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Re: TN Chapter of the Sierra Club Comments in Response to TVA's Draft Supplemental Environmental Impact Statement for a Single Nuclear Reactor at the Bellefonte Site, Jackson County, Alabama.

Contact:

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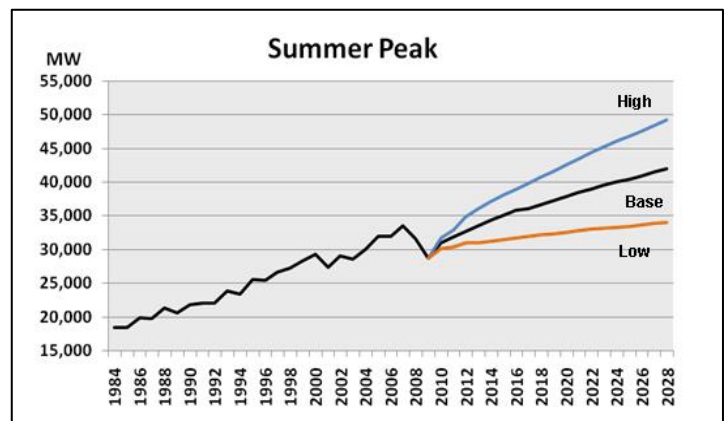
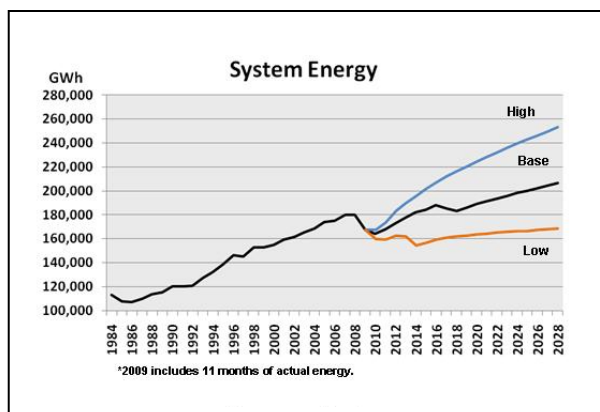
December 28, 2009

The TN Chapter of the Sierra Club respectfully submits these comments in response to the Tennessee Valley Authority's Draft Supplemental Environmental Impact Statement (SEIS) regarding the proposed construction of a single nuclear reactor at the Bellefonte site in Jackson County, Alabama.

The TN Chapter of the Sierra Club is concerned about the impacts energy choices have on our health, economy and environment. We have serious concerns about TVA's proposal to build a new reactor at the Bellefonte site. TVA's continuing organizational commitment to construction of new generating capacity ignores the power of energy efficiency and demand response and their benefits to the people of the Tennessee Valley. Indeed, TVA is violating its mandated responsibilities to provide electricity at the lowest cost to its customer by not making energy efficiency its first choice to meet its projected increases in demand.

We strongly recommend that TVA pursue the No Action Alternative.

1. TVA's projection for 2030 system energy and summer peak are inaccurate and cannot be used to determine the need for more generating capacity:



- The projections do not include the 1200 MW peak reduction that TVA currently is on-track to delivering in 2012.

- The projections do not include the effects of the Time of Use pricing rate structure that will TVA will start charging its distributors in 2012.
- The projections do not reflect the anticipated legislation that will place a price on carbon.

2. Energy efficiency should be given full consideration as reasonable alternatives under NEPA.

Beyond the energy efficiency savings derived from TVA's 1200 MW peak reduction programs, TVA does not have an energy efficiency program. Indeed TVA's analysis of energy efficiency in the Draft SEIS essentially consists of three sentences:

*Reducing peak demand and energy needs lowers the need for additional capacity in the future. Energy Vision 2020 examined the potential merits of a large number of different energy efficiency and DSM measures and TVA is updating these analyses in its ongoing IRP process. These resource options could reduce demand, particularly peak demand, substantially in the future, **but will take time to implement and their results are uncertain.***

- TVA provides no discussion of energy efficiency's potential in the valley, the ability of TVA to implement programs to achieve efficiency goals, or the benefits and costs associated with pursuing this resource.
- These statements do not fulfill NEPA's requirement that a SEIS "present the environmental impacts of the proposal and the alternatives in comparative form, thus sharply defining the issues and providing a clear basis for choice among options by the decision maker and the public." It is at the heart of NEPA that the rationale for these decisions be documented with rigorous and objective evaluation so that regulators and the public can understand the selection of one alternative over another.

The rapid growth of energy consumption in the South, coupled with a concern for dependable, affordable, and climate-friendly energy in the future, has led policymakers to ask how much energy waste can be eliminated by investing in energy-efficient technologies. Utilities in the South have "bought the market" for demand-side management programs to reduce its peak power requirements. However, the South has been one of the last regions in the country to embrace energy efficiency programs and to develop an energy-efficiency culture of consumer behavior.

- The South (a 16 state region) has 37% of the population but consumes 44% of US energy. 77% of its energy comes from fossil fuels.
- The South has the lowest rates of market penetration of *Energy Star* appliances.
- The South's per capita spending on electric utility energy efficiency programs is just one-fifth the national average

Tennessee would need to reduce its electricity intensity by 66% to match the current intensity in California and New York, the national EE leaders. TN ranks 40th in population and 24th in per capita energy efficiency expenditures.

A large reservoir of cost-effective energy savings exists in the South, sufficient to largely offset the projected growth in energy consumption over the next decade. The full deployment of energy efficient technologies could bring energy consumption in 2020 down nine percent below projected levels, completely offsetting the need to expand electricity generation capacity in the South through the year 2020. With vigorous policies, it is possible to reduce energy consumption in the South by one percent per year, which would more than eliminate the projected growth in energy demand in the region. This level of energy savings

generally means negative load growth, but the region will still need to replace aging power plants.

At least 10 states and the Northwest have targeted energy use reductions of 1.5 percent to 2.5 percent over the coming years. Others states are in a resource planning process or have open public service commission dockets. The result is a long-term trend of shrinking, rather than growing, electricity demand.

3. The need for additional generating capacity in an energy transformation economy is controversial.

The recession has reduced the consumption of electricity. Prior to the recession, electricity growth had been increasing 5 percent annually. Net power generation in the U.S. dropped by 7.6 percent in July 2009 from July 2008, according to the EIA, along with a drop in industrial production of 13 percent.

Many utility executives say that traditionally, electricity use recovers within a year or two after a recession, but they believe that this recession's recovery will not follow the pattern because of advances in energy efficiency.

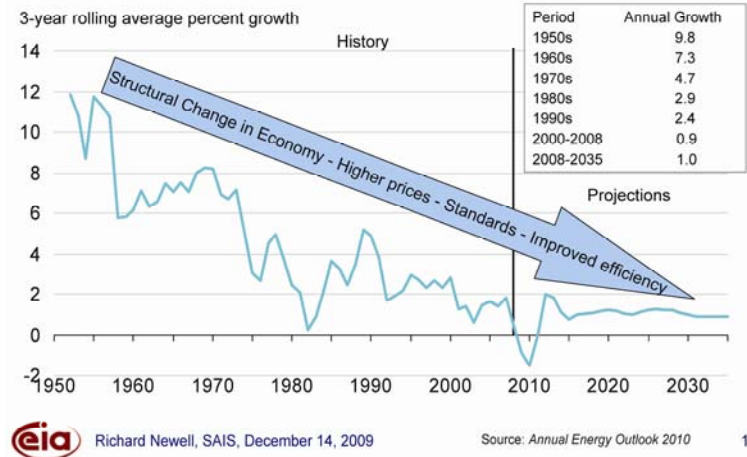
In April 2009, chair of the Federal Energy Regulatory Commission, said that because of the combination of renewable energy and energy efficiency, the US might not need to build any coal or nuclear plants to meet the base-load. However, aging generation units approach, and in some cases, exceed their retirement, and the challenge will then to replace their capacity with the most forgiving electricity sources. Renewable energy sources are indeed the energy supply option of choice.

The Obama administration's seriousness in pursuing its energy efficiency transformation goals became clear with the unveiling of the American Recovery and Reinvestment Act, appropriating \$97 billion in energy efficiency-related funding and aims to mobilize roughly \$100 billion more in private capital. The unprecedented speed and scale of the government's commitment to technologies that use or generate energy efficiently, with minimal impact on the environment, will dislocate strategies and disrupt market shares in the energy sector for years to come. ARRA's goal is to create or retain roughly 300,000 jobs through the energy-related elements of the stimulus package. Some of the longer-term consequences include,

- Energy efficiency technology learning curves will accelerate
- Innovative new players should gain a measure of strength
- Successful programs sustained by future government support are likely to emerge.

In December 2009, the EIA released an updated projection of the growth in electricity. It shows that electricity use will continue to slow. Between the period 2008-2035, the EIA projects an annual electricity growth of 1%. TVA's base projection forecasts a 2% growth in the same time period. TVA needs to revise downward its need for additional capacity. TVA would have absolutely no difficulty exceeding a 1% annual energy savings.

Growth in electricity use continues to slow



4. TVA and its distributors need to address their problems of revenue and an outmoded mission rather than hold the Valley an energy hostage.

TVA and its distributors make money strictly on how much power they sell and how much they can recover in increased rates from the capital investments of building new generation sources. The single largest barrier to unrolling energy efficiency in our region is how to ensure that the TVA and its distributors can cover their costs as power sales decline.

Since TVA got into the power generation business, its mission has been to increase use of electricity to spur economic development. Neither TVA nor its distributors seemingly have the ability to get beyond that creed to transform themselves into a modern electricity system that sees energy efficiency as an energy resource that will save money, create jobs, and benefit everyone. This lack of vision keeps the TN Valley locked out of the world that is rapidly learning how to smartly use energy efficiently and distributively.

5. Renewable energy alternatives should be given full consideration as reasonable alternatives under NEPA.

The whole of TVA's SEIS analysis regarding renewable energy alternatives consists of the unsupported statement that:

Renewable resources (wind and solar) are intermittent in nature and have capacity factors typically well below 50 percent. There is uncertainty about when the wind and solar generation resources will be available. Wind and solar generation potential is limited in the TVA region. In order to obtain meaningful amounts of power from these sources, TVA would need to purchase wind and solar power generated in other regions and bear the increased transmission costs. For these reasons, renewable resources are not considered reasonable baseload alternatives.

- TVA does not offer a fair consideration of these resources. Instead, TVA dismisses these resources as unreasonable alternatives through statements with little or no substantive support.
- Utility systems around the United States are pursuing energy efficiency and renewable energy as the *preferred* alternative to meeting future growth in energy demand.

TVA and other southeastern utilities have stated that the Southeast will face significant cost and difficulty meeting a national RES due to scarce access to renewable energy resources. Repeated studies have shown that the Southeast can meet a national renewable energy standard of at least 15% by 2015, 20% by 2020, and 25% by 2025 with today's technology. Major near term potential renewable energy resources include our current hydrogeneration, onshore wind, and solar.

Tennessee Potential:

- TN can produce 30% of its current electricity demand from rooftop solar. (covering .58% of its land area.
- TN can produce 2% of its current electricity from wind power

6. TVA is required to choose energy efficiency over all other supply options because it is the lowest cost option.

One of TVA's primary mandates is to provide power at the lowest cost. Energy efficiency is enormously less expensive than nuclear energy by any measure. TVA customers can cut billions off their future electric bills. While these savings will require substantial investments, they cost less than the projected cost of electricity from conventional sources. Money saved from energy efficiency increases consumer purchasing power, adding to expand the TN economy.

Energy efficiency is by far the least costly energy resource options available for utility resource portfolios. Saving a kWh through energy efficiency improvements is easily one-third or less the cost of any new source of electricity supply, whether nuclear or renewable energy source.

7. Reducing demand for electricity with efficiency and renewables will reduce emissions from TVA fossil fuels at its coal units, offering the Valley a more sustainable environmental future at an affordable cost.

Every watt not used reduces the amount of CO2 generated by coal-fired generating units. Because energy efficiency eventually pays for itself in lower electric bills, it truly is the lowest hanging fruit. Appliance standards, demand side management programs, high performance building (residential, commercial, and public), and building codes have the highest potential in reducing GHG the most.

8. TVA can revitalize the Valley's economy through energy efficiency and renewable programs.

Energy efficiency and renewables are labor rather than capital intensive. Through an aggressive EE/DR and renewable utility programs, TVA will put the Valley back to work. The Pew Charitable Trust identified Tennessee as one of the top 3 potential leaders in clean energy jobs. Nationally, \$100 billion invested in renewables and energy efficiency could create two million jobs in two years -- less money, more jobs than nuclear, in a fraction of the time.

Any other policy threatens to starve the Valley economy in the global competition for economic development, particularly considering what's happening in nearby states like SC. Ignoring the enormous waste of energy within the present system disadvantages the Valley in the transforming economy.

9. TVA should wait until the Integrated Resource planning process makes its recommendations to the TVA Board.

For TVA to make a decision now about construction of one or more Bellefonte nuclear generating units undermines the IRP process and the purpose of the Stakeholder Review Group. The touted TVA "culture change" appears no more than another round of musical chairs and perception management. You cannot both ask the public for what it wants and go ahead with what the TVA power planning group wishes before the IRP process has had the chance to make recommendations.

TVA is perpetuating the doubts and suspicions of the people in the Valley. The suppression of information of EE/DR plans in the base forecast merely offers us more of the same lack of credibility that TVA says it wants to overcome. What lessons has TVA learned from the Kingston Coal Ash Disaster in how it relates to the public?

Conclusions

- Energy efficiency resource policies can offset the projected load growth in the Valley over the next 15 years.
- Expanded development of renewable energy resources would further reduce future needs for conventional generation.
- Combined, these policies can serve over 25% of projected needs for electricity in 15 years, deferring the need for many new electric power generation projects in the Valley.
- The economic savings from the recommended policies can dramatically cut consumer's electricity bills. While these savings will require substantial investments, they cost less than the projected cost of electricity from conventional sources.
- Reducing demand for electricity with efficiency and renewables will reduce emissions from combustion of fossil fuels at utility power plants, offering the Valley a more sustainable environmental future at an affordable cost.

The Valley faces important decisions on its energy future. The current course calls for investments in new nuclear generation to make sure the system has enough electricity to sustain economic prosperity. Energy efficiency and renewable energy resources offer a lower cost, cleaner and less risky course, without sacrificing the Valley's quality of life.

The TN Chapter of the Sierra Club strongly recommends that TVA pursue the No Action Alternative