



Case 22-M-0149 – Proceeding on Motion of the Commission Assessing Implementation of and Compliance with the Requirements and Targets of the Climate Leadership and Community Protection Act.

NEW YORK STATE DEPARTMENT OF PUBLIC SERVICE
FIRST ANNUAL INFORMATIONAL REPORT ON OVERALL IMPLEMENTATION OF THE
CLIMATE LEADERSHIP AND COMMUNITY PROTECTION ACT

Dated: July 20, 2023

TABLE OF CONTENTS

I. INTRODUCTION 1

II. BACKGROUND..... 2

 RENEWABLE ENERGY AND ENERGY STORAGE RESOURCES..... 4

 TRANSMISSION INVESTMENT AND DEVELOPMENT..... 7

 ENERGY EFFICIENCY AND BUILDING ELECTRIFICATION 8

 CLEAN TRANSPORTATION..... 10

III. DATA COLLECTION AND GENERAL COMPLIANCE 12

 ANNUAL EMISSIONS INVENTORY 12

 PROGRESS ON ACHIEVING CLCPA MANDATED CLEAN ENERGY TARGETS..... 13

 DISADVANTAGED COMMUNITIES 15

**IV. SUMMARY OF COST RECOVERIES AND BENEFITS TO RATEPAYERS
 OF CLCPA INVESTMENTS 21**

 SUMMARY OF BENEFITS 21

 SUMMARY OF COST RECOVERIES 23

 SUMMARY OF RATEPAYER IMPACTS 25

 SUMMARY OF ESTIMATED COSTS IN SUPPORT OF CLCPA AUTHORIZED TO DATE..... 27

V. CONCLUSION 30

**GENERIC CASES RELATED TO THE COMMISSION’S IMPLEMENTATION
 OF THE CLCPA..... APPENDIX A**

ADDITIONAL DATA POINTS REGARDING NYSERDA’S CES NUMBERS APPENDIX B

I. Introduction

On May 12, 2022, the New York State Public Service Commission (Commission) issued an Order on Implementation of the Climate Leadership and Community Protection Act in this proceeding.¹ The Initiating Order directed Department of Public Service (DPS) Staff (Staff) to present an annual informational item detailing overall compliance with the Climate Leadership and Community Protection Act (CLCPA).² The Commission directed Staff to include a review of the emissions associated with electric and gas usage in the State; progress on achieving the targets mandated within the renewable energy program, the cost and benefits to ratepayers of CLCPA investments over the prior calendar year, the costs of local and bulk transmission facilities constructed for purposes of facilitating compliance with CLCPA targets, the cost recovery associated with New Efficiency New York and other energy efficiency (EE) programs implemented by the Utilities and NYSERDA; and a review of the extent that the overall investments made to comply with the Commission's CLCPA-related programs over the prior calendar year benefited Disadvantaged Communities in the presentation. This report provides Staff's responses to the Commission's directives.

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. With respect to both pre- and post-CLCPA measures, this report focuses only the portion of those direct effects arising from programs over which the Commission has oversight authority and does not account for programs implemented by other state agencies that are funded from other sources (e.g., Regional Greenhouse Gas Initiative (RGGI) funding). Examples of effects not captured here include property tax revenues to localities from newly developed renewable generation facilities, workforce development and job growth, and local air quality impacts, among others. It should also be noted that the benefits and costs of the measures discussed in this report do not accrue uniformly across stakeholders, and in some cases one stakeholder's benefit is another's cost. As such, this report generally describes a subset of benefits and costs related to the CLCPA and does so from the perspective of New York as a whole by using the Societal Cost Test. In instances where this report adopts a different perspective, it indicates what that perspective is. For those benefits that are difficult to quantify, this report includes qualitative descriptions of the nature, extent, and incidence of the benefit.

This is the *first* annual report on overall compliance with the CLCPA. It presents data from programs that draw on distinct inputs, report distinct outcomes, and employ diverse performance metrics. Being able to compare data across programs is an important means of assessing both relative and overall effectiveness and is indispensable to making CLCPA implementation transparent to the public. For this reason, in addition to publishing this first annual report, DPS

¹ Case 22-M-0149, Proceeding on Motion of the Commission Assessing Implementation of and Targets of the Climate Leadership and Community Protection Act, Order on Implementation of the Climate Leadership and Community Protection Act (issued May 12, 2022) (Initiating Order).

² Initiating Order, p. 49; Chapter 106 of the Laws of 2019.

will also explore options for making the data reported in subsequent versions of this report easier to access, review, compare, and analyze.

This document is organized as follows: Part II describes the relevant background, including the basis for this annual reporting process and recent efforts and outcomes in relation to several key areas: renewable electricity and energy storage, transmission, energy efficiency and building electrification (EE/BE), and transportation. Part III identifies data sources for key metrics and explains the status of those metrics. Part IV explains the benefits, costs, and ratepayer impacts of the various efforts since the enactment of the CLCPA and over the past year.

II. Background

The CLCPA establishes specific targets designed to achieve carbon neutrality in all sectors of the economy and eliminate greenhouse gas (GHG) emissions produced by electricity generation. Among the energy-sector specific requirements is the directive for the Commission to establish a clean energy program under which (1) by 2030, the State’s jurisdictional load serving entities (LSEs) procure at least 70% of the electricity to serve the State’s electric load from renewable energy resources, and (2) by 2040, the statewide electrical demand system is zero emissions.³ To meet these goals, the CLCPA also mandates the procurement of at least six gigawatts (GW) of distributed photovoltaic solar generation by 2025, three GW of energy storage capacity by 2030, and nine GW of offshore wind generation by 2035.⁴ LSEs include investor-owned utilities (IOUs),⁵ energy service companies (ESCOs), jurisdictional municipal utilities, and any retail customers self-supplying through the New York Independent System Operator, Inc. (NYISO).

The CLCPA also requires the Commission to issue for notice and comment a comprehensive review of the renewable energy program that considers (a) progress in meeting the overall targets for deployment of renewable energy and zero emission systems, including factors that will frustrate progress; (b) distribution of systems by size and load; and (c) annual funding commitments and expenditures.⁶ Additionally, the CLCPA requires the Commission to “promulgate regulations to contribute to achieving the statewide GHG emissions limits established” by the Department of Environmental Conservation (DEC).⁷

Further, the CLCPA requires all State agencies, including the Commission, to consider the impacts of their final agency actions on GHG emissions and Disadvantaged Communities.⁸ The

³ Public Service Law (PSL) §66-p (2).

⁴ PSL §66-p (5).

⁵ The major electric IOUs include Central Hudson Gas & Electric Corporation (Central Hudson), Consolidated Edison Company of New York, Inc. (Con Edison), New York State Electric & Gas Corporation (NYSEG), Niagara Mohawk Power Corporation d/b/a National Grid (NMPC), Orange and Rockland Utilities, Inc. (O&R), and Rochester Gas and Electric Corporation (RG&E). The major gas IOUs include Central Hudson, Con Edison, NYSEG, NMPC, O&R, RG&E, The Brooklyn Union Gas Company d/b/a National Grid NY (KEDNY), KeySpan Gas East Corporation d/b/a National Grid (KEDLI), National Fuel Gas Distribution Corporation, Liberty Utilities (St. Lawrence Gas) Corporation, and Corning Natural Gas Corporation.

⁶ PSL §66-p (3).

⁷ CLCPA §8.

⁸ CLCPA §7.

Commission also must design renewable energy programs in a manner that provides substantial benefits for Disadvantaged Communities.⁹ The CLCPA defined the concept of Disadvantaged Communities as “communities that bear burdens of negative public health effects, environmental pollution, impacts of climate change, and possess certain socioeconomic criteria, or comprise high-concentrations of low- and moderate-income households.”¹⁰ The CLCPA provided a process through which a Climate Justice Working Group would establish specific criteria for identifying Disadvantaged Communities.¹¹ The Climate Justice Working Group finalized the initial set of Disadvantaged Communities criteria in March 2023.¹²

In April of 2020, the State enacted the Accelerated Renewable Energy Growth and Community Benefit Act (the Accelerated Renewables Act) to help achieve CLCPA goals.¹³ The Accelerated Renewables Act contains provisions directing DPS to consult with the New York State Energy Research and Development Authority (NYSERDA), the NYISO, and IOUs to conduct a power grid study and to identify distribution upgrades, local transmission upgrades, and bulk transmission investments necessary to achieve CLCPA targets.¹⁴ DPS released an Initial Report on the New York Power Grid Study in January of 2021.¹⁵ The Commission subsequently took several measures to identify and fund local transmission projects and instituted new transmission and distribution planning processes.¹⁶

In the Initiating Order, the Commission recognized that meeting CLCPA targets will require continuous monitoring of progress to ensure the State remains on track to achieve these objectives. Additionally, the Commission recognized the potential need to revisit existing policies from time to time, and to develop new policies. The Commission instituted the instant proceeding to both track and assess advancements made toward meeting CLCPA mandates and provide policy guidance for additional actions needed to achieve the CLCPA.

The CLCPA represents a structural shift away from a fossil fuel-based economy and power grid towards reliance on clean energy across sectors. This transformation will reduce greenhouse gas emissions, create jobs, stimulate economic development, and improve air quality. However, the magnitude of the changes involved, in the time mandated by the CLCPA, presents challenges and requires significant investment to preserve the reliability of our energy systems and ensure

⁹ PSL§66-p (7); ECL §75-0117.

¹⁰ ECL §75-0101(5).

¹¹ ECL §75-0111.

¹² Climate Justice Working Group, Disadvantaged Communities Criteria (March 27, 2023), <https://climate.ny.gov/Resources/Disadvantaged-Communities-Criteria>.

¹³ Chapter 58 of the Laws of 2020, Part JJJ.

¹⁴ Accelerated Renewables Act §7(2). This Report includes the review required under §7(7) concerning progress in transmission investments made to achieve CLCPA targets pursuant to the Accelerated Renewables Act.

¹⁵ Case 20-E-0197, Proceeding on Motion of the Commission to Implement Transmission Planning Pursuant to the Accelerated Renewable Energy and Community Benefit Act, Initial Report on the New York Power Grid Study (filed January 19, 2021).

¹⁶ Case 20-E-0197, supra, Order on Phase 1 Local Transmission and Distribution Project Proposals (issued Feb. 11, 2021); Case 20-E-0197, supra, Order on Local Transmission and Distribution Planning Process and Phase 2 Project Proposals (issued September 9, 2021) (Phase 2 Order).

their resilience. As the State increases electrification across sectors, including buildings and transportation, a new and diverse mix of electric generation technologies will be needed to reliably serve electric demand, including solar, wind, hydro, storage, and other emerging-zero emission resources.

Ensuring the safety, reliability, and affordability of the State's utility infrastructure is in the core mission of the Commission. To date, the Commission has supported the mandates of the CLCPA and the related State clean energy policies that preceded it, authorizing the most cost-effective climate investments and expenditures possible. So far, this has been possible mainly while relying on utility ratepayer funds. As the State continues to progress toward its climate and clean energy targets and towards the mandate to also keep energy affordable, this will mean working across all branches of government to develop cost-effective and equitable solutions and funding mechanisms to support and manage the structural shift we are undertaking.

The Commission has and will continue to play a critical role as it proceeds with the implementation of a variety of clean energy initiatives across the power, buildings, and transportation sectors. This annual informational report will provide an overview of the Commission's actions and progress each year towards the requirements of the CLCPA. Below, the report briefly identifies recent Commission efforts and outcomes with respect to renewable energy and energy storage, transmission investment and development, energy efficiency and building electrification, and clean transportation. See Appendix A for a list of proceedings related to the Commission's implementation of the CLCPA.

Renewable Energy and Energy Storage Resources

The Commission has a longstanding policy of promoting renewable energy resources to meet our responsibility to preserve environmental values and conserve natural resources. Prior to the adoption of the CLCPA, the Commission implemented programs and mechanisms designed to support the decarbonization of the State's electric system. Beginning with statewide energy efficiency programs to reduce electricity and natural gas usage through direct rebates and subsidies, these programs have evolved to include the expansion of large-scale renewable energy resources and distributed energy resources. In 2003, the Commission initiated the Retail Renewable Portfolio Standard (RPS) proceeding.¹⁷ Subsequently, the Commission adopted the RPS, which is administered by NYSERDA, with a Main Tier for procurement of large resources and a Customer-Sited Tier for procurement of smaller resources, including distributed solar.¹⁸

The Reforming the Energy Vision (REV) initiative, launched in 2014, further guided necessary regulatory changes to align electric utility practices and the regulatory framework with advances in technology to promote greater penetration of renewable energy generation.¹⁹ In 2017, as part of the REV initiative, the Commission instituted a Value of Distributed Energy Resources

¹⁷ Case 03-E-0188, Proceeding on Motion of the Commission Regarding a Retail Renewable Portfolio Standard, Order Instituting Proceeding (issued February 19, 2003).

¹⁸ Case 03-E-0188, supra, Order Regarding Retail Renewable Portfolio Standard (issued February 19, 2003).

¹⁹ Case 14-M-0101, Proceeding on Motion of the Commission in Regard to Reforming the Energy Vision, Order Instituting Proceeding (issued April 25, 2014).

(VDER) tariff to encourage the location, design, and operation of a distributed energy resource in a manner that maximizes benefits to customers.²⁰

Additionally, in 2020 the Commission instituted a proceeding to address the strategic use of energy related data.²¹ The Commission noted that “ready access to customer energy usage and system data was necessary to animate markets and to promote innovation and customer choice” and called for the creation of Integrated Energy Data Resource which, once operational, will be a statewide resource to securely collect, integrate, and provide access to energy related information. The Commission found Integrated Energy Data Resource will provide “useful access to useful energy-related information and tools in a manner that will most efficiently accelerate progress toward achieving the State’s clean energy and climate goals.”²²

In 2014, following a series of modifications to the RPS program, the Commission authorized NYSERDA to implement the NY-Sun Megawatt (MW) Block Program for the period of 2016 through 2023, with a target of 3 GW of distributed solar in New York State and a total budget of \$960.6 million to support that goal.²³ In May 2020, in response to a petition filed by NYSERDA, the 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.²⁴ In April 2022, the Commission authorized an additional \$1.474 billion for the NY-Sun program and expanded the installation target from six to 10 GW of distributed solar generational projects.²⁵ Ten GW of distributed solar includes different capacity allocations and associated incentive funding levels for the Upstate and Con Edison regions.²⁶ The April Order directed DPS and NYSERDA to file a Midpoint Review after the occurrence of the earlier of: (1) the date when 50% of the capacity allocations – either Upstate or Con Edison – have been committed, or (2) December 31, 2025.²⁷ Half of the Upstate capacity was allocated in November 2022, and DPS and NYSERDA submitted the Midpoint Review filing on January 17, 2023, which the Commission acted on in June 2023.²⁸

²⁰ Case 15-E-0751, In the Matter of the Value of Distributed Energy Resources, Order on Net Energy Metering Transition, Phase One of Value of Distributed Energy Resources, and Related Matters (issued March 9, 2017).

²¹ Case 20-M-0082, Proceeding on Motion of the Commission Regarding Strategic Use of Energy Related Data, Order Instituting Proceeding (issued March 19, 2020).

²² Case 20-M-0082, supra, Order Implementing an Integrated Energy Data Resource (issued February 11, 2021), p. 9.

²³ Case 03-E-0188, supra, Order Regarding Retail Renewable Portfolio Standard (issued September 24, 2004).

²⁴ Case 19-E-0735, Petition of NYSERDA Requesting Additional NY-Sun Program Funding and Extension of Program Through 2025, Order Extending Distributed Solar Incentives (filed May 14, 2020).

²⁵ Case 21-E-0629, In the Matter of Advancement of Distributed Solar, Order Expanding NY-Sun Program (issued April 14, 2022).

²⁶ By “Upstate” in this instance, we refer to the areas of New York State north and west of New York City, including the portion of Westchester County served by NYSEG but excluding the portion of Westchester County served by Con Edison.

²⁷ Case 21-E-0629, supra, Order Expanding NY-Sun Program, p. 59.

²⁸ Case 21-E-0629, supra, New York Sun Program Midpoint Review (filed January 17, 2023) (Midpoint Review); 21-E-0629, supra, Order Adopting NY-Sun Mid-Program Modifications (issued June 23, 2023).

Expanded Solar for All (SFA) is a joint initiative between NYSERDA and NMPC to provide community solar and associated guaranteed bill savings to customers participating in NMPC's Energy Affordability Program (EAP). On January 20, 2022, the Commission issued the Order Approving Expanded Solar for all with Modifications.²⁹ On February 2, 2022, the Coalition for Community Solar Access filed a request for rehearing of the January Order, requesting that NMPC EAP customers who participate in the SFA program be permitted to simultaneously participate in a Community Distributed Crediting project, or to simultaneously enroll in a Remote Crediting/Remote Net Metered project. The Commission subsequently granted these requests in September 2022, in the Order Modifying Expanded Solar for All Program.³⁰

In 2016, the Commission adopted the Clean Energy Standard (CES), which set a goal for 50% of the electricity consumed in the State by 2030 to be generated by renewable energy sources.³¹ In 2018, the Commission added an Offshore Wind Standard to the CES, requiring LSEs to support the procurement of 2.4 GW of offshore wind resources by 2030.³² The Commission authorized NYSERDA to hold initial procurement solicitations in 2018 and 2019, for an aggregate of approximately 800 MW or more of offshore wind. In October 2019, NYSERDA successfully contracted for 1,696 MW of offshore wind, and in April 2020, the Commission authorized NYSERDA to issue an additional offshore wind solicitation for 1,000 MW or more.³³

These initiatives have since been expanded, where necessary, to support the CLCPA's requirement of a 100% emissions-free power grid by 2040. In October 2020, the Commission formally adopted 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, and the procurement of nine GW of offshore wind by 2035.³⁴ In the CES Modification Order, the Commission granted NYSERDA authority to procure the remaining amounts of offshore wind resources necessary to achieve that goal, with a target of between roughly 750 MW and 1,000 MW per year through 2027.

The 2018 Energy Storage Roadmap developed by the DPS and NYSERDA initiated a process of developing policies, market mechanisms, and funding programs to storage projects in New York State. The 2018 Roadmap led to the creation of a 1.5 GW target of energy storage by

²⁹ Case 19-E-0735, Petition of New York State Energy Research and Development Authority Requesting Additional NY-Sun Program Funding and Extension of Program Through 2025, Order Approving Expanded Solar for All with Modifications (issued January 20, 2022).

³⁰ Case 19-E-0735, supra, Order Modifying Expanded Solar for All Program (issued September 15, 2022).

³¹ Case 15-E-0302, Proceeding on Motion of the Commission to Implement a Large-Scale Renewable Program and a Clean Energy Standard, Order Adopting Clean Energy Standard (issued August 1, 2016).

³² Case 18-E-0071, In the Matter of Offshore Wind Energy, Order Establishing Offshore Wind Standard and Framework for Phase 1 Procurement (issued July 12, 2018).

³³ The third solicitation included initiatives such as Supply Chain Investment Plans, "Meshed-Ready" Systems, Stakeholder Engagement Plans and New York Workforce and Jobs Plans, and Energy Storage.

³⁴ Case 15-E-0302, supra, Order Adopting Modifications to the Clean Energy Standard (issued October 15, 2020) (CES Modification Order), p. 131.

2025, as well as the goal of three GW by 2030, which the CLCPA later codified.³⁵ In December 2018, the Commission issued the Energy Storage Order, which directed the Joint Utilities (JU) to competitively procure dispatch rights for bulk-level energy storage systems.³⁶ In December 2022, the 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 2030.³⁷

Transmission Investment and Development

New York is home to over 11,000 miles of transmission lines, with hundreds more miles at some stage of development.³⁸ Table 1 breaks down the State’s total existing transmission mileage by capacity (classified by kilovolts or kV) and whether the line runs overhead or underground. Most of this existing system was constructed over the last century to serve traditional residential and commercial electric demand, relying on large de-centralized power plants. Thus, until the enactment of the CLCPA, the drivers of utility transmission investment were primarily ensuring service to customers and maintaining reliability.

Table 1 Transmission Capacity by kV Class and Location in Miles ³⁹									
kV Class	115 kV	138 kV	230 kV	345 kV	500 kV	765 kV	150 kV DC*	500 kV DC*	Totals
<i>Overhead</i>	6,112	363.6	1,014.7	2,593.1	5.3	155.2			10,243.9
<i>Underground</i>	73.4	406.3	20.2	241.1			24.0	66.0	831.0
Totals by class	6,185.4	769.9	1,034.9	2,834.2	5.3	155.2	24.0	66.0	11,074.9

* DC indicates that these lines carry direct rather than alternating current

Renewable energy policies implemented by the Commission in the early 2000s such as (Alternating Current (AC) Transmission) and (Empire State Line) resulted in some significant transmission investments. However, meeting the CLCPA’s decarbonization and clean energy targets will require an extensive restructuring of the existing grid. As the Commission recognized, the CLCPA and the Accelerated Renewables Act require it to “revisit the traditional decision-

³⁵ Case 18-E-0130, In the Matter of Energy Storage Deployment Program, New York State Energy Storage Roadmap (filed June 21, 2018).

³⁶ Case 18-E-0130, supra, Order Establishing Energy Storage Goal and Deployment Policy (issued December 13, 2018).

³⁷ Case 18-E-0130, supra, New York’s 6 GW Energy Storage Roadmap: Policy Options for Continued Growth in Energy Storage (filed December 28, 2022).

³⁸ New York Independent System Operator (NYSIO), 2022 Load and Capacity Data (April 2022) (2022 Gold Book), pp.at 138, 142-48, tbls. IV-2 & VIII, <https://s3.documentcloud.org/documents/23780120/nyiso-2022-load-capacity-data-gold-book.pdf>.

³⁹ 2022 Gold Book, p. 138 tbl. VI-2.

making framework that the Commission and the utilities have relied on up to now for investing in transmission and distribution infrastructure.”⁴⁰

Following enactment of the CLCPA and the Accelerated Renewables Act, the Commission has undertaken several steps to implement forward-looking transmission planning. These recent measures to foster and steer transmission development in support of climate goals include:

- Publication of the 2021 Power Grid Study, including scenarios for transmission needed to achieve near term CLCPA goals, long term decarbonization, and integration of offshore wind;
- Direction to the utilities to begin identifying reliability projects with ancillary climate benefits (Phase 1 Projects) in rate cases;
- Direction to the utilities to develop a coordinated grid planning process to inform specific CLCPA transmission and distribution investment plans;
- Solicitation and selection of transmission to support offshore wind injections to the Long Island system by 2030;
- Approval of Phase 1 Projects proposed by NMPC and NYSEG;
- Approval of additional CLCPA transmission projects needed to unbottle renewable energy in three regions of the State (Phase 2 Projects);
- Adoption of the Tier 4 program and authorization for development of two Tier 4 transmission lines that will deliver clean, firm energy directly to the New York City grid;
- Authorization for Consolidated Edison’s development of a Clean Energy Hub in Brooklyn to support both reliability needs and the interconnection of OSW resources;⁴¹
- Solicitation of transmission to accommodate injections of offshore wind energy to the Consolidated Edison system, in time to meet the CLCPA 2035 deadline for nine GW of offshore wind.⁴²

Energy Efficiency and Building Electrification

New York State’s energy efficiency programs have changed substantially since the establishment of the Systems Benefit Charge in 1996 and still further since the Commission initiated the New York Energy Efficiency Portfolio Standard proceeding in 2008. Those programs have become more ambitious and detailed, and their scope and structure have evolved.

In response to the 2018 State of the State Address, which included a focus on increased statewide energy efficiency, the Commission established a new proceeding to consider issues related to energy efficiency targets and policy.⁴³ In April 2018, Staff and NYSERDA issued the

⁴⁰ Case 20-E-0197, supra, Order on Transmission Planning Pursuant to the Accelerated Renewable Energy Growth and Community Benefit Act (issued May 14, 2020), p. 4.

⁴¹ Case 20-E-0197, supra, Order Approving Cost Recovery for Clean Energy Hub (issued April 20, 2023).

⁴² Case 22-E-0633, New York Independent System Operator, Inc. Proposed Public Policy Transmission Needs for Consideration for 2022, Order Addressing Public Policy Requirements for Transmission Planning Purposes (issued June 22, 2023).

⁴³ Case 18-M-0084, In the Matter of a Comprehensive Energy Efficiency Initiative, Notice of New Case Number and Announcing Stakeholder Forums (issued February 8, 2018).

New Efficiency: New York (NE:NY) Whitepaper.⁴⁴ The Whitepaper established the context for a 2025 statewide energy efficiency target of 185 trillion British thermal units (TBtu) of energy usage reductions at the customer level and articulated a portfolio of actions necessary to achieve it which, if sustained through 2030, would represent nearly one-third of the total overall state goal of 40% statewide reduction of greenhouse gas (GHG) emissions from 1990 levels by 2030, as established in the 2015 State Energy Plan. The Whitepaper anticipated that NYSERDA's Clean Energy Fund (CEF) activities would be aligned with the NE:NY goals and utility activities. The Whitepaper also noted the importance of increasing electrification in the building and transportation sectors achieve the State's carbon reduction goals. Of the 185 TBtu reduction needed by 2025, the Whitepaper identifies 144 TBtu as resulting from the continuation of actions already in progress and 41 TBtu coming from accelerated actions. Of the accelerated actions, the Whitepaper proposed that 31 TBtu should come from an increase in utility-leveraged energy efficiency investments.

In its December 2018 Order, the Commission found that statewide goal of 185 TBtu of customer-level energy reduction by 2025 was reasonable and adopted an incremental, fuel neutral savings target of 31 TBtu for the State's utilities toward achievement of that goal.⁴⁵ The 2018 NE:NY Order also emphasized the cost effectiveness of the energy efficiency portfolios at each of the large investor owned utilities, required 20% of the incremental 2019-2025 budgets be dedicated to programs to serving LMI customers, and established a separate target related to heat pump deployment.

On July 18, 2019, the CLCPA, Chapter 106 of the Laws of 2019, was enacted and specifically references this proceeding's goal of achieving 185 TBtu in energy efficiency by 2025 in the context of broader economy-wide carbon reduction goals.

Subsequently, in January 2020, the Commission issued its 2020 NE:NY Order authorizing utility energy efficiency and building electrification portfolios through 2025.⁴⁶ The 2020 NE:NY Order directed energy efficiency budgets and targets for the Utilities that generally reflected the budgets and targets for electric efficiency in the 2018 NE:NY Order and meaningfully increased the budgets and targets for gas efficiency and the budgets for heat pumps; directing nearly \$2 billion of additional customer investment to achieve 35.8 TBtu of energy savings. The 2020 NE:NY Order also initiated a long-term heat pump strategy for New York, with an initial direction of \$454 million in funding to achieve energy savings of 3.6 TBtu, with a focus especially on heating applications in the single-family building sector. For LMI, the 2020 NE:NY Order committed 20% of incremental energy efficiency funding to programs serving this sector and anticipated adjustments as the Climate Action Council, called for in the CLCPA, establishes its policy instruments. The 2020 NE:NY Order also called for an Interim Review to commence in 2022. Since the authorization of the energy efficiency and building electrification portfolios

⁴⁴ Case 18-M-0084, supra, New Efficiency: New York (filed April 26, 2018).

⁴⁵ Case 18-M-0084, supra, Order Approving Funding for Clean Heat Program (issued August 11, 2022); Case 18-M-0084, supra, Order Approving Funding for Clean Heat Program (issued June 23, 2023).

⁴⁶ Case 18-M-0084, supra, Order Authorizing Utility Energy Efficiency and Building Electrification Portfolios Through 2025 (issued January 16, 2020) (2020 NE:NY Order).

through 2025, the Commission has twice modified budgets, once for Con Edison and once for Central Hudson, with respect to building electrification. In August 2022 and June 2023, the Commission issued orders authorizing additional funds to continue heat pump activities in Con Edison and Central Hudson service territories given significant demand within the respective programs.⁴⁷

In September 2021, the Commission issued its Order modifying the CEF to help improve overall performance and long-term success while aligning with the CLCPA requirements, including assigning a specific goal for the CEF to ensure that 40% of the benefits from CEF spending are realized in Disadvantaged Communities, as called for in the CLCPA.

In a September 15, 2022 Order, the Commission initiated the required Interim Review of the CEF and NE:NY portfolio, with an initial focus on instituting a renewed framework under which energy efficiency and building electrification programs are offered and establish new budgets and targets for a period beyond 2025.⁴⁸ In December 2022, in compliance with the Order Initiating the NE:NY Interim Review and CEF Review, Staff filed a comprehensive Energy Efficiency and Building Electrification Report, which summarized the portfolio performance through the second quarter of 2022 and solicited feedback from stakeholders on specific questions that were presented within the report.⁴⁹ The NE:NY Interim Review and CEF Review process is ongoing at this time.

Clean Transportation

New York's zero-emission vehicle (ZEV) targets have been established through the Advanced Clean Cars II and the Advanced Clean Truck rules. Advanced Clean Cars II requires all new sales of passenger cars to be zero-emission by 2035. The Advanced Clean Truck rule requires all medium and heavy-duty vehicles for sale in the State to be zero-emission by 2045, with interim goals beginning in 2025. In addition, New York has established a requirement that the school bus fleet must be zero-emission by 2035. Near-term, New York is working towards the goal of 850,000 zero emission vehicles on the road by 2025 through the Multi-State Zero-Emission Vehicle Programs Memorandum of Understanding.⁵⁰

To advance the State's ZEV targets and environmental goals, the Commission has instituted several proceedings to incentivize the development of electric vehicle charging infrastructure. In the Electric Vehicle (EV) Instituting Order, the Commission began defining the role of electric utilities in providing infrastructure and rate design to accommodate the needs of

⁴⁷ Case 18-M-0084, *supra*, Order Approving Funding for Clean Heat Program (issued August 11, 2022); Case 18-M-0084, *supra*, Order Approving Funding for Clean Heat Program (issued June 23, 2023).

⁴⁸ 18-M-0084, *supra*, Order Initiating the New Efficiency: New York Interim Review and Clean Energy Fund Review (issued September 15, 2022).

⁴⁹ Case 18-M-0084 *et al.*, *supra*, Department of Public Service Staff Energy Efficiency and Building Electrification Report (filed December 20, 2022).

⁵⁰ State Zero-Emission Vehicle Programs Memorandum of Understanding, Prepared and Signed by the States of California, Connecticut, Massachusetts, New York, Oregon, Rhode Island, and Vermont (October 24, 2013) <https://www.nescaum.org/documents/zev-mou-8-governors-signed-20131024.pdf>.

EVs and electric vehicle supply equipment (EVSE).⁵¹ On July 16, 2020, the Commission issued an order approving the EV Make-Ready Program with a \$701 million overall budget of which \$206 million is directed to Disadvantaged Communities.⁵² The Make-Ready Program is designed to stimulate the development of enough public EV charging infrastructure across the state to support the charging needs of an estimated 850,000 ZEVs by 2025. The plug targets for the EV Make-Ready Program include the installation of over 50,000 Level 2 (L2) chargers and 1,500 Direct Current Fast Chargers (DCFC). The EV Make-Ready Program provides developers and site hosts with incentives that cover 50 to 100 percent of the equipment and installation costs to make sites ready for EV charging for L2 and DCFC stations. The Commission’s Make-Ready Order also directed the creation of three programs aimed at advancing the medium- and heavy-duty (MHD) vehicle industry to be implemented by the JU. The MHD Fleet Make-Ready Pilot Program funds the utility-side make-ready costs for charging stations that serve MHD vehicles. The Fleet Assessment Service provides fleet operators with site feasibility and rate analysis to support electrification efforts. For the third program, the Order directed the JU to work with four upstate transit fleet operators, allocating a total of \$10 million in make-ready funding to support the goal to electrify 25% of these fleets by 2025.

The Make-Ready Order also included the New York Clean Transportation Prize program, funded at \$85 million, administered by NYSEDA in partnership with DPS. On January 10, 2022, an initial \$1.5 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. On November 16, 2022, ten grand prize winners across all three challenge programs were announced, with grant awards between \$7 and \$10 million.⁵³

On August 30, 2022, the Commission initiated Make-Ready Program Midpoint Review to assess and evaluate the budget, incentive levels and other programmatic elements. DPS released a Midpoint Review Whitepaper on March 1, 2023, recommending an incremental budget increase of \$407 million, driven primarily by updates to the plug forecast, incentive levels and additional proposed investments in Disadvantaged Communities. DPS also proposed a \$30 million increase in funding for the MHD Make-Ready Pilot and streamlining the Fleet Assessment Service application process. Additionally, the Midpoint Review Whitepaper proposes a \$25 million micromobility make-ready program for smaller two to three wheeled electric vehicles.

On January 19, 2023, the Commission issued an order to utilities that establishes a framework for alternatives to demand-based rate structures.⁵⁴ The Demand Rate Alternative Order requires utilities to develop a 50% demand charge rebate for all commercial EV charging use cases

⁵¹ Case 18-E-0138, Proceeding on Motion of the Commission Regarding Electric Vehicle Supply Equipment and Infrastructure, Order Instituting Proceeding (issued April 24, 2018).

⁵² Case 18-E-0138, supra, Order Establishing Electric Vehicle Infrastructure Make-Ready Program and Other Programs (issued July 16, 2020).

⁵³ The ten awards include one grant award in the PSEG-LI service territory. This grant award was funded by PSEG-LI customers.

⁵⁴ Case 22-E-0263, Proceeding to Establish Alternatives to Traditional Demand-Based Rate Structures for Commercial Electric Vehicle Charging, Order Establishing Framework for Alternatives to Traditional Demand-Based Rate Structures (issued January 19, 2023) (Demand Rate Alternative Order).

upstate and use-case specific incentives in the downstate utilities (Con Edison and O&R for the purposes of this Order). The Demand Rate Alternative Order also requires the utilities to develop commercial managed charging programs that will provide value-based incentives for EV charging stations that are able to avoid charging during the costliest times for the grid. Finally, the Demand Rate Alternative Order adopts the EV phase-in rate that blends demand charges with a time-of-use rate as the charging station's load factor increases which will replace the demand charge rebate once available.

Most recently, on April 20, 2023, the 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.⁵⁵

III. Data Collection and General Compliance

Annual Emissions Inventory

In the Initiating Order the Commission, while noting its actions regarding GHGs emissions reporting in rate cases, acknowledged the inconsistencies in reporting requirements and frequency of these studies and reports. To ensure the desired clear and consistent statewide guidelines for GHG emissions reporting requirements, the Commission 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.”⁵⁶ 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 (JU GHGI Proposal).⁵⁷ The JU GHGI Proposal built upon the US Environmental Protection Agency's (EPA) Mandatory Greenhouse Gas Reporting Program (GHGRP),⁵⁸ the United Nation's Greenhouse Gas Inventory (UN GHGI),⁵⁹ and current industry standards such as the Natural Gas

⁵⁵ Case 22-E-0070, Proceeding on Motion of the Commission to Address Barriers to Medium- and Heavy-Duty Electric Vehicle Charging Infrastructure, Order Initiating Proceeding and Soliciting Comments (issued April 20, 2023).

⁵⁶ Initiating Order, p. 15.

⁵⁷ Case 22-M-0149, supra, JU Proposal for an Annual Greenhouse Gas Emissions Inventory Report (filed December 1, 2022) (JU GHGI Proposal).

⁵⁸ Protection of Environment, Mandatory Greenhouse Gas Reporting, Petroleum and Natural Gas Systems, 40 C.F.R. §98, subpart W (2010); United States Environmental Protection Agency, Inventory of U.S. Greenhouse Gas Emissions and Sinks (last accessed June 28, 2023) <https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks> (A national estimate of GHG emissions prepared annually by the EPA and submitted to the UN Framework Convention on Climate Change).

⁵⁹ United Nations Data, Greenhouse Gas Emissions without Land Use, Land-Use Change and Forestry, in kiloton CO2 equivalent (last accessed June 28, 2023) <https://data.un.org/Data.aspx?d=GHG&f=seriesID%3AGHG>.

Sustainability Initiative (NGSI)⁶⁰ and ONE Future.⁶¹ The JU GHGI Proposal addressed upstream emissions resulting from the import of natural gas into New York State, direct and indirect attributable emissions including customer meters, and avoided emissions where utility actions may cause measurable emissions reductions.

After further consultation with Staff, the JU provided a supplement to its JU GHGI Proposal (JU GHGI Proposal Supplement)⁶² to provide the Commission and interested stakeholders more information regarding current emissions factors as part of the EPA GHGRP, the DEC's method for a statewide inventory,⁶³ and the JU's proposed NGSI methodology. This JU GHGI Proposal Supplement, taken together with the original JU GHGI Proposal⁶⁴ with associated emissions factors and indicative emissions estimates readers are better able to appreciate the very differences the Commission is currently considering. With that said, this report does not address emissions estimates, nor does it seek to remedy these questions currently before the Commission. Subsequent information filings as part of this annual reporting process will include annual emissions estimates from gas utilities once acted upon by the Commission.

Progress on Achieving CLCPA Mandated Clean Energy Targets

As of January 2023, New York State has a pipeline of contracted and awarded large-scale renewable energy generation projects that, once operational, account for 62,000 gigawatt-hours (GWh) annually. The combined renewable generation portfolio of operating, contracted, and awarded projects total approximately 66% of the State's projected 2030 electricity load.⁶⁵ In 2021, eighteen large-scale renewable generation projects were under construction in New York State totaling 856 MW. Five of these large-scale renewable projects entered operation the same year, totaling over 250 MW. In 2022, five additional large-scale renewable generation projects started construction in New York State, totaling 281 MW. Three large-scale renewable projects, from those that commenced construction in 2021, also began operations totaling 42 MW. In 2023, one additional large-scale renewable generation project started construction in New York State, adding to fifteen other projects already in construction, totaling 1,015 MW. In the first half of 2023, from projects that commenced construction in 2021 and 2022, six projects began commercial operation totaling 389 MW.

The NY-Sun Midpoint Review stated that, as of November 11, 2022, 5,999 MW have been committed or completed and that the NY-Sun program is on track to achieve the \$200 million total expenditure requirement for projects completed by 2025. In 2022, the NY-Sun initiative had a

⁶⁰ Edison Electric Institute, Issues & Policy: Natural Gas Sustainability Initiative (last accessed June 28, 2023) <https://www.eei.org/issues-and-policy/NGSI>.

⁶¹ Our Nation's Energy Future, <https://onefuture.us/>.

⁶² Case 22-M-0149, *supra*, JU Supplement to Proposal for an Annual Greenhouse Gas Emissions Inventory Report, (filed May 31, 2023) (JU GHGI Proposal Supplement).

⁶³ 6 NYCRR Part 496 (December 30, 2020).

⁶⁴ Case 22-M-0149, *supra*, JU GHGI Proposal Supplement, Appendix B.

⁶⁵ This current contracted and awarded pipeline includes approximately 14,146 GWh of hydroelectric, land-based wind, utility-scale solar and large-scale renewables generation contracted under the 2021 Tier 4 solicitation (T4RFP21-1).

record-setting year with 745.47 MW of NYSERDA-supported projects.⁶⁶ On October 17, 2022, NYSERDA and NMPC announced awards to 21 projects under the Expanded Solar For All program totaling 121.4 MW.⁶⁷ NYSERDA plans to issue a second round of procurements in 2023 to procure up to the 300 MW approved by the Commission.

On March 18, 2021, the Commission granted a Certificate of Environmental Compatibility and Public Need, authorizing Southfork Wind, LLC to build a 7.6-mile, 138 kV AC electric cable, connecting the South Fork Wind Farm to the mainland electric grid.⁶⁸ On December 20, 2021, the Commission granted South Fork Wind a Certificate of Public Convenience and Public Necessity for the Project.⁶⁹ Construction of the Project commenced in February 2022 and is expected to be operational by the end of 2023.⁷⁰ South Fork Wind is New York's first offshore wind farm, with capacity to deliver 132 MW of offshore wind from its 12 turbines.⁷¹ On July 27, 2022, Governor Hochul announced the release of New York's third competitive offshore wind solicitation.⁷² The third solicitation closed January 26, 2023, and NYSERDA received over 100 proposals for eight new projects from six offshore wind developers.

In 2021, LSEs met 83.1% of the 2021 Renewable Energy Standard (RES) obligation, while LSEs under PSC jurisdiction met 99.8% of their RES obligation.⁷³ Additionally, LSEs met 99.5% of the 2021 Zero Energy Credit (ZEC) obligation, while LSEs under Commission jurisdiction met 99.8% of their 2021 ZEC obligation.⁷⁴

After two rounds of utility solicitations under the Energy Storage Order, a total of 120 MWs of storage projects have executed contracts between developers and utilities, with 20 MWs located in NMPC's service territory and 100 MWs within Consolidated Edison's footprint. A total of 1,301 MW of storage, representing about 87% of the 2025 target, has been awarded or

⁶⁶ Case 15-E-0302, supra, Clean Energy Standard Progress Report: 2021 Compliance Year, p. S-3 (filed January 31, 2023) (CES 2021 Progress Report).

⁶⁷ Case 21-E-0629, supra, Midpoint Review p. 8.

⁶⁸ Case 18-T-0604, Deepwater Wind South Fork, LLC – Electric Transmission Line, Order Adopting Joint Proposal (issued March 18, 2021) (Article VII Order).

⁶⁹ Case 21-E-0261, Petition of South Fork Wind, LLC for an Original Certificate of Public Convenience and Public Necessity and for an Order Providing for Lightened Regulation, Order Granting Certificate of Public Convenience and Necessity and Providing for Lightened Regulation (issued December 20, 2021).

⁷⁰ South Fork Wind, About South Fork Wind: Project at a glance (last accessed June 28, 2023) <https://southforkwind.com/>.

⁷¹ South Fork Wind, About South Fork Wind: Project at a glance (last accessed June 28, 2023) <https://southforkwind.com/>, <https://southforkwind.com/>, <https://southforkwind.com/>.

⁷² NYSERDA, Offshore Wind: 2022 Offshore Wind Solicitation (last accessed June 28, 2023) <https://www.nysERDA.ny.gov/All-Programs/Offshore-Wind/Focus-Areas/Offshore-Wind-Solicitations/2022-Solicitation>.

⁷³ Case 15-E-0302, supra, CES 2021 Progress Report (filed January 31, 2023) p. S-4.

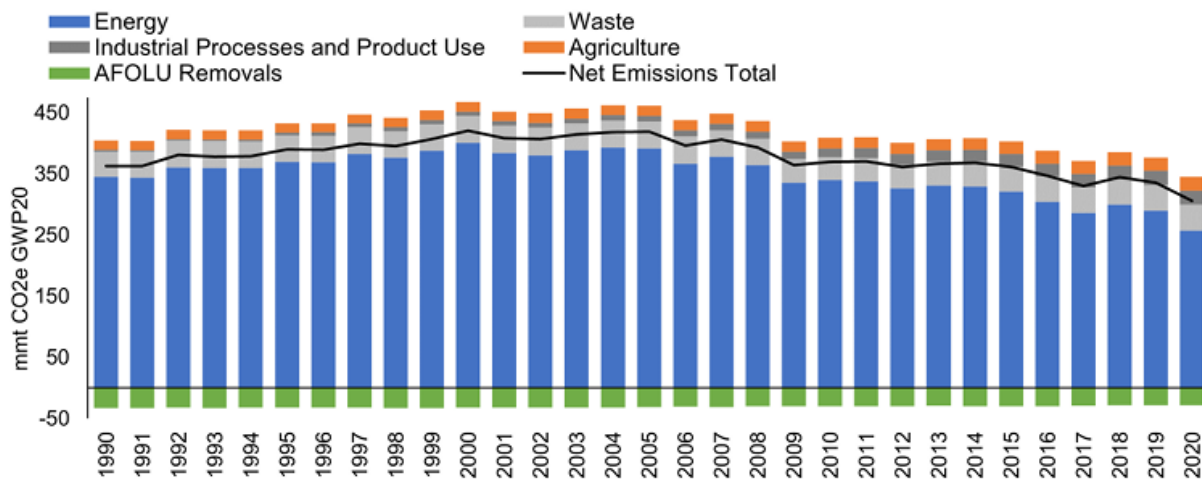
⁷⁴ Case 15-E-0302, supra, CES 2021 Progress Report (filed January 31, 2023) p. S-4.

contracted as of October 2022.⁷⁵ Approximately 12,000 MW of proposed energy storage projects are presently in either distribution-level or wholesale-level interconnection queues in New York.

As of May 2, 2023, there are approximately 144,037 EVs currently registered in New York State representing an approximately 42% year-over-year increase between March 2022 and March 2023. Serving these vehicles are 8,002 L2 chargers and 1,215 DCFC located throughout the State.⁷⁶

In December 2022, DEC published the New York State Statewide Greenhouse Gas Emissions Report that provided a detailed account of greenhouse gas emissions in the State from 1990-2019.⁷⁷ Total statewide gross emissions in 2019 were 7% below 1990 levels and 18% below 2005 levels, when assessed using CLCPA accounting. During this period, emissions from electricity dropped 46%.

Figure 1: NYS Statewide Greenhouse Gas Emissions by Sector, 1990-2020 (million metric tons (mmt) CO₂e GWP20)⁷⁸



Disadvantaged Communities

The CLCPA requires both that Commission decisions do not disproportionately burden Disadvantaged Communities and that Disadvantaged Communities receive substantial benefits from programs that implement the CLCPA’s mandates.⁷⁹ Specifically, with regard to Disadvantaged Communities and low- to moderate-income (LMI) customers, the CLCPA requires the Commission, to the extent practicable, to: a) direct available programmatic resources in such a

⁷⁵ Case 18-E-0130, *supra*, Energy Storage Roadmap (filed December 28, 2022) p. 11.

⁷⁶ Atlas Public Policy, Evaluate NY (August 2022) <https://atlaspolicy.com/evaluateny/>.

⁷⁷ 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>.

⁷⁸ 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>.

⁷⁹ PSL §66-p(7).

manner that Disadvantaged Communities receive a target of 40%, with no less than 35%, of the overall benefits of spending on clean energy and energy efficiency programs, projects or investments;⁸⁰ b) in any proceeding commenced by the Commission with a goal of achieving 185 trillion British thermal units (Btu) of end-use energy savings below the 2025 energy-use forecast, include mechanisms to ensure that, where practicable, at least 20% of investments in residential energy efficiency, including multi-family housing, are invested in a manner that will benefit Disadvantaged Communities, including LMI consumers;⁸¹ and c) require NYSERDA and the IOUs to develop and report metrics for energy savings and clean energy market penetration in the LMI market and in Disadvantaged Communities and post such information on the NYSERDA's website.⁸²

Disadvantaged Communities Benefit Reporting

DPS is working with DEC, NYSERDA, and other State agencies to develop a consistent approach to tracking and reporting investments in and benefits to Disadvantaged Communities. Staff envisions that this reporting will track the State's clean energy and energy efficiency investments in Disadvantaged Communities and the energy savings and bill impacts for participating customers, as well as broader benefits associated with those investments including employment, air quality, and health impacts. To demonstrate that the ratepayer funded portfolio of clean energy and energy efficiency investments complies with the CLCPA Disadvantaged Communities investments/benefit requirement, NYSERDA and the utilities shall provide an annual report on investments and benefits in Disadvantaged Communities, no later than December 31, 2023. The 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.⁸³

As part of this effort, pursuant to statutory requirement, DPS is working with NYSERDA and the JU to develop a data collection template and inter-agency process that State and utility program administrators will use to report clean energy and energy efficiency investments in Disadvantaged Communities. Staff is working closely with the program administrators to create a template that tracks appropriate metrics for the relevant programs, ensure that reporting is standardized across the state, and develop protocols to assure the quality of reported data. During the first quarter of 2023, Staff conducted an initial test run of the data collection tool and processes in which each program administrator was required to submit data for one program. Staff is working with NYSERDA to adjust the data collection template based on the results of the initial test run, as well as to reflect the final criteria for identifying Disadvantaged Communities, as adopted by the Climate Justice Working Group. To prepare for reporting on investments and benefits to Disadvantaged Communities, NYSERDA and the Utilities are expected to develop systems and

⁸⁰ ECL §75-0117.

⁸¹ PSL §66-p(6).

⁸² PSL §66-p(7)(c).

⁸³ Staff expects guidance on compliance with the DAC investment and benefits requirements of the Climate Act later in 2023.

processes that will provide for investments and associated benefits to be tracked based on the location of the project or investment.⁸⁴

Disadvantaged Community Compliance Plan for DPS

In addition to collaborating with other State agencies on statewide reporting processes, Staff is developing an internal DPS Disadvantaged Communities Compliance Plan. This Compliance Plan will lay out the necessary workstreams necessary to ensure that DPS fulfills its responsibilities with regard to the Disadvantaged Community provisions of the CLCPA. The compliance plan is expected to include, but not be limited to, a review and modification of existing reporting requirements, issuance of guidance documents to instruct program administrators on necessary improvements, review and modification of clean energy and energy efficiency programs to enhance benefits to Disadvantaged Communities, and the development and offering of Disadvantaged Community-related training for DPS employees.

Commission Actions Directing Benefits to Disadvantaged Communities

While work is ongoing both within and beyond DPS to develop guidance for implementing the CLCPA's requirements related to Disadvantaged Communities, the Commission has already acted in multiple proceedings to direct clean energy and energy efficiency investments to those communities. Many of these actions have been taken through the Clean Energy Fund (CEF). Established by the Commission in 2016, the CEF consists of four portfolios administered by NYSERDA: Market Development; Innovation & Research; NY-Sun, and the NY Green Bank. Since 2020, the Commission has issued several orders expanding access to CEF programming and ensuring that its benefits reach Disadvantaged Community residents.

In its May 2020 Order Extending and Expanding Distributed Solar Incentives, the Commission authorized \$135 million in incremental funding to increase access to solar energy for "LMI customers, affordable housing, and environmental justice and Disadvantaged Communities." In that Order, the Commission also approved NYSERDA's adoption of a Framework for Solar Energy Equity to ensure that those funds are used effectively to serve LMI customers and Disadvantaged Communities. In the subsequent Order Expanding NY-Sun Program, which increased the installation target of the NY-Sun program from 6 to 10 GW of distributed solar generation projects, the Commission created program criteria to ensure that at least 40% of the 4 GW incremental increase would benefit those New Yorkers who typically lack access to rooftop solar, including LMI households, residents of regulated affordable housing, and Disadvantaged Communities.

In its September 2021 Order Approving Clean Energy Fund Modifications, the Commission adopted a goal for the CEF that Disadvantaged Communities receive 40% of the benefits of spending across its entire portfolio beginning in 2020. The Commission required NYSERDA to make a filing 60 days following the finalization of the Disadvantaged Community

⁸⁴ This includes the geocoding of projects to enable geo-spatial analysis of investments and impacts relative to the Disadvantaged Communities criteria.

criteria by the Climate Justice Working Group, documenting how Disadvantaged Community criteria will be incorporated into CEF operations. As detailed in NYSERDA's May 26, 2023 filing, NYSERDA has modified and/or developed process in the areas of 1) data systems and processes; 2) engagement with underserved communities; and 3) building internal capacity attentive to these considerations. As a result, two new initiatives funded through the CEF to further enhance engagement with underserved communities include the Regional Clean Energy Hubs and the Energy Equity Collaborative.

In December 2022, Governor Hochul announced \$52 million in awards to establish twelve Regional Clean Energy Hubs across New York State. Overseen by NYSERDA and funded in large part by the CEF, the Hubs are comprised of networks of community-based organizations with experience practicing outreach and education in each of the State's economic development regions. They are charged, over the next four years, with connecting communities with opportunities to participate in and benefit from the clean energy economy, from home energy improvements to training in clean energy careers. The Hubs will promote awareness within Disadvantaged Communities of the State's clean energy goals and programs while relaying barriers to clean energy adoption and community needs back to policymakers and program administrators. The Hubs promise to be especially instrumental in facilitating the delivery of energy efficiency and clean energy programs administered by NYSERDA and utilities and overseen by DPS.

The Energy Equity Collaborative is a related CEF-funded initiative that will also assist New York, NYSERDA and DPS in delivering efficiency and clean energy benefits to Disadvantaged Communities. The Energy Equity Collaborative is guided by a Founding Steering Committee composed of community-based organizations that serve and represent Disadvantaged Communities in New York State, with a particular focus on energy equity and climate justice issues. It will provide a forum for building constructive relationships between representatives of historically marginalized communities and the State agencies and authorities responsible for carrying out the landmark equity objectives of the CLCPA. With NYSERDA's support, the Collaborative will host public meetings and create sector-specific working groups, that support meaningful engagement of Disadvantaged Community stakeholders in the development and implementation of State-level clean energy planning and decision-making.⁸⁵ This will help ensure policies and programs are informed by the lived experiences of the Disadvantaged Communities they are meant to serve.

The CEF Modifications Order also adopted a goal for the New York Green Bank (NYGB) to invest at least 35% of its capital beginning in 2020 in projects to benefit Disadvantaged Communities. In this Order, the Commission also addressed the need to continue to assess NYGB's offerings to ensure they meet the needs of and deliver true benefits to Disadvantaged Communities. NYGB was directed to undertake a stakeholder process that included representatives of Disadvantaged Communities and document the results in a filing in Case 13-M-

⁸⁵ NYSERDA, Energy & Climate Equity Strategy (last accessed June 28, 2023), <https://www.nyserda.ny.gov/all-programs/energy-and-climate-equity-strategy>.

0412.⁸⁶ As an example of how these have spurred programming focused on Disadvantaged Communities, in April 2023, the NYGB announced the launch of a \$250 million Community Decarbonization Fund, a wholesale lending pathway that provides low-cost capital to Community Development Financial Institutions and other mission-driven lenders for local clean energy, building electrification, and other projects that reduce GHG emissions in Disadvantaged Communities. These targets have enabled the CEF to intensify its focus on programs that address the disproportionate environmental and energy burdens identified in the CLCPA and lower barriers to access clean energy in Disadvantaged Communities.

DPS's EV Make-Ready Program is another area where the Commission has focused significant resources on serving the needs of Disadvantaged Communities. The Commission's July 2020 EV Make-Ready Order authorized \$206 million in funding for clean transportation programs benefitting Disadvantaged Communities. This budget supports higher incentives for the installation of publicly accessible EV charging stations, as well as chargers serving multifamily residential buildings, in census tracts qualifying as Disadvantaged Communities under the interim definition established by New York State. The budget also supports make-ready partnerships with four Upstate transit authorities and the \$85 million New York State Clean Transportation Prizes program, which sponsors projects that enhance clean transportation, improve mobility options, and reduce harmful emissions in Disadvantaged Communities through innovative transportation solutions. Ten grand prizes were awarded in November 2022 to projects to be executed over the next three years.

In March of 2023, DPS Staff issued the EV Make-Ready Program Midpoint Review Whitepaper, which recommends an additional \$133 million investment in Disadvantaged Communities. Staff's proposal would bring investments in Disadvantaged Communities to 35% of the total incentive budget and would include increased funding for infrastructure to transition polluting trucks and buses to zero-emission models and a micromobility charging pilot program, both priorities expressed to Staff by Disadvantaged Community advocates. The Whitepaper also proposes integrating workforce development considerations for Disadvantaged Community residents into the design of the Make-Ready Program.

Lastly, in September 2022, the Commission commenced the review of the Clean Energy Fund and New Efficiency: New York Portfolios and required Staff to issue a report on the ratepayer funded energy efficiency and building electrification programs along with a series of questions to engage stakeholders on the modifications necessary to, among other things, align these portfolios further with the CLCPA.⁸⁷ The Staff Report stated Staff's belief that although financial incentives will be necessary to deliver greater benefits in Disadvantaged Communities; financial incentives alone are unlikely to result in the type of transformational shift envisioned. Therefore, Program Administrators will need to examine current processes, program designs, and

⁸⁶ Case 13-M-0412, Petition of New York State Energy Research and Development Authority to Provide Initial Capitalization for the New York Green Bank, NYGB Operational Supplement to Annual Plan and Impact Report (filed May 2, 2022).

⁸⁷ Case 14-M-0094 Proceeding on Motion of the Commission to Consider a Clean Energy Fund, Order Initiating the New Efficiency: New York Interim Review and Clean Energy Fund Review (issued September 15, 2022).

outreach mechanisms to assess their effectiveness and engage with members and representatives of Disadvantaged Communities to identify and implement modifications that will improve services in these areas. Comments were received on March 27, 2023 and are currently under review.

IV. Summary of Cost Recoveries and Benefits to Ratepayers of CLCPA Investments

Summary of Benefits

To estimate benefits for this CLCPA Annual Review, Staff issued information requests to NYSERDA and each utility seeking data on the annual amounts for 2022 and cumulative total amounts for the years 2020 through 2022 of reductions in energy usage and emissions associated with CLCPA programs including CES,⁸⁸ CEF, VDER, EV, utility energy efficiency, beneficial electrification (heat pumps), etc.

Staff requested data on energy reductions or generation in MWh for electricity and million metric British thermal units (MMBtu) for all other fuel savings. This level of detail on fuel types was necessary to calculate net CO₂/CO₂e emissions reductions. The emissions reductions presented in the table below were calculated using the emissions factors as stated in CE - 10: Data Dictionary and Scorecard Guidance.⁸⁹

NYSERDA provided the MWh energy generation associated with the statewide CES programs (Tier 1 Renewable Energy Credits (RECs), Tier 2 RECs, Tier 3 ZECs, Tier 4 NYC RECs, and Offshore Wind RECs (ORECs)) and the energy reductions or generation associated with the statewide CEF programs (Market Development, Innovation & Research, NY-Sun, and NY Green Bank). NYSERDA's CES statewide numbers came with several caveats (see Appendix B).

For non-NYSERDA funded, utility-administered energy efficiency and CLCPA-related programs, the utilities provided the annual on-site energy reductions in MMBtu for 2022 and the cumulative annual on-site energy reductions in MMBtu for 2020 through 2022.

The annual emissions reductions in 2022, as well as the cumulative emissions reductions from 2020 through 2022, associated with the electric and gas programs described above are detailed in the chart below. On a statewide basis, the total emissions reductions are 16.5 mmt CO₂e emissions for 2022 and a cumulative total of 49.5 mmt CO₂e for 2020 through 2022.

⁸⁸ Regarding the CES generation provided by NYSERDA for calendar year 2022, NYSERDA has yet to close out 2022 calendar year reporting yet and will not do so until later this year. However, Staff does not expect the final 2022 generation to depart significantly from that provided by NYSERDA.

⁸⁹ Case 14-M-0094, supra, CE-10: Data Dictionary and Scorecard Guidance (issued December 16, 2021), Appendix C.

TABLE 2				
Statewide Energy Savings or Energy Generation by Program				
	2022		2020-2022	
	MWh	MMBtu	MWh	MMBtu
CES Tier 1 RECs	796,656	0	1,677,274	0
CES Tier 2 RECs	13,732	0	32,409	0
CES Tier 3 ZECs	26,808,001	0	81,551,557	0
CES Tier 4 NYC RECs¹	0	0	0	0
ORECs²	0	0	0	0
CEF³	1,286,593	2,036,769	3,281,548	6,522,627
VDER	1,581,392	0	2,893,945	0
Electric EE/BE (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
TOTAL	31,968,879	9,063,181	95,937,409	23,177,295

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.

TABLE 2a		
Overall Emissions Reductions		
	2022	2020-2022
Program	MT of CO₂e	MT of CO₂e
All Programs in Table 2		
from MWh Reductions	15,994,590	47,999,084
from MMBtu Reductions	481,821	1,233,087
Electric Vehicle (EV) Make Ready¹	63,869	267,128
TOTAL	16,540,280	49,499,299

1 – 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 sited here because the public charging stations funded through the program are enabling technology for the statewide EV deployments.

Several points that inform the emissions reduction totals in the table above require explanation. First, the majority of these emissions reductions are associated with Tier 3 CES ZECs. The Tier 3 program, which commenced in 2016, aligns with the broad objectives of the CLCPA in providing zero-emission electricity to the electric grid, but the Commission did not adopt that program pursuant to the CLCPA. While the amount of savings in Table 2 and billing in Table 5 are much higher for ZECs than other programs under the CES, these numbers will change over time as more renewable energy projects achieve commercial operation in support of the CLCPA renewable energy requirements. Second, as noted above, the 0.55 metric tons of CO₂ per MWh emissions factor used to calculate the emissions for the MWh displaced by most of these programs was calculated in 2017 and could be revised in subsequent annual reports.

Summary of Cost Recoveries

For purposes of estimating the cost recoveries of CLCPA related initiatives in 2022, Staff issued information requests to each of the utilities. Specifically, Staff requested the utilities provide 2022 cost recoveries for: CES (electric only), CEF (electric only), certain VDER (electric only), Electric Vehicle Make Ready Program (electric only), Clean Heat programs (electric only), Integrated Energy Data Resource (electric only), and Utility Energy Efficiency programs (electric and gas).

The cost recovered in 2022 by the utilities associated with these gas and electric programs described above are detailed in the tables below.

TABLE 3	
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
Total	\$112,967,498

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

¹ – CES 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 LIPA’s feed-in tariffs cannot be disaggregated.

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

³ – Storage related recoveries not included. The costs for the NYSERDA Energy Storage incentive program were funded from pre-2022 CEF collections. Electric utilities: (1) own and/or have procured customer sided storage projects for non-wires alternatives, (2) own storage pilot projects; and (3) own demonstration projects. 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 from 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.

⁴ – Including clean heat (heat pump) program recoveries.

⁵ – 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.

The annual total statewide costs billed to LSEs by NYSERDA in 2022, as well as the cumulative statewide costs billed to LSEs by NYSERDA from 2020 through 2022, associated with the CES programs are detailed in the chart below.

TABLE 5¹		
Billing for NYSERDA CES Programs		
(in dollars)		
Program	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
TOTAL	\$645,076,870	\$1,871,922,708

¹ – 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

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:

- A. Residential heating customers (83 therms per month),
- B. Small commercial customers (2,500 therms per month),
- C. Commercial customers (10,000 therms per month), and
- D. Industrial customers (100,000 therms per month).

TABLE 6
2022 Typical Monthly Gas Bills
with CLCPA related costs disaggregated

	Central Hudson	Con Edison	KEDLI	KEDNY	NFG	NYSEG	NMPC	O&R	RG&E	Corning
Residential - 83 Therms										
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%
Non-Residential - 2,500 Therms										
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%
Non-Residential - 10,000 Therms										
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%
Non-Residential - 100,000 Therms										
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%

Staff requested the utilities provide typical electric delivery and supply bills for 2022 for the following customer types:

- A. Residential customers (600 kWh per month),
- B. Non-residential customers (50 kW & 12,600 kWh per month),
- C. Non-residential customers (2,000 kW & 720,000 kWh per month), and
- D. Non-residential high load factor customers (2,000 kW & 1,296,000 kWh per month).

Additionally, Staff requested the utilities disaggregate the cost components reported in Table 1 (gas) and 2 (electric) above to determine CLCPA related impacts on customers.

TABLE 7 2022 Typical Monthly Electric Bills with CLCPA related costs disaggregated							
	Central Hudson	Con Edison	NYSEG	NMPC	O&R	RG&E	LIPA
Residential - 600 kWh							
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%
Non-Residential - 50 kW and 12,600 kWh							
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%
Non-Residential - 2,000 kW and 720,000 kWh							
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%
Non-Residential - 2,000 kW and 1,296,000 kWh							
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

This annual report is a review of actual costs incurred by ratepayers to date in support of various programs and projects to implement the CLCPA and does not fully capture potential future expenditures, including estimated costs already authorized by the Commission but not yet recovered in rates. To complement this overview of cost recoveries incurred to date, we also present below a table of the various programs and the total amount of estimated costs associated with each authorized by the Commission to date. Table 8 gives a sense of expenditures that ratepayers could ultimately see recovered in rates. These values are conservative and reflect both past and prospective estimated costs.

It is important to note that the Commission authorized some of the estimated costs in Table 8 prior to CLCPA enactment and that the cost associated with these authorized programs will be recovered over several years to come, based on the implementation schedules for these projects or programs and will mitigate the cost impacts to ratepayers year over year. These estimated costs represent either total program budget, estimated total cost for the program over its duration, or costs incurred to date in support of the program. Additionally, 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. The Department has also previously described market price effects that are a result of these investments. When load is reduced or more low-cost generation is added, it would be anticipated that energy prices would fall because the market would rely less on higher cost generators. In addition, investments in transmission infrastructure not only unbundle renewable energy but also yield production cost savings and reliability benefits.

In sum, the total estimated costs associated with these programs or projects should not be considered as entirely incremental costs to what ratepayers would otherwise pay. Subsequent annual reports may include additional information about costs recovered relative to the funding previously authorized by the Commission in these programs, including funds already expended in support of these programs.

TABLE 8
Authorized Funding to Date
in millions of dollars

Program	Total Funding Authorized to Date
CES ¹	\$25,242
CEF ²	\$7,011
EV Make Ready Program ³	\$701
Energy Storage ⁴	\$394
IEDR ⁵	\$72
Electric EE/BE (heat pumps) ⁶	\$4,337
Transmission Upgrades ⁷	\$5,999
Total	\$43,756

¹ – CES funding includes estimated costs originally authorized in the Order Establishing a CES and subsequent Commission orders under Case 15-E-0302. The value shown here includes up to \$3.3 billion estimated for land-based renewables under Tier 1 and up to \$6.9 billion for offshore wind as outlined in DPS Staff’s CES Whitepaper filed June 18, 2020. It also includes a \$200 million budget for Tier 2 pursuant to the CES Modification Order (issued October 15, 2020) and \$12.2 billion estimated for Tier 4 pursuant to the Order Approving Contracts for the Purchase of Tier 4 Renewable Energy Certificates issued April 14, 2022. Lastly, the value for the Tier 3 ZEC program is \$2.642 billion pursuant to the CES Financial Status Report for calendar year 2022 for the compliance years ending in March 31 for the years 2017 to 2022. Future expenditures for Tier 1 and offshore wind will depend on a variety of factors including future procurements, market energy, and capacity prices and will be recovered over extended time periods based on the contract terms (offshore wind and Tier 4 have 25-year maximum contract periods; Tier 1 contracts are for 20-year periods; Tier 3 contracts are for 12-year periods; Tier 2 contracts are for 3-year periods).

² – CEF funding is for years 2016-2036 pursuant to Commission orders under Case 14-M-0094 and includes the following portfolios: NY-Sun, NY Green Bank, Market Development, and Innovation and Research. This value nets out collections and expenditures for legacy programs including \$354 million for Energy Storage, \$58.7 million for CES, \$50.7 for utility energy efficiency, and \$0.1 million for Tier 2 which are captured in the other program-specific rows.

³ – EV Make Ready Program funding is for years 2020-2025 pursuant to Commission orders under Case 18-E-0138.

⁴ – Energy Storage cost is representative of the total funding for years 2019-2025 pursuant to Commission orders and implementation plans under Case 18-E-0130 and was funded in 2019 from previously collected CEF dollars.

⁵ – IEDR funding is representative of the total funding authorized in February 2021 through 2023 pursuant to Commission orders under Case 20-M-0082.

⁶ – Utility Energy Efficiency and Clean Heat funding is representative of the total funding authorized for the years 2019-2025 pursuant to Commission orders under Case 18-M-0084. Additional funding was authorized by the Commission for Con Edison and Central Hudson’s heat pump programs under New York State Clean Heat, which is funded through transfers of previously collected and unspent funds. More information on these transfers and additional funding via continuity mechanisms authorized by the Commission should it be needed before the end of the current program in 2025 is available in the relevant Commission orders in that case.

⁷ – Transmission Upgrades estimated cost is representative of the total estimated cost authorized by the Commission to date for Phase 1 transmission projects for National Grid (\$691 million in July 2022) and NYSEG (\$98 million in December 2022); \$4.4 billion for Phase 2 projects for Central Hudson, National Grid, NYSEG, and RG&E; and \$810 million for Con Edison’s Clean Energy Hub in April 2023 pursuant to Commission orders under Case 20-E-0197. These projects are anticipated to be in service by 2030 and cost recovery will begin as facilities are built. Not included in this table is the Propel NY transmission project, selected by the NYISO Board in June 2023 in response to the Commission’s declaration of a public policy transmission need (PPTN) to support injections of offshore wind energy to the Long Island system by 2030 at an estimated cost of \$3.36 B. Since the Commission did not directly approve this project, the estimated cost is not captured in the table above.

V. Conclusion

This document is the first to report on the Public Service Commission and DPS's overall compliance with the CLCPA. It presents data from diverse programs, and that diversity is reflected in the dissimilar inputs, outcomes, and performance metrics that inform its contents. As the foregoing descriptions and data show, New York State has invested a great deal in its initial efforts to realize the clean energy growth and emissions reduction goals of the CLCPA. In 2022, the six major investor-owned utilities and the Long Island Power Authority invested over \$1.1 billion on CLCPA related programs. NYSERDA, in turn, collected over \$645 million from load-serving entities for clean energy programs operated under the Clean Energy Standard. To make the data reported here – and thus CLCPA implementation – more transparent to the public, DPS will continue to explore different options for data definition, collection, comparability, and accessibility.

APPENDICES

Appendix A: Generic Cases Related to the Commission’s Implementation of the CLCPA

Case Number	Topic
<i>Technology-Specific Programs</i>	
18-M-0084	Energy Efficiency and Clean Heat Programs: This proceeding deals with energy efficiency initiatives including the utility-based energy efficiency and heat pump programs. Specifically, this proceeding includes the Clean Heat Program, which all the major utilities participate in along with support from NYSERDA, promotes the electrification of space and water heating by offering contractor and customer incentives for the installation of air- and ground-source heat pumps.
18-E-0130	Energy Storage: This proceeding encourages energy storage deployment and addresses New York’s energy storage target of 6 GW by 2030. New York’s ambitious storage target is accompanied by Market reforms and cost-effective procurement mechanisms including incentives for private customers to install storage. It encompasses Utility Requests for Proposals, and NYSERDA’s Retail and Wholesale Programs.
18-E-0138	Electric Vehicles, Charging and Supply Equipment: This proceeding addresses clean and reliable transportation in NYS to help meet the goal of 40% greenhouse gas reduction by 85% from 1990 levels by 2050 as well as the goal to phase out new sales of fossil fuel-burning cars by 2035, with a 2045 target for trucks and buses. It encompasses the EV Infrastructure Make Ready and Managed Charging Programs
22-E-0236	Commercial EV Charging Demand Charge Alternatives: This proceeding deals with alternatives to traditional demand-based rates to support commercial EV charging.
<i>Clean Energy Procurement Programs</i>	
15-E-0302	Large-Scale Renewables: Commission proceeding to implement a large-scale renewable program and a Clean Energy Standard. It encompasses large-scale renewable energy projects including Tier 1 for land-based solar photovoltaics and land-based wind; offshore wind; Tier 2 program for maintenance of the State’s existing renewable energy resources; the Zero-Emission Credit program (Tier 3); and the Tier 4 transmission projects to deliver renewable energy into New York City.
14-M-0094	Clean Energy Fund (CEF): The CEF encompasses four major portfolios: <ul style="list-style-type: none"> • Innovation and Research: The CEF helps to spur innovations through research and technology development that will drive clean-tech business growth and job creation while providing more energy choices to residential and business customers. • Market Development: The New York State Energy Research and Development Authority (NYSERDA) offers a variety of activities to stimulate consumer demand for clean energy alternatives and energy efficiency while building clean energy supply chains to meet growing customer demand. Information on Market Development can be found in DMM Case 14-M-0094 and in Matter 16-00681. • NY Green Bank: The NY Green Bank accelerates the deployment of clean energy through a variety of financing tools targeted at alleviating financial market barriers and harnessing capital markets. The NY Green Bank leverages private sector investment to expand the availability of capital and

	<p>increase confidence in lending for clean energy projects. More information on the NY Green Bank can be found in DMM Case 13-M-0412.</p> <ul style="list-style-type: none"> • NY-Sun: The NY-Sun Program is making solar energy more accessible to homes, businesses and communities throughout New York while on track to meet the Climate Leadership and Community Protection Act target of 6 gigawatts (GW) by 2025. More information on NY-Sun can be found in DMM Case 19-E-0735 or on NYSERDA's Solar Projects webpage.
14-M-0224	Community Choice Aggregation: This proceeding relates to Community Choice Aggregation (CCA) Programs, which are authorized by municipalities and includes the necessary design principles and standards that municipalities must apply in developing and implementing CCA programs for their constituents.
15-E-0082	Community Distributed Generation: This proceeding relates to community distributed generation (CDG) and allows customers for whom rooftop solar is not a viable option to directly participate in and enjoy the benefits of renewable energy programs.
18-E-0071	Offshore Wind: Proceeding related to the procurement and development of offshore wind projects to meet the State's renewable energy goals.
<i>Customer-Sited Renewable Generation</i>	
15-E-0751	Value of Distributed Energy Resources: This proceeding addresses the mechanism to compensate energy generated by distributed energy resources such as solar photovoltaic, energy storage, combined heat and power, anaerobic digesters, wind turbines and small hydro and fuel cells. It encompasses the value stack, rate design, community-distributed generation, standby rates, technology-neutral optional rate, net metering, and marginal cost of service (MCOS).
14-M-0224	Community Choice Aggregation: See above.
15-E-0082	Community Distributed Generation: See above.
<i>System Planning</i>	
16-M-0411	Distributed System Implementation Plans (DSIPs): Proceeding that relates to DSIPs that build upon traditional utility planning and promote timely development of a modern grid capable of managing distributed energy resources (DERs) and supporting retail markets. The proceeding also facilitates development of a Distribution System Platform (DSP) that allows the distribution utilities to efficiently plan and operate the grid using DERs, while providing a competitive retail market for transacting electric grid services.
16-M-0412	Benefit Cost Analysis (BCA) Handbooks: Proceeding that includes handbooks that set forth the BCA Framework and guide DER providers in structuring their projects and proposals. The BCA Framework enables the careful comparison of the value of the benefits obtained through a potential project or action against the costs incurred in effectuating that project or action, generally considered through the systematic quantification of the net present value of the project or action under consideration. More information on the BCA Framework can be found under Case 14-M-0101, including in the Order Adopting Regulatory Policy Framework and Implementation Plan (issued February 26, 2015).
14-E-0423	Electric Dynamic Load Management (DLM or Demand Response) Programs: The Utilities' DLM Programs Annual DLM Reports, and Tariff Filings are addressed annually by the Commission under this proceeding.
20-G-0131	Gas System Planning: This proceeding includes actions related to local gas distribution companies', or LDCs', long-term plans and alternative solutions to ensure that New York's residents continue to have safe, adequate, and reliable gas

	service as the state reduces greenhouse gas emissions and transitions to alternative energy sources. It also includes rules related to the process for initiating, operating, and lifting a natural gas moratorium, and covers issues including the metrics used to identify supply shortfall, communications, a Customer Bill of Rights, training materials and outreach, and information on low- and moderate-income customer and disadvantaged community impacts.
<i>Consumer Protection</i>	
14-M-0565	Low Income Affordability: Proceeding on the Commission’s Energy Affordability Policy (or Low-Income Bill Discount) program that established provides income-eligible consumers with a discount on their monthly electric and/or gas bills, as well as other benefits, depending on the characteristics of the particular utility's program. Specifically, in the Commission’s Order issued on May 19, 2016, the Commission formally adopted “a policy that an energy burden at or below 6% of household income shall be the target level for all low-income customers.” The Commission also adopted a policy to provide tiered discounts to customers qualifying as low-income. The tiered discount approach varies discounts based on level of need, with the level of need demonstrated by receipt of one or more Home Energy Assistance Program or HEAP “add-on” benefits.
15-M-0180	DER Supplier Oversight: This proceeding established a set of protections to ensure customers participating in DER programs and markets, particularly CDG projects, are not subject to fraud or abusive marketing. It also established a clear and consistent process for managing complaints and investigating and addressing violations to ensure that both customers and DER suppliers understand their rights and responsibilities.

Appendix B: Additional Data Points Regarding NYSERDA's CES Numbers

Tier 1 RECs (in New York Generation Attribute Tracking System (NYGATS) as of 2023-04-23):

- Tier 1 RECS are from large-scale resources under contract with NYSERDA and do not include Tier 1-eligible resources that are not under contract with NYSERDA.
- Tier 1 RECs from generators under contract with NYSERDA but that will not be delivered to NYSERDA are included (e.g., 100% of the RECs would be included even if NYSERDA is only under contract to purchase 95% of a resource's Tier 1 REC output).
- VDER Tier 1 RECs are excluded.
- Exported Tier 1 RECs are excluded.
- 2022 vintage Tier 1 RECs can be minted in NYGATS up to 2023-06-14.

Tier 2 RECs (in NYGATS as of 2023-04-23):

- Tier 2 RECs are from generators under contract with NYSERDA.
- An LSE's Tier 2 obligation is their load share of the Tier 2 RECs bought by NYSERDA.
- NYSERDA holds an annual voluntary sale of RECs purchased through the Tier 2 program – these RECs do not have the Tier 2 label.
- 2022 vintage Tier 2 RECs can be minted in NYGATS up to 2023-06-14.

Tier 3 ZECs (in NYGATS as of 2023-04-23):

- ZECs are created only from the four upstate nuclear generators under contract with NYSERDA (Nine Mile 1, Nine Mile 2, Ginna, Fitzpatrick).
- The maximum number of ZECs to be produced in a compliance year is 27,618,000 per the August 2016 CES Framework Order in Cases 15-E-0302 and 16-E-0270.
- The ZEC compliance year is April 1 through March 31 – the number of ZECs provided in this report is the number of ZECs produced during calendar year 2022.

Tier 4 NYC RECs & ORECs:

- Tier 4 REC and OREC contracts have not yet reached commercial operation and therefore have not yet delivered RECs to NYSERDA.
- NYSERDA has neither purchased nor resold Tier 4 RECs or ORECs.
- LSEs have not been billed by NYSERDA for programmatic costs
- Costs incurred from Tier 4 REC and OREC programs have been funded by CES uncommitted funds per orders approving NYSERDA's administrative funding petitions In Cases 15-E-0302 and 18-E-0071.