

Purchased Power Background and Update

City Council Workshop

January 22nd, 2019



Purpose

The purpose of today's discussion is to provide an explanation of the current condition of the electric fund, the reasons why the City entered into its current contracts, context regarding the electric market, and an update on current actions to address the financial obligations of the fund

Agenda

- 2008 Purchased Power Goals
- History of executed contracts
- Recent performance recap
- State of the energy market
- Current actions

2008 Purchased Power Goals

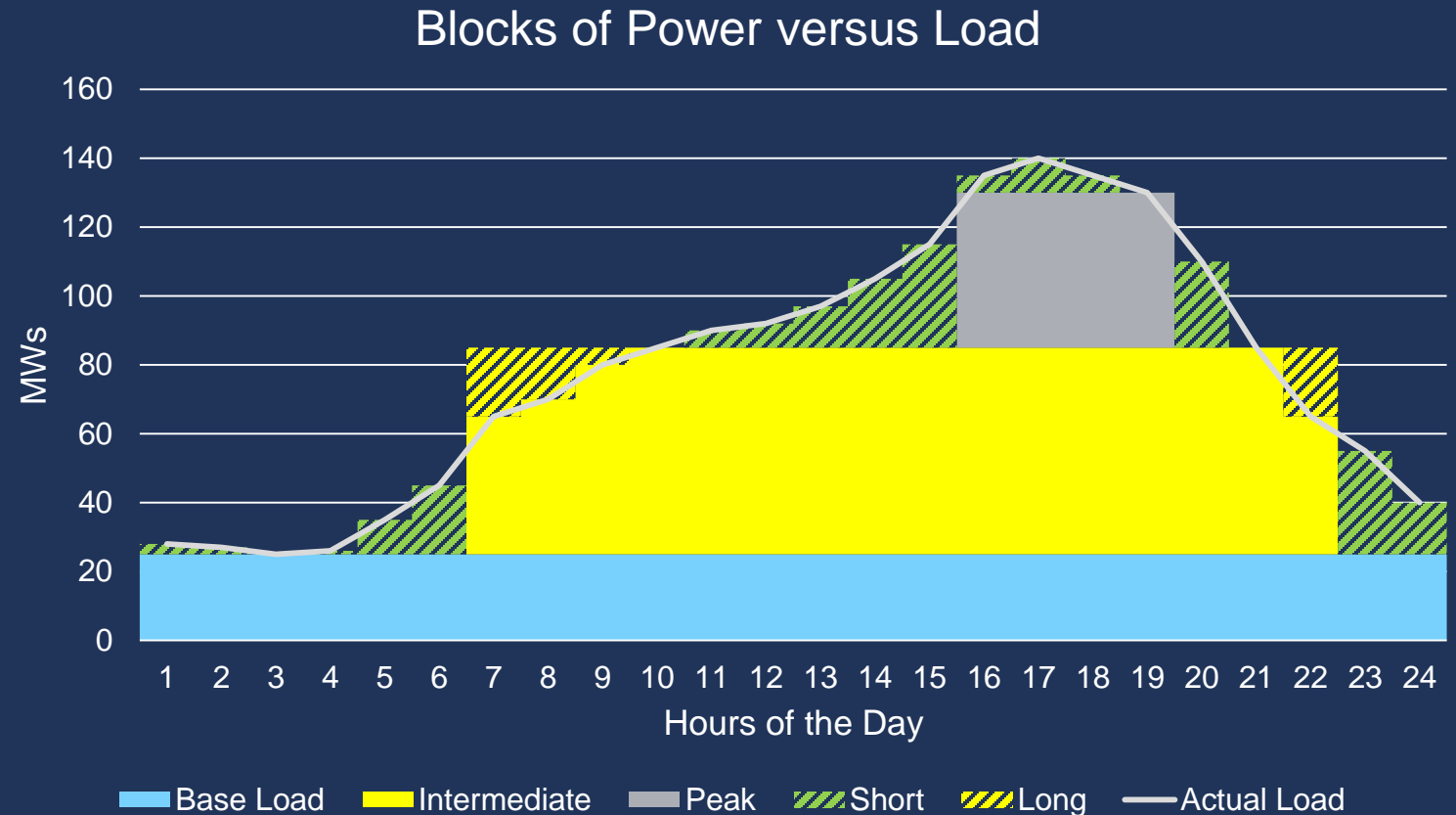
- **Current policy direction on power portfolio goals**
 - Competitively priced
 - Long term stable rates on energy
 - Mitigate regulatory, legislative, and financial risk
 - 30% renewable by 2030
- **2008 Integrated Resource Plan (IRP)**
 - 30% Renewable
 - 30% Coal
 - 30% Gas
 - 10% Market
 - Substitute Nuclear power for Coal or Gas if available

Contract History

- LCRA Primary Provider of energy from 1940-2012
 - Did not renew as they couldn't meet purchased power goals
 - Aging fleet
 - New investments were expensive
 - No rate guarantees to the City
- 2008 – Signed small wind contract with AEP as a pass through deal for Southwestern University
- Utility had no other sources of power at this time

State of markets in 2008-2012

- All forms of power were expensive to acquire
- City evaluated multiple options in wind, coal, and gas
- Every option was above electric rate targets

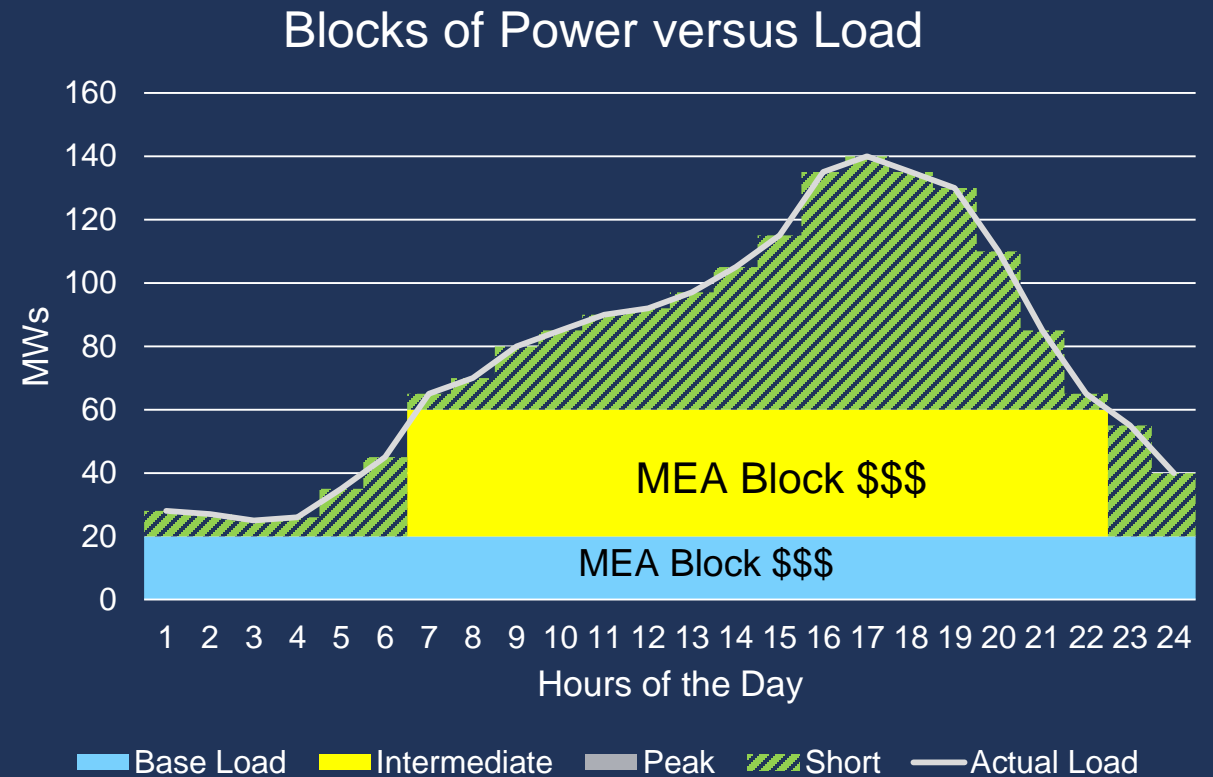


Competitive Procurement of Purchased Power

- 2012
 - LCRA contract terminated
 - Began competitive procurement for energy
- Philosophical design for the utility
 - Targeted peak vs. base load protection
 - Targeted future vs. current needs
- 2008-2012 had shown a high frequency of price spikes during peak demand

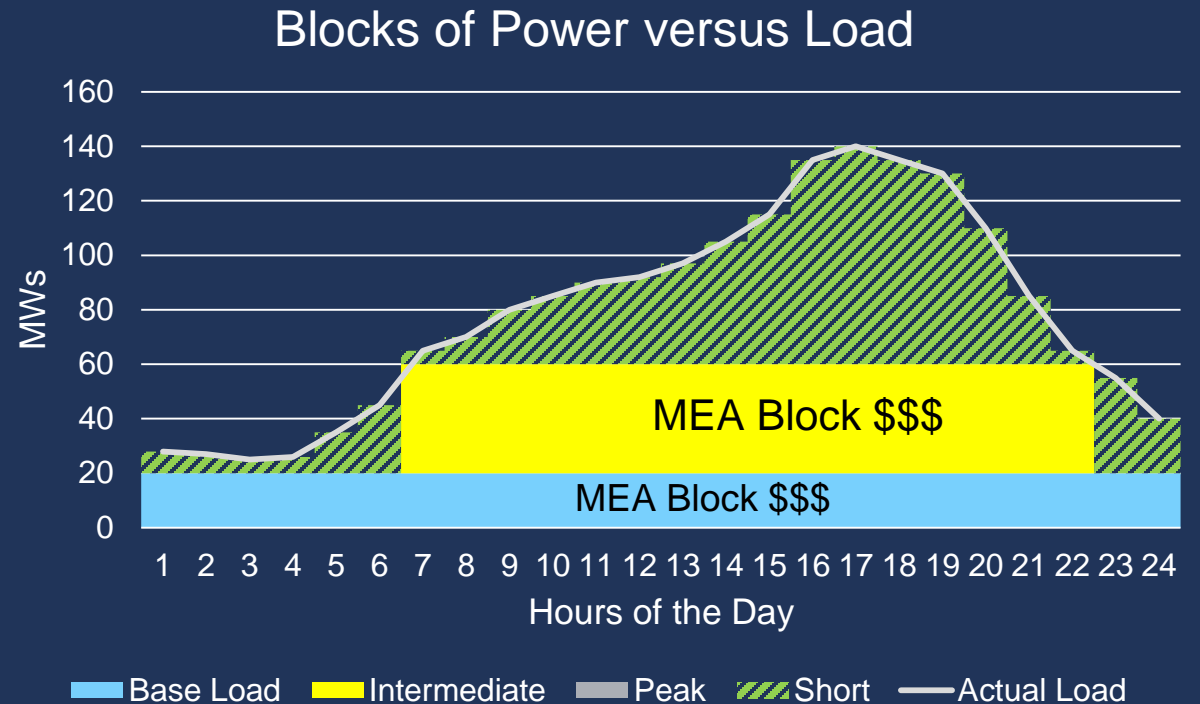
2012 City approved Mercuria (MEA) Contracts

- Originally contracted with JP Morgan
 - Subsequently purchased by Mercuria
- Gas based contracts
- Decision was to buy 50-60% of projected load through 2021
- Contracts were above rate target
 - No long-term contracts available
 - ERCOT forecasting shortage of energy resulting in very high prices



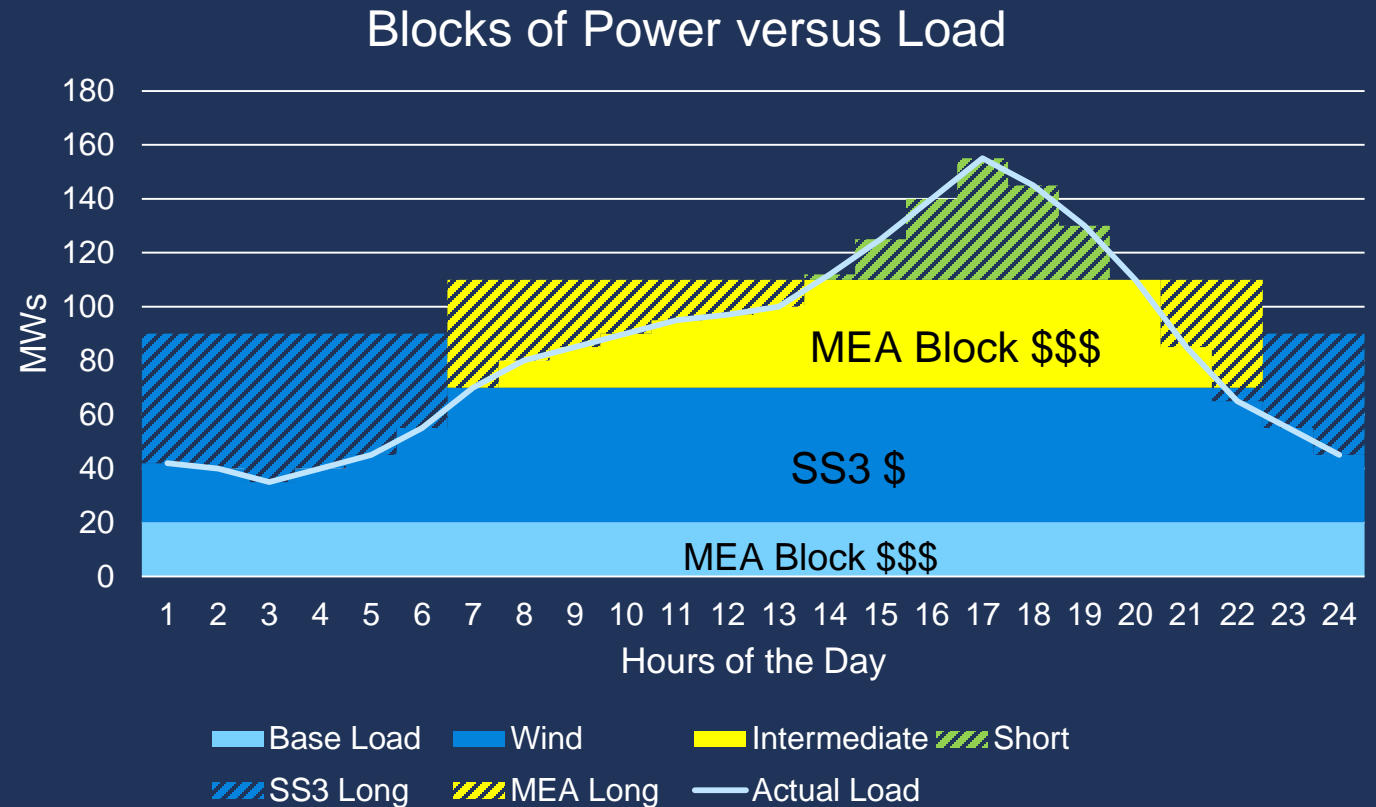
State of the energy market in 2013

- City was seeking long-term option to replace MEA and fill in short positions
- Issued RFP for long-term energy contracts
- Evaluated multiple options including wind, coal, solar, nuclear and gas
- Only wind was below rate targets
- Load was growing



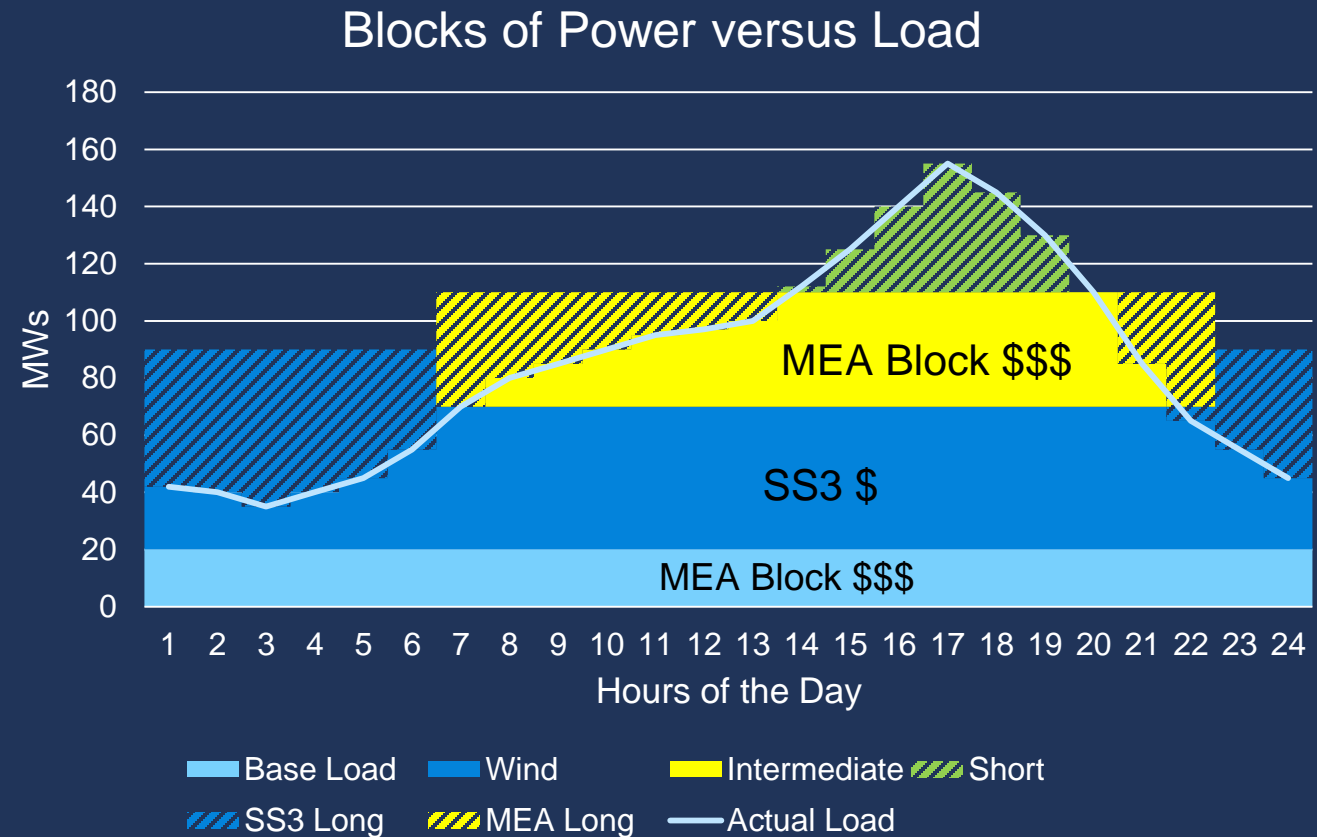
2013 City approved Spinning Spur 3 (SS3) Contract

- Decision was to buy 144MWs of capacity through 2035
- Initially sought 70MWs but one partner dropped out
- Tax credits expired with no replacement option
- Contract was below rate target
- Moved forward with full 144MWs to keep contract



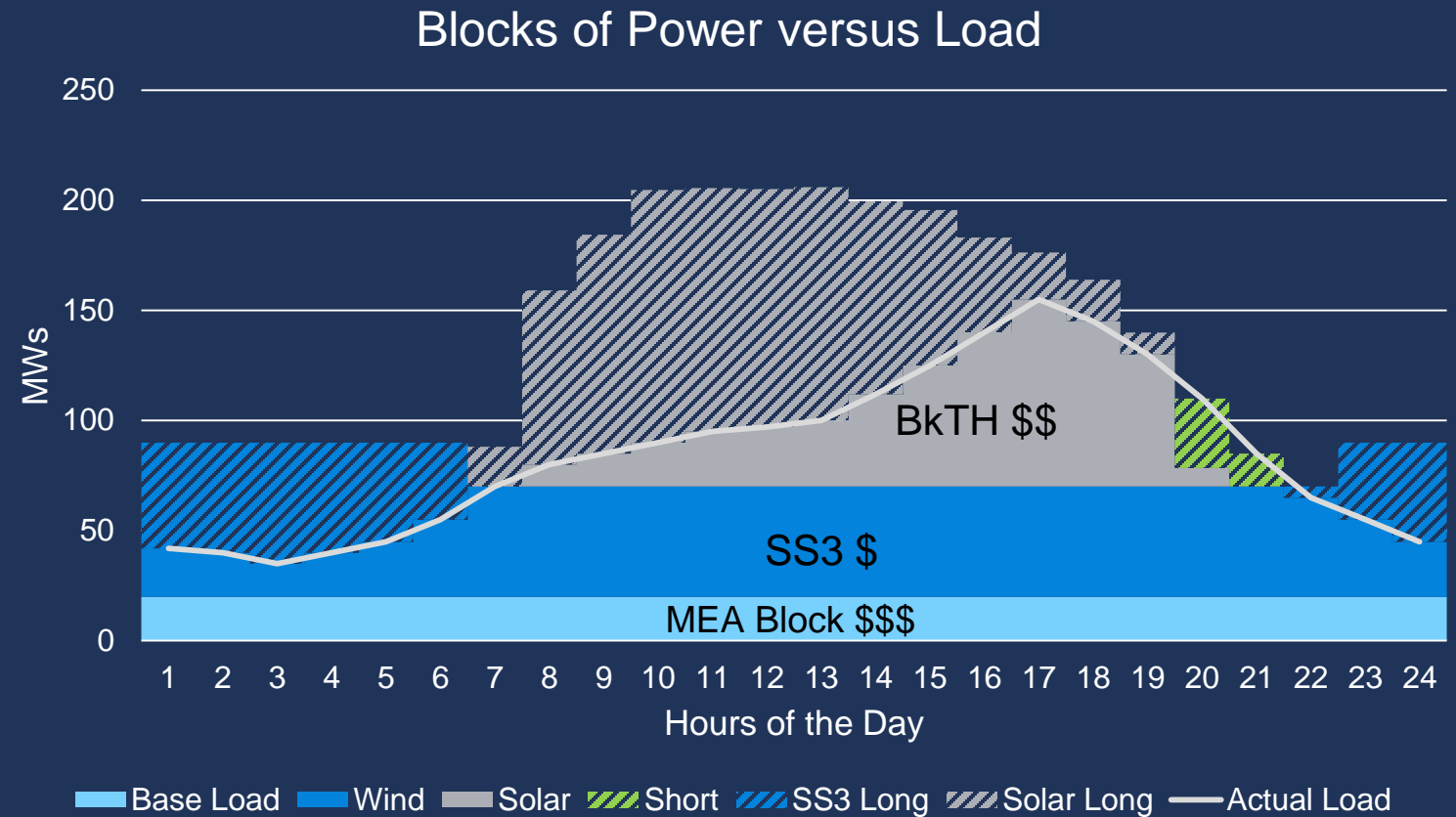
State of the energy market in 2014

- City was seeking long-term option to replace MEA and fill in short positions on Peak only
- Some elements of MEA not extended past 2018
- Issued RFP for energy contracts to better address short position during peak demand
- City evaluated multiple options including wind, solar, and gas
- Only Solar and Gas matched rate targets



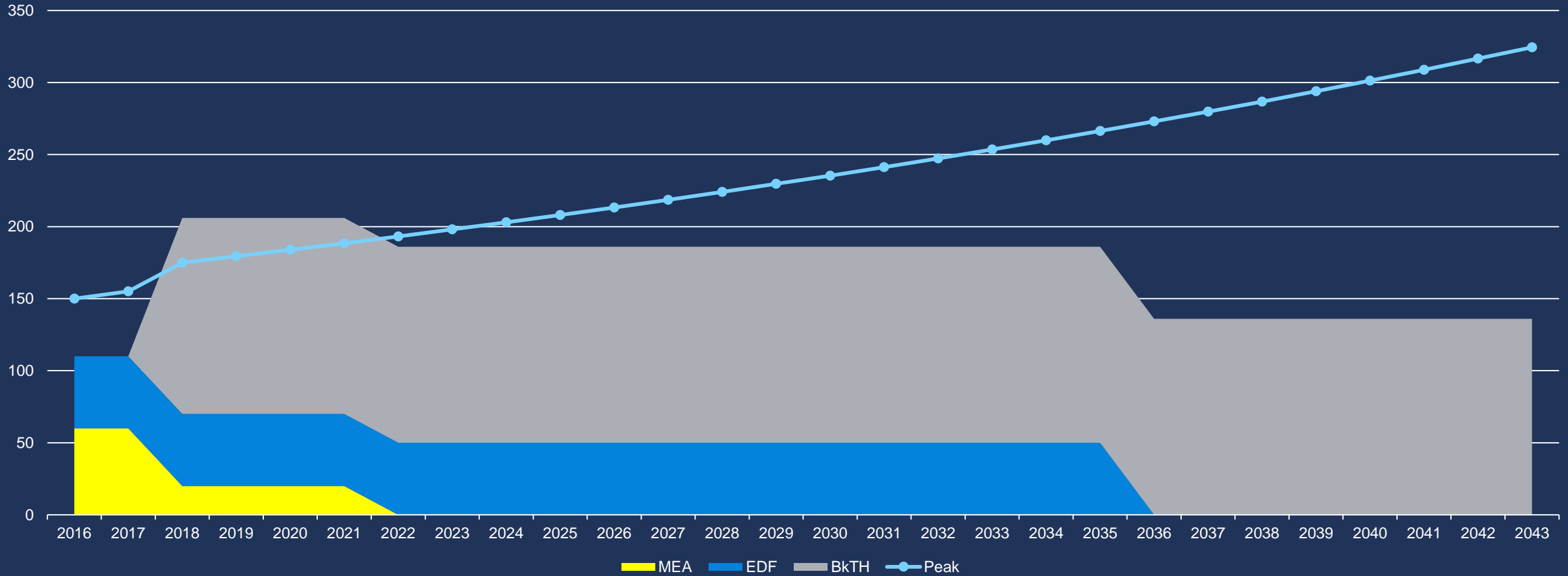
2015 City approved Buckthorn Contract

- Originally contracted with SunEdison
 - Subsequently acquired by NRG and then sold to Clearway
- Decision was to buy 150MWs of capacity through 2043
- Contract was at City's rate target
- Would knowingly put City in long position



*MEA block (\$\$\$) expires at the end of Dec. 2021

Annual Peak Supply



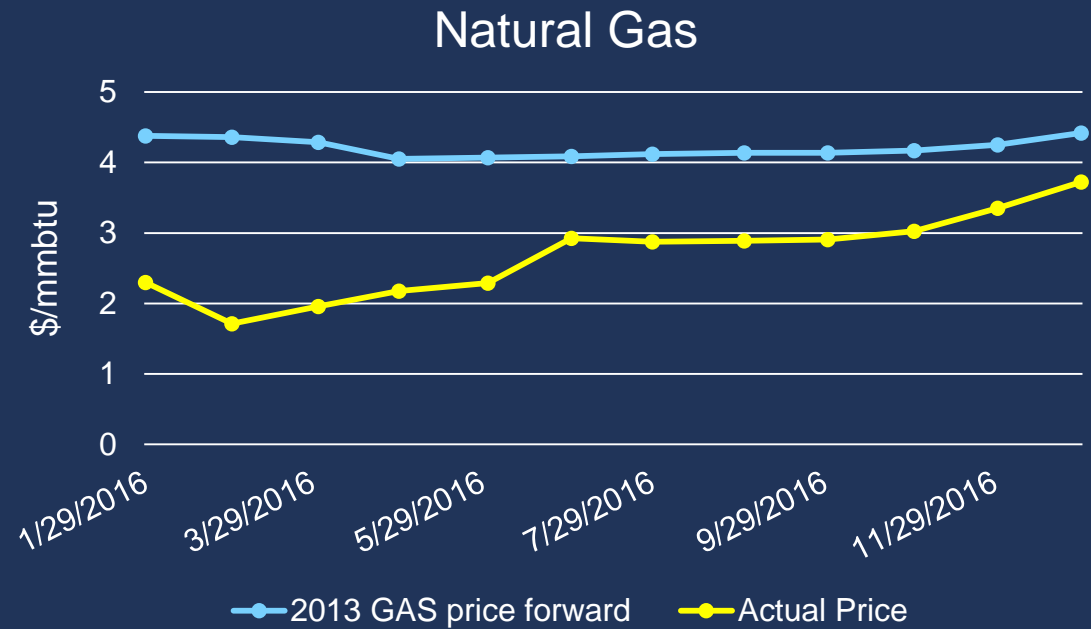
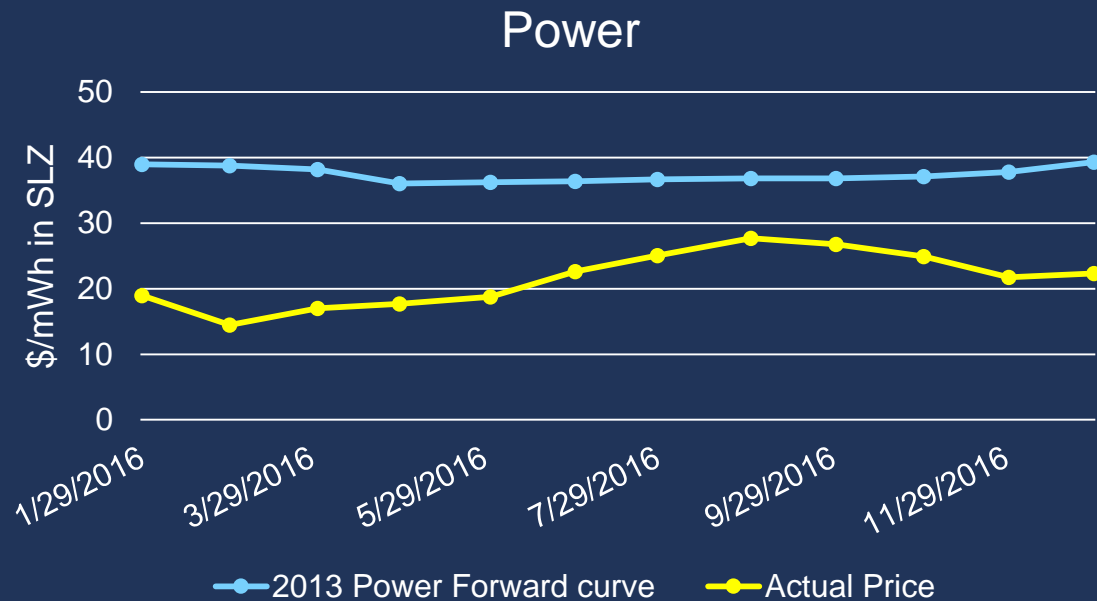
*MEA block (\$\$\$) expires at the end of Dec. 2021

Why the long position?

- Georgetown's energy demand was growing rapidly
- High frequency of price spikes for peaking energy in 2008-2014
- ERCOT was forecasting energy shortages past 2021
- Forecast for energy market predicted increasing prices

State of the energy market in 2016

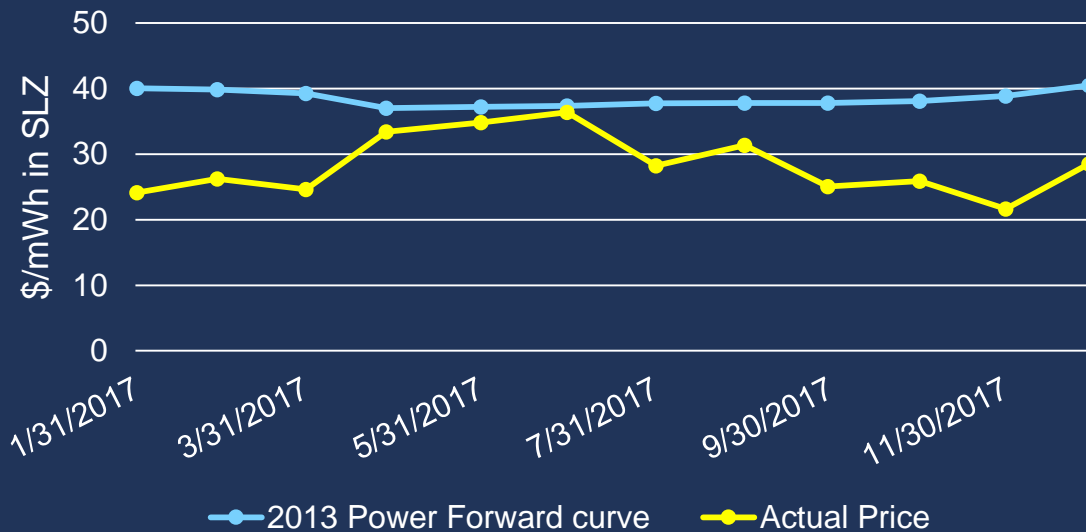
- Mild weather depressed power prices throughout the year



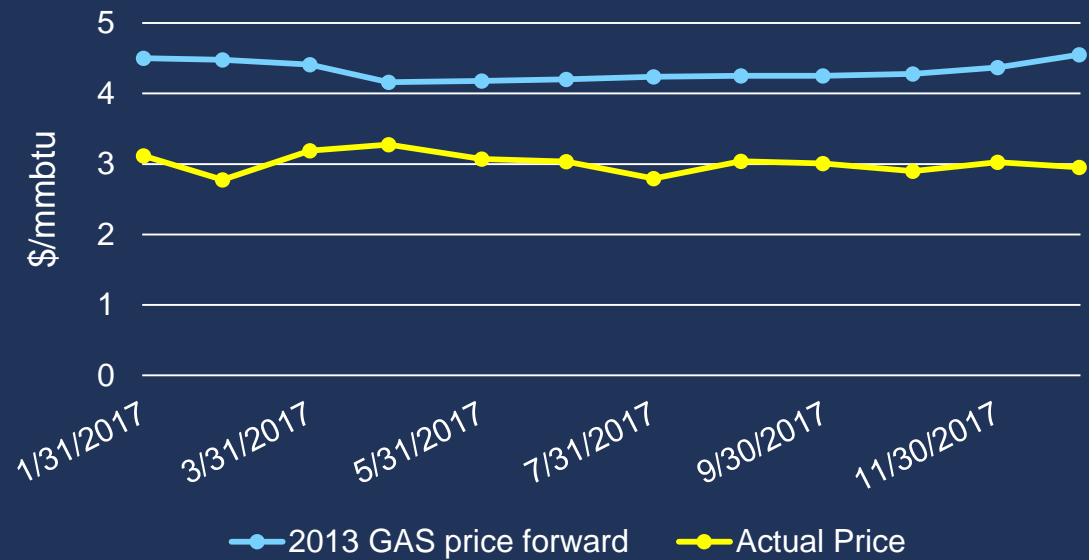
State of the energy market in 2017

- Hurricane Harvey disrupted all of ERCOT
- Energy prices crashed

Power



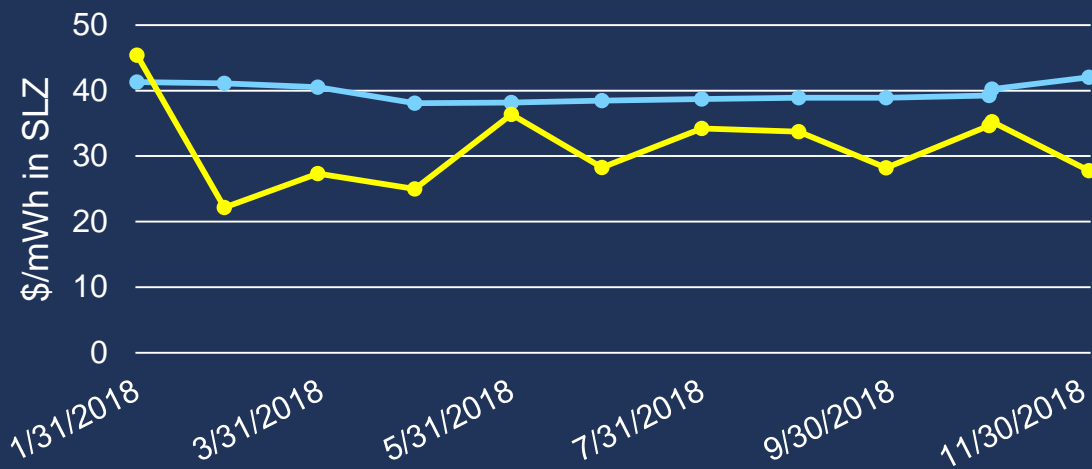
Natural Gas



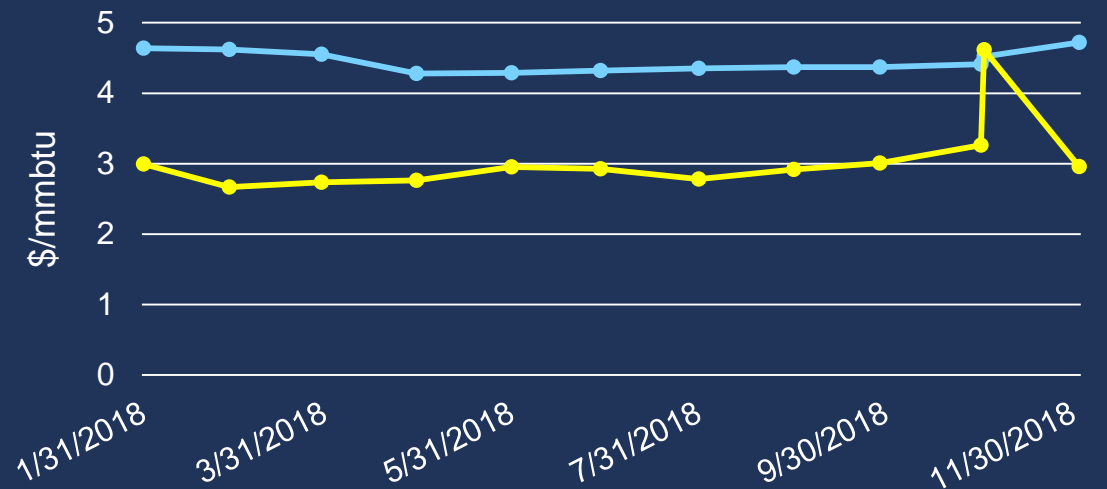
State of the energy market in 2018

- Return to normal weather patterns,
- Normal market performance in late-May and all of June.
- Prices crashed as more generation turned online

Power



Natural Gas

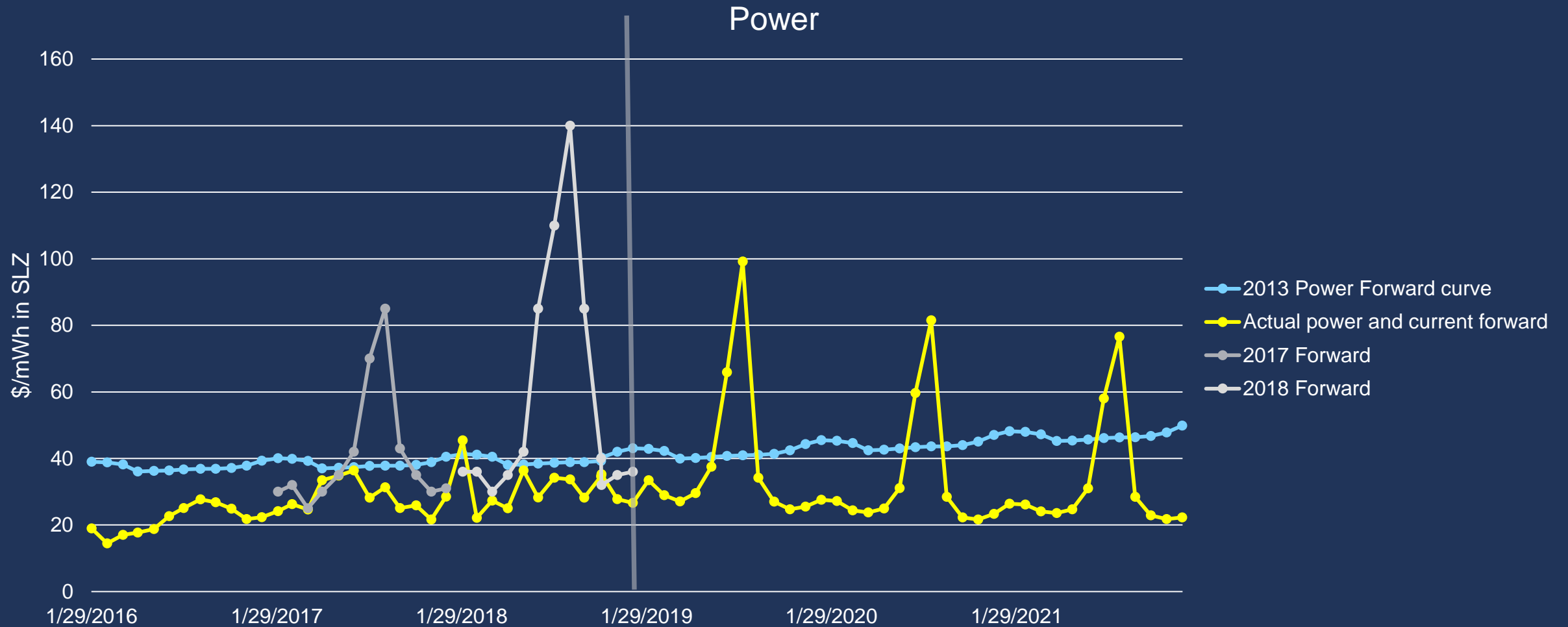


—●— 2013 Power Forward curve —●— Actual Price

—●— 2013 GAS price forward —●— Actual Price

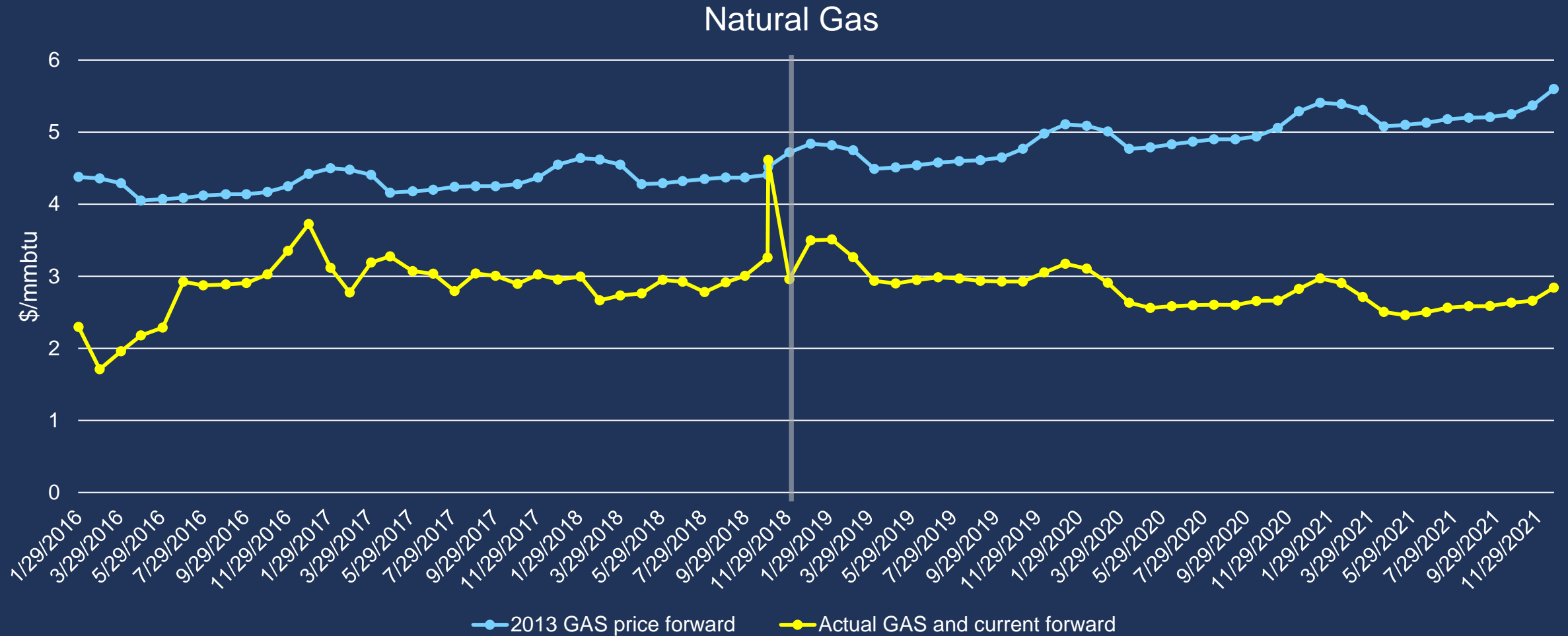
State of the current energy market

- Market fundamentals have changed significantly since our contracts were originally proposed



State of the current energy market

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2016 electric fund actions to address budget variances

- Budget based on market forecast
- Changed outlook for acquiring peak power for 2021+
- Customer Information System (CIS) upgrade allocation changed to share cost with all utilities
- Used more debt for CIP versus cash funding
- Increased transmission congesting hedging for SS3

2017 electric fund actions to address budget variances

- Budget based on market forecasts
- Delayed Buckthorn to July 2018 to coincide with MEA peak block expiration
- Negotiated a price reduction on Buckthorn
- Reduced/deferred CIP
- Updated cost allocations
- Held vacant positions

2018 electric fund actions to address budget variances

- **Budget based on rate target**
 - Changed due to recognizing inability of the industry to accurately predict future energy prices
- **Pursued selling forward blocks of energy in non-peak months**
 - Was not successful based on market conditions
- **Completed electric rate study**
 - Increased base rate
 - Increased fees for new development

2019 electric fund actions

- Budget based on rate target
- Took advantage of Nov. natural gas price spike to sell 2019 MEA gas and energy into the forward market
 - Sold gas contracts from Dec.-March
 - Sold power block from Dec.-September
- Initiated discussions with SS3 and Buckthorn on contract structure
- Actively soliciting proposals from other utilities and brokers on selling remaining long position
- Updating management strategies
- Seeking alternatives for portfolio management going forward

Electric Rate Structure

- **Base Monthly Charge (100% of fixed costs)**
 - Currently \$24.80 per month (up from \$20.00 in December to offset rising CIP costs due to growth)
- **Variable per kWh Charge**
 - Target for all Power and Transmission Costs including ERCOT Fees and Charges
 - \$0.0629 per kWh
 - Power Cost Adjustment Factor (PCA)
 - \$0.004 per kWh
 - Transmission Cost Adjustment Factor (TCA)
 - 0.000 per kWh
 - Used when unexpected increases to transmission rates occur during a budget year
 - Delivery Costs, Fees, and Charges Incurred by Utility
 - \$0.0329 per kWh