Promoting Distributed Generation Resources Through State Initiatives

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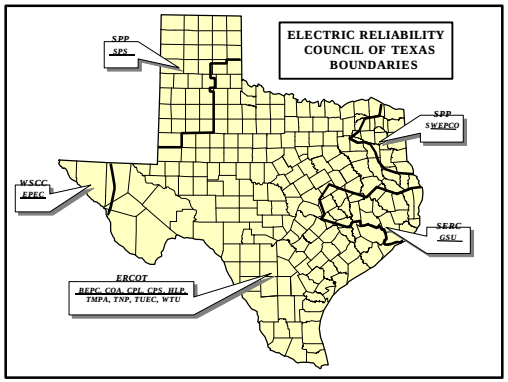

Regulatory background

- Traditional vertical utility days ended in TX in 9/95 when wholesale competition began, through comparable, open transmission access
- PUC has jurisdiction over wholesale market inside ERCOT
- Retail competition will begin in TX in 2002 (pilot in 6/01)

Context for DG in Texas

- We began our DG effort in 10/98 after summer peak capacity squeeze
- The 2000 & 2001 reserve margins are now estimated at 19% & 20% with interruptible load; 13% & 14% without interruptible load
- Prior to Summer Peak In 1999
  - Wrote 1999 Interconnection Guidelines
  - Discussion of DG certification, tariffs, insurance needs
  - Discussion of standard performance contracts

TX electric restructuring statute

- All customers are entitled access "to on-site distributed generation", effective 9/99; DG doesn't pay for stranded costs
- Energy efficiency goal--to provide 10% of new load by 2004. §25.181 adopted 4/11/00.
- Renewable energy goal-- additional 2000 MW of new renewables by 2009.§25.173 adopted 1/10/00
- Structural unbundling --
  - competitive customer energy services (9/2000)
  - functional unbundling (1/2002)
  - TDUs and REPs can't own generation
  - Strict affiliate code of conduct

Distributed generation and electric industry structure in TX

	Wholesale Competition	Retail Competition
Who can own it?	Customers; ESCO Power Generation Co. Not the TDU!	same
Who can DG sell to?	Any utility Self Not other end-user	End use customer; ESCO Retail electric provider Power generation co.
Size limit?	10 MW	same
T&D access?	Comparable open access for all generation to distribution as well as transmission grid	same
Renewables	Customer-owned that don't export to grid are energy efficiency measures	same; other renewables DG (<10 MW) or IPP
Who sets the price?	Bilaterally negotiated price (no avoided cost, no PX or pool pricing or net metering)	same

Removing institutional barriers

- Standard, state-wide policies for DG
- Reduce transactional barriers
  - Comparable, open access to distribution as well as transmission systems
  - Standardized pricing for T&D (loads pay)
  - Standardize interconnection agreements
  - Standardize interconnection application
  - Standardize, pre-certify DG equipment
  - Standard procedures and deadlines for utility processing of DG applications, studies, fees
  - Utility tariffs for standby power, maintenance, etc.
  - Standard performance contract

Energy efficiency provisions

- Standard, state-wide policies for EE
  - Standard offer performance contracts/payments
  - Standardized energy efficiency & market transformation programs
  - Efficiency funded from TDU fees
  - Biggest incentives for programs that reduce energy use & capacity; lowest premiums for programs that shift load or that are close to or better-than cost-effective
- EE administered by TDU, offered by REPs and EESPs
- Low-income EE funded from System Benefit Fund

So…where are we?

- Final substantive rules adopted in Dec. '99 with final DG interconnection tariff form w/rules, and standard performance contract form w/rules
- Developing standardized DG interconnection manual--Draft RFP prepared.
  - how to identify and quantify impacts, costs, benefits of DG
  - how to do interconnection studies
- Specific DG units certified by approved entity as meeting rule req'ts on safety & reliability will be pre-certified & need no further review of their design by the utility
  - PUC will approve one or more entities to pre-certify DG units

PUCTx Rules

Substantive Rules adopted or proposed:

- § 25.211 & 25.212 - Interconnection of Distributed Generation; Technical Req'ts for Interconnection and Parallel Operation of On-site Distributed Generation Units
- § 25.173 - Renewable Energy
- § 25.181- Energy Efficiency Programs
- § 25.341-346 - Cost Unbundling and Separation of Business Activities

www.puc.state.tx.us/rules and laws

Some issues to be resolved...

- Fine-tuning needed; effort initiated 5/9/00
- Costs of DG interconnection studies-Distribution companies have filed study rates & standby, maintenance, supplemental tariffs
- Appropriate cost and impact of DG on the transmission and distribution systems
  - How is settlement accomplished with DGs?
  - What effect does DG have on the transmission system? At what point does the ISO have to take notice of DG?
- Moderating air quality, siting impacts of DG

Prospects good for DG in Texas

- Many utility barriers to DG removed -- procedural, costs, time
- Electric supply capacity looks better, but new transmission lines are slow to come
- There exists a large installed base of back-up gen-set type generation that could be aggregated, but there is a potential air pollution problem
- Electric customers want more control over costs and reliability of power
- High economic growth, many new customers and potential installations