

John Holt

- > 14 years - Senior Manager, Generation and Fuels, NRECA 1993 to present
- > 30 years - Rural Electrification Administration positions as Nuclear Staff Advisor, Chief Power Plants Branch, Deputy Director Power Supply Division, 1963 to 1993
- > 5 years - Baltimore District, Corps of Engineers in hydro electric design and River Basin Studies 1956 - 1963
- > Registered Professional Engineer - Maryland
- > BSME University of Maryland
- > 2 years graduate work in Nuclear Engineering - University of Maryland
- > Executive Committee Nuclear Energy Institute
- > Executive Committee Utility Biomass Energy Commercialization Association (UBECA)
- > Member, Biomass Interest Group (BIG)
- > Executive Committee Utility Wind Integration Group (UWIG)
- > NRECA representative to American Council of Renewable Energy (ACORE), and Solar Energy Power Association (SEPA)
- > NRECA representative to Consumers United for Rail Equity (CURE), Coal utilization Research Council (CURC)
- > ASTM member drafting a standard for Environmentally Preferred Power Planning committee of Association of Rural Electric Generating Cooperatives (AREGC) and Resource Planning Association (RPA)
- > Generation Advisor to Cooperative Research Network
- > Member, Resolutions Committee on Electricity, Consumer Federation of America (CFA)
- > Former member - American Society of Mechanical Engineers, American Nuclear Society, Atomic Industrial Forum, Department of Agriculture Energy Policy Committee, US Citizens for Energy Awareness, USDA representative to Interdepartmental Committee on Nuclear Energy Site Survey, Department of Energy Source Evaluation Board for Clean Coal Technology, REA representative to New Technology Subcommittee of National Association of Regulatory Commissioners.

Energy Independence and Security Act of 2007

This 805 page document started as HR 6 and is commonly referred to as the Energy Efficiency Bill. It was designed to reduce the Nation's dependency on foreign oil by investing in clean, renewable and alternative energy resources, promoting new and emerging technologies and developing greater efficiencies. President Bush signed the Act into law on December 19, 2007. The Act is divided into 16 titles, but this paper will discuss only the highlight of those titles applicable to cooperatives.

Title 1 – Improved Vehicle Fuel Economy - A national fuel economy standard of 35 miles per gallon must be met by 2020. This is a graduated approach, beginning in 2011 and covers the average fuel economy standard for passenger automobile and a separate average fuel economy standard for non-passenger automobiles. After a study by the National Academy of Sciences, the Secretary shall establish fuel economy standards for commercial medium duty and heavy duty on highway vehicles. Grants and Loan Guarantees are established to encourage the development of PHEV and advanced batteries. 90 million/year 2008 through 2012 is authorized for the grants; 1/3 of which goes to local and municipal governments. Other authorizations are included for grants and loan guarantees.

Title 2 – Increased Production of Biofuels - Fuel producers must use at least 36 billion gallons of renewable fuels by 2022. Separately, this is 21 billion gallons of ethanol and 16 billion gallons of cellulosic derived fuel (Yes – I know this adds up to 37 – possibly rounded?); also 1 billion gallons of bio-diesel by 2012. The Administrator is to make a determination for amounts beyond 2022. The National Academy of Sciences shall do a study on the effects of this Act on feed grains, livestock producers, food producers, etc. An ethanol pipeline feasibility study is authorized.

Also, a study of the adequacy of railroad transportation of domestically produced renewable fuel is authorized.

Title 3 – Improved Standards for Appliances and Lighting – DOE must adopt a more rigorous program of setting and updating appliance standards. More appliance standards have been added to the list of standards that DOE has been working on (and been late developing). ASHRAE includes a number of equipment when it publishes its own building standards. DOE must now review these standards and consider adopting them unless they have a valid reason not to. In stead of a national standard for furnaces, air conditioners and heat pumps, there will be regional ones (Reason – an increased air conditioning standard might be cost effective in Arizona, but not Maine). Light bulbs must be 20 to 30% more efficient by 2014 and 65% by 2020 - meaning Compact Fluorescent Lamps and Light Emitting Diodes only and no more incandescent light bulbs unless they can meet the new efficiency standards which CFL and LED’s already meets.

Title 4 – Energy Savings in Buildings - DOE must establish standards for energy efficiency of new manufactured housing. Penalties will be assessed against manufacturers failing to comply. The Weatherization assistance program is reauthorized. A DOE Director of Commercial High-Performance Green Buildings shall be authorized. New Federal buildings and Federal buildings having major renovations must decrease the use of fossil fuels through increased energy efficiency. All general purpose lighting in Federal Buildings must use Energy Star products by the end of Fiscal Year 2013.

The following should be noted as it pertains to cooperatives.

Section D of this title - Promotes industrial waste energy recovery – i.e., Combined Heat and Power. States and Non Regulated Utilities must hold public hearings to consider requests from waste heat sponsors/owners to:

- Purchase all net excess power at rates pursuant to new rate methodology (essentially net metering)
- Wheel net excess power to three of the utility's retail customers for sale by the project owner (retail competition and cherry picking)
- Permit the project owner to build a private distribution system to serve up to three retail customers (retail competition, cherry picking and duplication).
- If the state or the non-regulated utility determines that it is not appropriate to adopt any of the above 3 bullets, it must state the reasons in writing and make the statement available to the public. The Project sponsor can ask for a new hearing every 2 years.

Title 5 – Energy Savings in Government and Public Institutions – Section 532 - PURPA is amended to require States and Non-Regulated Utilities (read cooperatives) to consider:

- Integration of energy efficiency into the integrated resource plans, establishing cost-effective energy efficiency as a priority resource.
- Align utility rates to be an incentive for cost-effective energy efficiency.
- Electricity customers should have direct written or electronic access to information concerning time-based electric rates and access to data concerning sources of power including green house gas emissions.
- Deadlines are confusing – none are given for the first 2 bullets above and one year to set a date and two years to consider for the last two bullets.

FERC is required to assess the status of demand response nationwide, develop a National Action Plan on Demand Response and report to Congress on implementation of the plan.

Title 6 – Accelerated Research and Development - Increased R&D is established for solar, geothermal, marine/wave and energy storage. Electric Cooperatives mentioned for eligible grant applicants for some geothermal and energy storage programs.

Title 7 – Carbon Capture – DOE to conduct R&D to promote regional partnerships to test, expedite and carry out large scale carbon capture (one million tons of CO₂ or more) and sequestration systems and to assess the effects.

Title 8 – Improved Management of Energy Policy - Prohibits manipulation of gas and oil markets. DOE Secretary shall develop and conduct a national media campaign to increase energy efficiency throughout the US.

Title 10 – Green Jobs -
DOL, in consultation with DOE, to create a worker-training program covering energy efficiency and renewable energy.

Title 12 – Small Business Energy Programs - The Small Business Act is amended to include loans for renewable energy and energy efficiency. A small business energy efficiency program is created within the Small Business Administration. The limit for loans to help small businesses develop energy efficiency technologies is increased.

Title 13 – Smart Grid - PURPA amended so that by end of 2008 state commissions will:

- Require utilities to justify not choosing smart grid technologies
- Authorize utilities to recover costs for deploying smart grid
- Authorize utilities to recover cost for obsolete equipment caused by smart grids
- By end of 2009, states and non-regulated utilities must show that they have considered implementing a smart grid information standard.

The Act defines Smart Grid Functions as the ability to develop, store, send and receive digital information concerning electricity use, costs, prices, time of use, nature of use, storage or other information relevant to device, grid or utility operations through one or a combination of devices (note that there are 2 pages of items that the Smart Grid must be capable of).

DOE is to create a “Smart Grid Task Force” and report to Congress every two years on its progress. A “Smart Grid Advisory Committee” will also be created. (DOE has scheduled completing this assignment by March 29, 2008) DOE with FERC and others are directed to conduct R&D on smart grid technologies and its uses. DOE is directed to establish and demonstrate the benefits of a smart grid. NIST is directed to develop protocols and model standards for information management of smart grid devices. FERC is authorized to adopt the NIST standards and protocols.

Almost every title includes sections that authorize energy efficiency and renewable energy grants and/or loans. The Titles also authorize studies to look into the various suggested programs prior to implementation and afterwards to see the effects. Most include reports to Congress on the status and effect of these various program.

FARM BILL

As of January 15, the Farm Bill has passed the Senate and is awaiting House Action. Current language of interest to RUS included in the Senate Bill is:

Section 6103 “Fees for Electrification Baseload Generation Loan Guarantees”

The Rural Electrification Act of 1936 is amended by inserting after section 4 (7 USC 904) the following:

SECTION 5. Fees for Electrification Baseload Generation Load Guarantees.

- (a) In General – For electrification baseload generation loan guarantees, the Secretary shall, at the request of the borrower, charge an upfront fee to cover the costs of the loan guarantee.
- (b) Fee –
 - (1) – In GENERAL – The fee described in subsection (a) for a loan guarantee shall be at least equal to the costs of the loan guarantee (within the meaning of section 502(5)(C) of ;the Federal Credit Reform Act of 1990 (2 USC 661a(5)(C).
 - (2) SEPARATE Fee – The Secretary may establish a separate fee for each loan
- (c) ELIGIBILITY – To be eligible for an electrification baseload generation loan guarantee under this section a borrower shall –
 - (1) provide a rating of the loan, exclusive of the Federal guarantee, by an organization identified by the Securities and Exchange Commission as a nationally recognized statistical rating organization that determines that the loan has at least a AA rating or equivalent rating, as determined by the Secretary, or

(2) obtain insurance or a guarantee for the full and timely repayment of principal and interest on the loan from an entity that has at least an AA or equivalent rating by a nationally recognized statistical rating organization.

- (d) **LIMITATION** – Funds received from a borrower to pay for the fees described in this section shall not be derived from a loan or other debt obligation that is made or guaranteed by the Federal Government.

Note that there has been a lot of discussion over the Fee, cost of insurance, rating etc. OMB initially wanted to establish an upfront fee of 190 basis points. CBO said they were more concerned over risk (payment of fee didn't diminish risk) so they wanted an AA rating and insurance. The Farm Bill language does not set the fee amount. CBO says that with the insurance and rating, the fee should go down substantially.

SECTION 6104. DEFERMENT OF PAYMENTS TO ALLOW LOANS FOR IMPROVED ENERGY EFFICIENCY AND DEMAND REDUCTION.

Section 12 of the Rural Electrification Act of 1936 is amended by adding at the end the following:

The Secretary shall allow borrowers to defer payment of principal and interest on any direct loan made under to Act to enable the borrower to make loans to residential, commercial and industrial consumers to install energy efficient measures or devices that reduce demand on electric systems. The total amount of the deferment shall not exceed the sum of the principal and interest on the loan. Payback period is not to exceed 60 months.

Other sections are:

6105 Rural Electrification Assistance gives definition on Rural Areas, and included Broadband Access.

6106 covers Guarantees for Bonds and Notes issued for electrification or telephone purposes.

6107 expands 911 access.

6108 on Electric Cooperatives defines Renewable Energy Sources and provides for transmission lines to wheel power from renewable resources.

6109 deals with Agency procedures requiring RUS to contact applicants monthly on the status of their loan application, deals with facilitation on transition from analog wireless to digital wireless and permits deletion of bonds in contracts if the contract warranty suffices or the costs and conditions associated with the bond exceeds the benefits.

6110 gives greater access to Broadband Telecommunication

I did not attempt to deal with these or comment on them other than to state they're in the Act.


Energy Independence and Security Act of 2007

Farm Bill of 2008

*John Holt
Senior Manager Generation/Fuel
February 20, 2008*



**National Rural Electric
Cooperative Association**

A Touchstone Energy Cooperative 

ENERGY BILL 2007

An 805 page document designed to reduce the Nation's dependency on foreign oil by investing in clean, renewable and alternative energy resources, promoting new and emerging technologies and developing greater efficiencies. The Act is divided into 16 titles, but this paper will discuss only the highlights of those titles applicable to cooperatives.

ENERGY BILL OF 2007

- ◆ Title 1 – Improved Vehicle Fuel Economy. A national fuel economy standard of 35 miles per gallon must be met by 2020.
- ◆ Title 2 – Increased Production of Biofuels – Fuel producers must use at least 36 billion

ENERGY BILL 2007

- ◆ Title 3 – Improved standards for appliances and lighting
 - Production of incandescent lights will be gone by 2014 and only CFL and LED lights to be used. DOE given more appliances to be included for standards.

ENERGY BILL OF 2007

- ◆ Title 4 – Energy Savings in Buildings – DOE to establish standards for energy efficiency of manufactured housing.
- ◆ Title 5 – DOE to apply energy savings to all new government buildings and public institutions.

ENERGY BILL OF 2007

- ◆ Title 6 – Accelerated Research and development – Accelerated R&D authorized in solar, geothermal, marine and hydrokinetic technologies as well as energy storage.
- ◆ Title 7 – Carbon Capture – Authorization for demonstration of carbon capture and sequestration included.
- ◆ Title 10 – Green Jobs – A program will be established for job training in renewables and efficiency.

ENERGY BILL OF 2007

- ◆ Title 12 – Small Business Energy Programs – Loans and grants will be available to small businesses for energy efficiency and renewable projects.
- ◆ Title 13 – Smart Grid – PURPA amended to accelerate the “smart grid”. A “Smart Grid Task Force” and a “Smart Grid Advisory Committee” to be established. Energy Efficiency to be incorporated into integrated resource plans.

FARM BILL OF 2008

- ◆ Rural Electrification Act of 1936 is amended to include the following:
 - For electrification baseload generation loan guarantees, the Secretary shall, at the protest of the borrower, charge an upfront fee to cover the cost of the loan guarantee. Fee to be at least equal to the costs of the loan guarantee.
 - The Secretary may establish a separate fee for each loan.

FARM BILL OF 2008

- Borrowers shall provide a rating of the loan of at least AA rating.
- Obtain insurance or a guarantee for full and timely repayment from an entity with an AA rating.
- Funds for fees and insurance to come from other than Federal Government.