Treatment of Capacity Exports from Local Reserve Zones

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Introduction

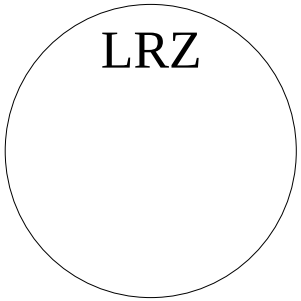
- This presentation discusses how capacity exports from Local Reserve Zones (LRZs) are treated under the current tariff, as well as the tariff change we have recommended.
- Introductory Concepts:
  - ✓ Capacity Import Limit (CIL) is effectively the Total Transfer Capability (TTC) for imports into a LRZ.
  - ✓ TTC = Base Power Transfer + First Contingency Incremental Transfer Capability (FCITC)
  - ✓ Base Power Transfer is are the initial loading in the load flow case from network resources serving load, plus schedules to external areas based on net firm transmission service rights.

How CIL is Calculated

- The following figure illustrates how the CIL is calculated with and without base transfers.
- MISO's power flow accounts for the effects of:
  - ✓ Exports going in one direction; and
  - ✓ Offsetting imports coming in from all directions.
- The offset may not be 1-to-1 depending on where the most limiting constraint is located.
- This approach is fully consistent with the current MISO Tariff, however, we recommend a tariff change to more efficiently account for off-system exports.

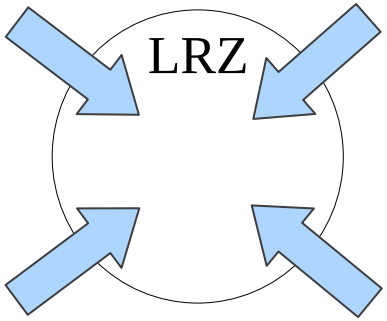
Capacity Import Limit
no Base Transfer

Base Case from Planning Model



Assume no Base Power Transfer

Transfer Analysis



2,000 MW Incremental Transfer Capability (ITC)

=

Total Transfer Capability (TTC)

Result:

CIL = 2,000 MW

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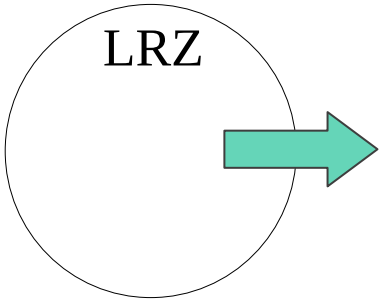
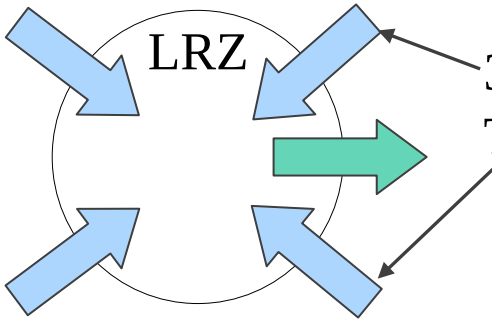
Capacity Import Limit with Base Transfers

Base Case from Planning Model



1,000 MW Base Power Transfer

Transfer Analysis



3,000 MW Incremental Transfer Capability

Result:

CIL = 3000 MW - 1000 MW

=

2,000 MW

Assumes a 1-to-1 offset between the base transfer and the ITC, this will depend on their relative shift factors on the limiting constraints.

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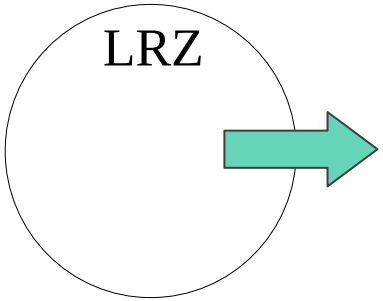
IMM Proposal for Off-System Exports

- The current approach effectively also assumes that the exporting resource is unavailable to serve needs of the zones, which is not accurate because:
  - ✓ The resource has accepted a capacity obligation (although to a neighboring area);
  - ✓ The resource is subject to Attachment Y provisions and may be designated as an SSR if it attempts to retire;
  - ✓ The resource will be under MISO's dispatch control.
- To account for the fact that exported resources physically located in the zone provide local reliability benefits in the zone, we recommend that:
  - ✓ MISO treat the export as a counter-flow over the CIL.
  - ✓ This is illustrated in the next figure.

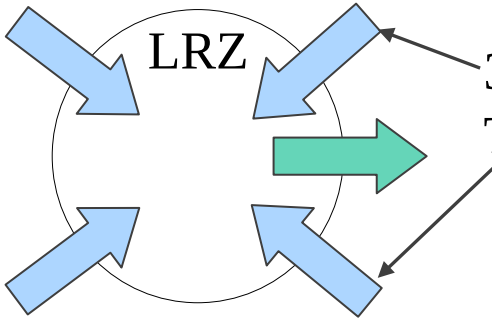
Capacity Import Limit with Base Transfers: Proposal

Base Case from Planning Model



1,000 MW Base Power Transfer

Transfer Analysis



3,000 MW Incremental Transfer Capability

Result:

CIL = 3000 MW - ~~1000 MW~~

=

3,000 MW

Assumes a 1-to-1 offset between the base transfer and the ITC, this will depend on their relative shift factors on the limiting constraints.

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