

Governor's Task Force on Energy Policy  
Nashville, TN  
December 16, 2008

Meeting Summary

**I. Welcoming and Opening Remarks**

Governor Bredesen opened the meeting by laying out the agenda, and by recapping where the Task Force stands:

- The Governor's goal is that the Task Force work one step at a time, taking actionable steps in a few key areas:
  - Leading by Example in state government
  - Driving residential energy efficiency in TN
  - Spurring economic growth in clean energy technology
- After this final meeting, recommendations will be "operationalized," within the constraints of the current budget crisis. TN is facing a budget shortfall of ~\$1 billion, which will require cuts in important programs, and this will affect the Task Force's recommendations, moving forward.
  - The clean energy sector has the potential to be a bright spot in the TN economy:
    - Hemlock Semiconductor/Dow Chemical bringing \$2 billion investment to TN, announced 12/15/08.
    - The federal stimulus package could provide major funding for energy and clean tech investment in TN, and the state intends to pursue such funding.
- There are meaningful, inexpensive things that the state can begin doing immediately. Many of these ideas came from the Lead-by-Example subcommittee, the recommendations from which were accepted by the Task Force at the July meeting in Kingsport.
  - The Governor is prepared to move forward with retrofit projects performed by energy service companies (ESCO's)
  - The Governor announced and signed Executive Order # 59, requiring all executive branch state agencies to use Energy Star equipment and appliances. Purchasing contracts that do not provide Energy Star options are not to be renewed and new contracts with Energy Star equipment are to be sought in their place.

**II. Recommendations from the Clean Tech Work Group**

Miles Burdine and Jonathan Raab each presented portions of the final recommendations from the Clean Technology Work Group. Preliminary

recommendations and goal areas from this group were presented at the November Task Force meeting in Jackson.

- Mr. Burdine introduced the Work Group members and the process to date, including Work Group meetings, public listening sessions, and the Governor's Summit on Clean Energy Technology.
- Dr. Raab presented some definitional issues the Work Group had worked on.
- "Clean Energy Technology" includes energy efficiency and conservation, renewable energy, alternative fuels, and distributed generation; and for certain TN programs and policies may include other low greenhouse gas emitting sources such as nuclear and potentially "clean" fossil fuels (where carbon is sequestered).
  - Above: Renewable energy sources include solar, wind, sustainable biomass, geothermal, landfill gas and certain hydro.
- The McKinsey GHG abatement curve shows that many energy efficiency measures will reduce emissions and actually save money (have a negative cost), whereas many alternative energy and nuclear power measures will accomplish greenhouse gas abatement, though at some cost to consumers or the public.
  - TVA hired McKenzie to study renewable energy potential in the TN Valley. It shows that hydro-electricity, landfill gas and biomass are the cheapest sources in the area, but have relatively little generating potential compared to solar power. The cost of solar generation is relatively expensive, but if those costs go down, solar will present the greatest renewable opportunity. Wind falls in between in price, but also is projected to have limited availability in TN.
- The Work Group defined Clean Tech jobs as direct (manufacturing, servicing), indirect (suppliers), and induced jobs (jobs created from savings generated by energy savings).
- In general, the Work Group looked for policies that will generate jobs in one of 2 ways:
  - Jobs resulting from manufacturing based in TN,
  - Jobs resulting from clean tech installations in TN.
- Burdine presented key comments from participants at the Clean Energy Technology Summit, which were used to guide the Work Group's recommendations.
- The Clean Tech Work Group recommendation areas are:
  - Growing clean tech businesses in TN;
  - Educating and training a clean tech citizenry and workforce;
  - Enabling Clean Tech installation and use in TN;
  - High-level energy leadership, with adequate staff.
- Strategy 1 – Growing clean tech businesses in TN:

- Recommendation A): Support and enhance certain initiatives already underway in TN, including:
    - Green Energy Tax Credit
    - Green Island Corridor program
    - Small Business Energy Loan program
    - Clean Energy Technology Grant Program
    - Biodiesel infrastructure grants
  - Recommendation B): The state should classify the Clean Tech sector as part of an “Emerging Industry” in TN.
  - Recommendation C): TN should spearhead clean energy research, design, and development (RD&D), seeking collaborations between state government, ORNL, TVA, state universities, and industry.
    - Potential projects: sustainable mobility, photovoltaic technology, others
  - Recommendation D): State should provide early-stage support for innovative clean energy technologies and businesses
    - Could include seed capital for new businesses, fellowship programs for entrepreneurs, etc.
  - Recommendation E): Work to shape a Federal Stimulus Package, and to attract federal dollars to Clean Tech development in TN.
- Governor Bredesen asked how to best leverage the presence of TVA in the state to achieve Clean Tech sector goals? What should the state ask TVA for?
    - Burdine: The state should establish the Clean Tech Collaboratory,.
    - Governor: I agree we should seek collaboration. On what, is the question.
    - Kalee Kreider: There is a need to engage with the many different things, from the fuel mix all the way down to power purchasing and meters in the home.
    - Michael Vandenberg: There should be a greater investment in energy efficiency and conservation.
    - Governor: I would like to have something to ask TVA to do. What could that thing be?
    - Kreider: A 25% increase in energy efficiency in TN homes in 10 years, for an example.
    - Vandenberg: Financial incentives for buyers and producers, weatherization, working with distributors, can get this ball rolling. The increment of resources devoted to this is the critical issue.
    - Dana Christensen: Time-of-day metering and enhancing the home energy audit program, with the commitment that the state would help residents to realize those audit recommendations.



prepare these people, who will be recommending to TN residents what equipment to buy, with the knowledge to make the most informed recommendation.

- Strategy 3: Enabling Clean Energy Installation & Use –
  - TN does not directly regulate utilities and distributors, so many of the tools used by other states to accomplish this goal are not available in TN.
  - Recommendation A): Create a statutory category for clean energy equipment similar to “certified pollution control” equipment.
    - This will qualify clean energy equipment for a variety of state tax credits.
  - Recommendation B): Implement public electric vehicle recharging infrastructure, in the following 3 areas: for commuters, general travel, and home recharging.
  - Recommendation C): Upgrade the electrical grid and communications technology to enable smart meters and time-of-use electricity pricing.
  - Recommendation D): Streamline and expedite siting and permitting for renewable energy projects
    - Use a dedicated “Energy Team” to help developers through the process
    - Set up “fast track” zones and/or pre-approved sites for renewable energy projects
  - Recommendation E): Develop interconnection standards for customer-sited renewables and distributed generation.
    - TVA’s standards aren’t currently implemented by all distributors in TN.
  - Recommendation F): Support the recommendations from the Residential Energy Work Group including building codes, labeling, and sales tax exemptions.
  - Recommendation G): Encourage adoption of a renewable portfolio standard.
    - TN does not regulate TVA or distributors, so standard must be federal or voluntary agreement.
  - Recommendation H): Evaluate a Clean Vehicle standard for TN.
    - CA standard phases-in requirements over time, reducing the carbon intensity of vehicle fuels by 10% over 10 years.
- Strategy 4: Leadership & Staffing around Clean Tech development –
  - On-going state involvement is needed to successfully implement the recommendations put forward by the 3 working groups.

**Questions and comments:**

- Governor: How do we take advantage of what businesses are already doing, to advance the goals we have identified here? What are the 2 or 3 things that we can do tomorrow, to get this whole process rolling?
- The stimulus could have a big effect in this area. Picking the best nuggets from these recommendations, and then using that funding to make them happen, is a great opportunity. The smart grid is an area with great potential, also a program for 'green collar jobs'.
- The most important thing that we can do right now, is to set up an infrastructure for permanence, and that means setting up the leadership to oversee this process, and move these things through.
  - Part of what we've discovered in the Task Force process is the great disconnect between the many different departments and agencies. An Energy Czar, or other leader, could work across those gaps to make these things happen.
- The DOE has said that we waste 50% of our energy in the U.S. In TN that is probably even more. That being the case, we should be able to pay ourselves back very quickly for some large-scale investment in these areas.
- The Jobs Cabinet approach here in TN has been very successful. Something like that might accomplish what you're talking about.
- Governor Bredesen asked the Work Group to continue working together to move from more general recommendations to very specific actions and strategies for how to create jobs specifically in TN, "jobs that other states are not getting". "How do we beat our neighbors in creating those jobs...?"
  - Through the work with Hemlock and other companies, we've got a lot of knowledge and experience in this kind of recruitment. This should help us down the road.
  - We have been looking at these kinds of manufacturing jobs, but we've also concerned ourselves with servicing and installation types of jobs.

Governor Bredesen announced that the recommendations from the Clean Tech Work Group were accepted, but asked the group to continue to meet and refine its proposals to highlight and further develop a strategy for attracting clean energy tech manufacturing jobs (without dropping from the report the recommendations focused on enabling clean energy tech installation and use in Tennessee which would support mainly design, audit, installation and maintenance jobs in the state).

### **III. Recommendations from the Residential Energy Work Group**

Governor Bredesen introduced the Residential Energy Work Group by mentioning that TN is among the largest users of residential energy in the U.S.

Michael Vandenberg and Jonathan Raab presented the recommendations from the Residential Energy Work Group. Vandenberg after re-introducing the Work Group members and its process to-date.

- What we are doing here is shifting from energy supply to energy demand. Every kW that we don't use saves money and makes us more competitive. No single step in this area is going to achieve the results we're looking for. But a good strategy and set of intelligent small steps will. We are going to provide an overall goal, and a series of more specific programs to reach that goal.
- On a BTU basis, the residential sector (including buildings and cars) makes up more than a third of TN's total energy use, spending approximately \$10.7 billion in 2006. The largest end-uses within this sector include motor vehicles (35%), heating/cooling (31%), appliances and electronics (13%), and water heating (10%).
- TN has the greatest per capita residential electricity use in the nation; ~50% above the national average.
  - Electricity rates are relatively low; much home heating is electric; plug-loads are increasing; the state has an aging housing stock.
  - TN is about average among U.S. states in overall energy use (all fuels) per capita, in the residential sector.
  - TN is 10<sup>th</sup> in the nation in vehicle miles traveled, and above the nat'l average in gas consumption, but these values are not currently rising.
- The Work Group recommendations fall into 4 categories:
  1. Residential energy goal
  2. Strategy for buildings
  3. Strategy for transportation
  4. Potential Federal Stimulus program and funding
- Area 1: Proposed Residential Energy Use Goal for TN –
  - Goal: Total residential energy usage in TN should be no higher than the 2007 levels by 2013, and should then decline by 1% per year thereafter.
    - TN should set comparable goals for other sectors
    - The state should track and report progress toward this goal, and this reporting information should be distributed publicly.
    - Residential energy use is growing in TN by about 1.9%/year. The goal means that, by 2013, that increase should level off and begin to decrease slightly each year.
  - Governor Bredesen asked whether the Work Group had put together a set of policies and programs to achieve the above goal. [The Work Group provides a number of recommendations that

taken together should be capable of achieving the goal, but has not done modeling work to demonstrate that it does.]

- Area 2: Strategy for Reducing Residential Energy Use in Buildings –
  - Part A) Education & Outreach:
    - The state should design and implement a large-scale public information campaign, to drive public behavior.
      - Combine information campaign with a free distribution of CFL lights
      - Coordinate with information from TVA and distributors. Coordination is important role for the state.
    - State should support the Clean Tech WG's education and training recommendations.
  - Part B) Building Codes (presented by Dr. Raab)
    - TN will change from 1988 codes to 2003 IECC code, 1/1/09.
    - TN should update its residential building codes automatically, based on the regular updating of the IECC codes every 3 years.
      - Begin with IECC 2009 standards – but allow two year lag
      - Implement a parallel standard for commercial codes.
    - TN should encourage better enforcement of building codes, using an incentive-based approach.
      - Working with TVA the state should train code inspectors, provide circuit riders and should combine energy code inspection with HERS rating inspection, to improve the cost and efficiency of each.
  - Part C) Residential Energy Labeling for Homes:
    - TN should phase-in a labeling program for homes, to provide consumers with energy information similar to what they find for automobiles and Energy Star appliances.
      - Voluntary program beginning in 2009, becomes mandatory for new single-family homes in 2011, and expands to existing homes on retrofit when practicable.
    - A sample label was presented to the Task Force
  - Part D) Natural Gas Energy Efficiency:
    - TN should require regulated gas utilities to spend ~1% of revenues toward energy efficiency.
    - For publicly-owned utilities, the state should strongly encourage voluntary participation.
      - These efforts should focus on energy efficiency measures, rather than fuel-switching.
  - Part E) Incentives for Efficiency & Renewables:

- Develop a targeted sales tax exemption for energy efficiency and some renewables.
      - Sales Tax incentive should focus on renewable energy equipment, and on Energy Star qualified products without mature market penetration, and possibly advanced vehicles.
    - Develop a grant and loan program for rental housing, small business, and low-income groups.
    - Encourage other innovative financing mechanisms.
- **Questions and comments on the strategies for energy use in buildings:**
  - Phil Chamberlain voiced support for the K-12 education recommendations from earlier, saying that very few homebuyers he has spoken to have asked about insulation or energy use. Education will drive demand in the residential sector.
  - Governor Bredesen asked Mr. Chamberlain whether homebuilders would be against automatic energy code updates. He also asked whether new codes and standards would be seen as a positive by homebuilders, or as a negative?
    - Mr. Chamberlain reported that he did not object to automatic updating, and that energy codes could be seen as a positive but that there needs to be some flexibility built into those codes, however. He also voiced his strong support for labeling and hoped labels could be applied to existing houses as well as new ones, as soon as possible.
  - K-12 education drove the recycling successes 20 years ago, as an illustration of how education can drive industry and demand.
  - There is interest in state government in IRC codes, perhaps as a substitute for IECC codes.
- **Area 3: Strategy for reducing energy use in transportation –**
  - Strategy A): EcoDriving
    - TN should join EcoDriving, and seek partnerships for outreach around EcoDriving efficient driving practices.
      - These recommendations can lead to 10-30% energy use reduction.
    - Governor Bredesen asked whether states are using signage to educate drivers. Some states are doing this, but more often this is done by local jurisdictions and municipalities.
      - Governor returns to the idea of a chart showing how mileage decreases with increasing speed, as a powerful tool for driver education.



potentially great effects for the local economy. The state is not yet taking advantage of these things to the level that it should be.

- One of the most important next steps for this group might be to figure out how to best commercialize basic research into these emerging clean technologies.

#### **IV. Public Comments and Questions**

- Steven Smith, Southern Alliance for Clean Energy: We are trying to create strong market pull for alternative energy investment, while also pushing forward with energy efficiency. This could reduce revenue for TVA, so keeping them whole as we do these things is important and difficult to accomplish. We need to look at innovative rate structures, such as decoupling energy profits (revenues) from sales. Some other states could serve as models for this (CA, MA). Also, TVA should rethink the requirement that renewable energy developers meet NEPA requirements, as these make it difficult for renewables developers to come here. Feed-in tariffs are another tool that has worked well in areas that have aggressively developed renewable energy. This could be a good tool to develop targeted energy industries in Tennessee.

Governor Bredesen closed the meeting by formally accepting the reports from the two Work Groups. He asked to see the final report that is expected to be completed in mid-January. The state is preparing to draft a bill for the General Assembly based on these reports. He asked that Task Force members assist Assembly members to understand what the process has done, and to answer their questions on these issues. The Governor thanked the participants, reminded them that he wished to keep them en-paneled in 2009, and wished everyone a happy holiday season.