

Integration and Impact of Geothermal on Transmission and Distribution

2016 Power Plays



Hala Ballouz,

Board member TREIA

Board Member AWE

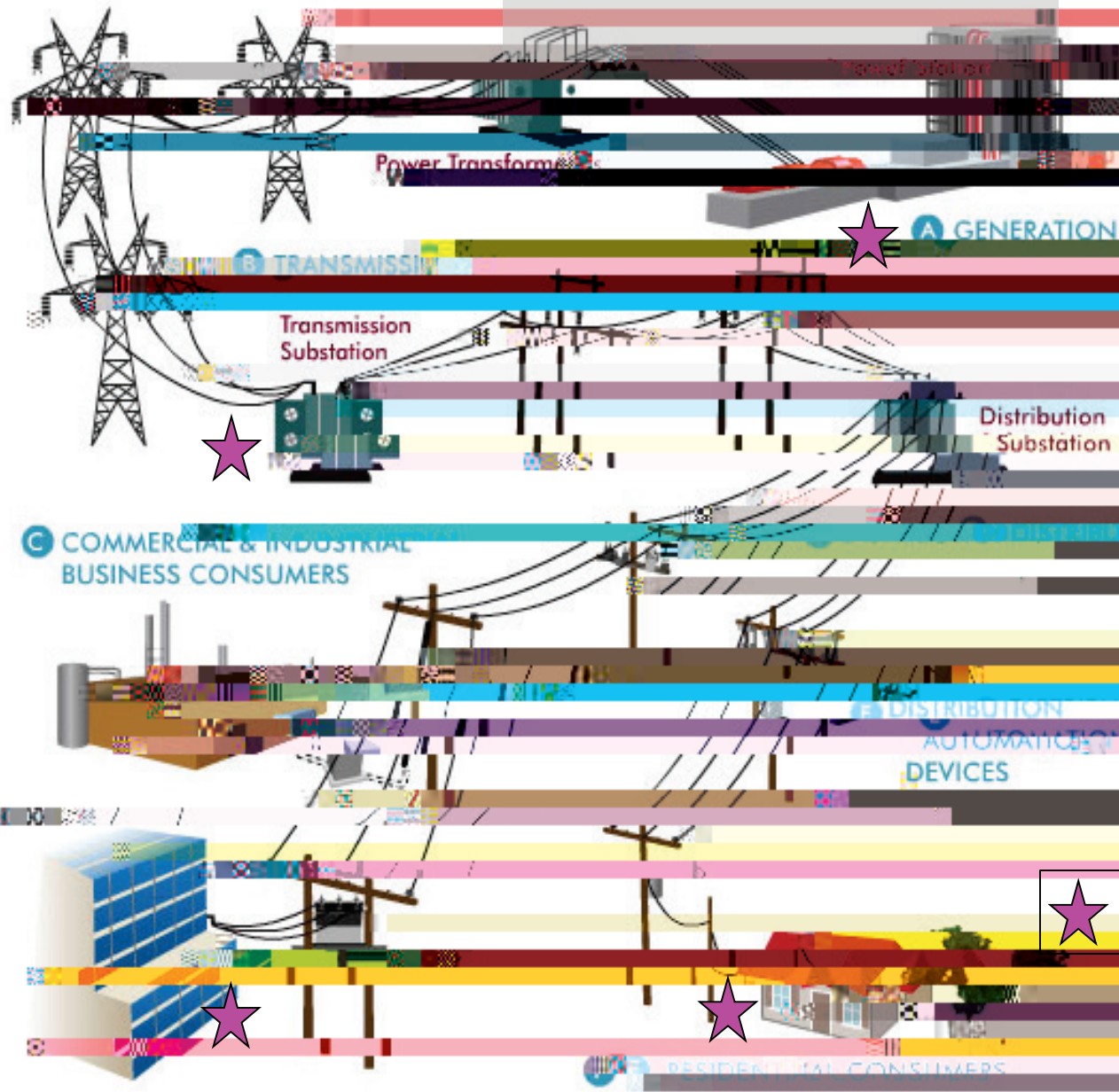
Board Member Wind Coalition





Topic Focus

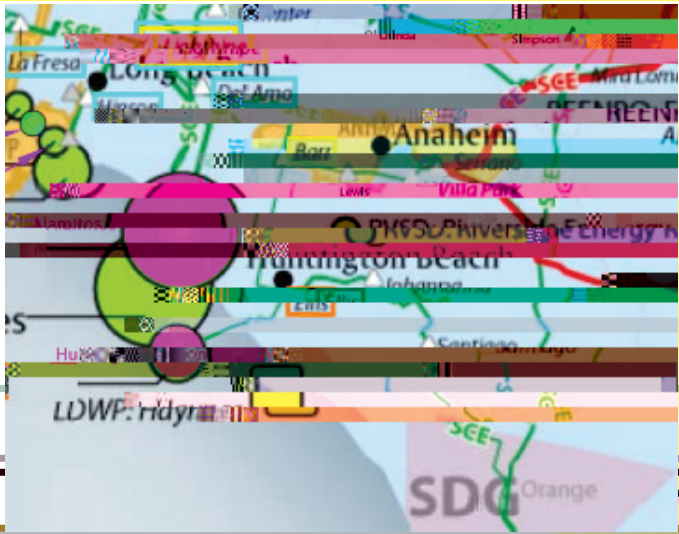


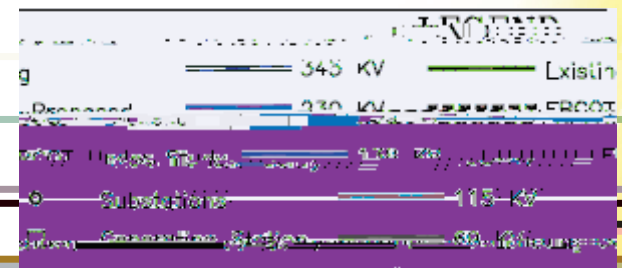


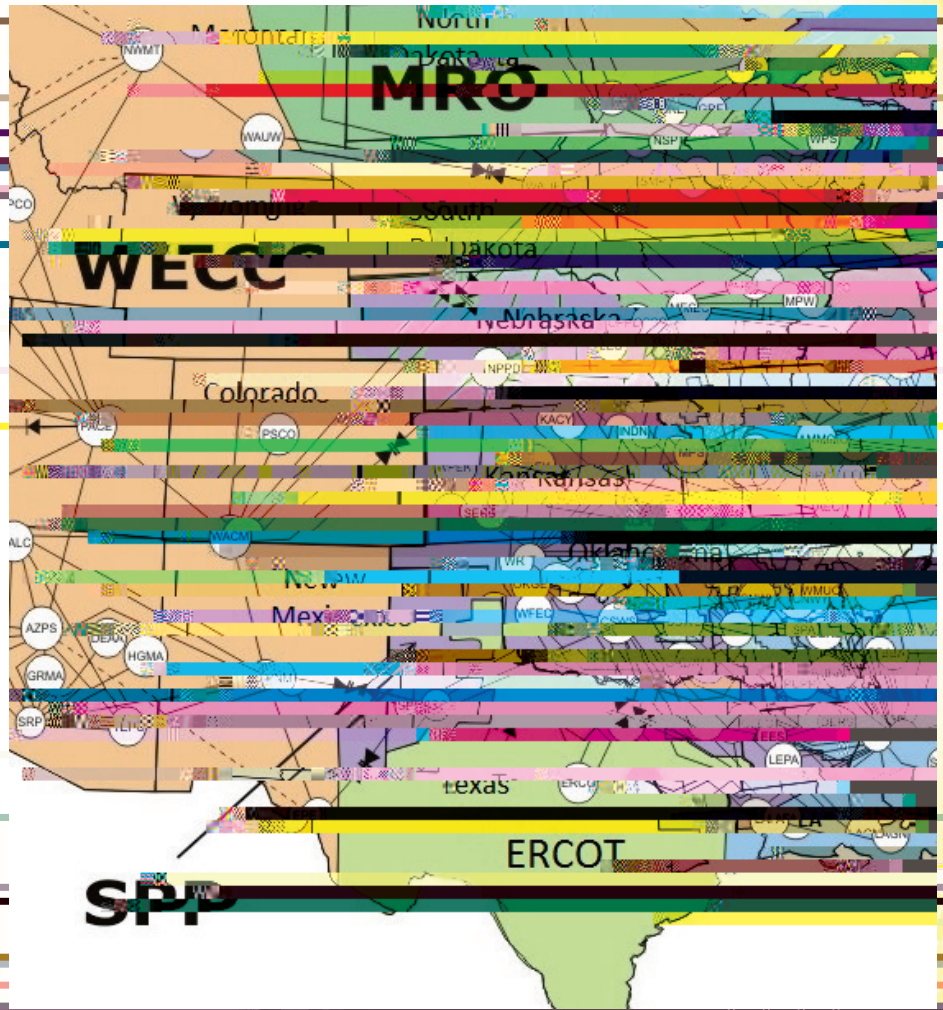
Geothermal











Generator size and location determines whether the Generator will export of power to the “Market”.

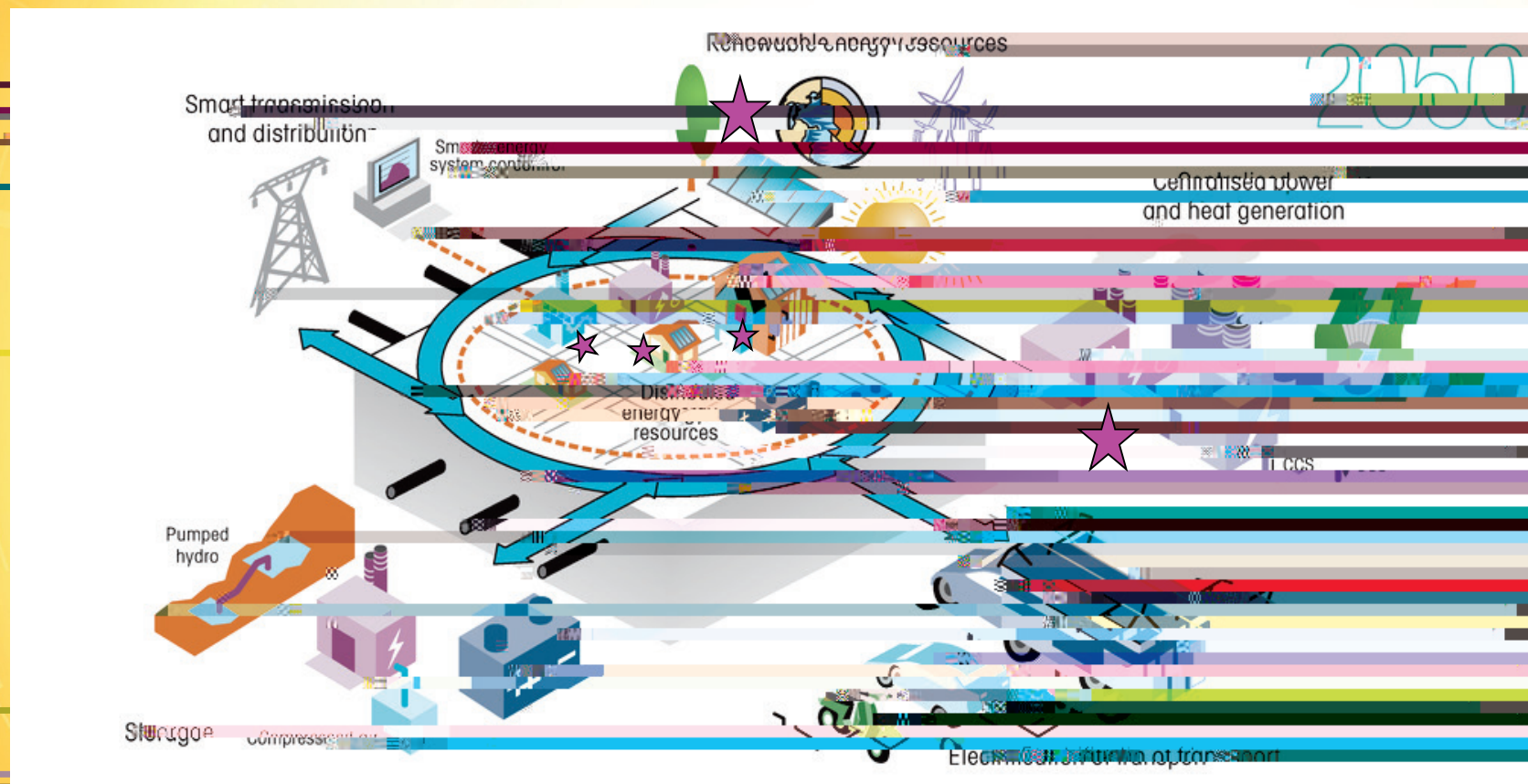
GRID Biggest Challenges

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Modern Grid

Distributed Generation rise



Source: International Energy Association

★ Geothermal Application

Examples from Texas today on Grid Needs





Far West Texas Load Growth



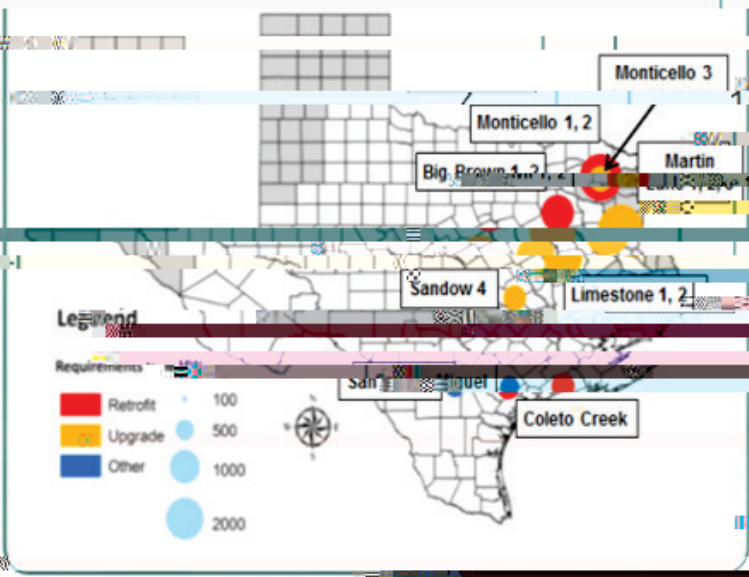


Central Texas Potential Coal Retirements

ERCOT study results with Regional Haze Implementation

3,700 MW or 8,500 MW of unit retirements next 5 to 7 years

Regional Haze Affected units in ERCOT



ERCOT Study results with Clean Power Plan Implementation

- Up to 9,000 MW unit retirements by 2022
- 33,000 MW total renewable capacity in scenarios with Clean Power Plan
- Includes more than 15,000 MW of renewable capacity additions, most of which is solar

\$\$\$ Transmission Solutions?
Generation Replacement?

Opportunities?



Geothermal Grid Driven Opportunities*

Congestion Relief

Deferral or mitigation of Grid Expansion

Load Offset

** Assuming costs reach grid parity*

