



July 24, 2017



Loss of Long-Term Power Sales Agreements:

Minimizing Adverse Impacts



Agenda

01 Background – Lee County Solid Waste Division

02 Historical Power Sales

03 The Florida Power Market

04 Long-Term Power Sales

05 Asset Manager & Short-Term Power Sales

06 Results To-Date

07 The Future



Lee County WTE Facility



**Recovered Materials
Processing Facility (MRF)**



Fleet Maintenance Building



Transfer Station



**Horticultural Waste
Processing Area**



**Construction & Demolition
Debris Recycling Facility**



Resource Recovery Facility



Lee WTE Plant Specs

- Nameplate Capacity is 59 MW with two generators rated 39MW and 20MW gross
- Plant self-consumes ~15% of gross electricity, and provides power to the MRF, C&D and rest of Buckingham complex
- After internal consumption, full load electrical output is ~44 MW available for sale
- 10% of Electrical revenues are shared with Covanta

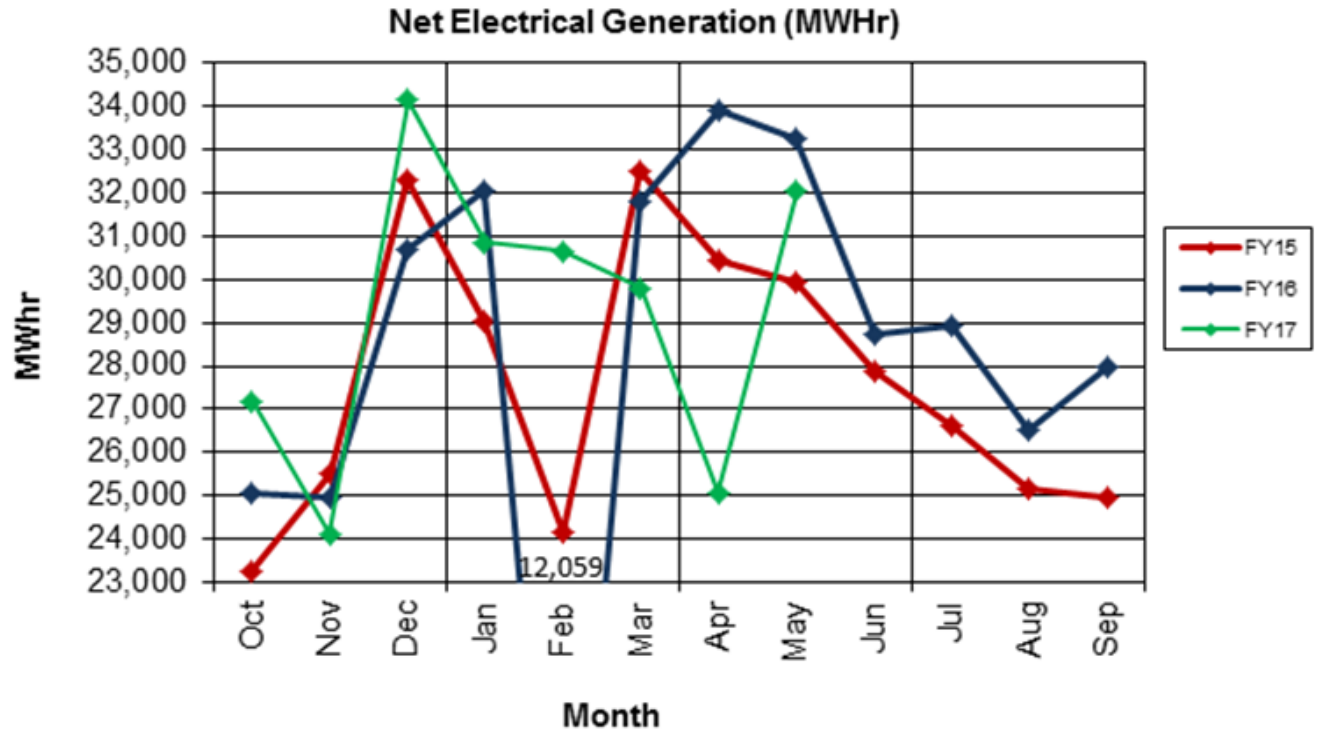


Lee WTE Plant Specs *Continued*

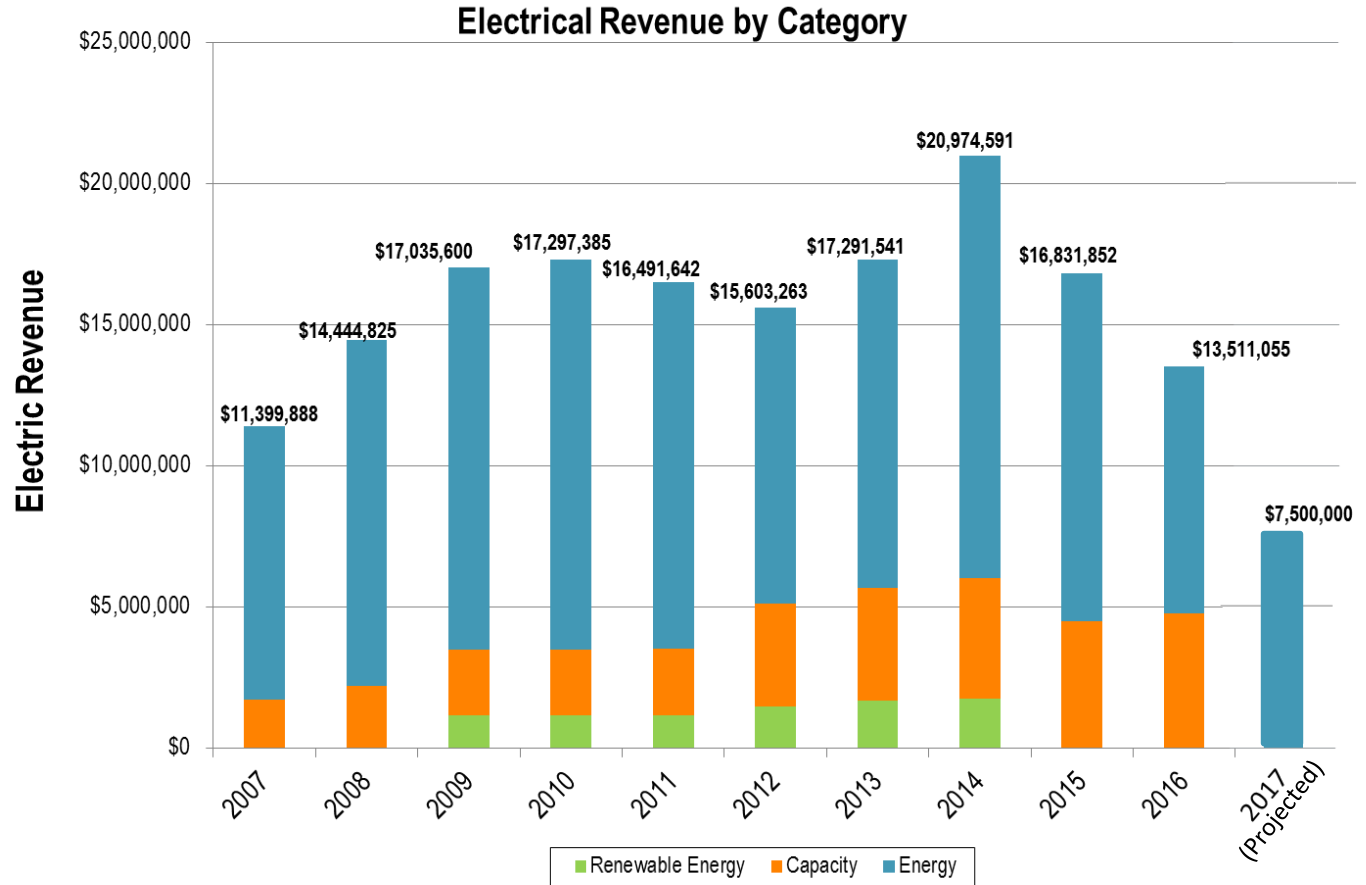
- Plant has seasonal characteristics due to winter population increase
- Units that provide steam to the turbine generators require scheduled downtime ~2-3 times/year/unit
- WTE units also have unscheduled downtime for repairs – can occur at any time
- Overall boiler availability is ~92% on annual average basis
- Each boiler's steam output represents about 33% of electrical output



Lee WTE Electrical Output

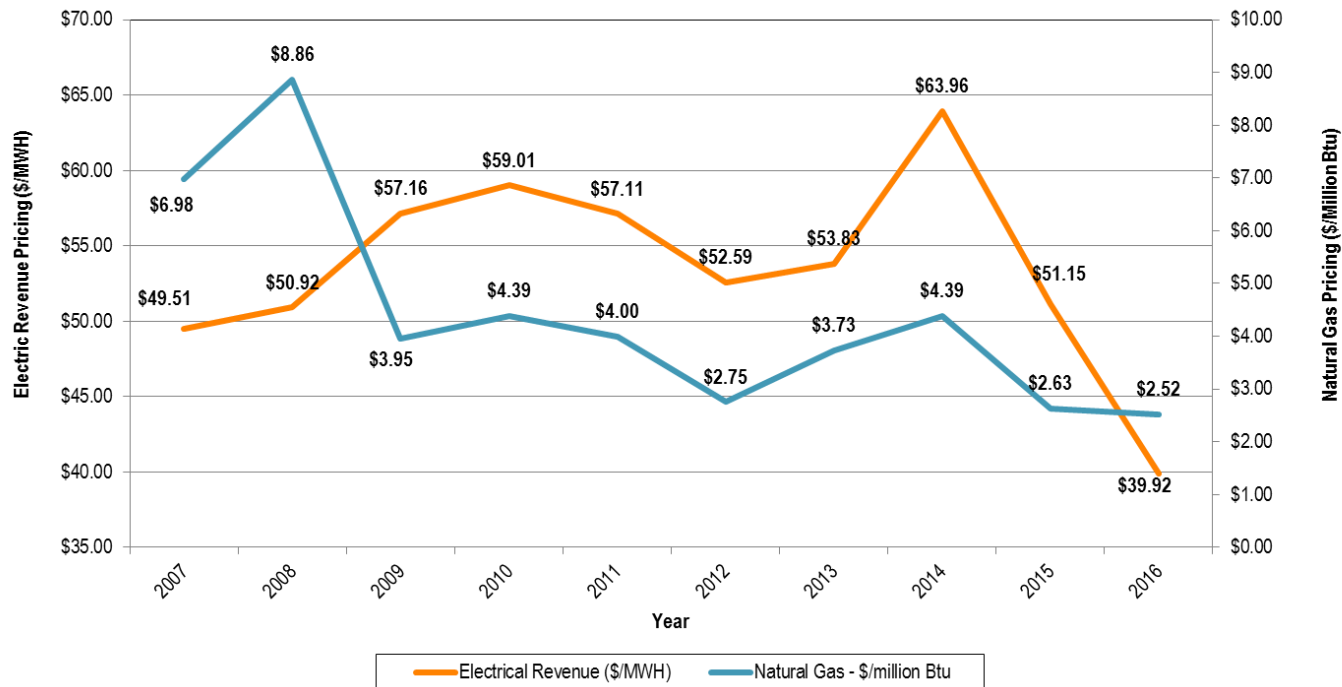


Historical and Projected Electrical Revenues



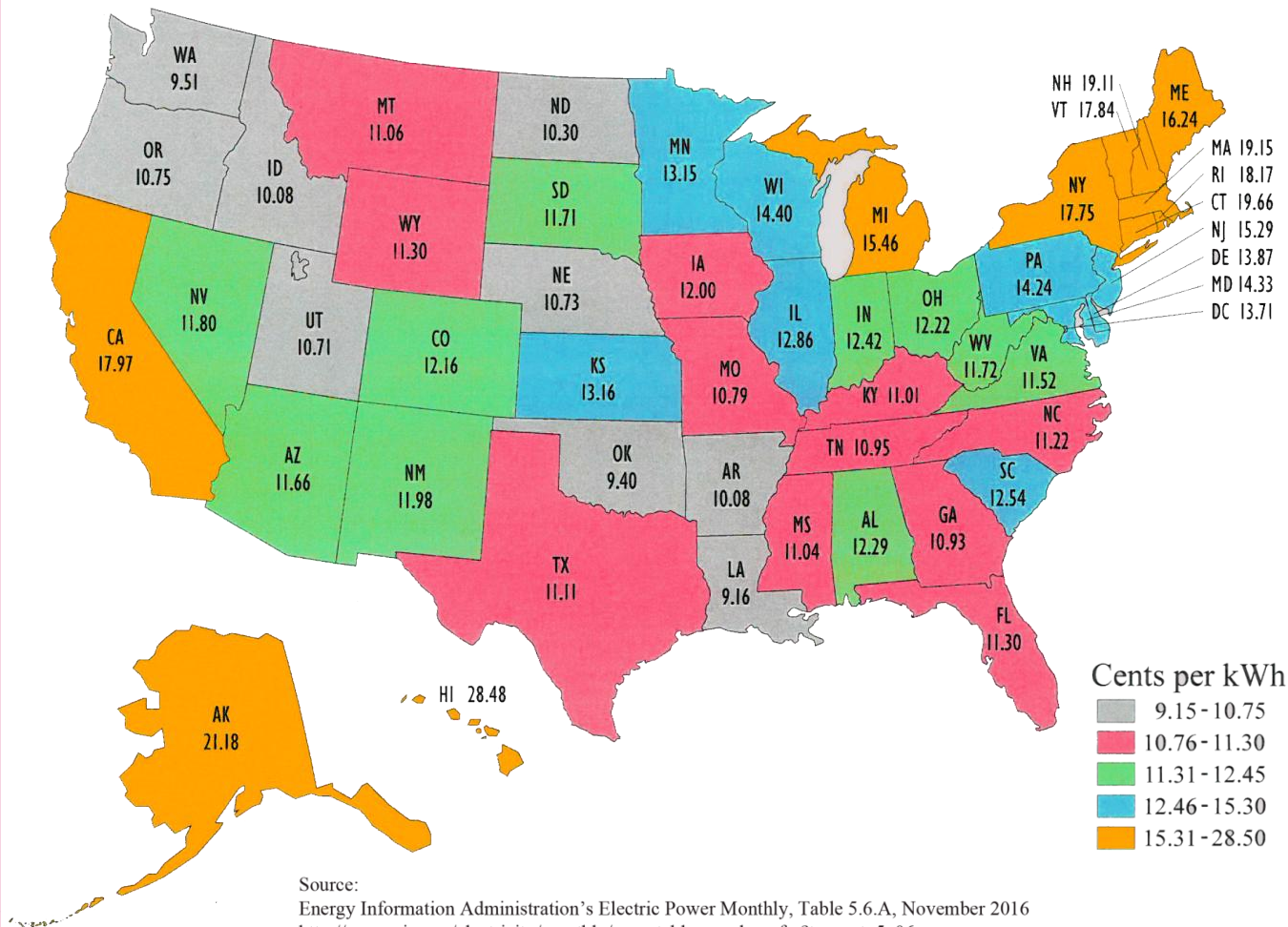
Electrical Pricing Received vs. Natural Gas (Henry Hub)

Electrical Revenue vs Natural Gas Pricing



Average US Retail Electric Rates by State in 2016

U.S. Residential Average Price per kWh = 12.75 cents



Source:

Energy Information Administration's Electric Power Monthly, Table 5.6.A, November 2016
http://www.eia.gov/electricity/monthly/epm_table_grapher.cfm?t=epmt_5_06_a

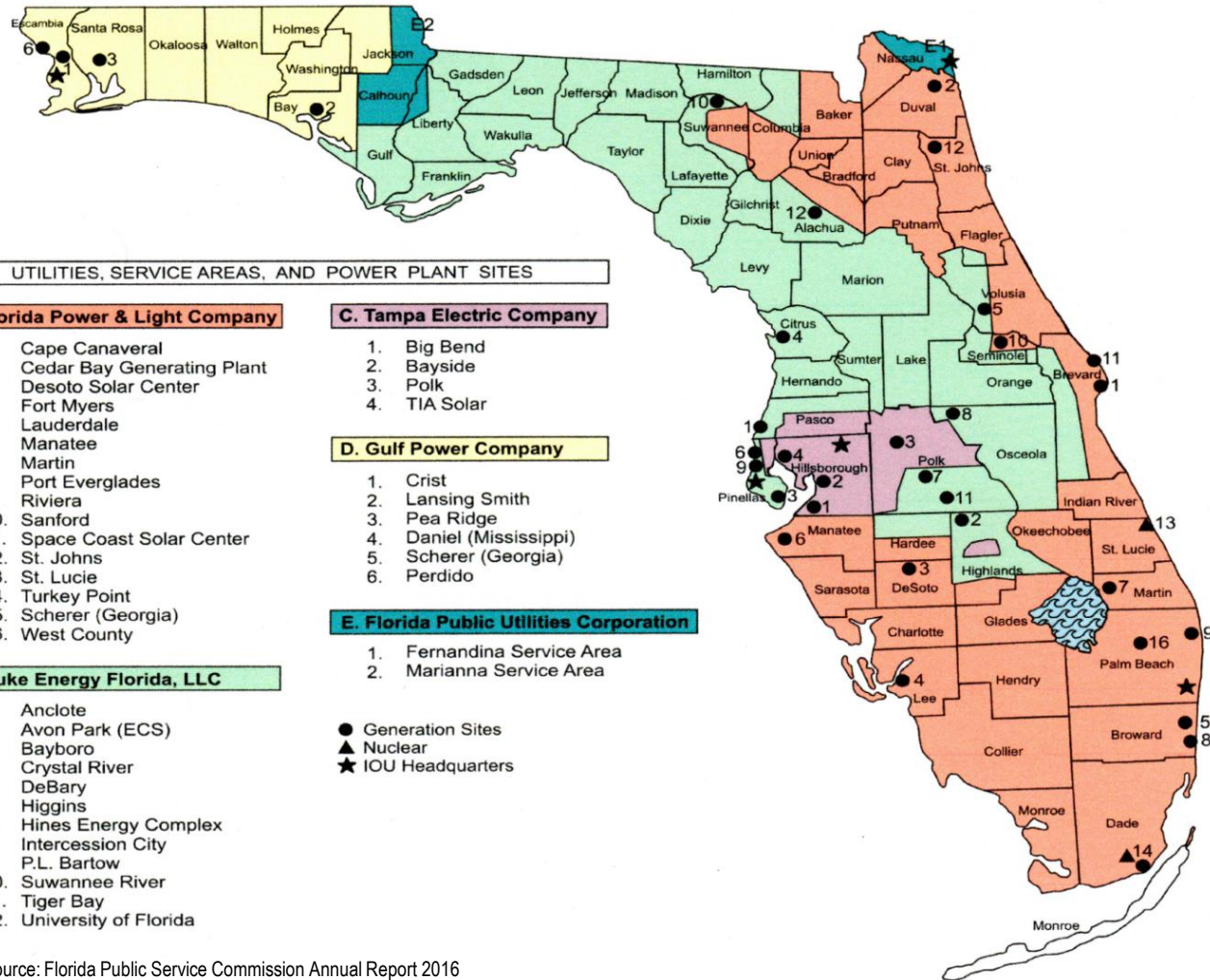
Electrical Generation Factoids

- Total electric generation capacity in Florida is about 60,000 MW
- Lee County's WTE capacity is approx. 60MW, or 0.1% of the total
- Florida does not require that a certain portion of electricity be generated by renewable sources
- The FERC does require that electricity generated from Qualified Facilities be purchased at wholesale "avoided cost rates"



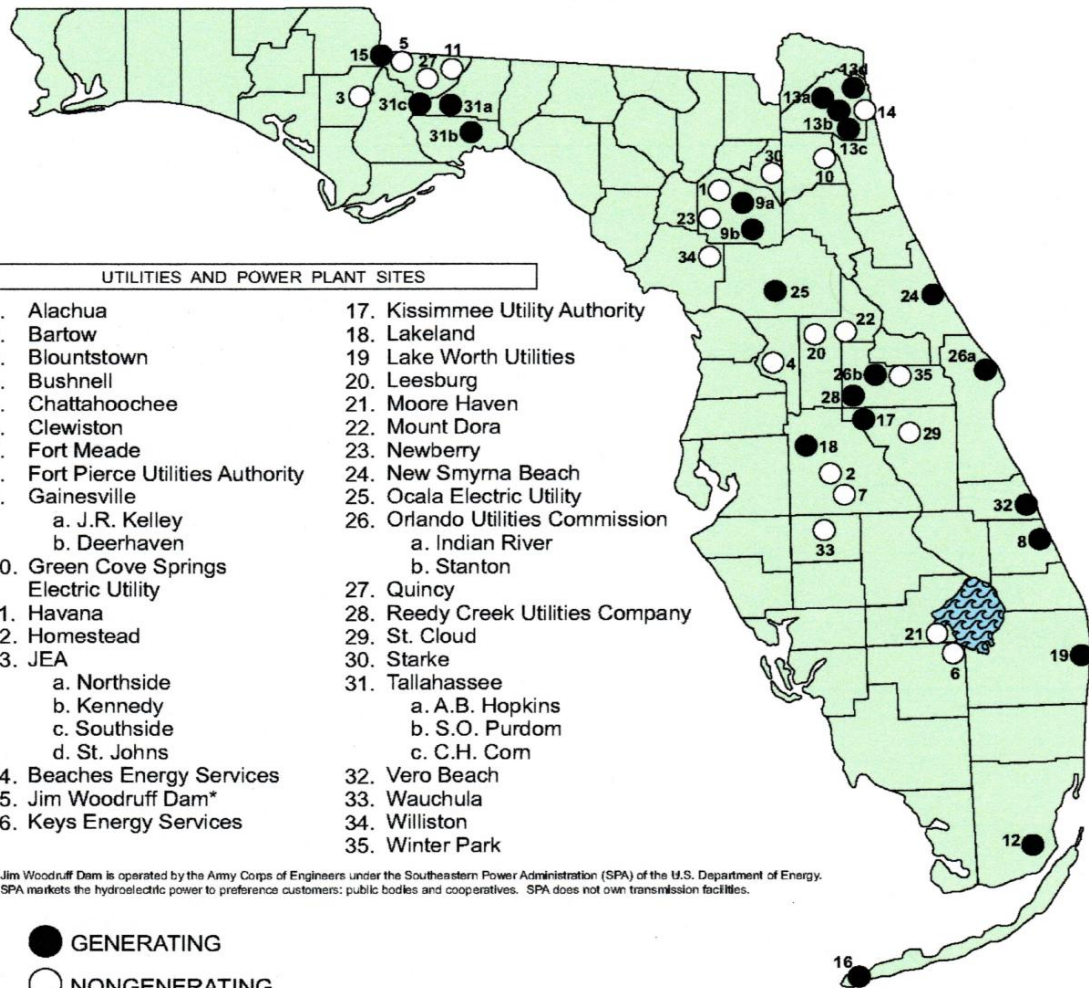
Florida Investor Owned Electric Utilities

Approximate Company Service Acres



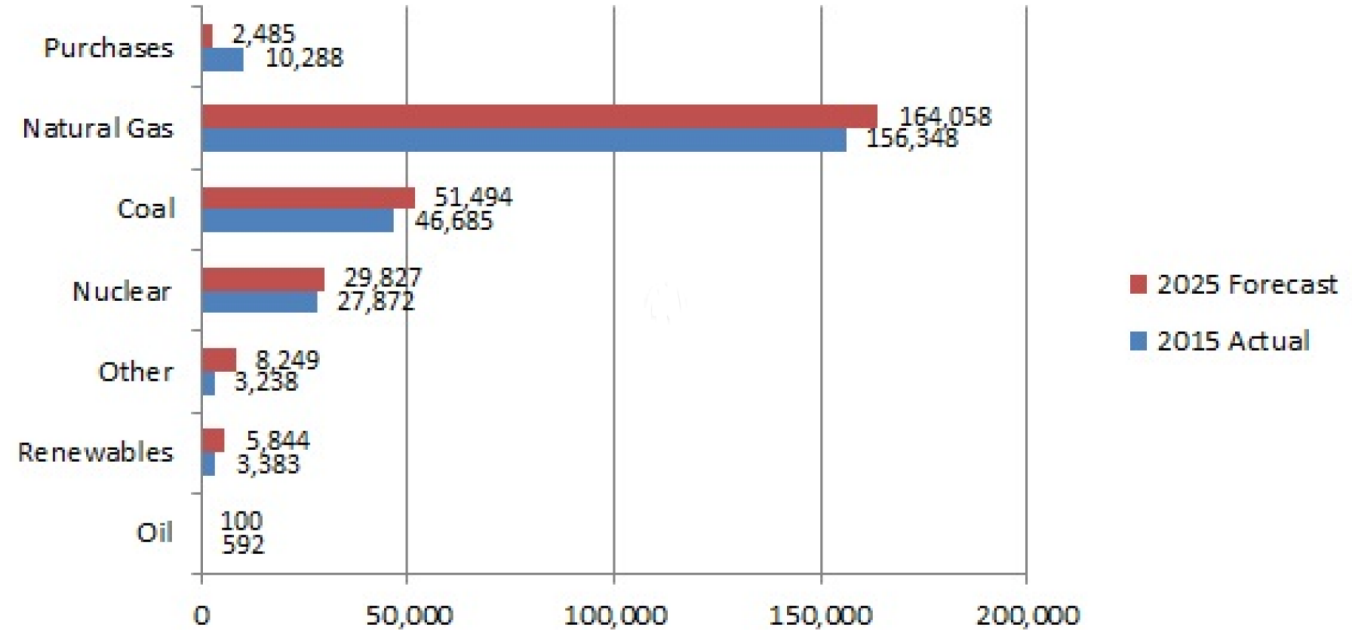
Florida Municipal Electric Utilities

Approximate Utility
Locations

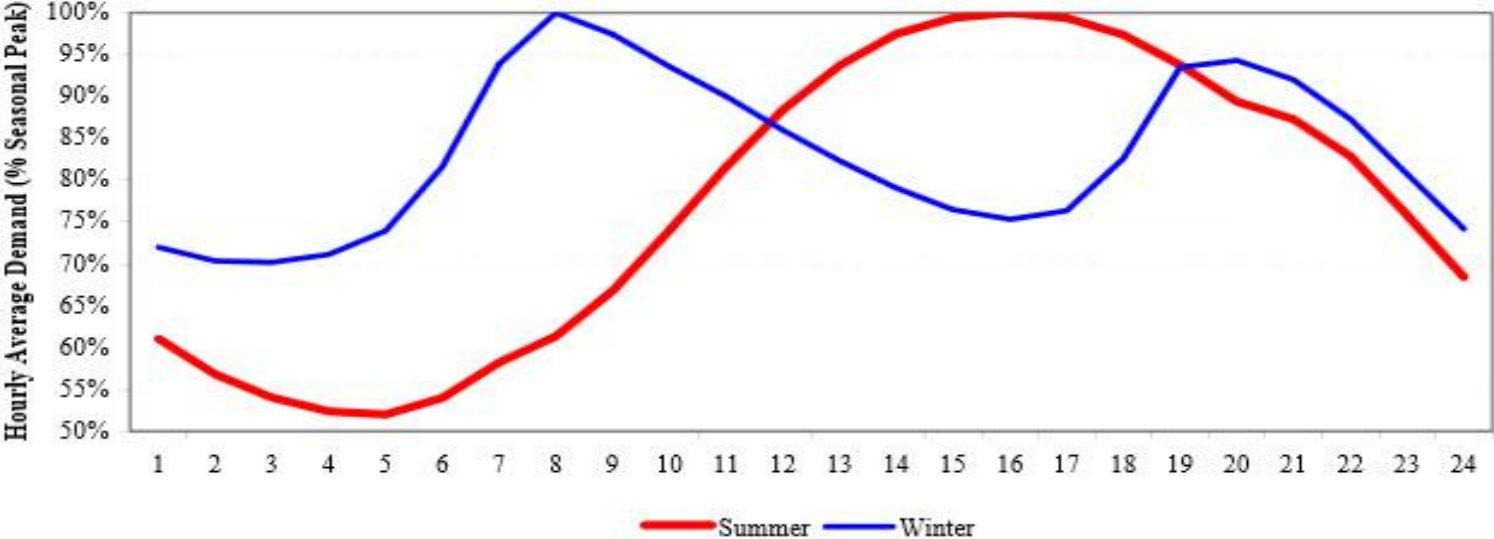


Florida Energy Generation by Fuel Type

Energy Sources (GWH)

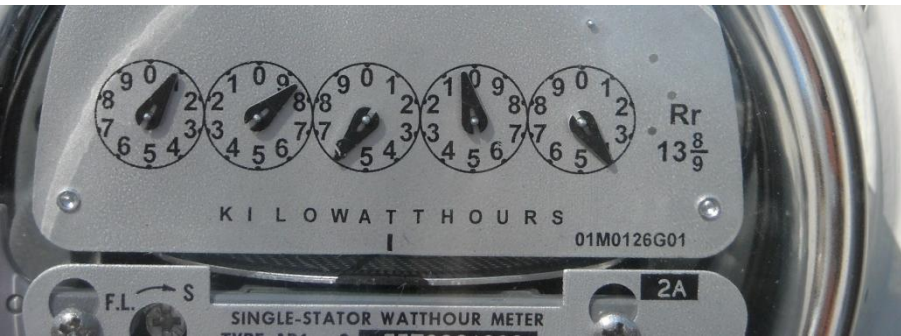


Typical Daily Load Profile – Florida

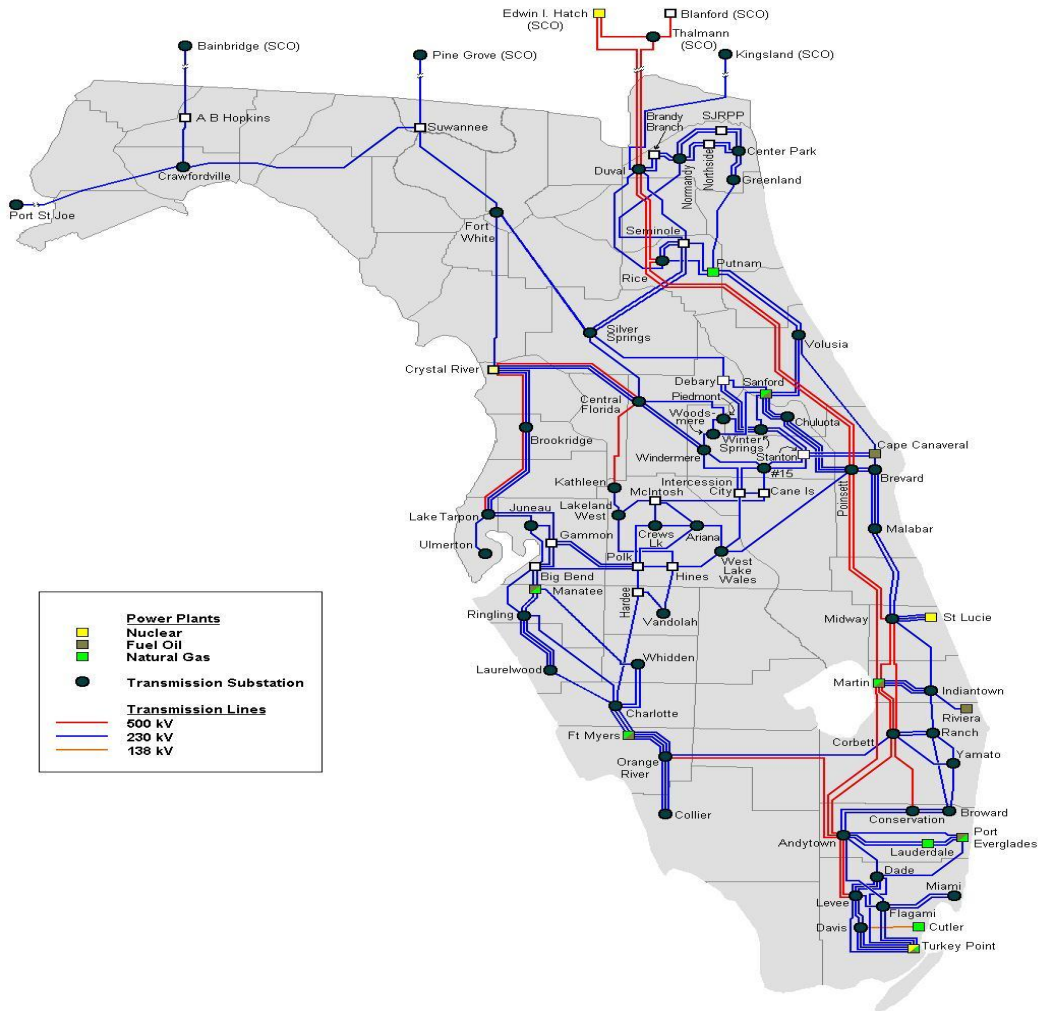


Summary Concepts for Electrical Production and Sale

- Lee will be selling into a base marketplace with a very low current floor price
- Opportunities for short-term sales at higher prices are driven by supply and demand - hourly
- The market place is subject to rapid changes in both supply and demand
- The available output for sale varies by operational considerations at the WTE Facility



Major Florida Transmission Lines



Energy Asset Manager



Asset Manager Objectives

- Optimize revenues from sale of electricity from the WTE Facility
- Coordinate/purchase transmission services to wheel electricity to buyers
- Coordinate with WTE Facility on 24/7 basis for available/projected output levels
- Minimize risk and disruption to the Facility
- Provide transparent and auditable transaction history



Types of Power Sales

- Long-term sales: contracted
- Short-term sales: as-available pricing
- Spot sales: can beat as-available pricing on an hourly basis (minus transmission)
- Firm and non-firm transmission
- Wheeling & Scheduling arrangements must be coordinated for all transactions (except FPL)



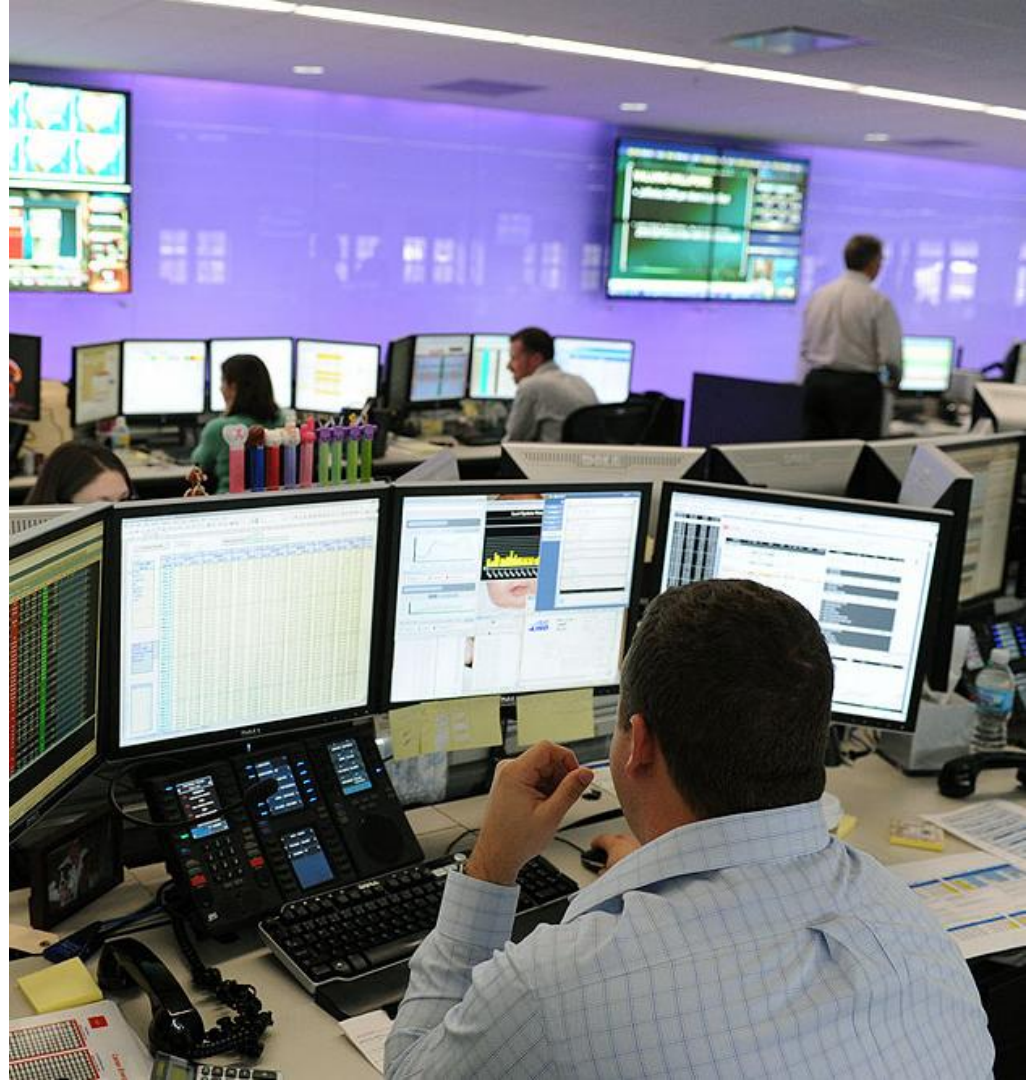
Asset Manager Functions

- Develop firm understanding of WTE facility capabilities and operational status
- Identify electricity sales opportunities
- Evaluate transmission paths to potential buyers
- Analyze electricity sales opportunities
 - Pricing, including wheeling costs
 - Transaction term, duration and schedule
 - Buyer creditworthiness & reputation

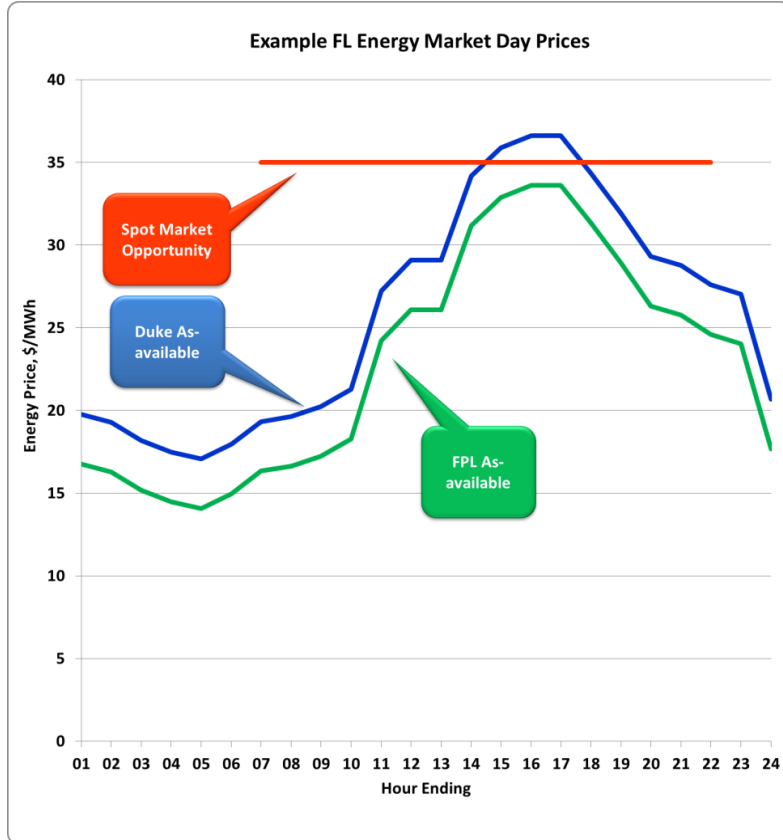


Asset Manager Functions *Continued*

- Negotiation of transaction terms (price, delivery point, party responsible for transmission (interruptibility, costs, risks, etc.)
- Execution of transactions
- Monitoring & Management of transactions, including curtailments, outages, etc.
- Transaction settlements, including invoicing and payment collection
- Monthly reporting of activities including sales, revenues and margins



Market Illustration



| Daily Price Table (\$/MWh) | | | | | | | |
|----------------------------|-----------------|------------------|--|-----------------|-----------------|------------------|-----------------|
| Hour Ending | Duke | | | FPL | Spot Market | | |
| | Energy | Wheel | Net | Energy | Energy | Wheel | Net |
| 01 | 19.77 | (3.91) | 15.86 | 16.77 | 16.77 | | 16.77 |
| 02 | 19.28 | (3.91) | 15.37 | 16.28 | 16.28 | | 16.28 |
| 03 | 18.19 | (3.91) | 14.28 | 15.19 | 15.19 | | 15.19 |
| 04 | 17.49 | (3.91) | 13.58 | 14.49 | 14.49 | | 14.49 |
| 05 | 17.06 | (3.91) | 13.15 | 14.06 | 14.06 | | 14.06 |
| 06 | 17.96 | (3.91) | 14.05 | 14.96 | 14.96 | | 14.96 |
| 07 | 19.33 | (3.91) | 15.42 | 16.33 | 35.00 | (5.87) | 29.14 |
| 08 | 19.63 | (3.91) | 15.72 | 16.63 | 35.00 | (5.87) | 29.14 |
| 09 | 20.23 | (3.91) | 16.32 | 17.23 | 35.00 | (5.87) | 29.14 |
| 10 | 21.29 | (3.91) | 17.38 | 18.29 | 35.00 | (5.87) | 29.14 |
| 11 | 27.22 | (3.91) | 23.31 | 24.22 | 35.00 | (5.87) | 29.14 |
| 12 | 29.09 | (3.91) | 25.18 | 26.09 | 35.00 | (5.87) | 29.14 |
| 13 | 29.08 | (3.91) | 25.17 | 26.08 | 35.00 | (5.87) | 29.14 |
| 14 | 34.17 | (3.91) | 30.26 | 31.17 | 35.00 | (5.87) | 29.14 |
| 15 | 35.90 | (3.91) | 31.99 | 32.90 | 35.00 | (5.87) | 29.14 |
| 16 | 36.60 | (3.91) | 32.69 | 33.60 | 35.00 | (5.87) | 29.14 |
| 17 | 36.60 | (3.91) | 32.69 | 33.60 | 35.00 | (5.87) | 29.14 |
| 18 | 34.34 | (3.91) | 30.43 | 31.34 | 35.00 | (5.87) | 29.14 |
| 19 | 31.91 | (3.91) | 28.00 | 28.91 | 35.00 | (5.87) | 29.14 |
| 20 | 29.30 | (3.91) | 25.39 | 26.30 | 35.00 | (5.87) | 29.14 |
| 21 | 28.78 | (3.91) | 24.87 | 25.78 | 35.00 | (5.87) | 29.14 |
| 22 | 27.60 | (3.91) | 23.69 | 24.60 | 35.00 | (5.87) | 29.14 |
| 23 | 27.04 | (3.91) | 23.13 | 24.04 | 24.04 | | 24.04 |
| 24 | 20.68 | (3.91) | 16.77 | 17.68 | 17.68 | | 17.68 |
| Daily Revenue | \$24,743 | (\$3,754) | \$20,989 | \$21,863 | \$27,739 | (\$3,754) | \$23,985 |
| Assume: | 40 | MW | Delivery Capacity | | | | |
| | 3.91 | \$/MWh | Transmission, incl losses & ancillary svcs (to Duke) | | | | |
| | 5.87 | \$/MWh | Transmission (to Market Oppty, adjusted for partial day) | | | | |

Source: APEX Power Services, Inc.

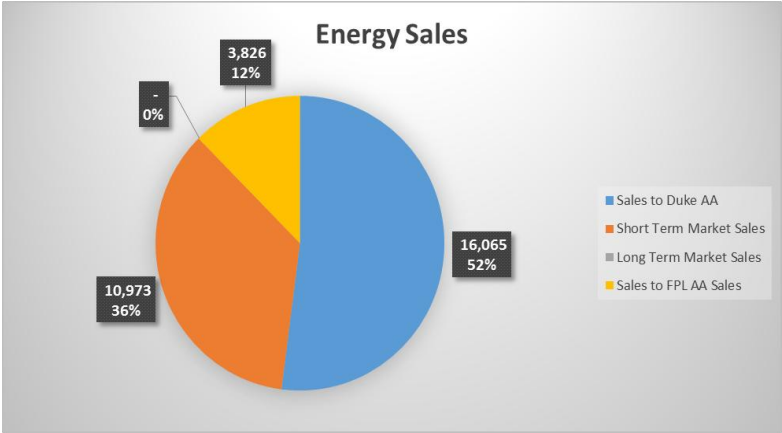
Owner/Operator Responsibilities

- Provide 30 Day Look Ahead of Net Output to Asset Manager (Operator)
- Provide prompt notice of any changes to Net Output as they occur 24/7 (Operator)
- Reconcile monthly generation, imbalance, demand charges and revenues (Owner)

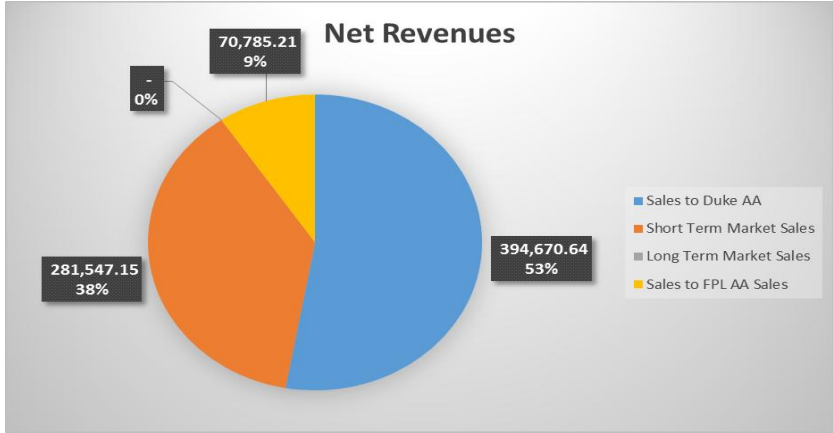


Short-Term Sales Recent Results

January 2017 MWH Sold



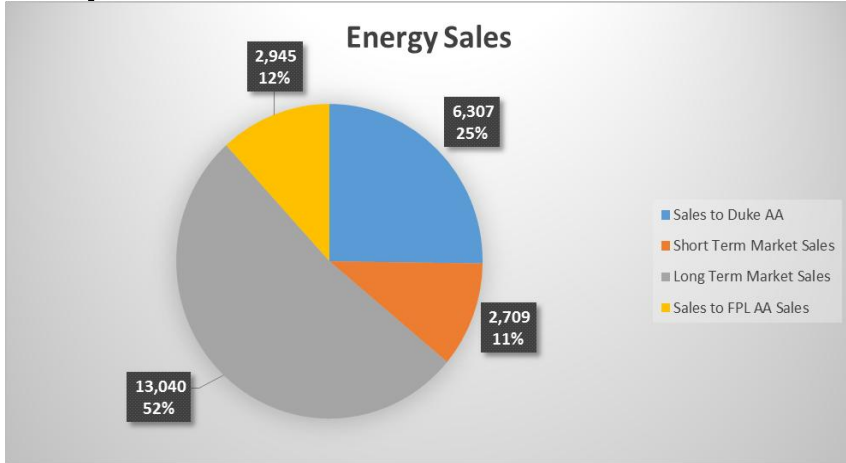
January 2017 MWH Revenue



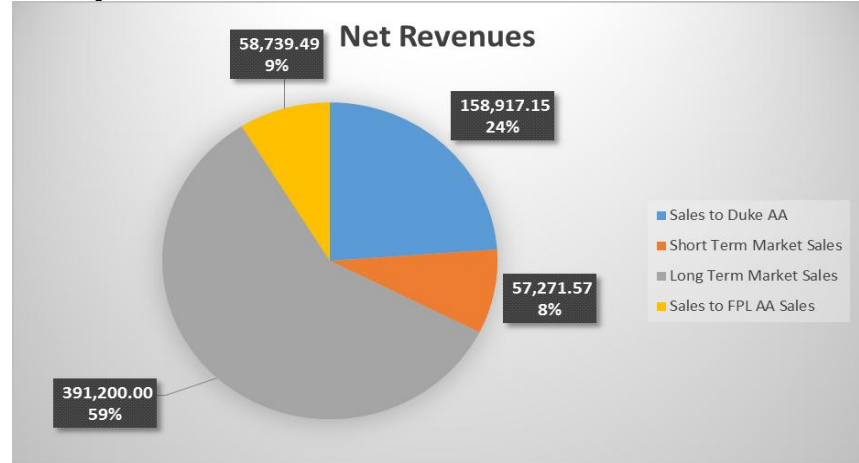
| Margins on Sales (relative to FPL) | | | |
|------------------------------------|------|-------------------|--------------|
| Sales to Duke AA | (\$) | 95,019.48 | \$ 5.91 /MWh |
| Short Term Market Sales | (\$) | 57,099.95 | 5.20 /MWh |
| Long Term Market Sales | (\$) | - | |
| | | <u>152,119.43</u> | |

Short-Term Sales Recent Results

April 2017 MWH Sold



April 2017 MWH Revenue

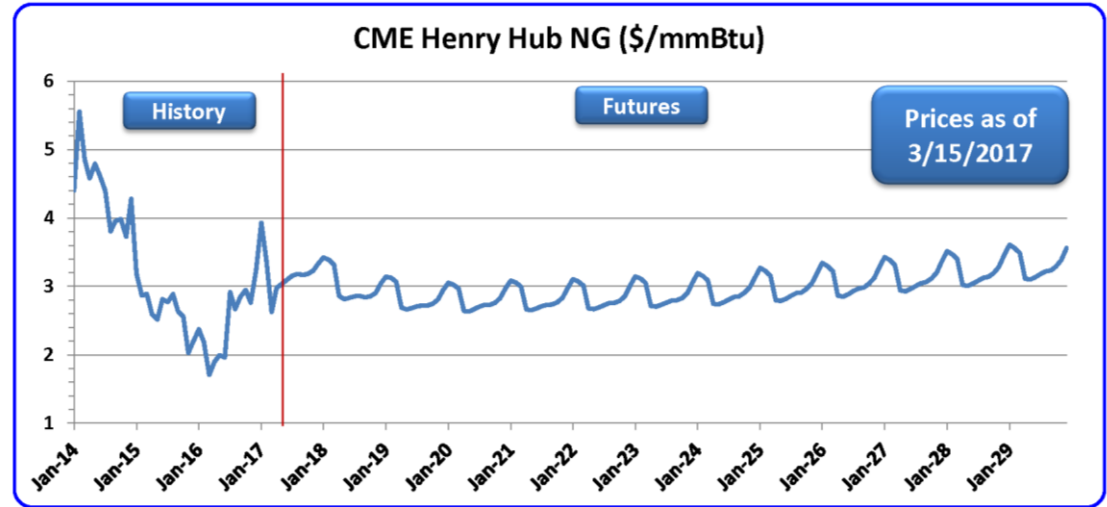


Margins on Sales (relative to FPL)

| | | | | |
|-------------------------|------|------------------|----------|------|
| Sales to Duke AA | (\$) | 72,030.75 | \$ 11.42 | /MWh |
| Short-Term Market Sales | (\$) | 22,963.12 | 8.48 | /MWh |
| Long-Term Market Sales | (\$) | - | - | /MWh |
| | | 94,993.87 | | |

The Future

- **Natural Gas Futures Remain Flat – with wholesale electric rates following suite**
 - Pursue Self Service Wheeling to County Facilities
 - Continue to Track and Pursue Long Term Sales Opportunities to Municipals and Other Wholesale Customers
 - Continue to Maximize Short Term Sales Opportunities



| 2017 Apr-Dec | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 |
|-----------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 3.154 | 2.999 | 2.836 | 2.811 | 2.825 | 2.845 | 2.885 | 2.935 | 2.998 | 3.069 |

Source: APEX Power Services Corp

Questions?



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