

GE Energy Financial Services

Infocast ERCOT Market Summit 2014
Perspectives on Financing ERCOT Projects

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GE Capital

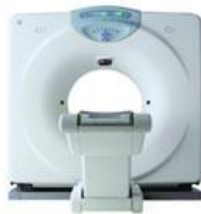
GE Capital Americas

Corporate lending
Equipment lending and leasing
Healthcare financial services
Industrial loan corporation



GE Capital International

Corporate lending
Equipment lending and leasing
Healthcare financial services
Mubadala JV



GE Real Estate

Debt and equity financing
Asset and investment management



GE Commercial Aviation Services

Commercial aircraft lending and leasing
Airport facility project financing



GE Energy Financial Services

Energy equity, debt and structured solutions



GE Retail Finance

Private label credit cards
Retail sales finance
Federal savings bank



\$18B assets, 220 investments \$25B in volume since 2004

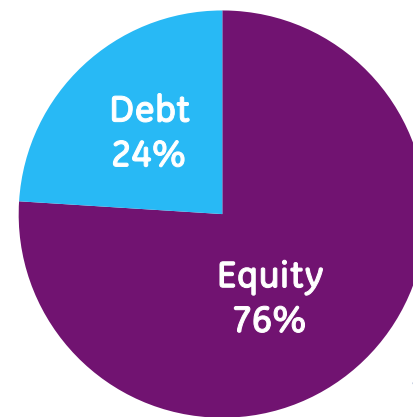
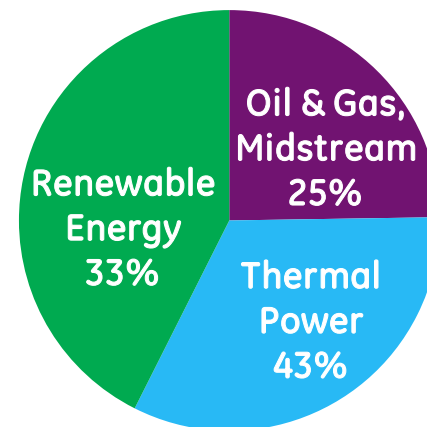
Across energy spectrum



Across capital structure



Across geographies



Sept 2013 exposure

We're big in Texas

More than \$4 billion invested... more than any other state

- Equity and debt for 4,300+ MW of wind farms
- Equity and debt for 6,100+ MW of thermal power plants
- Equity in partnerships producing 6,500+ barrels of oil equivalent a day
- Debt and equity for natural gas midstream and clean energy technology companies



Financing Wind in ERCOT

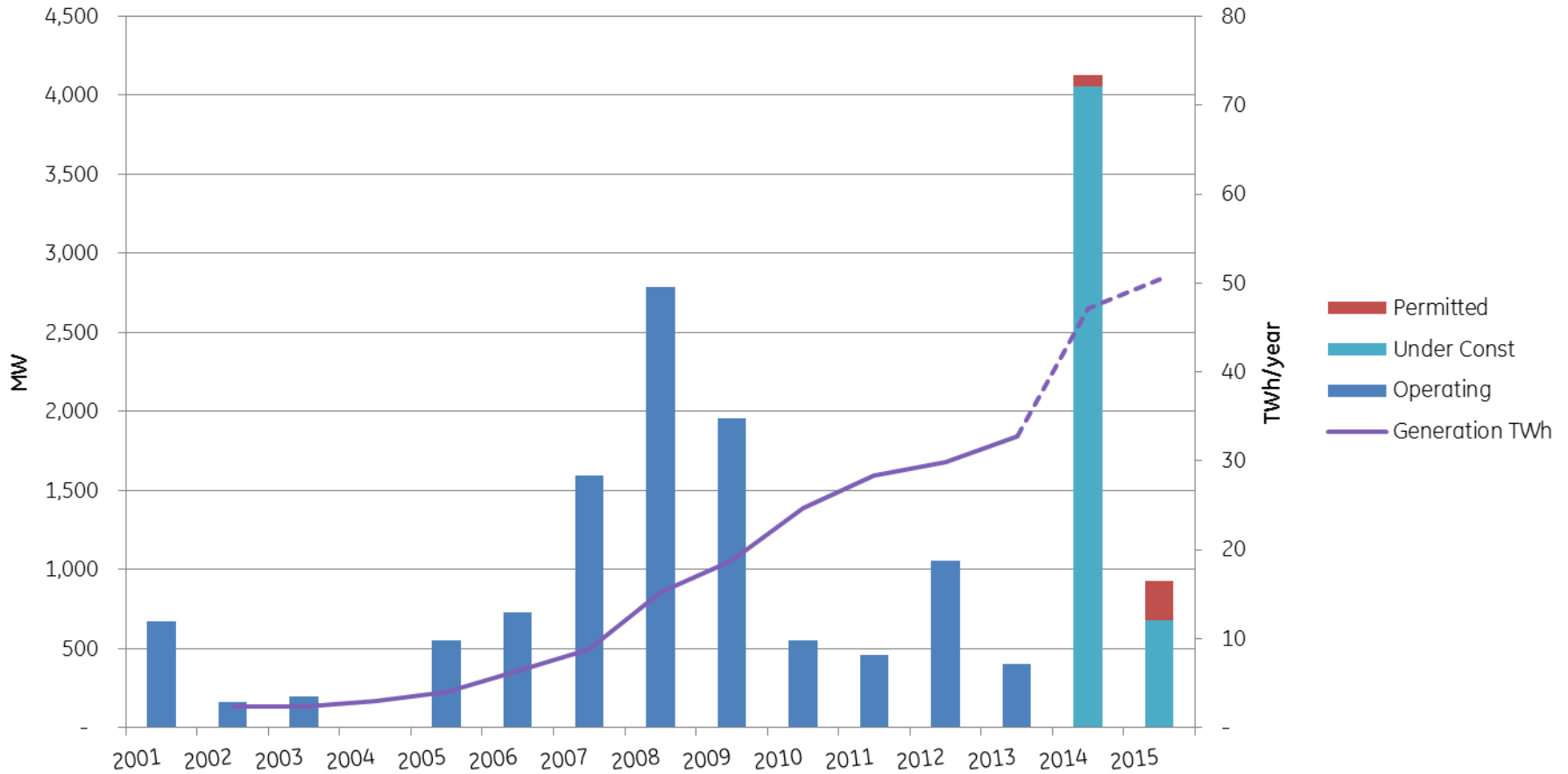
Wind in ERCOT

Wind development in ERCOT is a great success story

- Completion of CREZ has greatly reduced curtailment and negative pricing for existing projects, and opened the door for new ones – **over 4 GW of new generation expected in 2014**
- Wind turbine technology development has greatly increased production, driving down production cost
- Provided over 30 GWh (11%) of ERCOT's energy in 2013
- Supported over 10,000 direct and indirect jobs in Texas

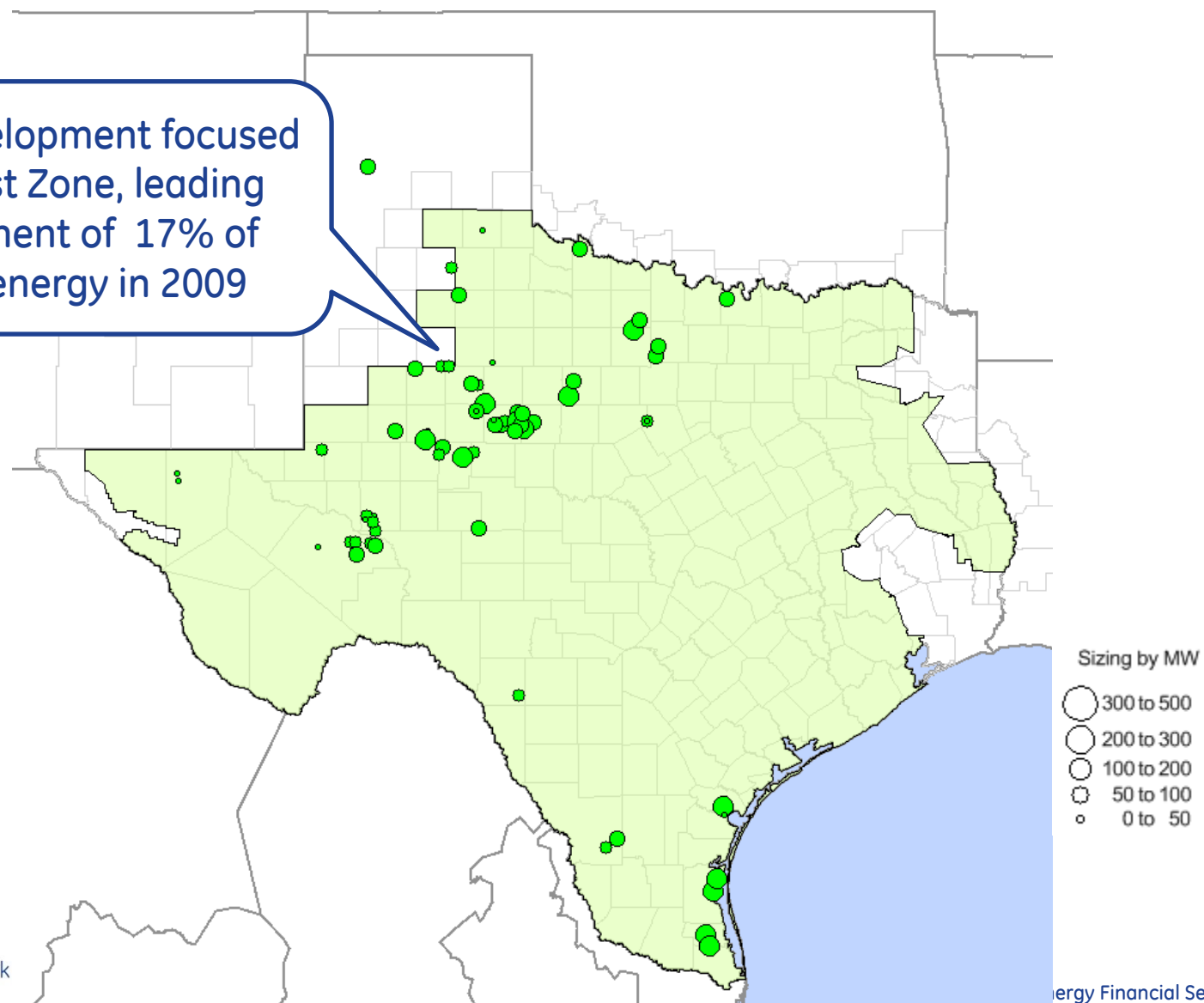
ERCOT Wind Build

ERCOT Wind Capacity Additions and Total Generation

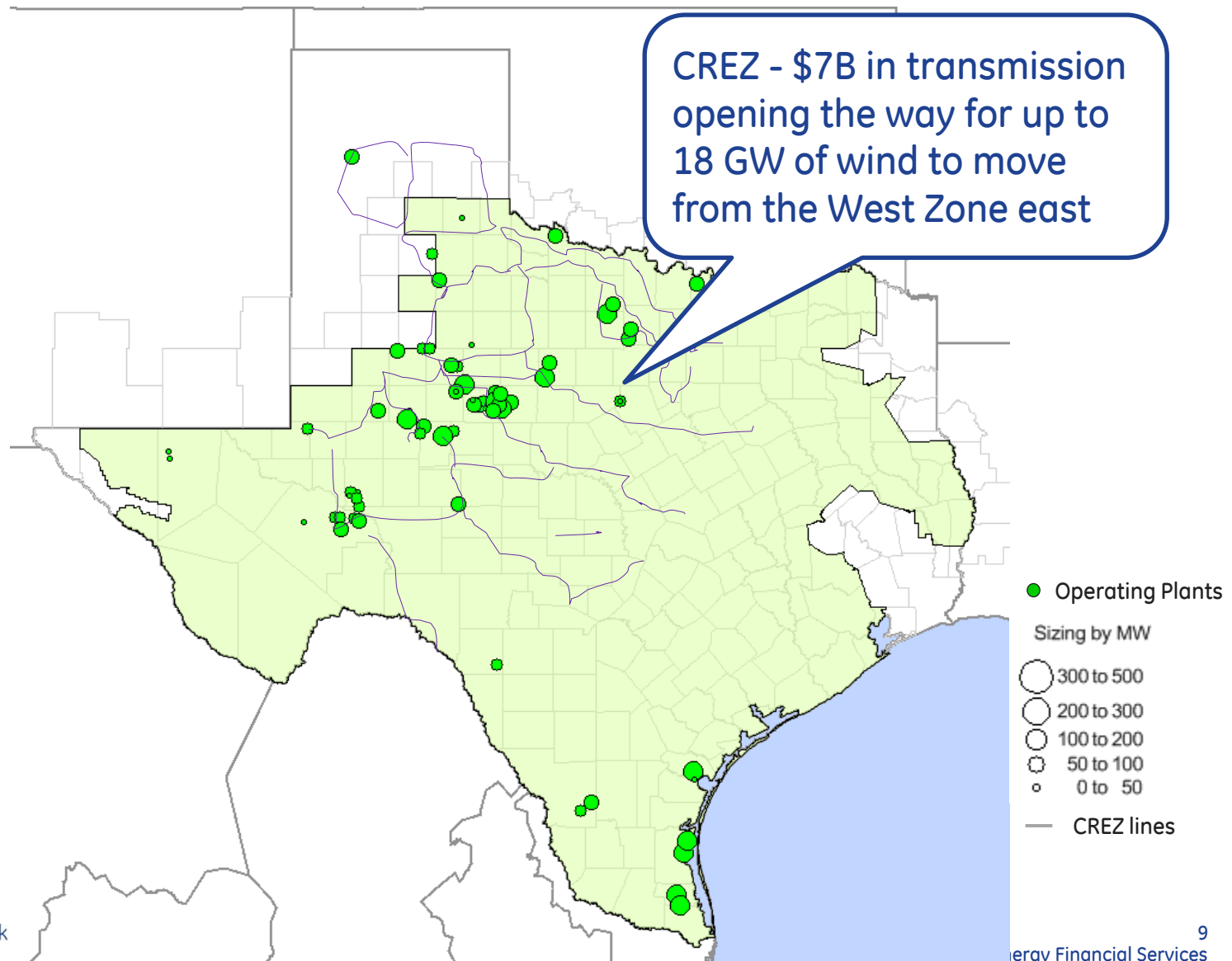


Current Operating Wind

Wind development focused in the West Zone, leading to curtailment of 17% of potential energy in 2009

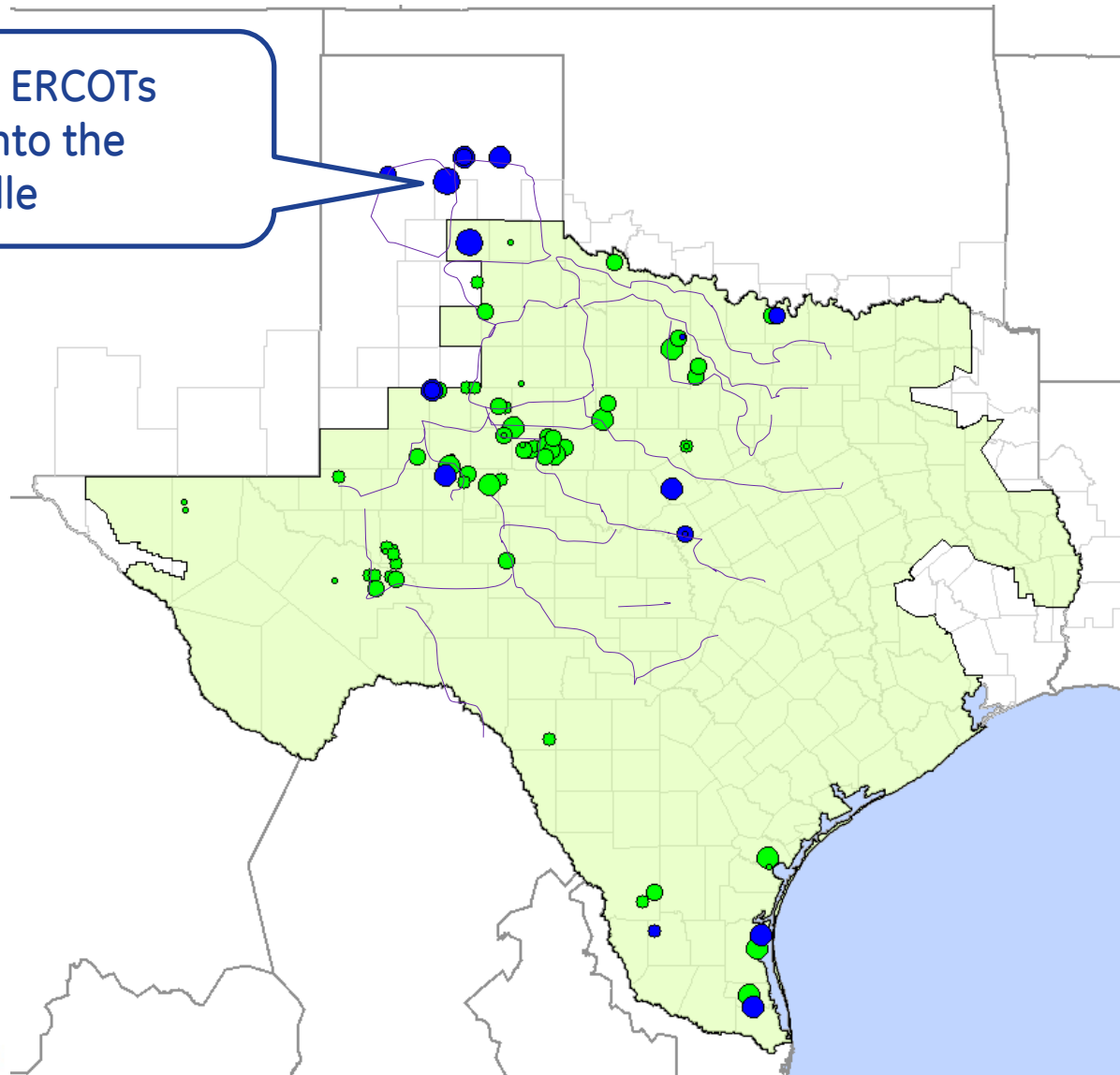


CREZ Transmission Projects



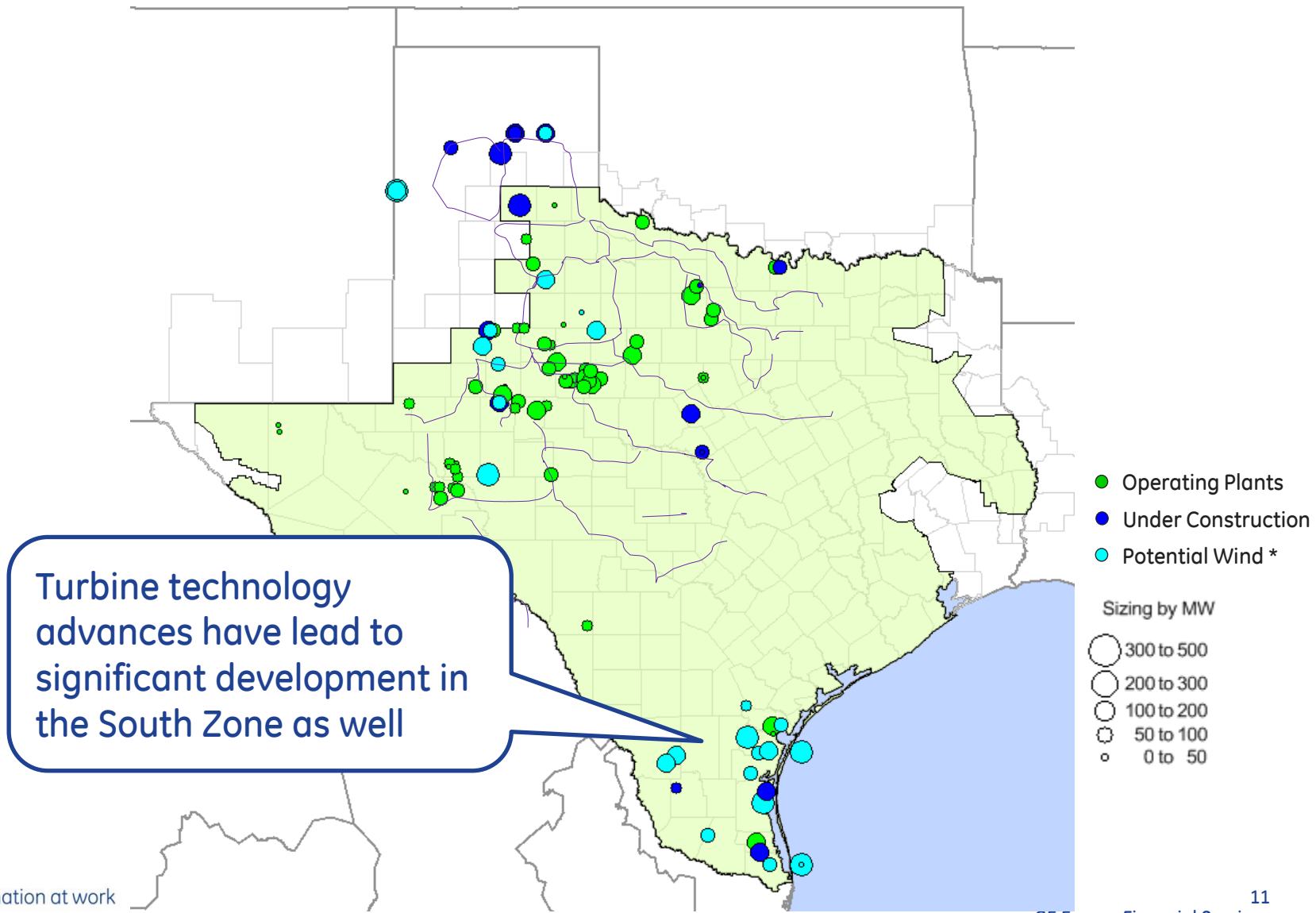
Wind Under Construction

CREZ extended ERCOTs reach further into the Texas Panhandle



- Operating Plants
 - Under Construction
- Sizing by MW
- 300 to 500
 - 200 to 300
 - 100 to 200
 - 50 to 100
 - 0 to 50

Additional Potential Wind



Typical Merchant Wind Financing

Example - 100 MW wind project

- Energy hedge
 - P99 volume, but at a fixed shape
 - 12 years
- Total project cost - \$200 M
 - Sponsor equity – 50%, with potential back leverage
 - Tax equity, monetizing the PTC – 50%
- Other financing considerations
 - Exposure to unhedged volumes
 - Potential locational basis risk

Financing Challenges for Wind

Developing and financing incremental wind generation faces a number of challenges

- Expiration of the Production Tax Credit
- Availability of Tax Equity
 - Market concentration concerns
 - Satisfaction with sponsor's commencement of "physical work of a significant nature" in 2013
 - Extension of the PTC?
- Ability to sell the power or enter into financial hedges

Financing Thermal Generation in ERCOT

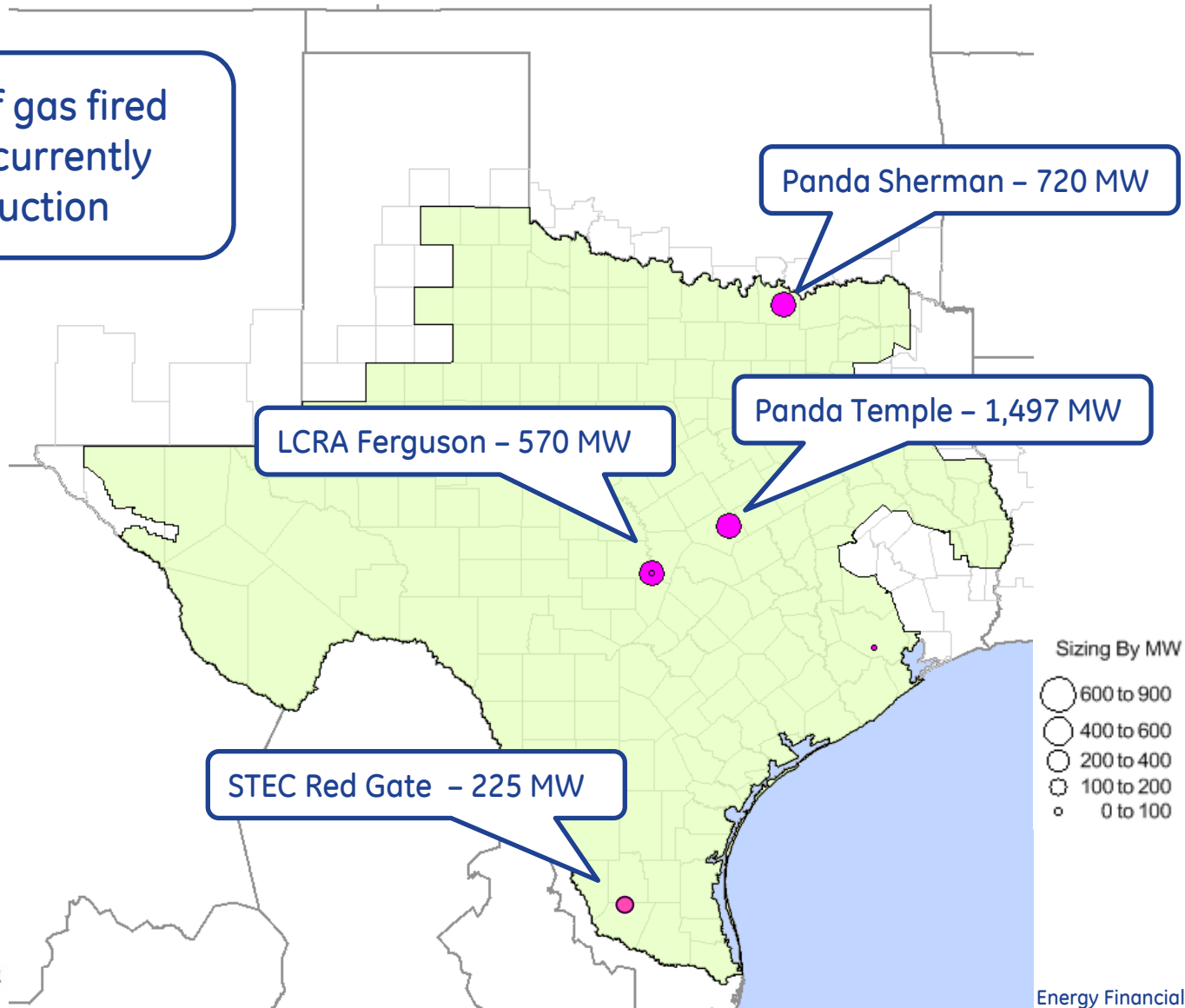
Thermal Generation in ERCOT

What will drive new generation construction in ERCOT?

- IPPs building in anticipation of tight reserve margins
 - Low cost expansions at existing sites
 - Highly efficient CCGTs at new sites
- Load serving entities building to protect against potential energy shortfalls during price spikes
- Adoption of a capacity market

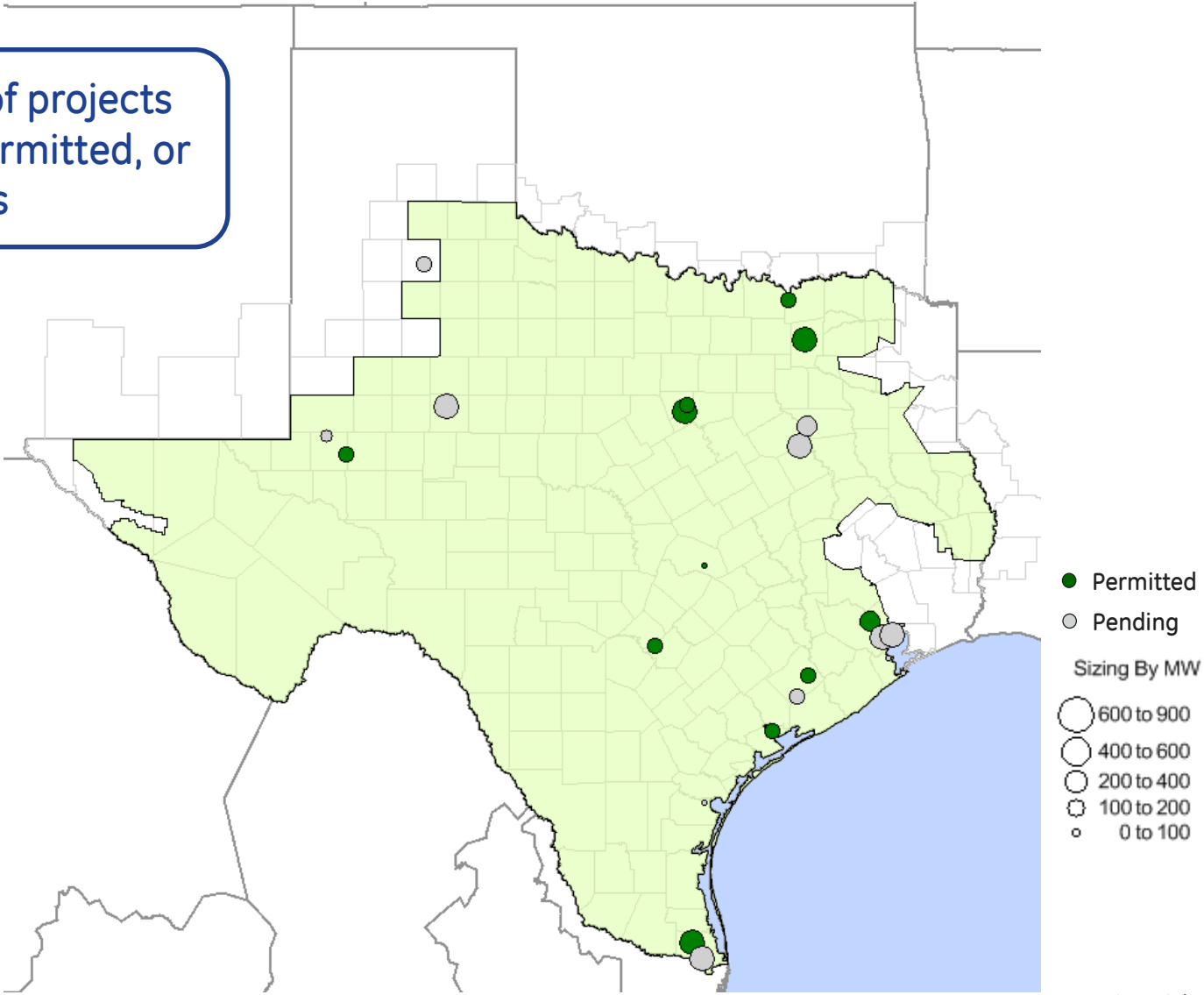
Gas Fired Power Under Construction

Over 3 GW of gas fired projects are currently under construction



Permitted and Pending Thermal

Over 15 GW of projects have been permitted, or are in process



Typical Merchant CCGT Financing

Example – 1,000 MW CCGT

- Energy hedge
 - Revenue floor or heat rate call option
 - At least 5 years
- Total project cost - \$1B
 - Sponsor equity – 45 to 55%
 - Debt – 45 to 55%
 - Either bank market or Term B
 - Tenor – 5 to 7 years
 - Recent rates – L + 400 to L + 650
- Other debt considerations
 - Amortization schedule
 - Draw schedule/negative carry
 - Prepayment penalties

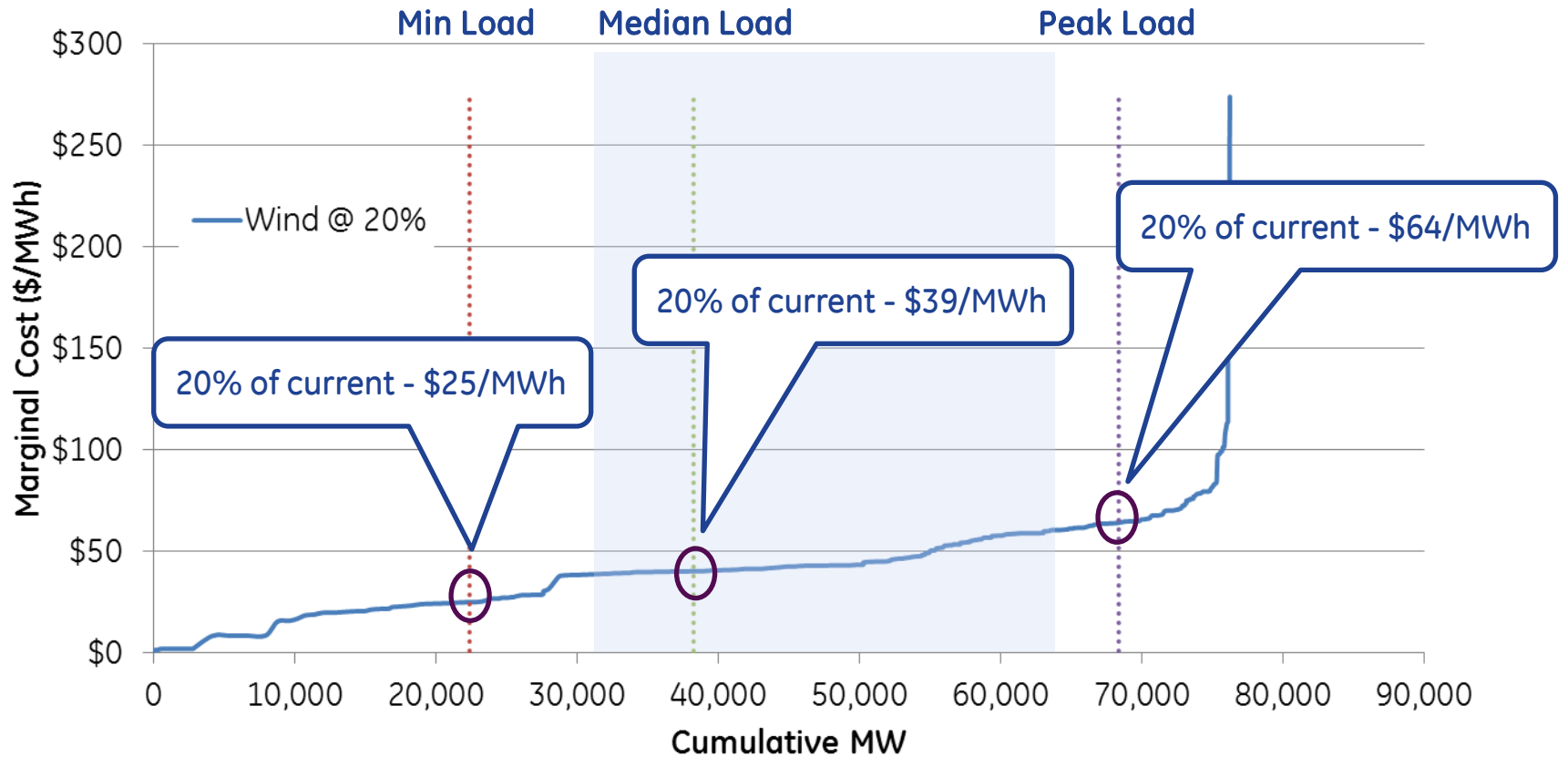
Financing Challenges for Thermal Generation

Developing and financing independent thermal generation faces a number of challenges

- Ability to sell the power or enter into financial hedges
- Gap between forward markets and revenue requirements of new generation (“missing money”)
- Market structure focuses margin into a few key hours
 - Growing wind compresses margins in non-peak hours
 - Outage risk becomes a key consideration

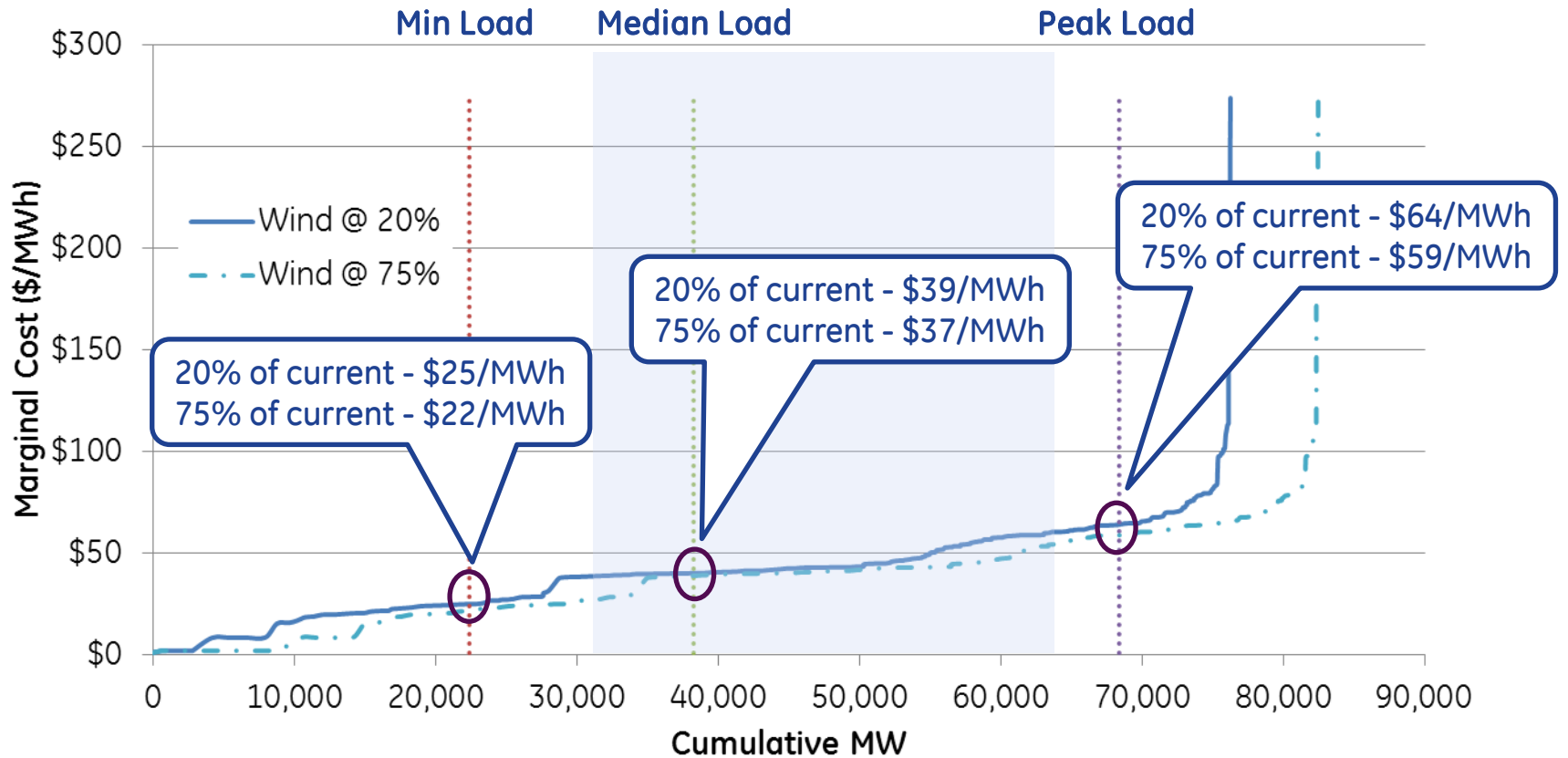
Impact of Wind on Energy Pricing

Current wind at 20% of nameplate



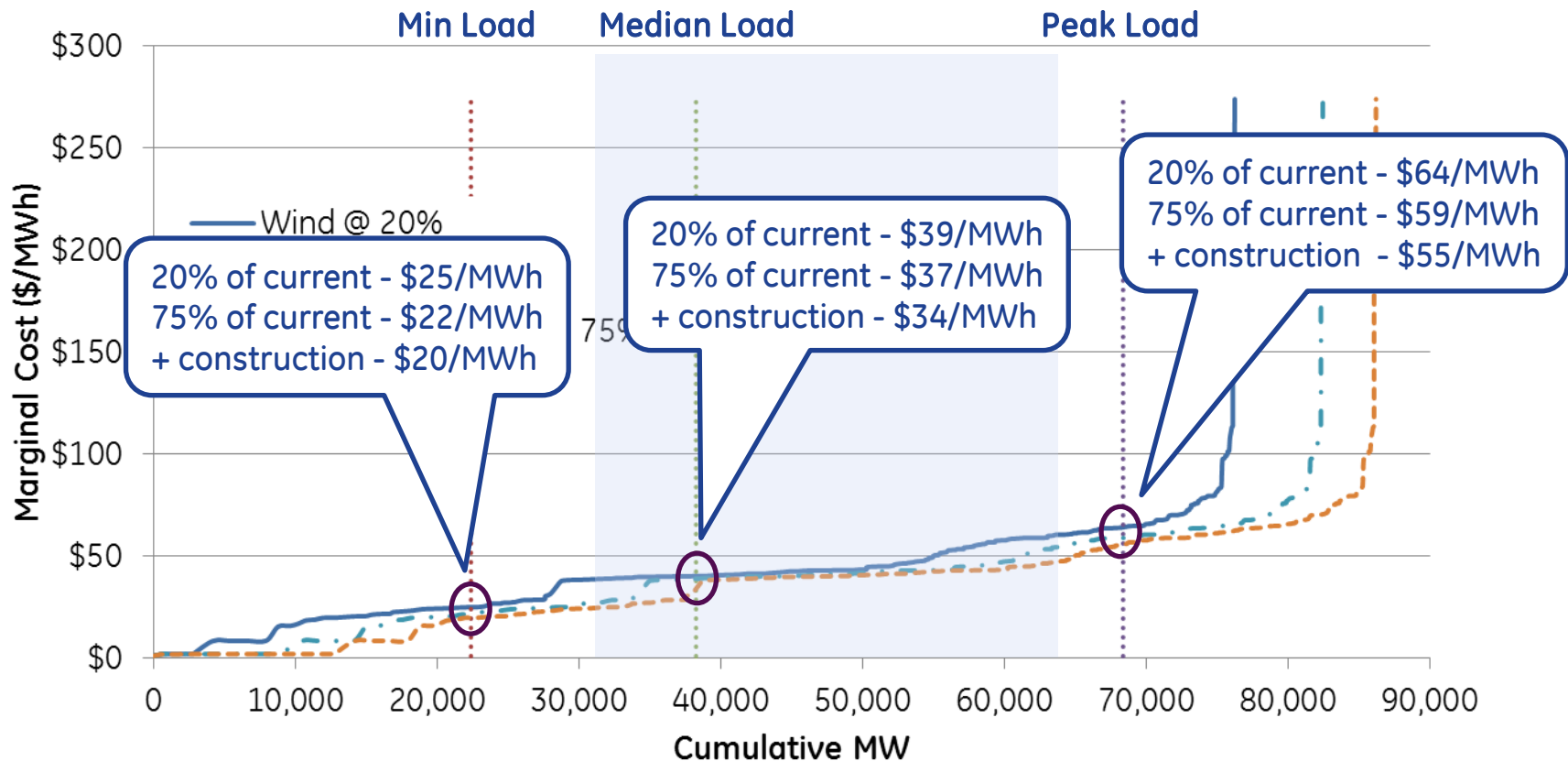
Impact of Wind on Energy Pricing

Current wind at 75% off nameplate



Impact of Wind on Energy Pricing

Current wind and wind under construction at 75% off nameplate



Conclusions

How will new generation be financed in ERCOT?

- Wind is booming, but faces a number of challenges after 2014
 - Expiring PTC
 - Limited hedge counterparties
 - Tighter tax equity markets
- Gas fired generation will be built, but faces challenges as well
 - Growing pressure on non-peak energy margins
 - Strong debt markets, but limited appetite for merchant exposure
 - Market structure uncertainty
- GE EFS will continue to invest in Texas

