



**KYMEA – “Go Live”  
May 1, 2019**

**Doug Buresh**

**April 24, 2019**

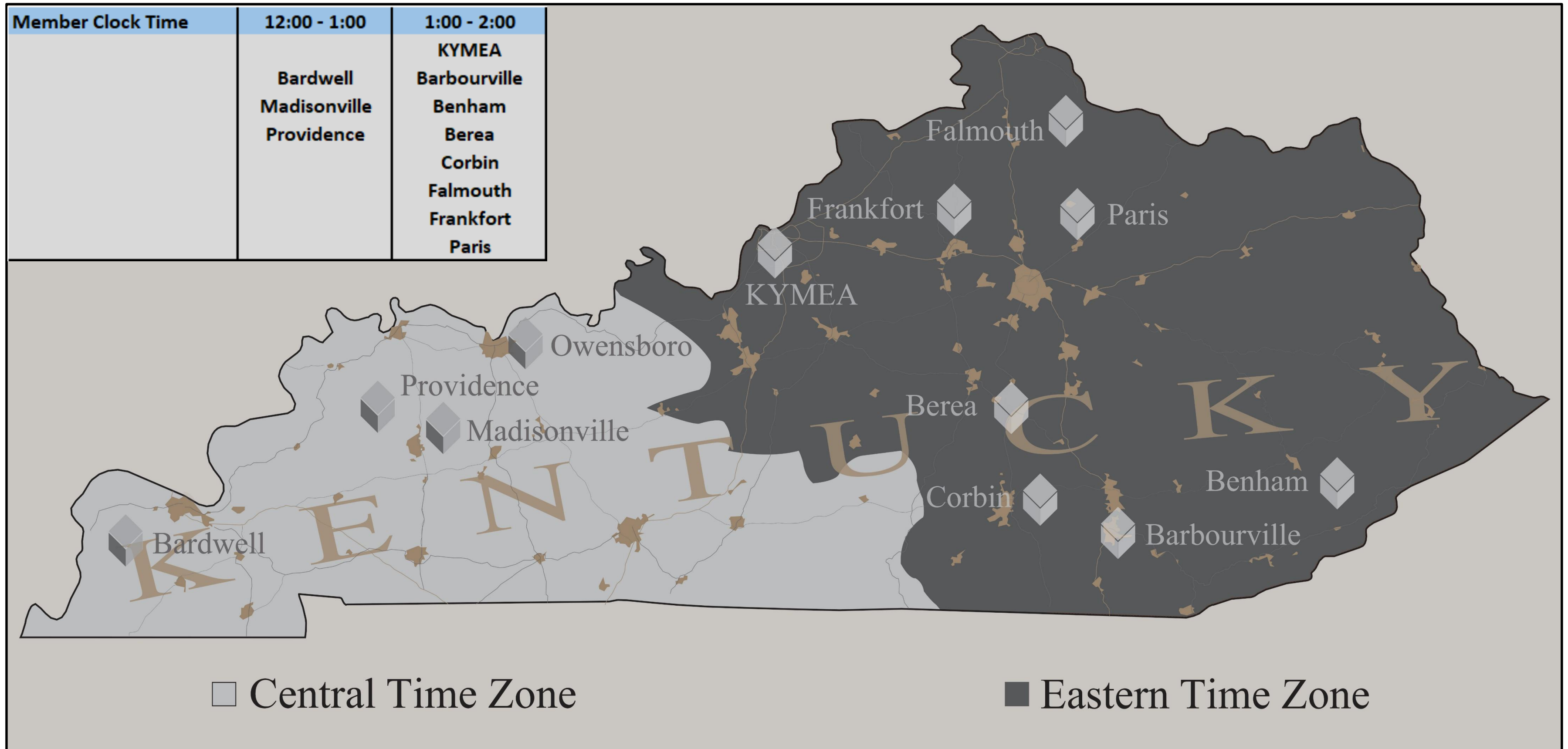
# PPA Preparation Operations Meetings

- ◆ PPA Scheduling, Settlement, Contract Details
  - Participants: KYMEA Staff, nFront, ACES
- ◆ PPA Start Date: May 1, 2019
  - PPS: (Paducah Peakers) - April 10<sup>th</sup> On-Site Meeting
  - BREC: (Wilson Coal) - April 11<sup>th</sup> On-Site Meeting
  - Paris: (Diesels) - April 18<sup>th</sup> On-Site Meeting
  - SEPA: (Hydro) - April 16<sup>th</sup> Conference Call
- ◆ PPA Start Date: June 1, 2019
  - IPMC: (Joppa Coal) - April 10<sup>th</sup> On-Site Meeting

# Scheduling Preparation

- ◆ Metering, Load Forecasting, Scheduling, Tagging
  - Participants: KYMEA Staff, ACES, Schneider, P&D Engineering, Strategic Communications, LG&E/KU Transmission, AMP, MISO, PJM, NewGen Strategies, ITRON, Rubin & Hays
- ◆ Load Forecasting and Data Transfer
- ◆ Daily Strategy and Dummy Tags
- ◆ Enabling Agreements
- ◆ Risk Management

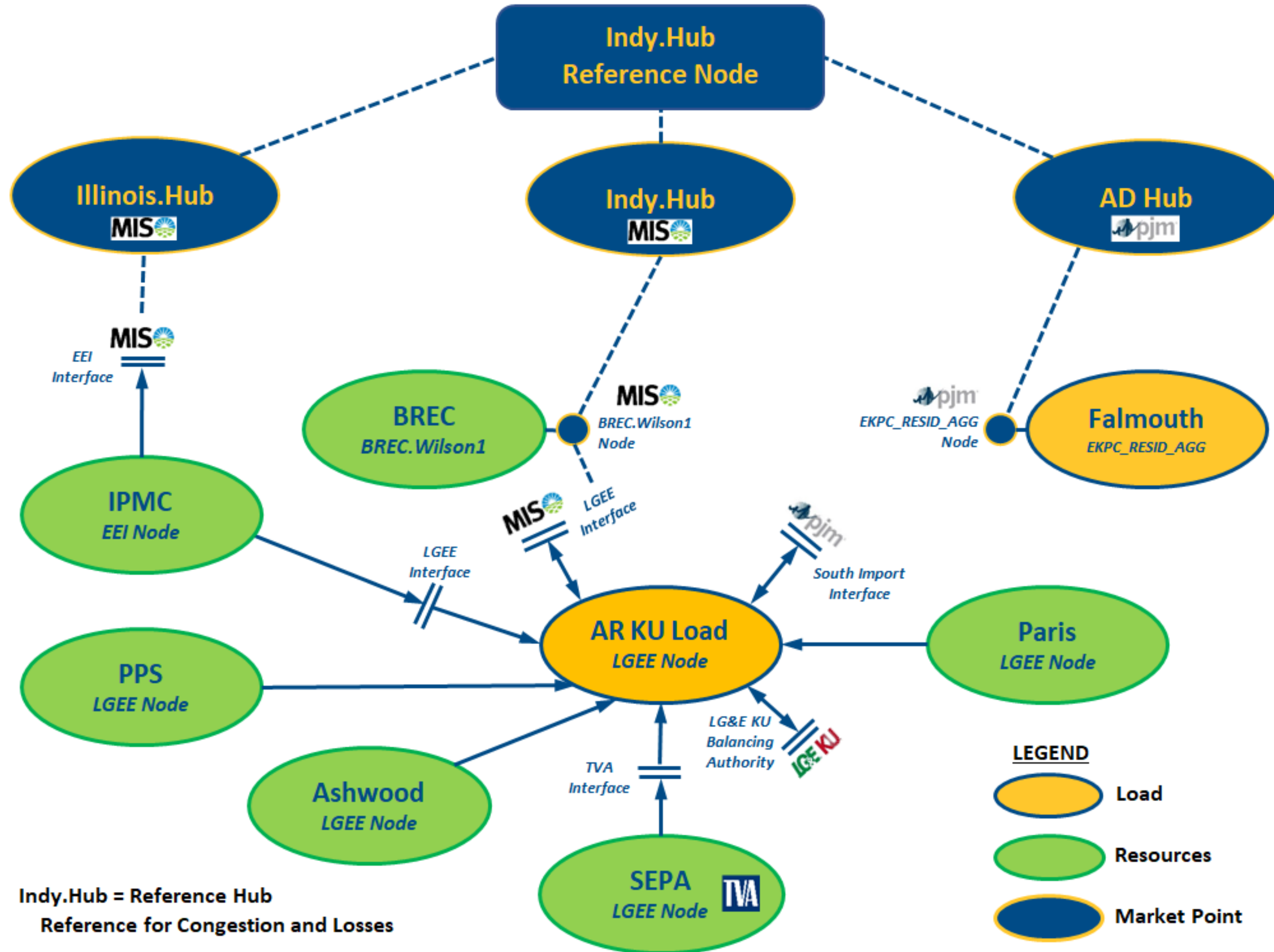
# KYMEA - Day 1 Go Live Time



**LG&E/KU provides service until HE 1 on May 1<sup>st</sup>** (Equivalent to HE 24 on April 30th - EST)

*Note: LG&E/KU stays on EST year-round.*

# KYMEA Power Network Resources, Loads, and Nodes



# KYMEA - Day 1

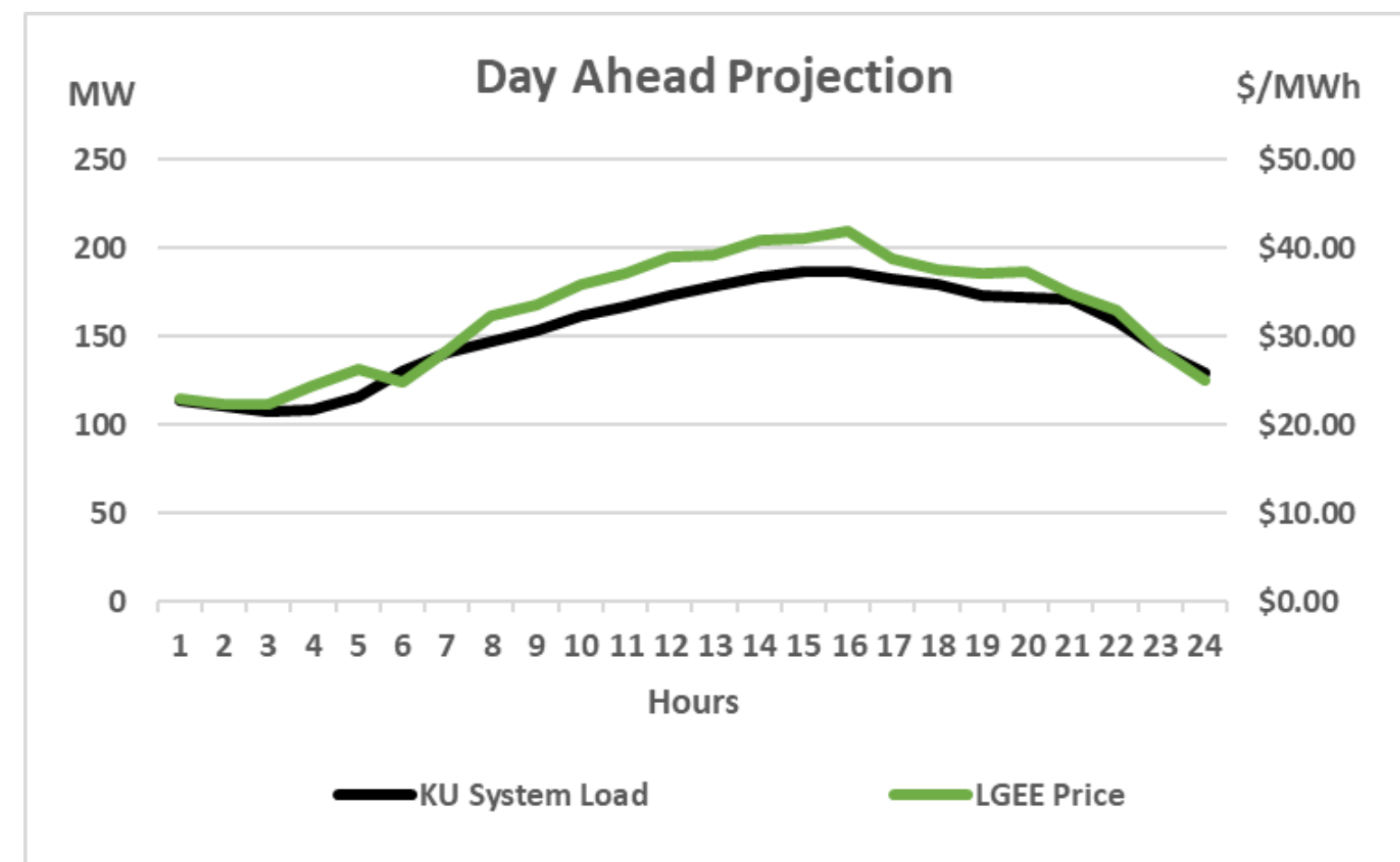
## Daily Operations and Load Forecasting

### Load Forecast

- Historical pattern, temperature, season, day of week, humidity, wind speed, etc.

### Market Price Forecast

- Hourly price signal at a number of price points (MISO-LGEE, PJM-EKPC\_RESID\_AGG, MISO-BREC.WILSON1, MISO-EEI, PJM-SOUTHIMP, PJM-SOUTHEXP, etc.)



**Current Day (April 30<sup>th</sup>)**

**Next Day (May 1<sup>st</sup>)**

April 25, 2019 (Thursday)

- SEPA - 7 Day Projection to TVA
- Load Forecast – 7 Day Projection to LG&E/KU

# Day Ahead Activities

## April 30th



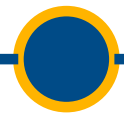
7:00



### Creation of Next Day Position Workbook

1. Retrieve KYMEA/AMP load forecasts, internal next day price forecasts for MISO:LGEE & EEI interfaces, INHub, BREC.WILSON1, ADHub, EKPC\_RESID\_AGG
2. Transmit file to LGEE BA containing data for: 14 Days Hourly load forecasts, 37 Days Daily peak loads, 5 weeks Weekly peak loads, 19 months Monthly peak loads
3. Gather market intelligence from visible ICE market activity for INHub/ADHub, NYMEX prompt gas, TetcoM3 physical gas
4. Submit Demand bid for Falmouth load to PJM Markets Gateway portal
5. Transmit updated load forecast information to KYMEA

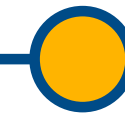
7:30



### Notification/Optimization

1. Receive notification from PPA counterparties of next day resource availability
2. Evaluate optimal strikes of PPA contracts/Economic purchases based on pricing/load forecast, resource availability and market intelligence, to cover next day load position
3. Transmit required notification of next day strike hours/MW volume to PPA counterparties

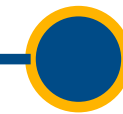
8:00



### Scheduling

1. Purchase/redirection of transmission capacity (if required)
2. Creation of next day OATI e-tags
3. Creation of Initial Day-Ahead MISO Finschedules
4. Capture of transactional data in ACES risk management/deal capture system

8:30



### Daily Actions including but not limited to:

Respecting MISO timeline requirements:

1. Adjust DA MISO Finschedules for Next Day if applicable
2. Creation of RT MISO Finschedules based on adjustments of DA Finschedules if applicable
3. Transmit next-day position/operational information to KYMEA

# “Dummy” Tag Tests

## April 23th



Dashboard | Request Summary | Template Summary

Request Summary (All times are in EST)

Filtered By: PSE: KYMEA | Data Source: Operational Database | Time - Active Next Day Forward: 04/24/2019 - 01/01/3000

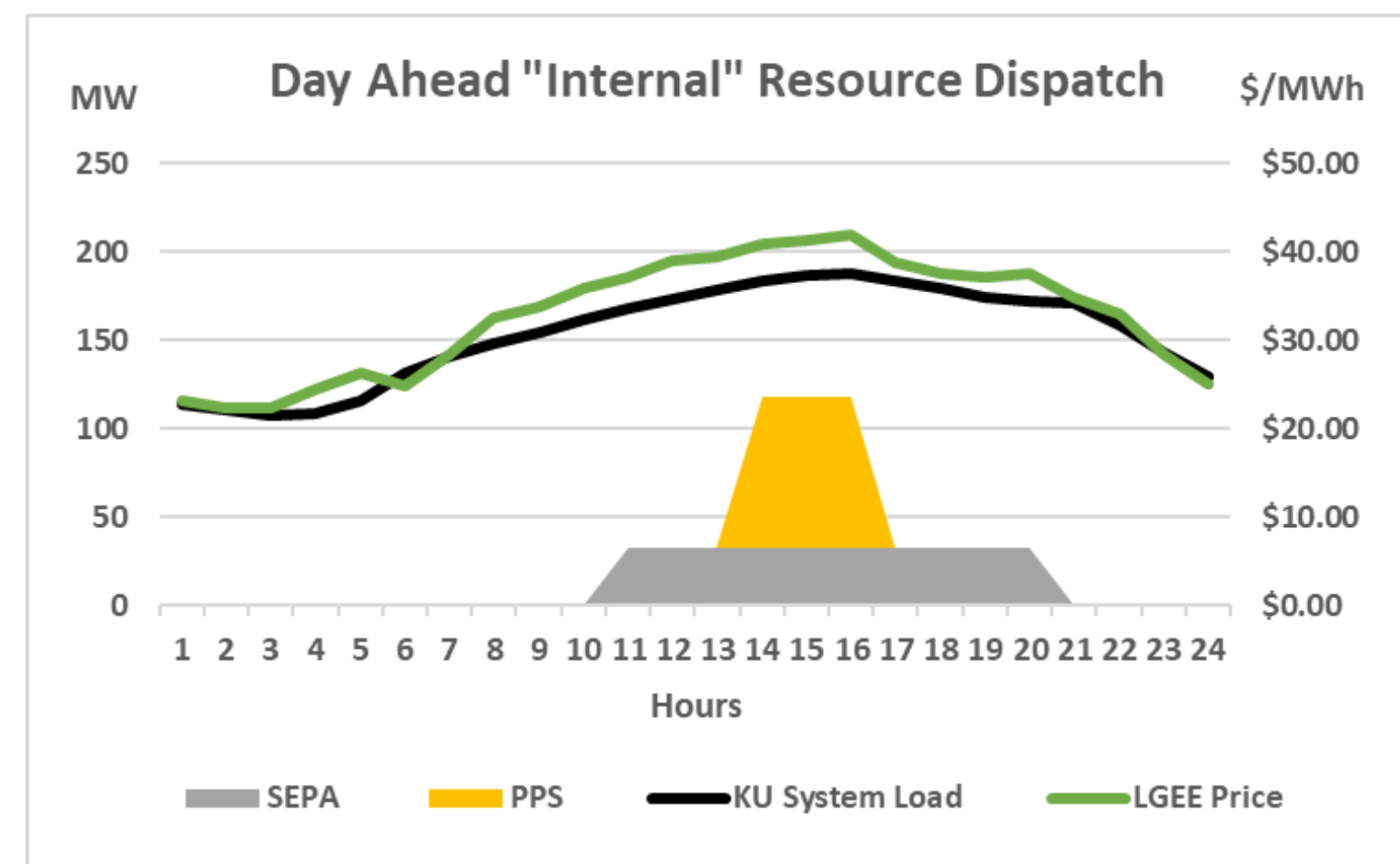
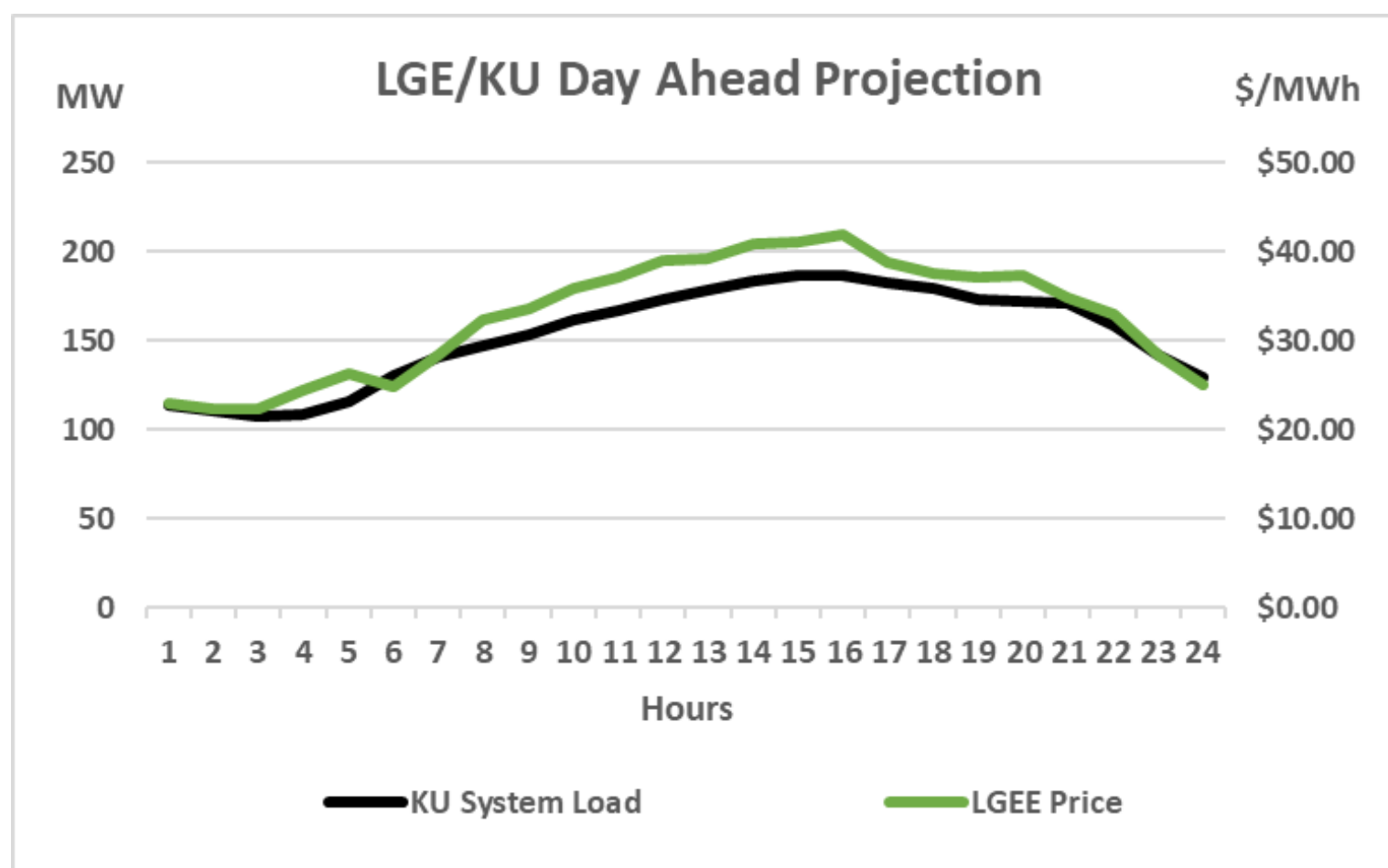
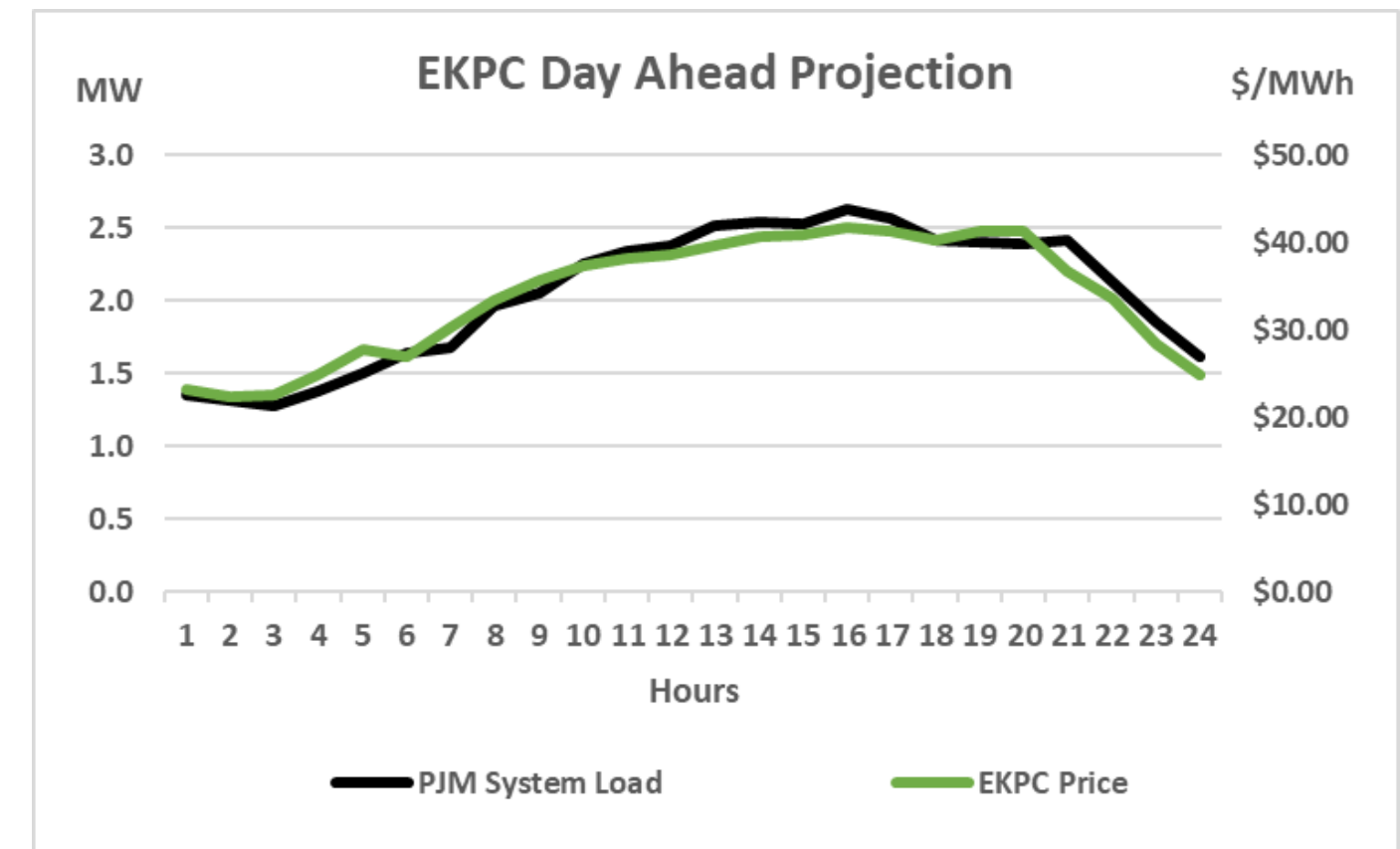
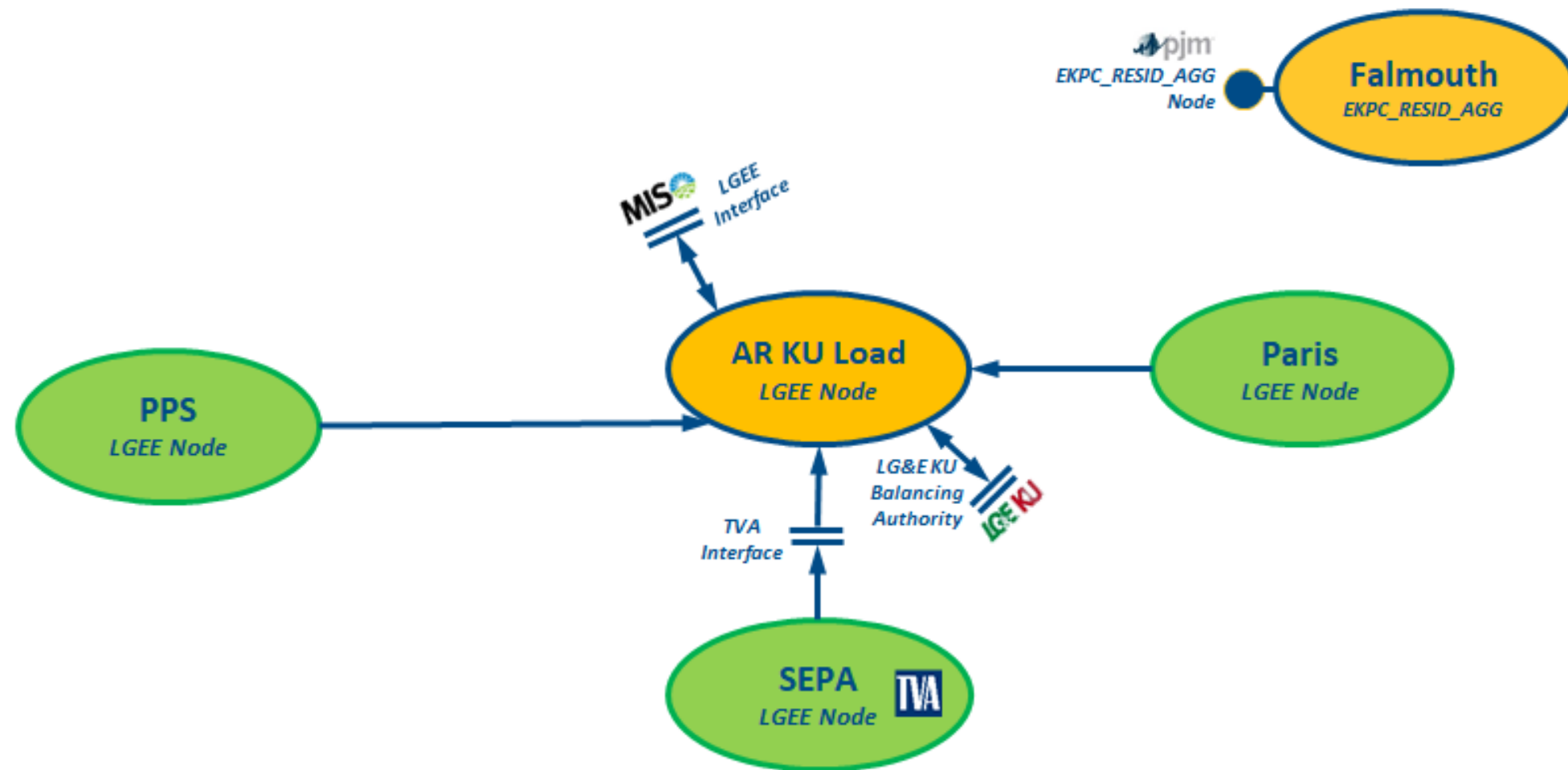
GCA: ALL | LCA: ALL | CPSE: ALL | Tag Code: | POR/POD: | Time: Active | Next Day Forward | 04/24/2019 | 01/01/3000  
 CA: ALL | TP: ALL | PSE: KYMEA | Tag Index: | OASIS #: | Status: ALL | Apply | Reset To Default

Tag Data							Request Data			Status of Approvers								
Tag Code	Owner	PSE Comment	Start Time	Stop Time	Tag	Final MW...	Req Type	Req Status	Timing	GPE	GCA	LCA	LSE	TSPs		Sched Entities		TX Cust
<a href="#">TESTKYM</a>	KYMEA	WILSON to KYMEA	05-09 00:00	05-10 00:00	🔒	0	<a href="#">Cancellation</a>	<a href="#">APPROVED</a>	DA/On time	MISO	MISO	LGEE		MISO	LGEE	MISO	LGEE	
							<a href="#">Creation</a>	<a href="#">APPROVED</a>	DA/On time	MISO	MISO	LGEE		MISO	LGEE	MISO	LGEE	
<a href="#">KYPARIS</a>	KYMEA	Paris Peaking	05-09 00:00	05-10 00:00	🔒	0	<a href="#">Cancellation</a>	<a href="#">APPROVED</a>	DA/On time		LGEE	LGEE		LGEE		LGEE		
							<a href="#">Creation</a>	<a href="#">APPROVED</a>	DA/On time		LGEE	LGEE		LGEE		LGEE		
<a href="#">KYPADUC</a>	KYMEA	Paducah Peaking	05-09 00:00	05-10 00:00	🔒	0	<a href="#">Cancellation</a>	<a href="#">APPROVED</a>	DA/On time		LGEE	LGEE		LGEE		LGEE		
							<a href="#">Correction</a>	<a href="#">APPROVED</a>	DA/On time		LGEE	LGEE		LGEE		LGEE		
							<a href="#">Creation</a>	<a href="#">APPROVED</a>	DA/On time		LGEE	LGEE		LGEE		LGEE		
<a href="#">KYJOPPA</a>	KYMEA	JOPPA to KYMEA	05-09 00:00	05-10 00:00	🔒	0	<a href="#">Cancellation</a>	<a href="#">APPROVED</a>	DA/On time	EEI	EEI	LGEE		LGEE		LGEE		
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<a href="#">THA8960</a>	TEA01		04-24 00:00	04-25 00:00	🔒	128	<a href="#">Creation</a>	<a href="#">APPROVED</a>	DA/On time	MISO	MISO	LGEE		MISO	LGEE	MISO	LGEE	



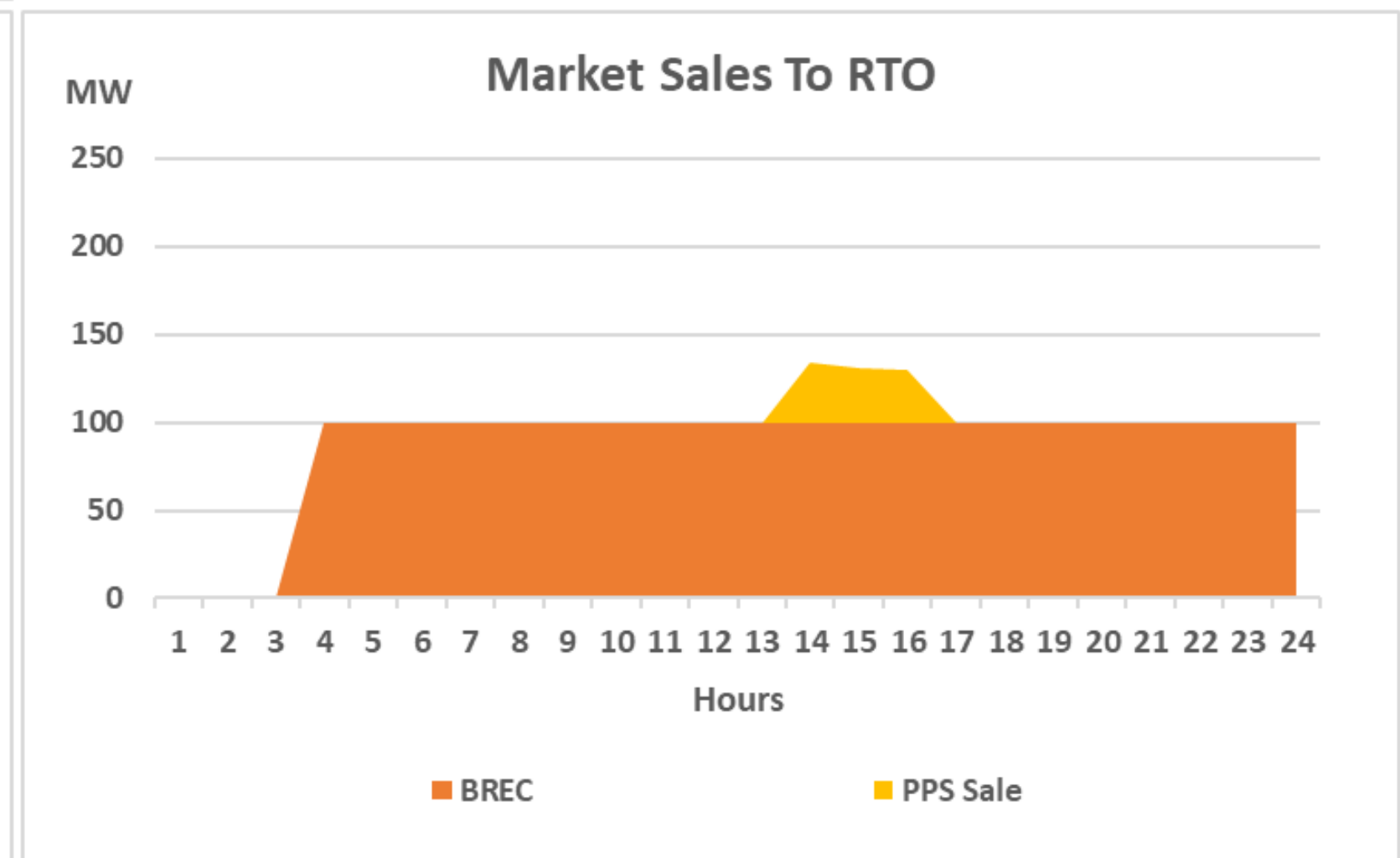
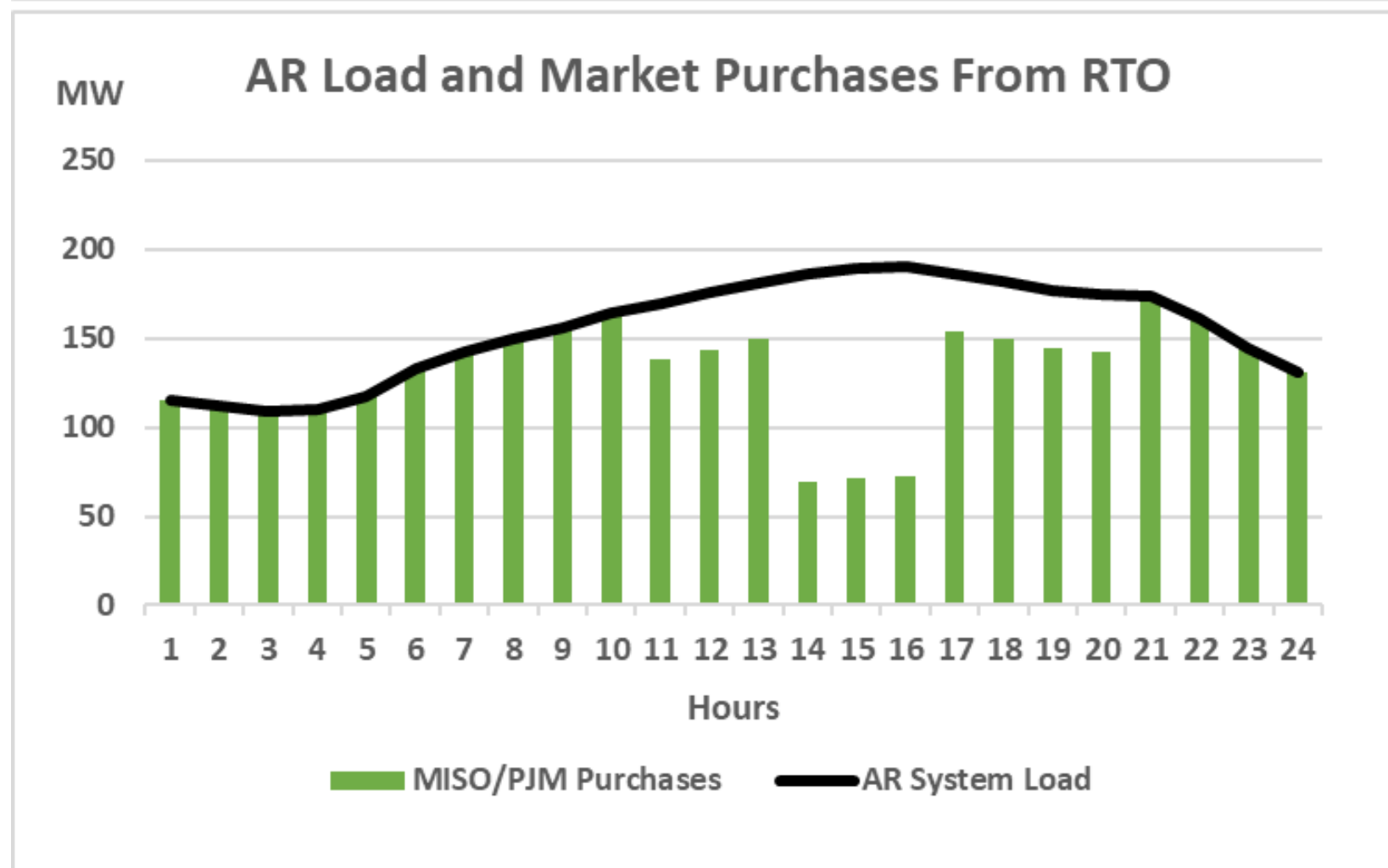
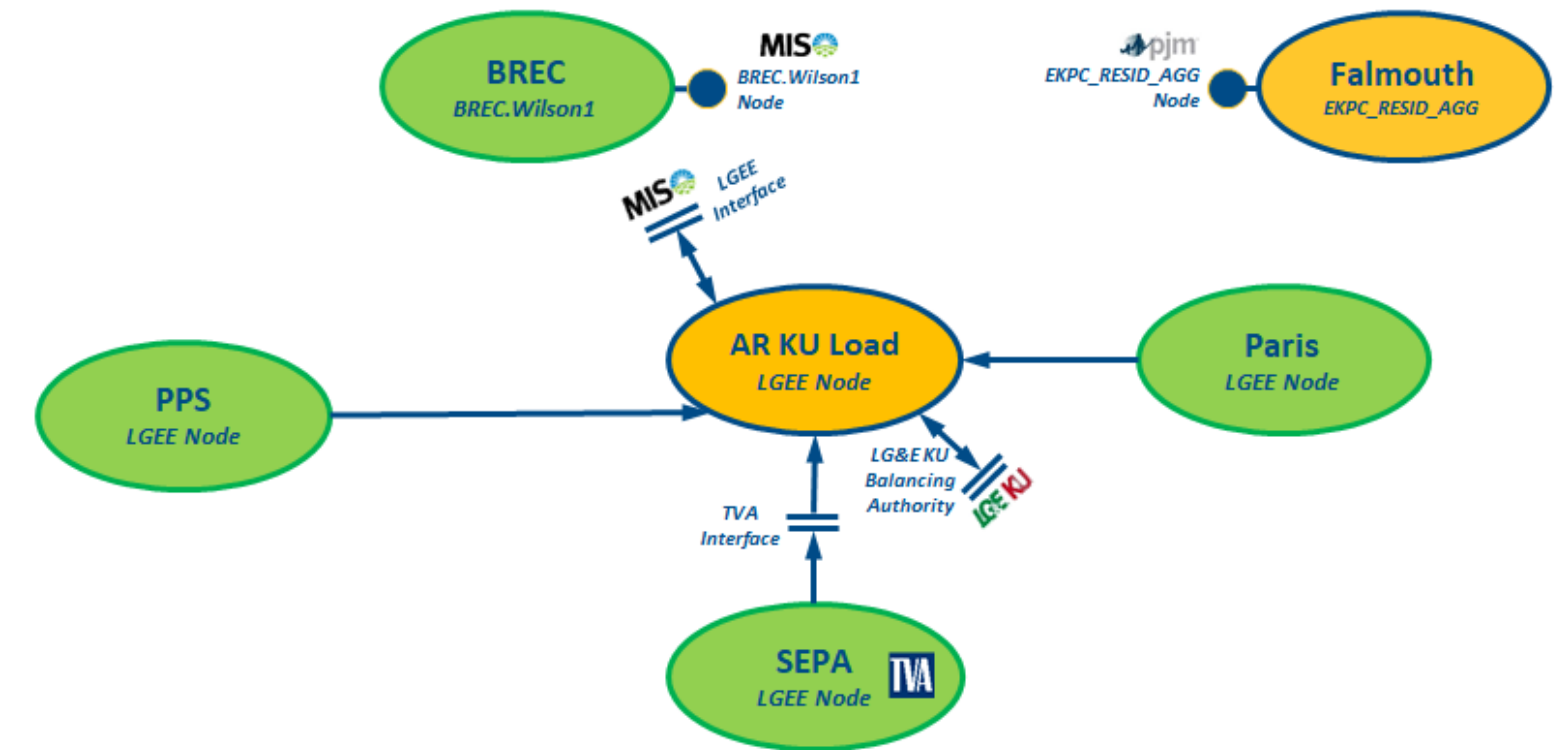
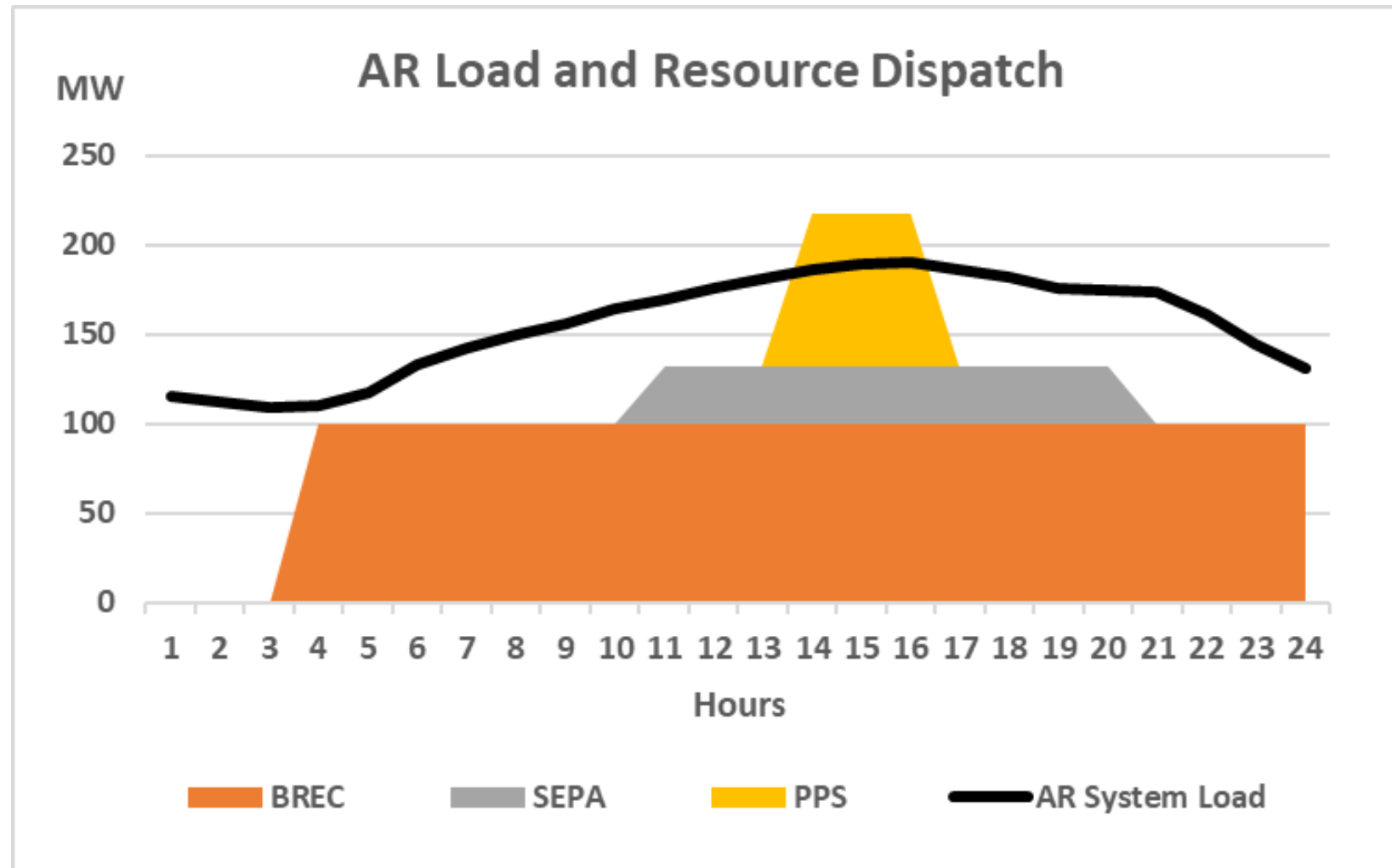
# All Requirements System Requirements

## “LG&E/KU Internal” Resources, Loads, Prices



# Energy Accounting

## Dispatch, RTO Purchases, RTO Sales



# Real Time Activities

## May 1st



### Every Hour

6. Retrieve intra-hour 5min load data

1. Retrieve previous hour actual load data

2. Retrieve current next hour forecast



**Daily Actions including but not limited to:**

1. Adjust DA MISO Finschedules for Next Day if applicable
2. Creation of RT MISO Finschedules based on adjustments of DA Finschedules if applicable
3. Transmit updated load forecast data to LGEE BA as applicable (frequency TBD)
4. Transmit updated load forecast/schedule adjustments to KYMEA as applicable

5. Adjustment of OATI tags for next hour if required to follow actual loads

3. Retrieve intra-hour 5min load data

4. Comparison of actual load tracking to forecast

# Board Action

- ◆ KYMEA MAC will be staffed all-day April 30<sup>th</sup> through early morning May 1<sup>st</sup>
  - KYMEA Staff, ACES, nFront, Strategic Communications, etc.
- ◆ Authorize KYMEA CEO and Officers to do all things necessary to accomplish successful “Go Live” launch