



**Problem / Opportunity Statement**

FTR revenue inadequacy occurs when the total amount of congestion charges and excess FTR auction revenue is not sufficient to cover the value of FTR Target Allocations. Causes of FTR revenue inadequacy include the following: i. when there is less transmission system capability available in actual operations than was assumed to be available in the FTR allocation and auction processes, and ii. when the day-ahead modeling on which FTRs are based does not match the performance of the real-time market and (iii)- when revenue adequacy is impacted by certain types of FTR activity or product types as well as the presence of up-to-congestion (UTC) transactions.

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There are several drivers that result in this reduced system capability. First is the ongoing volume of scheduled maintenance and construction-related transmission outages, many of which are overlapping, which has diminished the transmission capacity margins. External loop flows take up transmission system capability that would otherwise be utilized by internal market participant activity. To the extent that these loop flows are greater than what was expected and modeled in the annual processes, they will contribute to FTR underfunding. PJM continues to expect the transmission system performance to improve as construction projects finish, but the volume of ongoing new transmission projects indicates this improvement is still three to four years into the future. Other contributors include modelling differences between the day-ahead market and real-time market. Additionally, certain types of participant activity or types of products could potentially negatively impact revenue adequacy.

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Another related driver is that the PJM Tariff requires that PJM allocate transmission rights that are known to be infeasible in the annual process in the first stage of the allocation referred to as "Stage 1A". PJM is also required to ensure that transmission upgrades are planned in order to ensure that Stage 1A rights are made and remain feasible for ten years into the future. These Tariff provisions stem from the PJM implementation of a FERC requirement, which in turn flows from the requirements of the Energy Policy Act of 2005, to facilitate the planning and expansion of transmission facilities to meet the reasonable needs of load-serving entities to satisfy the service obligations of the load-serving entities, and enables load-serving entities to secure firm transmission rights (or equivalent tradable or financial rights) on a long-term basis for long-term power supply arrangements made, or planned, to meet such needs. More recently another significant major driver of FTR revenue inadequacy has involved the evolving operating procedures PJM has initiated in order to ensure resources appropriately set LMP when required to operate for reliability. These procedures require PJM to operate for transmission constraints when flows are significantly below the physical ratings in order to reflect the resources being dispatched in the calculated marginal prices. Such resources can be large generating units with restrictive operating parameters, or demand response deployed in anticipation of or during emergency conditions. When LMPs reflect these resources' operation and the flows on the constrained facilities are well below their ratings, significant FTR underfunding can result.

With FTR underfunding that has occurred over the last several years, FTRs no longer perform the function of an effective hedge against congestion in the Day-Ahead market.

Given that FTR funding has remained low and the drivers appear to be expanding, PJM believes a review of the purpose and function of FTRs (i.e., hedge against day-ahead congestion, mechanism for distribution of congestion revenues, etc.) and a modification of the FTR allocation and funding mechanism may be warranted.

**Issue Source**

PJM initiated this problem statement based on the continuing trend of FTR underfunding and the increasing level to which the infeasibility of allocated Stage 1A ARRs has contributed the level of FTR underfunding.