator, SERC Reliability Region, PJM Interconnection LLC, the Southwest Power Pool, the Mid-Continent Area Power Pool and the Tennessee Valley Authority, contributed to the study.

electricity from renewable [sources] by 2024, ...it would be necessary to build a new electricity circulatory system, including 15,000 circuit miles of extremely high voltage lines." [3] Such a system would cost up to $100 billion.

Therefore, NRECA urges Members of Congress considering any RES to:

- Include a small utility exemption of 4 million MWh.
- Allow efficiency to count for at least 25 percent of the mandate's requirement.
- Allow states to define "eligible renewable resources" for the first 50 percent of the federal standard.

[3] Wall Street Journal - February 9, 2009, "New Grid for Renewable Energy Could Be Costly."