

Exploring Opportunities for Large End-User Efficiency

Charles S. Griffey

Peregrine Consultants, LLC

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Status of Cogen in La and Tx

	Louisiana	Texas
CHP Production	33.6 GWh	84.6 GWh
Direct Use	20.3 GWh	34.9 GWh
Sales to Grid	13.3 GWh	49.7 GWh

Source: EIA 2014 data

Economics

Houston Large Industrial Retail Price	\$38/MWh
Typical Tariffs (LIPS and HLFS)	\$53-\$58/MWh
Transmission-level Delivered Price in MISO South	\$34/MWh
New Cogeneration Cost (no boiler replacement, Frame F)	=>\$38/MWh

Source: 2015 data. Tariffs are ELL LIPS and HLFS

Comparison of ERCOT and MISO South for Cogeneration

- ERCOT and recently MISO have a ready market in which to sell
- Energy-only vs. MISO capacity and energy
- Integrated utility/no retail choice in Louisiana
- Utilities control RFP timing and evaluation process

Other Considerations

- Cogeneration is more thermally efficient
- Industrial customers are sophisticated and can/should be responsible for their own risk management decisions