

System & Resource Outlook Update

Economic Planning Department

Electric System Planning Working Group (ESPWG)

Wednesday June 8th, 2022 – WebEx Teleconference

Agenda

- **Outlook Study Status**
- **Preliminary Policy Case Results**
 - Scenario 1 (S1)
 - Scenario 2 (S2)
- **Renewable Pocket Analysis for 2035**
- **Additional Policy Case Results & Hourly Seasonal Analysis**
 - S1 & S2 Results for 2025, 2030, and 2035
- **Next Steps**

Outlook Study Status

- September – October 2021: Finalize reference case assumptions*
- November - December 2021: Conduct simulations and analysis*
- January, February, March, April 2022, May 2022: Conduct Policy case simulations and analysis
- **May-July 2022: Issue draft report, finalize draft report, seek input from Market Monitoring Unit, Business Issues Committee and Management Committee review and action**
- **August 2022: Seek Board of Directors review and approval**
- **Following issuance, the NYISO will conduct a public information session on the Outlook**

*Collaborate with ESPWG and seek stakeholder input

Information in italics represents an update from the previous status or schedule

Material Attached w/ Agenda

- **Final Capacity Expansion Assumptions Matrix (.pdf)**
- **Final Production Cost Assumptions Matrix (.pdf)**
- **Policy Case Generator Additions (.xlsx)**
 - Capacity Expansion Zonal Buildout
 - Production Cost Generator Placement
- **Pocket & Zonal Results (.xlsx)**
- **Chart Data (.xlsx)**
- **Draft Report – Chapter 1 (.pdf)**

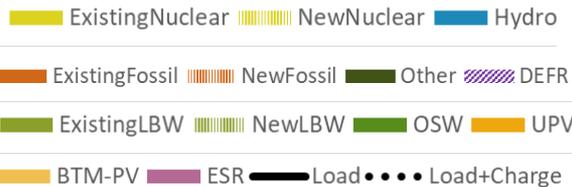
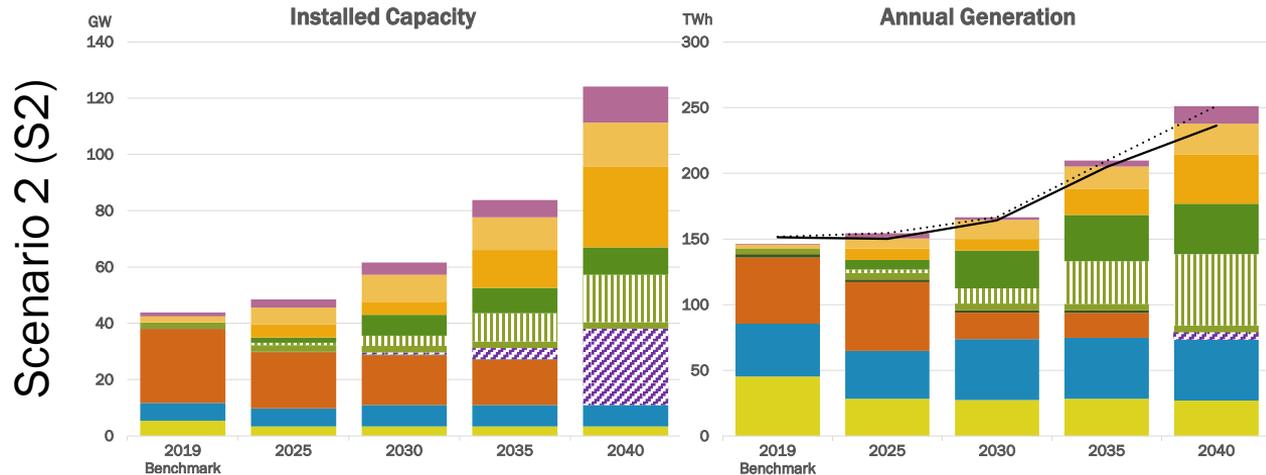
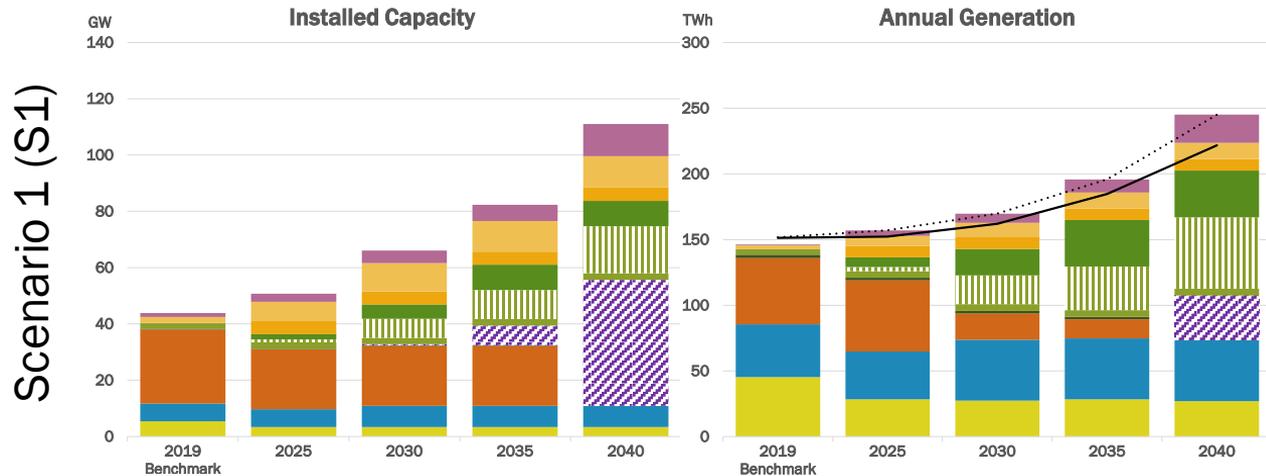
Policy Case

Policy Case Assumptions: Major Transmission Projects

Three additional major transmission projects are included in the Policy Case assumptions:

- NYPA Northern New York Priority Transmission Project
- Champlain Hudson Power Express
- Clean Path New York

Policy Case Capacity Expansion Cases



Generator Placement in Production Cost Model

- Policy Case generators were placed at available points of interconnections based on the latest Interconnection Queue using points that were not already utilized for contracted units in the Contract Case.
- For year 2035, new Policy Case generators were placed at the same locations within a zone as 2030
- The NYISO conducted iterative analysis to identify the need for these adjacent locations; however, the NYISO did not minimize zonal curtailment.
 - A test simulation was performed placing 2035 generation at adjacent higher kV buses (rather than a large injection at a single bus) in the same zone when generation at a single location exceeded 20%. Only a minor change in zonal/pocket curtailment was observed and therefore placement was kept consistent between 2030 and 2035

System Representation

- Fossil generators were retired based on Capacity Expansion results (in S1 and S2) and based on age as assumed in S2
- The baseline model contains generator operational constraints some of which represent the impact of reliability rules
- Must-run generation requirements were not replaced as affected generators were retired

Note On 2040 Policy Case Simulations

- For the 2040 study year, production cost simulations had difficulty solving. Approximately 8% of simulation hours were infeasible and simulation run-times exceeded 24 hours.
- To resolve, only bulk constraints were secured during simulations. The constraints less than 200kV were “relaxed,” meaning the facilities are monitored but not secured.
- 2040 results provide a directional, rather than a detailed, assessment of the transmission constraints.

Production Cost Simulation Results

- **The following slides show results from production cost simulations**
- **Some important differences between capacity expansion and production cost models to remember when viewing:**
 - Production cost results are nodal including neighboring systems, whereas the capacity expansion model was zonal without neighboring systems
 - Production cost results are hourly as compared to the use of representative time slices in capacity expansion
 - Production cost results accurately capture curtailment due to specific transmission constraints

Policy Attainment

The CLCPA Targets include 70% renewable generation in 2030 and (100%) zero-emissions in 2040. Indicative CLCPA annual renewable energy (%RE) and zero-emissions (%ZE) metrics were calculated as shown:

$$RE = LBW + OSW + UPV + BTM-PV + Hydro + HQimports$$

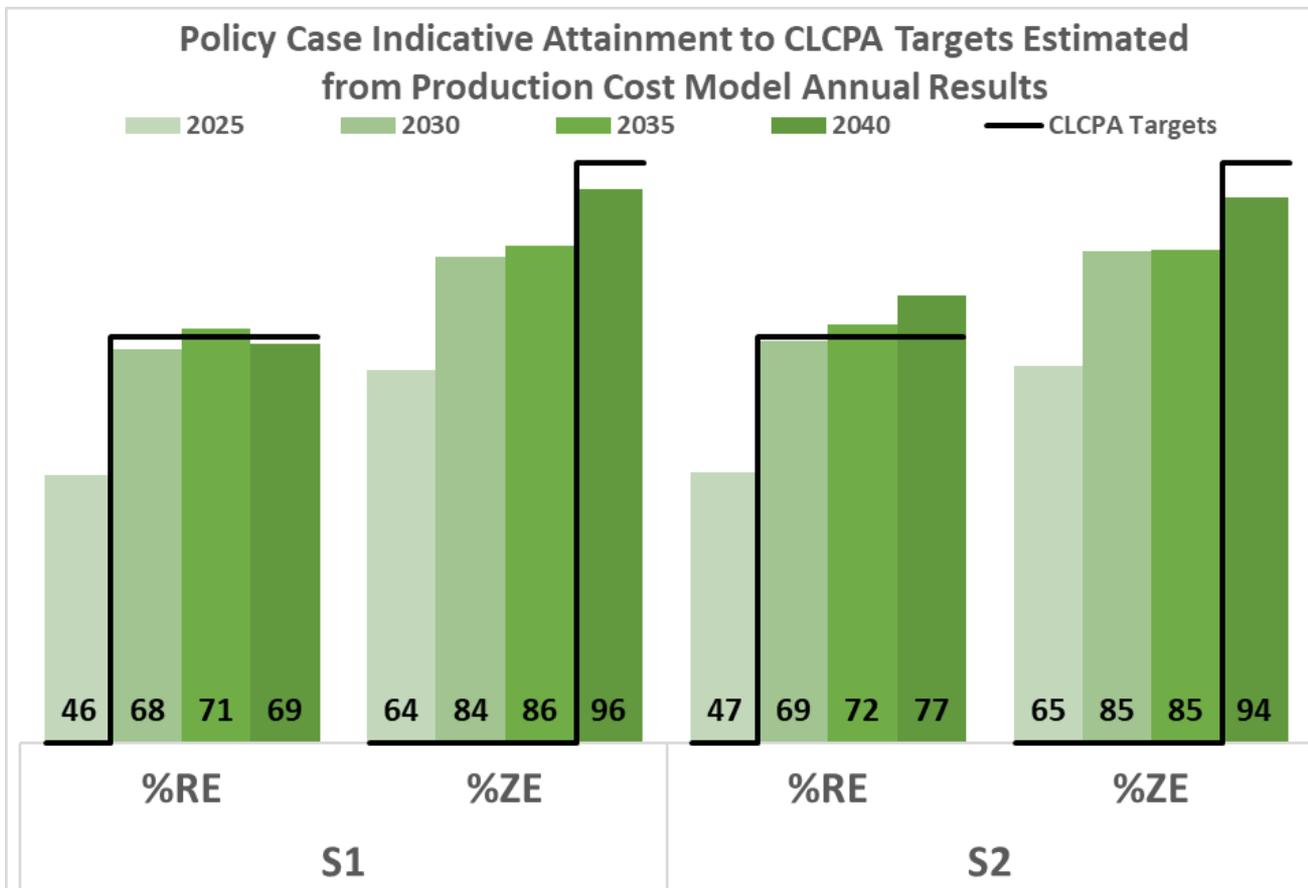
$$ZE = RE + Nuclear + DEFR$$

$$\%RE = RE / GrossLoad$$

$$\%ZE = (ZE + StorageDischarge) / (GrossLoad + StorageCharge)$$

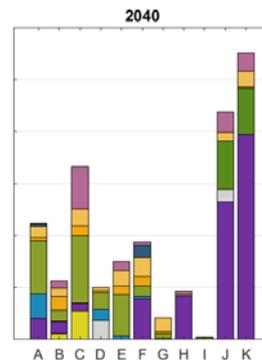
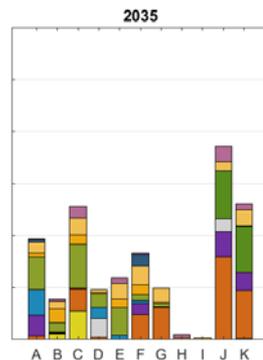
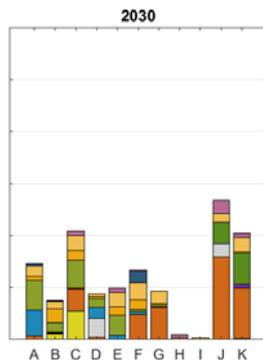
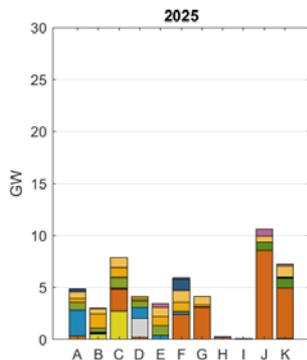
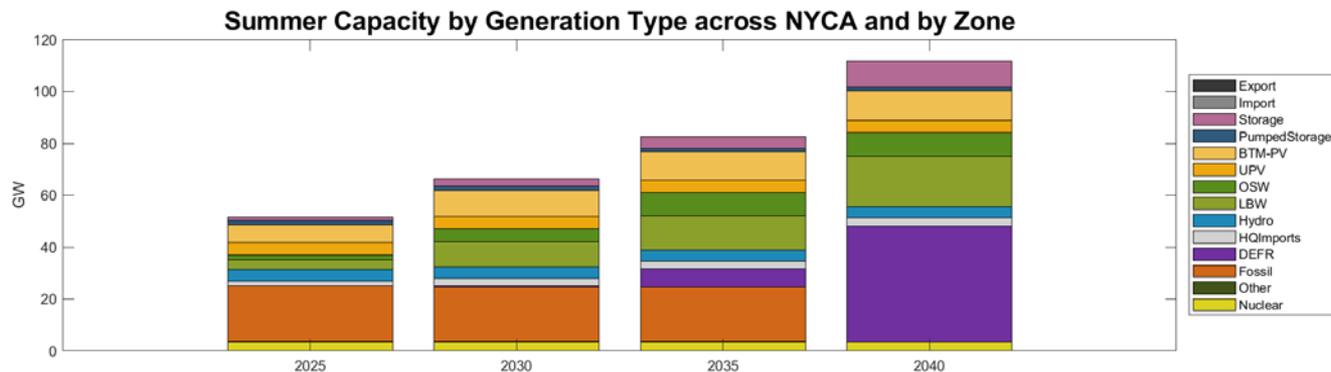
- No attempt was made to achieve full attainment of CLCPA requirements in the production cost model
- Accounting towards these targets will be based on programs to be developed by the PSC. A simplified representative calculation of the renewable and zero-emissions percentages are provided for informational purposes.
- These output metrics are distinct from the actual computations performed by NYSERDA/PSC to calculate the state's fuel mix and progress towards achieving the CLCPA targets, e.g., imports and exports were not considered as part of this simplified calculation.
- Storage includes Pumped Storage and Batteries. The percentage of ZE computed in all years includes impact of StorageDischarge and StorageCharge even though not all storage charging will be from ZE supply before 2040.

Policy Attainment in Production Cost Modeling Results

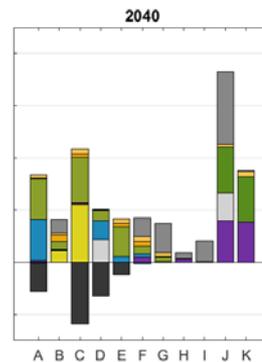
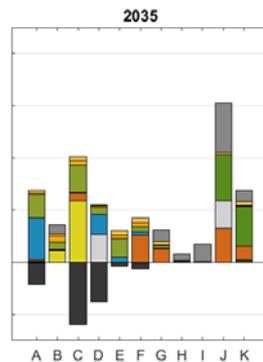
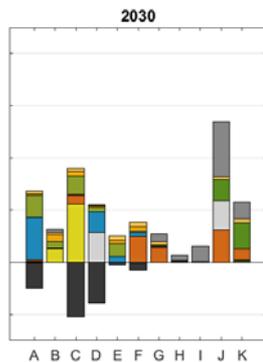
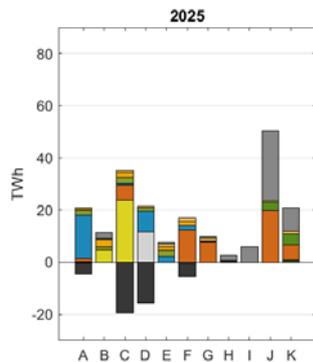
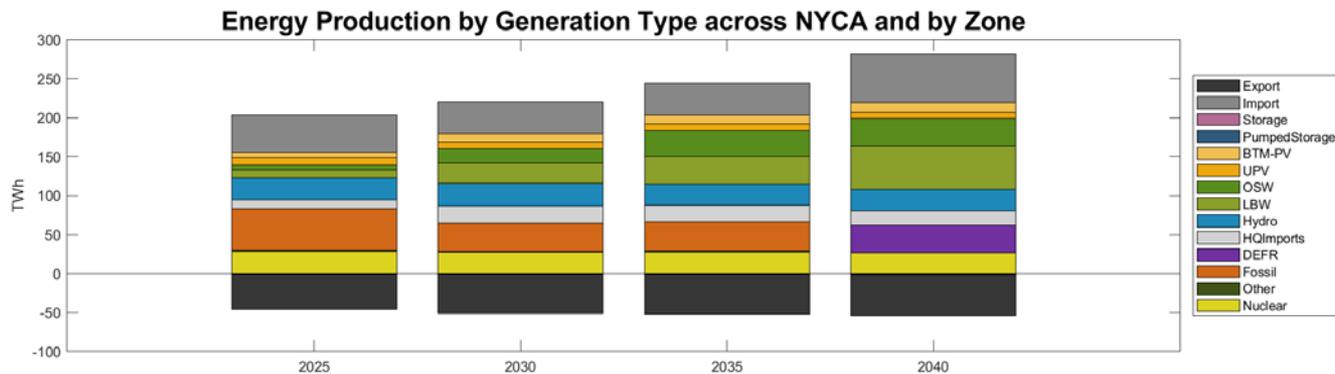


Policy Case: Preliminary Scenario 1 (S1) Results

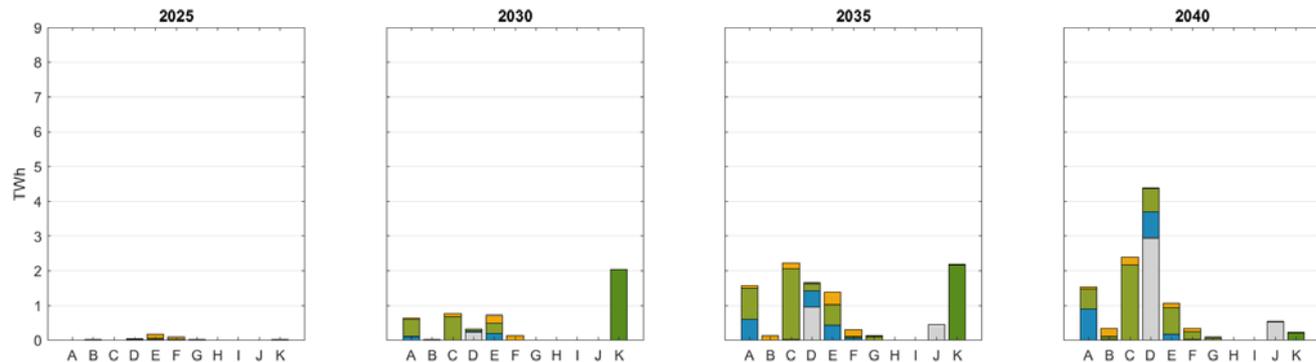
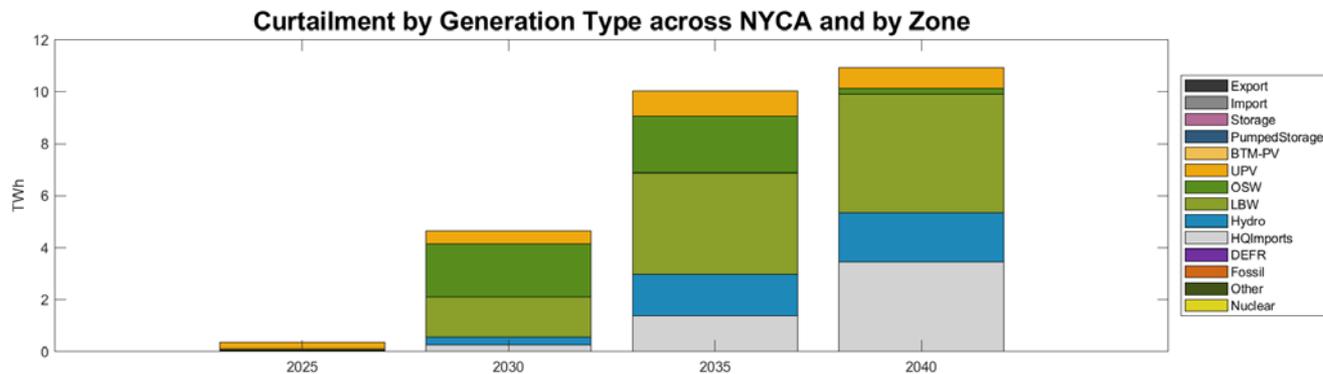
Policy Case (S1) Generation Capacity



Policy Case (S1) Energy Production

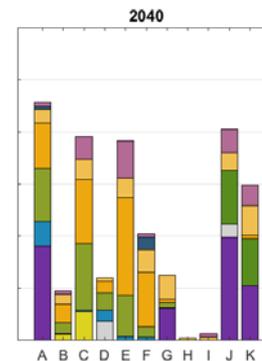
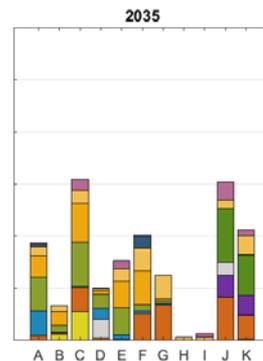
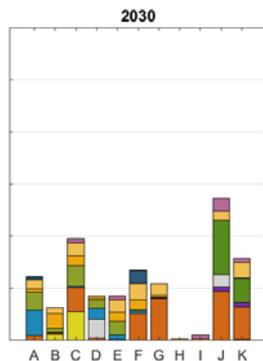
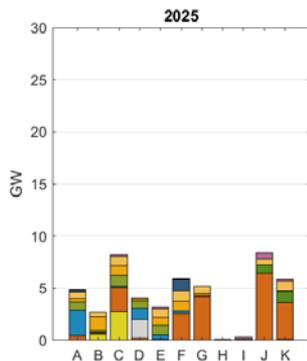
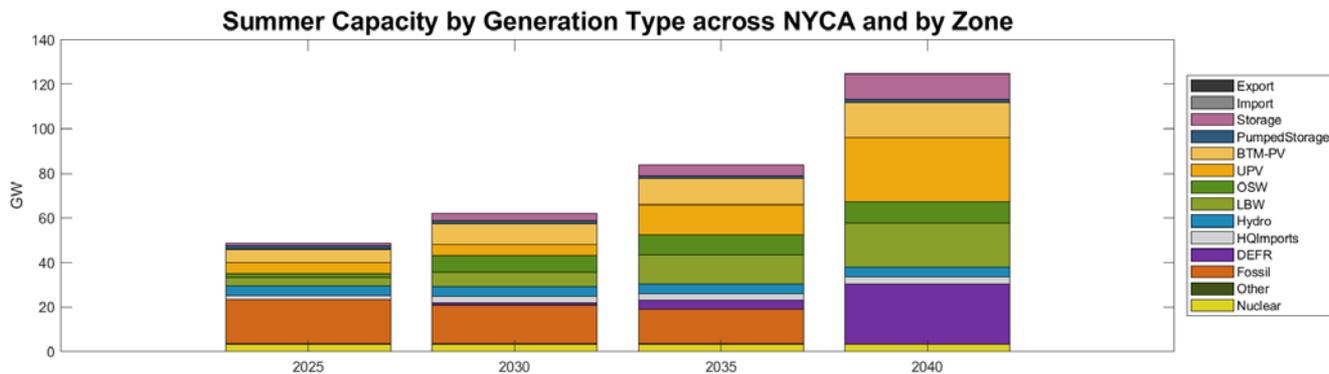


Policy Case (S1) Curtailment

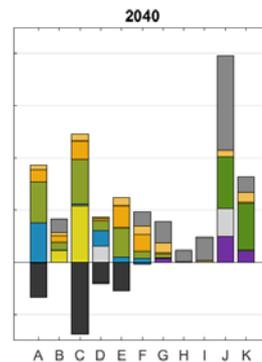
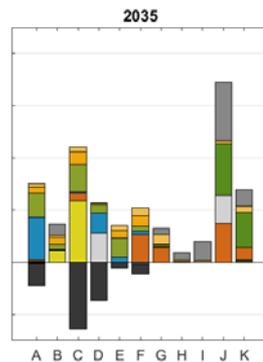
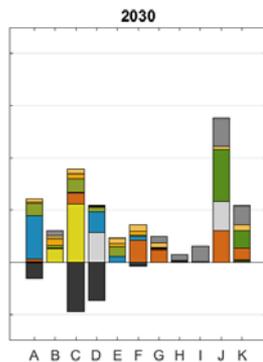
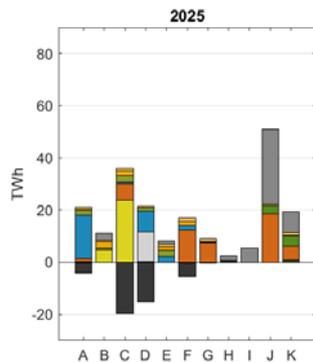
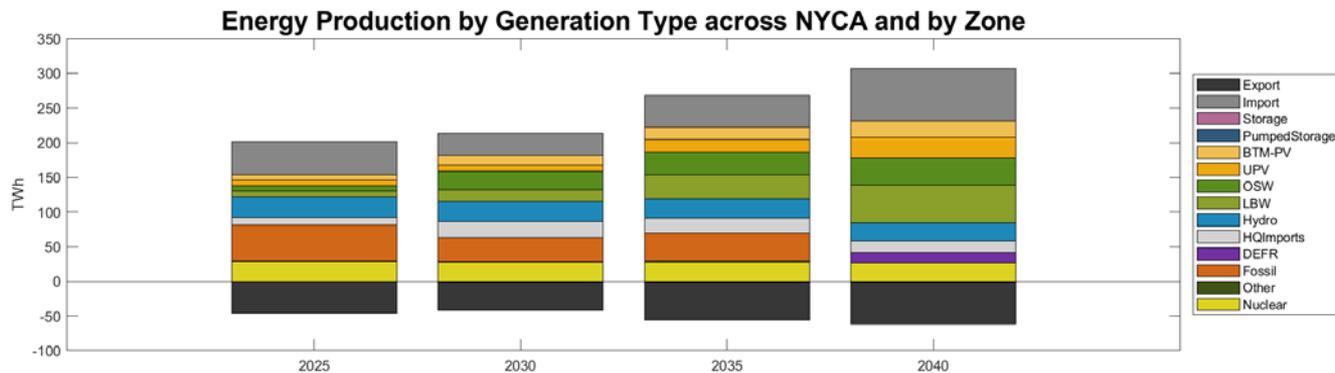


Policy Case: Preliminary Scenario 2 (S2) Results

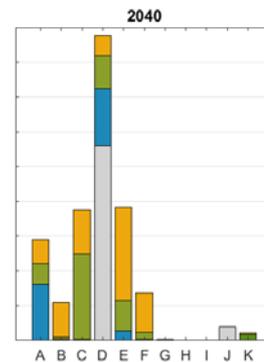
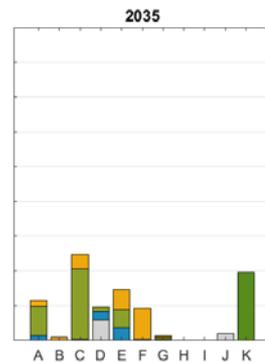
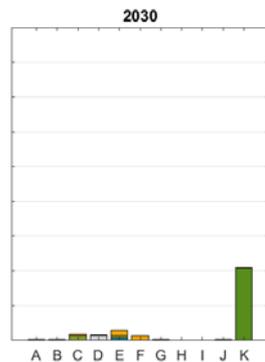
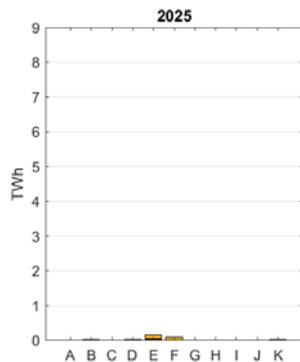
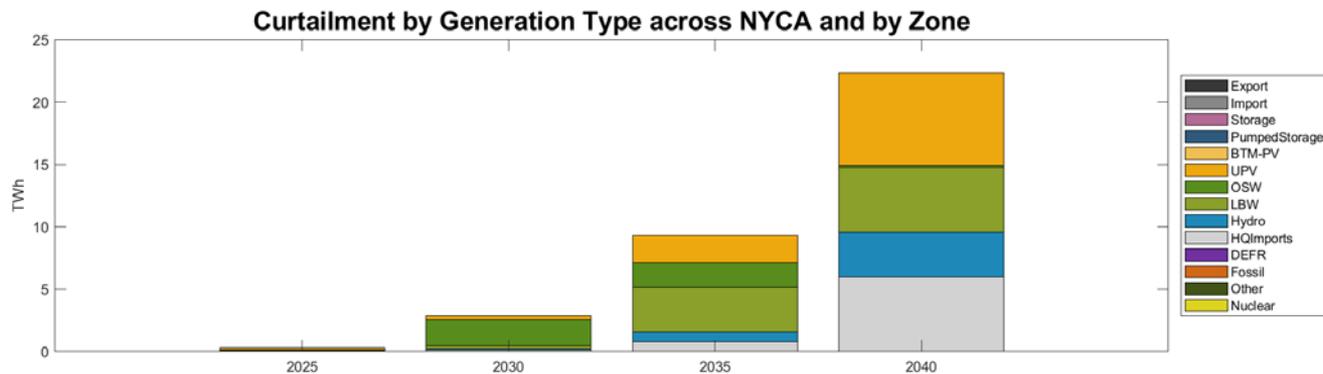
Policy Case (S2) Generation Capacity



Policy Case (S2) Energy Production



Policy Case (S2) Curtailment



Policy Case: Renewable Pocket Analysis for 2035

Policy Case Pocket Metrics (2035)

- **Dispatched Energy = Scheduled Energy – Curtailment**
- **Energy Deliverability (%) = Dispatched Energy / Scheduled Energy**
- **Hourly simulations underestimate real-time curtailments due to several factors including, but not limited to, not capturing transmission outages, forecast error, and real-time events**
- **Specific project interconnection configurations are not modeled as part of the Outlook**
- **As reported in the Policy S1 and S2 Case Pocket Metrics on the following slides, Hydro includes existing NYCA hydro generators and HQ Imports to reflecting qualifying imports from Hydro Quebec**

Policy S1 Case Pocket Metrics (2035)

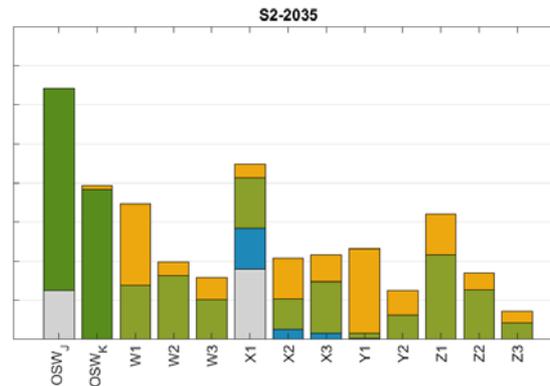
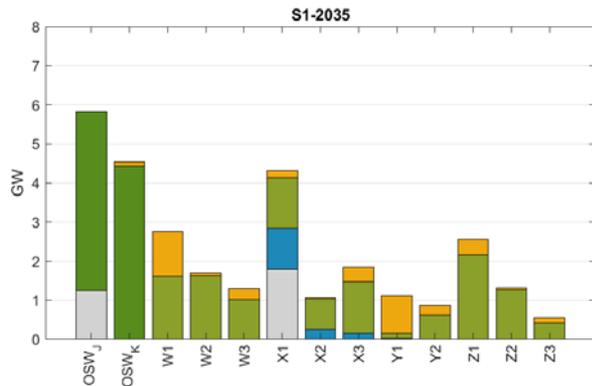
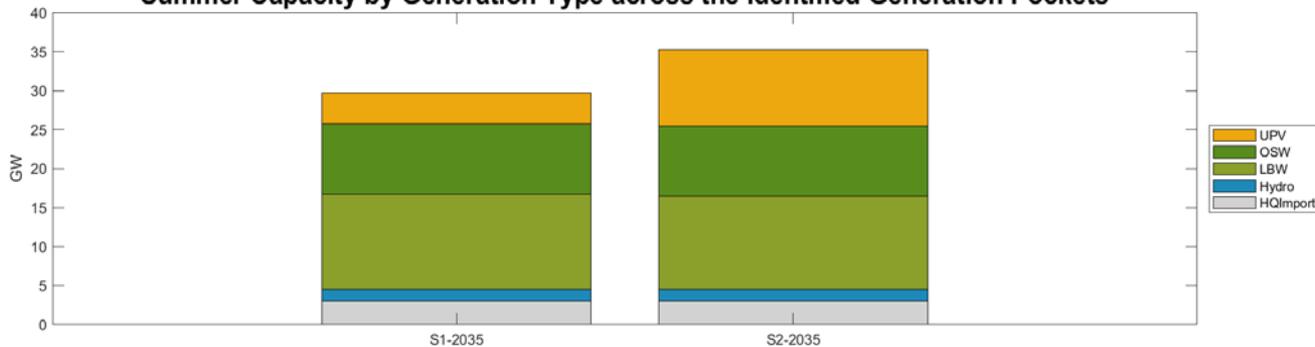
Pockets	Type	Capacity (MW)	Energy (GWh)	Scheduled Energy (GWh)	Curtailed Energy (GWh)	Energy Deliverability
W1	Solar	1,130	2,135	2,241	106	95%
	Wind	1,621	5,137	5,155	18	100%
W2	Solar	60	70	84	14	83%
	Wind	1,633	4,154	4,736	582	88%
W3	Solar	290	388	449	61	87%
	Wind	1,012	2,666	3,034	368	88%
X1	Hydro	1,068	7,485	7,929	445	94%
	HQI mport	1,930	10,553	11,517	964	92%
	Solar	180	356	367	12	97%
	Wind	1,274	3,070	3,298	228	93%
X2	Hydro	249	1,222	1,407	185	87%
	Solar	35	42	56	14	75%
	Wind	785	1,921	2,013	92	95%
X3	Hydro	156	523	782	259	67%
	Solar	369	434	678	244	64%
	Wind	1,313	3,954	4,224	270	94%
Y1	Hydro	30	107	114	7	94%
	Solar	961	1,642	1,869	227	88%
	Wind	120	296	337	41	88%
Y2	Solar	250	392	422	30	93%
	Wind	618	1,911	2,042	132	94%
Z1	Solar	405	605	711	106	85%
	Wind	2,160	4,596	6,217	1,621	74%
Z2	Solar	60	72	97	26	74%
	Wind	1,257	3,702	4,084	382	91%
Z3	Solar	150	244	280	36	87%
	Wind	413	1,123	1,224	101	92%
OSW J	Offshore Wind	4,571	17,699	17,712	13	100%
	HQI mport	1,250	10,512	10,950	438	96%
OSW K	Offshore Wind	4,430	15,490	17,652	2,162	88%
	Solar	99	136	160	24	85%

Policy S2 Case Pocket Metrics (2035)

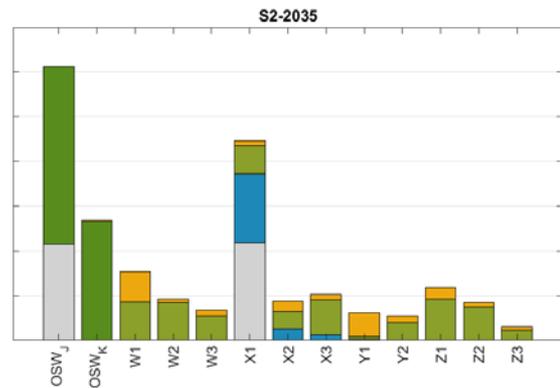
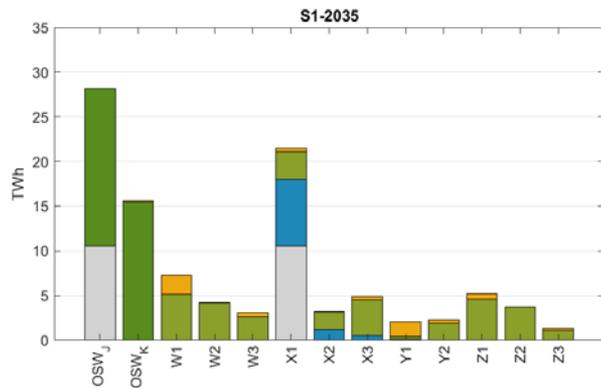
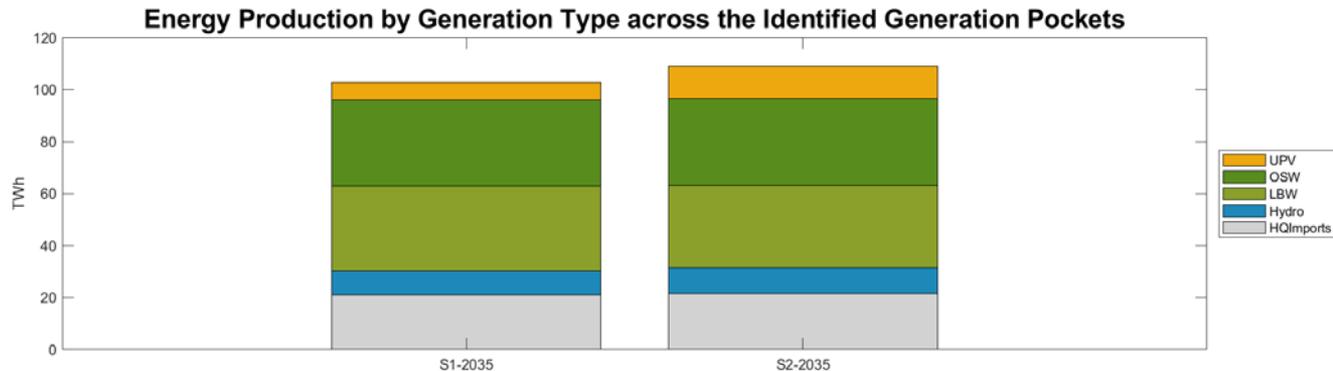
Pockets	Type	Capacity (MW)	Energy (GWh)	Scheduled Energy (GWh)	Curtailed Energy (GWh)	Energy Deliverability
W1	Solar	2,092	3,322	3,395	72	98%
	Wind	1,375	4,315	4,318	2	100%
W2	Solar	349	429	451	22	95%
	Wind	1,633	4,168	4,736	568	88%
W3	Solar	574	656	790	134	83%
	Wind	1,012	2,711	3,034	324	89%
X1	Hydro	1,068	7,709	7,929	221	97%
	HQI mport	1,930	10,924	11,517	594	95%
	Solar	355	560	565	5	99%
	Wind	1,274	3,152	3,298	146	96%
X2	Hydro	249	1,259	1,407	148	89%
	Solar	1,043	1,161	1,188	27	98%
	Wind	785	1,964	2,013	49	98%
X3	Hydro	156	551	782	231	70%
	Solar	686	608	1,038	429	59%
	Wind	1,313	3,961	4,224	263	94%
Y1	Hydro	30	110	114	4	97%
	Solar	2,162	2,600	3,392	792	77%
	Wind	120	296	337	41	88%
Y2	Solar	626	795	907	112	88%
	Wind	618	1,962	2,042	81	96%
Z1	Solar	1,037	1,340	1,535	195	87%
	Wind	2,160	4,591	6,217	1,625	74%
Z2	Solar	443	484	557	73	87%
	Wind	1,257	3,720	4,084	364	91%
Z3	Solar	303	390	480	90	81%
	Wind	413	1,114	1,224	110	91%
OSW J	Offshore Wind	5,166	19,923	19,924	1	100%
	HQI mport	1,250	10,759	10,950	191	98%
OSW K	Offshore Wind	3,835	13,280	15,227	1,947	87%
	Solar	99	150	160	10	94%

Renewable Pocket Generation Capacity

Summer Capacity by Generation Type across the Identified Generation Pockets

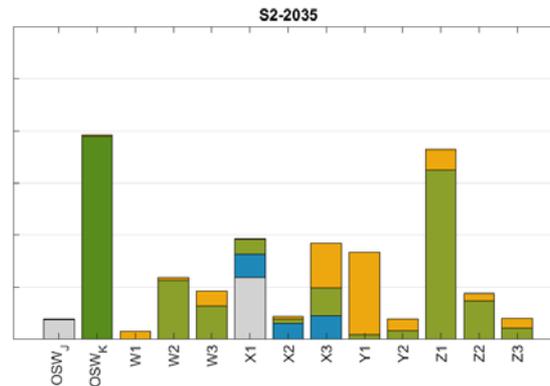
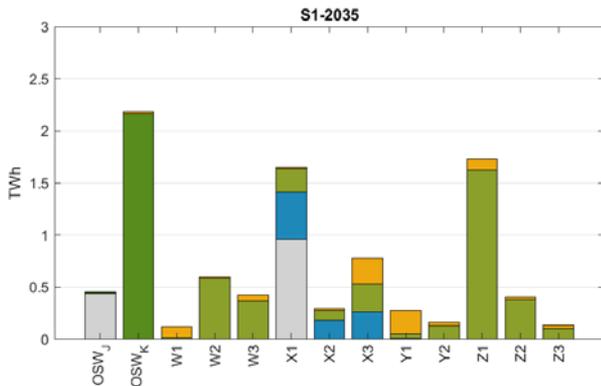
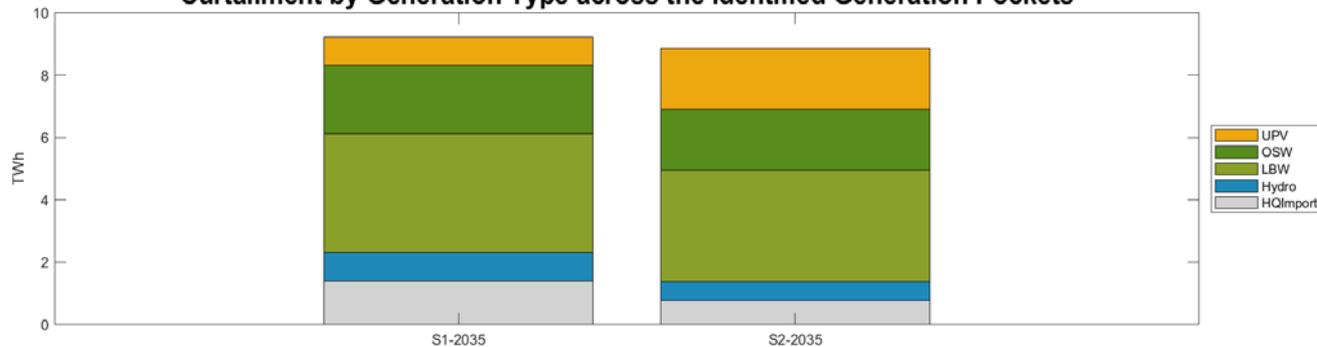


Renewable Pocket Energy Production



Renewable Pocket Curtailment

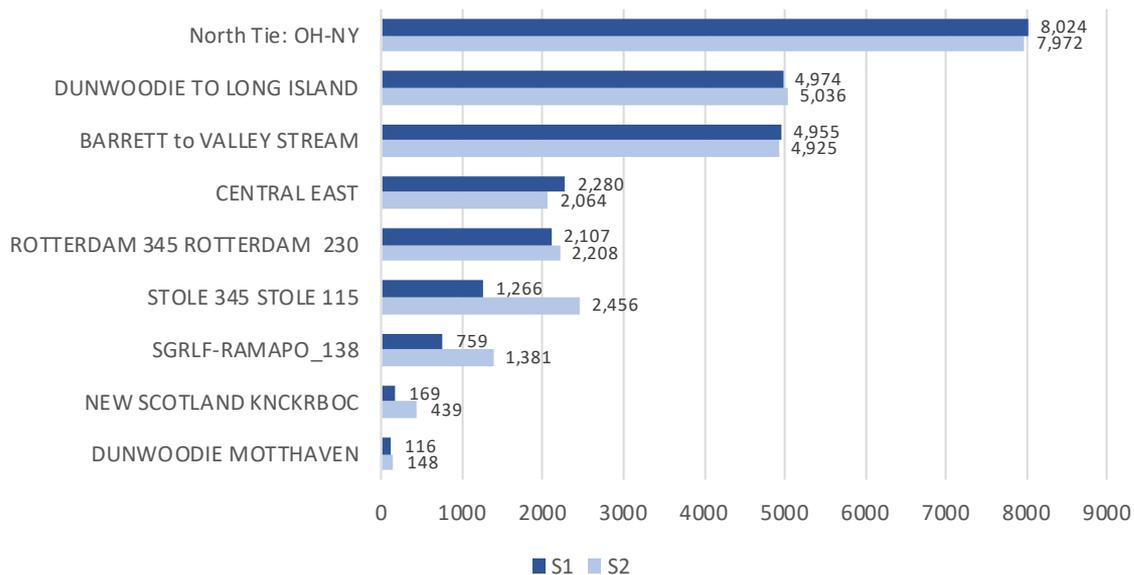
Curtailment by Generation Type across the Identified Generation Pockets



Congested Hours for Bulk Constraints (2035)

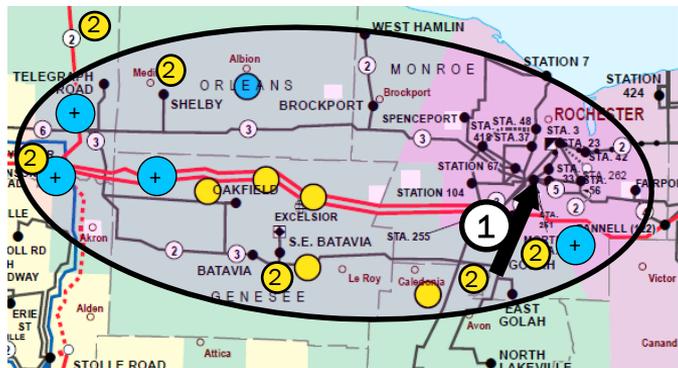
% of Year Congested	S1	S2
North Tie: OH-NY	92%	91%
DUNWOODIE TO LONG ISLAND	57%	57%
BARRETT to VALLEY STREAM	57%	56%
CENTRAL EAST	26%	24%
ROTTERDAM 345 ROTTERDAM 230	24%	25%
STOLE 345 STOLE 115	14%	28%
SGRLF-RAMAPO_138	9%	16%
NEW SCOTLAND KNCKRBOC	2%	5%
DUNWOODIE MOTTHAVEN	1%	2%

Congested Hours for Bulk Constraints (2035)



Pocket W1

Western NY: Niagara-Orleans-Rochester



Hours Constrained (if > 100 Hours)

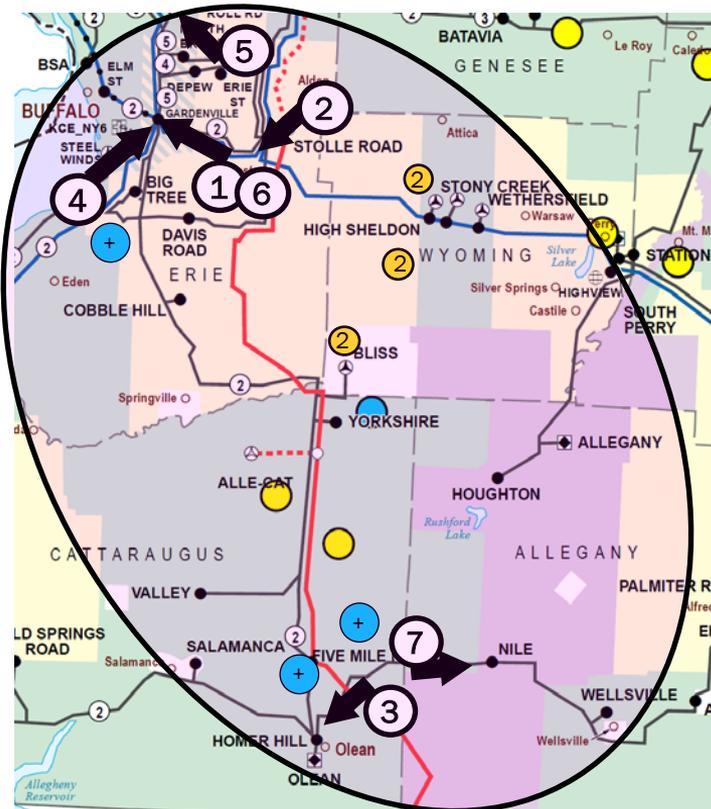
ID	Constraint	Policy S1	Policy S2
1	GOLAH115 115-MORTIMER 115	793	458

Type	Capacity (MW)		Energy Deliverability (%)	
	Policy S1	Policy S2	Policy S1	Policy S2
Solar	1,130	2,092	95%	98%
Wind	1,621	1,375	100%	100%

Key	Cont.	S1	S2	S1&S2
Wind	●	①	②	+
Solar	●	①	②	+

Pocket W2

Western NY: Buffalo-Erie



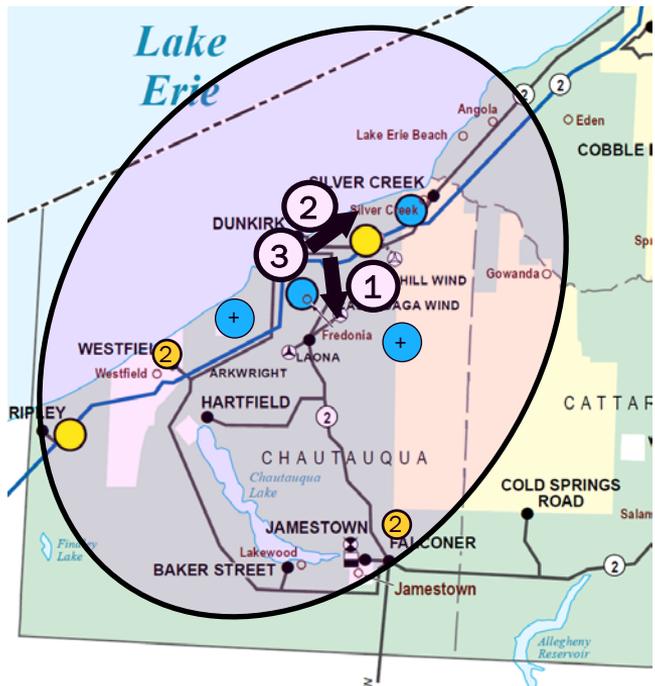
Hours Constrained (if > 100 Hours)

ID	Constraint	Policy S1	Policy S2
1	STOLE115 115-GIRD115 115	1,642	1,438
2	STOLE115 115-STOLE345 345	1,266	2,456
3	DUGN-157 115-HOMERHIL 115	3,634	3,933
4	BETH-149 115-GRDNVL1 115	1,340	1,330
5	CLSP-181 115-URBN-922 115	461	396
6	GARDV115 115-GIRD115 115	83	183
7	DUGN-157 115-NILE115 115	110	304

Type	Capacity (MW)		Energy Deliverability (%)	
	Policy S1	Policy S2	Policy S1	Policy S2
Solar	60	349	83%	95%
Wind	1,633	1,633	88%	88%

Pocket W3

Western NY: Chautauqua



Hours Constrained (if > 100 Hours)

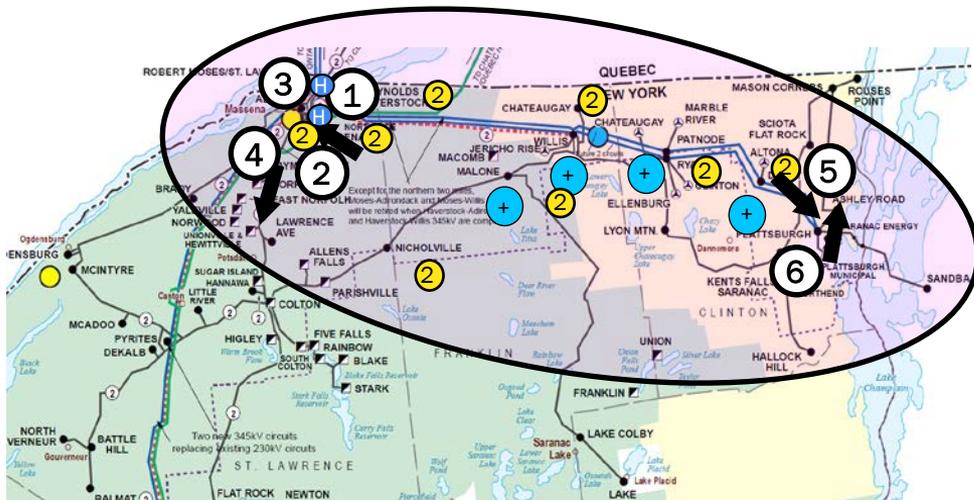
ID	Constraint	Policy S1	Policy S2
1	EDNK-161 115-ARKWRIGH 115*	92	64
2	SLVRC141 115-DUNKIRK1 115	2,757	3,060
3	DUNKIRK 230-DUNKIRK1 115	289	187

*met >100 hours threshold in 2030

Type	Capacity (MW)		Energy Deliverability (%)	
	Policy S1	Policy S2	Policy S1	Policy S2
Solar	290	574	87%	83%
Wind	1,012	1,012	88%	89%

Pocket X1

North Country: Northern Area



H HQ Import

Hours Constrained (if > 100 Hours)

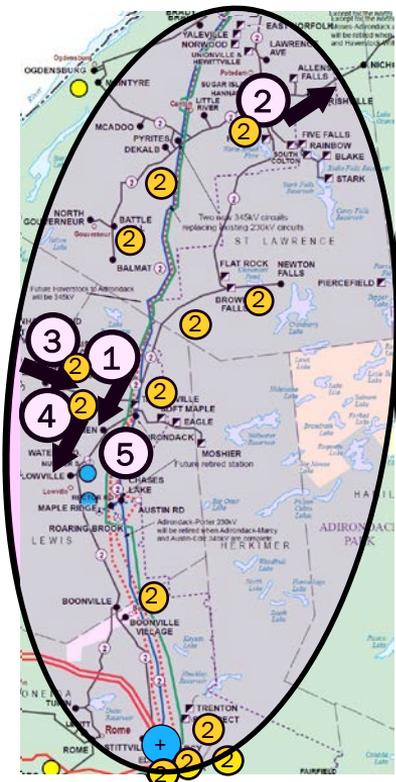
ID	Constraint	Policy S1	Policy S2
1	North Tie: OH-NY	8,024	7,972
2	ALCOA-NM 115-DENNISON 115	738	696
3	ALCOA-NM 115-ALCOA N 115	591	444
4	LWRNCE-B 115-SANDST-5 115	137	120
5	DULEY 230-PLAT T#1 230	4	176
6	NOEND115 115-PLAT 115 115	113	50

Type	Capacity (MW)		Energy Deliverability (%)	
	Policy S1	Policy S2	Policy S1	Policy S2
Hydro	1,068	1,068	94%	97%
HQImport	1,930	1,930	92%	95%
Solar	180	355	97%	99%
Wind	1,274	1,274	93%	96%

Pocket X2

Northern NY: Mohawk Valley Area

Hours Constrained (if > 100 Hours)



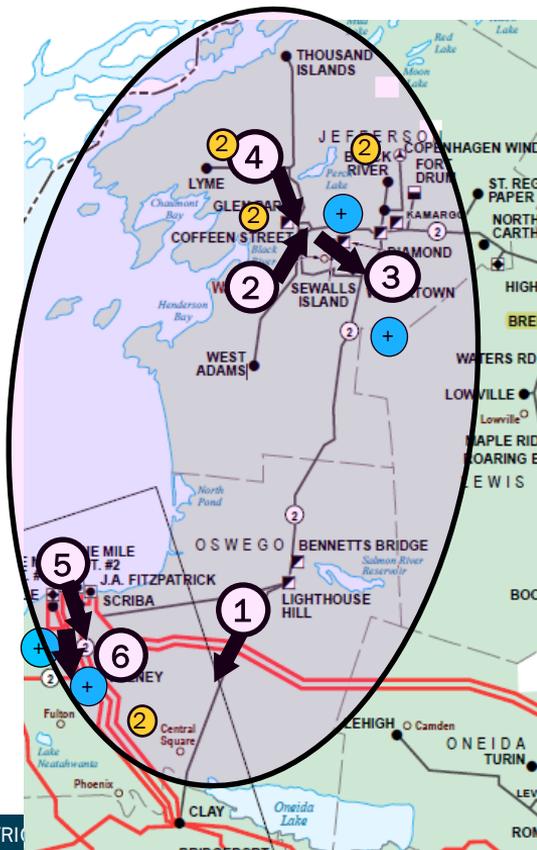
ID	Constraint	Policy S1	Policy S2
1	BREMEN 115-Q531_POI 115	17	161
2	NICHOLVL 115-PARISHVL 115	163	489
3	DEFERIET 115-TAYLORVL 115	195	178
4	LOWVILLE 115-Q531_POI 115	178	287
5	TAYLORVL-Q531_POI_115	2,927	3,181

Type	Capacity (MW)		Energy Deliverability (%)	
	Policy S1	Policy S2	Policy S1	Policy S2
Hydro	249	249	87%	89%
Solar	35	1,043	75%	98%
Wind	785	785	95%	98%

Pocket X3

Northern NY: Ontario Area

Hours Constrained (if > 100 Hours)



ID	Constraint	Policy S1	Policy S2
1	HTHSE HL 115-MALLORY 115	3,497	3,290
2	COFFEEN 115-GLEN PRK 115	1,047	1,686
3	COFFEEN 115-E WTRTWN 115	352	154
4	COFFEEN 115-LYMETP 115*	36	0
5	HMMRMILL 115-WINE CRK 115	1,469	1,512
6	SCRIBA 345-VOLNEY 345	859	879

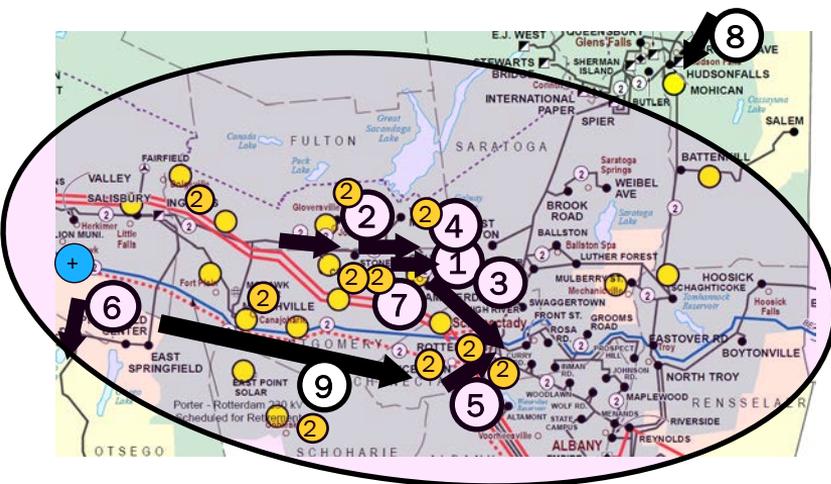
*met >100 hours threshold in 2030

Type	Capacity (MW)		Energy Deliverability (%)	
	Policy S1	Policy S2	Policy S1	Policy S2
Hydro	156	156	67%	70%
Solar	369	686	64%	59%
Wind	1,313	1,313	94%	94%

Pocket Y1

Capital Region: Mohawk Valley Area

Hours Constrained (if > 100 Hours)



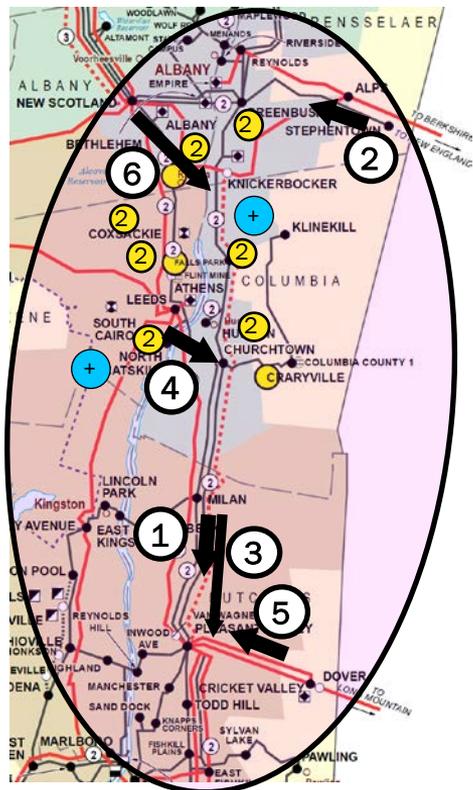
ID	Constraint	Policy S1	Policy S2
1	RTRDM1 115-Q638POI 115	1,216	2,014
2	STONER 115-VAIL TAP 115	1,503	2,533
3	AMST 115 115-Q638POI 115	546	1,583
4	CHURCH-E 115-MAPLEAV1 115	0	154
5	ROTTERDA 345-ROTRDM.2 230	2,107	2,208
6	COLER115 115-RICHF115 115	316	277
7	CHURCH-W 115-VAIL TAP 115	17	1,992
8	COMSTOCK 115-MOHICAN 115	24	283
9	CENTRAL EAST	2,280	2,064

Type	Capacity (MW)		Energy Deliverability (%)	
	Policy S1	Policy S2	Policy S1	Policy S2
Hydro	30	30	94%	97%
Solar	961	2,162	88%	77%
Wind	120	120	88%	88%

New York ISO

Pocket Y2

Capital Region: Hudson Valley Area



Hours Constrained (if > 100 Hours)

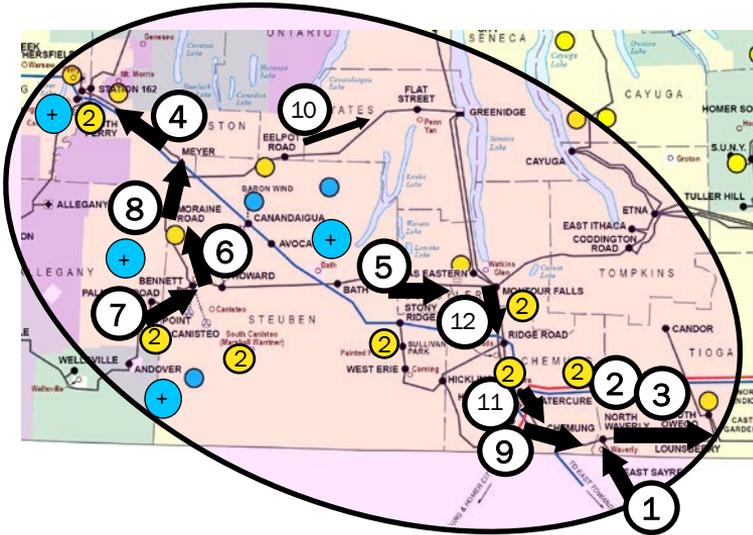
ID	Constraint	Policy S1	Policy S2
1	MILAN 115-BL STR E 115	322	1,255
2	STEPH115 115-GBSH+LGE 115	636	564
3	MILAN 115-PL.VAL 1 115	6	159
4	N.CAT. 1 115-CHURCHTO 115	1,939	1,992
5	PLTVLLEY 345-CRICKET 345	186	131
6	NEW SCOTLAND 345-KNICKB 345	169	439

Type	Capacity (MW)		Energy Deliverability (%)	
	Policy S1	Policy S2	Policy S1	Policy S2
Solar	250	626	93%	88%
Wind	618	618	94%	96%

Pocket Z1

Southern Tier: Finger Lakes Area

Hours Constrained (if > 100 Hours)



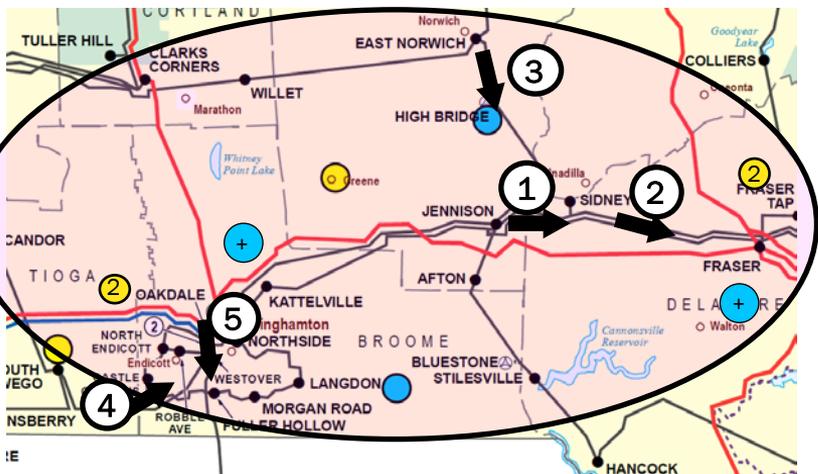
ID	Constraint	Policy S1	Policy S2
1	N.WAV115 115-26E.SAYR 115	1,100	855
2	LOUN115 115-STAGECOA 115	212	216
3	N.WAV115 115-LOUN115 115	41	201
4	MEYER115 115-S.PER115 115	668	650
5	BATH 115 115-MONTR115 115	1,811	1,422
6	MORAI115 115-BENET115 115	6	3,542
7	BENET115 115-PALMT115 115	1,814	1,785
8	MEYER115 115-MORAI115 115	2,062	1,746
9	N.WAV115 115-CHEMU115 115	196	413
10	EELPO115 115-FLATS115 115	554	629
11	HILSD115 115-CHEMU115 115	43	231
12	MONTR115 115-RIDGT115 115	6	247

Type	Capacity (MW)		Energy Deliverability (%)	
	Policy S1	Policy S2	Policy S1	Policy S2
Solar	405	1,037	85%	87%
Wind	2,160	2,160	74%	74%

Pocket Z2

Southern Tier: Binghamton Area

Hours Constrained (if > 100 Hours)

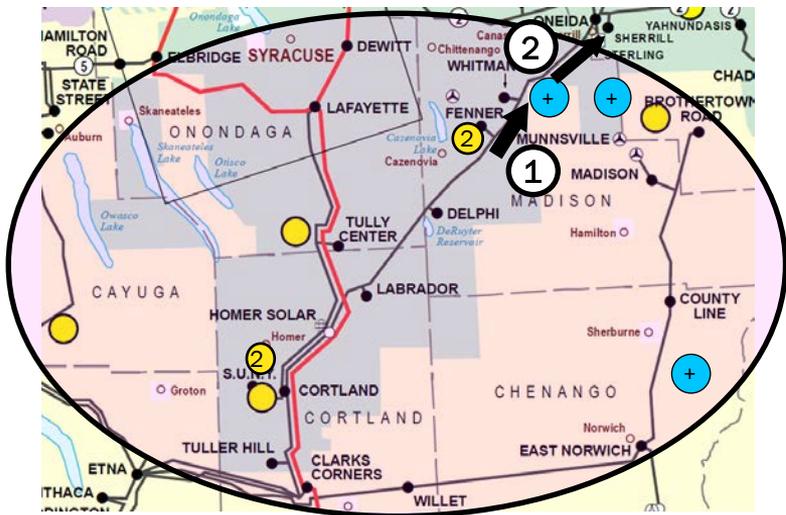


ID	Constraint	Policy S1	Policy S2
1	JENN 115 115-SIDNT115 115	3,768	4,015
2	FRASR115 115-SIDNT115 115	169	49
3	E.NOR115 115-JENN 115 115	1,240	705
4	S.OWE115 115-GOUDEY8- 115	92	307
5	OAKDL230 230-OAKDL115 115	1,056	1,419

Type	Capacity (MW)		Energy Deliverability (%)	
	Policy S1	Policy S2	Policy S1	Policy S2
Solar	60	443	74%	87%
Wind	1,257	1,257	91%	91%

Pocket Z3

Southern Tier: Syracuse Area



Hours Constrained (if > 100 Hours)

ID	Constraint	Policy S1	Policy S2
1	WHITMAN 115-FEN-WIND 115	530	783
2	WHITMAN 115-STERLING 115	1,142	1,862

Type	Capacity (MW)		Energy Deliverability (%)	
	Policy S1	Policy S2	Policy S1	Policy S2
Solar	150	303	87%	81%
Wind	413	413	92%	91%

Pocket OSW_J

New York City Offshore Wind & Tier 4 HVDC

Hours Constrained (if > 100 Hours)



ID	Constraint	Policy S1	Policy S2
1	E179 ST 138-HG 4 138	5,368	5,716
2	ASTE-ERG 138-CORONA-S 138	1,545	1,974
3	ASTANNEX 345 E13ST 345	6,193	7,038
4	FRESH KI 138-WILOWBK1 138	1,002	163
5	RAINEY8W 138-VERNON-W 138	4,633	7,270
6	HG 5 138-ASTORIA 138	240	0
7	GOWNUSR1 138-GRENWOOD 138	228	1,806
8	RAINEY8E 138-VERNON-E 138	409	499
9	DUNWOODI 345-MOTTHAVEN 345	116	148
10	GREENWOOD 138 - VERNON 138	20	233
11	MOTTHAVN 345-RAINEY 345	190	296

Type	Capacity (MW)		Energy Deliverability (%)	
	Policy S1	Policy S2	Policy S1	Policy S2
Offshore Wind	4,571	5,166	100%	100%
HQ Import	1,250	1,250	96%	98%

Pocket OSW_K

Long Island Offshore Wind



Hours Constrained (if > 100 Hours)

ID	Constraint	Policy S1	Policy S2
1	Cross Sound Cable	5,756	5,687
2	BARRETT2 138-VLY STRM 138	4,955	4,925
3	DUNWOODI 345-SHORE RD 345	4,090	4,798
4	REACBUS 345-DVNPT NK 345	2,610	2,192
5	HAUPAGUE 138-C.ISLIP 138	2,382	2,518
6	Neptune HVDC	3,748	3,392
7	NRTHPRT1 138-NRTHPRT2 138	2,206	1,977
8	HOLBROOK 138-RONKONK 138	351	944
9	CARLE PL 138-E.G.C. 138	1,344	714
10	NEWBRGE 138-RULND RD 138	380	710
11	E.G.C.-2 138-NEWBRGE 138	1,186	390
12	VLY STRM 138-E.G.C.-2 138	637	410
13	HAUPAGUE 138-PILGRM P 138	403	125
14	BUELL 69-EHAMP 69*	84	18
15	L SUCS 138-SHORE RD 138	1,037	655
16	HOLBROOK 138-HOLBRK2 69	862	299

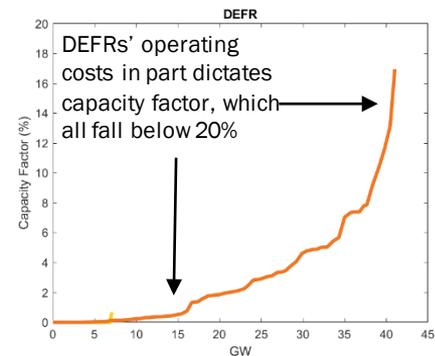
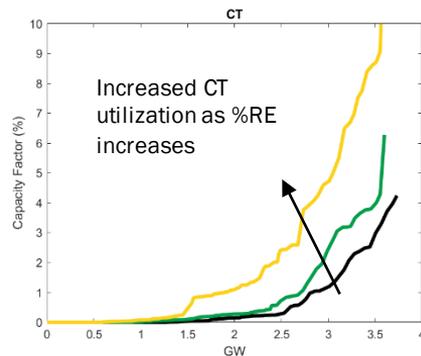
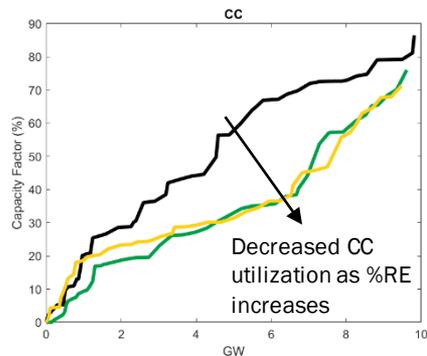
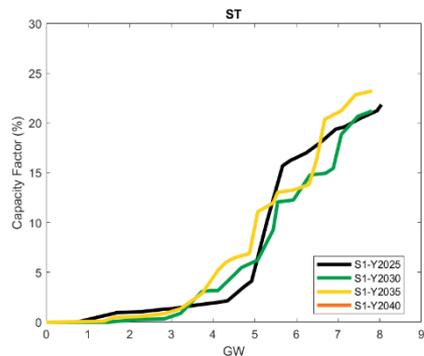
*met >100 hours threshold in 2030

Type	Capacity (MW)		Energy Deliverability (%)	
	Policy S1	Policy S2	Policy S1	Policy S2
Offshore Wind	4,430	3,835	88%	87%
Solar	99	99	85%	94%

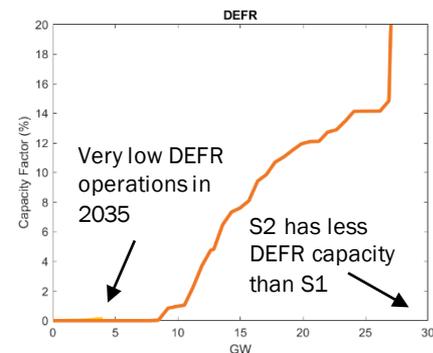
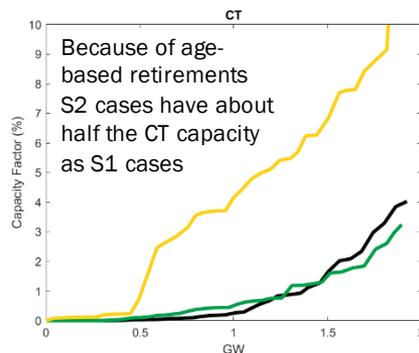
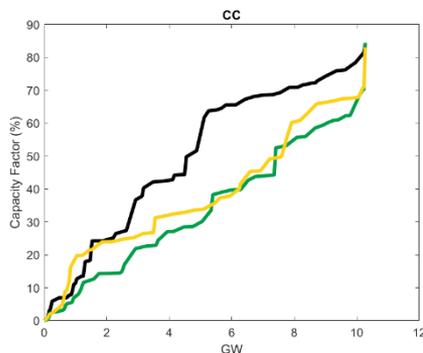
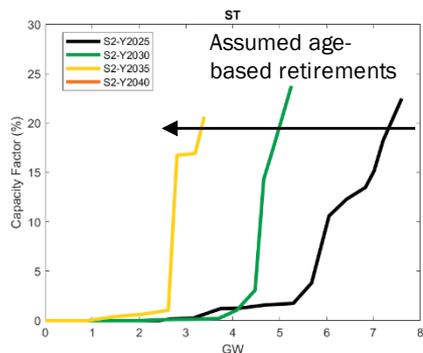
Policy Case: Additional Results

Policy Case Dispatchable Fleet Capacity Factors

S1

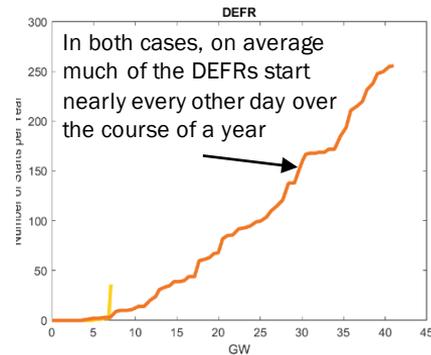
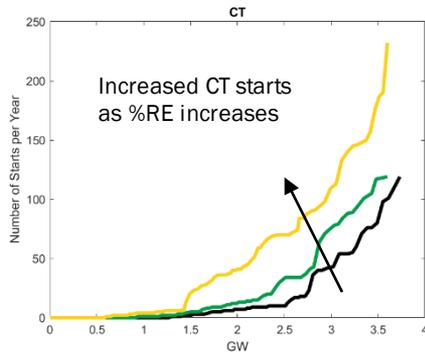
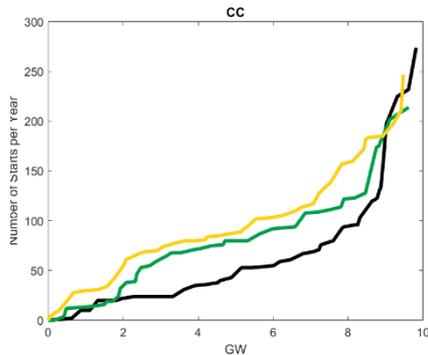
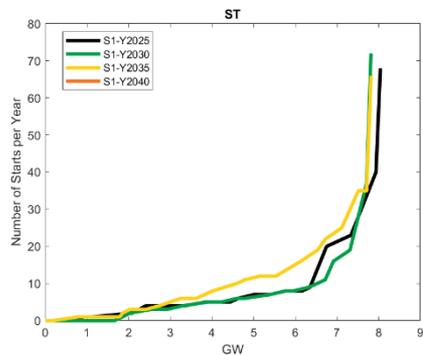


S2

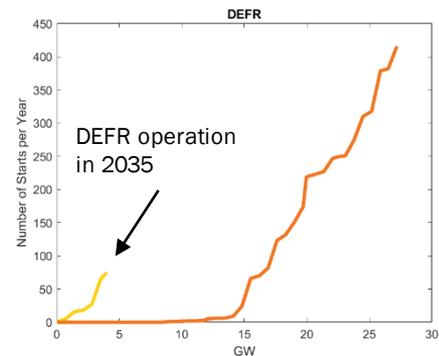
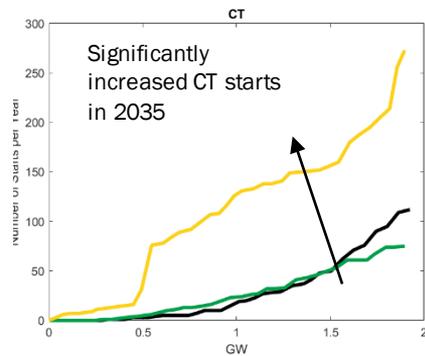
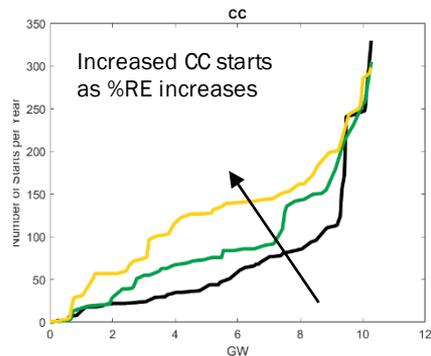
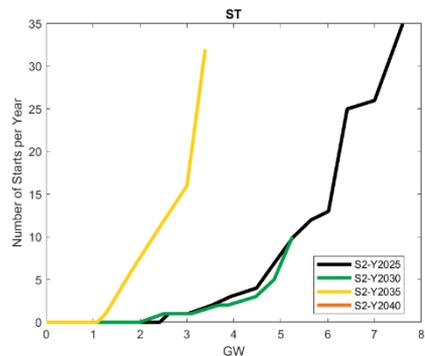


Policy Case Dispatchable Fleet Number of Starts

S1

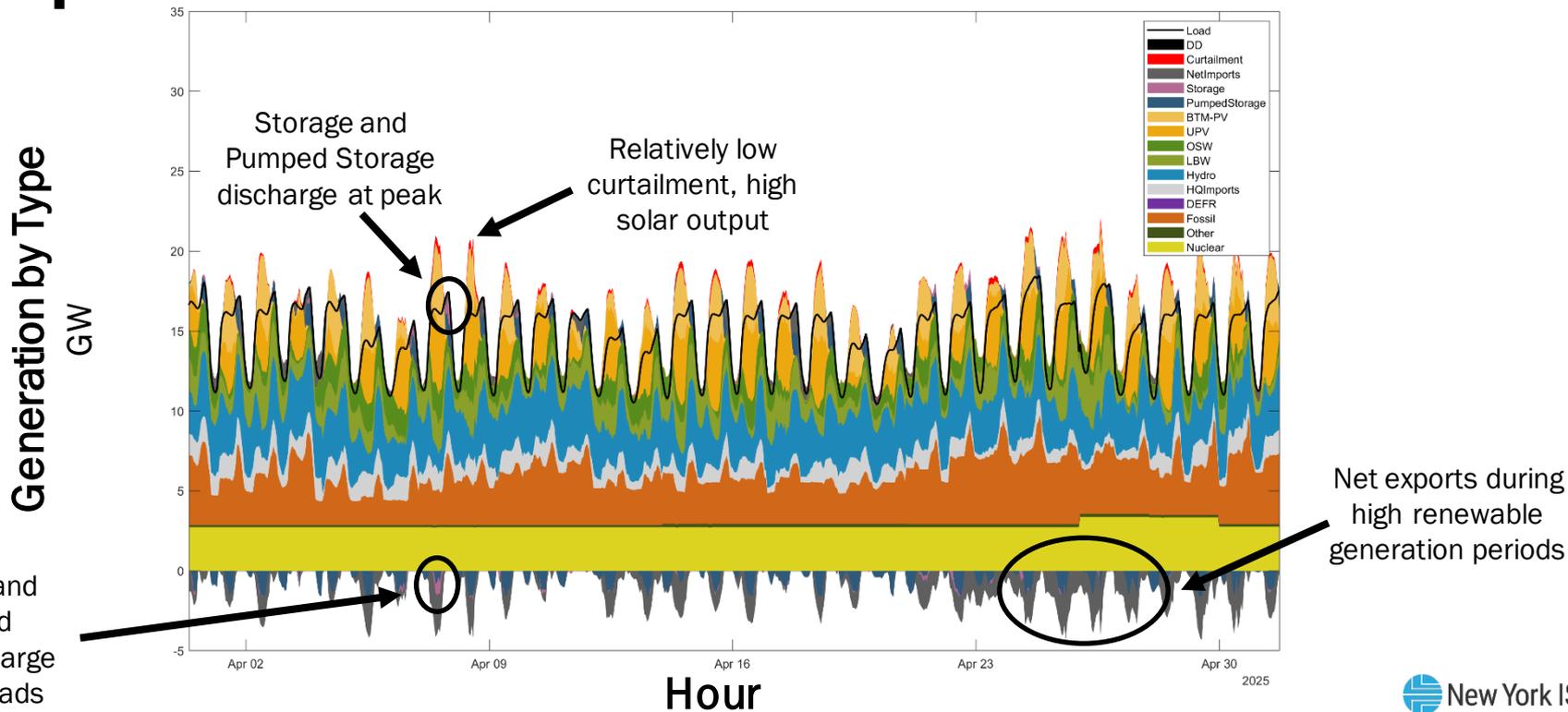


S2

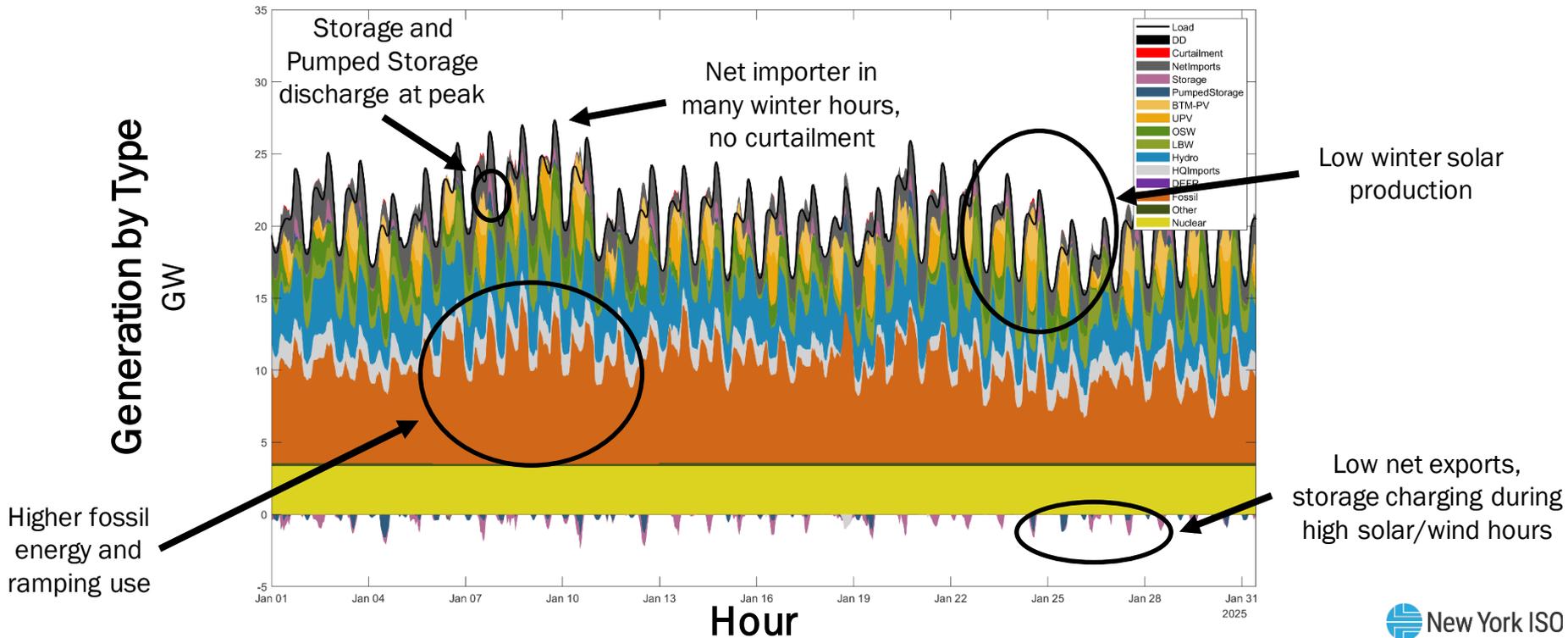


Policy Case: S1 Hourly Seasonal Analysis for 2025, 2030, and 2035

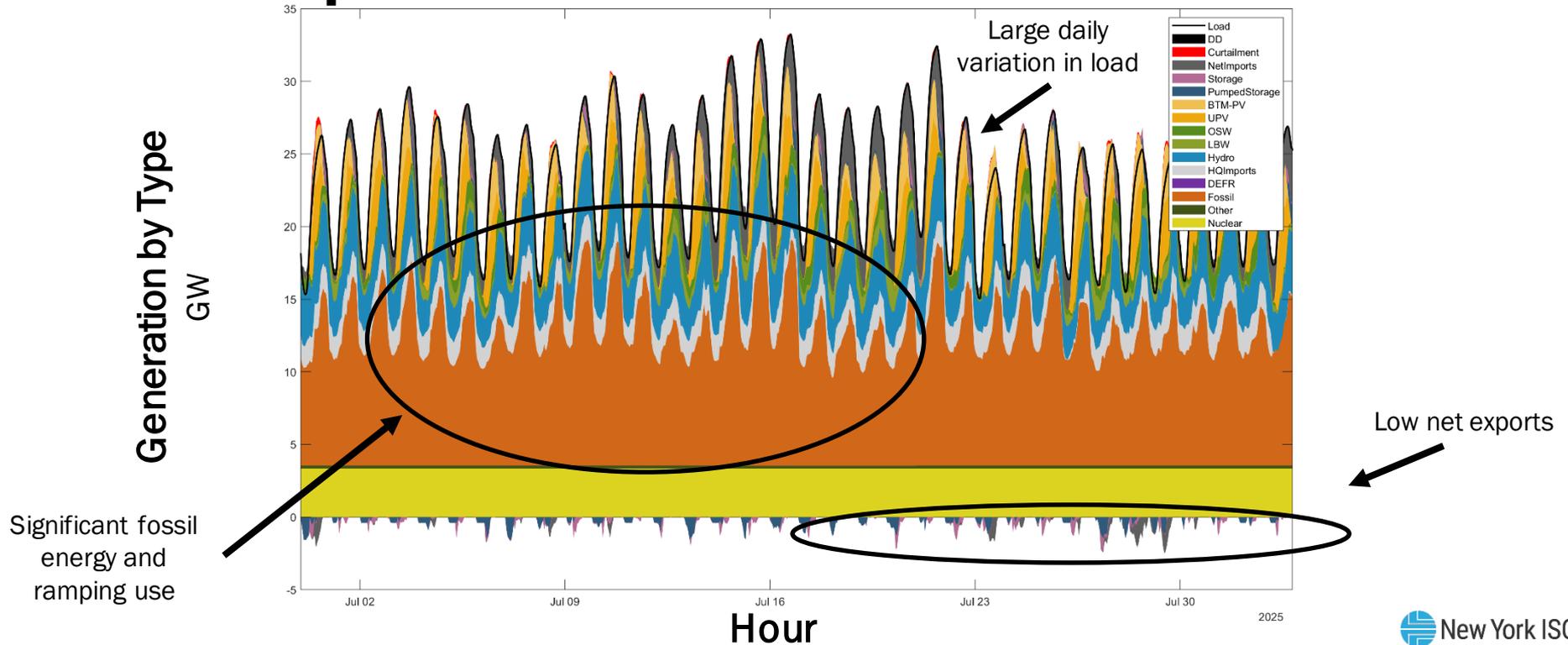
Policy Case (S1) Spring Generation and Imports in 2025



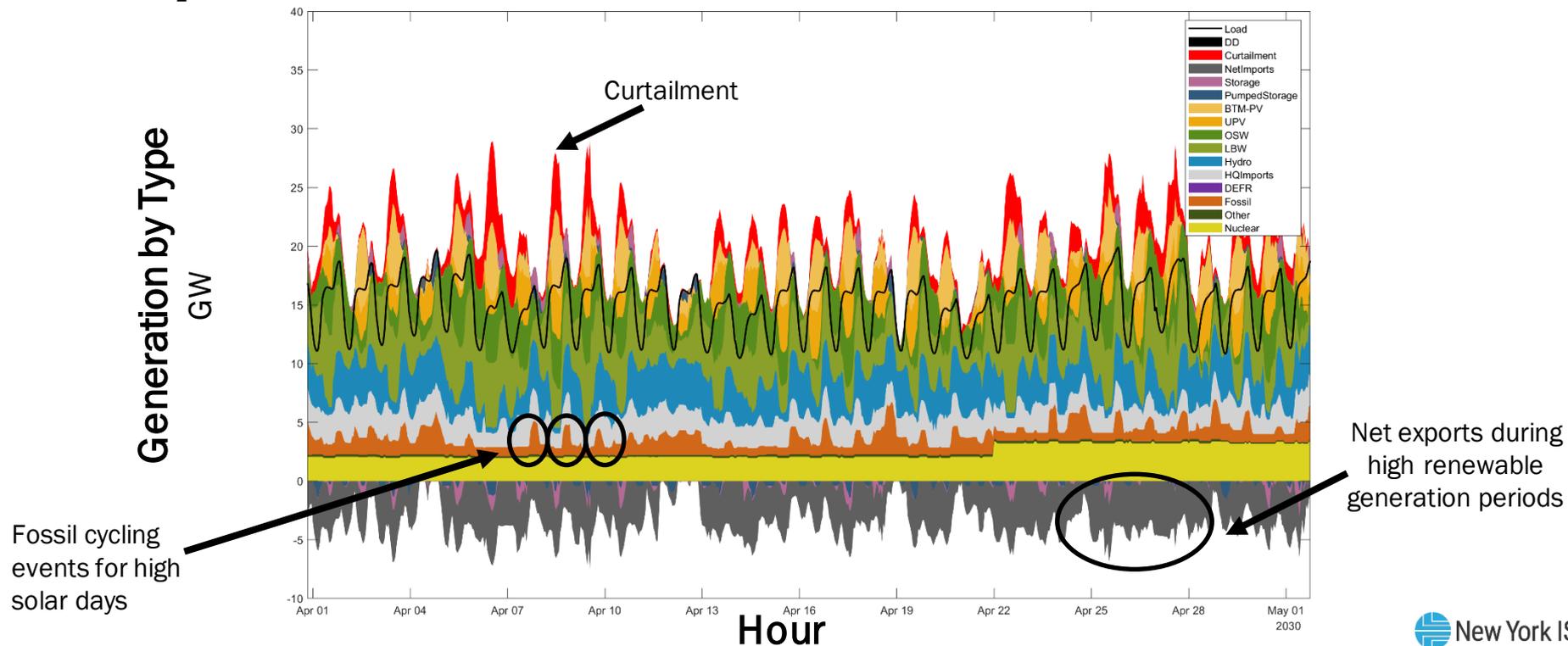
Policy Case (S1) Winter Generation and Imports in 2025



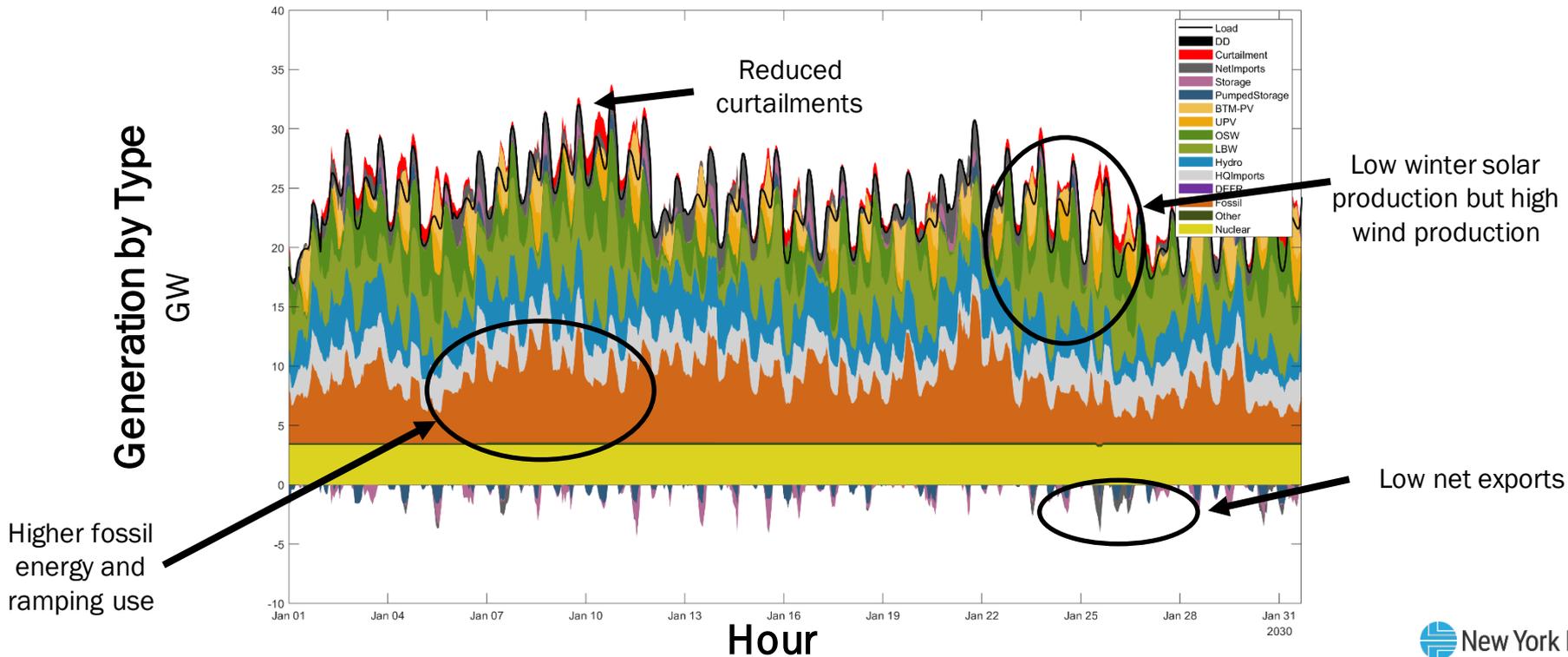
Policy Case (S1) Summer Generation and Imports in 2025



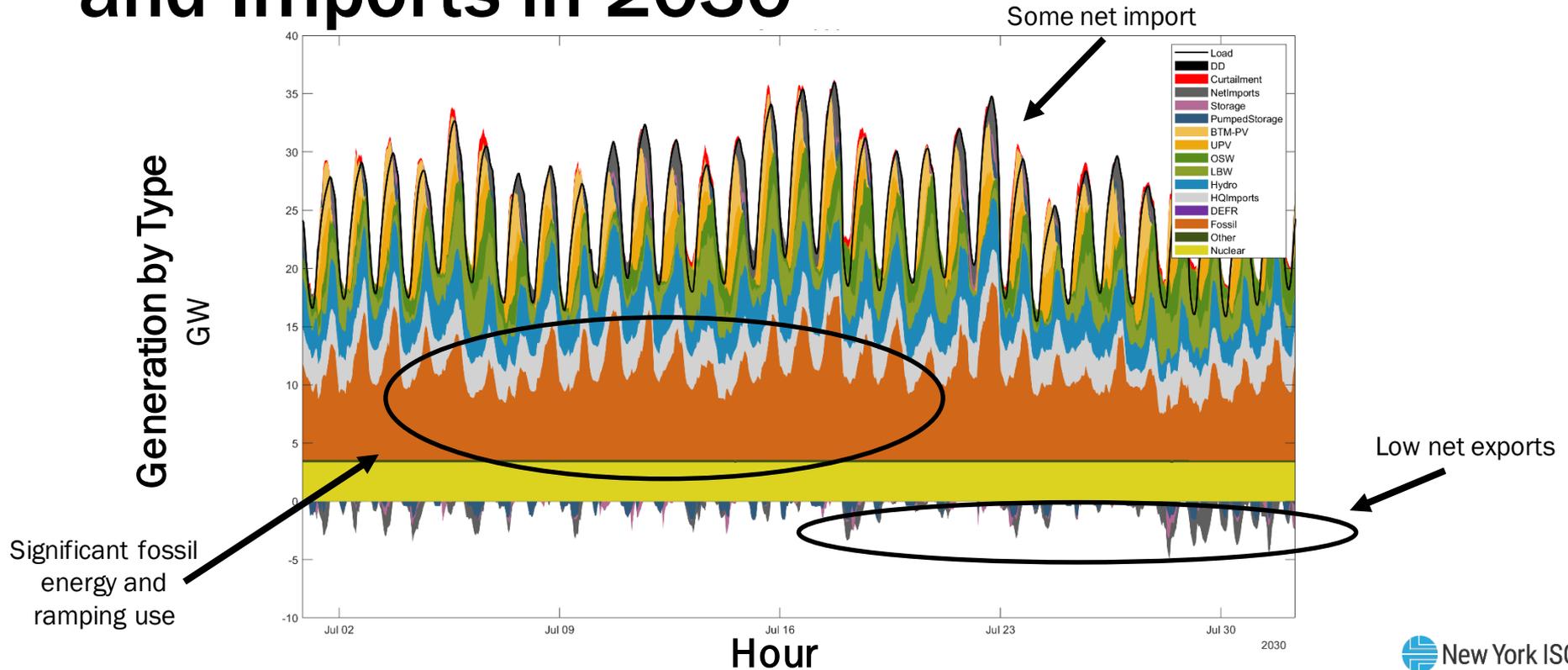
Policy Case (S1) Spring Generation and Imports in 20230



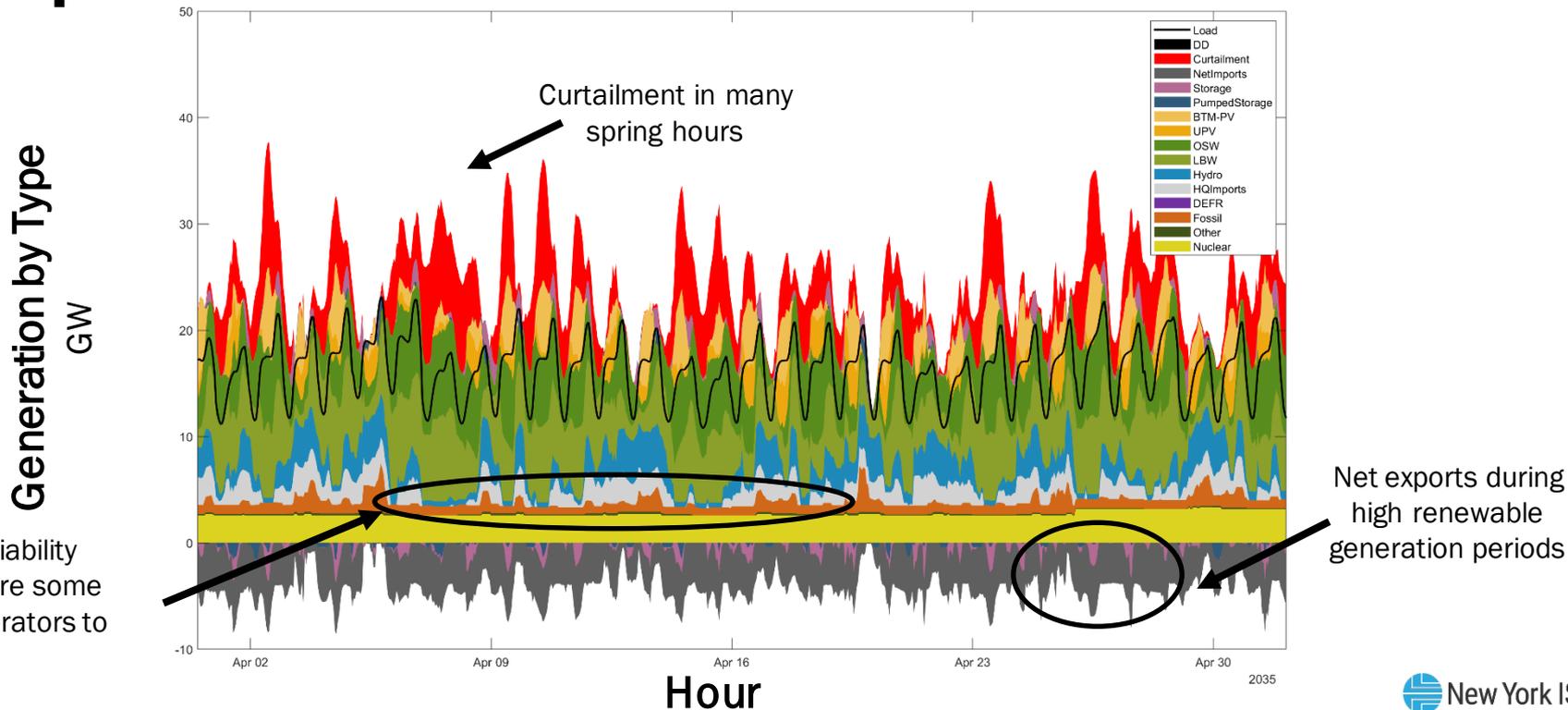
Policy Case (S1) Winter Generation and Imports in 2030



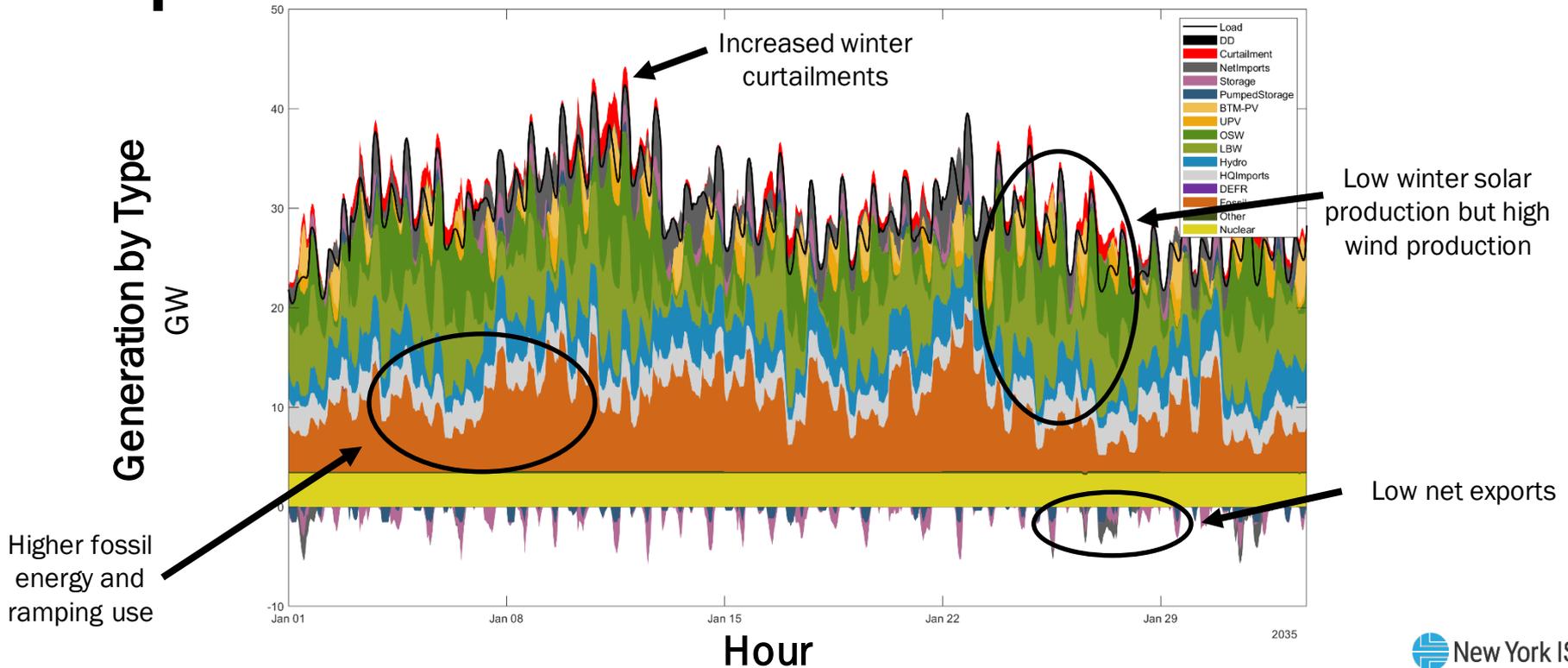
Policy Case (S1) Summer Generation and Imports in 2030



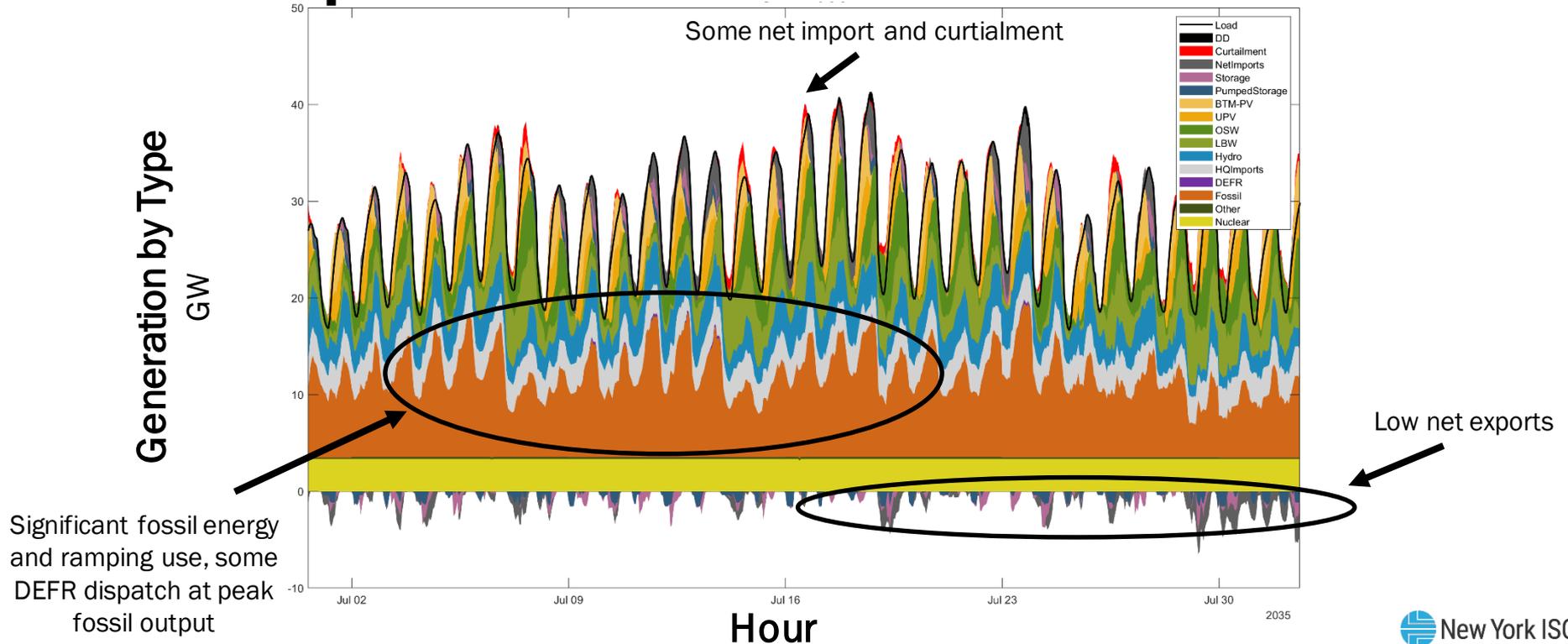
Policy Case (S1) Spring Generation and Imports in 2035



Policy Case (S1) Winter Generation and Imports in 2035

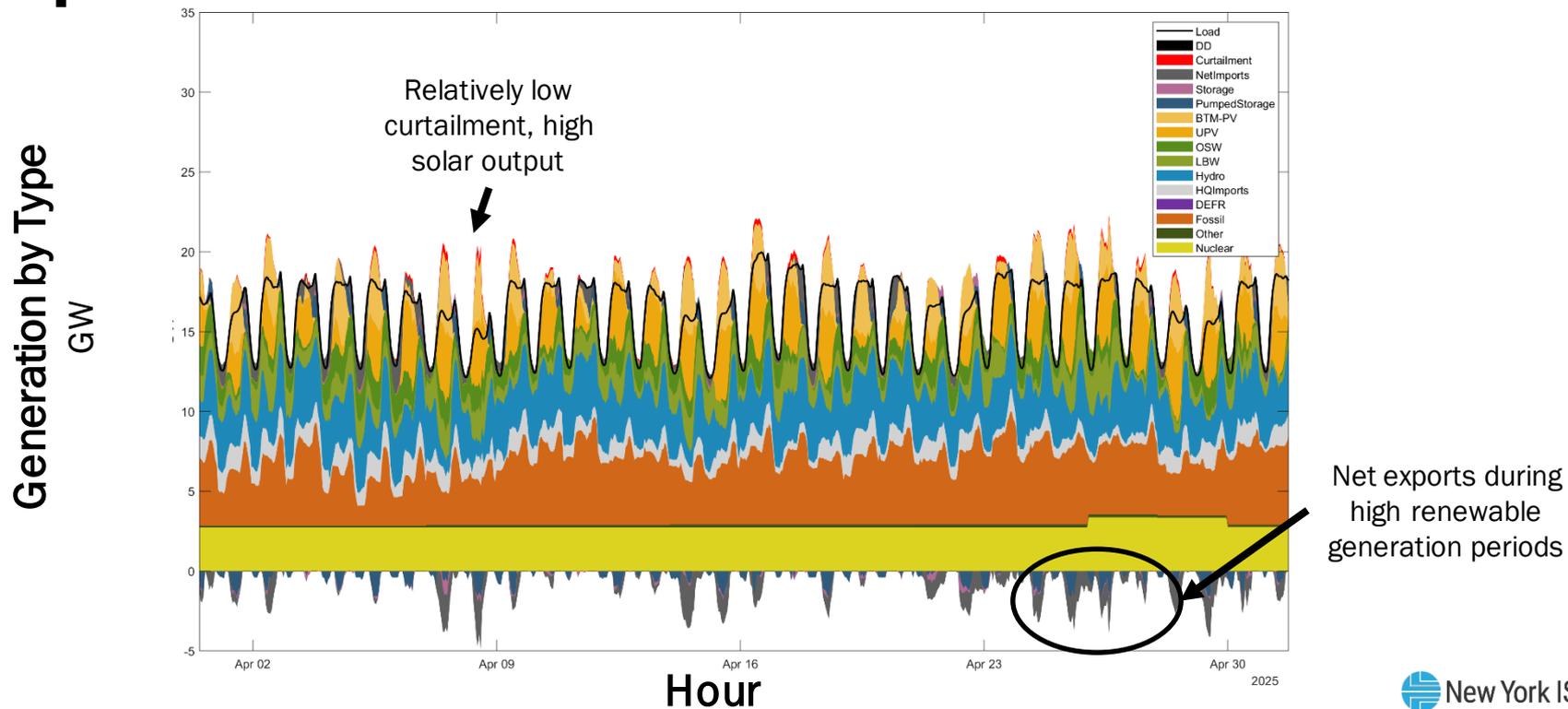


Policy Case (S1) Summer Generation and Imports in 2035

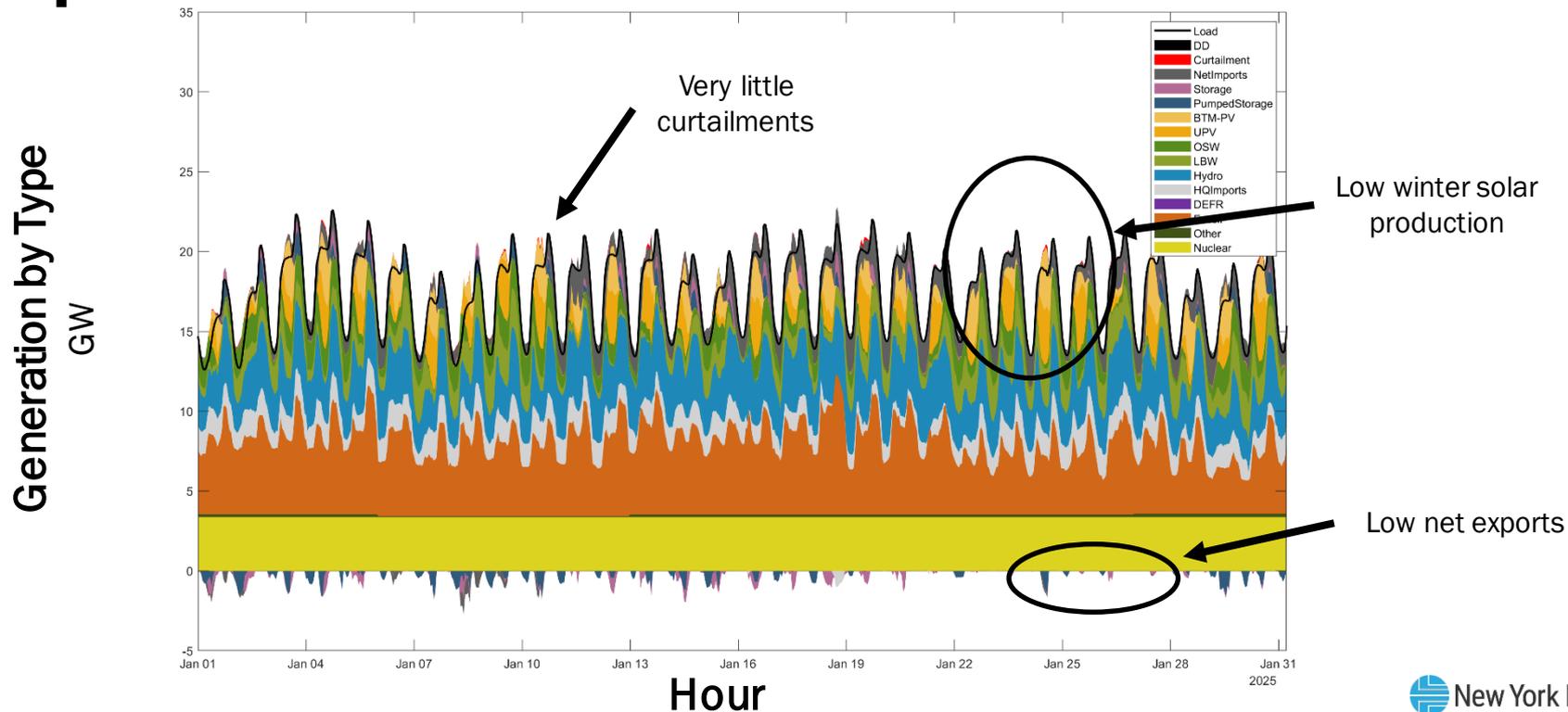


Policy Case: S2 Hourly Seasonal Analysis for 2025, 2030, and 2035

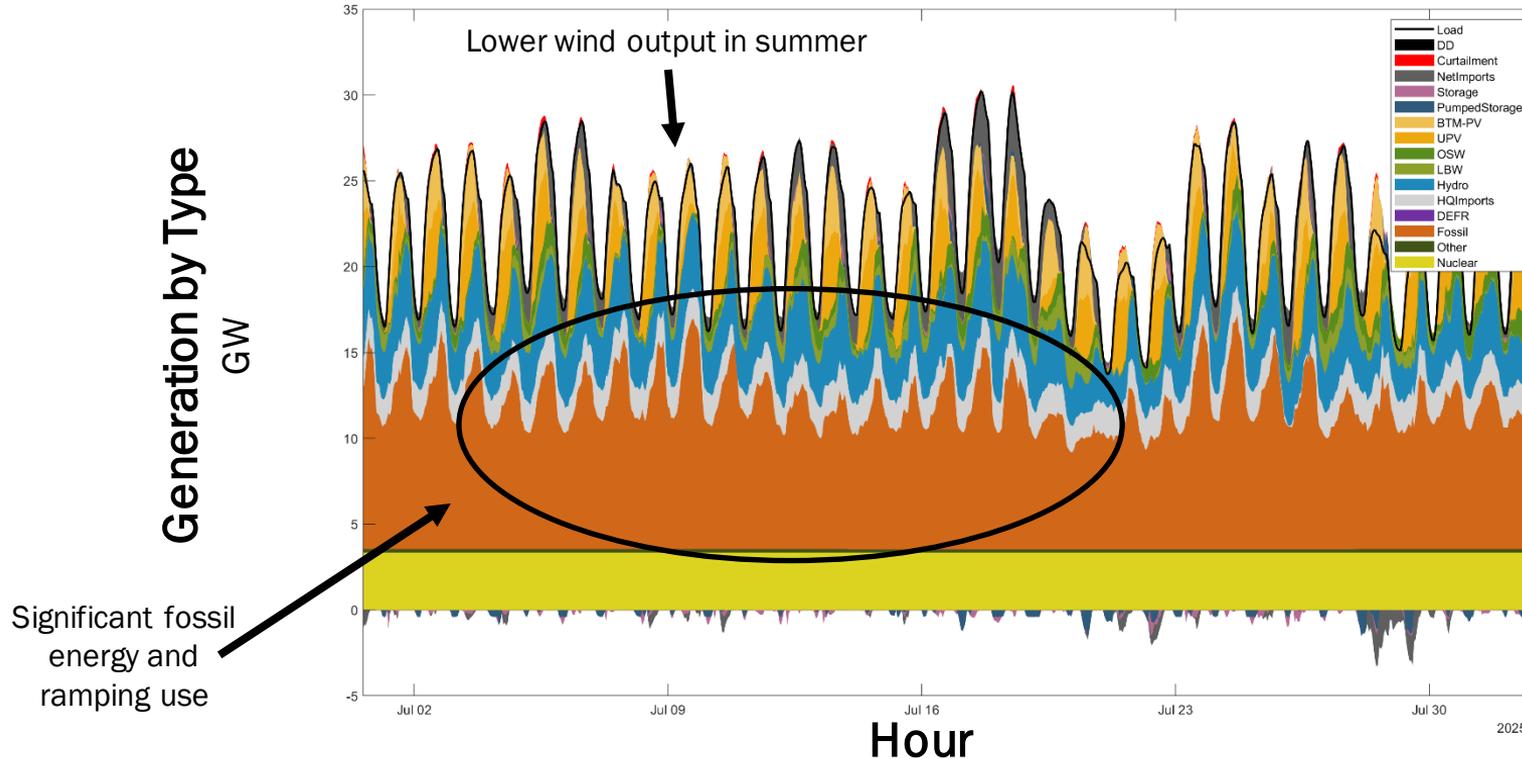
Policy Case (S2) Spring Generation and Imports in 2025



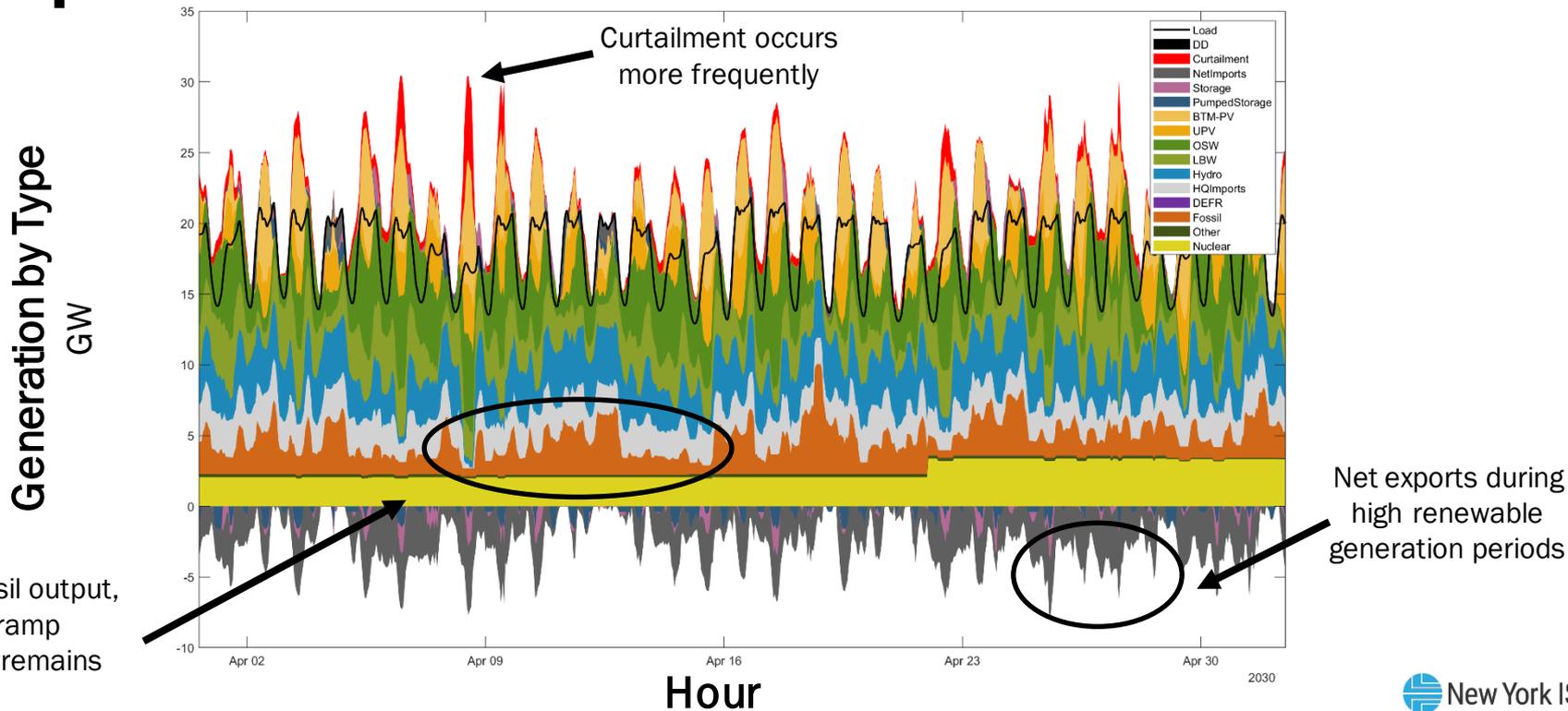
Policy Case (S2) Winter Generation and Imports in 2025



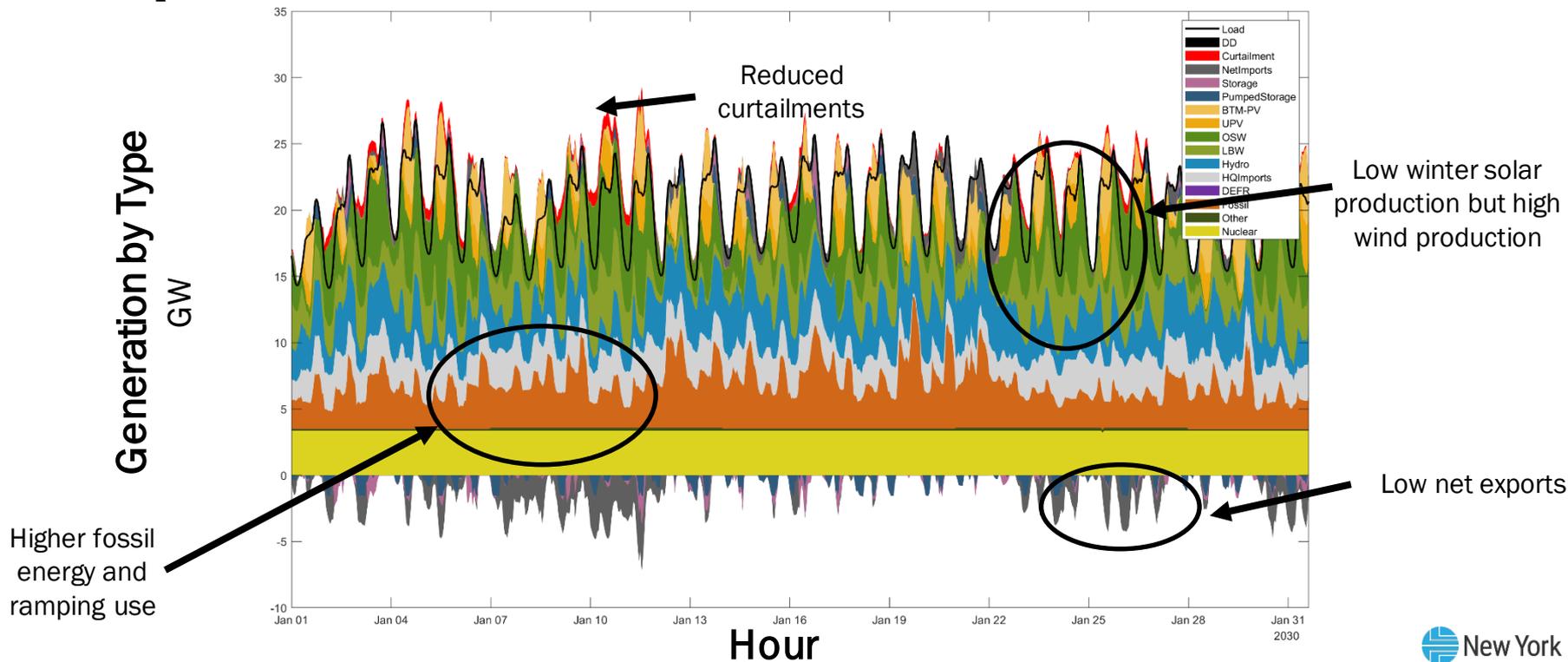
Policy Case (S2) Summer Generation and Imports in 2025



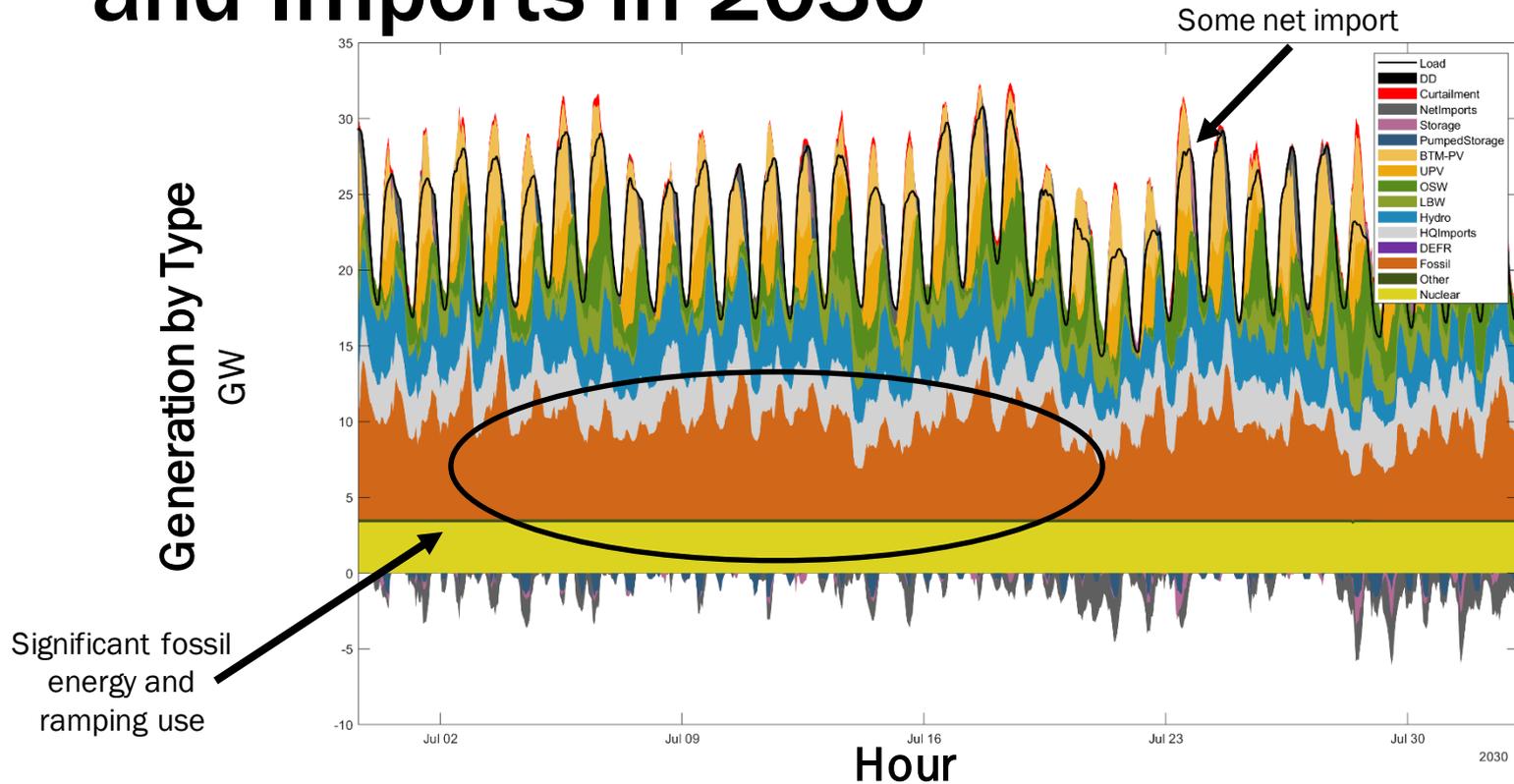
Policy Case (S2) Spring Generation and Imports in 2030



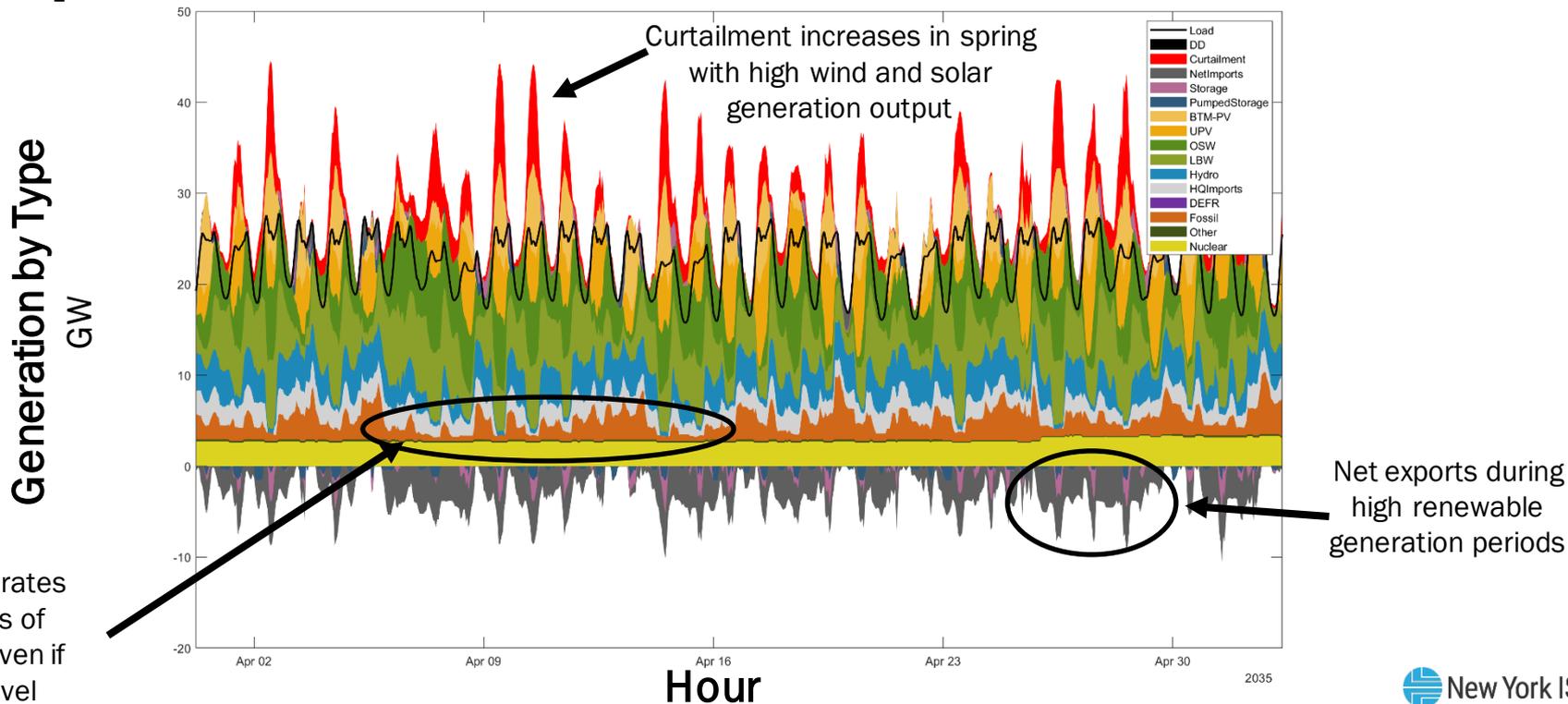
Policy Case (S2) Winter Generation and Imports in 2030



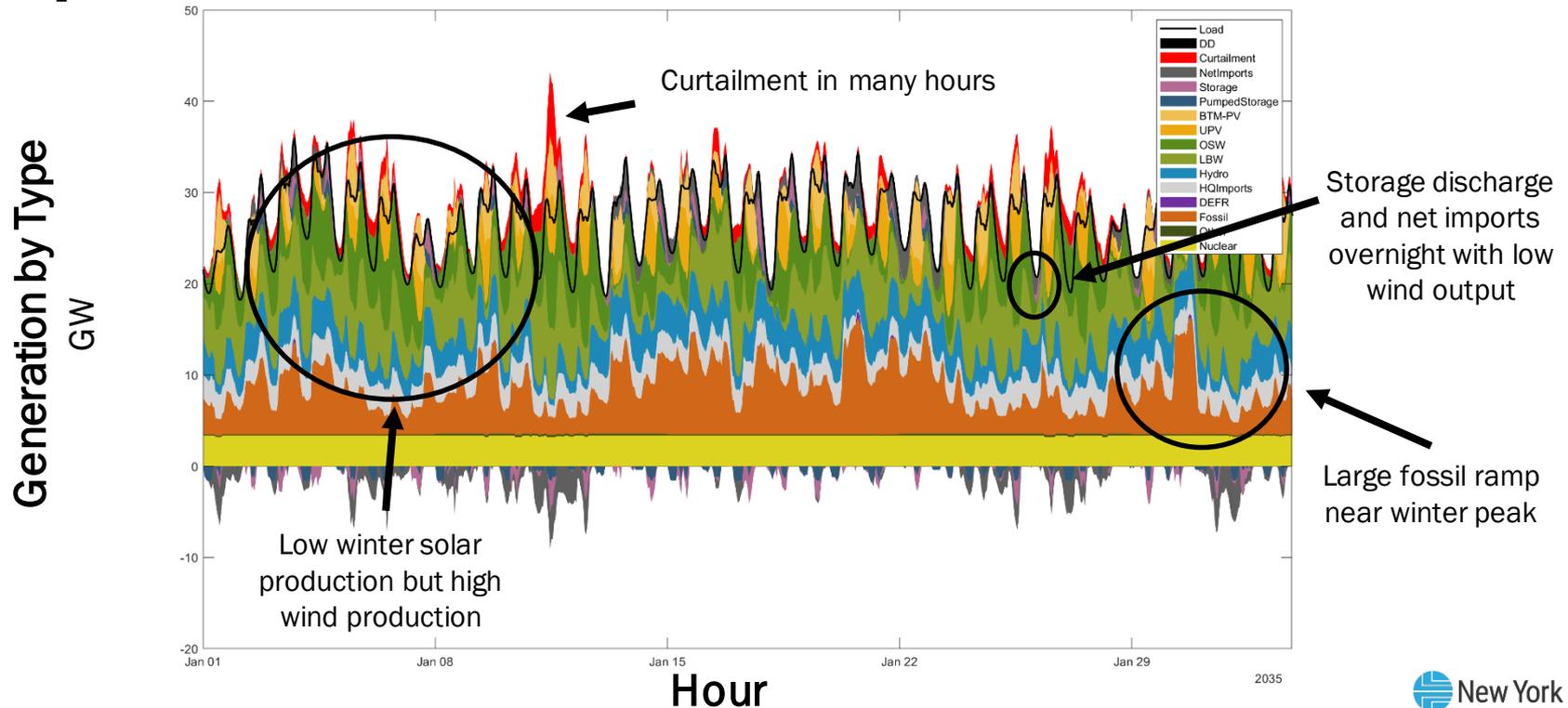
Policy Case (S2) Summer Generation and Imports in 2030



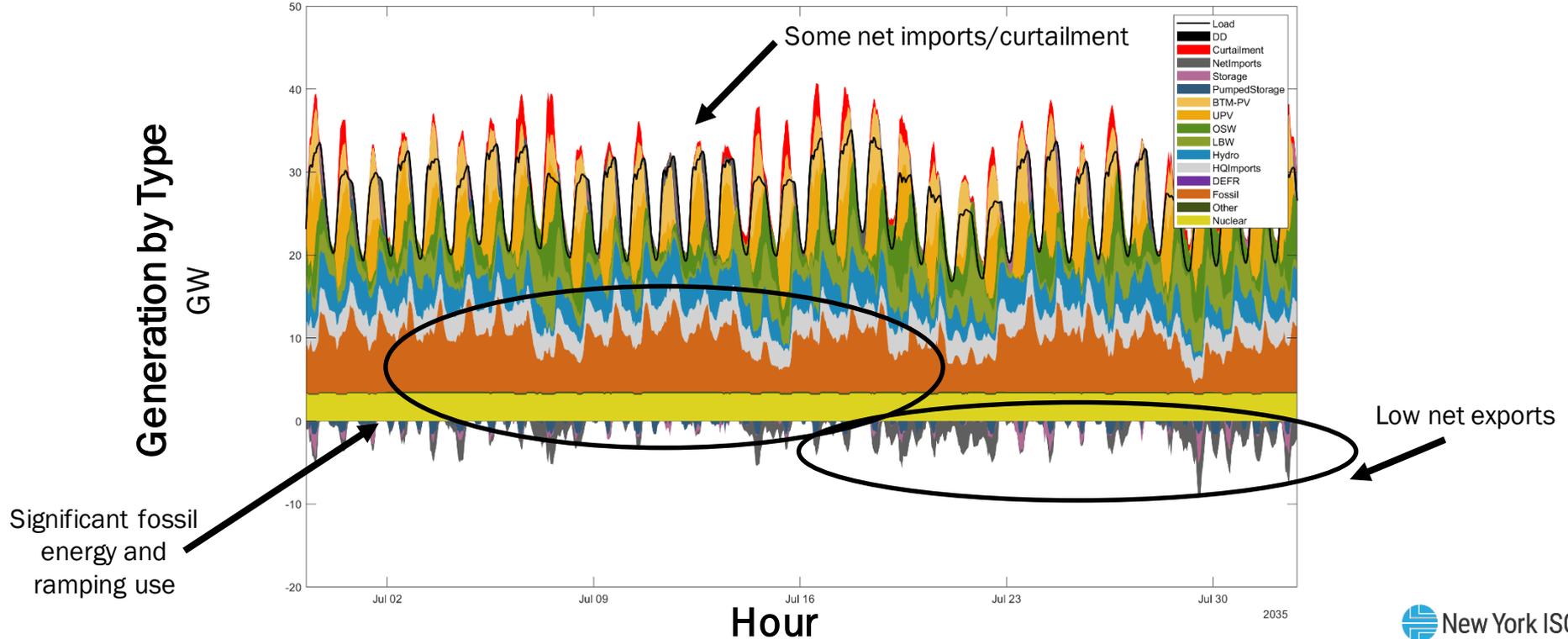
Policy Case (S2) Spring Generation and Imports in 2035



Policy Case (S2) Winter Generation and Imports in 2035



Policy Case (S2) Summer Generation and Imports in 2035



Next Steps

Next Steps

- **Draft report sections**
- **Upcoming Stakeholder Meetings for Outlook Updates**
 - Tuesday June 21st ESPWG
 - Friday July 1st ESPWG
 - Wednesday July 13th BIC
 - Wednesday July 27th MC

Questions, Feedback, Comments?

- Email additional feedback to: JFrasier@nyiso.com

2021-2040 Outlook Data Catalog

ESPWG/TPAS Presentations

May 20, 2021

Model Benchmark Results

September 22, 2021

System & Resource Outlook Update

October 25, 2021

Capacity Expansion Model Primer

System & Resource Outlook Update

November 19, 2021

System & Resource Outlook Update

December 19, 2021

System & Resource Outlook Update

January 25, 2022

System & Resource Outlook Update

February 9, 2022

System & Resource Outlook Update

Base & Contract Case Results

February 25, 2022

System & Resource Outlook Update

March 8, 2022

System & Resource Outlook Update

March 24, 2022

System & Resource Outlook Update

Contract Case Congestion Analysis

April 1, 2022

System & Resource Outlook Update

April 26, 2022

System & Resource Outlook Update

May 23, 2022

System & Resource Outlook Update

June 2, 2022

System & Resource Outlook Update

Final Reports

Data Posted to ESPWG



Assumptions Matrix v1

Capacity Expansion Assumptions Matrix v1

Contract Case Renewable Projects

Emissions Price Forecast

Fuel Price Forecast

Capacity Expansion Assumptions Matrix v2 (Redline)

Capacity Expansion Assumptions Matrix v3 (Redline)

Production Cost Assumptions Matrix v2 (Redline)

Capacity Expansion Assumptions Matrix v4 (Redline)

Capacity Expansion Assumptions Matrix v5 (Redline)

Policy Case Hourly Load Forecasts

Policy Case Zonal Capacity Expansion Preliminary Results

Capacity Expansion Assumptions Matrix v6 (Redline)

Capacity Expansion Assumptions Matrix v7 (Redline)

Our Mission & Vision



Mission

Ensure power system reliability and competitive markets for New York in a clean energy future



Vision

Working together with stakeholders to build the cleanest, most reliable electric system in the nation