

# Transition to Transformative Technologies

- \* Coastal and offshore wind
  - \* Major new additions in CREZ and coastal and off-shore announced
  - \* Figure out market protocols and give them the percentage they deserve
  - \* Might want to treat coastal vs. West Texas wind differently
- \* Get market rules fleshed out for storage
  - \* SB 941
  - \* NPRR 340
  - \* Work of ETWG at ERCOT
- \* Implement SB 981 for renewable distributed to get those markets moving now
- \* Prioritize Co-location - Figure out colocation of resources at CREZ lines and prioritization lines for storage, solar, wind and yes natural gas
- \* Identify and address barriers to entry for large-scale solar
- \* Get the market rules right so these technologies can enter the market and start to develop scale by the time they are needed
- \* Potential for TERP & other investments to lead to transformative electric vehicle infrastructure

# Air Quality and Water Resource Challenges are Real and Part of Answer will be New Cleaner Electric Grid

\* Reducing emissions from rural power plants by adding on SCRs or retiring these old plants may be far less expensive than cleaning up urban sources

 **2009 Primary Ozone Design Values by Combined Statistical Area (CSA)**

CSA	2009 8-Hr Ozone DV (ppb)
DFW	86
HGB	84
BPA	77
NETX	75
ELP	75
ARR	75
SAN	74
WACO	72
CC	69
Big Bend*	66
VIC	65
LRGV	62
LAR	55



\*Brewster County monitor is maintained by the national park service and reported in EPA AOS

# Water Needs for Electricity are Real and so too is Drought and other needs

- Water availability is expected to decline by 35%
- The current drought throughout Central Texas sets the trend for what we can expect in the future.
- Droughts are expected to get worse and thus energy sources that require little or no water will be far more viable

National Drought Mitigation Center



# Plan for the Future

- \* Follow this workshop with a commitment to plan for the future
- \* like it or not, the federal rules are what are or will be
- \* Question is how will Texas position itself to provide the clean, affordable, reliable energy its economy needs?
- \* nothing prevents PUCT from collaborating with RRC, TCEQ, TDHCA, TWDB, SECO and other state agencies to assess our position and plan for success

# Plan for success

## Use PUC study proposed in SB 15 as a blueprint

- \* Consider an 18-month timeline for this report, include collaboration with RCT and TCEQ
- \* Include public process, including potential for advisory committee – use utilities and interested parties to do your work for you
- \* identify the tools you will need to address these issues before the 83rd Texas Legislature convenes and make sure state leaders understand these challenges and the options to address them.
- \* Be prepared to answer the questions by January of 2013 and what recommendations are needed
  - \* May need to look at retirement strategy and transition strategy for early retirement, including use of natural gas reserve capacity
  - \* Forgiveness for environmental sins including consent decrees for reliability only
  - \* Purchasing commitment for state needs
  - \* Use of state credit for loan guarantees for transitional resources