De-Carbonization / DER Report for NYSRC Executive Committee Meeting 9/12/2025

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The September 2025 edition of the De-Carbonization / Distributed Energy Resources (DER) Report includes the following items:

- NY Times: Transportation Department Cancels $679 Million for Offshore Wind Projects
- NY Times: Spain's Old Ways May Show How to Keep Cool
- Canary Media: Google's new plan to keep its data centers from stressing the grid
- NYISO Blog: Energy-intensive Projects in NYISO's Interconnection Queue
- NYISO Blog: Since 2019, Clean Energy Projects Totaling More Than 14,000 MW Have Completed the Interconnection Process
- Snapshots of the NYISO Interconnection Queue and Cluster Queue: Storage / Solar / Wind / Co-located

NY Times: Transportation Department Cancels $679 Million for Offshore Wind Projects

This Article recounts how on August 29th, the Transportation Department announced that it was terminating or withdrawing $679 million in federal funding for 12 projects around the country intended to support the development of offshore wind power, the latest of the Trump administration's escalating attacks against the wind industry.

Key Highlights

- **Funding Withdrawals**
  - $427M: Humboldt County, CA - Humboldt Bay Marine Terminal
  - $48M: Staten Island, NY - Arthur Kill Terminal offshore wind port
  - $39M: Norfolk, VA - Fairwinds Landing port upgrade
  - $20M: Paulsboro, NJ - Marine Terminal
  - $47M: Baltimore County, MD – Sparrows Point Steel offshore wind manufacturing hub
- **Regulatory & Legal Actions**
  - Construction halted on Revolution Wind (RI/CT, $6.2B project, nearly complete).
  - State officials argue the stop-work order has no legal basis and threatens regional grid reliability.
  - CT Attorney General William Tong filed in federal court to block the order, warning of higher bills, job losses, and weakened grid stability.
  - Federal approval likely to be rescinded for Maryland Offshore Wind Project (114 turbines off Ocean City).
- **Administrative Barriers**
  - Interior Department imposing new political reviews on wind/solar permitting, slowing projects.
  - Investigations into bird deaths at wind farms launched.
- **Industry Challenges**
  - Offshore wind projects already strained by rising costs, high interest rates, supply chain delays, and local opposition.
  - Federal hostility and tariff uncertainty under Trump deepened the slowdown.
  - Several developers paused U.S. investments; only a handful of projects remain active (Empire Wind, Sunrise Wind, Vineyard Wind, Coastal Virginia Offshore Wind).

The Trump administration's aggressive reversal of federal support represents a significant setback for U.S. offshore wind, jeopardizing billions in investment and slowing the clean energy transition. With lawsuits already underway, the conflict underscores a sharp divide between federal policy shifts and state-level efforts to expand renewable energy infrastructure.

NY Times: Spain's Old Ways May Show How to Keep Cool

This Article describes how Seville, Spain sets an example for dealing with extreme heat waves that are worsening due to climate change, threatening vulnerable populations. Seville, one of Europe's hottest cities, now faces longer, harsher summers with an average of 115 days above 85°F since 2020. Extreme heat waves While modern solutions are scarce, Seville's centuries-old practices provide insights for coping.

The traditional siesta is no accident. As places like Norway and Finland hit higher temperatures, an increasingly uncomfortable continent may find itself looking to Seville and other cities that have been living with the heat for centuries for ways to get through what feels like the perpetual inferno of summer.

Key Highlights

- **Traditional Practices**
  - **Siesta**: Long midday breaks reduce outdoor exposure during peak heat.
  - **Urban Design**: Narrow shaded streets, white awnings, and thick-walled buildings naturally cool neighborhoods.
  - **Blinds & Shutters**: Keeping interiors dark and sealed helps maintain cooler indoor temperatures.
- **Architectural Adaptations**
  - Structures built before widespread air conditioning are optimized for heat resistance.
  - Simple, low-tech methods like shade, airflow control, and insulation remain effective.
- **Ancient Innovations Revisited**
  - Scientists are revisiting techniques from Muslim caliphates in Spain, inspired by Persian Qanat systems that were originally developed about 3,000 years ago.
  - These involve channeling hot air underground, cooling it with water, and releasing it back indoors as chilled air — a natural form of air conditioning.

Below: The roof of the Qanat project run by María de la Paz Montero Gutiérrez, uses ancient techniques with a modern twist. To cool water more quickly at night, underground water is redirected to the roof, where it flows in a thin, and easily chilled, film over slanted solar panels.

Seville demonstrates that traditional, common-sense cooling strategies can complement modern approaches in facing today's climate crisis. As extreme heat spreads across Europe, other nations may look to Spain's blend of heritage and adaptation for sustainable, low-cost solutions.

Canary Media: Google's new plan to keep its data centers from stressing the grid

The increasing growth of AI data centers are set to swamp U.S. power grids. This Article describes how Google's new utility deals aim to flip the script - shifting workloads to ease the strain of increased electric demand while speeding its access to energy to create flexible, grid-aware operations.

Key highlights:

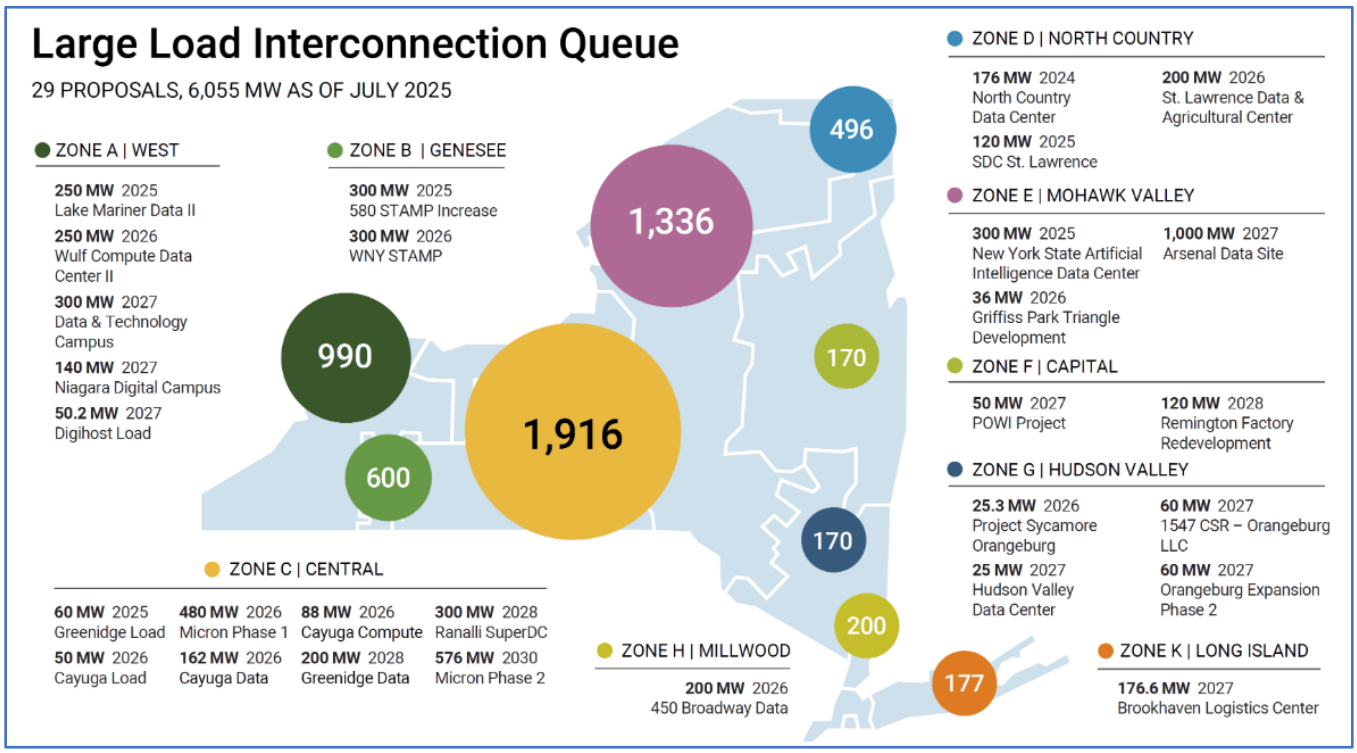
- Innovative Utility Deals: Google has signed agreements with Indiana Michigan Power (I&M) and Tennessee Valley Authority (TVA) to shift machine learning workloads and limit electricity use during peak stress periods. This is the first time AI workloads are directly used in demand-response programs.
- Carbon-Intelligent Computing: Building on its existing program that shifts non-urgent tasks (e.g., YouTube processing) to align with clean energy availability, Google is now applying this approach to large-scale AI operations.
- Grid Capacity Opportunity: Studies show that if data centers commit to even modest, time-limited curtailments, up to 100 gigawatts of capacity could be accommodated without major grid expansions.
- Growing Industry Pressure: Forecasts indicate explosive growth in data center demand, leading utilities in states like Georgia, Virginia, and Louisiana to propose multi-billion-dollar investments in new — largely fossil-fuel-based — power plants. This trend risks raising consumer energy costs.
- Regulatory Shifts: States including Indiana, Ohio, and Texas are implementing rules requiring data centers to shoulder more of their costs and to reduce usage during emergencies. Grid operators such as PJM and Southwest Power Pool are creating new frameworks for large, flexible loads.
- Broader Industry Movement: Other utilities and operators are testing flexible data center models, including Oracle and additional Google facilities, through initiatives like EPRI's DCFlex program.

Google's approach reframes data centers as flexible energy partners instead of fixed, high-demand loads. This helps to ease grid strain while supporting AI expansion. However, rapid demand growth still poses risks of higher costs, fossil fuel dependence, and infrastructure strain, unless flexible models are broadly adopted.

Title	**Source**	**URL**
How we're making data centers more flexible to benefit power grids	Google (blog)	Blog.google
One way data centers can help the grid - By being flexible	Canary Media	Canary Media
Boon or bane: What will data centers do to the grid? (series opener)	Canary Media	Canary Media
Recommendations on Powering Artificial Intelligence and Data Center Infrastructure	U.S. Dept of Energy	The Department of Energy's Energy.gov
Data centers are driving US power demand to hard-to-reach heights	Canary Media	Canary Media
How to build data centers without raising grid costs — and emissions	Canary Media	Canary Media
Google's Data Centre Solution to AI & Sustainability Demands	AI Magazine	AI Magazine
Google has a $20 B plan to build data centers and clean power together	Canary Media	Canary Media
Google Expands Data Center Demand Flexibility to Support Grid Resilience and AI Growth	ESG News	ESG News
How Google Is Making Data Centers Flexible to Benefit Power Grids	Duke University	Duke Nicholas Institute
Google's AI-Powered Grid Revolution: How Data Centers Are Reshaping the U.S. Power Landscape	District Energy blog	Districtenergy.org
From Grid Challenge to Grid Asset: Data Center Load Flexibility	Canary Media	Energy.canarymedia.com
How flexible data centers can help power grids keep up with AI demand	Aiholics	AIholics.com

NYISO Blog: Energy-intensive Projects in NYISO's Interconnection Queue

This Article from the NYISO Blog describes how large energy-intensive economic development projects such as data centers, chip fabrication facilities, and traditional manufacturing are driving up demand for electricity in New York. The below diagram shows the large load projects currently seeking to connect to New York's grid.



The number of new interconnection requests from large loads has grown dramatically in just a few years.

- In 2022, six large load projects in the interconnection queue accounted for 1,045 MW.
- As of July 2025, there are 29 large load projects in the queue which would collectively add nearly 6,055 MW of load to the grid.
- NYISO load forecasters anticipate that roughly 2,500 MW to 4,000 MW of that new demand will be on the system by 2035.

The increase in forecasted demand poses a major challenge to grid reliability in New York. As initially highlighted in the *2024 Reliability Needs Assessment* (RNA), some large load projects are expected to have flexibility in the amount of power they need from the grid. The 2024 RNA assumed that approximately 1,200 MW of demand from large loads can be reduced during peak periods, which can provide an important reliability benefit.

To Learn More: Connecting Clean Energy Resources to the Grid
Power Trends 2025 - The NYISO annual state-of-the-grid and markets report

NYISO Blog: Since 2019, Clean Energy Projects Totaling More Than 14,000 MW Have Completed the Interconnection Process

This Article describes how New York's electric grid urgently needs an abundance of new generation to serve rising consumer demand. Since 2019, 106 projects representing more than 14,000 megawatts (MW) of clean energy supply have completed the interconnection process. New York's total generating capacity is approximately 40,000 MW.

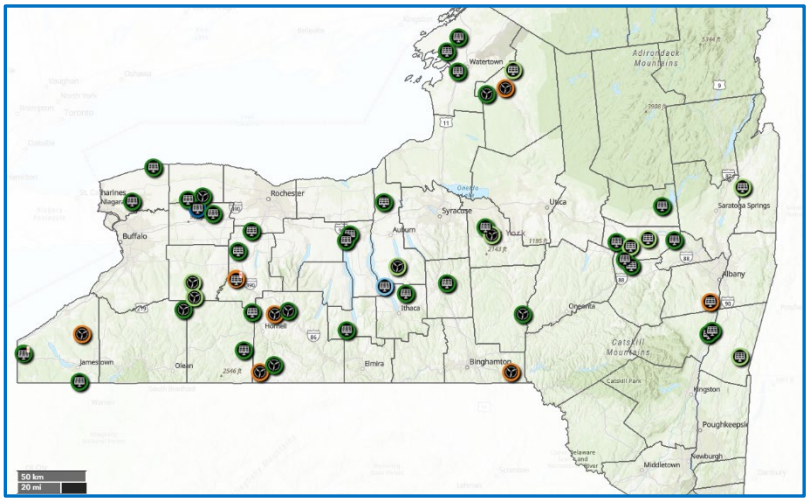
Of the projects that have completed the review process, the NYISO estimates that just seven, representing 3,493 MW, have begun construction. These include the Champlain Hudson Power Express transmission line that will deliver 1,250 MW of power from Canada to New York City, and the 340 MW Alle-Catt Wind Farm in Cattaraugus County.

Projects That Have Completed NYISO's Interconnection Process Since 2019

Resource Type	Capacity (MW)	Projects
Combined Storage/Solar	780.0	4
Energy Storage	2,058.9	24
Offshore Wind	1,740.0	3
Solar	5,460.5	64
Wind	1,694.8	8
DC Transmission	2,550.0	3
Total	**14,284.2**	**106**

Developers face numerous factors that ultimately influence their decision to begin construction. They must secure permits from state, local, and federal entities. One such entity is the Office of Renewable Energy Siting and Electric Transmission (ORES) which consolidates the environmental review and permitting process of large-scale renewable energy projects in New York.

The New York State Department of Public Service Office of Renewable Energy Siting and Electric Transmission (ORES) has published a Renewable Energy Permit Application Status Map (at right), which shows that less than 20 percent of recently permitted projects are either operational or under consideration. The remaining projects have received siting permits but have not yet started construction. Developers must also navigate challenges associated with supply chain disruptions, access to project capital, and economic forces that drive up the costs and delivery times of equipment.



According to a recent analysis from Clean Investment Monitor, "recent and proposed trade measures targeting clean technology imports, especially from China, could reshape the economics of domestic manufacturing ... But if they are poorly targeted or paired with policy uncertainty or retaliatory actions, they risk driving up costs and slowing deployment."

The report notes that weakened incentives for clean energy, such as measures adopted in the One Big Beautiful Bill Act to eliminate tax credits for clean energy investment, could lead to further delays and cancellations. As policymakers and regulators examine how the state can advance its clean energy goals, the complexities behind developing large-scale renewable energy projects should be considered. While interconnection is often cited as a reason for project delays, the number of projects with approved interconnection agreements that have not yet begun construction suggests that other factors are at play.

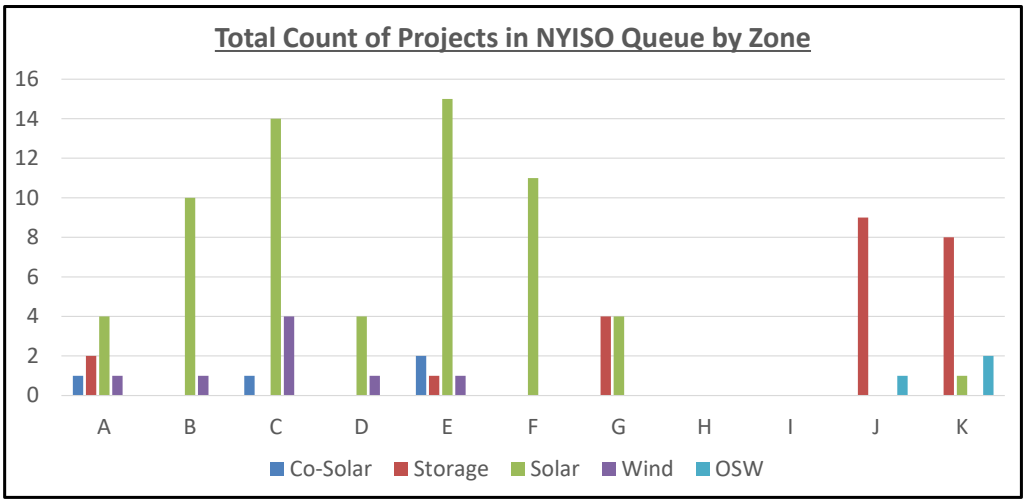
Interconnection Queue: Monthly Snapshot – Storage / Solar / Wind / CSRs (Co-located Storage)

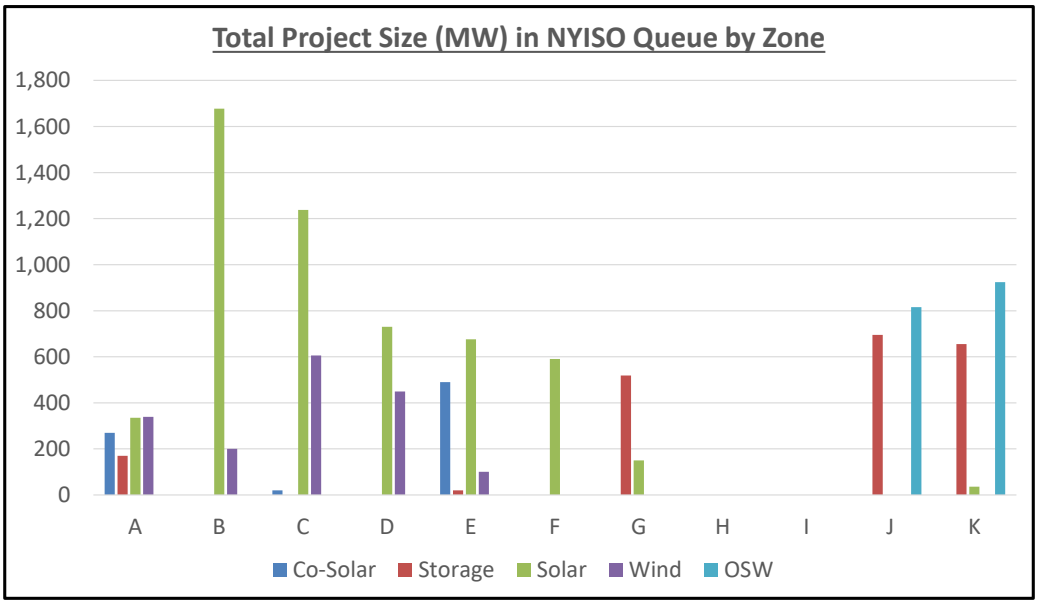
The intent is to track the growth of Co-Located Solar / Storage, Energy Storage, Solar, Wind, and Offshore Wind (OSW) projects in the NYISO Interconnection Queue, looking to identify trends and patterns by zone and in total for the state. The information was obtained from the NYISO Interconnection Website, based on information published on August 20th, and representing the Interconnection Queue as of July 31st. Note that two projects were added, and 16 projects were withdrawn during the month of July.

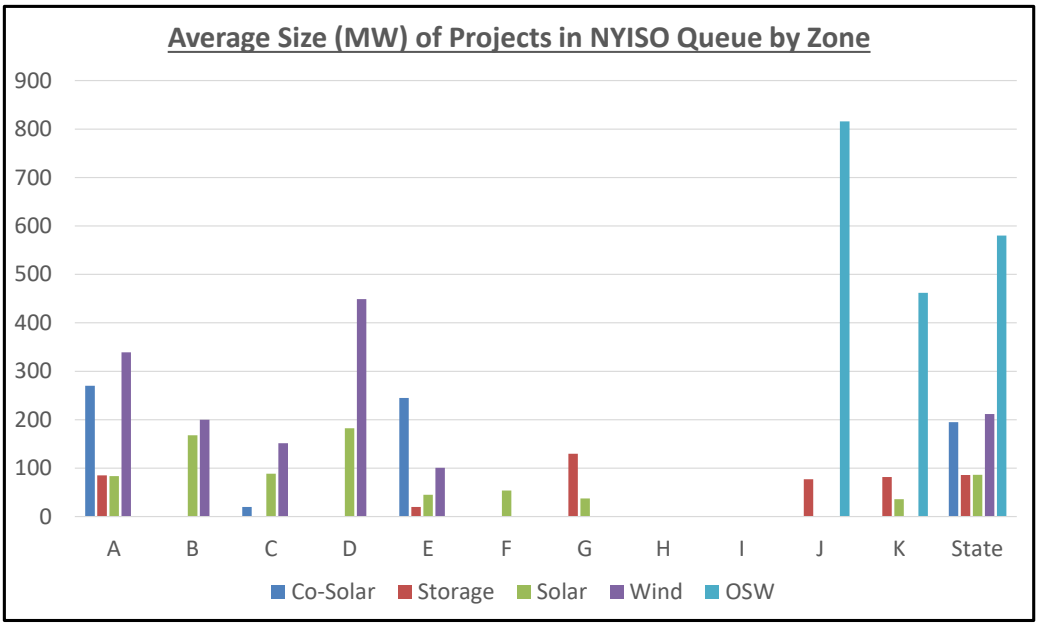
Total Count of Projects in NYISO Queue by Zone					
Zone	Co-Solar	Storage	Solar	Wind	OSW
A	1	2	4	1	
B			10	1	
C	1		14	4	
D			4	1	
E	2	1	15	1	
F			11		
G		4	4		
H					
I					
J		9			1
K		8	1		2
State	4	24	63	8	3

Total Count of Projects in NYISO Queue by Zone					
Zone	Co-Solar	Storage	Solar	Wind	OSW
A	270	170	335	339	
B			1,678	200	
C	20		1,238	606	
D			730	449	
E	490	20	676	101	
F			591		
G		519	150		
H					
I					
J		695			816
K		655	36		924
State	780	2,059	5,433	1,695	1,740

Average Size (MW) of Projects in NYISO Queue by Zone					
Zone	Co-Solar	Storage	Solar	Wind	OSW
A	270	85	84	339	
B			168	200	
C	20		88	151	
D			183	449	
E	245	20	45	101	
F			54		
G		130	38		
H					
I	`				
J		77			816
K		82	36		462
State	195	86	86	212	580


Total Count of Projects in NYISO Queue by Zone
16
14
12
10
8
6
4
2
0
A
B
C
D
E
F
G
H
I
J
K
Co-Solar
Storage
Solar
Wind
OSW


Total Project Size (MW) in NYISO Queue by Zone
1,800
1,600
1,400
1,200
1,000
800
600
400
200
0
A
B
C
D
E
F
G
H
I
J
K
Co-Solar
Storage
Solar
Wind
OSW


Average Size (MW) of Projects in NYISO Queue by Zone
900
800
700
600
500
400
300
200
100
0
A
B
C
D
E
F
G
H
I
J
K
State
Co-Solar
Storage
Solar
Wind
OSW

Cluster Interconnection Queue: Monthly Snapshot – Storage / Solar / Wind / CSRs (Co-located Storage)

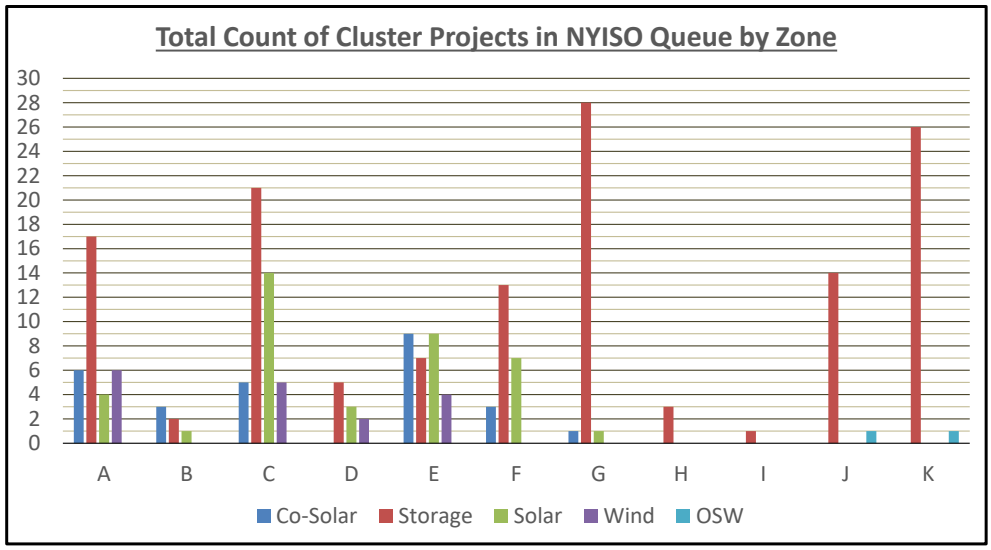
The intent is to track the growth of the Cluster-based projects, including Co-Located Solar and Wind / Storage, Energy Storage, Solar, Wind, and Offshore Wind (OSW) projects in the NYISO Interconnection Queue, looking to identify trends and patterns by zone and in total for the state. The information was obtained from July, based on information published on August 20th.

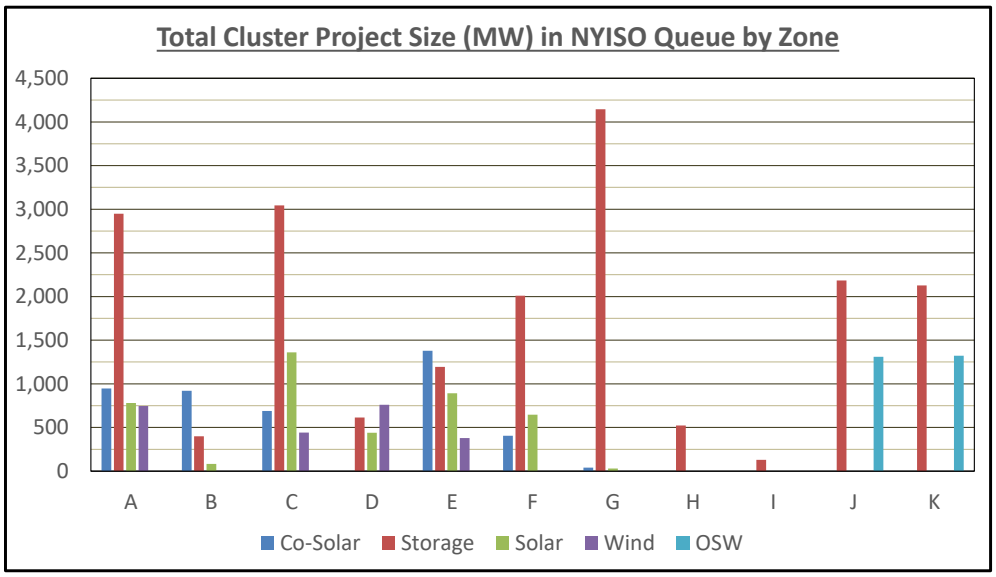
Note that within the Cluster Queue, there are currently 222 projects totaling 32,893 MW. This represents a drop of 4 projects, totaling 656 MW from the previous month. A total of 151 projects representing 42,590 MW are listed as having been withdrawn to date.

Total Count of Cluster Projects in NYISO Queue by Zone					
Zone	Co-Solar	Storage	Solar	Wind	OSW
A	6	17	4	6	
B	3	2	1		
C	5	21	14	5	
D		5	3	2	
E	9	7	9	4	
F	3	13	7		
G	1	28	1		
H		3			
I		1			
J		14			1
K		26			1
State	27	137	39	17	2

Total Cluster Project Size (MW) in NYISO Queue by Zone					
Zone	Co-Solar	Storage	Solar	Wind	OSW
A	947	2,948	780	746	
B	920	400	83		
C	690	3,045	1,361	442	
D		615	440	760	
E	1,378	1,194	893	380	
F	405	2,009	647		
G	40	4,146	30		
H		524			
I		130			
J		2,184			1,310
K		2,128			1,321
State	4,379	19,322	4,233	2,328	2,631

Average Size (MW) Cluster Projects in NYISO Queue by Zone					
Zone	Co-Solar	Storage	Solar	Wind	OSW
A	158	173	195	124	
B	307	200	83		
C	138	145	97	88	
D		123	147	380	
E	153	171	99	95	
F	135	155	92		
G	40	148	30		
H		175			
I		130			
J		156			1,310
K		82			1,321
State	162	141	109	137	1,316


Total Count of Cluster Projects in NYISO Queue by Zone
30
28
26
24
22
20
18
16
14
12
10
8
6
4
2
0
A
B
C
D
E
F
G
H
I
J
K
Co-Solar
Storage
Solar
Wind
OSW


Total Cluster Project Size (MW) in NYISO Queue by Zone
4,500
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0
A
B
C
D
E
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H
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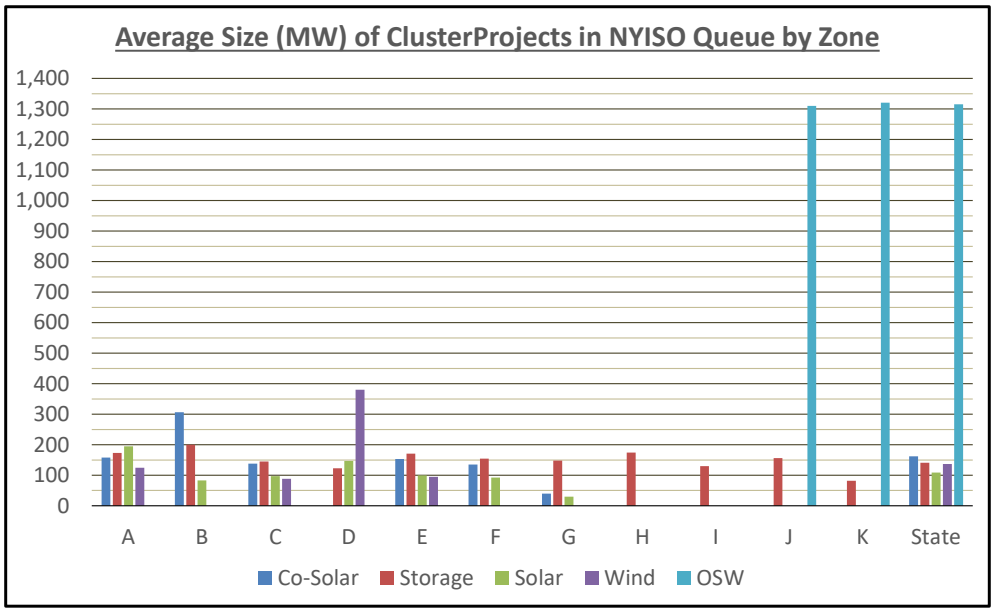
J
K
Co-Solar
Storage
Solar
Wind
OSW


Average Size (MW) of ClusterProjects in NYISO Queue by Zone
1,400
1,300
1,200
1,100
1,000
900
800
700
600
500
400
300
200
100
0
A
B
C
D
E
F
G
H
I
J
K
State
Co-Solar
Storage
Solar
Wind
OSW