

## **Brainstorm Boards - May 21,2010**

### **Economics**

LED market penetration  
Solar integrated into building materials  
World demand for: energy, materials, etc.  
Nuclear: No more, only at existing sites, only sea water cooled

### **Environmental**

Secondary growth related to renewable energy and transmission development  
Available water supplies  
Private property issues  
Single species issues (example: Whooping Crane)  
Climate change  
Water related issues  
Carbon sequestration (banks) new and existing  
Mitigation of habitat impacts - habitat conservation plans  
Directing technology (generation) to appropriate areas, along with transmission  
I would like to see ERCOT include the Tres Amigas project in the study, both from a technology perspective, and a market approach

### **New Technologies**

Transmission: high temp super conductor, super conducting magnetic energy storage  
Toshiba nuclear package plants  
Triple-net leases for low rise buildings  
Big box retail reaction to time of use-pricing

### **Market Factors**

Economic DSM and energy efficiency (static)  
Government action: building standards, appliance standards, energy pricing  
Building energy codes  
Zero energy homes  
Tax incentives to attract industries  
Legislation policy and regulatory  
City economic development plans/projection  
Data centers  
Utility cost as percentage of income (residential)  
I would like to see ERCOT include the Tres Amigas project in the study, both from a technology perspective, and a market approach  
I think a broad look at market solutions to provide ancillary services to support and improve stability with large amounts of wind on the system makes senses.  
A scenario where enough wind generation is deployed where ERCOT would look at exporting variable gen (wind) in potentially need to import ancillaries and balancing energy

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### **Load Technology or Behavior Changes**

Roof top solar residential and commercial

Smaller community wind projects

Single wind projects (re-desalination)

EV

Solid State lighting

District cooling and heating

Load frequency control: smart bulbs that respond to frequency, plug in cars

Ability to sell surplus energy back

Distributed generator and market price

Energy storage for residential and light commercial becomes affordable

New technology: off shore wind, wave action, geothermal, solar

Solar panel efficiency reaches 50% @ affordable prices

Increase in wind development along coast-current grid will hold up for how long- potential big increase in that area until CREZ lines are built

New development/generation (wind/solar) cause additional new development (commercial/residential) in previously rural areas (low load areas)

Change in load as people move form rural or suburban areas to downtown/inner city

Industry looking at developing small wind facilities to generate own electricity