ISO/RTO Panel Discussion on Winter Preparedness

Federal Energy Regulatory Commission

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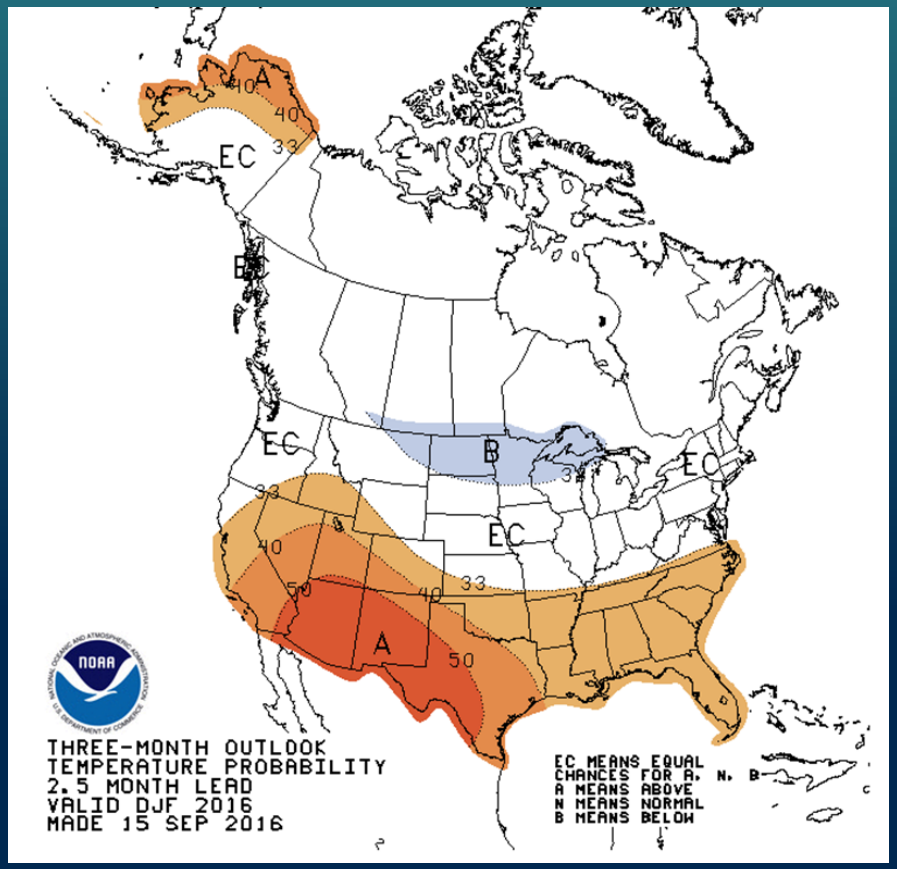
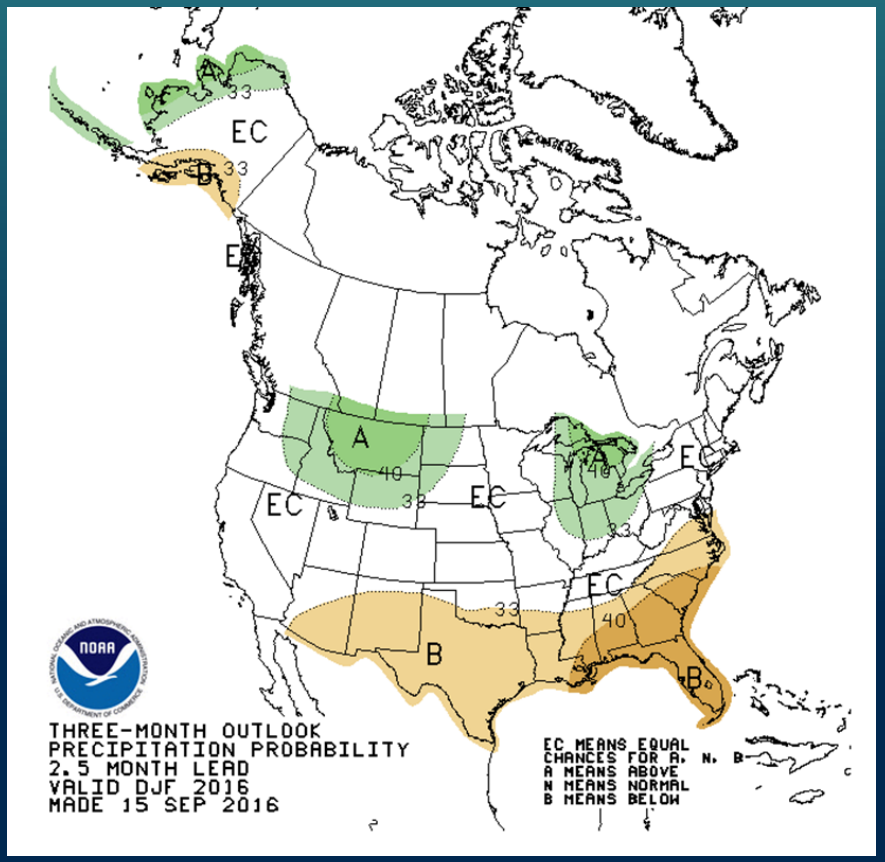
Warmer than average temperatures and normal precipitation predicted this winter





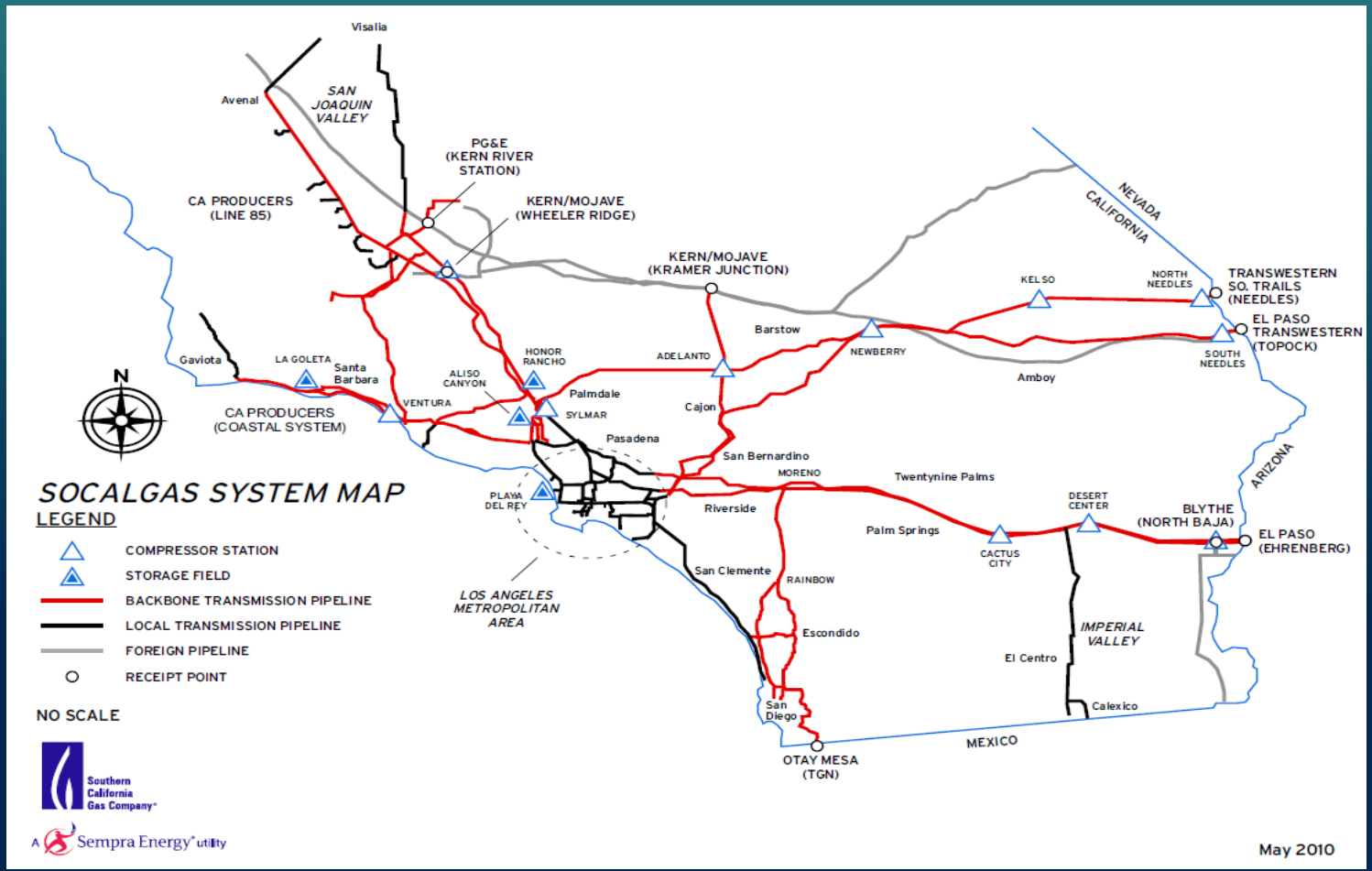
CAISO has completed its annual winter assessment

- Full transfer capability; no reductions on major paths
- Winter peaking load pockets:
- Humboldt; Sierra
- New 500kV line increases transfer capability into LA Basin
- Local congestion not anticipated due to lower winter loads
- Active monitoring; planned transmission maintenance and gas constraints

Aliso Canyon remains unavailable

- Electric generators not primary driver of Winter risks
- Demand flips from non-core generators to core customers
- Core uses 60% of gas supply
- Non-core generators first curtailed to meet core demand
- Lower electricity demand; more flexibility outside the SoCalGas area
- Good coordination, advanced electric planning, bidding flexibility help mitigate risks

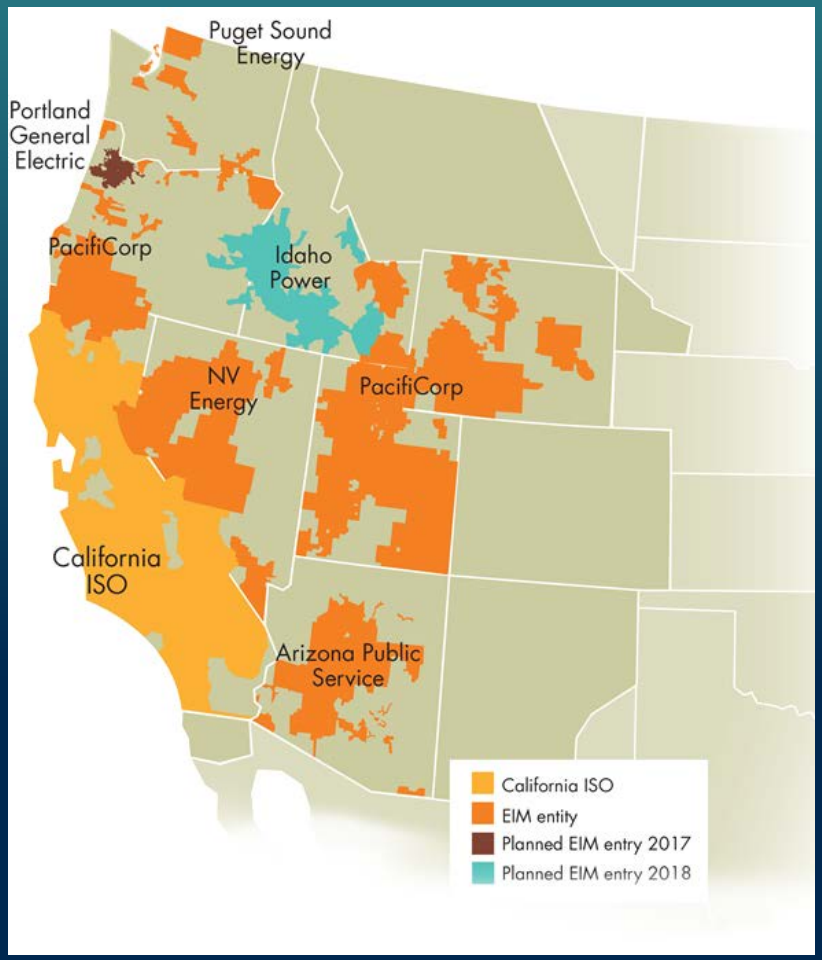
Directly Affects 17 Gas-fired Plants Generating ~9800MW; Indirectly Affects 48 Plants Generating 20,120MW



Flexible ramping product important for real-time market

- Secures ramping capability in the fifteen-minute market for real-time dispatch
- Accounts for upward and downward ramping needs
- Helps maintain and use dispatchable capacity
- Provides transparent and less volatile price signals
- Compensates ramping providers; charges ramping consumers

Energy Imbalance Market enhances reliability



- Puget Sound Energy and Arizona Public Service successfully began full participation on October 1, 2016
- Economic transfers are supporting imbalances across the combined footprint