

**BEFORE THE PUBLIC SERVICE COMMISSION  
OF THE STATE OF MISSOURI**

In the Matter of the Determination of Special )  
Contemporary Resource Planning Issues to be )  
Addressed by KCP & L Greater Missouri Operations ) **Case No. EO-2018-0045**  
Company in its Next Triennial Compliance Filing )  
or its Next Annual Update Report. )

**PUBLIC COUNSEL’S AMENDED SUGGESTED  
SPECIAL CONTEMPORARY RESOURCE PLANNING ISSUES**

**COMES NOW** the Office of the Public Counsel (“OPC” or “Public Counsel”) and in its response to the Missouri Public Service Commission’s (Commission) August 14, 2017 *Order Opening a File Regarding Special Contemporary Resource Planning Issues and Offering an Opportunity to File Suggestions* submits the following Updated Memorandum of Suggested Special Contemporary Topics and planning issues for KCP&L Greater Missouri Operations Company (GMO) pursuant to 4 CSR 240-22.080(4)(A).

1. As described in the Commission’s regulations, the fundamental objective of the Commission’s Electric Utility Resource Planning process for electric utilities is to provide the public with “energy services that are safe, reliable, efficient, at just and reasonable rates, in compliance with all legal mandates, and in a manner that serves the public interest and is consistent with state energy and environmental policies.” Commission Rule 4 CSR 240-22.010(2).

2. Commission Rule 4 CSR 240-22.080(4)(A) provides that Public Counsel may file suggested special contemporary issues for the utility to consider in triennial compliance filings or annual update report of the utility’s resource plan. In light of the purpose of the rule, and because of recent announcements and developments, including the Mountain West Transmission Group’s announcement that it is has completed initial discussions with the Southwest Power

Pool's (SPP) about its utility members becoming part of SPP,<sup>1</sup> OPC hereby submits the attached Memorandum with its Updated Suggested Special Contemporary Topics.

3. In the GMO FAC prudence review, Case No. EO-2017-0232 ("Prudence Case"), the Commission stated that it would welcome additional information regarding OPC's concern with regard to GMO's reliance on the SPP Integrated Market to meet its energy needs. OPC has completed its analysis, which shows GMO has relied heavily on the SPP IM since the SPP IM started. The Memorandum attached to this pleading includes a graph that shows GMO's monthly reliance on the SPP for energy. Since GMO has a Fuel Adjustment Clause, which allows it to pass costs through to customers, GMO has little cost recovery risk from its transfer of responsibility to the SPP IM.

4. The change to GMO's preferred plan in its most recent annual update accelerated the retirement (by 22 years) of its largest baseload coal plant, which, unlike wind generation, can be dispatched as needed. The new preferred plan adds wind capacity through purchased power contracts that require GMO to "take or pay" regardless of whether the energy is needed by its customers or the current SPP IM price. The plan also includes yet-to-be determined contracts for capacity which will not include any provision of energy, increasing GMO's reliance on energy from the SPP IM. This reliance on market purchases of energy shifts GMO's responsibility of cost-effectively providing energy to its customers to the SPP IM. This significantly increases the potential for volatility in cost to GMO's customers, and with potential retirement of baseload units by other SPP members and creates reliability concerns during times when wind energy is not available.

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<sup>1</sup> The Mountain West Transmission Group (Mountain West) announced today that it has completed initial discussions with the Southwest Power Pool's (SPP) management team, concerning membership in the SPP regional transmission organization (RTO). Through these discussions, Mountain West has determined that membership in SPP would provide opportunities to reduce customer costs, and maximize resource and electric grid utilization. [www.wapa.gov/newsroom/NewsReleases/2017/Pages/Mountain-West-SPP-negotiations.aspx](http://www.wapa.gov/newsroom/NewsReleases/2017/Pages/Mountain-West-SPP-negotiations.aspx)

5. A recent presentation by SPP to the Commission in Agenda included a slide that showed that, beginning in 2019, GMO will not meet SPP's Resource Adequacy Requirements. Neither the SPP representatives nor the GMO representative present at Agenda could provide any explanation to Chairman Hall's questions.

6. Notably, SPP's Resource Adequacy study was based on GMO's 2016 preferred plan. GMO's 2016 preferred plan is contingent on its obtaining unknown capacity contracts beginning in 2019.

7. The attached Memorandum highlights why the Commission should consider GMO's announced premature plant retirements and the subsequent questions OPC has raised as a special contemporary topic.

WHEREFORE Public Counsel respectfully submits this Memorandum of Suggested Special Contemporary Resource Planning Topics and asks the Commission to order GMO to address these issues in its next triennial compliance filing or annual update report.

Respectfully submitted,

/s/ Lera Shemwell  
Lera L. Shemwell  
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Attorney for the Office of the Public Counsel

**CERTIFICATE OF SERVICE**

I hereby certify that copies of the foregoing have been mailed, emailed or hand-delivered to all parties of record electronically on this 27<sup>th</sup> day of September 2017.

*/s/ Lera Shemwell*

Lera L. Shemwell

## MEMORANDUM

To: Missouri Public Service Commission Official Case File,  
Case No. EO-2018-0045 (KCP&L Greater Missouri Operations)

From: Geoff Marke, Chief Economist  
Lena Mantle, Senior Analyst  
John Robinett, Engineering Specialist

Subject: OPC Suggested Special Contemporary Topics (Updated)

Date: September 27, 2017

### Suggested Topics:

- Supply-Side Management Topics:
  1. Provide an explanation for stranded costs and ratepayer impact for the premature retirement of the Sibley and Lake Road coal plants<sup>1</sup> including, at a minimum:
    - The total cost of all stranded assets, who will pay the stranded costs, and if Empire expects the customers to pay the stranded costs, the impact on customer rates;
    - All “cost of removal” considerations (dismantle, demolition) for plants that are retired early;
    - Costs associated with transmission upgrades or additions necessary for transmission grid reliability, stability, or voltage support affected by retirement;
    - The availability of long-term (greater than five-years) capacity contracts and the impact on customer rates if there are no long-term capacity contracts; and
    - The availability of long-term (greater than five-years) energy contracts and the impact on customer rates if there are no long-term energy contracts.
  2. The Company should model scenarios that examine the impact of the retirement of 10% and 25% of all of the coal generation of Southwest Power Pool’s (SPP) members and replacement with wind generation energy and capacity including:

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<sup>1</sup> The change to GMO’s preferred plan in its most recent annual update accelerated the retirement of its largest baseload coal plant, which can be dispatched when needed, by 22 years. The new preferred plan adds wind capacity through purchased power contracts that require GMO to “take or pay” regardless of whether the energy is needed by its customers or the current SPP IM price. The plan also includes yet-to-be determined contracts for capacity which will not include any provision of energy which will increase GMO’s reliance on energy from the SPP IM. Also important in this discussion is GMO’s current reliance on the Southwest Power Pool (“SPP”) integrated market (“IM”) for energy. This reliance on market purchases of energy shifts GMO’s responsibility of cost-effectively providing energy to its customers to the SPP IM. Since GMO has an FAC, GMO has little cost recovery risk from this transfer of responsibility to the SPP IM. However there is significant increase in the potential for volatility in cost to GMO’s customers, and with potential retirement of base load units by other SPP members, an increase in the risk of availability during times when wind energy is not available.

- The effect on reliability of energy availability on an hourly basis;
  - The effect on SPP’s monthly market prices taking into account the impact of the reliability of energy availability;
  - The expected effect on the amount of energy purchased from the SPP IM;
  - The effect on subsequent changes in GMO’s customers’ rates (including FAC rates) by season; and
  - The effect of inclusion of Mountain West Transmission into the SPP.
- Demand-Side Management Topics:
    1. The upcoming energy efficient potential study should include adoption (or “take”) rate consideration that are modified (+/-) with the following elements:
      - Modified rate design scenarios (fluctuations in fixed charges +/- at \$2, \$5 and \$10, Inclining Block Rates, and Time of Use.); and
      - Increase in volatile weather (additional Heating Degree Days and Cooling Degree Days).

**Additional Contextual Information in Support of Request**

Supply-Side Management:

A recent presentation by SPP to the Commission in Agenda included a slide that showed that beginning in 2019, GMO did not meet SPP’s Resource Adequacy Requirements. Neither the SPP representatives nor the GMO representative present could provide an explanation to Chairman Hall. The SPP Resource Adequacy study was based on GMO’s 2016 preferred plan. GMO’s 2016 preferred plan is contingent on unknown capacity contracts beginning in 2019.

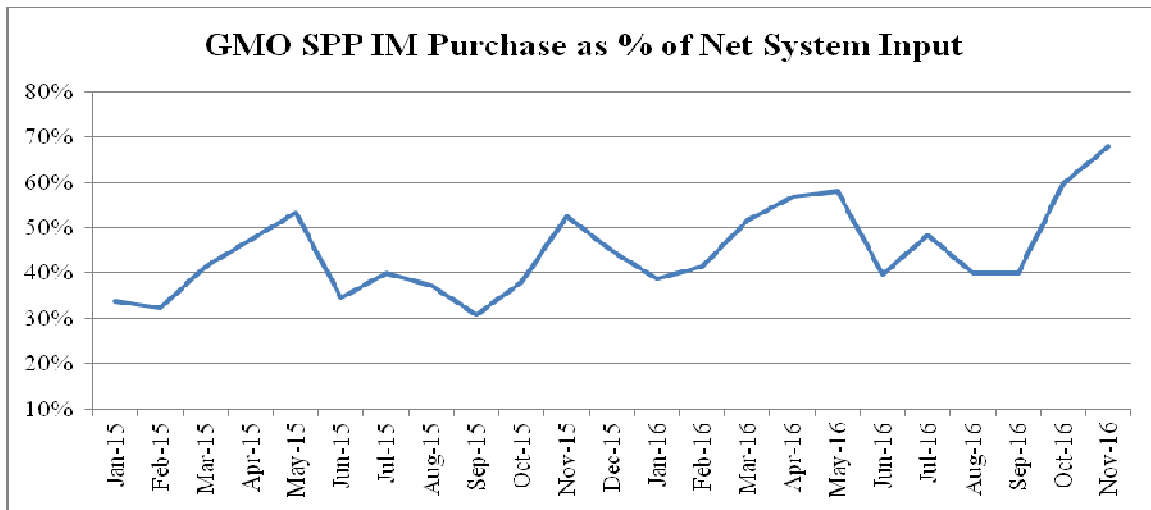
**Final Report – June 2017**

Load Responsible Entity	Met Resource Adequacy Requirement					
	2017	2018	2019	2020	2021	2022
Carthage Water & Electric Plant	NO	NO	NO	NO	NO	NO
City of Malden Board of Public Works	YES	YES	YES	YES	YES	YES
City of Poplar Bluff Municipal Utilities	YES	YES	YES	YES	YES	YES
City of West Plains Board of Public Works	YES	YES	YES	YES	YES	YES
City Utilities of Springfield	YES	YES	YES	YES	YES	YES
Empire District Electric Company	YES	YES	YES	YES	YES	YES
Greater Missouri Operations Company (KCP&L)	YES	YES	NO	NO	NO	NO
Independence Power & Light	YES	YES	YES	YES	YES	YES
Kansas City Power & Light	YES	YES	YES	YES	YES	YES
Kennett Board of Public Works	YES	YES	YES	YES	YES	YES
Missouri Joint Municipal Electric Utility Consortium	YES	YES	YES	YES	YES	YES
People’s Electric Cooperative	YES	YES	YES	YES	YES	YES
Westar Energy	YES	YES	YES	YES	YES	YES



This Memorandum highlights why the Commission should consider GMO’s announced premature retirements and the subsequent questions OPC has raised as a special contemporary topic.

In the time period of January 2015 through November 2016, GMO has relied on the SPP Integrated Market (SPP IM) to supply 44% of its customers’ energy needs. The graph below shows GMO’s monthly reliance on the SPP IM for energy:



Sibley 3 currently is GMO’s largest generation unit at 364 MW. It is dispatchable, meaning that it can and does follow load. During the time period of January 2015 through November 2016, Sibley 3 supplied 35% of GMO’s energy needs. According to GMO’s response to Staff’s data request 16 in the FAC prudence review case EO-2017-0232, Sibley 3 was to be retired in 2040. GMO’s 2017 preferred plan provided 34 days later in EO-2017-0230, accelerated that retirement from 2040 to 2018.

During the time period of January 2015 through November 2016, energy from GMO’s current wind purchased power contracts supplied 11% of GMO’s energy needs. GMO’s current wind purchased power contracts require GMO to “take or pay” at a set price regardless of GMO’s customers’ needs or the market price of energy at the time the wind is strong enough to generate energy. Wind power is intermittent and not dispatchable. While GMO does not have to take the wind energy generated, it does have to pay for what is generated. This results in GMO taking the energy and often “selling” it at a loss on the SPP IM.

The graph that follows shows the average monthly cost per megawatt-hour (MWh) GMO paid for energy purchased from the SPP IM, the cost wind energy from its purchased power contracts and the average production fuel cost per MWh of the Sibley site.<sup>2</sup> \*\*

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As shown by this graph, the cost of energy generated by the Sibley plants is typically lower than the price of energy purchased on the SPP IM. It also shows that the price of the “take or pay” wind contract was only lower than the cost of purchasing from the SPP IM seven out of the 23 months.

What this graph does not show is the erratic availability of wind energy. This is shown in the following graph: \*\*

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<sup>2</sup> This information is only provided for the Sibley plant site in total – 42 MW Sibley 1, 42 MW Sibley 2, and 364 Sibley 3 per GMO response to Staff data request 16 in EO-2017-0232. Graph does not include information from any month when the Sibley 3 plant was down for more than 14 days of the month.



In its Resource Plan update, GMO changed its 2016 preferred resource plan to Sibley 3 (364 MW) early. Its 2017 preferred resource plan replaces this baseload, dispatchable low cost resource with capacity from wind (30 MW accredited capacity) and unknown capacity purchased power contracts to meet its SPP capacity requirements. It is GMO's current plan to replace any energy that would have been generated by Sibley 3 that is not supplied through its new wind contracts with SPP IM energy purchases. This change in the preferred resource plan will increase GMO's reliance on the SPP IM to meet its customers' energy needs.

While all of these concerns are limited to GMO, SPP IM does not operate in isolation. The resource capacity decisions of all of its members affect the SPP IM prices. Other SPP members have announced that they are planning for early retirement of their coal plants and also replacing that capacity with wind. Many of these announcements were made after the June 2017 publication of the SPP Resource Adequacy report. These retirements have a yet-to-be determined impact on the SPP IM.

Additionally, last Friday, September 22, 2017 it was announced that negotiations had begun between the Mountain West Transmission Group and SPP. Mountain West is a coalition of ten electricity providers that, in 2016, included 10,503 MW of installed capacity that generated over 28,500 GWh of energy. It serves about 6.4 million customers and has over 16,000 miles of transmission lines. If the negotiations are successful, Mountain West's integration in the SPP could occur in late 2019. The addition of generation resources and load requirements would impact SPP market prices and thus creates an additional layer of uncertainty to the cost to serve GMO's customers since it has such great reliance on the SPP market for energy.

#### Demand-Side Management:

Expressed Commission interests in both recent rate cases (ER-2017-0285, ER-2016-0243, ER-2016-0156, ER-2016-0023) and regulatory workshops (EW-2017-0245) have heightened the importance of the relationship between rate design and energy efficiency adoption. The future deployment of AMI technology and exploration into value-added utility services is underscored by the need to mitigate peak energy demand. Future market potential studies (that inform future MEEIA applications) should be modeled with applicable "nudges." Simply put, a ratepayer's

decision to participate in MEEIA will be informed by the price signals they receive through rates and by changes in weather. A DSM market potential study should take rate design and possible changes in weather into account when it determines future RAP (realistic achievable potential) and MAP (maximum achievable potential) levels as these numbers form the foundation for future MEEIA targets.

**BEFORE THE PUBLIC SERVICE COMMISSION  
OF THE STATE OF MISSOURI**

**AFFIDAVIT OF LENA M. MANTLE**

STATE OF MISSOURI     )  
                                  )     SS.  
COUNTY OF COLE     )

COMES NOW LENA M. MANTLE and on his oath declares that she is of sound mind and lawful age; that she contributed to the foregoing *ORDER OPENING A FILE REGARDING SPECIAL CONTEMPORARY RESOURCE PLANNING ISSUES AND OFFERING AN OPPORTUNITY TO FILE SUGGESTIONS*; and that the same is true and correct according to her best knowledge and belief.

Further the Affiant sayeth not.


  
Lena M. Mantle  
Senior Analyst

**JURAT**

Subscribed and sworn before me, a duly constituted and authorized Notary Public, in and for the County of Cole, State of Missouri, at my office in Jefferson City, on this 27<sup>th</sup> day September, 2017



JERENE A. BUCKMAN  
My Commission Expires  
August 23, 2021  
Cole County  
Commission #13754037

  
Jerene A. Buckman  
Notary Public

My Commission expires August 23, 2021.


**BEFORE THE PUBLIC SERVICE COMMISSION  
OF THE STATE OF MISSOURI**

**AFFIDAVIT OF GEOFF MARKE**

STATE OF MISSOURI     )  
                                  )     SS.  
COUNTY OF COLE     )

COMES NOW GEOFF MARKE and on his oath declares that she is of sound mind and lawful age; that she contributed to the foregoing *ORDER OPENING A FILE REGARDING SPECIAL CONTEMPORARY RESOURCE PLANNING ISSUES AND OFFERING AN OPPORTUNITY TO FILE SUGGESTIONS*; and that the same is true and correct according to her best knowledge and belief.

Further the Affiant sayeth not.


  
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Geoff Marke  
Chief Economist

**JURAT**

Subscribed and sworn before me, a duly constituted and authorized Notary Public, in and for the County of Cole, State of Missouri, at my office in Jefferson City, on this 27<sup>th</sup> day September, 2017.



JERENE A. BUCKMAN  
My Commission Expires  
August 23, 2021  
Cole County  
Commission #13754037

  
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Jerene A. Buckman  
Notary Public

My Commission expires August 23, 2021.

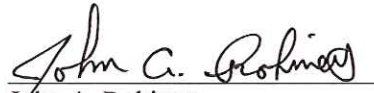
**BEFORE THE PUBLIC SERVICE COMMISSION  
OF THE STATE OF MISSOURI**

**AFFIDAVIT OF JOHN A. ROBINETT**

STATE OF MISSOURI     )  
                                  )     SS.  
COUNTY OF COLE     )

COMES NOW JOHN A. ROBINETT and on his oath declares that she is of sound mind and lawful age; that she contributed to the foregoing *ORDER OPENING A FILE REGARDING SPECIAL CONTEMPORARY RESOURCE PLANNING ISSUES AND OFFERING AN OPPORTUNITY TO FILE SUGGESTIONS*; and that the same is true and correct according to her best knowledge and belief.

Further the Affiant sayeth not.

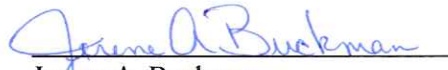
  
\_\_\_\_\_  
John A. Robinett  
Utility Engineering Specialist

**JURAT**

Subscribed and sworn before me, a duly constituted and authorized Notary Public, in and for the County of Cole, State of Missouri, at my office in Jefferson City, on this 27<sup>th</sup> day September, 2017.



JERENE A. BUCKMAN  
My Commission Expires  
August 23, 2021  
Cole County  
Commission #13754037

  
\_\_\_\_\_  
Jerene A. Buckman  
Notary Public

My Commission expires August 23, 2021.