



ACE NY

ALLIANCE FOR CLEAN ENERGY NEW YORK, INC.

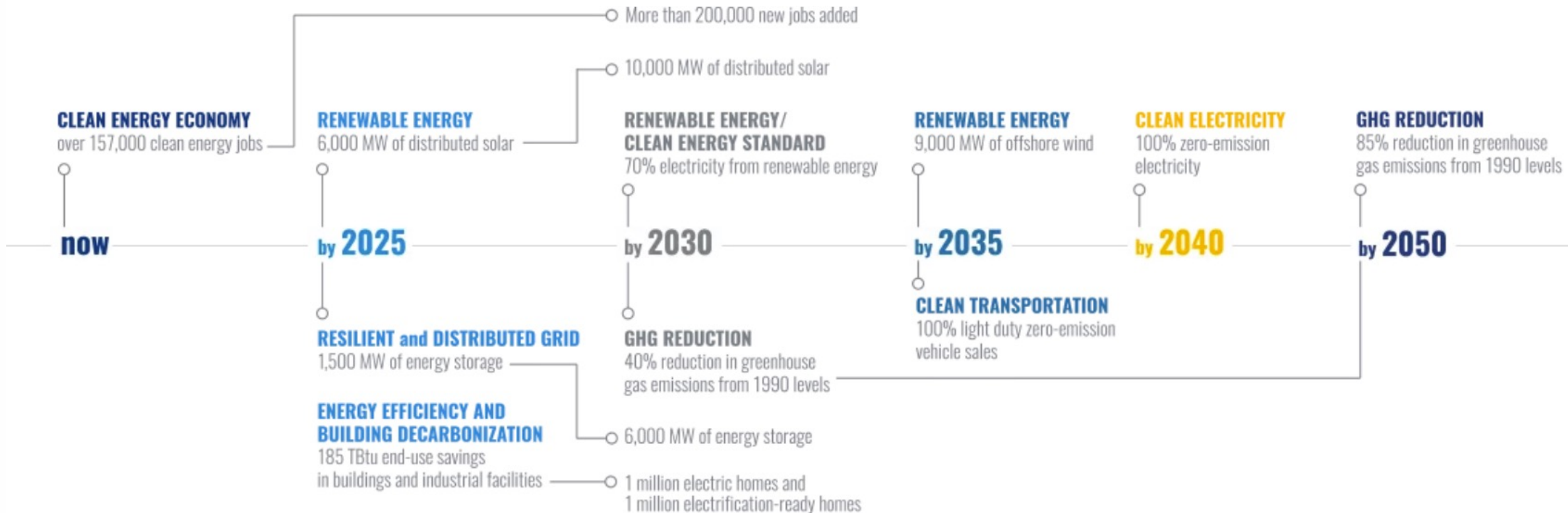
Building Renewables Together: Update on Clean Energy Construction

Legislative Breakfast, March 1, 2023

Co-hosted by Laborer's Union PAC and ACE NY

aceny.org

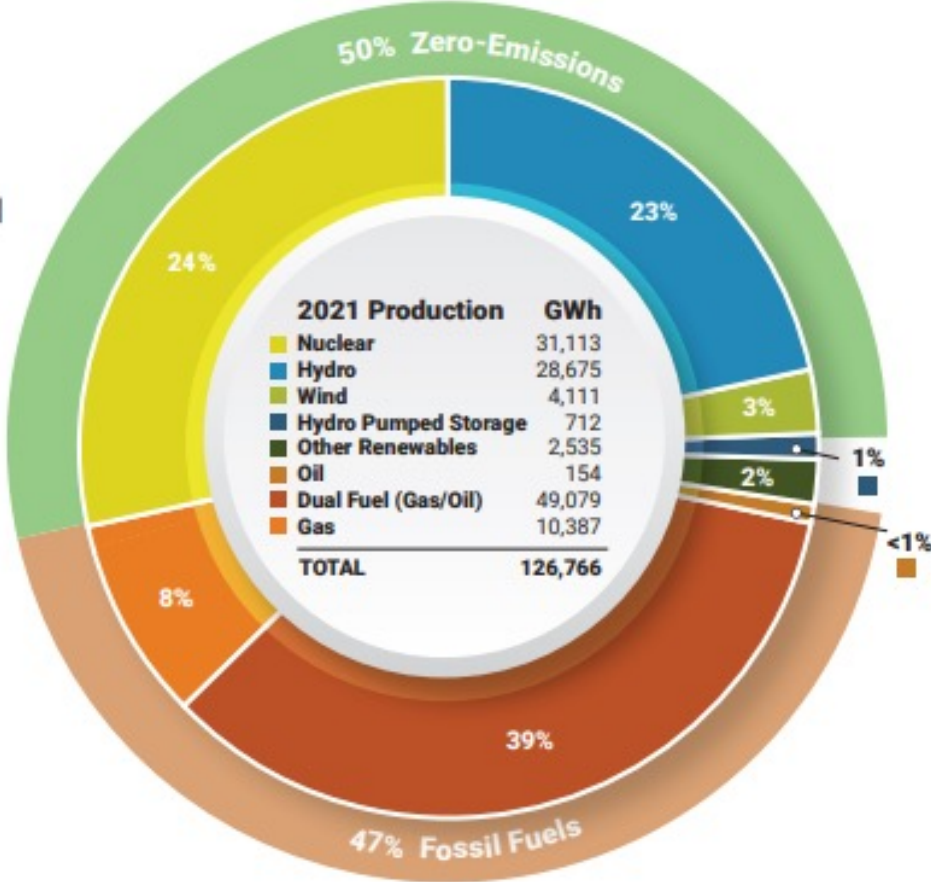
New York's Nation-Leading Climate Goals



Current Sources of Electricity in New York

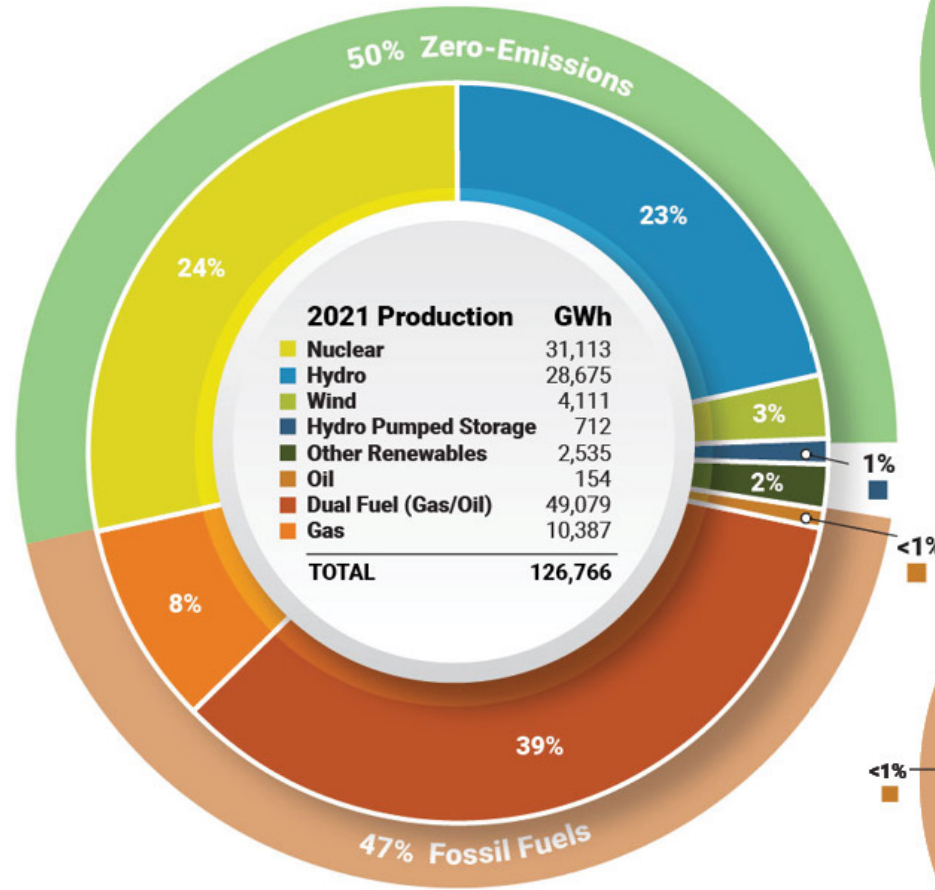
New York Control Area Energy Production

Figure 12: Energy Production by Fuel Source (GWh) - Statewide, Upstate and Downstate New York: 2021

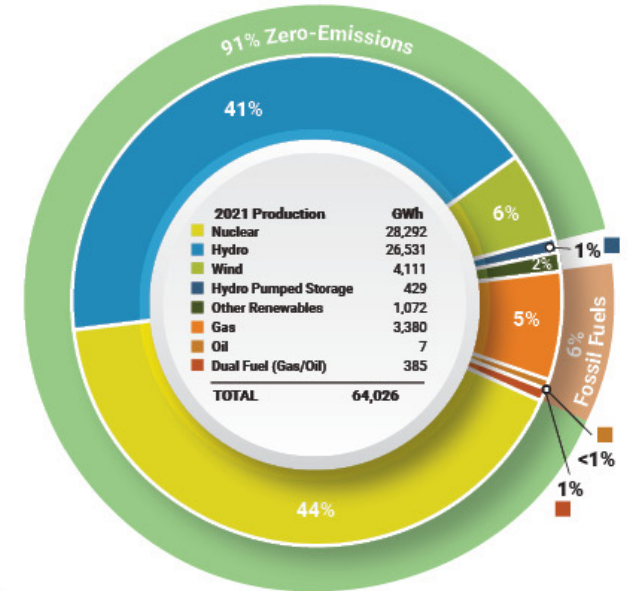


Tale of 2 Grids

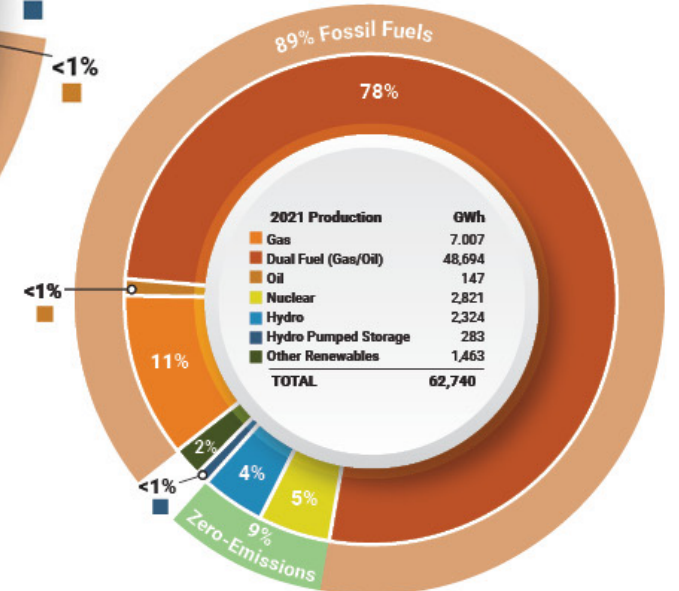
New York Control Area Energy Production



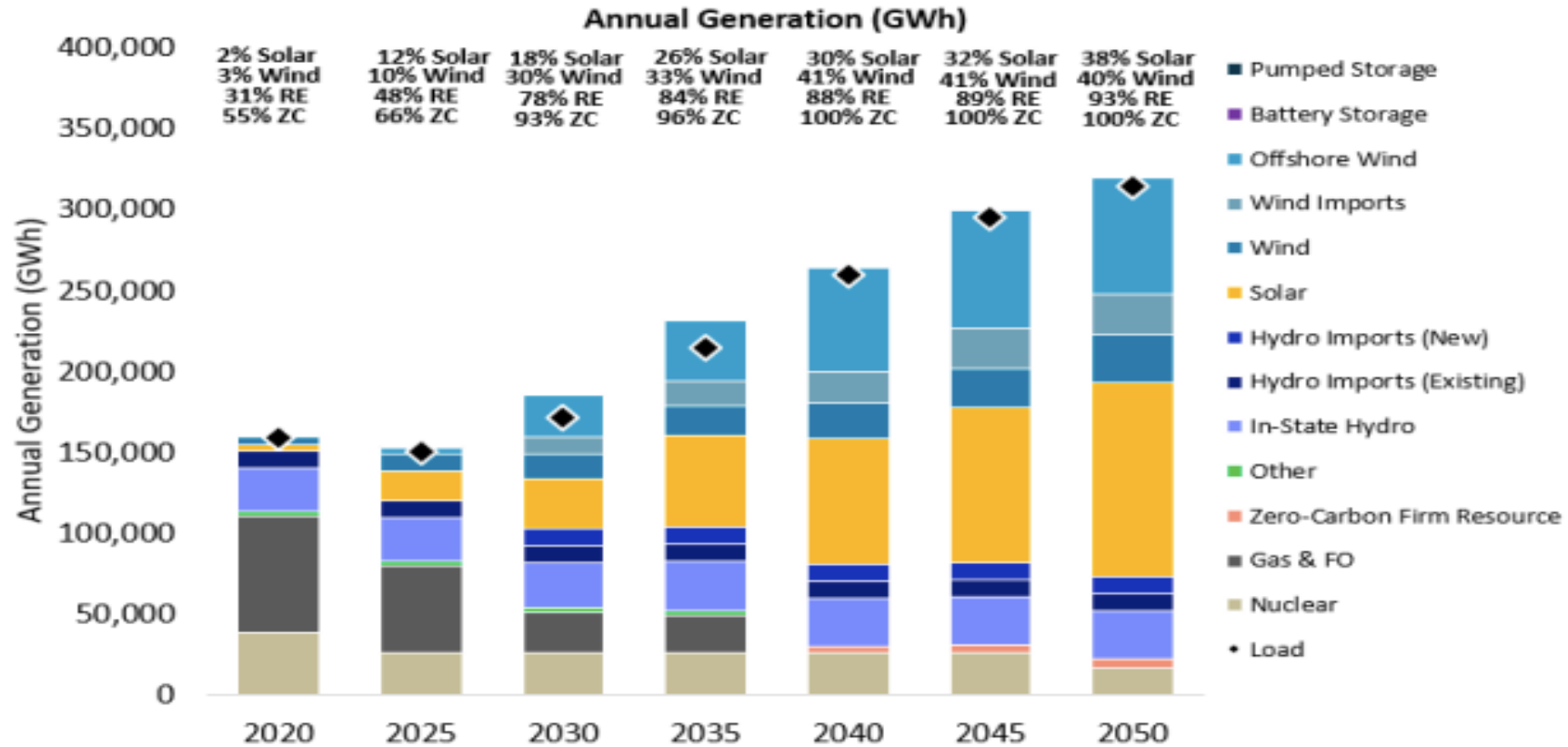
Upstate Energy (Zones A-E)



Downstate Energy (Zones F-K)

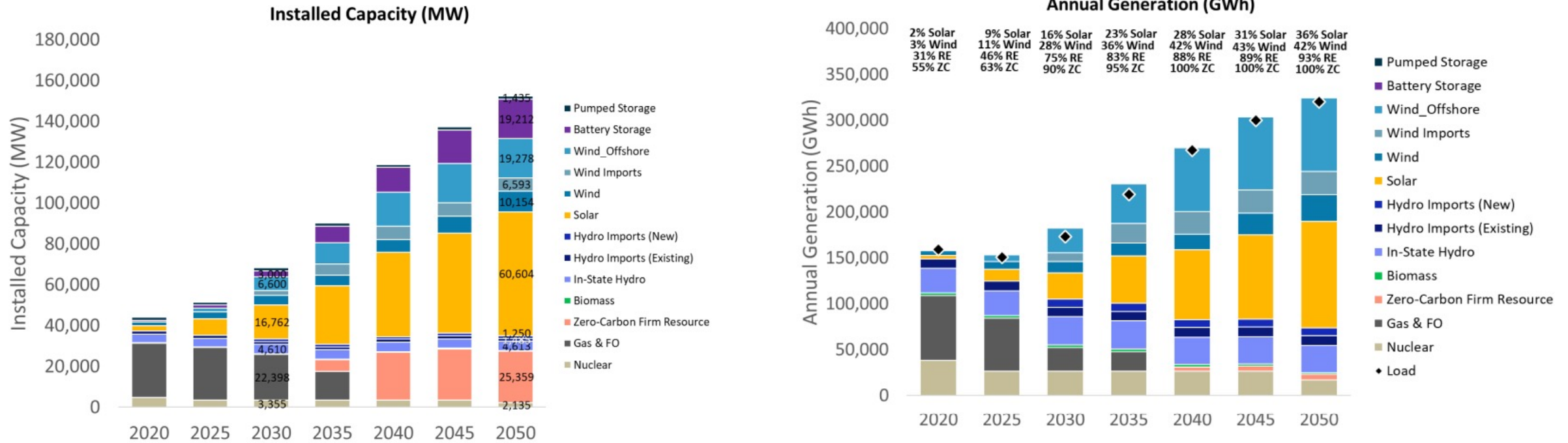


Need to Build Renewables in NYS to Achieve CLCPA

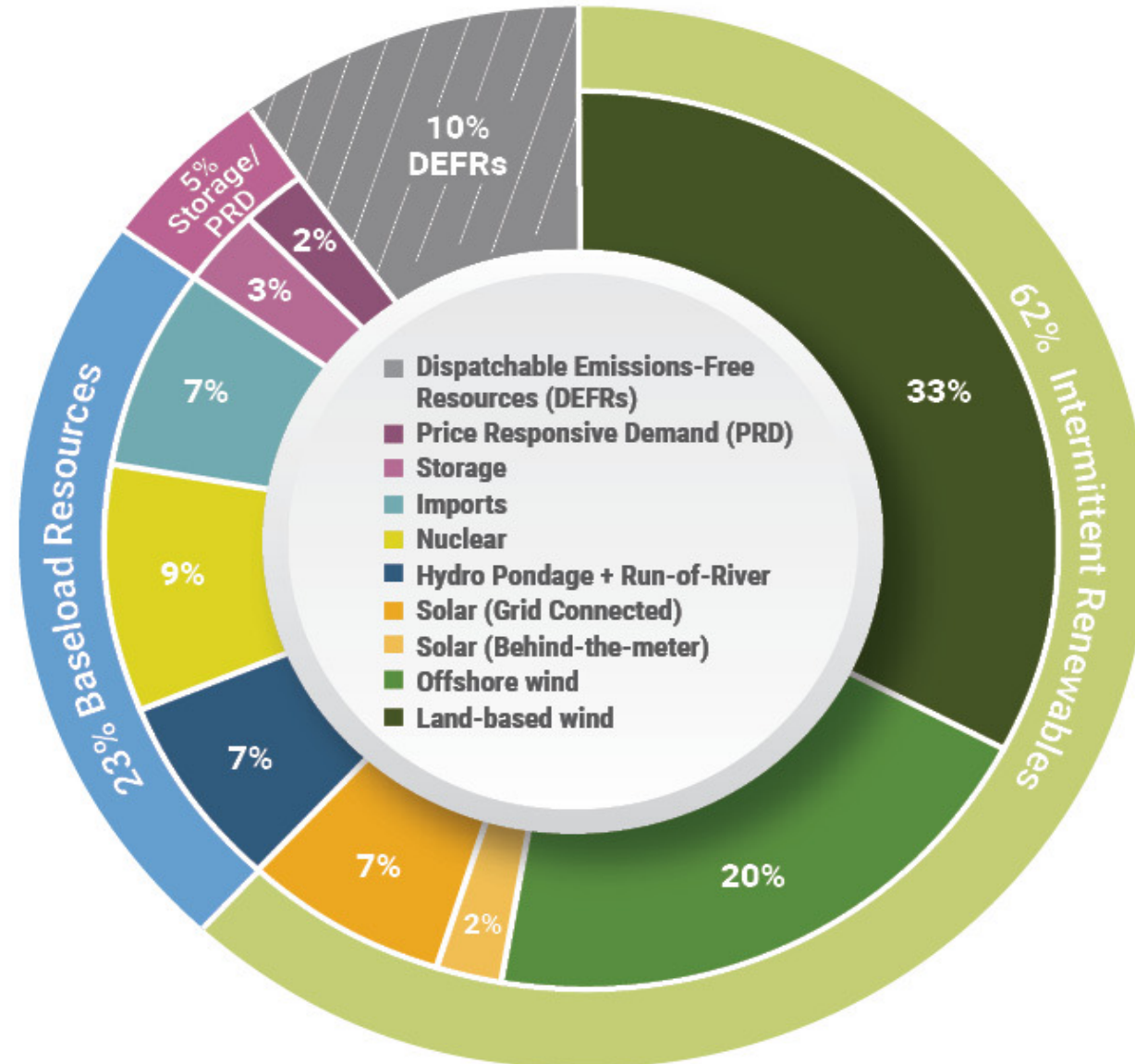


Predicted Need for Renewables from the Climate Scoping Plan (Appendix G)

Figure 29. Installed Capacity and Annual Generation for Scenario 3: Accelerated Transition away from Combustion³⁰



Sources of Electricity in 2040, If NY Achieves CLCPA



10 GW By 2030 Goal for Distributed Solar

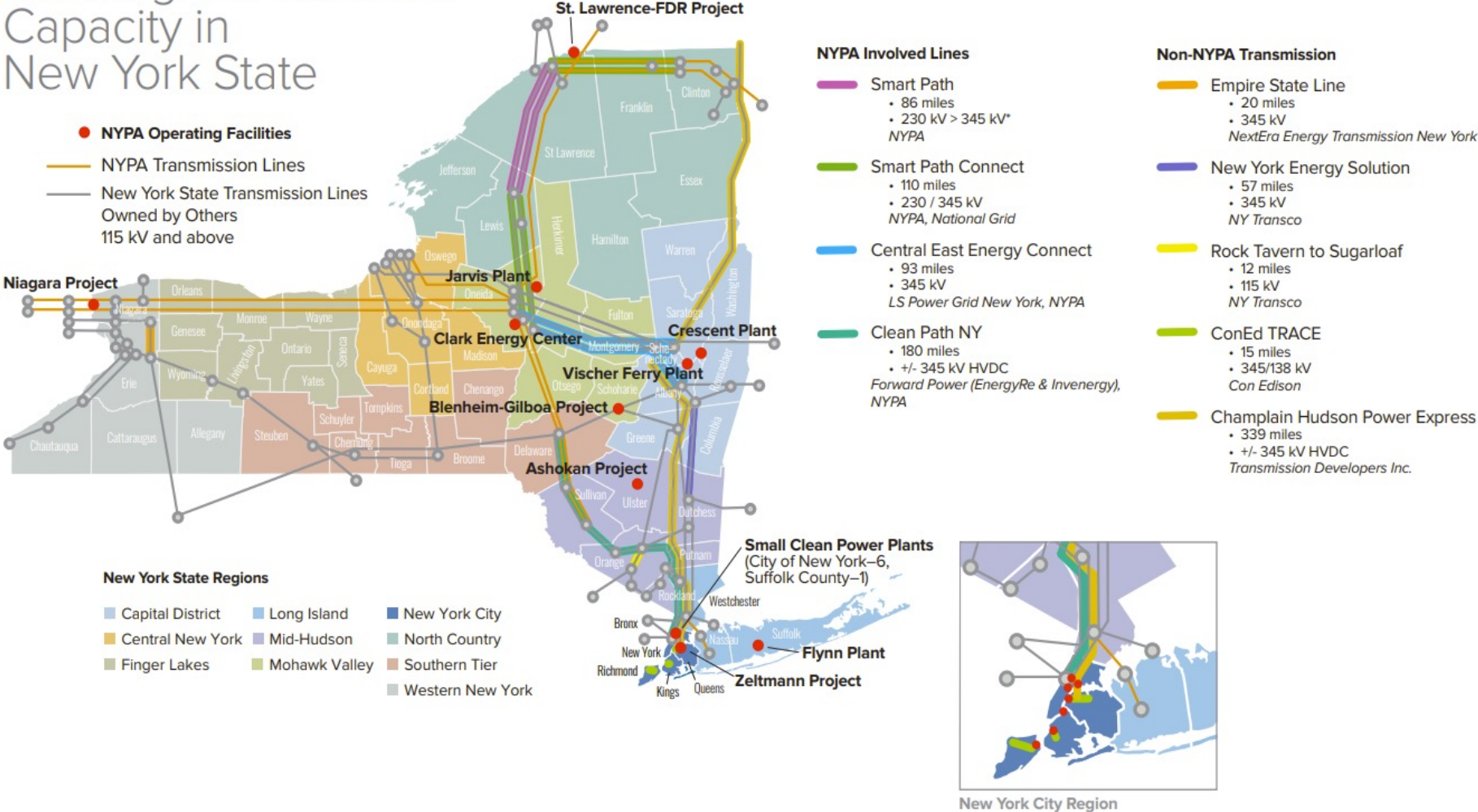
- 6 GW Goal for 2025 is in CLCPA; this is nearly achieved.
- NY is striving to achieve + 4 GW of Solar through NY-Sun, VDER, net metering

Geographical Breakdown of the Incremental 4 GW Target

Incentive Group	MW
Upstate MW Block Incentives - C/I	2,943
Con Edison MW Block Incentives - Residential	150
Con Edison MW Block Incentives - Small Projects	150
Con Edison MW Block Incentives - Large Projects	150
Subtotal: MW Block Incentives	3,393
Long Island, and Upstate Unincentivized Projects	607
TOTAL²	4,000

Current Transmission Investments in NY

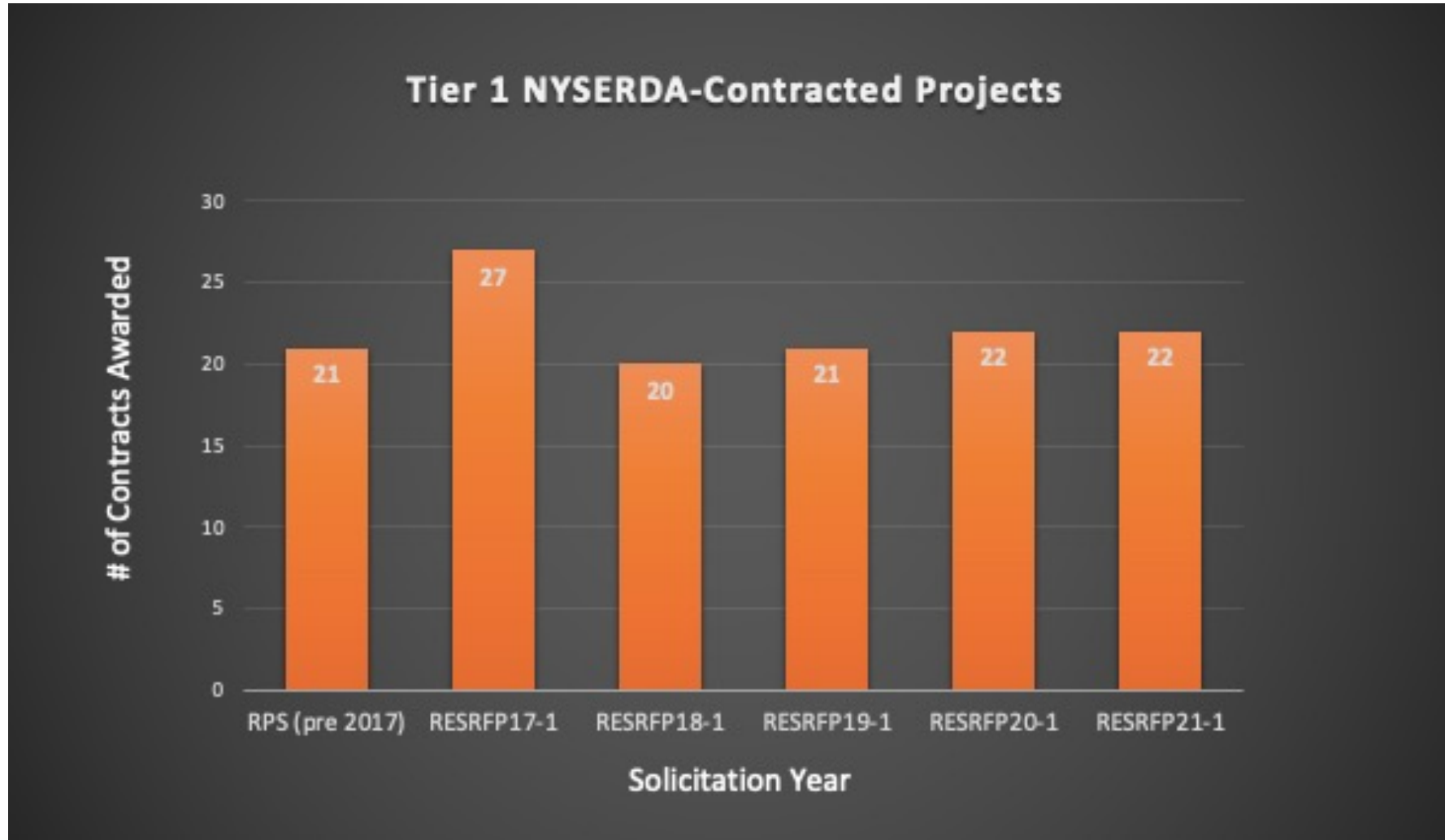
Growing Transmission Capacity in New York State



Solving The Transmission Bottleneck

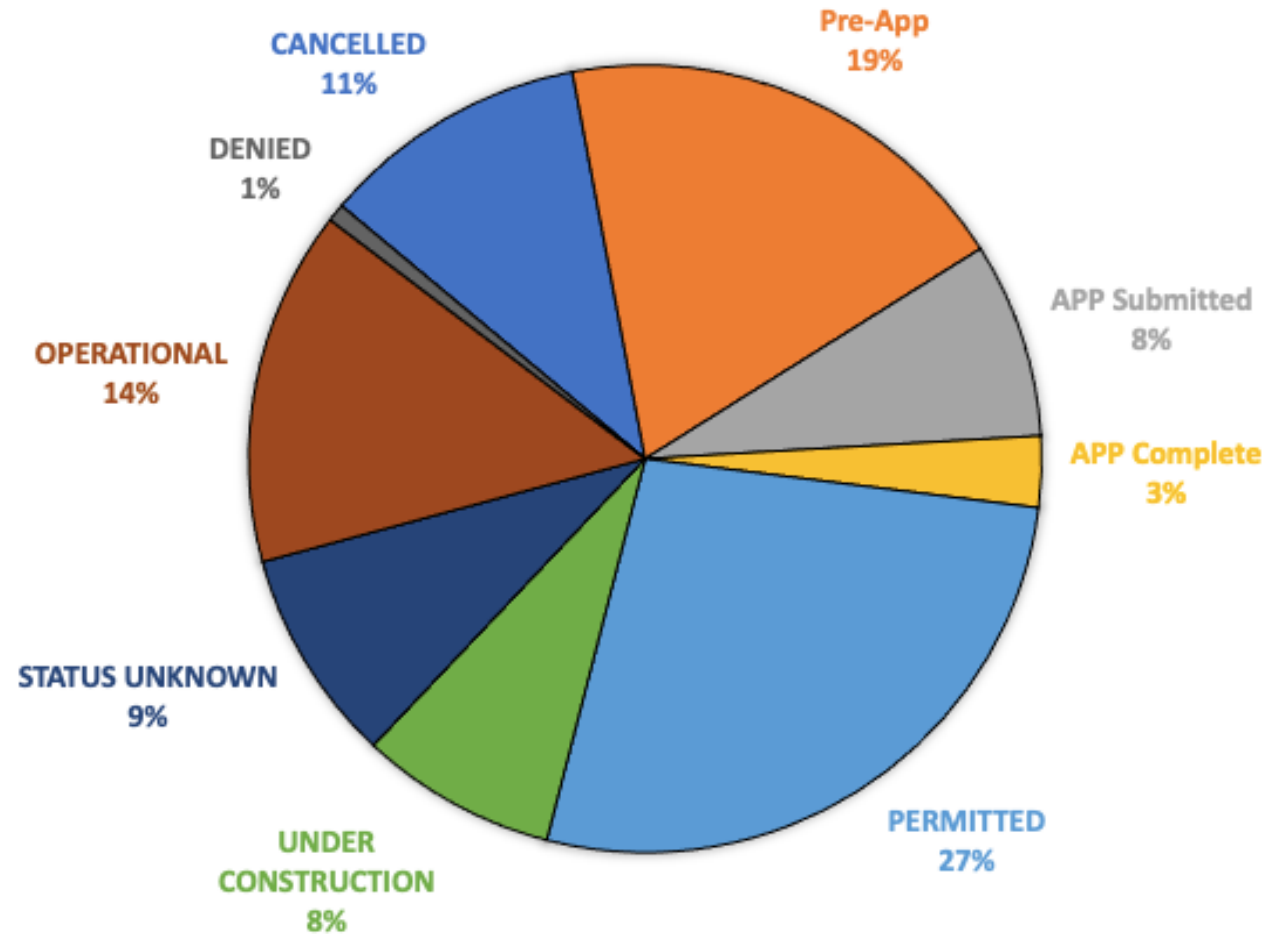
- The Accelerated Renewable Growth and Community Benefit Act (2020) directed the PSC to do an Initial Grid Study.
- Subsequent actions include 1 NYPA Priority Transmission Project, Phase 1 projects by utilities, recent approval of projects in 3 Areas of Concern.
- Also, declaration of “Public Policy Transmission Need” (PPTN) for offshore wind in 2021, with project still to be selected.
- Next step – PSC to approve the Coordinated Grid Planning Process; ACE thinks there should be some modifications to the utilities’ proposal.
- ACE has also requested additional PPTN declarations in North Country, Southern Tier, and Downstate for offshore wind.

Beginning in 2017, NYSERDA Accelerated Awarding Contracts for Renewable Energy Projects in Tier 1 and Offshore Wind Tier



Total of 137 Awards in Tier 1 and Offshore Wind Tier

TIER 1 NYSERDA-CONTRACTED PROJECTS - STATUS



Disclaimer: ACE NY does not have full transparency into the status of all projects. This data represents our best efforts to determine the status of each project.

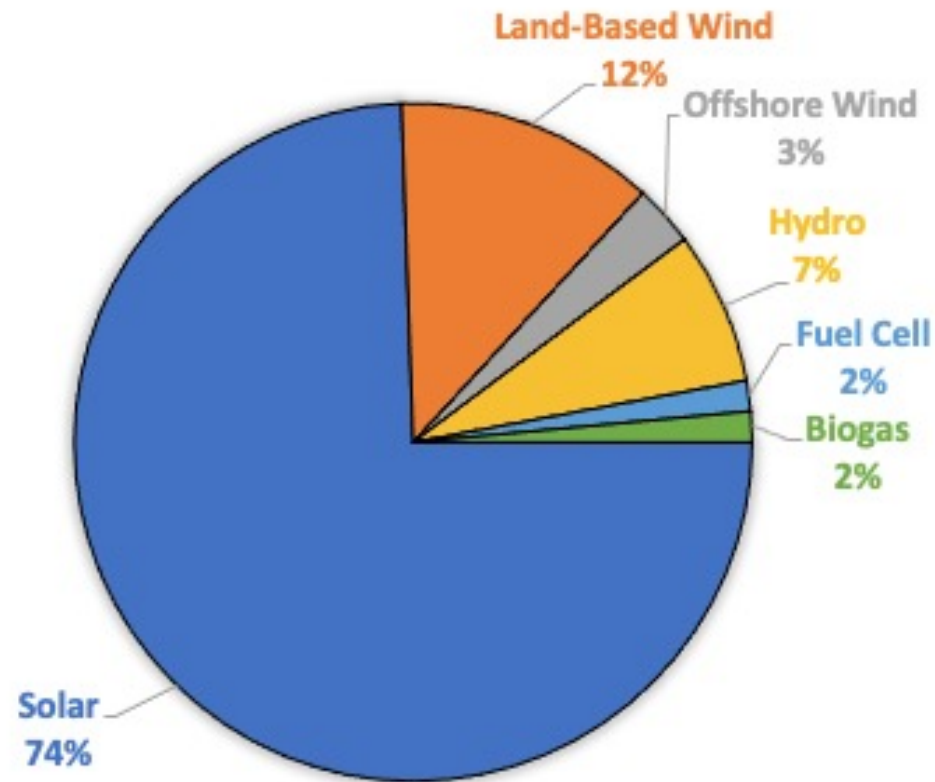
Status of Awarded Wind, Solar, & Offshore Wind Projects

PROJECT STATUS	TOTAL #	Cancelled	Pre-App	APP Submitted	APP Complete	Permitted	Under Construction	Status Unknown	Operational	Denied
# of Projects	137	15	26	11	4	37	11	12	20	1
Percent Projects (%)	100%	11%	19%	8%	3%	27%	8%	9%	15%	1%
MW	13623.01	811.66	3275.14	259.91	483.54	3197.64	668.65	4389.75	356.72	180.00
Percent MW (%)	100%	6%	24%	2%	4%	23%	5%	32%	3%	1%

NYSERDA reports that these awarded projects, plus the two Tier 4 projects (NYC Renewables Program), **if all built**, would allow NY to reach 66% renewable electricity in 2030. Under the Clean Energy Standard, NYSERDA is authorized to contract for ~4,700 MW more of offshore wind and 5 more years of Tier 1 RFPs (~110 more wind and solar projects). The Tier 1 procurement schedule accounts for 20% project attrition.

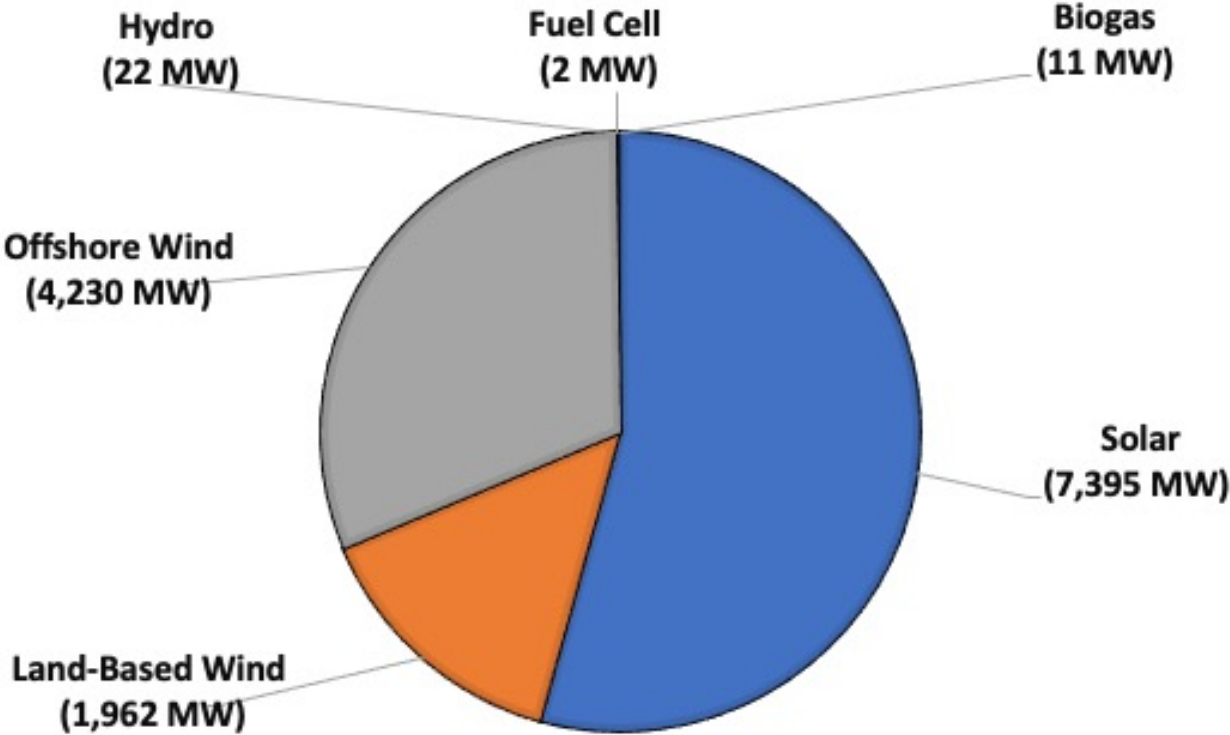
About three fourths of the projects are solar.

TIER 1 NYSERDA-CONTRACTED PROJECTS - BY TECHNOLOGY



More than a Quarter of the Megawatts are Offshore Wind

TIER 1 NYSERDA-CONTRACTED PROJECTS - BY TECHNOLOGY & CAPACITY



Awarded Projects – By Technology

Technology	Solar	Land-Based Wind	Offshore Wind	Hydro	Fuel Cell	Biogas	TOTAL #
# of Projects	102	17	4	10	2	2	137
Percent Projects (%)	74%	12%	3%	7%	1%	1%	100%
MW	7395.90	1962.25	4230.00	22.18	1.84	10.84	13623.01
Percent MW (%)	54.29%	14.40%	31.05%	0.16%	0.01%	0.08%	100.00%

Harvesting the Sun in NY: Solar on Farmland

- Collaboration between the RE industry and the farming community can advance the objectives of NY's Climate Act while preserving the State's vital agricultural sector.
- Through the co-location of solar panels on farmland, **agri-voltaics and dual-use solar** can deliver a much-needed boost to farm income & can improve soil health, increase biodiversity protection, stabilize farm revenues, create construction jobs and bolster the local economy.
- Renewables are always built on land owned by **willing** landowners. Landowners that are willing to lease their land to solar developers are often farmers that seek additional income.



Solar Development on Farmland in NYS

- ✓ In NY, all solar developers are required to adhere to the NYS Department of Agriculture and Markets Mitigation Guidelines for Solar Projects on Agricultural Land, to protect topsoil and prevent permanent loss of farmland.
- ✓ NYSERDA's existing contracting process already has a powerful incentive for solar projects to avoid locating on the best soils (Mineral Soil Groups 1 – 4) and assesses a mitigation fee if they do not. **Note: this is for Tier 1 projects**
- ✓ This current Agricultural Mitigation Payment has proven to be effective at incentivizing project developers to avoid prime soils (as well as develop comprehensive agricultural co-location plans).

Dual-Use: Dialogue, Collaboration and Research

- New York has both the **Agricultural Technical Working Group** and the **Farmland Protection Working Group** currently working on this issue.
 - Both involve state agencies, farmers, agricultural organizations, renewables developers and other stakeholders.
- Research underway is through the lens of:
 - *projects can be designed as a form of medium-term conservation with strategies to improve soil health, protect pollinators and other species, and reduce runoff and erosion.*
 - *projects, sited responsibly, offer farmers a steady revenue stream for decades, allowing their farm to continue in production and to better endure market volatility.*

So, how much farmland are we talking about?

- The Climate Scoping Plan predicts 2030 Solar capacity in NYS at 18.9 gigawatts (GWs), which includes 10 GW of distributed solar and 8.9 GW of grid-scale solar.
- If we assume that half of the distributed solar (approx. 5 GWs) would not be on rooftops, the remaining 13.9 GWs of solar on land translates to 77,000 acres, based on 5.5 acres per MW.
- Because not all solar would be on farmland, 77,000 acres is an overestimate.
 - Using that overestimation predicts that 1.1% of NY's approximately 7 million acres of farmland would be used for solar power in 2030.

What about 2050? We will need much more solar then.

- Climate Plan Scenario 3 predicts 60,604 MW of solar in 2050.
- Assuming half of the 10,000 MW of distributed solar is rooftop or customer-sited, ~55,000 MW would remain.
- Assuming ALL 55,000 MW is on farmland = 303,000 acres.
- 303K acres = 4.3% of New York's farmland.
- Again, this is an overestimate because not all solar will be on farmland.

Thank you!

- Our next speakers are Vinny Albanese from the LiUNA (Laborer's Union) and Jennifer Lawrence from the Social Enterprise and Training Center. They will speak about clean energy jobs.
- Thank you for attending our legislative breakfast!