

**JOINT QUARTERLY STAKEHOLDER BRIEFING**  
**(SPP Board of Directors, Members Committee and Regional State Committee)**

**April 29, 2019**  
**1:00 p.m.**  
**Doubletree Warren Place | Grand Ballroom**  
**Tulsa, Oklahoma**

**1. QUARTERLY BRIEFINGS**

- a. Federal Energy Regulatory Commission (FERC) Update.....Patrick Clarey**  
This report will update Stakeholders on the activities of the Federal Energy Regulatory Commission (FERC).
- b. SPP RSC/OMS Seams Liaison Committee Update.....Adam McKinnie**  
This report will update Stakeholders on the activities of the SPP RSC/OMS Seams Liaison Committee.
- c. Holistic Integrated Tariff Team (HITT) Update .....Tom Kent**  
This report will update Stakeholders on the activities of the HITT.
- d. Transmission Planning Update.....Lanny Nickell**  
This report will update Stakeholders on the 2019 and 2020 ITP study activities.
- e. Assignment of Notification to Construct .....Lanny Nickell**  
This report will updated Stakeholders on the Assignment of Notification to Construct 200479 Kansas Power Pool to GridLiance.
- f. Integrated Marketplace Update.....Bruce Rew**  
This report will update Stakeholders on the Integrated Marketplace.
- g. Z2 Waiver Order.....Paul Suskie**  
This report will update the Stakeholders on the February 28, 2019 Order in the Z2 Waiver Docket.

**RSC BUSINESS MEETING**

**2. CALL TO ORDER**

**3. PRELIMINARY MATTERS**

- a. Commissioners' Roll Call and Declaration of a Quorum**
- b. Meeting Attendees Roll Call**
- c. Adoption of Minutes from January 28, 2019**
- d. Review of Ongoing Action Items**

**Antitrust:** SPP strictly prohibits use of participation in SPP activities as a forum for engaging in practices or communications that violate the antitrust laws. Please avoid discussion of topics or behavior that would result in anti-competitive behavior, including but not limited to, agreements between or among competitors regarding prices, bid and offer practices, availability of service, product design, terms of sale, division of markets, allocation of customers or any other activity that might unreasonably restrain competition.

4. **UPDATE**
  - a. **RSC First Quarter 2019 Financial Report & SPP Report**.....Paul Suskie
5. **BUSINESS ITEMS**
  - a. **2019 RSC Operational Objectives** .....Kim O’Guinn  
This report will update the RSC on the 2019 Operational Objectives.  
**[POTENTIAL VOTING ITEM]**
6. **CAWG REPORT**
  - a. **Cost Allocation Working Group (CAWG) Report**.....Cindy Ireland  
This report will update the RSC on the activities of the CAWG, including solicitation of RSC endorsement of the Distributed Energy Resource (DER) Whitepaper.  
**[VOTING ITEM]**
  - i. **Cost Allocation in Wind Rich Areas Update** .....John Krajewski  
This report will update the RSC on the CAWG’s work on this issue.
7. **OTHER RSC MATTERS**
8. **NEW ACTION ITEMS**
9. **SCHEDULING OF NEXT REGULAR MEETINGS, SPECIAL MEETINGS OR EVENTS**
  - a. **RSC Meetings:**  
July 29, 2019 – Des Moines, IA  
October 28, 2019 – Little Rock, AR
10. **ADJOURNMENT OF BUSINESS MEETING**

**RSC/BOD/MC EXECUTIVE SESSION**

11. **RSC WILL HOLD AN EXECUTIVE SESSION WITH THE SPP BOARD & MEMBERS COMMITTEE.**

**\* NOTE: ADDITIONAL INFORMATIONAL MATERIAL ATTACHED.** Attached to the RSC’s meeting agenda and background material is additional material that is either for informational or reporting purposes.

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# SPP RSC – OMS Seams Liaison Committee Update

Adam McKinnie  
Missouri Public Service Commission  
SPP RSC Meeting  
April 29, 2019

# Goals of Presentation

- Provide an overview of SPP Regional State Committee (SPP RSC) – Organization of MISO States (OMS) Seams Liaison Committee activities
- Provide updates on Seams Liaison Committee activities over the last quarter

# Overview - Members

- SPP RSC Committee Members
  - Shari Feist Albrecht, Kansas (lead)
  - Kristie Fiegen, South Dakota
  - Kim O’Guinn, Arkansas
  - DeAnn Walker, Texas
- OMS Committee Members
  - Daniel Hall, Missouri (lead)
  - Eric Skrmetta, Louisiana
  - Julie Fedorchak, North Dakota
  - Matt Schuerger, Minnesota
  - Nick Wagner, Iowa (*ex officio*)

# Overview - Events

- Meetings so far
  - Telephone call in September 2018
  - In-person meeting at NARUC, November 2018 (Orlando)
  - In-person meeting at NARUC, February 2019 (Washington D.C.)
  - Telephone call, March 1, 2019
  - Telephone call, March 15, 2019

# Overview - Documents

- Documents of note\*\*
  - SPP-MISO penned whitepaper, November 2018
  - Stakeholder responses to the whitepaper, January 2019
  - SPP and MISO responses to follow up questions, March 2019
  - SPP and MISO Market Monitors suggested list of items for further study, March 2019

\*\* these documents can all be found at <https://www.spp.org/organizational-groups/regional-state-committee/spp-rscoms-liaison-committee/> under “Reference Documents”. There are some additional documents under “Reference Documents” and “Meeting Materials”

# Recent Activity – RTO responses

- SPP and MISO each provided responses to follow up questions from the Seams Liaison committee on March 25, 2019
- Responses are posted in the “Reference Documents” portion of the RSC Seams Liaison Committee section on the SPP website.
- Committee is currently evaluating the responses.



# RTO Responses of note

- Q1, Regional Through and Out Rates (RTORs), both SPP and MISO noted that new analysis would have to be done to see result of eliminating RTORs
- Q2, Unreserved Usage charges, differing opinions on what, if anything, could be done to alter those charges

# RTO Responses of note

- Q7, Generation and Transmission Outage Coordination, interest in sharing multiple day ahead reliability assessments
- Q10, Differences in Adjusted Production Cost (APC) calculations, explanations of how SPP and MISO differ in their regional APC calculations

# Recent Activity – Market Monitors

- The Seams Liaison Committee has had discussions with the SPP and MISO Market Monitors about performing analysis.
- The SPP Market Monitoring Unit (MMU) and the MISO Independent Market Monitor (IMM) both provided a list of seams topics for potential analysis.
- Those lists are posted in the “Reference Documents” portion of the RSC Seams Liaison Committee section on the SPP website.

# Recent Activity – Market Monitors

- The Seams Liaison Committee has had further discussions with the Market Monitors to develop a scope of work.
- That scope is expected to be finalized in April – May 2019.

# Next Steps

- Analyzing responses from RTOs and Market Monitors
- Anticipate future in-person meetings
  - Previous in-person Seams Liaison Committee meetings have been at the same time and location as NARUC meetings.
  - Potentially could also utilize MARC meetings.

# Questions?

[adam.mckinnie@psc.mo.gov](mailto:adam.mckinnie@psc.mo.gov)

# Transmission Planning Update

Lanny Nickell

Vice President, Engineering



SouthwestPowerPool



SPPorg



southwest-power-pool

# ITP Timeline

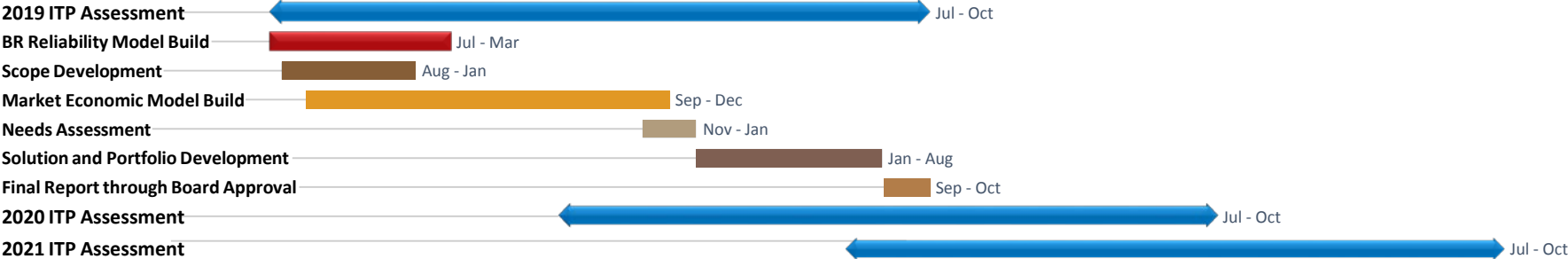


2017



2021

Today





# Current and Upcoming Milestones



Milestone	Status	Start Date	End Date
Reliability Portfolio Development	●	3/21/2019	6/28/2019
Project Grouping	●	3/21/2019	6/28/2019
Initial Portfolio Reliability Assessments	●	5/16/2019	7/02/2019
Planning Summit	●	5/29/2019	5/30/2019
Optimization & Portfolio Consolidation	●	7/03/2019	8/05/2019
Benefit Metrics	●	8/06/2019	8/26/2019
Stability Analysis	●	8/06/2019	8/26/2019
Sensitivity Analysis	●	8/06/2019	8/26/2019

# 2019 ITP Plan to Actual\*

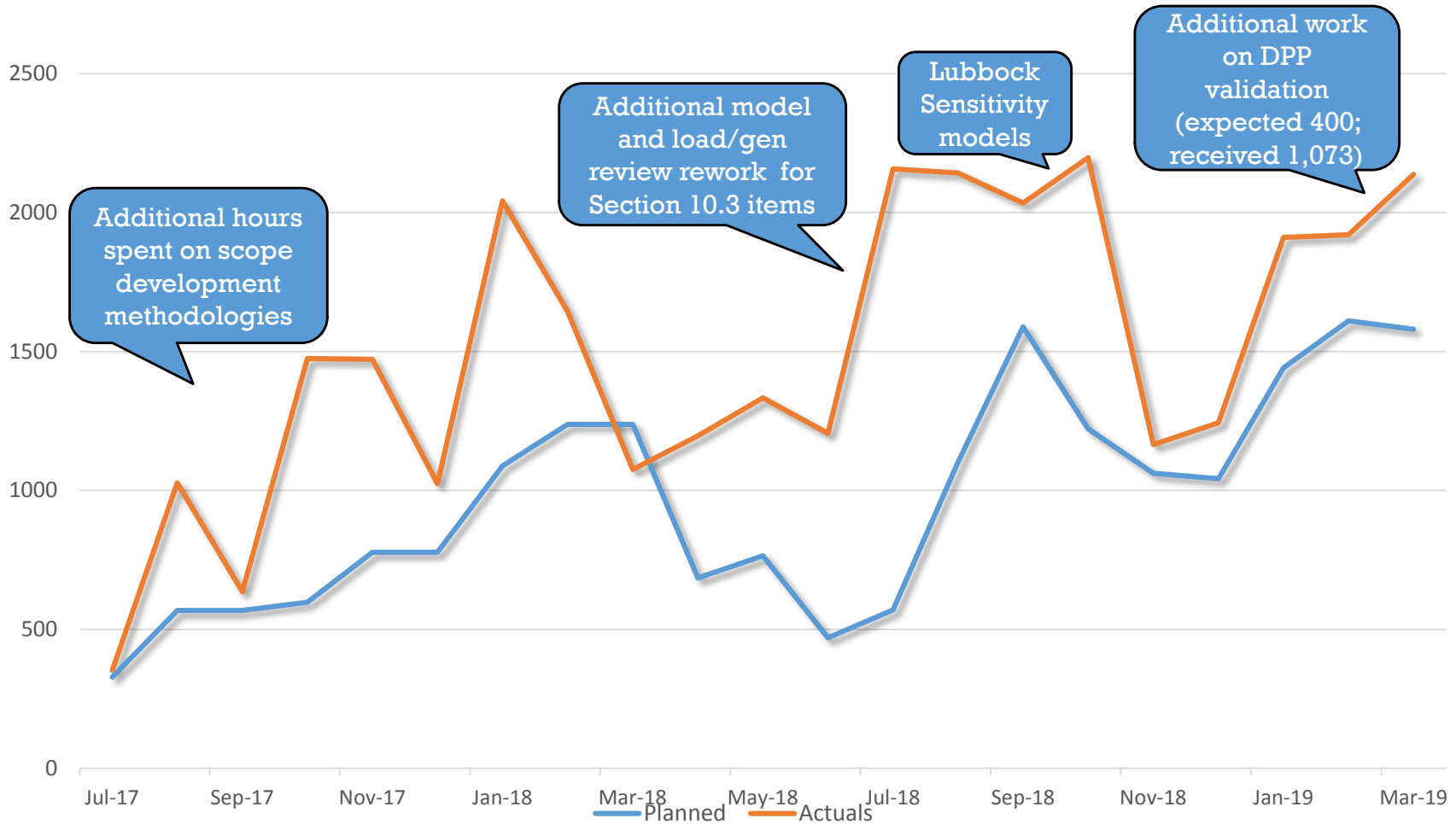
Item	Amount
Staff Hours originally estimated	28,000 hrs.
Current estimate for Staff hours at study completion	38,400 hrs.
ITP Annual Consultant Budget*	\$200,000
2019 ITP – Consultant budget spend year-to-date	\$85,000
2019 ITP – Expected consultant budget spend to complete study	\$100,000

\* Annual Budget includes costs for 2019, 2020 and 2021 ITP spend during the calendar year

\*As of 3/31/2019

# 2019 ITP Planned vs. Actual Work

ITP  
2019



# 2019 ITP Scope

- Future 1: Reference Case
- Future 2: Emerging Technologies

Key Assumptions	Drivers				
	Year 2	Reference Case		Emerging Technologies	
		Year 5	Year 10	Year 5	Year 10
Energy Demand Growth Rates	As submitted in load forecast	As submitted in load forecast		Increased due to electric vehicle growth	
Fossil Fuel Retirements	Age-Based 60+, subject to stakeholder input	Age-Based 60+, subject to stakeholder input		Age-based 60+	
Distributed Generation (Solar)	As submitted in load forecast	As submitted in load forecast		+300 MW	+500 MW
<b>Total Renewable Capacity</b>					
Solar (GW)	~.25	3	5	4	7
Wind (GW)	~18	24.2	24.6	27	30

# Economic Needs – Future 1

ITP  
2019

## 2019 ITP Market Powerflow Model & Economic Needs

(Needs solved by model corrections  
or NTCs are removed)



- Overload
- Voltage
- MON

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Date Exported 4/16/2019 1 inch equals 161 miles

Future 1





# Economic Needs – Future 2

ITP  
2019

## 2019 ITP Market Powerflow Model & Economic Needs

(Needs solved by model corrections  
or NTCs are removed)



- Overload
- Voltage
- MON

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Date Exported 4/16/2019 1 inch equals 161 miles





# Reliability Needs

ITP  
2019

## 2019 ITP BR Needs

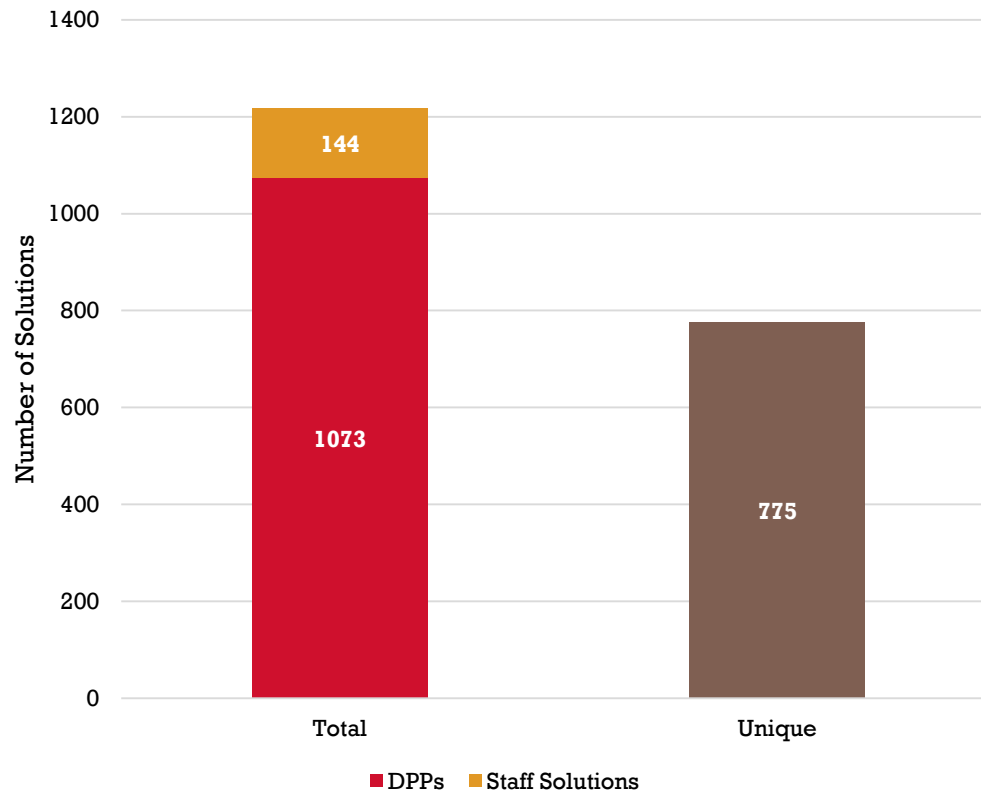
(Needs solved by model corrections  
or NTCs are removed)



- Overload
- Voltage
- Short Circuit



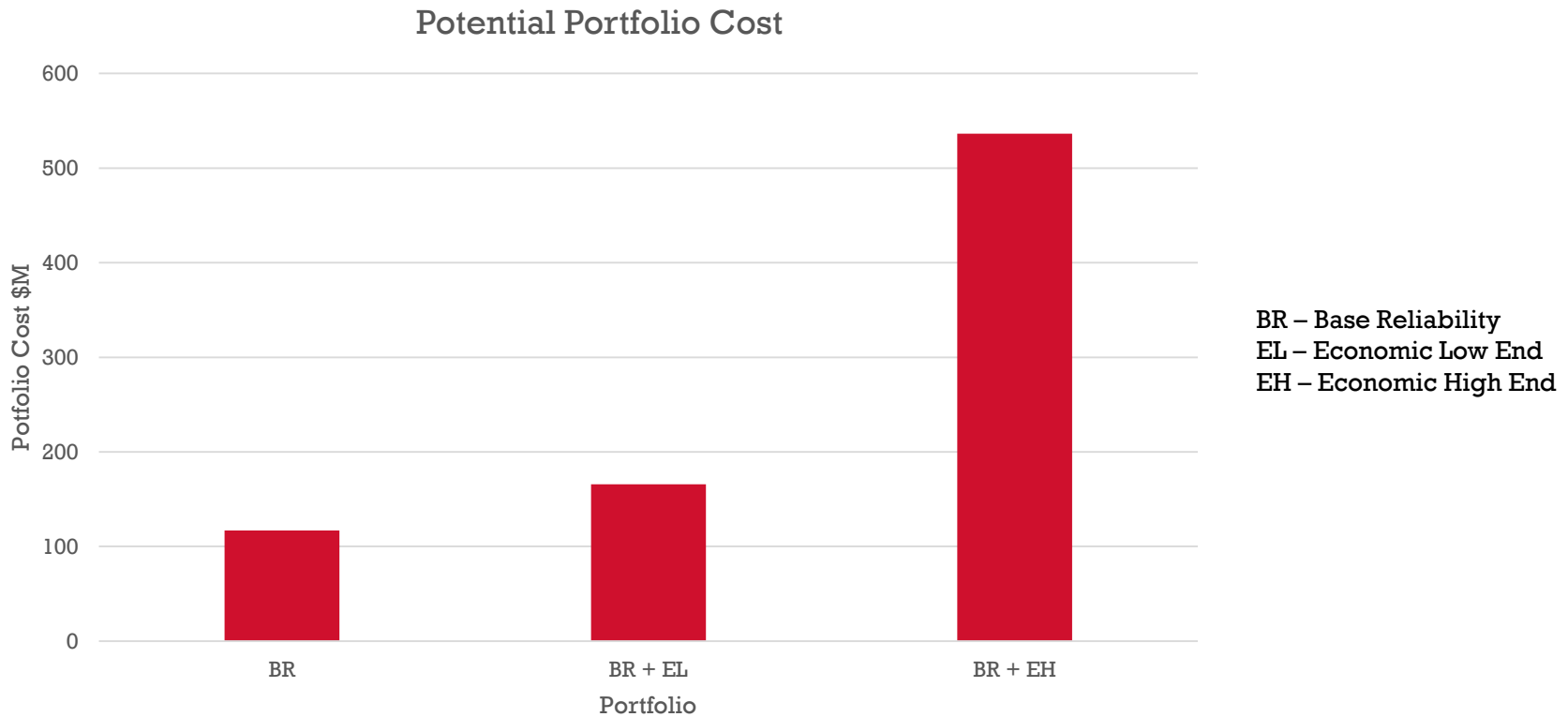
# 2019 ITP DPP\* Statistics



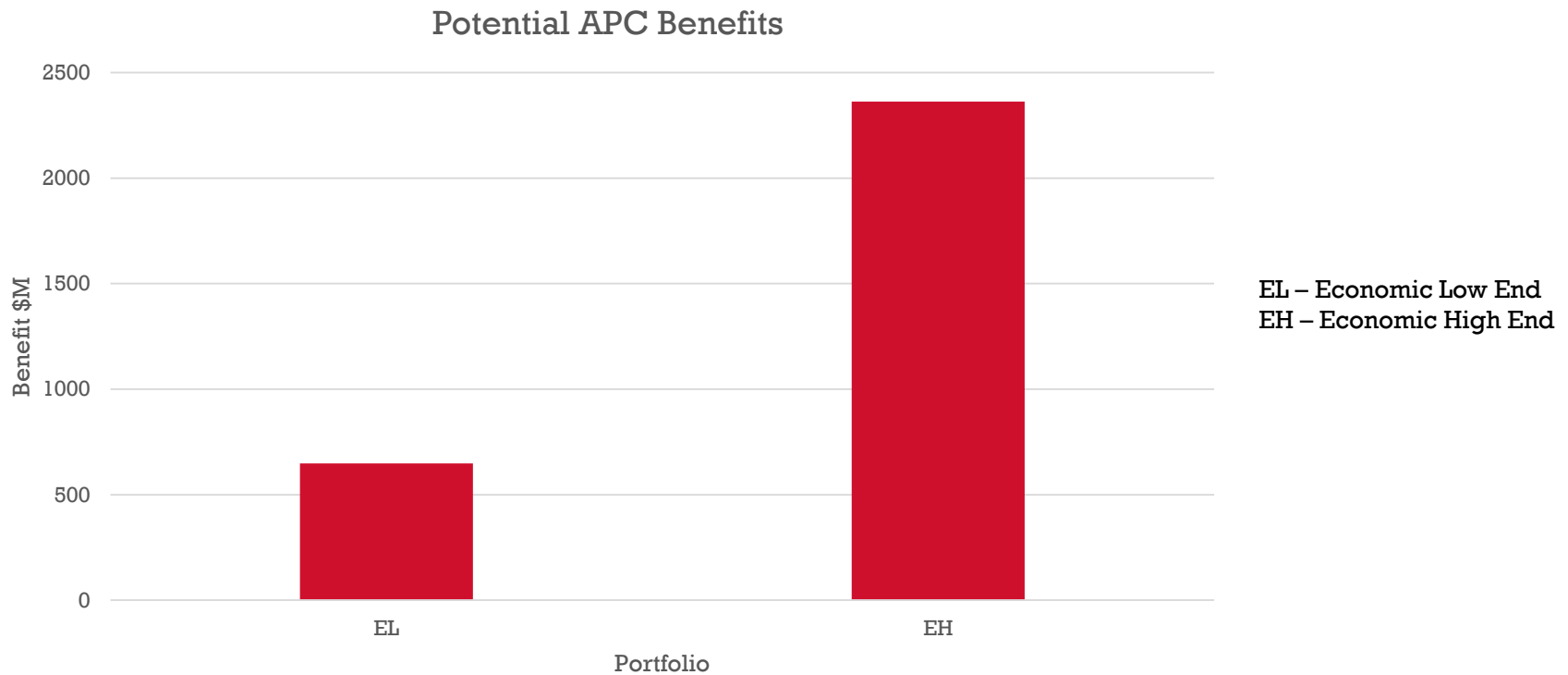
\*DPP = Detailed Project Proposal



# Potential Portfolio Costs



# Potential APC Benefits



\* APC calculated for individual projects subject to change based on portfolio optimization

# Proposed Assignment of NTC 200479

Lanny Nickell

Vice President, Engineering



SouthwestPowerPool



SPPorg



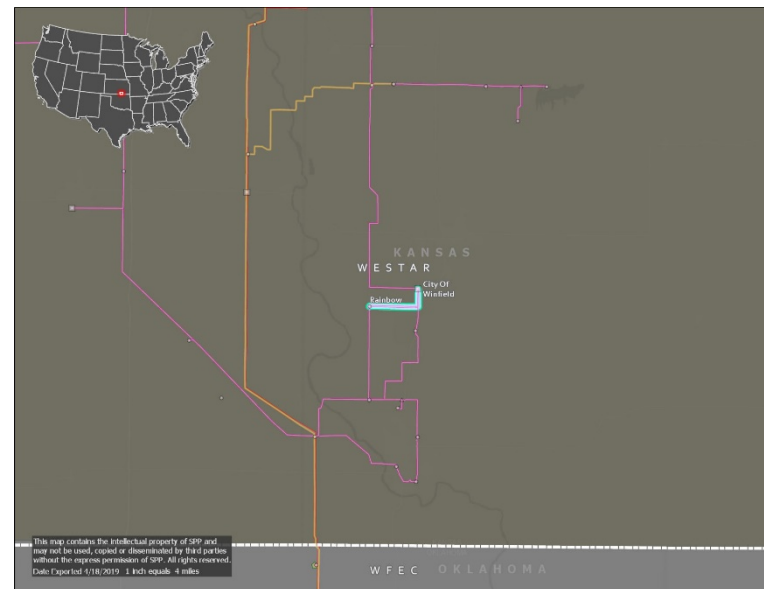
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# Background

## Notification to Construct (NTC) 200479

Upgrade No.	Upgrade Name	Current Project Description	Trans. Owner	Need Date	Cost Estimate
71954	City of Winfield-Rainbow 69kV Ckt1	Rebuild 4 miles of 69kV transmission line from City of Winfield to Rainbow	KPP	6/1/2021	\$3,600,000

- NTC 200479 issued February 27, 2018 to Kansas Power Pool (KPP)
- KPP has requested assignment to GridLiance High Plains, LLC (GridLiance)
- Request to be considered by SPP Board



# Assignment Definition

- **Transfer of a transmission owner's legal right to build a transmission upgrade**
  - Legal right based on issuance of NTC
  - Assignee must meet qualifications criteria
- **Assignor is still legally obligated to ensure that the project is built**

# Assignment Qualification

Per Attachment Y and Business Practice 7070 criteria, proposed assignee must:

- ✓ Obtain all necessary state regulatory approvals prior to construction activity
- ✓ Meet SPP creditworthiness requirements
- ✓ Sign, or be capable and willing to sign, the SPP Membership Agreement as a Transmission Owner
- ✓ Meet SPP business practice specified financial, technical, and managerial qualifications

# Analysis and Report Contents

- ✓ **Project ownership details**
  - ✓ Current owner and proposed entity
  - ✓ Selection process for proposed entity
- ✓ **Regulatory matters involving project**
- ✓ **Financial comparisons**
  - ✓ Return On Equity (ROE)
  - ✓ Net Plant Carrying Charge (NPCC)
  - ✓ Annual Transmission Revenue Requirement (ATRR)
- ✓ **Facility operations and maintenance impact**

# NPCC Cost Comparison

- KPP/Winfield - 16.2%
- GridLiance - 20.4%

	<b>Franchise Fee</b>	<b>Property Tax</b>	<b>Income Tax</b>	<b>Debt Cost</b>	<b>Total Impact</b>
<b>Impact To GridLiance NPCC</b>	0.8%	1.5%	1.5%	0.4%	4.2%



# ATRR Cost Comparison

- 25.9% increase in ATRR with assignment
  - \$3M increment over life of project
- Same ROE for both entities
  - GridLiance ROE FERC approved
  - KPP/Winfield would file for similar Formula Rate Template
- NPCC difference drives the increase
- Shared project ownership reduces cost impact
  - Analysis done at 100% GridLiance ownership
  - Winfield executes option to own 35% of project reduces tax and fee impact on NPCC

# Non-Financial Analysis

- No increase in operating and maintenance costs(O&M)
  - Winfield responsible for all O&M
- Winfield Commission selected GridLiance as exclusive transmission partner
  - Co-Development agreement executed
- Project not eligible to use the Transmission Owner Selection Process (TOSP)
- GridLiance has requested and is awaiting KCC approval

# Summary

- GridLiance has provided documentation that meets SPP Tariff requirements for assignment
- SPP has provided a detailed report that meets Business Practice 7070 transparency requirements
- Staff recommends Board approve GridLiance as a qualified entity to accept assignment from KPP
  - GridLiance must receive appropriate state approval prior to starting construction
  - State approval must be received in a timely manner such that the current project need date can be met



**KANSAS POWER POOL NTC  
ASSIGNMENT TO  
GRIDLIANCE HIGH PLAINS, LLC  
SPP-NTC-200479**

April 2019

Southwest Power Pool

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## SECTION 1: NTC ASSIGNMENT REVIEW

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### *SUBSECTION A: KANSAS POWER POOL NTC ASSIGNMENT TO GRIDLIANCE HIGH PLAINS LLC*

This report presents the review of Kansas Power Pool's ("KPP") request to assign Notification to Construct ("NTC") No. 200479 to GridLiance High Plains, LLC ("GridLiance") conducted by Southwest Power Pool ("SPP").

This review was performed to satisfy the requirements established by SPP's Open Access Transmission Tariff ("Tariff") Attachment Y and Business Practice 7070 regarding the assignment of NTCs. Per SPP Business Practice 7070, an "assignment" is the transfer of a Designated Transmission Owner's ("DTO") legal right to build a project pursuant to a NTC issued by SPP. Although the DTO has transferred its legal right to build a project pursuant to an assignment, the original DTO is still under a legal obligation to ensure that the project is built.

This report provides information to the SPP Board of Directors ("BOD"), Regional State Committee ("RSC"), Markets and Operations Policy Committee ("MOPC"), and the SPP Members Committee on the qualifications of GridLiance to be assigned Project ID 51249, which is directed in SPP's NTC-200479. Project ID 51249 is also referred to as Network Upgrade ID 71954, which is an upgrade requiring the reconductoring of 4 miles of 69kV transmission line from the City of Winfield, Kansas ("Winfield") to Westar Energy, Inc.'s Rainbow Substation. SPP issued the NTC to KPP on February 27, 2018 with a cost estimate of \$1,467,084. KPP accepted the NTC on April 23, 2018. As part of the NTC acceptance, KPP provided an updated cost estimate of \$3,600,000 based upon the need to rebuild rather than reconductor the line. KPP also acknowledged the possibility of airport restrictions causing a route change. KPP's updated cost estimate assumes that the airport restrictions can be satisfied without rerouting the line.

### *SUBSECTION B: REVIEW PROCESS*

SPP conducted the review and analysis in accordance with Attachment Y of the SPP Tariff and Section 3 of Business Practice 7070. This review included phone interviews with KPP, GridLiance, and Winfield and review of the supporting documentation to compare and analyze the proposed NTC assignment with respect to Regulatory, Managerial, and Financial factors.

### *SUBSECTION C: DOCUMENT REVIEW*

GridLiance provided two documents to SPP at the start of the review in August 2018, and six additional documents over the course of the analysis in response to SPP additional inquiries. SPP submitted two data requests to GridLiance during the review. The documents exchanged during the review are shown in Table 1 below. During the review, GridLiance and SPP exchanged approximately fifteen emails including data requests, responses to data requests, and clarification of responses that may or may not be included in identified documents 1-9 in Table 1 below. Email exchanges and data embedded within the emails are intended to be captured as part of Document No. 10 in Table 1 below.

Table 1 lists the documents/communications reviewed.

DOCUMENT NO.	DATE RECEIVED	DOCUMENT NAME
1	8/6/2018	KPP_NTC_Acceptance_4_18_18.docx
2	8/6/2018	NTC Assignment-Winfield_KPP_GridLiance_Executed_7_19_18.pdf
3	9/7/2018	NTC Assignment Data Response_GL_KPP_9_7_18.docx
4	12/18/2018	Winfield NTC Response supporting data_09042018_bh.xlsx
5	01/03/2019	DOCS-#611412-v6-GL-NTC_Assignment_Agreement.docx
6	01/03/2019	GL NTC Assignment Agreement [Execution Version](11545.2).docx
7	01/03/2019	NTC Assignment-Winfield_KPP_GridLiance_Executed_7_19_18.pdf
8	01/08/2019	GL NTC Assignment Agreement Execution Version (11545.2)_TK.docx
9	02/21/2019	KPP GHP Assignment Agreement.pdf
10	8/2018-3/2019	Approximately 15 email exchanges between SPP and GridLiance providing data requests, responses to data requests, and clarification of responses

**Observations from Document Review**

The documents provided by GridLiance show that –

- GridLiance meets the financial requirements of the Transmission Provider as specified in Section III.1(b)(ii) of Attachment Y of the SPP Tariff
- GridLiance has signed the SPP Membership Agreement as a Transmission Owner
- GridLiance meets the managerial requirements as specified in Section III.1(b) of Attachment Y of the SPP Tariff
- GridLiance, Winfield, and KPP jointly filed at the Kansas Corporation Commission (“KCC”) in February 2019 requesting public utility status and a Certificate of Convenience and Authority (“COC”) for GridLiance to operate and upgrade transmission facilities in the state of Kansas. (KCC Docket No. 19-GLPE-338-ACQ)
- GridLiance has a Federal Energy Regulatory Commission (“FERC”) approved formula rate template that is the basis for the cost comparisons
  - KPP currently has a FERC stated rate but indicates if it were to move forward with the NTC, it would file for a formula rate with FERC to mimic the capital structure and return on equity of its local partner, GridLiance.
  - GridLiance will be the joint owner of other transmission assets with Winfield/KPP
- There is a difference of 4.2 percentage points between the GridLiance Net Plant Carrying Charge (“NPCC”) and the Winfield NPCC for the first five years of the project life as well as over the entire service life. As discussed in Section 2 below, this NPCC difference results in the GridLiance projected Annual Transmission Revenue Requirement (“ATRR”) being approximately 26 percent higher than the projected ATRR if KPP or Winfield were the full owner.
- Winfield, with KPP acting as its agent, will co-own with GridLiance the final constructed upgrade. For the full project cost, this joint ownership will dampen the difference in ATRR to the extent of Winfield’s ownership.
- Winfield will perform all Operations & Maintenance (“O&M”) services related to this project
- The Winfield Commission selected GridLiance as its exclusive transmission partner in public and open meetings
- KPP selected GridLiance as its exclusive planning and development partner in 2015 and codified this agreement in a Co-Development Agreement executed in 2016
- Winfield has the right and intends to execute its right to own 35 percent of the project. This means Winfield will contribute 35 percent of the capital and will recover through its ATRR the cost of ownership of its 35 percent share



## SECTION 2: FINANCIAL REVIEW

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### *SUBSECTION A: GRIDLIANCE ASSUMED COST*

SPP's financial review focused primarily on the responses to data requests one and two (email exchanges noted in Document No. 10) and the spreadsheet titled "Winfield NTC Application Supporting Data" (Document No. 04).

FERC has authorized a Return on Equity ("ROE") of 10.3 percent for GridLiance, which is a 9.80 percent base return and a 0.50 percent adder for RTO participation.

Due to differences in the cost of debt, the Weighted Average Cost of Capital ("WACC") of GridLiance is projected as 8.2 percent vs 7.8 percent for KPP.

Since KPP does not currently have a formula rate, GridLiance considered certain assumptions to remain constant. They indicated that the debt share of the capital structure, ROE, administrative and general expense (A&G), and O&M were assumed the same whether the facilities were owned by GridLiance or by Winfield with KPP acting as the agent.

GridLiance's estimated NPCC is 4.2 percentage points higher than KPP. The factors that account for the 4.2 percentage point variance are:

- Franchise Fees: Represents 0.8 points of the NPCC. Winfield does not expect to pay itself a Franchise Fee, but GridLiance will be required to pay a Franchise Fee. The Franchise Fee accounts for GridLiance's ability to use the municipality's right-of-way.
- Property Taxes: This represents 1.5 points of the NPCC. GridLiance is required to pay property tax while Winfield is not.
- Income Tax: This represents 1.5 points of the NPCC. GridLiance is required to pay income tax while Winfield is not.
- Debt Cost: Winfield can issue tax-free bonds, which GridLiance cannot, thereby lowering the Winfield cost of debt. The difference between GridLiance's and Winfield's projected debt cost creates a 0.4 percentage point difference in the WACC, which translates into a corresponding difference in the NPCC.

Table 2 compares the financial assumptions between GridLiance and KPP the Designated Transmission Owner (“DTO”).

TRANSMISSION OWNER	ACTUAL OR PROJECTED D/E RATIOS	ACTUAL OR PROJECTED COST OF CAPITAL	ACTUAL OR PROJECTED ROE OR APPLICABLE MEASURE	ACTUAL OR PROPOSED TYPE AND AMOUNT OF CONSTRUCTION FINANCING COSTS, I.E. INTEREST RATE, AFUDC OR CWIP	S&P AND MOODY'S CREDIT RATINGS	ESTIMATED NPCC FOR THE LIFE OF THE PROJECT AFTER IT IS PLACED IN-SERVICE
<b>KPP (DTO)</b>	40% / 60%	7.8%	10.3%	AFUDC (4.0%) Est. Cost of Debt	Moody's: A3 Fitch: A-	13.3% (Avg Yr 1-5) / 16.2% (Lifetime Avg)
<b>GridLiance (PDTO)</b>	40% / 60%	8.2%	10.3%	AFUDC (5.0%) Est. Cost of Debt	Not Rated	17.5% (Avg Yr 1-5) / 20.4% (Lifetime Avg)

**Cost to Customers**

The data provided by GridLiance shows that the annual cost to SPP customers is expected to be greater than if KPP retained the NTC. The largest driving factor for this increase is that the tax requirements for GridLiance are greater than those for KPP/Winfield.

GridLiance, KPP, and Winfield verified that if KPP/Winfield retained the NTC they would file with FERC to gain approval of a Formula Rate template that would mimic the FERC approved template of GridLiance.

**Staffing and Project Management Needs**

GridLiance indicated that Winfield, with KPP acting as its agent, will co-own with GridLiance the final constructed upgrade. Winfield will perform all O&M services related to this project. The Winfield Commission, in public and open meetings has selected GridLiance as its exclusive transmission partner. Additionally, KPP selected GridLiance as its exclusive planning and development partner in 2015 and codified this in a Co-Development Agreement executed in 2016.

GridLiance indicated that benefits of the agreements help to ensure the project is constructed and placed into service as required per the NTC with greater assurance than having less experienced municipalities carry out the requirements of the NTC. GridLiance noted that while Winfield owns transmission facilities, transmission ownership is not its business and the city must manage more priorities than running an electric utility. Partnering with GridLiance will bring a transmission-only focus to the project, along with capital resources. Along with expertise and proper staffing and capital, GridLiance also provides resource relief to Winfield as a small municipality and provides greater expertise when handling the NTC project to ensure it is constructed as required and is delivered on time. GridLiance indicated that these are benefits to be considered as offsets to any increased cost to develop and own the project without an assignment.

## SECTION 3: FINDINGS

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### ***SUBSECTION A: FINANCIAL FINDINGS***

#### ***Due diligence findings with respect to Financing Assumptions***

SPP's review resulted in a finding that the operating and maintenance ("O&M") costs are estimated to be the same for GridLiance as for KPP/Winfield.

- In making this determination, SPP reviewed supporting documentation provided by GridLiance indicating the projected cost for O&M would remain the same whether GridLiance or KPP/Winfield ultimately constructed the NTC. This is because Winfield intends to provide all O&M for the project.

SPP's review resulted in a finding that the NPCC applicable to the project will be 4.2 percentage points higher if GridLiance were to construct the NTC as opposed to KPP/Winfield. This is the difference between the 20.4 percent NPCC estimated for GridLiance and the 16.2 percent NPCC estimated for KPP/Winfield, both of which are quantified over the facility's life. The difference between the two is largely attributable to differences in the taxable status between the entities. The difference between the two NPCC values results in GridLiance having an estimated ATRR that is approximately 26 percent higher than the KPP/Winfield ATRR.

- This analysis assumes that GridLiance will own and operate 100 percent of the facilities; however, Winfield has the right, and plans to execute the right, to own 35 percent of the project. This will require Winfield to contribute 35 percent of the capital that will be recovered through its ATRR. This means that the ATRR difference in ownership, if just comparing GridLiance ownership versus Winfield ownership, is overstating the cost since Winfield will own 35 percent of the project. GridLiance will be the transmission operator for 100 percent of the project, but the ownership is anticipated to be shared.

SPP's review resulted in a finding that the tax costs would cause approximately a 3 percentage point difference between the NPCC for GridLiance and the NPCC for KPP/Winfield.

- In making this determination, SPP reviewed supporting documentation regarding taxable status of the entities involved. GridLiance's tax obligation would be higher as compared to the municipalities' obligations as GridLiance is a tax-paying public utility and KPP/Winfield are tax-exempt.

SPP's review resulted in a finding the WACC for GridLiance would be approximately 0.4 percentage points higher than it would be for KPP/Winfield.

- In making this determination, SPP reviewed the supporting documentation that reflected the projected cost of capital would be 7.8 percent for KPP as compared to 8.2 percent for GridLiance. This is largely due to KPP/Winfield's ability to issue tax-exempt bonds.

### ***SUBSECTION B: COST TO CUSTOMERS FINDINGS***

#### ***Due diligence findings with respect to Cost to SPP Customers***

SPP's review resulted in a finding that the calculation of the GridLiance and KPP/Winfield NPCC values is supportable based on the information provided. This calculation shows that the cost to SPP customers is higher after assignment of the project.

- Based on the NPCC values provided, SPP calculated the service life sum of the increment in ATRR under 100 percent GridLiance ownership as approximately \$3 million (25.9 percent)

over a 40-year period. This calculation is based on a current NTC cost of \$3,600,000 and a projected increased service life NPCC of 4.2 percentage points, from 16.2 percent to 20.4 percent. It also assumes the same rate of straight-line depreciation over a 40-year period in both cases.

### ***SUBSECTION C: OPERATIONS FINDINGS***

#### ***Due diligence findings with respect to Project Development, Operations, and Maintenance***

SPP's review resulted in a finding that GridLiance has demonstrated its managerial and engineering expertise/qualifications that are sufficient for GridLiance to construct, own, and operate the project in a manner that Winfield has not currently demonstrated.

- Winfield/KPP indicated during the review process that transmission construction is not a business in which Winfield is experienced and, therefore, Winfield would likely seek to execute any assigned NTCs through a partnership with an experienced entity as it has in this case.

### ***SUBSECTION D: ASSIGNMENT APPROVAL CRITERIA PER SPP TARIFF***

#### ***Due diligence findings with respect to approval criteria for Assignments per SPP Tariff Attachment Y***

SPP's review resulted in a finding that GridLiance meets and has demonstrated proof that it is eligible to be assigned this NTC as required in both SPP Tariff Attachment Y Section VII.1 (a-d) and Business Practice 7070 Section 3. (3.1.1).

- Attachment Y Section VII.1 (a), requires that prior to starting its construction activity, the entity must have obtained all state and regulatory authority necessary to construct, own, and operate transmission facilities within the state(s) where the project is located.
  - GridLiance, KPP, and Winfield jointly filed with the KCC in Docket No. 19-GLPE-338-ACQ on February 20, 2019 seeking to gain the regulatory authority required for GridLiance to construct, own, and operate the project in Kansas. The KCC has 300 days from the date of the filing to issue a ruling. As part of the filing, however, the entities requested expedited treatment and requested to have approval by the KCC by August 20, 2019.
- Attachment Y Section VII.1 (b), requires the entity to meet the financial requirements of the Transmission Provider as specified in Section III.1 (b) (ii) of Attachment Y.
  - GridLiance has met this requirement through the Qualified RFP Participant requirements option 3 and is current in the submission of documentation proof of this requirement to SPP.
- Attachment Y Section VII.1(c), requires the entity to have signed or be capable and willing to sign the SPP Membership Agreement as a Transmission Owner.
  - GridLiance met this requirement and executed the SPP Membership Agreement as a Transmission Owner in June 2017. GridLiance became a Transmission Owner with facility costs recovered under the SPP Tariff on April 1, 2018.
- Attachment Y Section VII.1 (d), requires the entity to meet other qualifications as specified in Section III.1 (b) of Attachment Y.
  - GridLiance has met this requirement through the Qualified RFP Participant requirements under the Managerial Criteria section and is current in the submission of documentation proof of this requirement to SPP.

# Integrated Marketplace and Operations Update

Bruce Rew, PE

Vice President, Operations

# SPP Integrated Marketplace Update

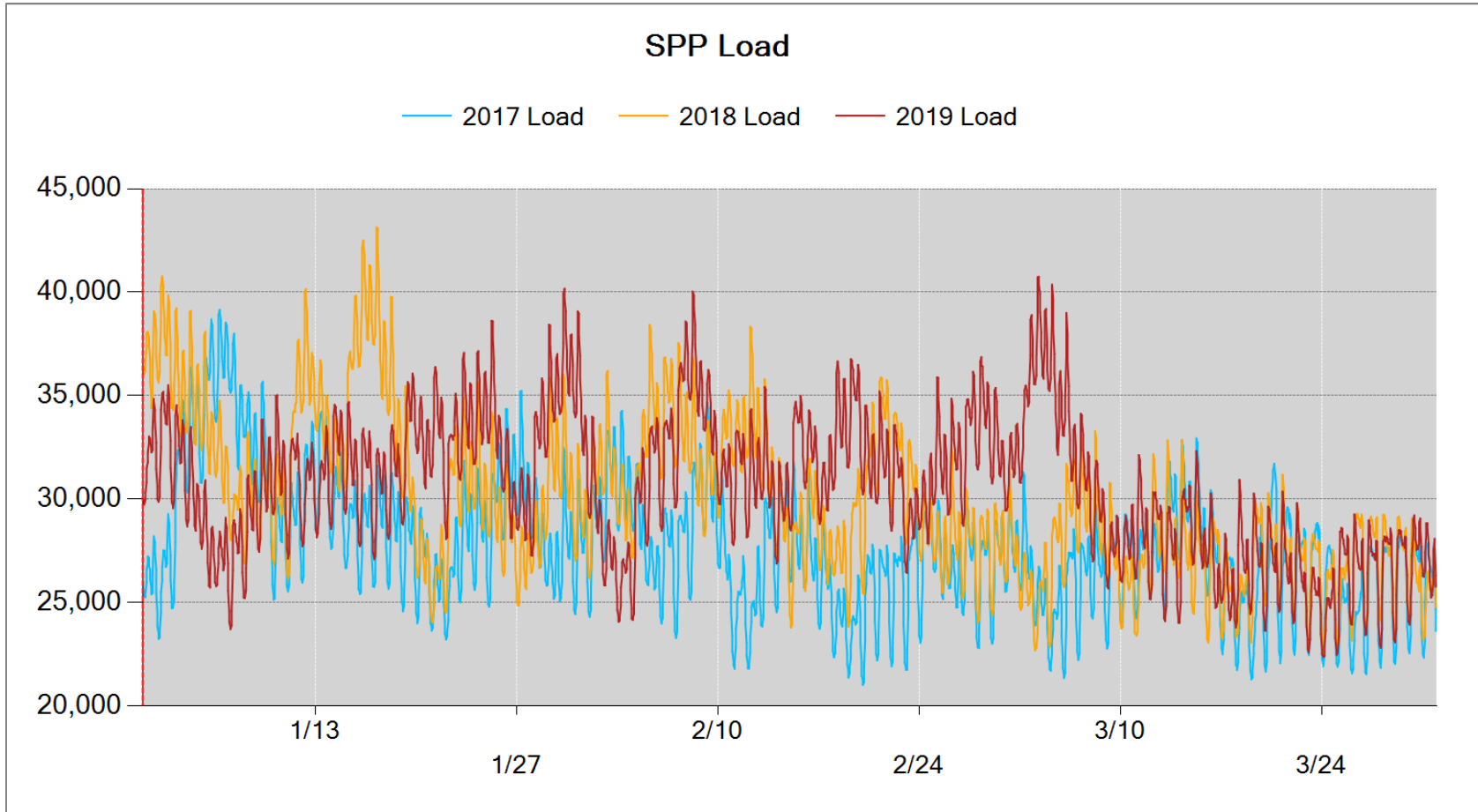
- Marketplace Operational Highlights
- Historical Load and Wind Trends
- Marketplace Highlights and Information
- Enhancements implemented and under development

# Marketplace Operational Highlights

- No new peaks during the quarter
  - Load peaked around 41GW on 3/4 (short of historical winter peak 43.6 GW on 1/17/2018)
- SPP declared Conservative Operations 2/7- 2/9 and again for 3/3 - 3/5
- Load forecast error was improved when compared to Q1 2018
- Maximum absolute Wind forecast error significantly improved compared to Q1 2018. Average absolute Wind forecast error was similar to Q1 2018.
- Currently over 21GW of wind registered in the market



# SPP Load profile: January – March (comparing 2017, 2018, 2019 years at same date)



# Wind Output: Jan - Mar 2019

	@ Max Wind Output	@ Min Wind Output
<b>MW Wind</b>	15,966 MW	395 MW
<b>Time</b>	2/23 @ 18:35:44	1/17 @ 12:54:56
<b>SPP Load</b>	30,224 MW	31,079 MW
<b>Appx Gen Mix</b>		
Coal	30%	55%
Wind	50%	1.7%
Nat. Gas	9%	30%
Nuclear	6%	7%
Hydro	4%	6%

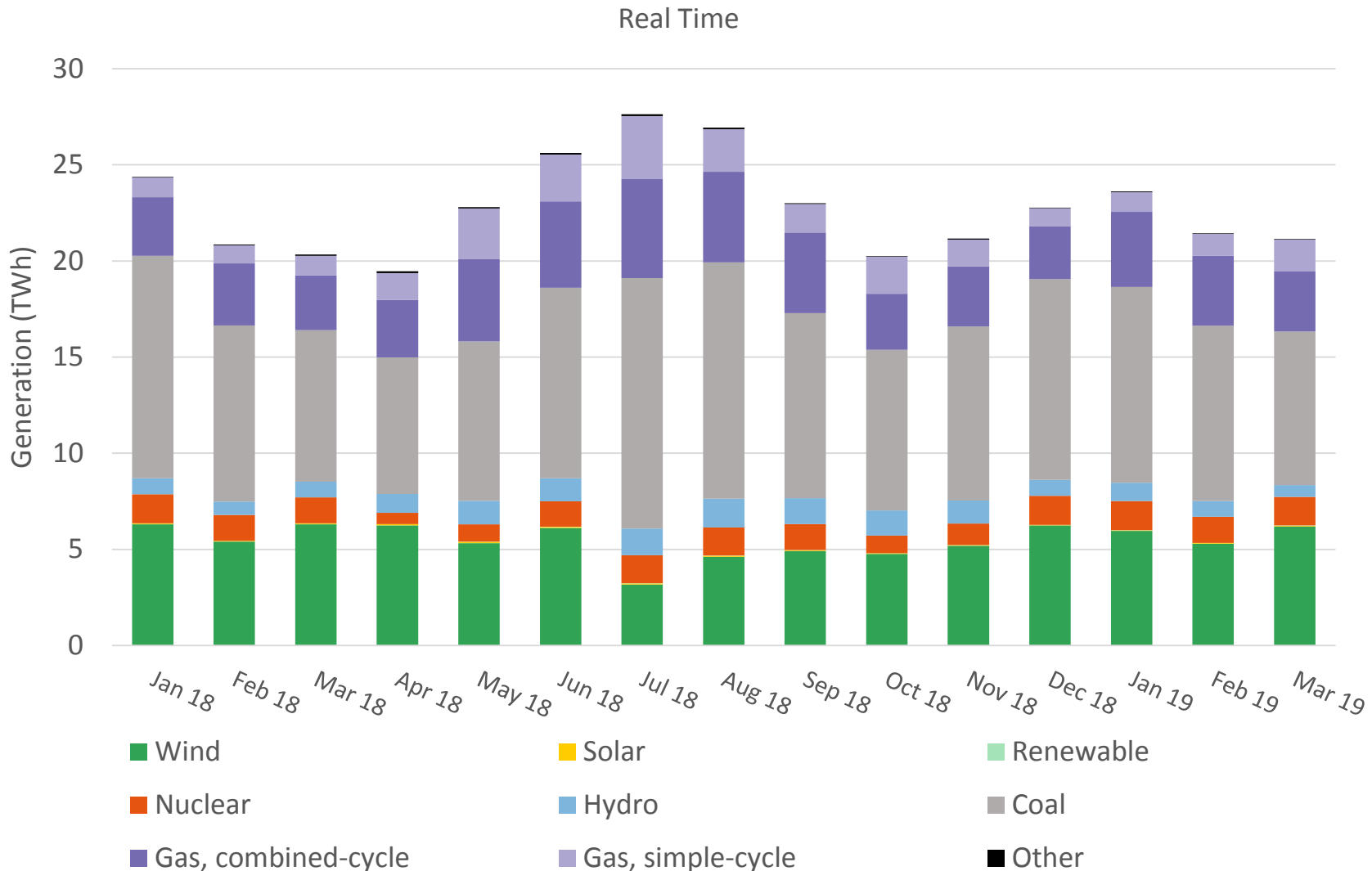
# Wind Penetration: Jan - Mar 2019

	<b>Max Penetration</b>	<b>Min Penetration</b>
<b>Wind Penetration</b>	63.76% of load	1.27% of load
<b>Time</b>	3/27 @ 02:40:32	1/17 @ 12:24:56
<b>SPP Load</b>	23,451MW	31,079 MW
<b>Wind Output</b>	14,953 MW	395 MW
<b>Appx Gen Mix</b>		
Coal	19%	55%
Wind	59%	1.7%
Nat. Gas	12%	30%
Nuclear	8%	7%
Hydro	2%	6%

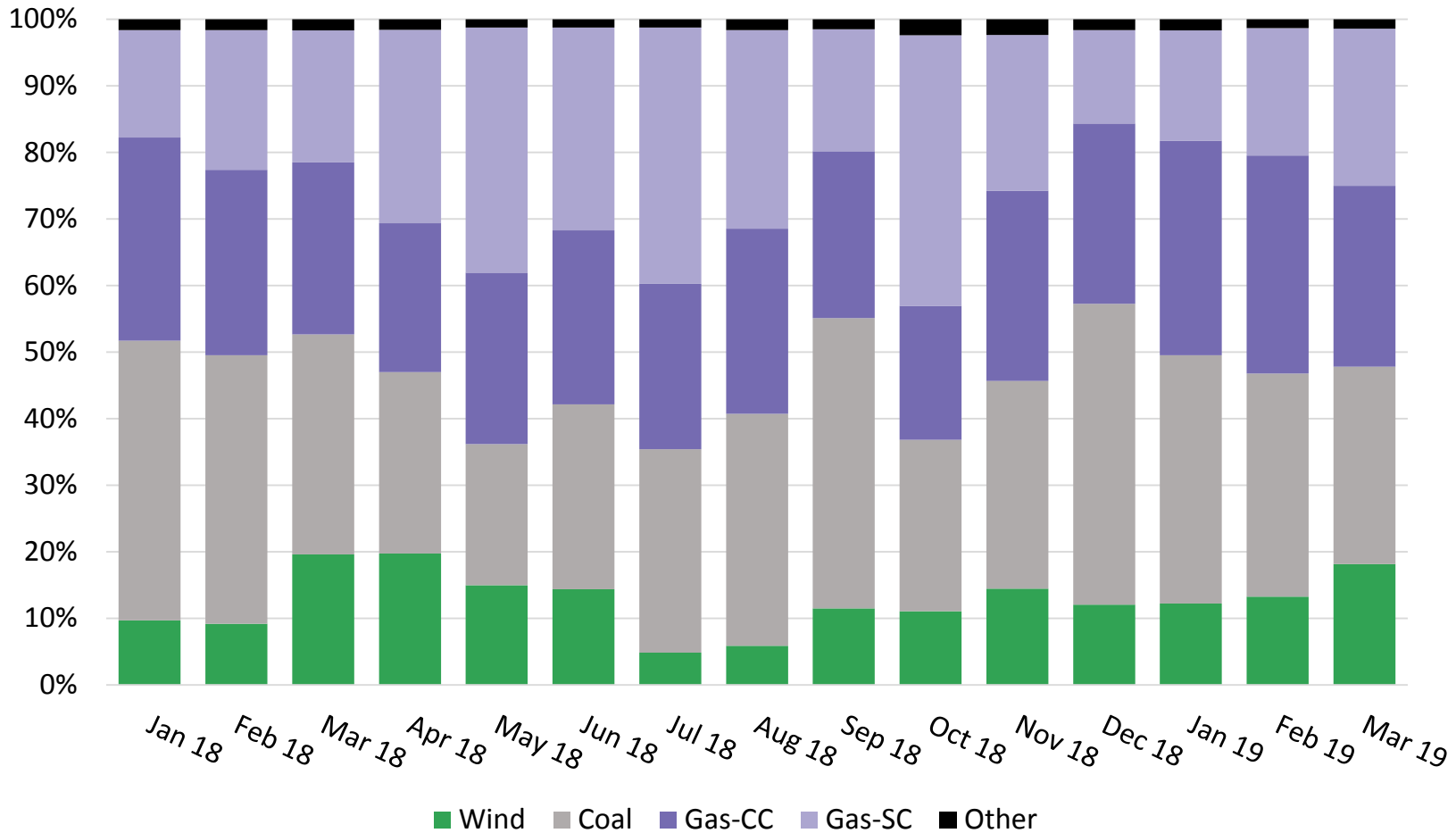
# Marketplace Over Last 12 Months

- **231 Market Participants**
  - 148 financial only and 83 asset owning
- **SPP BA has successfully maintained NERC control performance standards (BAAL & CPS)**
- **High System availability**
  - Day-Ahead Market results have posted late 1 time in past 12 months
    - 1 late posting in 2018 Q3 due to issues resulting from new market system release
  - Real-Time Balancing Market has successfully solved 99.8% of all intervals

# Dispatch by Fuel Type



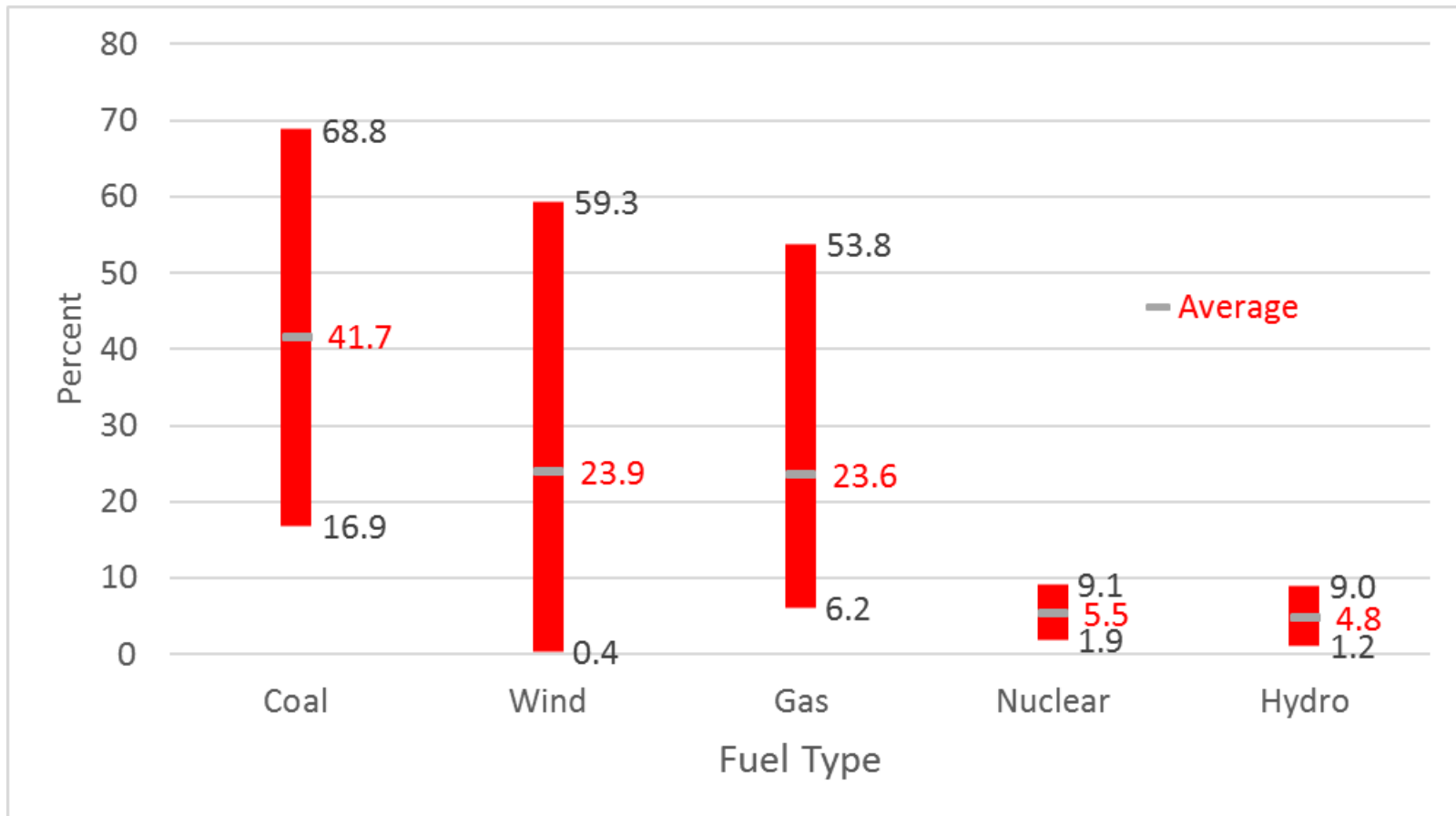
# Fuel on the Margin in Real-Time



# Real-Time versus Day-Ahead pricing

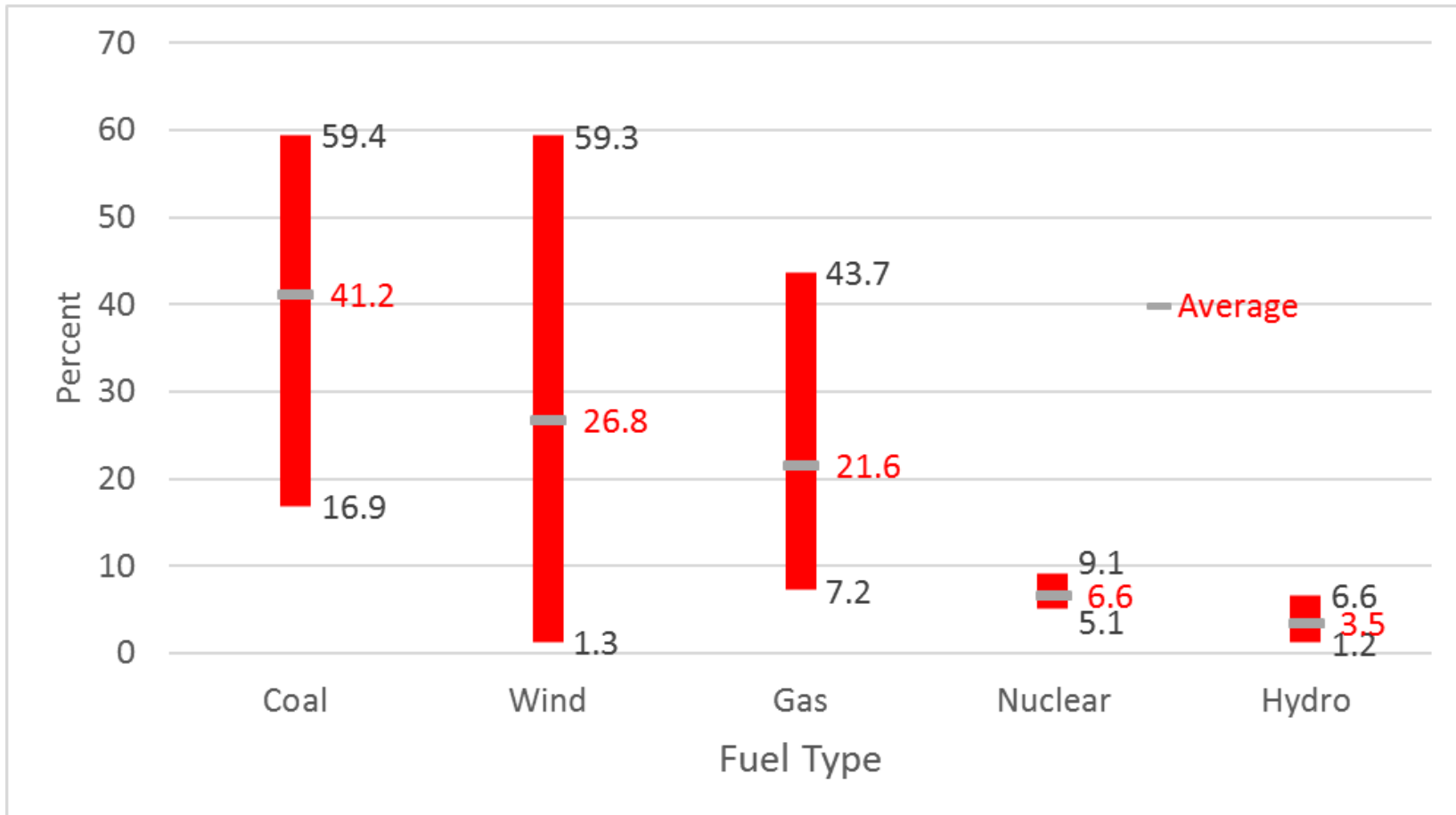


# Min and Max Percent of Generation Mix Per Fuel Type - Last 12 Months





# Min and Max Percent of Generation Mix Per Fuel Type – Q1 2019




# Integrated Marketplace Enhancements

## Implementation September 2019:

- RR316 – MCR Plant and Group Min Down time
- RR318 – Contingency Reserve Requirement Calculation Change

## Future Projects:

- Settlement System Replacement Complete – February 2020
  - To be implemented with Settlement System Replacement
    - RR210 – Contingency Reserve Deployment Tests
    - RR229 - Order No. 831 Compliance (Offer Caps)
    - RR252 – OOME Enhancement
- RR266 – JOU Combined Single Resource Modeling
  - Planned Implementation beyond February 2020
- FERC Order 841- Electric Storage Participation
  - Planned Implementation late 2020

A nighttime photograph of a city skyline reflected in a body of water. The buildings are illuminated, and their lights are mirrored in the calm water. A bridge is visible on the left side of the frame.

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Helping our members work together to keep the lights on...  
today and in the future

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 **SPP** *Southwest  
Power Pool*