

# 1:1 Path Curtailments

## 01/18/2023 Customer Meeting – Combined Comment Responses

General Responses:..... 1

TRANSALTA ENERGY MARKETING (US) INC: ..... 1

Puget Sound Energy, Inc. .... 3

NT Customer Group: ..... 5

    The Eugene Water and Electric Board (EWEB), Umatilla Electric Cooperative (UEC), Northwest Requirements Utilities (NRU), Pacific Northwest Generating Cooperative (PNGC) Power, and the Western Public Agencies Group (WPAG)..... 5

Northwest & Intermountain Power Producers Coalition (NIPPC): ..... 6

Powerex ..... 7

Shell Energy North America (US), L.P. (“Shell Energy”) ..... 10

The Energy Authority (TEA)..... 10

### General Responses:

- BPA staff would like to thank all stakeholders for providing detailed and thoughtful comments.
- o BPA staff’s goal is to address the potential for disparate impacts to NT customers that might result from BPA’s current process for managing curtailments on 1:1 paths, while taking into consideration the issues raised in response to BPA staff’s preferred alternative.

### TRANSALTA ENERGY MARKETING (US) INC:

- Steve Lincoln Senior Transmission Specialist

TransAlta appreciates the opportunity to comment on BPA’s curtailment proposals for 1-1 paths presented on January 18, 2023 and the background that the presentation provided regarding this issue’s history.

From that history, TransAlta observes that the changes BPA has presented for the Redispatch and Curtailment Business Practice (the four alternatives) exceed those in Category A, which is how this issue began in April 2022.

According to Bonneville’s Business Practice Process, Category A changes encompass things like grammatical errors and/or revisions with minor significance.



- This presentation, while stemming from the previous discussions on a Category A Business Practice (BP) update, was intended to discuss BPA’s evaluation of the existing processes and procedures to manage curtailments on 1:1 paths.
  - o This evaluation was undertaken after a clarification update to document the current status quo within OATI Curtailment Manager (CM) was withdrawn. This was reflected in a proposed update to the Redispatch and Curtailment Procedures Business Practice (BP or business practice). This withdrawal was completed after a risk of disparate impact to Network Integration (NT) Transmission Service customers was raised during the May 9<sup>th</sup> 2022 Customer meeting.

TransAlta suggests that making changes to how 1-1 path schedules are curtailed, or transitioning to one internal iCRS curtailment tool, or crafting a solution from multiple alternatives are material changes, like those covered in Category B, and we recommend treating this issue accordingly, perhaps by convening another Tech Forum event to discuss drivers for these proposed significant changes.

- Any material changes to the business practice would undergo a Category B BP update process.
  - o The presentation on 01/18/2023 discussed the initial review of the current status quo and alternatives that could address the risk of disparate impact to NT customers (discussed in the example reviewed in the 01/18/2023 meeting).
- BPA will review feedback and hold a follow-up customer meeting to discuss any changes to current BPA staff recommendations or new alternatives.

This is unclear because the existing (status quo) curtailment process for 1-1 paths appears to be non-discriminatory, it is enacted on scheduled capacity, and it steers clear curtailing based on reserved capacity alone, which FERC has rejected. TransAlta believes the status quo first creates a level playing field among transmission customers by accounting for actual Transmission Service Request (“TSR”) rights.

- As discussed, the status quo presents a potential risk to NT customers discussed on May 9<sup>th</sup> 2022, which resulted in the draft Category A BP update being withdrawn.
- While PTP Service is based on purchased rights (TSR), NT service is based on Network Load.
  - o This results in the potential for NT TSRs to schedule above the TSR limit.
  - o As a result, an NT Customer in this position has the potential to be over-curtailed in the calculation of updated (reliability scheduling) TSR Limits (Step 1).
    - The current OATI CM implementation operates as if the NT customer has “over-scheduled.”
    - The status quo operating as if this was an “over-schedule” presents the risk of cutting the NT customer first down to an initial OASIS TSR limit, followed by the Day-ahead advisory TSR Limit. This presents the potential for a disparate impact to NT customers discussed in the comments from the May 9<sup>th</sup> 2022 Customer meeting.
- Regarding the referenced FERC guidance, the status quo approach does implement the proposed method that FERC previously rejected.

Second, and this part is not entirely clear, it includes a mechanism for returning capacity that is curtailed beyond the required reduction, which seems superior to the alternatives.



Third, pro rata curtailment is enacted on scheduled volume that remains.

TransAlta requests that BPA retain current practices and make no change to the Redispatch and Curtailment BP. Otherwise, altering the business practice similar to the alternatives presented should not be considered without further engagement commensurate with a Category B changes.

- Thank you for your feedback and ongoing collaboration. As the initial meeting provided a space for engagement and was not representative of a specific planned BP update, any future changes to the Redispatch and Curtailment BP will follow either Category A or B procedures in line with the specific changes proposed.

## Puget Sound Energy, Inc.

Puget Sound Energy, Inc. (“PSE”) submits the following comments on the BPA January 18, 2023 presentation on Redispatch and Curtailment BP 1:1 Path Curtailments. BPA has requested comments by February 8, 2023. However it is still unclear how BPA would implement 1:1 curtailments under various circumstances. Therefore, --

- (i) BPA should provide more examples that describe how BPA would implement 1:1 curtailments under various circumstances, including varying combinations of NT and PTP customers; and varying combinations of firm and non-firm reservation priorities. The BPA-provided scenario involving a NT and PTP customer in the January 18 Presentation seems to have an inequitable outcome under the proposed Alternative 1 implementation, where the PTP customer is disproportionately curtailed based on the NT customer’s over-scheduling decision.
  - While PTP Service is based on TSRs (rights), NT service is based on Network Load in any given hour. As a result, an NT customer cannot "over-schedule." This means that an NT customer can schedule above their TSR limit without being considered “over-scheduled” per the Scheduling Transmission Service BP (H.5.a-b).
    - o The current OATI CM implementation operates as if the NT customer has “over-scheduled.” This is the root cause of the problem.
    - o The status quo operating as if this was an “over-schedule” presents the risk of cutting the NT customer first down to an initial OASIS TSR limit, followed by the Day-ahead advisory TSR Limit. This presents the potential for a disparate impact to NT customers discussed in the comments from the May 9<sup>th</sup> 2022 Customer meeting.
  - Further examples may be discussed during a subsequent customer meeting on this topic after customer comments and any amendments to BPA staff’s recommendation have been reviewed.
  
- (ii) BPA should comment on and address an additional customer-provided example that includes four customers with differing tagging decisions under the proposed Alternative 1 implementation when a path is derated for a given hour in day ahead, resulting in the following inequitable outcome:



E-Tag Based Curtailment post OATI Amendment Example #2: generic 1:1 path, assume ALIS rating of 400MW, outage curtailed to 200MW, shared by four customers							
Step 1	Step 2	Step 3	Step 4	Totals			
TSR Limits	TSR Reliability Limit (non-binding)	E-Tag Creation	E-Tag Curtailment	Resulting Flow	Total Curtailment	Impact %	
TSR Limit	Day-Ahead Advisory	Day-Ahead Submission	Real-Time Curtailment				
Customer 1 (Firm PTP)	100	50	50	-10	40	-60	30%
Customer 2 (Firm PTP)	100	50	100	-20	80	-20	10%
Customer 3 (Firm PTP)	100	50	50	-10	40	-60	30%
Customer 4 (Firm NT)	100	50	50	-10	40	-60	30%
<b>Total</b>	<b>400</b>	<b>200</b>	<b>250</b>	<b>-50</b>	<b>200</b>	<b>-200</b>	<b>100%</b>

- The above example is an accurate representation of the outcome of a schedule-based curtailment. However, BPA does not agree with the characterization of this as an “inequitable outcome,” consistent with FERC guidance. It comes down to whether a TP is required to issue curtailments *pro rata* based on schedules or reservations.
    - Under the schedule-based approach in the above example, all four Customers share equally in a 20% curtailment of their schedules, resulting in an equal 20% reduction in their flow.
    - The status quo uses a reservation-based approach in which the reduction is applied *pro rata* to the reserved capacity rather than to the scheduled capacity.
  - The perception of inequity presented by the above example may stem from the column titled “Total Curtailment.” The information in that column does not represent “curtailment” quantities. As described by both NERC and NAESB, a curtailment is a reduction in the scheduled capacity or energy delivery of an Interchange Transaction (*i.e.*, a reduction in a tag). Instead, the information in that column represents the percent of a given reservation permitted to flow following the curtailment. This is useful information with which to discuss the relative impact of a curtailment, but it inherently involves an approach that considers reserved capacity. Commenters proposed such an approach to FERC in the NOPR to Order 890; in the final Order, FERC rejected the very reservation-based approach that the status quo curtailment practices utilize.
  - BPA will review feedback and hold a follow-up customer meeting to discuss any changes to current BPA staff recommendations or new alternatives.
- (iii) BPA should allow two weeks for further comments after BPA provides the requested additional examples and comments on the above-described customer provided example. In addition, BPA should host a collaborative workshop with PTP and NT customers to discuss alternative approaches and solutions for 1:1 path curtailments.
- BPA will review feedback and hold a follow-up customer meeting to discuss any changes to current BPA staff recommendations or new alternatives.

(iv) Based on the information provided to date, BPA should not implement Alternative 1 and should consider other mechanisms to address the following issue: Alternative 1 results in



disproportionate and unequitable curtailments to a customer when another customer overschedules contractual transmission rights, as BPA demonstrated in the example discussed at the January 18 meeting.

- Please see the discussion above on the differences in “rights” between NT and PTP customers.
- Any material changes to the business practice would undergo a Category B BP update process.
  - o The presentation on 01/18/2023 discussed the initial review of the current status quo and alternatives that would address the risk of disparate impact (discussed in the example reviewed in the 01/18/2023 meeting) to NT customers.
- BPA will review feedback and hold a follow-up customer meeting to discuss any changes to current BPA staff recommendations or new alternatives.
- (v) Further, PSE would recommend keeping Status Quo in place and eliminating the ability of a transmission customer with applicable contracts (i.e., NT or other) to use No Demand (ND) Scheduling Validations on any 1:1 interties.
- Thank you for the feedback. The “-ND” validation is the current mechanism that allows NT customers to schedule to their load and not to a predefined megawatt total.
- (vi) If BPA is going to implement changes to its Redispatch and Curtailment procedures, PSE encourages BPA to adhere to the FERC approved pro-forma OATT principles and implement curtailments on a fair, pro-rata basis, in alignment with how other Transmission Providers in the West manage curtailments.
- Alternatives reviewed will be assessed in alignment with FERC guidance, *pro forma* and OATT principles in order to implement curtailments on a non-discriminatory, *pro rata* basis.

\* \* \*

PSE appreciates BPA’s review of these comments. By return e-mail, please confirm BPA’s receipt of these comments.

- Thank you for your feedback and ongoing collaboration.

## NT Customer Group:

The Eugene Water and Electric Board (EWEB), Umatilla Electric Cooperative (UEC), Northwest Requirements Utilities (NRU), Pacific Northwest Generating Cooperative (PNGC) Power, and the Western Public Agencies Group (WPAG)

The Eugene Water and Electric Board, Umatilla Electric Cooperative, Northwest Requirements Utilities, PNGC Power, and the Western Public Agencies Group (collectively, the “NT Customer Group”) submit these comments in support of the Bonneville Power Administration’s (“BPA”) proposal to amend its current OATI CM calculation and reporting to align with a schedules-based curtailment calculation on 1:1 paths.

As more fully explained in the attached comments submitted by the NT Customer Group last June, a copy of which is attached hereto as Attachment 1, BPA’s proposed amendment to its OATI CM calculation is necessary to ensure

- (i) compliance with BPA’s tariff,
- (ii) consistency with relevant and persuasive FERC precedent, and
- (iii) that BPA is not unduly discriminating against its NT transmission customers for exercising their rights under BPA’s tariff.



We are pleased that, after conducting its own careful review of its tariff and FERC precedent, as well as performing a scan of best practices in the industry, BPA has reached the same conclusion.

We further thank BPA for its careful consideration and willingness to change course and are looking forward to BPA's implementation of the proposed amendment.

- Thank you for your feedback and ongoing collaboration, BPA will review feedback and hold a follow-up customer meeting to discuss any changes to current BPA staff recommendations or new alternatives.

### Northwest & Intermountain Power Producers Coalition (NIPPC):

Thank you for the opportunity to submit comments on this proposed business practice. NIPPC has concerns regarding the proposal to curtail schedules by E-tag without reference to customers' underlying transmission service reservations. While the ease and speed with which operators can issue curtailments is an important factor, BPA should also consider the implications for customers who submit schedules (E-tags) at or below a temporary reliability scheduling limit on a path.

- This presentation, while stemming from the previous discussions on a Category A BP update, was intended to discuss BPA's evaluation of the existing processes and procedures to manage curtailments on 1:1 paths.
  - o This evaluation was undertaken after the clarification update to document the current status quo within OATI CM was flagged as representing a risk of disparate impact to the NT product Customers after the May 9<sup>th</sup> 2022 Customer meeting.

Under the proposal, customers who respect a reliability scheduling limit and submit an E-tag for a MW quantity below the full value of their transmission service reservation will bear a larger share of the curtailment than a customer who submits an E-tag for its full reservation rights despite notice of a reliability scheduling limit. When operators act to curtail schedules pro rata, the customer who voluntarily scheduled service within the reliability scheduling limit is harmed vis a vis the customer who scheduled its full rights. NIPPC suggests that BPA should consider these implications in establishing its business practices.

If BPA were to proceed with adopting the preferred alternative, the likely result would be that all customers would seek to maximize their post-curtailment service by ignoring the reliability scheduling limit and instead scheduling the full quantity of their scheduling rights. Is this the behavior BPA seeks to encourage? If not, BPA should reconsider its preferred alternative.

- Thank you for the feedback. BPA staff agrees that a schedule-based curtailment would key specifically on the total MW amount utilized and is considering this factor compared to a rights-based curtailment calculation in this evaluation, as discussed in the previously posted slides and customer meeting.
  - o Customer comments and concerns are being considered prior to any BP amendment proposal.
  - o Alignment to reliability scheduling limits is optional.
- BPA will review feedback and hold a follow-up customer meeting to discuss any changes to current BPA staff recommendations or new alternatives.



NIPPC suggests that the status quo – which takes into account both the MW quantity of a customer’s transmission service reservation as well as the scheduled Etags – is the correct methodology. In the event curtailments are required on a 1:1 path, customers (including NT customers) who have submitted schedules in excess of the reliability scheduling limit are curtailed first down to their pro rata share of that limit. Only then would all schedules be curtailed pro rata.

- Thank you for your feedback and ongoing collaboration. As discussed, NT customers may be disadvantaged under the status quo OATI CM implementation.
  - o While PTP Service is based on purchased rights (TSR), NT Service is based on Network Load.
  - o NT customers are permitted to schedule to their Network Load, which may exceed their NT reservation. This practice is not considered to be “over-scheduling”. However, the current OATI CM implementation may treat the NT customer as if they had “over-scheduled.” CM addresses the “over-scheduling” by first cutting the NT tag down to be within the NT reserved MW before proceeding with a *pro rata* curtailment of both NT and PTP. This may result in the NT customer being cut prior to and in excess of what should be required in a *pro rata* curtailment. This represents the potential disparate impact to NT customers discussed in the comments from the May 9<sup>th</sup> 2022 Customer meeting.

## Powerex

Powerex appreciates the opportunity to provide comments on this important topic. On January 18, 2023, Bonneville staff provided an update on its planned implementation of curtailments on 1:1 paths.

Bonneville previously proposed revisions to the Redispatch and Curtailment Procedures Business Practice to provide clarity to how Bonneville conducts curtailments on 1:1 paths. Bonneville subsequently withdrew those proposed revisions following comments from NT customers and committed to evaluating the customer input and sharing the results at a customer workshop.

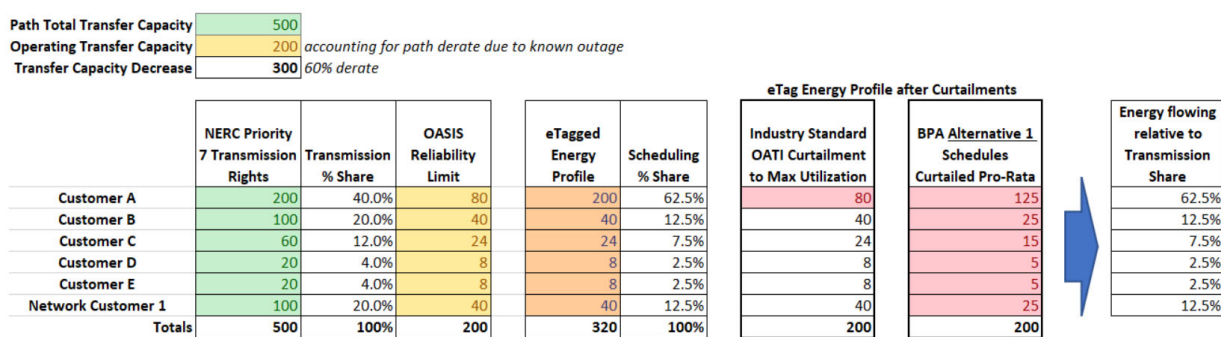
During the workshop, Bonneville indicated its preference for an alternative (Alternative 1), which would change how Bonneville conducts curtailments on 1:1 paths. Powerex is highly concerned there would be unintended outcomes if Bonneville were to implement the recommended alternative and raised various concerns with the proposal. Changing Bonneville’s curtailment practices to curtail on schedules alone raises numerous material concerns, but most importantly, the shift would significantly erode the certainty of deliveries from Bonneville’s system to load serving entities, who require a high degree of certainty of energy deliveries when a derate is known in advance. A shift to curtailments based on schedules only, without recognizing each customer’s underlying rights, would increase the load-serving entities’ uncertainty in the deliverability of energy from Bonneville’s transmission system. This, in turn, would lead to market inefficiencies and seams, while also creating an undesirable incentive for customers to schedule to the maximum share of their transmission rights to secure a higher proportion of flow.

- Thank you for your review and flagging of the potential unintended effects of Alternative 1. BPA will review feedback and hold a follow-up customer meeting to discuss any changes to current BPA staff recommendations or new alternatives.



Moreover, Powerex believes that Bonneville’s preferred alternative would result in NT customers’ schedules being curtailed to a greater extent than under the current methodology when such schedules are less than the customers’ reserved transmission. Ultimately, both NT and PTP customers will be subject to more unexpected and uncertain curtailments than before. Powerex recognizes that Bonneville is trying to address a scenario that may occur if an NT customer has scheduled beyond its reserved transmission. This is because any schedules exceeding reserved transmission rights may be curtailed ahead of the pro rata curtailments (relative to held transmission rights).

While Alternative 1 may address some NT customers concerns in that particular scenario, it is likely that this would detrimentally impact NT schedules when they are scheduled at less than their reserved transmission rights. Consider the following example showing a 1:1 path with a total capacity of 500 MW that experiences a 60% decrease in capacity, leaving only 200 MW available.



- While BPA staff agrees that a schedule-based curtailment would key specifically on the total MW utilized (scheduled), prior written FERC guidance does not support a rights-based curtailment calculation, as discussed in the previously posted slides and customer meeting. These are factors BPA is considering in its evaluation.
- Customer comments and concerns are being considered prior to any BP amendment proposal.
- BPA will review feedback and hold a follow-up customer meeting to discuss any changes to current BPA staff recommendations or new alternatives.

Under the current industry standard, the curtailment process honors customers’ investments in transmission rights and establishes reliability limits whenever a reduction in path capacity is known ahead of the delivery period. The reliability limit identifies the ‘protected’ amount of transmission a customer (NT and PTP) can depend on during a derate (with the exception of when the transfer capacity for the path is unexpectedly further reduced).

In the example above, the curtailments that would occur with Alternative 1 will render all customers in a worse position except for the customer that scheduled to their max rights despite a known 60% path derate. Customers will lose their ability to know the portion of their rights that they can safely schedule on. Under Alternative 1, whenever any schedule is curtailed within the same NERC priority, every schedule will be curtailed.

Powerex believes that the current curtailment practices, as established through the OATI curtailment manager, are consistent with Bonneville’s OATT, its Redispatch and Curtailment Business Practice, and FERC precedent. Section 13.6 of Bonneville’s OATT requires non-discriminatory, pro rata curtailments and that curtailments of PTP and NT customers will occur “on a basis comparable to the curtailment of service to the Transmission Provider’s Native Load Customers.”





- As discussed, NT customers may be disadvantaged under the status quo OATI CM implementation.
  - o While PTP Service is based on purchased rights (TSR), NT Service is based on Network Load.
  - o Alignment to reliability scheduling limits is optional.
  - o NT customers are permitted to schedule to their Network Load, which may exceed their NT reservation. This practice is not considered to be “over-scheduling”. However, the current OATI CM implementation may treat the NT customer as if they had “over-scheduled.” CM addresses the “over-scheduling” by first cutting the NT tag down to be within the NT reserved MW before proceeding with a *pro rata* curtailment of both NT and PTP. This may result in the NT Customer being cut prior to and in excess of what should be required in a *pro rata* curtailment. This presents the potential disparate impact to NT customers discussed in the comments from the May 9<sup>th</sup> 2022 Customer meeting.

Similarly, the Redispatch and Curtailment Business Practice states only that “BPA Transmission Services will curtail schedules pro-rata according to NERC Curtailment priority.” The current OATI curtailment manager respects these obligations because it curtails all firm (7-F) schedules pro rata and without undue discrimination, while respecting the capacity rights defined in Bonneville’s OATT and paid for by customers, all while maximizing flow on the line and without adding undue complexity.

Powerex also believes that Order No. 890 supports BPA’s current approach and the OATI methodology. At most, FERC’s discussion in Order Nos. 890 and 890-A stands for:

- (1) curtailments must be sufficient so as to not impact reliability (Order No. 890 at P 1629); and
- (2) the curtailment mechanism must not be too complex too close to real-time operations to jeopardize reliability (Order No. 890-A at P 977).

Importantly, Powerex’s comments on the Order No. 890 proposed rulemaking did not propose a reservation-only curtailment methodology. Powerex explained this fact on rehearing, which FERC acknowledged. With that initial concern addressed, FERC’s Order No. 890-A objection was entirely different – an implementation concern, namely that the process would be too complicated during or close to real-time operations and therefore pose a threat to reliability. Such concerns, to the extent they were valid, have been addressed through the automation provided by OATI and because real-time curtailments are based only on schedules, as Powerex supported in the Order No. 890 proceeding.

During the workshop, Bonneville stated that they would give further consideration to Powerex’s concerns, hold another workshop on this issue, and pause any implementation changes until that process is completed. Powerex strongly supports Bonneville continuing a dialogue with customers on this important issue through at least one or more additional workshops and customer engagement. Powerex hopes to continue to work with Bonneville and all customers collaboratively to address the concerns while minimizing disruption to system operations and protecting customers’ firm rights.

- Thank you for your feedback and ongoing collaboration. Bonneville agrees that Powerex did not propose to FERC a “reservation-only” curtailment approach. Rather, Powerex proposed a reservation-based approach; an approach that has been almost wholly adopted into the OATI CM tools used in the status quo implementation. In Order 890, FERC rejected that reservation-based approach. Bonneville agrees that the basis for that rejection (*i.e.*, “too complicated”) has



been largely addressed with over 10 years of successful operational use. Nevertheless, the FERC guidance remains in place, as there have been no subsequent re-hearings on the matter, as does the potential risk of disparate impact to NT customers.

- As discussed, BPA will review feedback and hold a follow-up customer meeting to discuss any changes to current BPA staff recommendations or new alternatives.

## Shell Energy North America (US), L.P. (“Shell Energy”)

Ian D White

Shell Energy North America (US), L.P. (“Shell Energy”) appreciates the opportunity to submit comments to the Techforum regarding BPA’s proposed 1:1 path curtailment business practice changes.

Shell Energy supports retaining the status quo or adopting alternative four which would allow curtailments to continue being assessed using both TSR limits and implemented e-tags.

Shell Energy is concerned with proposals to conduct pro-rata curtailments based solely upon e-tags without reference to customers’ underlying transmission reservations/rights will create unintended consequences. Under alternatives 1, 2 and 3 customers who elect to reduce e-tags to their TSR’s corresponding “reliability limit” run the risk of being curtailed in excess of their reliability limit. Without reference to customers’ underlying TSR, customers may be disincentivized from voluntarily reducing e-tags in accordance with corresponding scheduling limits—which would require curtailment for BPA operators.

- While BPA staff agrees that a schedule-based curtailment would key specifically on the total MW utilized (scheduled), prior written FERC guidance does not support a rights-based curtailment calculation, as discussed in the previously posted slides and customer meeting.
  - o Customer comments and concerns are being considered prior to any BP amendment proposal.
  - o Alignment to reliability scheduling limits is optional.

Should BPA elect to move forward with alternative 1, 2 or 3 proactive reductions of customer e-tags on affected 1:1 paths should be accounted for when calculating pro-rata e-tag curtailments.

- Thank you for your feedback and ongoing collaboration. As discussed, BPA will review feedback and hold a follow-up customer meeting to discuss any changes to current BPA staff recommendations or new alternatives.

## The Energy Authority (TEA)

Dmitry Batishchev <[Dbatishchev@teainc.org](mailto:Dbatishchev@teainc.org)>

To whom it may concern,

We are commenting in response to BPA staff’s proposal at “Redispatch and Curtailments on 1:1 paths” meeting held on January 18, 2023 to amend BPA current OATI CM calculation and reporting to align with a schedules based curtailment calculation on 1:1 paths.

Our recommendation is to retain Status Quo: Curtail by **TSR Limits & E-Tags**.



## Reasoning:

BPA's staff proposal to curtail by schedules within OATI (E-Tag) incentivizes customers to schedule without consideration of their reliability limits. This type of scheduling will increase transmission curtailments in real-time if customers do not schedule to their reliability limits and will disadvantage customers following their transmission rights' reliability limits.

## Example:

Let's assume 1:1 path has 200 MW of TTC and it is sold as firm to 2 entities, 100 MW each.

On a day-ahead basis 1:1 path gets derated to 100 MW (50%) TTC.

Reliability limits for both entities are now 50 MW (50%) each.

Entity A schedules 50 MW (their reliability limit), while entity B schedules 100 MW (above their reliability limit) on a day-ahead basis.

1:1 path's TTC limit stays at 100 MW in real-time.

Below are the two different outcomes based on Status Quo (1) and BPA's staff proposal (2)

- 1) Status Quo curtailment process: entity A's 50 MW schedule does not get curtailed, while entity B schedule gets curtailed to its reliability limit of 50 MW
- 2) BPA's staff proposal process: entity A's 50 MW schedule gets curtailed to  $100/150 \times 50 = 33$  MW (17 MW **below** its reliability limit), while entity B's 100 MW schedule gets curtailed to  $100/150 \times 100 = 67$  MW (17 MW **above** its reliability limit)
  - The above bullet 2 is an accurate representation of the outcome of a schedule-based curtailment. In this example, both entity's schedules are reduced *pro rata* by 67%.
  - As other commenters have pointed out, an entity that has proactively reduced their schedules to stay within a day-ahead TSR limit will be curtailed along with the entity that did not reduce their schedules.
  - While BPA staff agrees that a schedule-based curtailment would key specifically on the total MW utilized (scheduled), prior written FERC guidance does not support a rights-based curtailment calculation, as discussed in the previously posted slides and customer meeting. These are factors BPA is considering in its evaluation.
    - o Customer comments and concerns are being considered prior to any BP amendment proposal.
    - o Alignment to reliability scheduling limits is optional.
  - Thank you for your feedback and ongoing collaboration. BPA will review feedback and hold a follow-up customer meeting to discuss any changes to current BPA staff recommendations or new alternatives.

