

# **Comments in Response to Tennessee Valley Authority's Release of its Draft Integrated Resource Plan and Accompanying Environmental Impact Statement (No. 20100379) for Public Review and Comment**

Submitted by the National Association of Energy Service Companies (NAESCO)

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The National Association of Energy Service Companies (NAESCO) appreciates the opportunity to file these reply comments on the Draft Integrated Resource Plan.

NAESCO numbers among its members some of the most prominent companies in the world in the HVAC and energy control equipment business, including Honeywell, Johnson Controls, Siemens, Trane, Comfort Systems USA Energy Services, and Schneider. Our members also include many of the nation's largest utilities: Duke Energy, Pacific Gas & Electric, Southern California Edison, and the New York Power Authority. In addition, ESCO members include affiliates of several utilities including ConEdison Solutions, FPL Energy Services, Pepco Energy Services, Constellation Energy Projects and Services and Energy Systems Group. Prominent national and regional independent members include, AECOM Energy, NORESKO, Onsite Energy, EnergySolve Companies, Ameresco, UCONS, Chevron Energy Solutions, Synergy Companies, Wendel Energy Services, Control Technologies and Solutions, Clark Realty Capital, McClure, and Lockheed Martin.

Over the last twenty-five years, NAESCO member ESCOS have delivered more than \$40 billion of energy efficiency, renewable energy, demand response and distributed generation projects to institutional, commercial, residential and industrial customers nationwide. These projects have produced:

- \$50 billion of dollar savings to customers, **verified and guaranteed**
- 377,000 person-years of direct employment
- \$34 billion of public infrastructure improvements
- 480 million tons of Carbon Dioxide saved, **at no additional project cost**

NAESCO member companies deliver between \$4 and 5 billion in energy efficiency projects in the US and tens of millions of dollars worth of projects in the TVA service territory annually.

## **Summary of Comments**

NAESCO believes that the recommendations contained within the Draft IRP grossly underestimate the achievable energy efficiency in the TVA region. The adoption of an IRP that is not founded on capturing all cost-effective energy efficiency is a disservice to the millions of consumers served by TVA and a slight on the storied history of TVA's delivery of energy resources that facilitate economic development in the region.

## **Discussion**

NAESCO is a trade organization and not a research organization, and therefore our comments will not dispute the fine points of the analyses that have been put forward by the TVA and a number of other parties. NAESCO is an organization of businesses that are grounded in the practical realities of delivering measured and verified energy efficiency savings and, in many instances, operating and maintaining energy efficiency and renewable energy projects over a multi- year time frame.

## **Potential of Energy Efficiency**

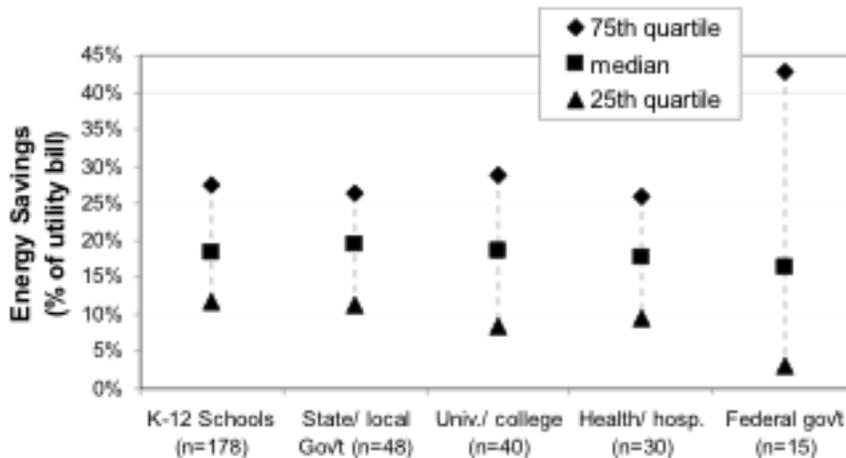
From direct market experience, we firmly believe that the projection of 7% aggregate achievable potential for energy efficiency in the TVA territory over the next twenty years, and the concomitant projection that the region will achieve almost no energy savings between 2020 and 2030, lacks credibility. Our member companies work in a number of states that have already reached this aggregate threshold, and where energy efficiency production continues to increase each year at double the incremental annual savings that TVA says it can achieve a decade from now.

The day-to-day market experience is that the billions of dollars of projects our member companies deliver to federal, state and local government agencies each year routinely generate decreases of more than 20% of their baseline energy expenditures<sup>1</sup>, as depicted in the graphic below. These savings are achieved through capital equipment retrofits employing a comprehensive mix of energy efficiency technologies. Another 10-20% savings is typically available through rigorous building operation.

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<sup>1</sup> *Public and Institutional Markets for ESCO Services: Comparing Programs, Practices and Performance*, LBNL-55002, Lawrence Berkeley National Laboratory, 2005, available at: [http://eetd.lbl.gov/ea/EMS/EMS\\_pubs.html](http://eetd.lbl.gov/ea/EMS/EMS_pubs.html)

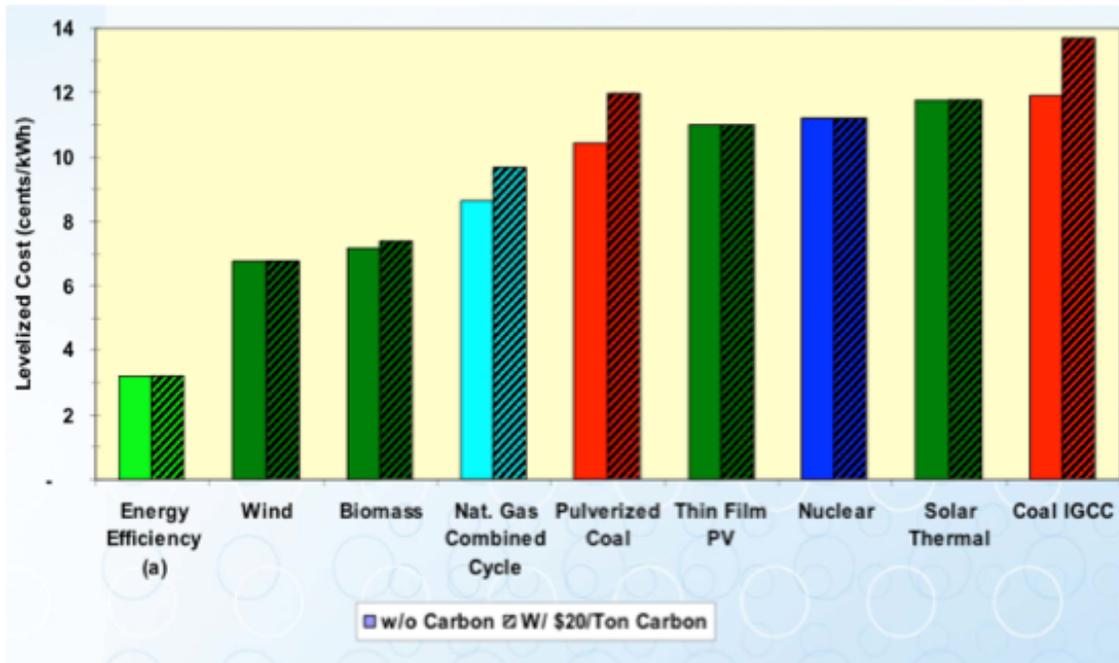
This field experience corroborates the US EPA estimate that about one-third of all energy purchased by commercial buildings is wasted. The experience of the energy service industry in delivering energy efficiency resources in commercial and institutional buildings is similar to the experiences of other energy efficiency providers working in residential buildings and industrial facilities.



**Figure ES-3. Energy Savings as Percent of Utility Bill by Market Segment**

### Cost of Energy Efficiency

We also know that the economics of energy efficiency dictate that it should be the first resource in the formulation of an utility portfolio, because energy efficiency is a fraction of the cost of new generation resources. The graphic below, excerpted from a recent report by the investment bank Lazard, displays the relative costs of various new energy resources and supports the decision of Public Utilities Commissions in other states which have already concluded that energy efficiency should be the first resource in the “loading order” as it is the most cost-effective resource available, can be brought on line relatively quickly, does not further burden the already capacity-constrained transmission and distribution infrastructure, and has no associated environmental mitigation compliance costs.



### What's Holding TVA Back?

As the energy efficiency resource is plentiful and cheap, then the real barrier to turning its technical and economic potential into achievable (or realized) energy efficiency appears to be, in this instance, the challenges of program design and implementation. We hope that the Draft IRP is not really claiming that TVA is not capable of delivering all available, cost-effective (cheaper than other resources) energy efficiency. We recognize that delivering large-scale energy efficiency is very hard work, of a different kind than TVA has ever done. It involves interacting with millions of individual residential, commercial, industrial and institutional customers, rather than the small number of construction contractors required to build a new power plant. While TVA may be perhaps two decades behind the Bonneville Power Authority, NYSERDA, and the leading public and private utilities in designing and implementing large-scale, state-of-the-art energy efficiency programs, TVA does not have to start from scratch and can draw upon the experience and market expertise readily available. Today there is a very competitive industry of energy efficiency program managers (not NAESCO members) who deliver programs for utilities across the country, and can jump-start “best practices” programs at TVA in a few months.

### **TVA Can Once Again be a Market Leader**

It is perhaps not too far a stretch to say that the work of implementing all cost-effective energy efficiency today is similar to the work done by the first generation at TVA nearly eight decades ago. The task that TVA contemplated -- bringing electricity to an underdeveloped region of the country, and supplying the region with the low-cost electricity it needed to fuel its remarkable economic growth -- was somewhere between daunting and impossible. But they did it. So why should we settle today for a plan that is the equivalent of harnessing the power of a few minor tributaries of the Tennessee River rather than its full potential? TVA's sister organization, BPA, is already exploiting the full potential of energy efficiency in its service territory and TVA can and should adopt a similar economic development strategy based on energy efficiency resource production and delivery to serve its region most cost effectively.

### **Regional Economic Development at Stake**

Energy efficiency not only delivers a cheaper and more reliable energy resource, it can also deliver economic development to every community in the region. There are tens of billions of dollars of cost-effective energy efficiency improvements sitting unclaimed in the region's homes and buildings today. Developing implementing these resources requires tens of billions of dollars worth of construction work, which can help the region recover from a recession that looks a lot like the Great Depression to the construction industry.

### **Conclusion**

NAESCO therefore suggests that the TVA Board should not approve this draft IRP, in which energy efficiency -- the cheapest, most reliable and easiest-to-implement resource -- is hamstrung by shortsighted analyses and obsolete approaches to developing new energy resources. To do so would be unfair to the millions of consumers who have come to depend on TVA for a key component of the region's economic development -- depriving them of the lowest cost energy resource and depriving them of an engine of immediate employment and economic growth.