New York ISO
Independent System Operator

External Control Area Modeling Update

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ICS

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Proposed External Area Model

- Consolidate 5 PJM (mid-Atlantic) areas into a single area
- Consolidate 14 ISO-NE areas into a single area

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Finished Scope

- **Simplified external control area topology representations (e.g., PJM)**
  - All load and resource are placed in a single bubble

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Method for Policy 5 Adjustment

- **External Control Areas are adjusted to meet the Policy 5 Requirements**
  - Adjust Load/Capacity to meet the Reserve Margin Requirement for each External Area
  - Additional Load/Capacity adjustment to meet the LOLE requirement for each External Area

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Results

Parametric Results						
Case	**Location**					**IRM**
	PJM LOLE	**ISONE LOLE**	**HQ**	**IESO**	**NYCA LOLE**	
2020 FBC	0.221	0.104	0.105	0.142	0.100	18.90%
2020FBC + simplified PJM	0.206	0.103	0.105	0.142	0.100	18.93%
2020FBC + simplified NE	0.238	0.105	0.106	0.134	0.100	20.10%
2020FBC + simplified NE+simplified PJM	0.146	0.105	0.106	0.143	0.100	20.10%
Tan 45 Results						
2020FBC + simplified NE+simplified PJM	0.14861	0.10484	0.10592	0.14852	0.100	19.80%

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Open Questions-Observations

- The NYISO observes some increase in the IRM increase in NE Single Bubble Case and NE+PJM Single Bubble Case

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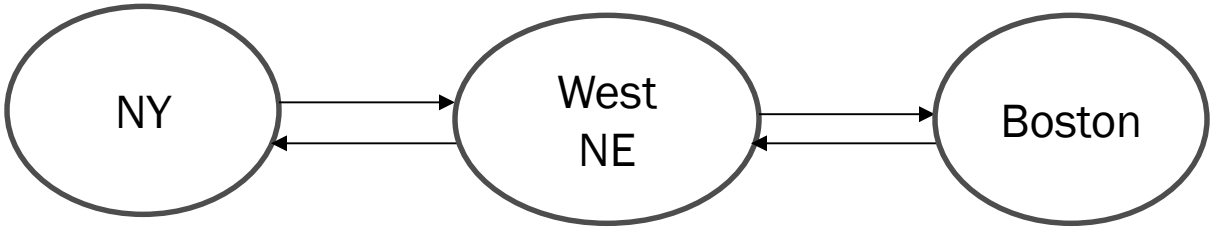
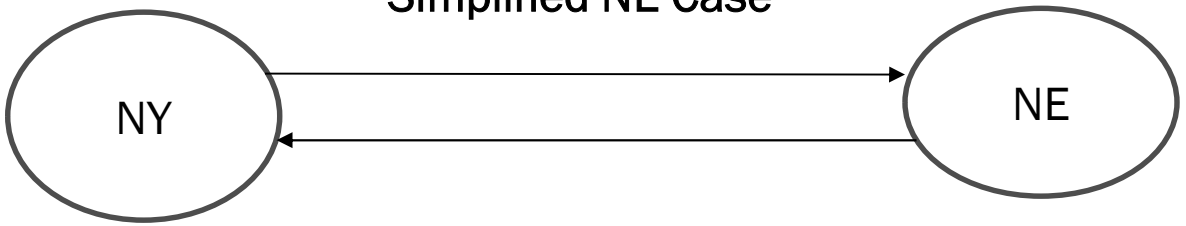
2020 FBC



NE currently has "bottled" excess capacity in western NE. that capacity can help NY avoid LOLE events because it cannot reach Boston / eastern NE to help NE avoid LOLE events.

Simplified NE Case



NY will not get emergency assistance to avoid the LOLE event from NE in the Single Bubble Case.

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Evidence

FBC	
Area	LOLE
BOSTON	0.10373
WMA	0.00024

The LOLE of western New England is extremely low

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Flow Table

FBC		
	Positive	
	Maximum	Average
Em.As. from NE to NYCA	1241.5	528.1
Import from NE to NYCA	1307.9	96.2
	Negative	
	Maximum	Average
Em.As. from NE to NYCA	215.7	317.5
Import from NE to NYCA	209.3	334.6

NE Single Bubble		
	Positive	
	Maximum	Average
Em.As. from NE to NYCA	387.3	247.7
Import from NE to NYCA	483.4	91.2
	Negative	
	Maximum	Average
Em.As. from NE to NYCA	34.1	336.2
Import from NE to NYCA	27.7	288.8

Combined Single Bubble		
	Positive	
	Maximum	Average
Em.As. from NE to NYCA	386.3	243
Import from NE to NYCA	482.4	91.2
	Negative	
	Maximum	Average
Em.As. from NE to NYCA	58.3	254.2
Import from NE to NYCA	51.8	201.8

There is a decrease in flow between NY and NE from the FBC to the Single Bubble Case

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Next Steps

- **Continue evaluation of Simplified Topology External Area Model**
  - Evaluate two bubble model for NE to represent capacity that could flow to NY
- **Consider specifying the amount of emergency assistance we expect from neighboring regions to mitigate IRM impact of simplified topology model**

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- Maintaining and enhancing regional reliability
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- Planning the power system for the future
- Providing factual information to policymakers, stakeholders and investors in the power system

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Questions?