Firm Service Step Up for Large Load Interconnections (LLWG-2026-1)

Detailed Design

Large Load Working Group

June 10, 2026

Purpose & Key Takeaway

Purpose

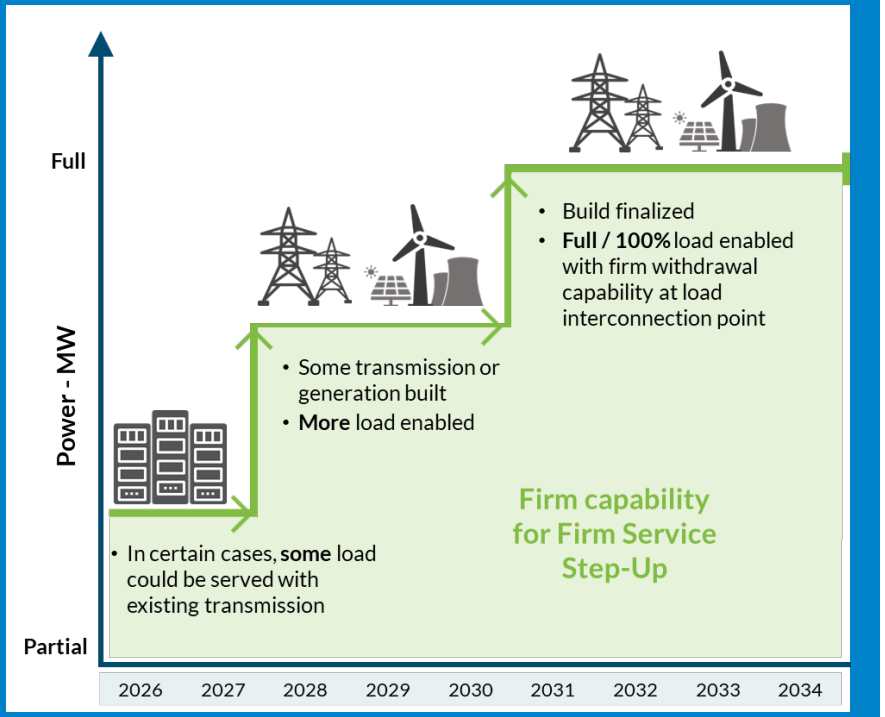
MISO is developing further details of the Firm Service Step Up process to evaluate partial load additions in the interim period.

Key Takeaways

- Firm Service Step Up would facilitate earlier interconnection of a portion of the load to support construction, commissioning and initial operations of large load projects
- The proposed process determines the amount of load that can be supported by availability of transmission capacity in the interim period
- Uses existing resource adequacy framework to ensure that sufficient capacity is procured to minimize reliability risks and impact on markets
- MISO is seeking Stakeholder feedback on elements of the proposed approach due by June 24, 2026

Background

Firm Service Step Up allows earlier load interconnection at reduced (partial) levels if existing system capacity is adequate.



- Interconnection Requests for Large Loads typically involve transmission upgrades submitted through the MTEP process
- Large Loads may request firm service to support partial interim load additions before full interconnection and upgrade completion; partial load is the amount of load needed to meet customer requirements for a specific period*
- The Firm Service Step-Up process provides a pathway to energize a portion of the Large Load:
  - Enables faster load interconnection using transmission capacity available in the interim.
  - Interim firm service requests are not studied in MTEP/EPR because no new upgrades are identified.
  - Multiple incremental load additions can significantly impact system reliability.
  - Requests are evaluated first-ready, first-served based on the earliest expected in-service date of customer load blocks

*Reliability limits may reduce the amount of firm service that can be provided to serve the load.

Firm Service Step Up Request Submittal

Requests are submitted by TO/LSE for partial load addition in interim period prior to full in-service date

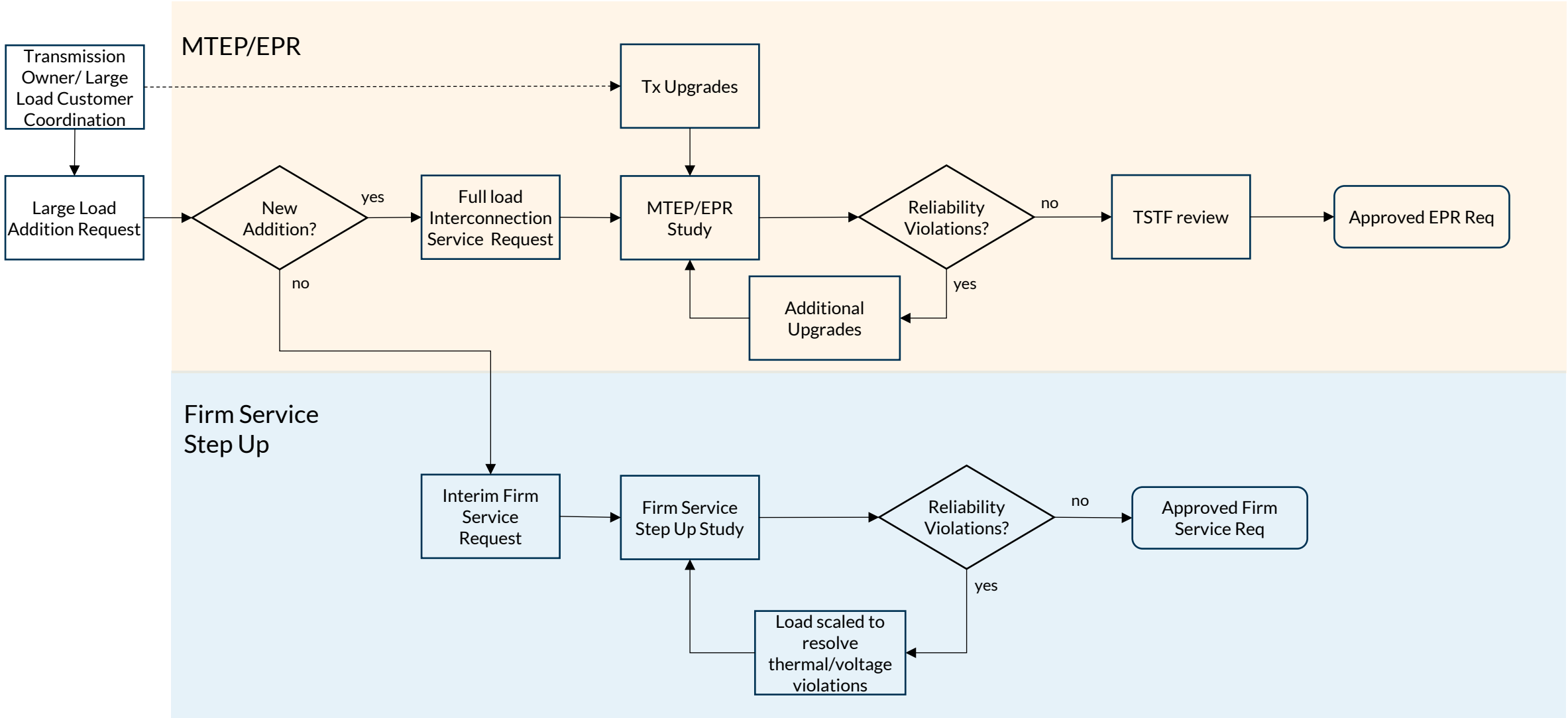
- TO and LSE coordinate submittal of interim firm service request after MTEP/EPR approval
- Requests for load additions that begin service within 36 months
- Interim firm service is submitted to MISO planning as a Firm Service Step Up request
  - Additional MW load block requested (incremental)
  - Requested In-service date
  - Associated MTEP request POI
  - Any prior approved transmission project associated with load increase – no new network upgrades
- TO/LSE may request additional step up load levels simultaneously
- Each successive block is studied as additional load to earlier approved requests

Approval of Firm Service

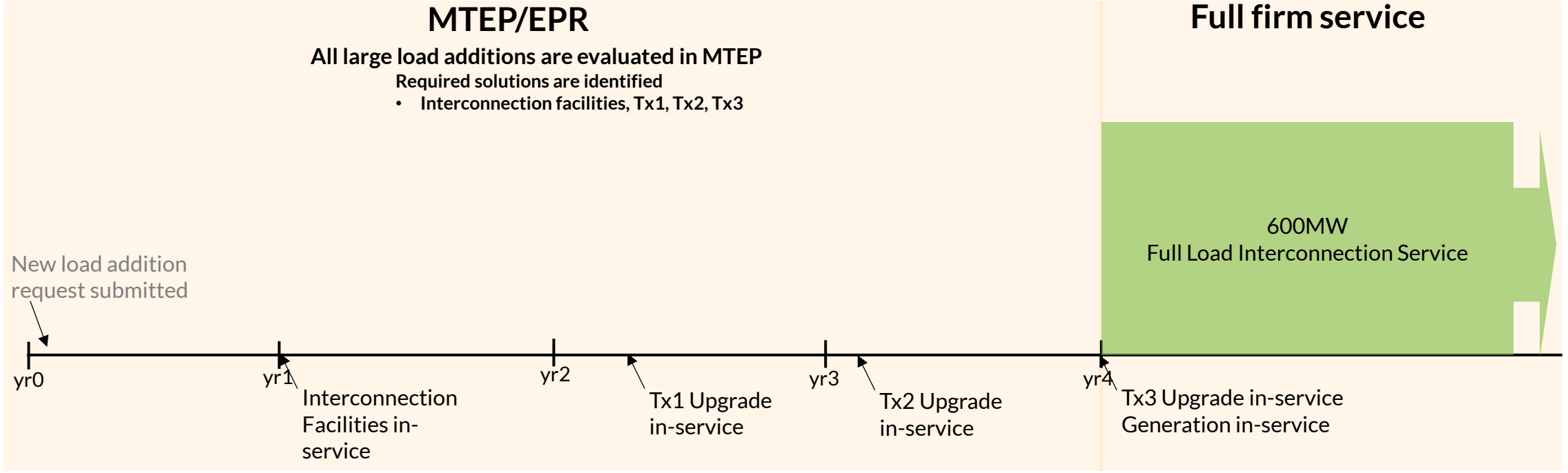
Firm service becomes effective after start of planning year and persists until the full in-service date

- Eligibility for the approved interim firm service level requires the LSE to procure necessary generation capacity
- Approved firm service level will be effective after start of planning year through the entire interim period
  - Superseded by full interconnection service when transmission upgrades are completed
- Firm service requests are cumulative – firm service level reflects total of all approved requests
- MISO will communicate approval with TO/LSE and coordinate with internal workstreams for operational readiness

Full load interconnection service and interim firm service are evaluated in two distinct processes



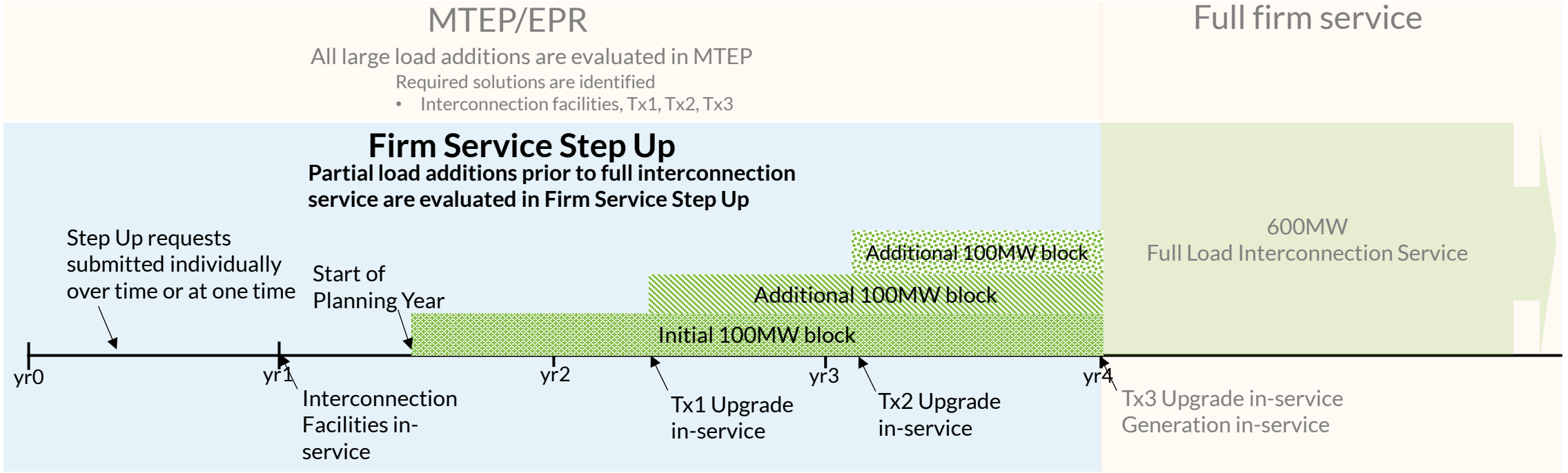
The Large Load interconnection workflow begins with MTEP/EPR request for full load interconnection study that includes associated transmission upgrades



- Transmission Owner and LSE coordinate submittal of full load interconnection request
- The study **includes associated interconnection facilities and network transmission upgrades**
- For EPR requests, **studies start every other month**

- The studies:
  - EPRs typically <3 months
  - NERC TPL-001 Reliability study – steady state/stability
  - Study window: **2 yr, 5 yr, 10 yr**

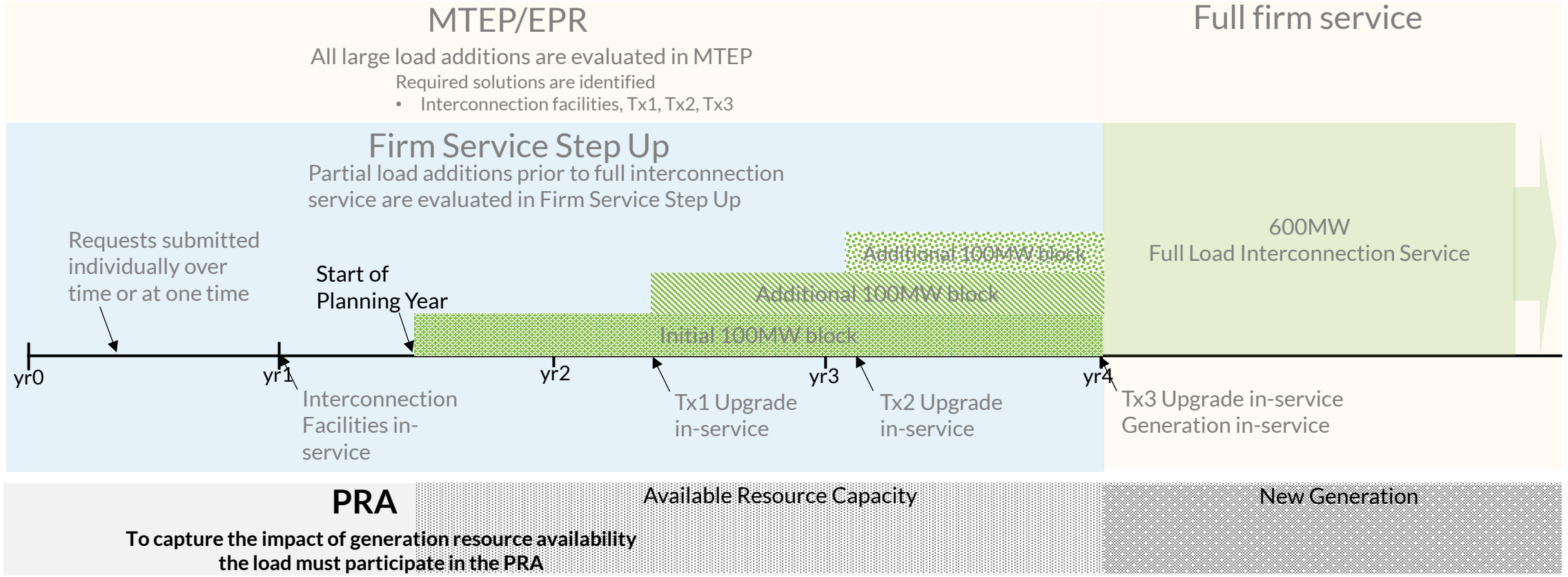
After MTEP/EPR approval, the TO/LSE may submit a Firm Service Step Up request for partial load addition(s) in the interim period before full load interconnection is operational



- The Transmission Owner and LSE coordinate submittal of partial load interconnection request; assessment of **available transmission capacity (i.e., not requiring new network upgrades)**
- **Study cycles are quarterly; requests within each cycle are prioritized on first ready, first served**
- Load level is studied for duration of the period until full load interconnection in-service date

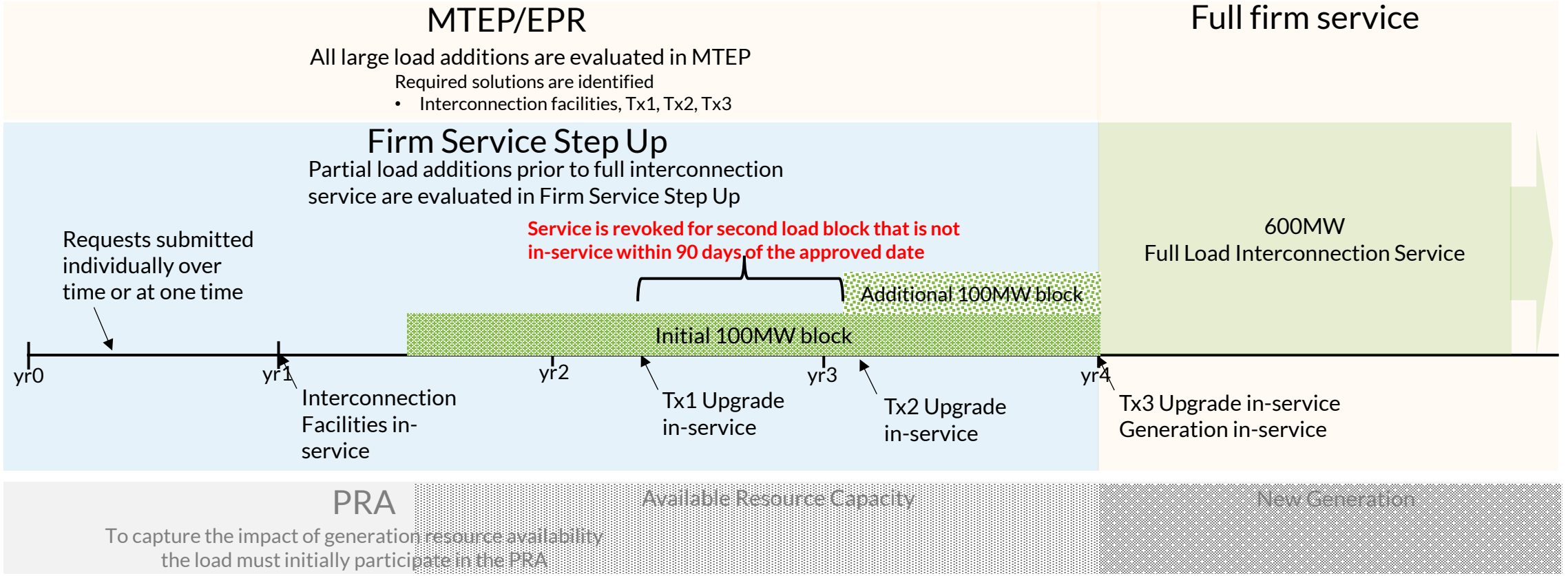
- The studies:
  - 90-day study timeline
  - NERC TPL-001 Reliability study – steady state/stability
  - Study window: **near-term (2+ yr) conditions**
  - **Examine pre-existing operating conditions (e.g., planned outages)**

After Firm Step Up approval, the load must participate in the Planning Resource Auction to ensure adequate generation resource availability



- Eligibility begins after the start of the planning year following approval
- LSE submits load and associated generation in Module E forecast to be included in resource adequacy assessment
- LSE obtains transmission service

Firm service is revoked for a load block that fails to begin operation and results in reduction in firm service level



- MISO will verify operational status with the TO/LSE after the in-service date
- If the incremental load is not in service after 90 days, MISO will notify the TO/LSE of revocation of service

- Revocation of approved load block for the entire interim period
- Firm Service granted for subsequent load blocks is maintained but total service level will be adjusted to reflect reduction in the load
- New request is required for additional load block

Stakeholder Feedback Request

- MISO requests feedback on the Firm Service Step Up Approach by Monday, June 24, 2026.
- Please provide feedback on:
  - Is there methods other than cycle based first-ready, first-served approach to prioritize requests?
  - Should requests be submitted for each load block or as a complete profile?
  - Is a quarterly interval a sufficient frequency for studies?
  - Is there another approach to account for generation availability apart from PRA alignment proposal?
- Feedback requests and responses are managed through the Feedback Tool on the MISO website at: https://www.misoenergy.org/engage/stakeholder-feedback/

Next Steps

- MISO will provide response to feedback at the Large Load Working Group meeting in July and review any adjustments to process and draft Tariff provisions
- MISO will seek feedback on proposed Tariff provisions and provide final Tariff language in August Large Load Working Group

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