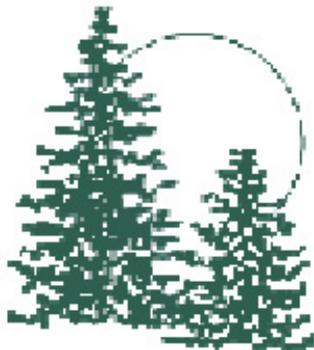


Tennessee Valley Authority  
March 5, 2008



# Comments on Renewable Energy Strategy



**ED HOLT**  
**& Associates, Inc.**

*Energy Smart Consulting*

28 Headland Road  
Harpwell, ME 04079  
Tel. 207.798.4588  
Fax 207.798.4589  
[edholt@igc.org](mailto:edholt@igc.org)

# Topics

---

- Why renewable energy is important
- Setting policy goals
- Utility scale renewables
- Distributed generation
- Role of voluntary markets

# The Climate Imperative

---

- Change—coming to an ecosystem near you
- Average temps rise a little more than 4° F by 2090
- Boost in agriculture and hardwood forestry
- Summer heat index rises by as much as 15° F
- Higher water temps could lower oxygen levels, concentrating pollutants and degrading water quality
- Annual rainfalls increase by 20%
- Warmer, wetter climate could expand insect-borne disease--malaria, Lyme disease and dengue fever
- Increased temps and smog could lead to more respiratory disease and heat-related maladies

# Planning with Uncertainty

---

- Is Congress going to pass an RPS, or adopt carbon cap and trade legislation?
  - Not mutually exclusive
- Reason to act even if Congress does not
  - If not climate, then energy security, price risk management, healthy air, resource diversity
- But why wait to see? Least-regrets strategy would be to set your own goals and act on them

# What's in Your Strategy?

---

- Reduce GHG emissions by XX% below 1990 levels by 20XX
- Assess renewable resource potential
- Set explicit renewable targets that are easily tracked
  - Emphasize *portfolio*
- Encourage distributed generation
- Boost customer demand for green power

# Distributed Generation

---

- DG is small (<5 MW) and dispersed
- Doesn't require transmission, but may require distribution upgrades
- Provides a measure of energy security
- Technical analysis—what's the effect of XXX MW on systems?
  - Need to work with distributors
- Investors need certainty
- Encourage with standard offer
  - Sensitive to different technology needs

# Distributed Generation

---

- DG could be an economic development strategy
- To drive it will require multiple activities
  - Need critical mass of infrastructure and services
  - Standardized and simplified interconnection
  - Design and installation services
  - Training and education for skilled workforce
  - Technology manufacturing
- Multiplied by different technologies
  - Solar, wind, maybe anaerobic digestion

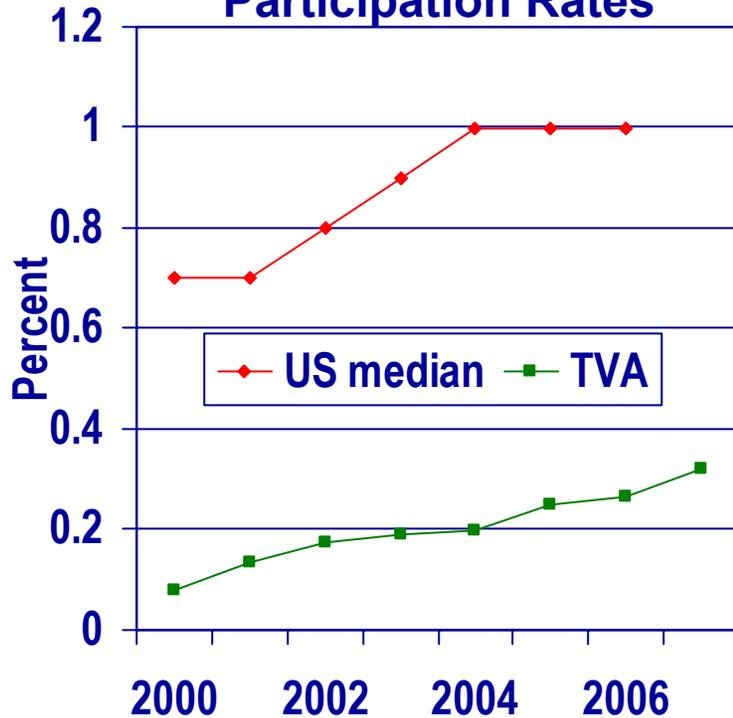
# Voluntary Green Power



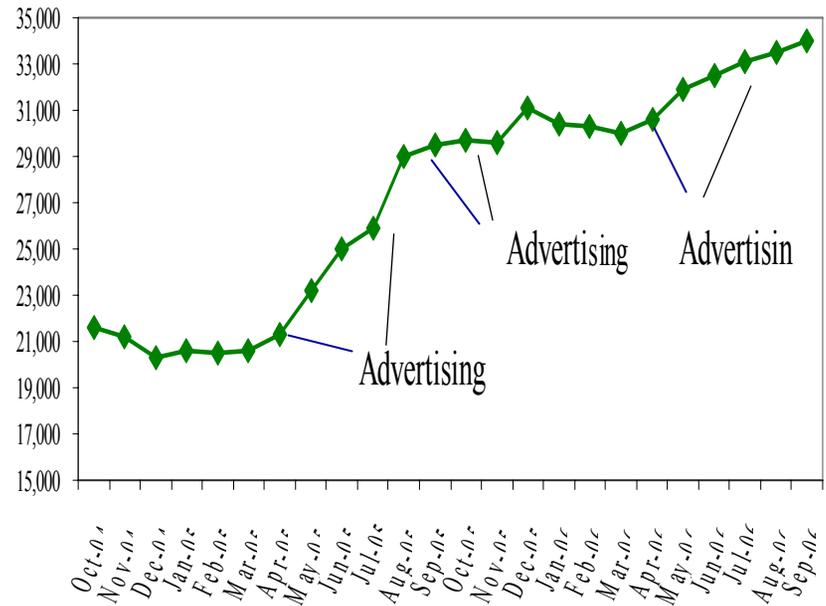
- Some customers will want go beyond TVA plans
- Voluntary customer actions and TVA actions are compatible
  - Customer options must be incremental to what the utility is doing or planning to do
- Doesn't really matter whether TVA adopts its own goal or is mandated by Congress
  - It becomes the baseline--business as usual—and customers want to make a difference beyond that
- REC tracking system will keep them separate

# Green Power Trends

## Residential Customer Participation Rates



## TVA Response to Advertising



# Conclusions

---

- Set a clear course – be bold
  - Quantified targets
- Ensure continued management interest
  - Maintain high priority and focus
- Support programs and staff to do the hard work of implementing it
- Be publicly accountable
  - Involve distributors and stakeholders in monitoring progress