Action Item 88: SPP staff to compile a list of entities who filed with FERC to reflect the TCJA federal corporate income tax rate in the 2018 ATRR and ultimately RRR. The update should include a summary of the impacts to RRR file and effective date for each entity, an estimated January-June RRR file update through the rest of the year and a settlement schedule update for the revised RRR files.

Agenda Item 3—Consent Agenda—Motion by Tom Hestermann (Sunflower) seconded by Terri Gallup (AEP) to approve the consent agenda. The motion passed.

Agenda Item 3—Consent Agenda—Motion by Tom Hestermann (Sunflower) seconded by Heather Starnes (MJMEUC) to approve RR 266 as implementing the market protocols. The motion passed with one abstaining (Xcel).

Agenda Item 8—RR 305 (Attachment O and BP 7060 Clarification)—Motion by Jessica Meyer (LES) seconded by Mo Awad (Westar) to approve RR 305 as modified. The motion passed.

Agenda Item 11—RR 272 (NDVER to DVER Conversion)—Motion by Mo Awad (Westar) seconded by Tom Hestermann (Sunflower) to approve RR 272 as implementing the MWG policy. The motion passed with two opposing (Empire, Tenaska) and four abstaining (CUS, OGE, WAPA, WFEC).
Southwest Power Pool
REGIONAL TARIFF WORKING GROUP MEETING
June 28, 2018
Net Conference

• M I N U T E S •

Agenda Item 1 – Administrative Items
SPP Chair David Kays (OGE) called the meeting to order at 8:33. The following members were in attendance or represented by proxy:

David Kays  Oklahoma Gas & Electric Company
Robert Pick  Nebraska Public Power District
Mo Awad  Westar Energy
Michael Billinger  Midwest Energy Inc.
Tom Christensen  Basin Electric Power Cooperative
Jack Clark  NextEra Energy Resources
Alex Dobson  Oklahoma Municipal Power Authority
Terri Gallup  American Electric Power
Greg Garst  Omaha Public Power District
Joel Hendrickson  Tri-State Generation and Transmission
Tom Hestermann  Sunflower Electric Power Corporation
Rob Janssen  Dogwood Energy, LLC
Bernie Liu  Xcel Energy
Brandon McCracken  Western Farmers Electric Cooperative
Jessica Meyer  Lincoln Electric System
Neil Rowland  Kansas Municipal Energy Agency
Steve Sanders  Western Area Power Administration – UGPR
Robert Shields  Arkansas Electric Cooperative Corporation
Heather Starnes  Healy Law Offices/Missouri Joint Municipal Electric Utility Commission
John Stephens  City Utilities of Springfield
Robert Stillwell  City of Independence
Todd Tarter  Empire District Electric Company
John Varnell  Tenaska Power Services Company

The following proxies were recorded:
Heather Starnes (MJMEUC) for Alex Dobson (OMPA)
David Mindham (ITC) for Jim Bixby (ITC)
JP Maddock (BEPC) for Tom Christensen (BEPC)
Heather Starnes (MJMEUC) for Rob Janssen (Dogwood)
Heather Starnes (MJMEUC) for Robert Stillwell (Independence)

The agenda was amended to include a review of RR 272 – NDVER to DVER Conversion with the possibility of action by the group.

(Attachment 1 – 2018 07 26 RTWG Attendance)

Agenda Item 2 – Review of Past Action Items
Training on the RRR file has been pushed to September due to resource constraints (Action Item 87).
**Agenda Item 3 – Consent Agenda (Approval Item)**

David Kays (OGE) presented the consent agenda which consisted of the June 28, 2018 minutes, July 3, 2018 minutes, and one market RR (RR 266). RR 266 was removed from the consent agenda for separate consideration by the group. **Motion by Tom Hestermann (Sunflower) seconded by Terri Gallup (AEP) to approve the consent agenda. The motion passed.**

The group then considered RR 266 as a standalone item. **Motion by Tom Hestermann (Sunflower) seconded by Heather Starnes (MJMEUC) to approve RR 266 as implementing the market protocols. The motion passed with one abstaining (Xcel).**

**Agenda Item 4 – RTWG Task Force Updates – CPTF & BDTF**

There were no new updates for either of the two RTWG task forces.

**Agenda Item 5 – RRR Update**

Denise Martin (SPP) provided the RRR update. August 2018 will be updated with the annual updates for GRDA and OPPD. September will be updated with the annual update for Midwest.

**Agenda Item 6 – Settlements Update**

Steve Davis (SPP) provided a settlements update and the Settlements replacement project remains on track and is still scheduled to go-live May 2019.

**Agenda Item 7 – Legal Update**

Joe Ghormley (SPP) provided the legal update using the June 2018 Regulatory Status Report and Regulatory Outlook as the baseline ([http://www.spp.org/spp-documents-filings/?id=18504](http://www.spp.org/spp-documents-filings/?id=18504)). A brief overview of each filing made since the latest publication was given, as well as an overview of upcoming filings. Based on discussion and questions, an action item was noted for SPP staff to compile a list of entities who filed with FERC to reflect the TCJA federal corporate income tax rate in the 2018 ATRR and ultimately RRR. The update should include a summary of the impacts to RRR file and effective date for each entity, an estimated January-June RRR file update through the rest of the year and a settlement schedule update for the revised RRR files.

**Agenda Item 8 – RR 305 – Attachment O and BP 7060 Clarification**

Dee Edmondson (SPP) and Caitlin Shank (SPP) reintroduced a revision request to remove the requirement for SPP to issue a NTC or NTC-C prior to filing a Service Agreement, remove the requirement for filing a Service Agreement prior to modeling new Transmission Service in the ITP, and add the financial commitment date of four years to the issuance of a NTC or NTC-C to Attachment AQ. This will allow members with new Transmission Service coming out of an Aggregate Facilities Study will have their service included and studied in the upcoming ITP Models. Additionally, the time lag for getting service inputs from Transmission Services will be eliminated and allow for closer alignment of the modeling inputs from the ITP and Transmission Services cycles. **Motion by Jessica Meyer (LES) seconded by Mo Awad (Westar) to approve RR 305 as modified. The motion passed. (Attachment 2 – RR 305 Recommendation Report)**
Agenda Item 9 – RR 313 – Transmission Service Along the Seams

Clint Savoy (SPP) introduced a revision request to address unreserved use charges when an unplanned transmission outage along the seam results in a transmission customer taking service, even if they are unaware they are doing so at the time the outage occurs. The revision request creates two new Business Practices, which are intended to accompany the Tariff changes presented in RR 313. Given the concerns raised with the foundational policy, the RTWG remanded that revision request back to the Seams Steering Committee. The group is considering providing general comments back to the BPWG on RR 313 regarding more accurate subsection titles, clearer definitions, clarity on responsibility of performing certain actions, and the opinion that the second proposed Business Practice should be included as a part of RR 308.

Agenda Item 10 – RR 262 – Attachment AQ Business Practice

Josh Ross (SPP) introduced a revision request to define practices for how to handle Delivery Point Additions, Delivery Point Modifications, and Delivery Point Retirements as part of the expedited planning process outlined in Attachment AQ. The new proposed Business Practice will serve to define what shall be evaluated in the Attachment AQ process versus what shall be evaluated through other study processes and will provide guidance for the administration of the process. The group asked questions and provided general feedback regarding the proposed changes.

Agenda Item 11 – RR 272 – NDVER to DVER Conversion

Erin Cathey (SPP) presented a revision request previously reviewed and approved by the RTWG in March 2018, but ultimately rejected by the MOPC in April 2018. The proposal was revised to require all NDVERs to register as DVERs by the latter of January 1, 2021 or the 10 year anniversary of a Resource’s original Commercial Operation Date, unless they are a Qualified Facility (QF) exercising their rights under the Public Utility Regulatory Policies Act of 1978 (PURPA) or a Resource having a primary fuel source of run of the river hydro-electric that is incapable of following Dispatch Instructions. This amended approach was approved by the MOPC on July 17, 2018. Motion by Mo Awad (Westar) seconded by Tom Hestermann (Sunflower) to approve RR 272 as implementing the MWG policy. The motion passed with two opposing (Empire, Tenaska) and four abstaining (CUS, OGE, WAPA, WFEC). (Attachment 3 – RR 272 Recommendation Report)

Agenda Item 12 – Review of Motions, Action Items, and Future Meetings

The next scheduled RTWG meeting is August 23, 2018 in Dallas, TX (8:30 a.m. – 2:30 p.m.).

Respectfully Submitted,

Marisa Choate
Secretary

Attachments
(Attachment 1 – 2018 07 26 RTWG Attendance)
(Attachment 2 – RR 305 Recommendation Report)
(Attachment 3 – RR 272 Recommendation Report)
### EXECUTIVE SUMMARY AND RECOMMENDATION FOR MOPC AND BOD ACTION

#### OBJECTIVE OF REVISION

**Objectives of Revision Request:**

Describe the problem/issue this revision request will resolve.

In Attachment O Section III.5.a and III.5.b of the tariff it states:

- a. The studies performed under this Section III of Attachment O shall accommodate and model in accordance with the Integrated Transmission Planning Manual, the specific long-term firm transmission service of Transmission Customers and specific interconnections of Generation Interconnection Customers when such Service Agreements and Generator Interconnection Agreements have been executed or filed un-executed with the Commission.

- b. Transmission upgrades related to requests for transmission service are described in Sections 19 and 32 of the Tariff and Attachment Z1 of the Tariff. Upgrades associated with the modeled long-term firm transmission service are included in the Transmission System planning model, upon the execution of the various Service Agreements with the Transmission Customers. Transmission upgrades related to an approved request for transmission service may be deferred or supplemented by other upgrades based upon the results of subsequent studies. Changes in planned upgrades do not remove the obligation of the Transmission Provider to have adequate transmission facilities available to start or continue the approved transmission service.

This language was written before Attachment Z1 was updated to modify the Aggregate Facilities Study process where, if all Transmission Customer (TC) parameters are met at the conclusion of the study, then the TC is obligated to take the service. If this language stays in Attachment O as written,

1. The TCs’ Transmission Service will not be included in the ITP Models until the Service Agreement with SPP is filed.
2. The language will ignore the updates to Attachment Z1, Section III.A.4 and Section III.A.5 which state:
   - 4) By executing the AFSA, the Eligible Customer agrees to take the transmission service requested in accordance with Section III.C.8 of this Attachment Z1 if the Study Completion Conditions specified in its AFSA are met upon the completion of the Aggregate Facilities Study except as provided in Section III.D of this Attachment Z1.
   - 5) Changes to an Eligible Customer’s request in OASIS will not be permitted following the close of the open season and withdrawal of an OASIS request after that date will not relieve an Eligible Customer of any obligations specified in Section III.A.4 of this Attachment Z1.

Section 3.3 and 7.1 of BP 7060 has the same restrictions as Attachment O. SPP also recommends changes to BP 7060 to match the Attachment O changes. These changes will allow SPP to issue NTCs or NTC-Cs for Service Upgrades that are assigned in a completed Aggregate Facilities Study in accordance with Attachment Z1 of the Tariff.

Section 3.5 of BP 7060 is an additional change that is needed to the issuance of NTCs or NTC-Cs issued from Attachment AQ. SPP will issue a NTC or NTC-C within four years for all Network Upgrades issued from Attachment AQ.

Describe the benefits that will be realized from this revision.

By removing the requirement for filing a Service Agreement prior to modeling new Transmission Service in the ITP Models, Members with new Transmission Service coming out of an Aggregate Facilities Study will have their service included and studied in the upcoming ITP Models. Also, all members will have the most up to date information included in the ITP Models.
By removing the requirement for SPP to issue a NTC or NTC-C prior to filing a Service Agreement, members will be able to receive the NTC or NTC-C sooner.

By adding the financial commitment date of four years to the issuance of a NTC or NTC-C to Attachment AQ, it will add clarity on when SPP issues NTC or NTC-C for Attachment AQ. This will also align the process with the ITP process.

### SPP STAFF ASSESSMENT

SPP supports this revision request.

### IMPACT

- Will the revision result in system changes? **No**  **Yes**

  Summarize changes:

- Will the revision result in process changes? **No**  **Yes**

  Summarize changes:

- Is an Impact Assessment required? **No**  **Yes**

  If no, explain:

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Primary Working Group Score/Priority:

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### WORKING GROUP REVIEWS AND RECOMMENDATIONS

List Primary and any Secondary/Impacted WG Recommendations as appropriate

Primary Working Group: RTWG

Date: 7/26/2018

Action Taken: To approve RR 305 as modified

Abstained: None

Opposed: None

Reason for Opposition:
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Action Taken:  
Abstained:  
Opposed: |
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Reasons for Opposition:

**COMMENTS**

**Comment Author:** Rodney Massman (MoPSC)

**Date Comments Submitted:** 5/4/2018

**Description of Comments:** There are some inconsistencies in how the OATT and the NTC or NTC-C is referred to in the Business Practices Section 7060. To make the changes consistent with existing language, I have attached several proposed revisions below.
III. The Integrated Transmission Planning Assessment

The Integrated Transmission Planning Assessment evaluates the system upgrades, at all applicable voltage levels, identified in the ten-year planning horizon.

5) Additional Information to be Included in the Integrated Transmission Planning Assessment
   
a) The studies performed under this Section III of Attachment O shall accommodate and model in accordance with the Integrated Transmission Planning Manual, the specific long-term firm transmission service of Transmission Customers upon the completion of the associated Aggregate Facilities Study in accordance with Attachment Z1 of this Tariff and specific interconnections of Generation Interconnection Customers in accordance with the schedule for Generation Interconnection Agreements and Generation Interconnection Upgrades in the Integrated Transmission Planning Manual when such Service Agreements and Generator Interconnection Agreements have been executed or filed un-executed with the Commission.

b) Transmission upgrades related to requests for transmission service that are described in Sections 19 and 32 of the-this Tariff and Attachment Z1 of the-this Tariff. Upgrades associated with the modeled-accepted long-term firm transmission service are included in the Transmission System planning model, upon the completion of the associated Aggregate Facilities Study execution of the various Service in accordance Agreements with Attachment Z1 of this Tariff the Transmission Customers. Transmission upgrades related to an approved request for transmission service may be deferred or supplemented by other upgrades based upon the results of subsequent studies. Changes in planned upgrades do not remove
the obligation of the Transmission Provider to have adequate transmission facilities available to start or continue the approved transmission service.

c) Interconnection facilities and other transmission upgrades related to requests for Generator Interconnection Service are described in Attachment V of this Tariff. Upgrades associated with the modeled Generator Interconnection Service are included in the Transmission System planning model upon the execution of a Generator Interconnection Agreement with the Generator Interconnection Customers or filing of an un-executed Generator Interconnection Agreement with the Commission. Transmission upgrades related to an approved interconnection agreement may be deferred or supplemented by other upgrades based upon the results of subsequent studies. Changes in planned upgrades do not remove the obligation of the Transmission Provider to have adequate transmission facilities available to start or continue the approved interconnection service.

d) A Sponsored Upgrade will be included in the Transmission System planning model upon execution of the Agreement for Sponsored Upgrade in Schedule 1 to Attachment J of this Tariff.

e) Projects approved in accordance with Section IV of this Attachment O will be included in the Transmission System planning model upon approval for construction.

SPP Business Practices


3. Issuance of an NTC or NTC-C

The authority for SPP to issue an NTC is derived from approval by the BOD, a FERC filed Service Agreement under the SPP OATT, an endorsed Economic or Sponsored Upgrade upon the execution of a contract that financially commits a Project Sponsor to fund such upgrade, or when such upgrade is otherwise required pursuant to the tariff. An NTC or NTC-C may be issued for projects originating from study processes described in Attachment O of the OATT.
The issuance of an NTC or NTC-C represents that the Network Upgrade is eligible for cost recovery under the SPP OATT, including if SPP withdraws the NTC or NTC-C as described in Section 7 below.

For non-Competitive Projects, SPP will issue an NTC-C for Applicable Projects. SPP staff will provide the timeframe that the DTO has to provide its CPE to SPP in the NTC-C letter.

SPP will issue an NTC or NTC-C under the conditions and time constraints defined in Sections 3.1 through 3.5. An NTC-C shall not be issued for a Competitive Project.

3.1. **Approved Network Upgrades from ITP/High Priority Studies**

Unless previously issued, SPP staff will issue NTC(s) or NTC-C(s) for all Network Upgrades approved by the BOD for which financial commitment is required prior to the approval of the next update of the STEP. Additionally if authorized by the BOD, SPP staff will issue an NTC/NTC-C for each Network Upgrade for which a financial commitment is needed within the next four years or other time period as designated by the BOD. For a non-Competitive Project, such an NTC/NTC-C will be issued within 15 business days from the time the SPP BOD approves the project. For a Competitive Project, an NTC will be issued to the Selected RFP Respondent in accordance with Attachment Y of the OATT.

3.2. **Sponsored Upgrades**

An NTC will be issued for an endorsed Sponsored Upgrade once a project sponsor has financially committed to pay for the Sponsored Upgrade.

3.3. **Network Upgrades related to Transmission Service requests**

Unless previously issued, SPP staff will issue NTCs or NTC-Cs for all identified non-Competitive Projects Service Upgrades associated with the finalized Aggregate Transmission Service Study Transmission Service Agreements (TSAs) within 15 business days from the time at which SPP receives from all customers in an Aggregate Study executed TSA(s) or written request(s) from customer(s) requesting a TSA be filed unexecuted in accordance with Attachment Z1 of the SPP OATT within 15 business days of the study completion.

3.4. **Network Upgrades related to Generation Interconnection requests**

Unless previously issued, SPP staff may issue NTCs for identified project(s) associated with Generation Interconnection Agreements (GIA) to an affected Transmission Owner (TO) who is not a party to the GIA within 15 business days from the Effective Date of the GIA.

3.5. **Network Upgrades related to Attachment AO requests**

Unless previously issued, SPP staff will issue NTCs or NTC-Cs for all identified Network Upgrades associated with the request for which a financial commitment is needed within the next
four years. NTCs or NTC-Cs will be issued within 15 business days from the time at which SPP receives the updated and executed Network Transmission Service Agreement.

7. NTC/NTC-C Withdrawal or Suspension

In the event that changes occur which could render an NTC/NTC-C for an approved Project unnecessary, SPP may re-study the need for the Project. Changes that could render an NTC/NTC-C for an approved Project unnecessary include but are not limited to:

- Changes in load
- Changes in generation
- Annulment of TSR’s
- Change in local planning criteria
- Modeling error

But must not:

- Cause adverse impact to Service Agreements or other contractually committed service under the SPP OATT
- Render firm transmission service undeliverable

7.1. Stakeholder Request for Project Re-studied for Withdrawal

A stakeholder wishing to have an NTC/NTC-C Project re-studied for withdrawal must provide SPP with the necessary information needed to study the removal of the Project from the appropriate models. If SPP determines that changes have occurred that could render an NTC/NTC-C for an approved Project unnecessary, SPP will perform any necessary analysis and will, in consultation with stakeholders, determine if the Project is still required. Consideration of NTC/NTC-C withdrawal will take into account the stage of development of the Project and discussion with the DTO.

If SPP confirms that an NTC/NTC-C Project is unnecessary, it will inform the TWG, PCWG, MOPC, and BOD of this fact at their next regularly scheduled meeting and request approval by the BOD, as necessary, to withdraw the NTC/NTC-C.

After the BOD approves the withdrawal of an NTC/NTC-C, SPP will notify the DTO that the NTC/NTC-C has been withdrawn. If the NTC/NTC-C was due to a Service Agreement finalized Aggregate Transmission Service Study in accordance with Attachment Z1 of the SPP OATT, then the NTC/NTC-C withdrawal shall not need TWG, MOPC, or BOD approval but shall be addressed by SPP staff. SPP staff will work in coordination with the DTO to properly and safely stop all activities on the Project.
## Revision Request Recommendation Report

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### SUBMITTER INFORMATION

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<tr>
<th>Submitter Name: Erin Cathey on behalf of SPP</th>
<th>Company: Southwest Power Pool</th>
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<tr>
<td>Email: <a href="mailto:ecathey@spp.org">ecathey@spp.org</a></td>
<td>Phone: 501.590.8298</td>
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### EXECUTIVE SUMMARY AND RECOMMENDATION FOR MOPC AND BOD ACTION

This Revision Request requires Non-Dispatchable Variable Energy Resources (NDVERs) to register as Dispatchable by the latter of January 1, 2021 or the 10 year anniversary of a Resource’s original Commercial Operation Date, unless they are 1) a Qualified Facility (QF) exercising their rights under the Public Utility Regulatory Policies Act of 1978 (PURPA) or 2) a Resource having a primary fuel source of run of the river hydro-electric that is incapable of following Dispatch Instructions. The proposed design creates increased reliability and economic efficiency.

The MWG and ORWG reviewed and approved this Revision Request with one abstention (CUS) and eight oppositions (AECC, Empire District, KEPCO, KCPL, NPPD, OPPD, Tenaska, and WR). The RTWG reviewed and took no action. Details provided below.

MOPC rejected. BOD tabled the revision request until the July 31st, 2018 BOD meeting.

MWG approved and incorporated language edits proposed by AECC and AEP during the July MWG meeting. The MWG recommends MOPC approve RR272 as amended by the MWG.

MOPC approved this revision request as amended by the MWG during the July 18th, 2018 MOPC meeting. The MOPC recommends the BOD approve this revision request.

### OBJECTIVE OF REVISION

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Page 1 of 17
Objectives of Revision Request:

Describe the problem/issue this revision request will resolve.

SPP proposes in this revision request to require that all Variable Energy Resources registered as Non-Dispatchable Variable Energy Resources (NDVERs) be required to register as Dispatchable Variable Energy Resources (DVERs) by the latter of January 1, 2021 or the 10 year anniversary of a Resource’s original Commercial Operation Date, unless they are 1) a Qualified Facility exercising their rights under the Public Utility Regulatory Policies Act of 1978 (PURPA) or 2) their primary fuel source is run of the river hydro-electric that is incapable of following Dispatch Instructions.

Non-Dispatchable Variable Energy Resources in SPP’s market create market inefficiencies and reliability risks that SPP resources and systems must mitigate.

1) Market Efficiency: Collections of NDVERs are generally located in the same region, however it is often necessary to redisplay many Resources (DVERs and others with potentially lower shift factors) around them in order to solve constraints, leading to higher congestion costs for the market. Additionally, SPP has observed NDVERs reacting to LMP signals - dropping offline when the LMP drops and responding to increased LMPs by generating at the same prior output; although by definition, NDVERs are not capable of being incrementally dispatched by the Transmission Provider. When this price-following behavior from NDVERs occurs, the subsequent market redisplay and pricing are inefficient, due to the assumption that NDVERs are not capable of dispatching and reacting to price. Additionally, SPP may OOME NDVERs today. However, the issuance of an OOME is less precise than the systematic redisplay provided by the market when resources are dispatchable. This imprecision results in either too much or too little redisplay being provided requiring other market and reliability mechanisms to make up the difference.

2) Reliability: The price-following behavior of NDVERs also present reliability and operational challenges when NDVERs suddenly drop offline and then return to follow an increase in LMP as more relief may be realized than was requested by the SCED solution; SCED is unable to effectively clear energy and cover regulation when NDVERs behave in this manner. This behavior results in the SPP BA having to manually manage the additional lost output with regulation, putting the Reliability Coordinator in a position to possibly issue an OOME to the NDVERs who are responding to LMP changes in order to mitigate flowgates becoming unstable from the unexpected oscillations caused by NDVERs that follow price. Additionally, NDVERs make up a large majority of the Resources to which OOMEs are issued. The need to issue an OOME inherently represents an actual reliability issue that has risen to the attention of the RC and requires the RC to take action to maintain reliability. Although these reliability issues are manageable, converting NDVERs to DVERs would remove the associated reliability risks.

In the 2015 ASOM Report, the SPP MMU stated their concern with Non-Dispatchable Variable Energy Resources due to their adverse impact on market prices. The SPP MMU stated that when prices are depressed in high wind production regions, NDVERs have an adverse impact on prices in two ways. Some resources chase price, ignoring the system dispatch and self-dispatching to a lower level in an attempt to avoid the cost associated with producing when prices are very low. This behavior at times causes unexpected volatility on the system and distorts market prices. The alternative behavior is for these NDVER units to continue to produce as expected even when prices are below what would be an appropriate market clearing price. Both cases result in sub-optimal market results. The SPP MMU recommended SPP transition NDVER Resources to DVER status to lessen the negative impact of such resources on the market. Work to respond to the MMU’s recommendation has been tracked via both MOPC and MWG action items.

Describe the benefits that will be realized from this revision.

- Increased reliability realized through collective dispatchable Resources mitigating multiple constraints simultaneously
- Increased economic efficiency through reduction of manual Out-of-Merit Energy (OOME) instructions
- Reduction of price volatility (reliability and economic benefit)
- Having more VERs be controllable by the market and not subject only to variable fuel and external control behaviors leads to less pricing uncertainty as a result of:
  - Reduction of ramp scarcity events by having NDVERs controllable within SCED
  - Further optimization of quick start Resource needs by having a larger set of Resources that are under SCED control
  - Increased pricing convergence between Day-Ahead and Real-Time due to larger set of controllable Resources in RT
  - Further potential optimization of Operating Reserves with potentially more VERs participating in the offering of certain ancillary services. If they convert, they will be controllable and may qualify for REG DN
  - Increased reliability by reducing NDVER generation oscillation
- Market efficiencies are gained by adding dispatchable generation to resolve congestion in the load pocket, rather than redisplaying less effective generation to protect the NDVER output. This has the potential to reduce the congestion costs from less effective generation redisplay
### SPP STAFF ASSESSMENT

SPP Staff supports this Revision Request.

### IMPACT

- **Will the revision result in system changes?** ☑ No  ☐ Yes

  **Summarize changes:**

- **Will the revision result in process changes?** ☑ No  ☐ Yes

  **Summarize changes:**

- **Is an Impact Assessment required?** ☑ No  ☐ Yes

  **If no, explain:** There are no SPP systems impacted.

  **Estimated Cost:** N/A  
  **Estimated Duration:** N/A

  **Primary Working Group Score/Priority:** N/A

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<td>Planning Criteria</td>
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<td>Tariff</td>
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<td>Attachment AE - 1.1, 2.2</td>
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<td>Business Practice</td>
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<td>Integrated Transmission Planning (ITP) Manual</td>
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<td>Minimum Transmission Design Standards for Competitive Upgrades (MTDS)</td>
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<td>Reliability Coordinator and Balancing Authority Data Specifications (RDS)</td>
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<td>SPP Communications Protocols</td>
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### WORKING GROUP REVIEWS AND RECOMMENDATIONS

List Primary and any Secondary/Impacted WG Recommendations as appropriate

<table>
<thead>
<tr>
<th>Primary Working Group</th>
<th>Date</th>
<th>Action Taken</th>
<th>Abstained</th>
<th>Opposed</th>
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</thead>
<tbody>
<tr>
<td>MWG</td>
<td>2/6/2018</td>
<td>Approved</td>
<td>CUS</td>
<td>KEPCO, WR, NPPD, Tenaska, OPPD, AECC, KCPL</td>
</tr>
<tr>
<td></td>
<td>7/10/2018</td>
<td>Approved as modified to add AECC and AEP recommended language</td>
<td>CUS</td>
<td>Tenaska</td>
</tr>
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Reason for Opposition:

John Varnell (Tenaska) 2/6/18 – I voted no because it has no prevision to help type I & II’s to get waivers except from FERC if they cannot meet the requirements.

Jim Flucke (KCPL) 2/6/18 – KCP&L voted in opposition to RR272 NDVER to DVER Conversion. KCP&L believes that the mandatory conversion of all Non-Dispatchable Variable Energy Resources is unnecessary and potentially places an undue financial burden on market participants. This financial burden will be most immediate and severe on Variable Energy Resources utilizing type 1 and type 2 wind turbines but also on those market participants with “take or pay” contracts for the power generated by Variable Energy Resources. The intent of the exception granted in the protocols for wind facilities “with an interconnection agreement executed on or prior to May 21, 2011 and that commenced Commercial Operation before October 15, 2012” was precisely to avoid the costly conversion of older wind facilities to be capable of dispatchability and also to avoid the legal issues associated with renegotiating power purchase agreements.

Michael Massery (AECC) 2/6/18 – The Corps of Engineers are in control of the water flows through run of the river hydro-electric facilities making it near impossible to follow dispatch signals and should have been excluded from this revision request.

Secondary Working Group: ORWG  
Date: 3/1/2018  
Action Taken: Approved  
Opposed: NPPD, KCPL, Empire District

Reasons for Opposition:

Ron Gunderson (NPPD) 3/1/18 – NPPD voted against RR272 because of its potential to harm market participants by exposing them to curtailment costs associated with economic curtailments that were not required when they entered into PPA contracts. I do not have a reliability based concern with RR272 unless current NDVERS register as a DVER as required by this RR and do not perform as expected due to physical limitations with the facility.

RR272 effectively abrogates all NDVER PPA contracts, except for qualifying facilities, by undermining the grandfathered non-dispatchable status over older wind farms upon which their supply contracts were based. RR272 throws NDVER owners/buyers “under the bus” by financially exposing them to “economic dispatch” of which neither contract accounted for nor for which the unit was operationally constructed. RR272 forces NDVER conversion costs upon the Asset Owners which did not anticipate the cost when they were integrated with SPP. SPP is effectively adding another interconnection requirement years after the fact, which does not seem just or reasonable.

Last and perhaps the most import factor not considered by RR272 is SPP’s market reputation. NDVERs were a condition of several MPs agreeing to transition from EIS to IM. If we go back on our word, will other MPs lose confidence in the stability of SPP tariff grandfathering and agreements made to prospective Balancing Authorities, Asset Owners, and Market Participants considering the benefits of join SPP as a stable settlement & market platform?

Jay Patel (KCPL) 3/1/18 – KCP&L voted in opposition to RR272 NDVER to DVER Conversion. KCP&L believes that the mandatory conversion of all Non-Dispatchable Variable Energy Resources is unnecessary and potentially places an undue financial burden on market participants. This financial burden will be most immediate and severe on Variable Energy Resources utilizing type 1 and type 2 wind turbines but also on those market participants with “take or pay” contracts for the power generated by Variable Energy Resources. The intent of the exception granted in the protocols for wind facilities “with an interconnection agreement executed on or prior to May 21, 2011 and that commenced Commercial Operation before October 15, 2012” was precisely to avoid the costly conversion of older wind facilities to be capable of dispatchability and also to avoid the legal issues associated with renegotiating power purchase agreements.

David Pham (Empire District) 3/1/18 – I have no concern about reliability on this RR. But the contracts that members had that would impact the economic significantly; in addition, who is paying for all the systems and upgrades so that these grand-fathered farms can follow dispatch instructions. As far as operating the wind farms reliably today, RC can always curtail the wind farms to control them.
<table>
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<tr>
<th>Secondary Working Group: RTWG</th>
<th>Date: 3/22/2018</th>
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<tbody>
<tr>
<td>Action Taken: No action taken</td>
<td>Date: 7/26/2018</td>
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<tr>
<td>Action Taken: To approve RR 272 as implementing the MWG policy</td>
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<tr>
<td>Abstained: CUS, OGE, WAPA, WFEC</td>
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<tr>
<td>Opposed: Empire, Tenaska</td>
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**Reason for Opposition:**

**Empire** – Empire voted in opposition of RR 272 NDVER to DVER Conversion primarily due to the financial burdens this would cause for some existing wind resources and not necessarily due to the proposed tariff language. Some wind resources that provide a significant amount of energy in the market operate under purchased power agreement contracts that were executed many years prior to the existence of the SPP Integrated Marketplace. It would be difficult and costly to convert them from non-dispatchable variable energy resources to dispatchable energy resources. The conversion of these resources may cause costly retrofits and produce issues with the existing contracts.

**Tenaska** – I voted against RR272 at RTWG. The words changed in the Tariff matched the policy but the policy retroactively changed a date in the Tariff that is used in contracts.

**Reason for Abstention:**

**CUS** – I ABSTAINED from the recommendation vote at RTWG for RR272. My concerns are:

1. Conflict in interpretation of Section 6.1.8. The first sentence states that “All Variable Energy Resources in the market must be registered…”, and the second sentence states that “A Generation Interconnection Customer…must convert…”.

2. Conflict between 6.1.8 and 6.1.9. Section 6.1.8 states that “All Variable Energy Resources in the market must be registered as a Dispatchable Variable Energy Resource (DVER)…”.

**OGE** – My reason for abstention really is not from OG&E’s position, but rather as Chair of RTWG. I feel that the use of the term “Generation Interconnection Customer” in the sentence detailing timing requirements for conversion allows generators without an SPP proforma Generation Interconnection Agreement an opportunity to “do nothing”. This ability to “game the Tariff” appears to conflict with the intention of the conversion.
<table>
<thead>
<tr>
<th>MOPC</th>
<th>Date: 4/10/2018</th>
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<tr>
<td><strong>Action Taken:</strong> Rejected</td>
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<tr>
<td><strong>Abstained:</strong> OPPD, CUS, Flat Ridge 2 Wind Energy, South Central MCN, Southern Power, Transource Energy, Transource MO</td>
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| Date: 7/17/2018 |  |
| **Action Taken:** Approved |  |
| **Abstained:** CUS, Dogwood Energy, Enel Green Power, Flat Ridge 2 Wind Energy, Hunt Transmission, NE NPPD, Southern Power Co, |  |
Reasons for Opposition:

Brad Hans (NMPP) 4/10/18 – Our No vote was due to the following: 1) Lack of RTWG approval, 2) It was not clear that this would apply to MWTG and their tariff writing consultant’s body language appeared to indicate that they would not accept this, and 3) Considerations were not made for known gaps in this RR.

Denise Buffington (KCP&L and KCPL-GMO) 4/10/18 – KCP&L voted in opposition to RR272 NDVER to DVER Conversion. KCP&L believes that the mandatory conversion of all Non-Dispatchable Variable Energy Resources is unnecessary and potentially places an undue financial burden on market participants. This financial burden will be most immediate and severe on Variable Energy Resources utilizing type 1 and type 2 wind turbines but also on those market participants with “take or pay” contracts for the power generated by Variable Energy Resources. The intent of the exception granted in the protocols for wind facilities “with an interconnection agreement executed on or prior to May 21, 2011 and that commenced Commercial Operation before October 15, 2012” was precisely to avoid the costly conversion of older wind facilities to be capable of dispatchability and also to avoid the legal issues associated with renegotiating power purchase agreements.

Larry Holloway (Kansas Power Pool) 7/17/18 – Kansas Power Pool voted against this motion for several reasons. First, forcing NDVER units to install and upgrade equipment to become DVER units essentially renegotiates contracts between parties that may have been in effect for years before such obligations were contemplated by either party. The comments made by SPP Staff and others at the MOPC meeting that this would create significant savings for the converted units, ignores how many of these contracts work. In fact, these comments assume that the party paying for the equipment modifications and upgrades will be the same party that will reap the benefits from the market after the NDVER to DVER conversion. Depending on the contractual arrangement this may not be true. The contract itself may require one party to spend the money and the other party to get the benefits. Second, as proposed, the change envisions exemptions for no good reason other than to gain votes for passage. Simply put, it makes no sense to exempt run of river hydro and not type 1 and type 2 wind generators. The only reason for this discriminatory treatment is to gain the votes necessary to pass MOPC. Third, and finally, the PURPA QF exemption does not address existing contracts with smaller units that could be qualified as a PURPA QF, but had no need to achieve QF status to achieve a workable purchase power agreement. If this proposal is implemented, SPP would force these units to perform all of the paperwork and associated regulatory expenses to receive the QF exemption. After converting to a QF the affected unit would not change its operation, but would instead operate in the market as an NDVER, as it does today (Staff admitted it did not consider such cases in its analysis). Kansas Power Pool proposes that units that would qualify as a PURPA QF, but for the bureaucratic hurdles and costs to achieve such qualification, should also be exempt.

Reason for Abstention:

Tim Hall (Southern Power) 7/17/18 – Southern Power abstains from the vote on RR272 – NDVER to DVER Conversion. While we believe value is created through the market efficiencies gained by replacing NDVERs with DVERS, we feel it is inappropriate to retroactively charge Generator Interconnection Customers for upgrades that are beyond what they are expected to receive in return. If cost caps with explicit exemption terms were included we would feel more comfortable with the Revision Request.

Jeff Knottek (CUS) 7/17/18 – CUS abstained from voting in favor of RR272 as the benefits and risks are unable to be realized at this time.

SPP Responses for Members Committee and BOD:

Below are key points in the MOPC discussions during the April, 2018 and July 2018 MOPC meetings with SPP’s responses for the Members Committee and Board’s deliberation on the requested approval.

- **Language question:** The MWG modified the original revision request to add clarifying language that would ensure the responsibility to complete the conversion for previously registered NDVERs is appropriately and clearly stated. The original language stated the “Market Participant…must convert…”, however, the Market Participant may not have the authority in place to require the resource to make the necessary investments to allow the resource to be dispatchable. The language was modified to state: “A Generation Interconnection Customer …must convert….” The MOPC discussed whether or not the term, “Generation Interconnection Customer”, should be changed from a capitalized term to a lower case term. If the term is lower case then the MWG concern with appropriately assigning responsibility to ensure NDVERs convert is reintroduced and additional ambiguity would be introduced as to the difference between the Tariff-defined term and the lower case term.

- **NDVERs without an SPP GIA:** The RTWG questioned whether the MWG and SPP legal had considered that the “Generation Interconnection Customer” language added by the MWG meant resources without an SPP GIA were excluded; the RTWG advised that, the MWG should review the revision request because, as written, using a Tariff defined term may exempt resources that do not have an SPP GIA because their interconnection was granted by another
transmission provider that subsequently integrated into SPP. The RR does not provide an exemption for resources that do not have a GIA with SPP. SPP legal reviewed and determined that the language may not provide an explicit date by which they must convert, however found that it did not cause issues with implementation (filing and justification to FERC). This impacts ~27 resources; ~1000 MW.

- **NDVER exclusions to conversion:** SPP has taken a holistic approach to conversion in the proposed RR272 revision request to allow stakeholders to submit comments and recommend appropriate exclusions utilizing the stakeholder process.

  o **Type I and Type II wind generators:** KCPL, Tenaska, and Westar requested an exclusion for type I and type II wind generators, stating it is cost prohibitive for these resources to become dispatchable. While this may be true for certain Type I and Type II resources, others have indicated they see no significant concerns in converting their Type I and Type II NDVERs. There is not a one size fits all cost for conversion of an NDVER to a DVER, but rather this is a resource specific expense determined by the specific circumstances of that resource. Should a type I or II wind generator wish to be excluded from the requirements proposed by this RR they may request a waiver from FERC. SPP did not receive comments to exclude type I and II resources, nor did any of the reviewing working groups chose to adopt this exclusions in discussions during their meetings.

  o **Hydro resources:** AECC requested a waiver for hydro-electric resources stating the Corps of Engineers is in control of the water flows through the run of the river hydro-electric facilities making it near impossible to follow dispatch signals. SPP has submitted RR288 DVER Dispatchability that will allow DVERs to utilize control statuses under limited circumstances (including environmental restrictions), specifically Control Status 3 (CMODE 3), which would allow the resource to operate the same as it does today, honoring the agreement with the Corps. AECC submitted comments to exclude run of the river hydro resources. The MWG accepted this exclusion with one modification to qualify that the excluded run of the river hydro resources must be incapable of following a Dispatch Instruction.

  o **Possible Exemption of NDVERs without an SPP GIA:** The Wind Coalition states first that, “The language that appears to require the changes to the NDVER in order to qualify as a DVER appears to be an inappropriate attempt to modify existing GIAs. It is unnecessary to use this language to accomplish the stated purpose of this RR”, and second states that, “It further has an apparent unintended consequence of exempting a number of NDVERs from conversion resulting in an unnecessary limitation on the benefits to the market that are suggested by SPP.”

To address the first statement - The MWG modified the original revision request to add clarifying language that would ensure the responsibility to complete the conversion for previously registered NDVERs is appropriately and clearly stated. The original language stated the “Market Participant…must convert…”, however, the Market Participant may not have the authority in place to require the resource to make the necessary investments to allow the resource to be dispatchable. The language was modified to state: “A Generation Interconnection Customer …must convert….” As the GIC does have the authority to make the necessary investments to allow the resource to be dispatchable. The MOPC discussed whether or not the term, “Generation Interconnection Customer”, should be changed from a capitalized term to a lower case term. If the term is lower case then the MWG concern with appropriately assigning responsibility to ensure NDVERs convert is reintroduced and additional ambiguity would be introduced as to the difference between the Tariff-defined term and the lower case term.

To address the second statement - The RR does not provide an exemption for resources that do not have a GIA with SPP. SPP legal reviewed and determined that the language may not provide an explicit date by which they must convert, however found that it did not cause issues with implementation (filing and justification to FERC). This impacts ~27 resources; ~1000 MW.

- **Contract issues (PPAs):** Westar and KPP state RR272 abrogates NDVER contracts. The MWG proposes a conversion timeframe during which stakeholders could work to address issues related to PPAs. The proposed conversion timeframe is by the latter of January 1, 2021 or a Resource’s 10 year anniversary of their original Commercial Operation Date.

- **Conversion analysis:** WR voiced concern with a lack of analysis to understand the costs and benefits of the proposed market design. The MWG, ORWG and MOPC have reviewed and discussed analysis to show the results of price
following NDVERs, the results of an individual NDVER conversion, and the results of a full NDVER conversion. Analysis performed is provided by the MWG and in its presentation to the BOD.

- **Consensus building efforts:** KPP states the changes made by the MWG “envisions exemptions for no good reason other than to gain votes for passage. Simply put, it makes no sense to exempt run of river hydro and not type 1 and type 2 wind generators. The only reason for this discriminatory treatment is to gain the votes necessary to pass MOPC.” SPP and stakeholders proposed multiple options for NDVER conversion during MWG meetings from 2015 - 2018. No special exclusions were submitted or approved following discussion at the MWG prior to RR272 submission to MOPC in April 2018 when it was rejected. SPP staff, the SPP MMU, and four stakeholders appealed to the BOD to consider the RR for approval during the April 2018 BOD meeting. During the April BOD meeting, action was deferred to July with direction for SPP to: 1) provide additional analysis to show the results of the conversion analysis and, 2) further encourage stakeholders to provide comments such that consensus on a stakeholder position may be gained. SPP encouraged stakeholders to utilize the revision request process to provide their suggested edits or other comments. Four stakeholders submitted comments for language modification which the MWG discussed during the July 2018 MWG meeting. MWG approved RR272 with 2 modifications as suggested by stakeholders but no other modifications were submitted or discussed.

- **QF exercising rights under PURPA** – KPP states, “…the PURPA QF exemption does not address existing contracts with smaller units that could be qualified as a PURPA QF, but had no need to achieve QF status to achieve a workable purchase power agreement.” If this proposal is implemented, SPP would force these units to perform all of the paperwork and associated regulatory expenses to receive the QF exemption. After converting to a QF the affected unit would not change its operation, but would instead operate in the market as an NDVER, as it does today (Staff admitted it did not consider such cases in its analysis). Kansas Power Pool proposes that units that would qualify as a PURPA QF, but for the bureaucratic hurdles and costs to achieve such qualification, should also be exempt.” Applying to be a Qualifying Facility and choosing to exercise rights under PURPA would be a stakeholder’s individual and voluntary business decision. KPP is correct, SPP did not assume in the conversion analysis that NDVERs with a max capacity of 80 MW or less would choose to apply for QF status.

KPP states that SPP should exclude units that would qualify as a PURPA QF. SPP cannot make this type of determination, only FERC can determine if an individual resource qualifies to be a QF. In order to be considered a QF, a facility must meet all of the requirements of 18 C.F.R. §§ 292.203(a), 292.203(c) and 292.204 for size and fuel use, and be certified as a QF pursuant to 18 C.F.R. § 292.207.

Also of note, due to the Energy Policy Act of 2005 (EPAct 2005), utilities have the ability to be relieved of PURPA’s mandatory purchase obligation where QFs have access to competitive markets but are not 20MW or below. SPP has 21 NDVER resources that are 80 MW or less. Only two of the 21 are 20MW or below.

- **SPP providing a waiver process** - SPP discussed the possibility of offering a waiver process for NDVERs concerned that conversion is not a sustainable option due to cost and contract barriers. SPP determined that providing such a process would be far too subjective and burdensome for SPP to administer and could lead to additional administrative costs and legal risk at a cost to SPP’s members and customers. Instead, SPP feels the most appropriate option is for NDVERs seeking a waiver to submit such requests directly to FERC who is better suited to evaluate whether a waiver of specific tariff requirements is just and reasonable.

- **No consideration of conversion cost** – The Wind Coalition states, “There is no consideration for the amount of cost to convert NDVERs to DVERs relative to the benefit. In the case of Type 1&2 turbines this conversion can amount to millions of dollars in capital expenditures which the revision request ignores as a consideration. There are also a few NDVERs that may have very costly upgrades for communication equipment in areas where there is no access to fiber communications lines. The Wind Coalition suggests that a provision be added that allows for certain NDVERs to apply to SPP for a waiver of the requirement.”

SPP requested information on conversion cost from stakeholders. SPP learned that conversion costs vary and are resource specific, based on location and physical characteristics of the wind turbine. The majority of stakeholders who were willing to offer this data stated the costs to be $100k or less, while a few stated $500k or more. SPP has a total of 9 Type I and II wind generators; ~639 MW. Five of the 7 stakeholders who operate these resources have voted to approve RR272 as modified, one voted in opposition, while the other did not provide a vote.

SPP discussed the possibility of offering a waiver process for NDVERs concerned that conversion is not a sustainable option due to cost and contract barriers. SPP determined that providing such a process would be far too subjective and
burdensome for SPP to administer and could lead to additional administrative costs and legal risk at a cost to SPP’s members and customers. Instead, SPP feels the most appropriate option is for individual NDVERs seeking a waiver to submit such requests directly to FERC who is better suited to evaluate whether a waiver of specific tariff requirements is just and reasonable.

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<tr>
<td>Action Taken: Tabled until the July 31st, 2018 BOD Meeting</td>
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<tr>
<td>Abstained: OGE</td>
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**Date:** 7/30/2018
**Action Taken:**
**Abstained:**

**COMMENTS**

**Comment Author:** Ronald Thompson (NPPD)

**Date Comments Submitted:** 2/1/2018

**Description of Comments:**

NPPD has concerns with RR272

See below for NPPD comments related to RR272:

- SPP has stated that conversion of the NDVER to DVER units would have a positive impact on market efficiencies. With a potential of market benefits, we believe it to be short sighted to not address the cost impacts of such a conversion on the member utilities. This would include a process to determine the level of cost by that Entity and have the market compensate the costs.

- There are some Resources not designed to move every 5 minutes. Example would be Type 1 and Type 2 wind turbines. Converting these types of Wind Turbines would likely result in additional maintenance costs and increased risk of turbine failures. These costs and risks will be borne by the member or developer with potentially no chance of cost recovery from SPP.

- Generally speaking, there is a broader issue that should be addressed. And that is the lack of market systems recognizing that there are a number of generating units that have connected to the SPP system utilizing only a Generator Interconnect Agreement (GIA). The SPP Tariff has historically allowed this type of service, but the market needs to be able to recognize that these units are essentially utilizing non-firm transmission and being dispatched comparatively to units that have requested, and paid for, firm transmission service. Most NDVER’s have requested and paid for upgrades to get firm transmission for delivery to their load. The Firm Transmission Rights allow a hedge however that still is not enough to offset the impacts of resources not having Firm Transmission Rights. Also getting the congestion rights needed, are at times, not possible even if having firm transmission rights. If SPP could differentiate between these types of resources and dispatch those non-firm resources that are impacting the congestion before prices become volatile that would result in a better overall market. At this time there is not much in enhancement of acquiring Firm Transmission by resources. If SPP would curtail resources without firm transmission before those with Firm it could enhance more firm transmission being requested and upgrades that the costs are currently borne by the Load.

- The SPP Market sees many periods of price spikes in the RT Market due to flowgate congestion. At what level of a price spike due to a CME event is a Reliability Signal? NPPD believes that there are times that when flowgates are “Binding” or “Breached” and flows need to change address reliability concerns it should be a Reliability Signal. The reason for the price spikes is due to a current or projected transmission line overload or N-1 condition. That is a reliability concern and that signal should be treated that way. NPPD has asked for a clarification on this subject from SPP and has yet to see a response.

Additionally, this is an example of SPP changing the market rules which were agreed upon during the SPP IM integration phase. SPP allowed the use of NDVERs and now that agreement is potentially changing with the added cost burden of the changes being placed on the member utilities.
<table>
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<tr>
<th>Status:</th>
<th>MWG reviewed</th>
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<tr>
<td><strong>COMMENTS</strong></td>
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<tr>
<td><strong>Comment Author:</strong></td>
<td>Grant Wilkerson and Cliff Franklin (WR)</td>
</tr>
<tr>
<td><strong>Date Comments Submitted:</strong></td>
<td>2/2/2018</td>
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</table>
Westar has concerns with RR272:

Westar agrees with the NPPD comments listed at the bottom of this document but would add several considerations not addressed by SPP staff in RR272.

- First and foremost, SPP staff has repeatedly communicated their desire to make NDVER dispatchable, either through dispatch instruction NDVER clips, RR272, or in MWG discussions on wind. They state that price-following NDVERs have caused significant reliability issues since the start of Integrated Marketplace (IM) in 2014. If price-following NDVERs are the real problem, then at a minimum, SPP staff should have submitted an option for MWG consideration to penalize price-following NDVERs instead of forcing all NDVER conversions as in RR272.

- SPP provides a presentation SPP_8.4_NDVER to DVER Conversion Analysis.pdf claiming there have been reliability issues associated with price following NDVERs and there exists significant market efficiency benefits to be gained in forcing NDVER to DVER conversion. There is no study, nor does it include financial impacts forced upon NDVER owners/buyers in making conversions. The presentation states, “78% of NDVERs have Firm PTP/Firm NITS” but fails to acknowledge that the market dispatch provides no recognition of this fact. In fact, this RR fails to recognize the fact that it is the interconnection process that has allowed additional generation to be connected to the grid creating existing generation NDVERs to become congested and now look for the NDVER party to financially remedy this short coming in market design. In Section 4: Individual NDVER Resource Conversion – Financial Analysis, SPP states, “The annual savings ranged from $94k to $115k” for a single NDVER to DVER conversion. We can assess nothing from this analysis. Was the unit the most constrained NDVER or was it truly a representation of the average. Someone once said that you can twist the arm of statistics/modeling until they confess to anything. SPP fails to provide critical information needed to make their analysis credible;

1. What was the name and location of the NDVER resource?
2. What was the size in MW of the NDVER resource and was it representative of all NDVERs?
3. Is SPP claiming 5000 intervals where NDVER offers fall below LMP representative of all SPP NDVERs and is it necessary to achieve positive economics and is it representative of all NDVERs?
4. Do NDVERs having less than 5000 intervals where their offer fell below the LMP not benefit from a NDVER conversion?
5. What transmission constraints were applicable to the study NDVER and was it representative of all NDVERs?
6. How many hours of negative pricing were experienced by this resource and is it representative of all NDVERs?
7. During high wind and low load intervals, what was the bottom standard deviation LMP pricing and was it representative of all NDVERs?
8. Did SPP re-price SCED dispatch for both the NDVER, NDVER→DVER conv, DVER, DVER+8 or did SPP staff just add subtract NDVER/DVER scenarios assuming historical LMPs would not change?
9. What transmission constraints were applicable to the study NDVER and was it representative of all NDVERs?
10. Would conversion of all NDVERs reduce benefits for the study NDVER if SPP completely re-priced all SPP LMP locations?
11. Is 10/2016 – 10/207 representative of wind and wind/generation mix since market startup or did that time frame contain higher wind values that historically seen in SPP?

- RR272 effectively abrogates all NDVER PPA contracts, except for qualifying facilities, by undermining the grandfathered non-dispatchable status over older wind farms upon which their supply contracts were based. RR272 fails to address the financial exposure of owners/buyers of NDVERs by forcing them to become dispatchable which they may be incapable to perform within URD guides and which their contracts lacked notice to consider. RR272 throws NDVER owners/buyers “under the bus” by financially exposing them “economic dispatch” of which neither contract accounted for nor the unit was operationally constructed. RR272 forces NDVER conversion and abrogates NDVER contracts making RR272 unjust and unreasonable.

- RR272 fails to address the issue that many Market Participants (MPs) manage many NDVERs in the market owned by an Asset Owner which is not an MP. SPP puts the burden of NDVER conversions completely onto MPs which may not own the NDVER nor have any control over upgrades for the resource. Likewise, in cases where NDVERs capacity/energy is sold from AO seller to MP buyer, RR272 places all burden of NDVER conversion to the buyer MP in which RR272 has no regard for their inability or lack of authority to make NDVER→DVER upgrades. This will
leave the buyer MP in a badly disadvantaged position to renegotiate unit upgrades and contract terms, likely resulting in significant financial loss exposure. RR272 lack of consideration for NDVER financial exposure to make them dispatchable is clearly unjust and unreasonable. RR272, at minimum, should be changed to make Generation Interconnection Owners have the burden of upgrading NDVERs.

- Last and perhaps the most important factor not considered by RR272 is SPP’s market reputation. NDVERs were a condition of several MPs agreeing to transition from EIS to IM. If we go back on our word, will other MPs lose confidence in the stability of SPP tariff grandfathering and agreements made to prospective Balancing Authorities, Asset Owners, and Market Participants considering the benefits of join SPP as a stable settlement & market platform?

**Status:** MWG reviewed

**COMMENTS**

**Comment Author:** Erin Cathey (SPP) on behalf of the MWG

**Date Comments Submitted:** 2/6/2018

**Description of Comments:** The MWG modified Protocol Section 6.1.8 and Attachment AE Section 2.2, incorporating language to clarify what resources can be exempt from NDVER to DVER conversion under PURPA.

**Status:** MWG approved and incorporated language

**COMMENTS**

**Comment Author:** Michael Massery (AECC)

**Date Comments Submitted:** 6/28/2018

**Description of Comments:**

AECC believes there should be an exclusion for run of the river hydro-electric facilities in RR272

- “The Corps of Engineers are in control of the water flows through run of the river hydro-electric facilities making it near impossible to follow dispatch signals”
- Proposed language added to exclude run of the river hydro-electric resources:
  - “or (ii) a Resource having a primary fuel source of run of the river hydro-electric”
  - MWG modified to add, “…incapable of following Dispatch Instruction”

**Status:** Reviewed by MWG, Approved and Incorporated

**COMMENTS**

**Comment Author:** Shawn McBroom (OGE)

**Date Comments Submitted:** 7/6/2018

**Description of Comments:** OGE seeks to provide a compromise among Market Participants such that the NDVER design enhancement may move forward

Proposes extended transition time for Type I and Type II wind generators. Language added to state Type I and Type II wind turbine generators must convert to a DVER on or prior to October 15, 2022.

**Status:** Reviewed by MWG, Not Approved

**COMMENTS**
<table>
<thead>
<tr>
<th>Comment Author: Richard Ross (AEP)</th>
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<tbody>
<tr>
<td><strong>Date Comments Submitted:</strong> 7/10/2018</td>
</tr>
<tr>
<td><strong>Description of Comments:</strong> AEP believes an extension to require conversion based on a Resource’s original Commercial Operation Date should be provided. AEP comments recommend language stating, “…must convert to a DVER by the latter of January 1, 2021 or the 10 year anniversary of a Resource’s original Commercial Operation Date”.</td>
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<td><strong>Status:</strong> Reviewed by MWG, Approved and Incorporated</td>
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**COMMENTS**

<table>
<thead>
<tr>
<th>Comment Author: Jim Flucke (KCPL)</th>
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<tbody>
<tr>
<td><strong>Date Comments Submitted:</strong> 7/10/2018</td>
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<tr>
<td><strong>Description of Comments:</strong> KCPL believes an extension to require conversion by October 15, 2022 should be provided for all NDVERs. KCPL comments recommend language stating, “…an NDVER must convert to a DVER on a prior to October 15, 2022”.</td>
</tr>
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<td><strong>Status:</strong> Reviewed by MWG, Not Approved</td>
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**COMMENTS**

<table>
<thead>
<tr>
<th>Comment Author: Steve Gaw (The Wind Coalition)</th>
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<tbody>
<tr>
<td><strong>Date Comments Submitted:</strong> 7/24/2018</td>
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</table>
| **Description of Comments:** The Wind Coalition supports reasonable changes that will cause Variable Energy Resources that are currently registered as Non-Dispatchable VERs to Dispatchable status. We have concerns with some of the language in this RR which would impose substantial costs on some existing wind facilities that were exempted from the requirements to meet the DVER criteria in the current tariff. We also have concerns that this RR exempts a significant number of NDVERs in the market due to the language targeting only those NDVERs that have SPP GIAs. The concerns include the following:

1. There is no consideration for the amount of cost to convert NDVERs to DVERs relative to the benefit. In the case of Type 1 & 2 turbines this conversion can amount to millions of dollars in capital expenditures which the revision request ignores as a consideration. There are also a few NDVERs that may have very costly upgrades for communication equipment in areas where there is no access to fiber communications lines. The Wind Coalition suggests that a provision be added that allows for certain NDVERs to apply to SPP for a waiver of the requirement. The language suggested below would create a capital expenditure threshold to apply for a waiver, which could be adjusted. However, having a benefit to cost exemption which would allow a waiver for NDVERs that would provide a reasonableness analysis to be made for those applying for an exemption, or a provision providing for market benefits for this conversion to be applied to the costs of conversion of would be alternatives.

2. The language that appears to require the changes to the NDVER in order to qualify as a DVER appears to be an inappropriate attempt to modify existing GIAs. It is unnecessary to use this language to accomplish the stated purpose of this RR. It further has an apparent unintended consequence of exempting a number of NDVERs from conversion resulting in an unnecessary limitation on the benefits to the market that are suggested by SPP.

NOTE: The language changes submitted below have not been approved by the Wind Coalition at a full meeting of members and the suggestions are intended for discussion of possible alternatives to RR 272 rather than an official position of the Wind Coalition or its members. |
| **Status:** Not reviewed by the MWG; Not Approved |

**PROPOSED REVISION(S) TO SPP DOCUMENTS**

**Market Protocols**
1. Glossary

**Dispatchable Variable Energy Resource**

A Variable Energy Resource that is capable of being incrementally dispatched down by the Transmission Provider. As defined in Attachment AE of the tariff.

**Non-Dispatchable Variable Energy Resource**

A Variable Energy Resource that is not capable of being incrementally dispatched down by the Transmission Provider. As defined in Attachment AE of the tariff.

### 6.1.8 Dispatchable Variable Energy Resource

All Variable Energy Resources in the market must be registered as a Dispatchable Variable Energy Resource (DVER) except for (i) Wind Powered Variable Energy Resources with an interconnection agreement executed on or prior to May 21, 2011 and that commenced Commercial Operation before October 15, 2012 or (ii) a Qualifying Facility exercising its rights under PURPA to deliver its net output to its host utility or (ii) a Resource having a primary fuel source of run of the river hydro-electric that is incapable of following Dispatch Instructions, or (iii) Non-wind Variable Energy Resources registered on or prior to January 1, 2017 and with an interconnection agreement executed on or prior to January 1, 2017. VERs included in (i) and (iii) above may register as Dispatchable Variable Energy Resources if they are capable of being incrementally dispatched by the Transmission Provider. A Generation Interconnection Customer with Variable Energy Resources that are not QFs exercising their rights under PURPA previously registered as an NDVER must convert to a DVER by the latter of January 1, 2021 or the 10 year anniversary of a Resource’s original Commercial Operation Date. A Qualifying Facility exercising its rights under PURPA to deliver its net output to its host utility may register as a Dispatchable Variable Energy Resource if it is capable of being incrementally dispatched by the Transmission Provider and will be subject to the DVER market rules including Uninstructed Resource Deviation Charges.

Any Resource that has previously registered as a Dispatchable Variable Energy Resource shall not subsequently register as a Non-Dispatchable Variable Energy Resources.

1. A Dispatchable Variable Energy Resource is eligible to submit Offers for Regulation-Down if that Resource qualifies to provide Regulation-Down by passing the test described under Section 6.1.11.3.

2. A Dispatchable Variable Energy Resource is not eligible to submit Offers for Regulation-Up, Spinning Reserve or Supplemental Reserve;

3. Dispatchable Variable Energy Resources are committed and dispatched the same as any other Resource in the Day-Ahead Market.

4. For the RUC and RTBM, special commitment and dispatch rules apply as defined under Section 4.2.2.5.5.
6.1.9 Non-Dispatchable Variable Energy Resource

Variable Energy Resources that qualify may register as a Non-Dispatchable Variable Energy Resource. The Market Participant registering a Non-Dispatchable Variable Energy Resource must provide documentation to SPP verifying that it meets one or more of the exceptions in Section 6.1.8. Otherwise, the Resource must be registered as a Dispatchable Variable Energy Resource. Only a Qualifying Facility exercising its rights under PURPA to deliver its net output to its host utility or a Resource having a primary fuel source of run of the river hydro-electric that is incapable of following Dispatch Instructions may register as a Non-Dispatchable Variable Energy Resource. Any Resource that has previously registered as a Dispatchable Variable Energy Resource shall not subsequently register as a Non-Dispatchable Variable Energy Resource.

NDVERs are committed and dispatched the same as any other Resource in the Day-Ahead Market. For the RUC and RTBM, special commitment and dispatch rules apply as defined under Section 4.2.2.5.6. Non-Dispatchable Variable Energy Resource data submittal requirements are defined in Section 4.1.2 in the SPP Criteria.
Energy Resource registered on or prior to January 1, 2017 and with an interconnection agreement executed on or prior to January 1, 2017. Variable Energy Resources included in (1) and (3) above may register as Dispatchable Variable Energy Resources if they are capable of being incrementally dispatched by the Transmission Provider. A Generation Interconnection Customer with Variable Energy Resources that are not QFs exercising their rights under PURPA previously registered as an NDVER must convert to a DVER by the latter of January 1, 2021 or the 10 year anniversary of a Resource’s original Commercial Operation Date. A Qualifying Facility exercising its rights under PURPA to deliver its net output to its host utility may register as a Dispatchable Variable Energy Resource if it is capable of being incrementally dispatched by the Transmission Provider and will be subject to the Dispatchable Variable Energy Resource market rules including Uninstructed Resource Deviation charges. Any Resource that has previously registered as a Dispatchable Variable Energy Resource shall not subsequently register as a Non-Dispatchable Variable Energy Resource.