



2022 - 2023 IRM Proposed MARS Topology Updates

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Capacity Market Operations – Resource Adequacy

NYSRC-ICS

June 2, 2021



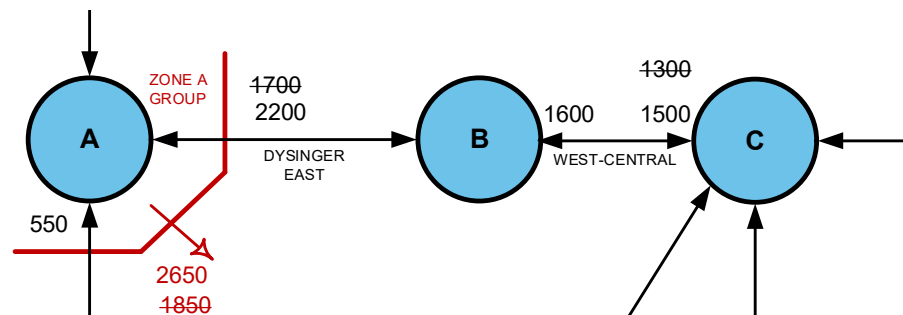
Objective

- **Review RNA Updates**
 - Western New York Public Policy Transmission Project impacts
 - Cedar Rapids Transmission Upgrade
- **Additional updates**
 - Status of IESO/Zone D PARs
 - Central East derates
- **Next Steps**

Western New York Public Policy Transmission Project impacts

- **Topology limit changes**

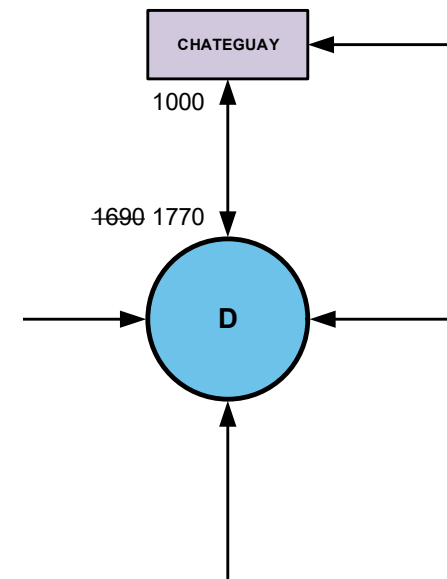
- Increased transfer limits between Zones A and B, and between Zones B and C



Update to Cedars

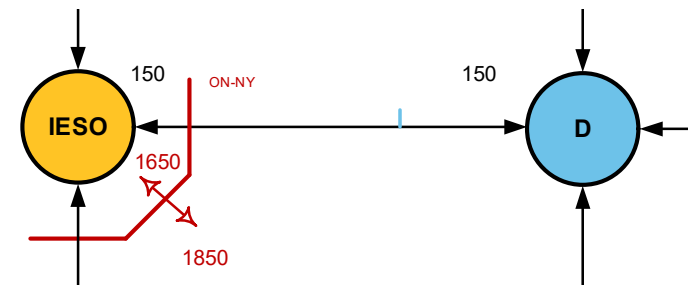
■ Topology limit changes

- Increased transfer limit between Zone D and Chateaugay bubble
 - <https://www.nyiso.com/documents/20142/2248793/2020-RNARReport-Nov2020.pdf>



IESO/NYISO PARS in Zone D

- At the May 5th NYSRC ICS meeting, the NYISO reported changes to the transfer limit between IESO and Zone D, as well as the IESO group interface limit due to the inclusion of 2 PARS
- The NYISO received updates from IESO that the status of a PAR is uncertain for next year
 - <http://mis.nyiso.com/public/pdf/ttcf/20210505ttcf.pdf>
 - <http://mis.nyiso.com/public/pdf/ttcf/20210524ttcf.pdf>
- The NYISO will model this interface as it was modeled for the 2021 IRM
 - Recommends further analysis (tan45, sensitivity) should any new data become available



Derates to Central East

- The NYISO received updates from the transmission owner that the Porter-Rotterdam (30 & 31) lines will be out of service
 - These values are considered preliminary pending final application of the reliability base case inclusion rules
- Derates are applied to the interface’s dynamic limit as well as the group interface limits
 - https://www.nyiso.com/documents/20142/3692791/CE_VoltageandStability_Limit_ReportFinalOCAApprove d3-17-2016.pdf/6464eebc-5736-67f5-e507-ececf18c9554

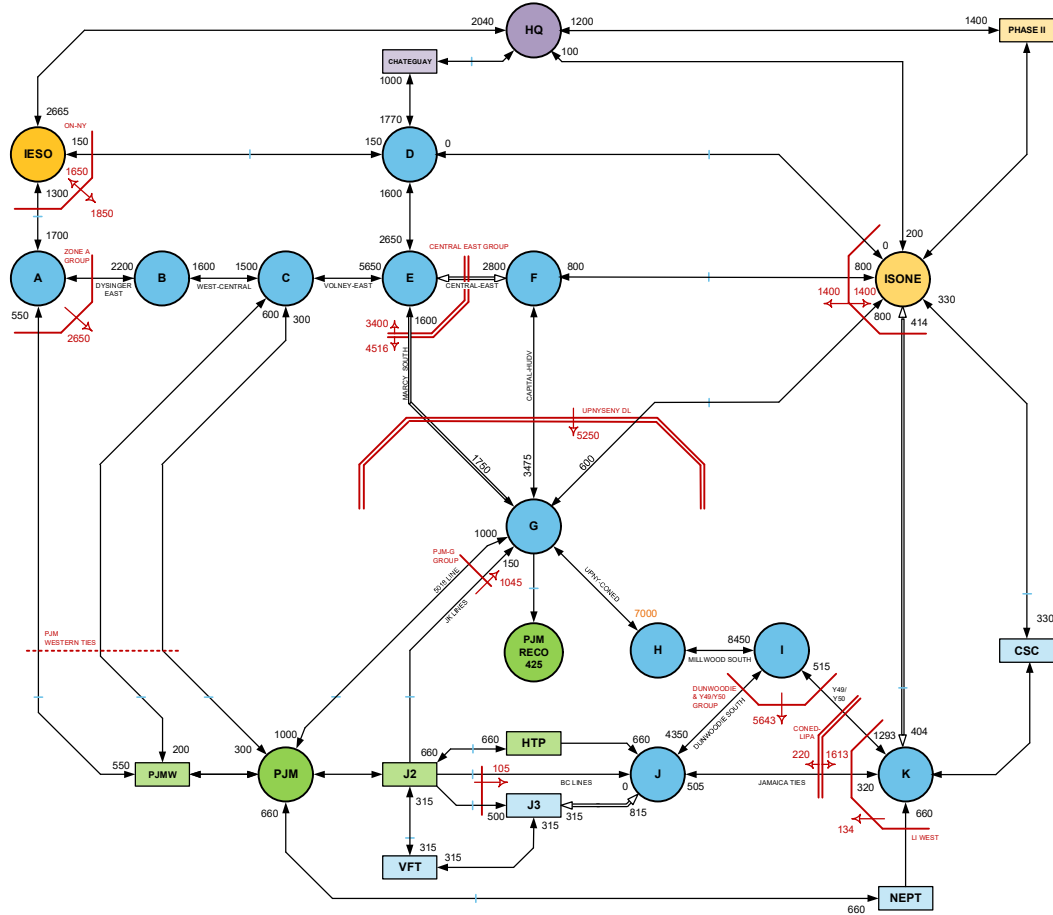
Central East Dynamic Limits				
Dependency	9MILP1, 9MILP2, FPNUC1, STHIND, OS05, OS06			
Units Available	Central East		Central East & Marcy Group	
	IRM2021	IRM2022	IRM2021	IRM2022
6	3100	2800	5000	4515
5	3050	2740	4925	4425
4	2990	2650	4840	4290
3	2885	2605	4685	4230
2	2770	2490	4510	4055
All other Conditions	2645	2415	4310	3935



Next Steps

- **A review of a subset of LIPA dynamic limits is underway**
 - Recommended we capture any updates in the September topology update
- **Update the external topology model upon receipt and review of the external data from the GE-MARS CP8 database**

Draft IRM 2022 Topology For New York Control Area



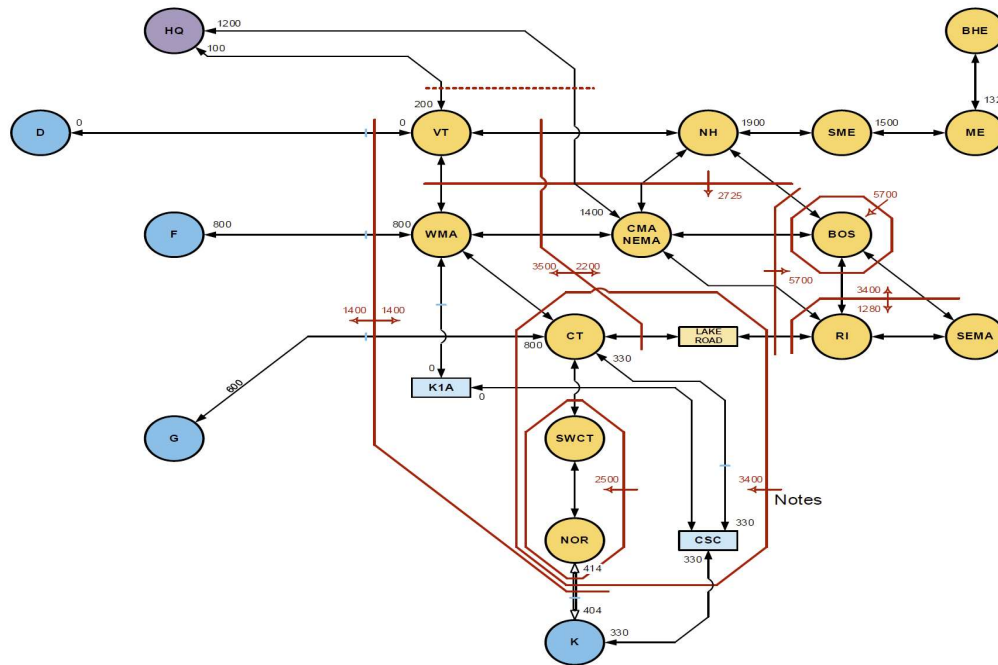
- Notes**
1. PJM to NY emergency assistance (EA) assumption for calculating the PJM-NY Western ties, PJM-G Group, and ABC Line Group flow distribution limit: 1500MW
 2. NYCA EA simultaneous import limit: 3,500 MW
 3. External areas representation based upon information received from the NPCC CP-8 WG

Legend



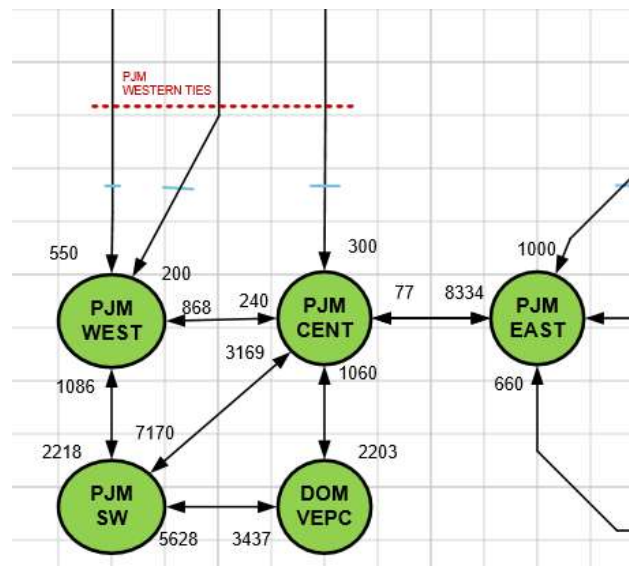
ISO-NE 14 Bubble Model*

*The external topology shown is from the 2021 IRM



PJM Bubble Model*

*The external topology shown is from the 2021 IRM



Draft Topology for 2020 RNA: Study Years 2021-2023 Dynamic Limits and Groupings Information

Interface Group	Limit	Flow Equation
LI_WEST	134	$(K \text{ to } I\&J) - 0.13*(K_NEPT)$

Central East Voltage Limits, Oswego Complex Units

Depends On:		9MILP1, 9MILP2, FPNUC1, STHIND, OS05, OS06			
Units Available	E_to_F		E_to_FG		
	Fwd	Rev	Fwd	Rev	
6	2800	1999	4515	3400	
5	2740	1999	4425	3400	
4	2650	1999	4290	3400	
3	2605	1999	4230	3400	
2	2490	1999	4055	3400	
Otherwise	2415	1999	3935	3400	

Staten Island Import Limits, AK and Linden CoGen Units

Unit Availability				J_to_J3	
AK02	AK03	LINCOG1	LINCOG2	Fwd	Rev
A	A	A	A	315	200
U	A	A	A	315	500
A	U	A	A	315	700
A	A	U	A	315	500
A	A	A	U	315	500
Otherwise				315	815

Depends On:		NPRTS1-4	
Units Available	U_NE		
	Norwalk to K	K to Norwalk	
4	260	414	
Otherwise	404	414	

Depends On:		Barrett1 and 2	
Units Available	ConEd-LIPA		
	IJ to K	K to IJ	
2	1613	220	
1	1613	200	
0	1613	130	

Voltage Limited Interfaces
 Central East MARS
 Central East Group
 UPNY-ConEd

PJM-NY JOA Flow Distribution (Jan 31, 2017 filing)	RECO Load Deliveries	PJM-NY Emergency Assistance
PJM-NY Western Ties	20%	46%
501B Line	80%	32%
JK Lines	0%	15%
A Line	0%	7%
BC Lines	0%	0%

US DL Limit (MW)	Units Available		
	CPV	Cricket	Athens
5250	2	3	3
5100	2	3	2
5350	1	3	3
5200	2	2	3
5150	2	1	3
5250	1	1	3
5100	2	0	3
5350	All Other Conditions		

E_TO_G DL Limit (MW)	Units Available
	CPV
1750	2
2000	1
2250	0

Questions?

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- Maintaining and enhancing regional reliability
- Operating open, fair and competitive wholesale electricity markets
- Planning the power system for the future
- Providing factual information to policymakers, stakeholders and investors in the power system

