



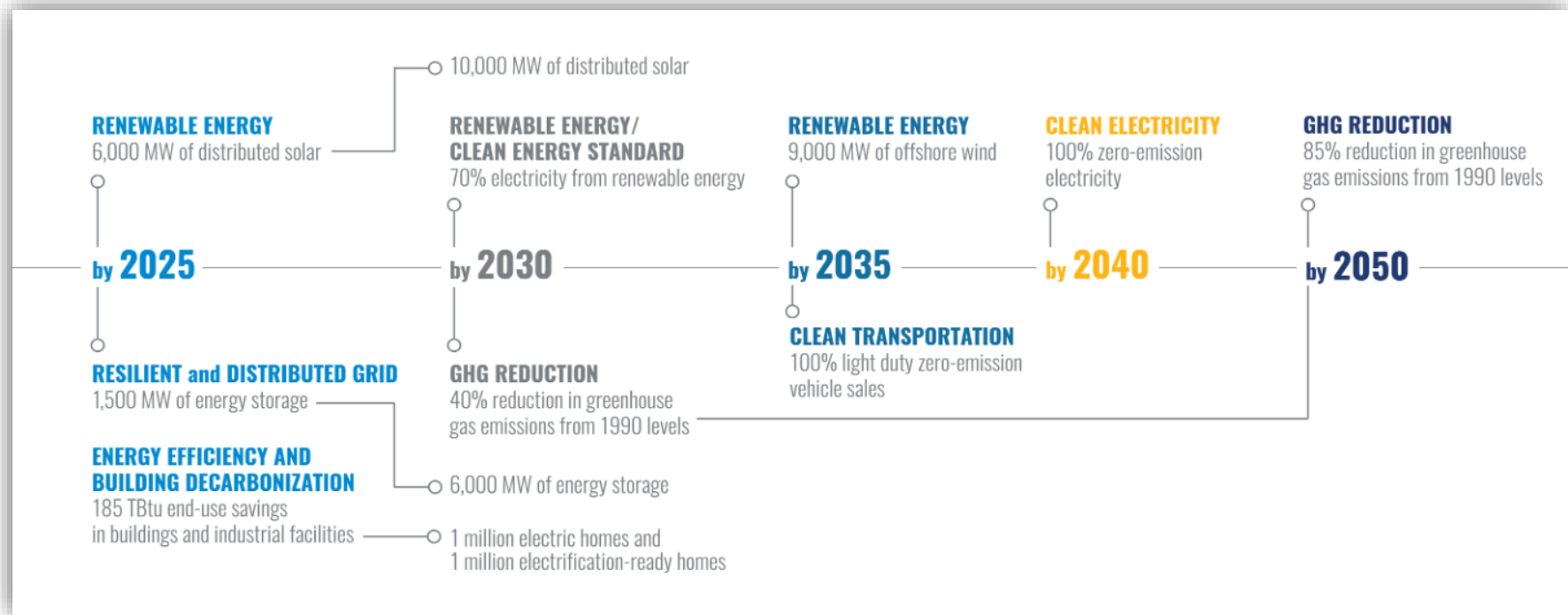
Department  
of Public Service

# CLCPA Annual Informational Presentation

## DPS Staff First Annual Report

# CLCPA Targets

The Climate Leadership and Community Protection Act (CLCPA), signed into law on July 18, 2019, including emissions reduction and clean energy targets including the below, some of which have been update since.



# Order on the Implementation of the CLCPA

## CLCPA Order Purpose:

- Issued in Case 22-M-0149 to track and assess the progress made towards meeting the CLCPA mandates and provide policy guidance, as necessary, for the additional actions needed to help achieve the objectives of the CLCPA.

## What the Order did:

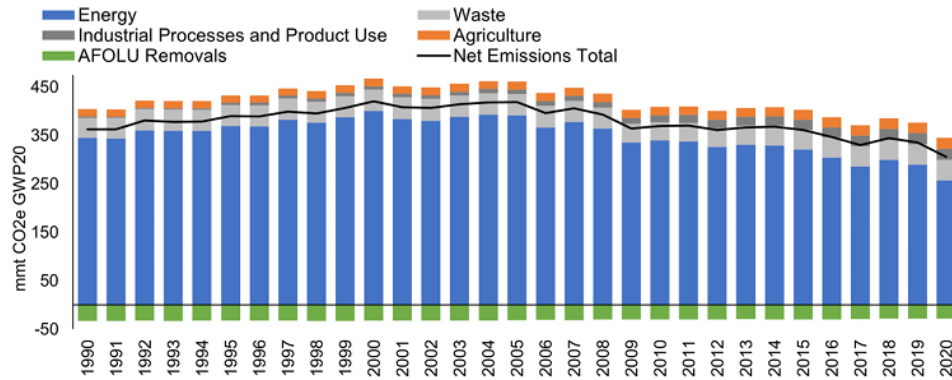
- Reinforced the Commission's statutory responsibilities in implementing the CLCPA as well as its core mission to ensure that utilities can provide safe and adequate service at just and reasonable rates along with the reliability and resiliency of the system.
- Highlighted actions taken both pre- and post-CLCPA enactment by the Commission to encourage the deployment of clean energy resources, energy efficiency and building electrification measures, and advanced energy storage technologies.
- Included guidance for Staff and utilities for requirements in rate cases to evaluate compliance with the emissions limits and goals included within the CLCPA.

## Annual Presentation:

- Established an annual informational presentation by Staff to the Commission on compliance with CLCPA mandates pertaining to PSC and DPS. This annual presentation must include:
  - Emissions associated with electric and gas usage in the State (as identified in the annual GHG Emissions Inventory Reports);
  - Progress on achieving targets mandated within the renewable energy program;
  - Cost and benefits to ratepayers of CLCPA investments over the prior calendar year;
  - Costs of local and bulk transmission facilities constructed for purposes of facilitating compliance with CLCPA targets;
  - Cost recovery associated with New Efficiency: New York and other energy efficiency programs executed by the utilities and New York State Energy Research and Development Authority (NYSERDA);
  - Review of benefits to Disadvantaged Communities over prior calendar year.

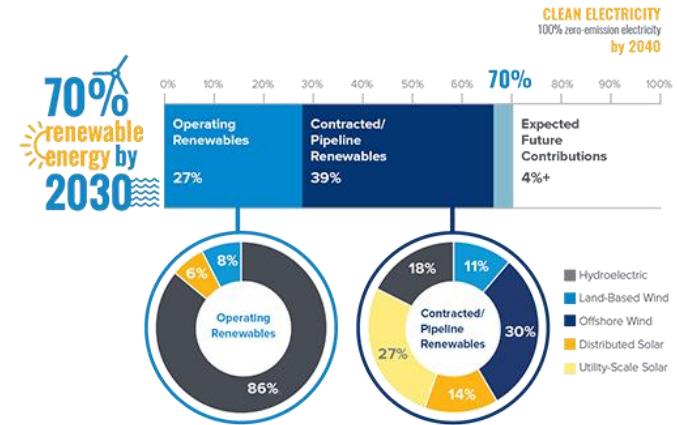
# Progress Toward CLCPA Renewable Energy Targets

NYS Statewide Greenhouse Gas Emissions by Sector, 1990-2020 (million metric tons (mmt) CO<sub>2</sub>e)



Source: New York State Department of Environmental Conservation, Statewide Greenhouse Gas Emissions Report (last accessed June 28, 2023) <https://www.dec.ny.gov/energy/99223.html>

- New York currently has more than 120 renewable energy and transmission projects in active development or construction, including large-scale solar, land-based wind, and offshore wind. This combined renewable generation portfolio of operating, contracted, and awarded projects total approximately 66% of the State's projected 2030 electricity load.
- In 2021, 18 large-scale renewable generation projects were under construction in New York State totaling 856 MW. 5 of these large-scale renewable projects entered operation the same year, totaling over 250 MW.
- In 2022, 5 additional large-scale renewable generation projects started construction in New York State, totaling 281 MW. 3 large-scale renewable projects, from those that commenced construction in 2021, also began operations totaling 42 MW.
- In 2023, 1 additional large-scale renewable generation project started construction in New York State, adding to 15 other projects already in construction, totaling 1,015 MW. In the first half of 2023, from projects that commenced construction in 2021 and 2022, 6 projects began commercial operation totaling 389 MW.
- The December 2022 Statewide Greenhouse Gas Emissions Report showed emissions in the electricity sector has decreased by 46% from 1990-2019



# Progress To Date

## Renewable Energy and Energy Storage

Date	Action
May 2020	Commission extended the NY-Sun program through 2025 and authorized an incremental program budget of \$573 million to achieve the CLCPA's 6 GW target
Oct. 2020	Commission issued Order Adopting Modifications to the Clean Energy Standard, formally adopting the CLCPA's clean energy deployment targets, including the requirement that at least 70% of the statewide load will be served by renewable energy resources by 2030, the procurement of 9 GW of offshore wind by 2035, and the 100% zero-emission electric grid by 2040 requirement
April 2022	Commission authorized an additional \$1.474 billion for the NY-Sun program and expanded the installation target from 6 GW to 10 GW of distributed solar generational projects
Jan. 2022 & Sept. 2022	Commission issued the Order Approving Expanded Solar for all with Modifications (Jan. 2022); Commission issued Order Modifying Expanded Solar for All Program (Sept. 2022)
Dec. 2022	DPS and NYSERDA released a 6 GW Energy Storage Roadmap to meet the directive laid out by Governor Hochul to achieve at least 6 GW of energy storage deployments by 2030
May 2023	Commission issued Order to initiate a process to identify technologies that can close the anticipated gap between the capabilities of existing renewable energy technologies and future system reliability needs to meet the 100% zero-emission electric grid by 2040 requirement

# Progress To Date

## Transmission and Distribution Investments

Date	Action
Jan. 2021	Published Power Grid Study including scenarios for transmission needed to achieve CLCPA goals and integration of offshore wind
Feb. 2021	Directed utilities to identify reliability projects with ancillary climate benefits (Phase 1 Projects) in rate cases
Sept. 2021	Directed utilities to identify CLCPA-driven upgrades (Phase 2 Projects) and to develop a coordinated grid planning process to inform specific CLCPA transmission and distribution investment plans
March 2021	Solicitation of transmission to support offshore wind injections to the Long Island system
July & Dec. 2022	Approval of Phase 1 Projects proposed by NMPC and NYSEG
April 2022	Adoption of the Tier 4 program and authorization for development of two transmission lines to deliver clean energy to NYC
Feb. 2023	Approval of additional CLCPA transmission projects needed to unbottle renewable energy in three regions of the State (Phase 2 Projects – Areas of Concern)
April 2023	Authorization for Consolidated Edison’s development of a Clean Energy Hub in Brooklyn to support reliability needs and the interconnection of OSW resources
June 2023	Solicitation of transmission to accommodate injections of offshore wind energy to the Consolidated Edison system, in time to meet the CLCPA 2035 deadline for 9 GW of offshore wind

# Progress To Date

## Clean Transportation

Date	Action
July 2020	Commission issued an Order approving the Electric Vehicle (EV) Make-Ready Program with a \$701 million overall budget of which \$206 million directed to Disadvantaged Communities. Order included the New York Clean Transportation Prize program, funded at \$85 million, administered by NYSERDA in partnership with DPS. The Order also directed the creation of three programs aimed at advancing the medium- and heavy-duty (MHD) vehicle industry to be implemented by the utilities.
Jan. 2022	New York Clean Transportation Prize program: Initial \$3 million was awarded to seventeen applicants to further develop proposals for the prize program's Clean Neighborhoods Challenge, Electric Mobility Challenge, and Electric Truck & Bus Challenge
July 2022	Commission issued Order approving managed charging programs for residential electric vehicle charging
Jan. 2023	Commission issued an Order to utilities that establishes a framework for alternatives to demand-based rate structures for commercial electric vehicle charging
March 2023	DPS released a Midpoint Review Whitepaper on the EV Make-Ready Program, recommending an incremental budget increase of \$407 million based on updated plug forecast and increasing Disadvantaged Community investment to 35% of the total budget for consistency with the CLCPA
April 2023	Commission issued an Order initiating a proceeding to implement policies and develop programs related to MHD electric vehicle charging infrastructure and begin proactively planning for EV charging load from all vehicle classes

# Progress To Date

## Energy Efficiency and Building Electrification

Date	Action
Jan. 2020	Commission issued Order approving an additional \$2 billion in energy efficiency and building electrification initiatives. This was the first time the Commission authorized a specific energy efficient heat pump target for the utilities to achieve.
Sept. 2021	Commission issued an Order Modifying the Clean Energy Fund to help improve overall performance and long-term success while aligning with the CLCPA requirements, including assigning a specific goal for the Clean Energy Fund to ensure 40% of the benefits of its spending are realized in Disadvantaged Communities, as called for in the CLCPA, including at least 35% of investment of the NY Green Bank.
Aug. 2022 & June 2023	Commission issued Order authorizing additional funds to continue heat pump activities in Con Edison and Central Hudson utility territories given significant demand for incentives and project implementation.
Sept. 2022	Commission issued Order commencing review of the utilities' efforts under New Efficiency: New York and NYSERDA's Clean Energy Fund.
Dec. 2022	Department of Public Service Staff file a comprehensive Energy Efficiency and Building Electrification Report summarizing portfolio performance posing questions soliciting feedback from stakeholders.

- Energy efficiency programs have changed substantially since the establishment of the Systems Benefit Charge in 1996, through the Energy Efficiency Portfolio Standard period (2008); the adoption of the New Efficiency:New York portfolio in 2018 and now further aligning with the objectives of the CLCPA.
- Programs have become more ambitious and detailed, and their scope and structure have evolved, including specific programs aimed at building electrification.



# Data Collection and General Compliance

## Annual Emissions Inventory

- The Commission's May 2022 CLCPA Order directed the JU to work with DPS Staff to develop a proposal regarding the content of a GHG Emissions Inventory Report that includes an inventory of total gas system-wide emissions.
- Specifically, the Commission required the JU to “assess the current direct and indirect GHG emissions, including upstream emissions from imported fossil fuels, local distribution emissions, and end-use (customer meter) emissions and file a report on an annual basis.”
- The JU subsequently worked with DPS Staff to develop a proposal, including detailed requirements, and the methodology used to calculate emissions for this annual GHG Emissions Inventory Report and filed the proposal for public comment on December 1, 2022, and a subsequent proposal supplement on May 31, 2023.
- This proposal is currently out for comment and Staff will soon bring a proposal to the Commission for review.

# Disadvantaged Communities Investments/Benefits

- DPS is working with DEC, NYSERDA, and other agencies to develop a consistent approach to tracking and reporting investments in and benefits to Disadvantaged Communities.
- Initial report will track investments that have been made since the enactment of the CLCPA, beginning January 1, 2020, and annually thereafter to track progress towards meeting the requirement of at least 35%, with a goal of 40%, of clean energy and energy efficiency investments benefitting Disadvantaged Communities.
- New York State expects to produce its first report on investments and benefits in Disadvantaged Communities pursuant to the CLCPA in 2024.

Commission Actions Directing Benefits to Disadvantaged Communities		
May 2020	Order Extending and Expanding Distributed Solar Incentives	\$135M
July 2020	EV Make-Ready Order	\$206M
September 2021	Order Approving Clean Energy Fund Modifications	Invest min. 35% (goal of 40%)
April 2022	Order Expanding NY-Sun Program	\$600M (40% of incremental funding)
December 2022	Regional Clean Energy Hubs (funded via CEF)	\$52M
March 2023	EV Make-Ready Program Midpoint Review Whitepaper	\$133M (recommended)



# Summary of Benefits

## Energy Savings and Energy Generation (Annual)

### Statewide Energy Savings or Energy Generation by Program

	2022		2020-2022	
	MWh	MMBtu	MWh	MMBtu
Clean Energy Standard (CES) Tier 1 RECs	796,656	N/A	1,677,274	N/A
CES Tier 2 Renewable Energy Credits (RECs)	13,732	N/A	32,409	N/A
CES Tier 3 Zero Emission Credits(ZECs)	26,808,001	N/A	81,551,557	N/A
CES Tier 4 NYC RECs <sup>1</sup>	0	N/A	0	N/A
Offshore Wind RECs (ORECs) <sup>2</sup>	0	N/A	0	N/A
Clean Energy Fund (CEF) <sup>3</sup>	1,286,593	2,036,769	3,281,548	6,522,627
Value of Distributed Energy Resources (VDER)	1,581,392	N/A	2,893,945	N/A
Electric Energy Efficiency/Building Electrification (EE/BE, including heat pumps)	1,482,505	3,502,485	6,498,594	7,213,914
Gas EE	0	3,523,926	2,081	9,440,754
<b>TOTAL</b>	<b>31,968,879</b>	<b>9,063,181</b>	<b>95,937,409</b>	<b>23,177,295</b>

1 – Tier 4 REC contracts have not yet reached commercial operation and therefore have not yet delivered RECs to NYSERDA

2 – Offshore wind contracts have not yet reached commercial operation and therefore have not yet delivered ORECs to NYSERDA.

3 – CEF emissions were adjusted downward to reflect portfolio overlap.

# Summary of Benefits

## Overall Emissions Reductions (Annual)

Overall Emissions Reductions		
	2022	2020-2022
Program	MT of CO2e	MT of CO2e
<b>All Programs From All Projects on Previous Slide</b>		
from MWh Reductions	15,994,590	47,999,084
from MMBtu Reductions	481,821	1,233,087
<b>EV Make-Ready<sup>1</sup></b>	63,869	267,128
<b>TOTAL</b>	<b>16,540,533</b>	<b>49,499,299</b>

<sup>1</sup> –Electric Vehicle Make-Ready emission reductions were calculated by multiplying the year-1 reduction in vehicle emissions for each EV make and model by the net increase in EV registrations in each year, statewide. It should be noted that the emissions reductions from EVs are indirect benefits of the EV Make-Ready program but are included here because the public charging stations funded through the program are enabling technology for the statewide EV deployments

# Summary of Cost Recoveries

## 2022 Gas CLCPA/ Gas Energy Efficiency Recoveries

2022 Gas CLCPA/ Gas Energy Efficiency Recoveries	
Utility	Cost Recoveries
Central Hudson	\$1,182,000
Con Edison	\$14,207,113
KEDLI	\$29,200,026
KEDNY	\$37,524,615
NFG	\$9,518,260
NMPC	\$17,412,995
NYSEG	\$2,505,000
O&R	\$703,000
RG&E	\$705,333
Corning	\$9,156
<b>Total</b>	<b>\$112,967,498</b>



# Summary of Cost Recoveries

## 2022 Electric CLCPA Recoveries

2022 Electric CLCPA Recoveries in thousands of dollars								
	Central Hudson	Con Edison	NYSEG	NMPC	O&R	RG&E	LIPA	Total
CES <sup>1</sup>	\$15,960	\$117,560	\$46,850	\$85,945	\$10,970	\$20,053	\$50,748	\$348,087
Clean Energy Fund	\$28,675	\$211,431	\$59,559	\$146,730	\$20,699	\$33,199		\$500,294
Value of Distributed Energy Resources <sup>2</sup>	\$4,063	\$8,254	\$5,959	\$13,827	\$3,511	\$1,330	\$1,310	\$38,254
Electric Vehicle Make Ready Program	\$88	\$737	\$119	\$225	\$185	\$61	\$1,288	\$2,703
Storage <sup>3</sup>								
Integrated Energy Data Resource	\$263	\$4,314	\$731	\$1,419	\$410	\$385		\$7,524
Utility Energy Efficiency and Clean Heat <sup>4</sup>	\$12,768	\$83,279	\$10,850	\$85,679	\$978	\$4,472	\$80,902	\$278,928
Transmission Upgrades <sup>5</sup>								
<b>Total</b>	<b>\$61,817</b>	<b>\$425,577</b>	<b>\$124,068</b>	<b>\$333,825</b>	<b>\$36,754</b>	<b>\$59,500</b>	<b>\$134,248</b>	<b>\$1,175,788</b>

<sup>1</sup> – Clean Energy Standard recoveries include: Tier 1 and 2 RECs, VDER Market Environmental Recoveries, and Tier 3 ZEC recoveries. LIPA CES excludes Tier 1 RECs which are not available. The environmental attributes included in bundled purchases associated with LIPAs feed-in tariffs cannot be disaggregated.

<sup>2</sup> – Includes recoveries of out of market capacity, out of market environmental, market transition credit, and community credit payments.

<sup>3</sup> – Storage related recoveries not included. The costs for the NYSERDA Energy Storage incentive program were funded from pre-2022 CEF collections. For utility owned or operated storage, utilities: (1) own or have procured customer sided storage projects for non-wires alternatives, (2) own storage pilot projects; and (3) own demonstration projects and Staff did not consider such storage assets as CLCPA related. Additionally, utilities have issued requests for proposals to acquire dispatch rights for large scale storage projects. Utilities recovered implementation costs and received revenues for participation fees associated with storage dispatch rights procurements in 2022. However, the net was de minimis. Staff plans to report on dispatchable storage costs/benefits in future reports.

<sup>4</sup> – Including clean heat (heat pump) program recoveries.

<sup>5</sup> – Transmission costs are not included in the above table as many of the programs for Phase 1, Phase 2 and other related transmission project efforts pursuant to the Accelerated Renewables Act were authorized in 2022. Expenditures related to transmission will be reported in subsequent annual reports as they are incurred.

# Summary of Cost Recoveries

## 2022 NYSERDA CES Program Billing

Billing for NYSERDA CES Programs <sup>1</sup> (in dollars)		
	2022	2020-2022
CES Tier 1 RECs	\$67,050,166	\$237,326,107
CES Tier 2 RECs	(\$121,007)	\$1,037,745
CES Tier 3 ZECs	\$578,147,711	\$1,633,558,856
CES Tier 4 NYC RECs	\$0	\$0
ORECs	\$0	\$0
<b>TOTAL</b>	<b>\$645,076,870</b>	<b>\$1,871,922,708</b>

<sup>1</sup>The information above is only for billing for NYSERDA's CES programs for the calendar years 2020-2022 and does not reflect billing for these programs under the CES that occurred prior to 2020.



# Summary of Ratepayer Impacts

## Overview of Impacts Analysis

Staff issued information requests to each of the utilities to help estimate the bill impacts associated with the CLCPA related cost recoveries.

- Staff requested the utilities provide typical gas delivery and supply bills for 2022 for the following customer types:
  - Residential heating customers (83 therms per month),
  - Small commercial customers (2,500 therms per month),
  - Commercial customers (10,000 therms per month), and
  - Industrial customers (100,000 therms per month).
- Staff requested the utilities provide typical electric delivery and supply bills for 2022 for the following customer types:
  - Residential customers (600 kWh per month),
  - Non-residential customers (50 kW & 12,600 kWh per month),
  - Non-residential customers (2,000 kW & 720,000 kWh per month), and
  - Non-residential high load factor customers (2,000 kW & 1,296,000 kWh per month).



# Summary of Ratepayer Impacts

## Gas Utility Ratepayer Impacts

2022 Typical Monthly Gas Bills with CLCPA related costs disaggregated										
	Central Hudson	Con Edison	KEDLI	KEDNY	NFG	NYSEG	NMPC	O&R	RG&E	Corning
<b>Residential - 83 Therms</b>										
Total Bill	\$190.99	\$226.36	\$164.82	\$170.67	\$100.54	\$106.04	\$111.35	\$151.89	\$89.67	\$134.23
CLCPA	\$0.61	\$0.31	\$1.60	\$1.41	\$1.36	\$0.38	\$1.31	\$0.35	\$0.04	\$0.02
Percent	0.32%	0.14%	0.97%	0.83%	1.36%	0.36%	1.20%	0.23%	0.05%	0.02%
<b>Non-Residential - 2,500 Therms</b>										
Total Bill	\$3,359.68	\$4,104.86	\$3,341.58	\$3,709.69	\$2,364.82	\$2,411.53	\$2,267.68	\$3,352.36	\$1,884.76	\$2,838.36
CLCPA	\$8.64	\$4.45	\$46.61	\$42.15	\$4.52	\$9.91	\$38.64	\$1.50	\$1.26	\$0.47
Percent	0.26%	0.11%	1.39%	1.14%	0.19%	0.41%	1.70%	0.04%	0.07%	0.02%
<b>Non-Residential - 10,000 Therms</b>										
Total Bill	\$12,817.73	\$14,896.60	\$11,892.48	\$13,348.56	\$10,539.92	\$11,052.93	\$8,497.66	\$13,071.46	\$8,493.26	\$9,782.82
CLCPA	\$31.06	\$17.81	\$186.44	\$168.60	\$18.07	\$54.91	\$199.34	\$5.72	\$(16.46)	\$1.28
Percent	0.24%	0.12%	1.57%	1.26%	0.17%	0.50%	2.35%	0.04%	-0.19%	0.01%
<b>Non-Residential - 100,000 Therms</b>										
Total Bill	\$123,548.72	\$168,678.49	\$113,645.63	\$127,852.48	\$97,002.32	\$82,755.30	\$77,619.45	\$128,243.22	\$64,560.79	\$79,326.38
CLCPA	\$280.96	\$252.80	\$1,864.40	\$1,685.98	\$180.72	\$318.15	\$1,545.38	\$54.45	\$(112.39)	\$5.14
Percent	0.23%	0.15%	1.64%	1.32%	0.19%	0.38%	1.99%	0.04%	-0.17%	0.01%

# Summary of Ratepayer Impacts

## Electric Utility Ratepayer Impacts

2022 Typical Monthly Electric Bills with CLCPA related costs disaggregated							
	Central Hudson	Con Edison	NYSEG	NMPC	O&R	RG&E	LIPA
<b>Residential - 600 kWh</b>							
Total Bill	\$154.20	\$181.79	\$93.73	\$95.91	\$141.65	\$98.06	\$168.65
CLCPA	\$9.34	\$7.91	\$7.15	\$9.38	\$8.71	\$7.54	\$6.27
Percent	6.1%	4.4%	7.6%	9.8%	6.1%	7.7%	3.7%
<b>Non-Residential - 50 kW and 12,600 kWh</b>							
Total Bill	\$2,353.64	\$3,477.45	\$1,784.57	\$2,002.90	\$2,479.97	\$2,416.86	\$3,259.34
CLCPA	\$171.73	\$157.60	\$138.39	\$183.52	\$153.92	\$159.00	\$125.28
Percent	7.3%	4.5%	7.8%	9.2%	6.2%	6.6%	3.8%
<b>Non-Residential - 2,000 kW and 720,000 kWh</b>							
Total Bill	\$117,445.36	\$164,131.22	\$80,728.52	\$86,231.63	\$115,864.77	\$95,758.48	\$156,874.89
CLCPA	\$9,439.89	\$8,490.10	\$7,778.06	\$10,203.06	\$8,464.08	\$8,876.21	\$7,158.96
Percent	8.0%	5.2%	9.6%	11.8%	7.3%	9.3%	4.6%
<b>Non-Residential - 2,000 kW and 1,296,000 kWh</b>							
Total Bill	\$190,505.51	\$240,355.82	\$129,654.24	\$129,212.56	\$182,302.28	\$146,763.07	\$258,085.90
CLCPA	\$16,412.62	\$14,483.37	\$13,724.00	\$16,291.29	\$15,230.00	\$15,576.92	\$12,886.13
Percent	8.6%	6.0%	10.6%	12.6%	8.4%	10.6%	5.0%



# Summary of Estimated Costs in Support of CLCPA Authorized to Date

## Authorized Funding to Date in millions of dollars

Program	Total Funding Authorized to Date
Clean Energy Standard	\$25,242
Clean Energy Fund	\$7,011
Electric Vehicle Make Ready Program	\$701
Energy Storage	\$394
Integrated Energy Data Resource	\$72
Utility Energy Efficiency and Clean Heat	\$4,337
Transmission Upgrades	\$5,999
<b>Total</b>	<b>\$43,756</b>

<sup>1</sup>–Values shown above represent Commission-authorized budgets, estimated costs, or actual program costs depending on the program. More detailed information behind these numbers is included in Staff’s CLCPA Annual Informational Report.

<sup>2</sup>–These initiatives will result in a variety of other changes that will impact how much consumers pay for energy. A number of these would put downward pressure on costs, including benefits in the form of reduced energy usage and therefore reduced energy bills to consumers.

<sup>3</sup>–the total estimated costs associated with these programs or projects should not be considered as entirely incremental costs to what ratepayers would otherwise pay

# Conclusion

- The cost recoveries, benefits, and other information reported here are mainly focused on the direct effects of CLCPA implementation. Notably, the estimates of total funding authorized by the Commission to date for various clean energy programs in some instances reflect actions that pre-date the enactment of the CLCPA.
- The costs, benefits, and other information reported here represent direct effects of CLCPA implementation only, and only the portion of direct effects of programs over which the Commission has oversight authority. Examples of effects not captured here include property tax revenues to localities from newly developed renewable generation facilities, customer costs related to adoption of clean energy technologies, workforce development and job growth, and local air quality impacts, among others.
- It is difficult to pull out exactly what costs we would have otherwise incurred for infrastructure investment vs. the cost of CLCPA.
- The magnitude of change the CLCPA requires is significant and will present challenges related to the need to preserve the resiliency and reliability of the energy systems, and cost mitigation to preserve energy affordability.
- DPS will continue to explore different options for data definition, collection, comparability, and accessibility.