



## SPP Congestion Hedging FAQ

This document is intended to address frequently asked questions regarding SPP’s Congestion Hedging process, reports, funding and tools. This document has answers that are subject to change with adjustments to the SPP TCR markets business practices and changes to the governing documents, the SPP Open Access Transmission Tariff (OATT or Tariff) and/or the SPP Market Protocols. For any further questions or clarification please use RMS (<https://spprms.issuetrak.com/Login.asp>) and the Quick pick “Transmission Congestion Rights (TCR) Inquiry”.

Note there is training available on LMS about the Congestion Hedging / TCR markets.

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## Reports

**Q Where are the June monthly results for the TCR markets?**

*a There is no June monthly process. June is allocated (ARR) and auctioned (TCR) in totality in the annual process. The results for June are found in the annual results.*

**Q What is SPP's schedule for posting historical ARR nominations and TCR bids and offers?**

*a We post historical TCR bid and offer information 6 months after the posting of each auction. We post historical iLTCR, LTCR, and ARR nominations, 14 months after the posting of awards for each market. The historical nominations, and bids and offers are posted on the TCR MUI under Download>Public>Historical. Select the specific Market Term and Market to pull the desired results for the iLTCR, LTCR, ARR or TCR market.*

**Q I am trying to verify my monthly ARR's in the MUI, but the zip file for the monthly allocation that should show my firm transmission service reservations (my entitlements) is empty, there are no reservations listed. Is there a different process to verify the monthly entitlements?**

*a No, that is the process of verifying your monthly entitlements. Please remember that during the monthly verification process the entitlements/candidate ARR's that you should observe (in that zip file) and verify should be only those firm transmission service reservations that are incremental (additional) to what was verified and received during the annual process.*

## Self-Converts

- Q If an MP self-converts and doesn't put a bid in, then the MP doesn't influence price, correct?**
- a Not exactly, if an MP self-converts, then this tells the system to do everything it can to get the TCR for the MP. This price will not affect the MP because they are effectively paying themselves. The MP would be paying into the auction if they added a bid.*
- Q What happens if an MP wants to self-convert all ARR and there is not enough counterflow?**
- a The software will try and make that counterflow happen by purchasing buy bids; if the system can't get enough counterflow, the self-convert will be curtailed.*
- Keep in mind that self-converts occur during the auction process. In cases where the allocation percentage doesn't match the auction percentage, a pre-run study is run prior so SPP knows what will settle. The pre-run considers the maximum of request or minimum-settled in pre-run in order to preserve viability of ARR funding by the TCR auction process.*
- Q I submitted a self-convert in Round 1 of a monthly two round auction and converted 50% of my request. In order to convert remaining ARRs, do I need to submit a self-convert in Round 2?**
- a Yes.*
- Q Should MPs attempt to bid above the minimum settled MW? Wouldn't this help me get more of my self-convert? For example, for a 100 MW ARR should I self-convert 100 MWs and also bid 10 MWs if I want to guarantee myself 100 MWs but expect the self-convert to be awarded at the minimum settled MW.?**
- a No. A self-convert will always trump a bid (with the exception of self-converts curtailed in the pre-run). If an MP is not getting a TCR via self-convert, a bid on the same path will not help an MP receive more of their self-convert. Additionally, if an MP is awarded a self-convert equal to the minimum settled MWs, their same-path bid may also clear. In this case, the MP would pay for the bid TCR out of pocket, i.e. in the auction, the 100 MW self-convert could be awarded from 0 to 100 MWs and the MP would be, in effect, paying themselves. Any portion of the 10 MW bid which is awarded would be paid, out of pocket, into the auction by the MP.*
- Q Can an ARR be self-converted and the resulting TCR be offered to sell in the same round?**
- a No, only a previously awarded TCR can be sold in a given auction round. For example, a TCR from the annual process could be sold in a monthly auction. Additionally, a TCR obtained in Round 1 of a monthly auction could be sold in Round 2 of that two round monthly process.*

## 2 Stage Monthly ARR Allocation

- Q In Stage 2 of the Monthly ARR Allocation, can I nominate up to 100% of my residual cap in on peak and also in off peak and for NITs and PTP?**
- a Yes! You can nominated up to 100% for NITs on peak, 100% for NITS off peak, 100% for PTP on peak, and 100% for PTP off peak.*
- Q In stage 2 of the monthly ARR Allocation, I can enter a nomination limit that is higher than the round cap. Why?**
- a In stage 2, if you enter a percentage nomination and a nomination limit, the system will use the lesser of the percentage nomination or the nomination cap as the stage 2 ARR nomination. By doing so, the round cap is never truly exceeded.*
- Q When will the Stage 1 and Stage 2 Monthly ARR Allocation nominations be submitted?**
- a Stage 1 and Stage 2 nominations will both be submitted at the same time during the single Monthly ARR Allocation nomination window.*
- Q Do Market Participants get to see the Stage 1 results before the Stage 2 results?**
- a No, all of the Monthly ARR Allocation results will be received by members at one time.*
- Q Are there separate solutions for Stage 1 and Stage 2?**
- a While the SFT process does generate two separate solutions and then aggregate them together, members only receive one award file. This award file will indicate the stage from which each award came.*
- Q Which paths are available to be nominated?**
- a Stage 1 nominations will be based upon valid TSRs held by MPs. Stage 2 nominations will be valid for any source-sink pair, excluding those pairs listed in the Electrically Equivalent Settlement Locations (EESL) file. The number of paths that can be nominated is capped in two ways, first by 100%. Once the nominations sum to 100%, participants are not able to nominate any more paths. Second, members are permitted to submit up to 2000 nominations combined for PTP and NITS, per peak of the Monthly ARR Allocation.*
- Q Do the Market Participants know what the residual cap is in Stage 2 for their Asset Owner (AO) prior to the closing of the nomination window?**
- a No. This residual cap is not calculated until the completion of the Stage 1 SFT, which occurs after the nomination window has already closed.*
- Q The binding constraints file shows a breakdown of which constraints bound in each stage. Can I assume that all of the constraints that bound in stage 2 also bound in stage 1?**
- a No, the binding constraints listed are exclusive to the listed stage. The constraints that bind depend on the way that participants interact with each stage of the allocation.*



**Q In stage 2, can a member submit their percent nominations using either the PTP or the NITS tab?**

*a The participant can use whichever tab has cap available. The only difference is that if a participant only has PTP service, they can only use the PTP tab, and if they only have NITS, they can only use the NITS tab. If the participant has both types of service, they can use either one.*

**Q In Stage 2, when the Nominated % is multiplied by the remaining nomination cap, it is possible that the MW value can be less than the minimum allowed nomination of 0.1 MW. What happens in this case?**

*a When the MW nomination is less than 0.1 MW, the nomination is truncated to 0 MW and is not included in the SFT calculations. For this reason, participants should bear in mind that there is risk associated with small percentage nominations, as the nomination may be too small to be included.*

**Q When are the stage 1 and stage 2 nominations of the Monthly ARR Allocation each submitted?**

*a The first and second stage nominations are both submitted at the same time during the single allocation window. To see when each monthly allocation is held, please use this link from the SPP Marketplace Portal that has the latest TCR calendar information: <https://www.spp.org/spp-documents-filings/?id=43632>.*

## LTCR (Long-term Transmission Congestion Right)

### Q How can I surrender my LTCR?

- a In Round 1 of the LTCR process you can "Keep" or "Decline" existing LTCRs in the TCR MUI. The LTCR default values will be set for the maximum value. To reduce or surrender LTCR MWs, reduce the MW amount to the desired value in 0.1 MW increments. Then **you must save and submit your portfolio.** Failing to save and submit would ultimately mean surrendering **all** previously allocated LTCRs.

### Q Do allocated LTCRs require self-converting in the regular ARR/TCR annual process?

- a No. The allocated LTCRs are automatic TCR awards and are available for your viewing through the MUI prior to the annual TCR auction.

### Q Is it necessary to nominate the previously awarded LTCRs again the following years?

- a Yes, previously awarded LTCRs must be nominated again in Round 1 of the LTCR process to keep them. As long as the firm transmission service MW backing the LTCR remains, the system prefills the nominations with the assumption that you're keeping all the previous LTCRs at the same amount (MWs); if desired, you can reduce the amount in 0.1 MW increments. Then **you must save and submit the portfolio** in order to keep them. Failing to save and submit would ultimately mean surrendering **all** previously allocated LTCRs.

### Q What's the nomination cap for each round of the LTCR process?

- a In Round 1, you keep or surrender previously awarded LTCRs. In Round 2, you can nominate 100% of any remaining nomination cap (less LTCRs kept in Round 1) from qualified LTCRs (candidate LTCRs).

### Q Does electing to surrender or reduce an LTCR preclude an MP from nominating the candidate LTCR in the future?

- a No, electing to surrender or reduce an LTCR does not preclude nominating the same candidate LTCR in Round 2 of any future annual LTCR processes.

### Q Will I need to opt out of allocated LTCRs for resources that retire or will the process automatically take the entitlement for the LTCR out of my portfolio?

- a If a resource retires, the participant will need to work with the Transmission Services department to update the transmission service as appropriate. Once the service is updated, the candidate LTCRs will reflect changes to service. During the verification window, it is the participants' responsibility to verify that the changes are correct.

The Transmission Services department can be contacted via the Request Management System (RMS) located at <https://spprms.issuetrak.com/Login.asp> using the "Engineering Planning" quick pick and the Subtype 1 "Transmission Services".

## ILTCR (Incremental Long-term Transmission Congestion Right)

### **Q Why do my ILTCR/LTCR reports not show a Service Type or LSE Type for ILTCR records?**

- a ILTCRs do not have a Service Type or LSE Type because they do not tie directly to Transmission Service Reservations. They are based on sponsored upgrades, so NITS or PTP would not be accurate. Even though they are not classified as LSE (Load Serving Entity) or non-LSE, they are evaluated along with LSEs in Round 2 of the LTCR allocation prior to non-LSE evaluation.*

### **Q Are ILTCRs evaluated as options or obligations?**

- a Like LTCRs, ILTCRs are evaluated as OPTIONS in the LTCR allocation simultaneous feasibility evaluation. However, once these ILTCRs are awarded and directly converted to TCRs, they become OBLIGATION type, the same as all other TCRs.*

### **Q When is SPP going to run an Initial ILTCR market?**

- a Initial ILTCR markets only happen when an MP requests to receive ILTCRs from a sponsored upgrade and only that MP will participate in the market. Depending on requests, one or more Initial ILTCR markets could occur at any time during the TCR year.*



What if?

**Q What if I have a question or a problem?**

*a Please contact us via the Request Management System (RMS) located at <https://spprms.issuetrak.com/Login.asp> using the "Transmission Congestion Rights (TCR) Inquiry" quick pick.*

*We are happy to help!*

**Q What if an MP doesn't submit their portfolio during an open auction/allocation window?**

*a They are unable to participate in that round of an auction/allocation.*

**Q Is there a way SPP can notify us of market actions?**

*a Yes, to be added to the recipient list of all TCR notifications, navigate to [SPP.org](http://SPP.org) and create a profile. While creating your profile, select the SPP Auction Revenue Rights/ Transmission Congestion group under the Exploder Lists section. You will receive a confirmation email once you have been added and receive all future TCR notifications through the email address used to create your profile on [SPP.org](http://SPP.org).*

**Q Does SPP rename nodes after the TCR auction results are published?**

*a SPP does not rename nodes after TCR auction results are published. We also do not maintain a comparison file of old vs new node names.*

**Q For a resource to be considered as an annual LTCR or ARR source, when is the deadline that the associated NITS or PTP agreement must be approved?**

*a For example in 2016, the annual processes were started in early February, a February 1 date then would typically allow new entitlements to be considered for the annual LTCR and/or ARR processes. Therefore, please observe the timing of the annual verification process for the deadline in any given year.*

*Also, be aware of any other processes that may impact the ability to achieve useable firm NITS or PTP transmission service in the Congestion Hedging process such as:*

- o Aggregate study timelines and deadlines for long-term service*
- o AFC process for monthly service study timelines and deadlines*
- o Registration deadlines for registering settlement locations and associated OASIS source/sink mappings (for 2016's annual process it was December 15<sup>th</sup>, 2015)*

*An example of this timing can be found in the presentation titled [SPP Registration-Timing Requirements at: https://www.spp.org/spp-documents-filings/?id=43632](https://www.spp.org/spp-documents-filings/?id=43632)*

## Process

### Q What is the bid limit per MP?

- a Section 5.4.1(4) of the SPP Market Protocols states that an MP is limited to a maximum combined submittal of 2,000 TCR bids and/or TCR offers per TCR round combined for PTP and NITS per product (on peak/ off peak) for each Asset Owner it represents.

### Q In the TCR Auction, are Bids and Offers priced as \$/MW-hour or \$/MW-period?

- a They are priced as \$/MW-period. The TCR MUI evaluates a Bid/Offer price as the price for all of the hours in the On/Off peak period.

### Q What is a reference bus in SPP?

- a The reference bus is the bus from which all clearing prices are calculated. The reference bus always has a price of \$0.

### Q How is the model made?

- a The process by which the TCR Model is created is detailed in the TCR Market Modeling Practices guide, which can be found on [www.spp.org](http://www.spp.org).

You can use the url

[https://www.spp.org/Documents/21423/TCR%20Market%20Modeling%20Processes\\_.pdf](https://www.spp.org/Documents/21423/TCR%20Market%20Modeling%20Processes_.pdf) or follow [www.spp.org](http://www.spp.org) >> Markets & Operations >> TCR Markets >> Related Document Groups >> TCR Reference Documents >> TCR Market Modeling Practices.

### Q I am trying to download the historic network models at SPP Marketplace Portal>TCR MUI>Download>Public>Network>Model.Raw, but when downloading the .zip file the contents of the file show 'noFileAvailable.txt.' Why?

- a Due to differing security requirements, the network model files are hosted on GlobalScape, not the MUI. To get access to GlobalScape please submit an RMS ticket asking for TCR model GlobalScape access. Please attach your signed TCR non-disclosure agreement (NDA) to the RMS ticket. The NDA can be found at <https://www.spp.org/engineering/modeling/> under Related Documents>SPP Confidentiality Agreement. Within the SPP Confidentiality Agreement document, select the link **Download the CD TCR Addendum** to download the necessary NDA.

### Q How are outages applied in the TCR process?

- a The TCR Market Modeling Practices guide can be found on [www.spp.org](http://www.spp.org). The section on Scheduled Outages can be found on page 6.

You could use the url

[https://www.spp.org/Documents/21423/TCR%20Market%20Modeling%20Processes\\_.pdf](https://www.spp.org/Documents/21423/TCR%20Market%20Modeling%20Processes_.pdf) or follow [www.spp.org](http://www.spp.org) >> Markets & Operations >> TCR Markets >> Related Document Groups >> TCR Reference Documents >> TCR Market Modeling Practices.

### Q Where can I track my enhancement requests?

- a There are multiple ways that enhancements can be tracked. The first is through the Change Working group (CWG). The CWG's meeting materials can be found at <https://www.spp.org/spp-documents-filings/?id=18239>. Additionally, enhancement requests can be tracked through the Stakeholder

*Prioritization Quarterly Meetings (SPQM). The SPQM meeting materials can be found at <https://www.spp.org/spp-documents-filings/?id=37347>. As enhancement requests travel through these working groups and meetings they are consistently identified by their SILK ID. A listing of these IDs and their associated requests can be found in the SPQM meeting materials.*

**Q Is there a calendar of the TCR process?**

- a Yes. Here is a link from the SPP Marketplace Portal that has the latest TCR calendar information: <https://www.spp.org/spp-documents-filings/?id=43632>. Please feel free to utilize the .ics files available in the Congestion Hedging [YYYY] Market Outlook folder; we worked very hard on them!*

**Q Is there a mapping between the Day-Ahead/Real-Time monitored/contingent facilities and the TCR device names?**

- a There is a NERC ID associated with the Day-Ahead/Real-Time monitored/contingent facilities file. You can cross-reference that ID against the OASIS flowgate posting and the TCR flowgates file to match up the elements. The OASIS flowgates file is posted at <https://www.oatiaoasis.com/SWPP/index.html> in the Transmission > Flowgates folder using the navigation bar on the left of the screen.*

**Q Will I see changes made to my entitlements/candidate ARR, ARRs or self-converted TCRs or LTCRs if a change occurs to the underlying firm confirmed transmission service after it is verified in the TCR markets annual process?**

- a No, once verified in the annual verification process the entitlements/candidate ARRs or any ARRs or self-converted TCRs from verified transmission service will be honored until the next annual verification process.*

*However, there are two exceptions to the above statement that apply to certain circumstances.*

*First, Attachment AE, section 7.1.1 describes the reversion of ARR/TCR rights based on transmission service with unexercised rollover rights.*

*For transmission service with rollover rights whose deadline for providing notice of rollover occurs after the Annual LTCR/ARR verification but before June 1, the Transmission Provider shall assume that the rollover will occur and shall consider the transmission service entitlement to span the entire allocation year, provided, however, that, if rollover rights for such transmission service are not exercised by the applicable deadline, any ARRs, TCRs, or LTCRs associated with such transmission service shall revert to the Transmission Provider effective on the date such transmission service terminates.*

*See SPP's Tariff at Attachment AE, section 7.1.1 ("Transmission Service and Incremental Long-Term Congestion Rights Verification").*

*Second, Attachment AE, section 7.9 (citing Attachment X) describes a scenario in which SPP terminates the TCR positions of an MP that has defaulted. See Attachment AE, section 7.9 ("Liquidation of Transmission Congestion Rights in the Event of Market Participant Default").*

**Q Can I transfer a portfolio of TCRs from one AO to another in the Secondary Market?**

- a No, there is not a mechanism to fully transfer a portfolio from one AO to another. The Secondary Market allows for the dayahead congestion rents from a TCR MW to transfer from the original AO to another. The cost to acquire the TCR stays with the original AO as the secondary purchaser pays TCR seller directly.*

## Funding

### Q How are TCRs priced?

- a TCRs are priced in the Day-Ahead Market by the creation of Locational Marginal Prices (LMPs) made up of three components: energy, losses, and congestion. The hourly TCR value is a construct of the differential in the congestion component of LMP between the TCR's source Settlement Location and sink Settlement Location. Please note that this financial position can be a credit or charge in any given hour. The dollar amount of each Asset Owner (AO) for each TCR instrument for a given hour of the Operating Day is calculated as follows:

$$TcrHrlyQty * (DaMccHrlyPrC_{source} - DaMccHrlyPrC_{sink})$$

See the SPP Market Protocols 4.5.8.14 Transmission Congestion Rights Funding Amount

The Settlement formulas can be found in Section 4 of the [SPP Market Protocols](#).

### Q Where does the money come from to pay TCRs?

- a The monetary funds used to settle TCRs come from the Day-Ahead Market congestion monies that are collected from load; this is a fundamental element of a LMP market. For hours where those funds are not sufficient to cover all TCRs, a TCR uplift charge is applied.

### Q Why does TCR underfunding occur?

- a TCR funding diverges from full funding when the value of TCRs sold cannot be covered by Day-Ahead Market congestion funds collected. This occurs when the TCRs sold are in excess of what can effectively flow on the given Day-Ahead transmission system model.

Per the Market Protocols under 4.5.8.15 Transmission Congestion Rights Daily Uplift Amount, "...to the extent that congestion revenues collected over the Operating Day are not sufficient to fund the net of the total charges and credits calculated under Section 4.5.8.14 over the Operating Day."

### Q How volatile is TCR funding?

- a Within any given day TCR funding may be over-funded or under-funded each hour resulting in the operating day being over-funded or under-funded on net.

This daily net funding then results in over-funding or under-funding for the month, as TCRs are a Monthly time-of-use right/hedging instrument. The intent of the market design and the running of the TCR markets is for funding to, on average, approach full funding (100%) over the TCR settlement year, which begins on June 1 of each year and runs through the end of May in the subsequent year.

### Q What are the mechanics that cause TCR funding divergence from 100%, i.e. too many TCRs?

- a The TCR funding issues are a function of what is known and forecasted at the time of the annual and monthly Congestion Hedging market processes and what actually occurs in the Day-Ahead Market.

The causes of under-funding tend to be a function of base loading from the annual process and the model assumptions such as ratings, outages (that are planned vs those that actually occur), and parallel (loop) flows (forecasted vs actually occur).

**Q What's SPP done/doing to address TCR funding issues?**

- a *SPP continues working on improving accuracy of estimations for parallel flow and outages. With implementation of Revision Request 91 (RR 91), in FERC Docket ER16-13, for the 2016 Annual TCR process, SPP has been better able to award rights on a more representative transmission system network model in the monthly processes, thereby assisting TCR funding.*

**Q Where is TCR funding discussed?**

- a *TCR funding is discussed in various reports by the SPP Market Monitoring Unit and by the TCR Market team, including presentations at the SPP Market Working Group (MWG) meetings. TCR funding is a topic which is discussed by other SPP Organizational Groups meetings such as: Markets and Operations Policy Committee (MOPC); Cost Allocation Working Group (CAWG); Credit Practices Working Group (CPWG); Regional State Committee (RSC); the SPP Board of Directors/Members Committee.*

*There are reports and presentations available as background materials for the various groups.*

**Q How is TCR uplift determined?**

- a *Uplift is a result of a funding shortage incurred on an hourly basis where the Day-Ahead Market congestion funds are not sufficient to cover the existing TCRs. The resulting uplift is distributed to MPs with TCRs based on a pro rata share of the sum of the absolute value of the TCR values as related to the overall total absolute value of TCR values in the Day-Ahead Market for that Operating Day.*

$$\text{Uplift Share of a TCR} = (\text{Operating Day's Net Deficit}) * \frac{\text{Abs.Value of TCR for Operating Day}}{\text{Abs.Value of All TCRs for the Operating Day}}$$

*For further detail, see the Market Protocols: 4.5.8.15 Transmission Congestion Rights Daily Uplift Amount*

*The Settlement formulas can be found in Section 4 of the [SPP Market Protocols](#).*

**Q Where can I get information about what TCR funding is?**

- a *Information is publicly available on the SPP Marketplace Portal <https://marketplace.spp.org>. You must log in to see the following information.*

*From the 'Settlements' link choose 'Public Reports' to see the most up-to-date TCRARR\_MMDDYYYY Excel document that provides ARR and TCR charge type activity by operating day.*

*From the 'Public' link choose the 'Public TCR Market' link, then choose 'Monthly Funding By Constraint' to see the various years of TCR funding by Day-Ahead Market binding constraint.*