

Transmission Interface Transfer Capabilities: 2014 Regional System Plan Assumptions

Planning Advisory Committee



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Agenda

- Briefly describe the recent discussions regarding the inclusion of transmission interface transfer capabilities in the Regional System Plan (RSP) and the consideration of Capacity Zones to model in the Forward Capacity Market (FCM)
- Present transfer capabilities for RSP14
- Discuss the next steps

Transfer Capabilities and Zones in the FCM

- As a result of the recent stakeholder process regarding FCM zones, the ISO is proposing that:
 - The RSP shall include the results of the annual assessment of transmission transfer capability, conducted pursuant to applicable NERC, NPCC and ISO New England standards and criteria and the identification of potential future transmission system weaknesses and limiting facilities that could impact the transmission system's ability to reliably transfer energy in the planning horizon
 - Each annual assessment will identify those portions of the New England system, along with the associated interface boundaries, that should be considered in the assessment of Capacity Zones to be modeled in the Forward Capacity Market pursuant to ISO Tariff Section III.12

RSP14 – TRANSFER CAPABILITY ASSUMPTIONS

Base Interface Limits

Single-Value, Summer Peak,¹ Non-Firm, Transmission Interface Limits for Use in Subarea Transportation Models

<u>Interface</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>
New Brunswick-New England	700 ²	700 ²	700 ²	700 ²	700 ²	700 ²	700 ²	700 ²	700 ²	700 ²
Orrington South Export	1200	1325 ^a	1325	1325	1325	1325	1325	1325	1325	1325
Surowiec South	1150	1500 ^a	1500	1500	1500	1500	1500	1500	1500	1500
Maine-New Hampshire	1600	1900 ^a	1900	1900	1900	1900	1900	1900	1900	1900
North-South	2700	2700	2700	2700	2700	2700	2700	2700	2700	2700
East-West	2800	2800	2800	2800	2800	3500 ^b	3500	3500	3500	3500
West-East	1000	1000	1000	1000	1000	2200 ^b	2200	2200	2200	2200
Boston Import (N-1)	4850 ^c	4850	4850 ^d	4850	4850	4850	4850	4850	4850	4850
Boston Import (N-1-1)	4175 ^c	4175	4175 ^d	4175	4175	4175	4175	4175	4175	4175
SEMA/RI Export	3000	3000	3000	3000	3000	3400 ^b	3400	3400	3400	3400
Connecticut Import (N-1)	3050	3050	3050	2800 ^e	2800	2950 ^b	2950	2950	2950	2950
Connecticut Import (N-1-1)	1850	1850	1850	1600 ^e	1600	1750 ^b	1750	1750	1750	1750
SW Connecticut Import (N-1)	3200	3200	3200	3200	3200	3200	3200	3200	3200	3200
HQ-NE (Highgate)	200	200	200	200	200	200	200	200	200	200
HQ-NE (Phase II) ³	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
Cross-Sound Cable (CSC) (In) ⁴	0	0	0	0	0	0	0	0	0	0
Cross-Sound Cable (CSC) (Out)	346	346	346	346	346	346	346	346	346	346
NY-NE Summer ⁵	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
NY-NE Winter ⁵	1875	1875	1875	1875	1875	1875	1875	1875	1875	1875
NE-NY Summer ⁵	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
NE-NY Winter ⁵	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400

Notes are discussed on the following pages



Base Interface Limits

1. Limits are for the summer period, except where noted to be winter
 - The limits may not include possible simultaneous impacts, and should not be considered as “firm” (the bases for these limits are subject to more detailed review in the future)
 - For the years within the FCM horizon (2018, ninth Forward Capacity Auction (FCA-9) and sooner), only accepted certified transmission projects are included when identifying transfer limits
 - Certified transmission projects were presented to the Reliability Committee at their January 21, 2014 meeting
 - For the years beyond the FCM horizon (2019 and later), proposed plan approved transmission upgrades are included according to their expected in-service dates



Base Interface Limits, continued

- Relevant in-service dates
 - a) Maine Power Reliability Program – 2015
 - b) NEEWS Interstate Reliability Program – 12/2015 on the most recent RSP Project List
 - However, the certification of certain components of this project is still being considered by the ISO
 - c) The Boston import capabilities change in 2014 as a result of the combination of the retirement of Salem Harbor and the inclusion of the advanced NEMA/Boston upgrades
 - d) The effect of the addition of the Footprint generation project on the Boston import capability will be evaluated at a future date
 - e) With the certification of the new 345 kV Lake Road-Card line, the Lake Road generating facility will be modeled in the Connecticut Capacity Zone for Capacity Commitment Period 8 (2017), and beyond
 - The 345 kV Lake Road-Card line was certified to be in-service by 2016



Base Interface Limits, continued

2. The electrical limit of the New Brunswick-New England (NB-NE) Tie is 1,000 MW
 - When adjusted for the ability to deliver capacity to the greater New England Control area, the NB-NE transfer capability is 700 MW
 - This is because of downstream constraints; in particular Orrington South
3. The Hydro-Quebec Phase II interconnection is a DC tie with equipment ratings of 2,000 MW. Due to the need to protect for the loss of this line at full import level in the PJM and NY Control Areas' systems, ISO-NE has assumed its transfer capability for capacity and reliability calculation purposes to be 1,400 MW
 - This assumption is based on the results of loss-of-source analyses conducted by PJM and NY



Base Interface Limits, continued

4. Import capability on the Cross Sound Cable (CSC) is dependent on the level of local generation
5. New York interface limits
 - These are without CSC and with the Northport Norwalk Cable at 0 MW flow
 - Simultaneously importing into NE and SWCT or CT can lower the NY-NE capability (very rough decrease = 200 MW)
 - Simultaneously exporting to NY and importing to SWCT or CT can lower the NE-NY capability (very rough decrease = 700 MW)



Next Steps

- February PAC
 - Discuss the modeling characteristics of the New Hampshire, Vermont and West-Central Massachusetts Load Zones
- March PAC
 - Discuss the modeling characteristics of the SEMA and Rhode Island Load Zones
- April RC
 - Summarize the findings and identify those zones that are proposed to be analyzed for FCA-9
- RSP14
 - Document the findings in RSP14

Questions

