In the Matter of

New York State Electric & Gas Corporation and Rochester Gas and Electric Corporation

Cases 25-E-\_\_\_; 25-E-\_\_\_\_ June 30, 2025

Direct Testimony of:

Electric Capital Expenditures Panel

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## DIRECT TESTIMONY OF THE ELECTRIC CAPITAL EXPENDITURES PANEL

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1	I.	INTRODUCTION
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- 2 Q. Please state the names of the members on the
- 3 Electric Capital Expenditures Panel (the
- 4 "Panel").
- 5 A. We are Jon S. Fairchild, Yvette O. LaBombard,
- 6 and Christopher F. Malone.
- 7 Q. Mr. Fairchild, please state your title and
- business address.
- 9 A. I am the Senior Manager of Project Development
- 10 for New York State Electric & Gas Corporation
- 11 ("NYSEG") and Rochester Gas and Electric
- 12 Corporation ("RG&E" and, together with NYSEG
- 13 collectively, the "Companies" and individually,
- the "Company"). My business address is 1300
- Scottsville Road, Rochester, New York 14624.
- 16 Q. Please summarize your work experience and
- 17 educational background.
- 18 A. I have worked in the electric utility business
- for 12 years. My utility engineering experience
- 20 has been split between the Project Development
- 21 Group, within the Companies' Integrated System
- 22 Planning Organization, and the Projects
- 23 Organization as a Lead Substation Engineer. For
- the last four years I have served in the role of

- 1 Manager / Sr. Manager Project Development. In
- 2 this role, I manage the development of
- 3 comprehensive planning analyses with a focus on
- 4 project feasibility, project alternatives,
- 5 detailed needs assessments, cost estimates and
- 6 construction sequences. My team also works to
- 7 ensure all projects in planning or in execution
- 8 are fully justified and in support of the
- 9 capital investment plans for NYSEG and RG&E. I
- 10 received my undergraduate and master's degrees
- from South Dakota School of Mines & Technology
- 12 (SDSM&T) in Civil Engineering. My Curriculum
- 13 Vitae ("CV") is set forth in Exhibit (ECE-
- 14 01).
- 15 Q. Have you previously testified in other
- 16 proceedings before the New York State Public
- 17 Service Commission ("Commission") or any other
- state or federal regulatory agency?
- 19 A. No.
- 20 Q. Ms. LaBombard, please state your title and
- 21 business address.
- 22 A. I am the Senior Director Gas Engineering and
- 23 Hydro Engineering/Operations. My business

- address in 1300 Scottsville Road, Rochester New
- 2 York 14624.
- 3 Q. Please summarize your work experience and
- 4 educational background.
- 5 A. My work experience and educational background
- are summarized in the Gas Capital Expenditures
- 7 Panel testimony. My CV is set forth in Exhibit
- 8 (GCE-01).
- 9 Q. Have you previously testified in other
- 10 proceedings before the Commission or any other
- 11 state or federal regulatory agency?
- 12 A. Yes, please see the Gas Capital Expenditures
- 13 Panel testimony for a description of the
- 14 proceedings in which I have testified.
- 15 Q. Mr. Malone, please state your title and business
- 16 address.
- 17 A. I am the Senior Director of the NY Integrated
- 18 System Planning Group overseeing all planning
- activities for NYSEG and RG&E. My business
- 20 address is 180 Marsh Hill Road, Orange,
- 21 Connecticut 06477.

1	Q.	Please summarize your work experience and
2		educational background.
3	Α.	I have worked in the electric utility business
4		for 18 years. Most of my engineering-based
5		experience has been in the field of transmission
6		planning. For the last several years, I have
7		been responsible for Project Development, Asset
8		Management, Non-Wires and Non-Pipes
9		Alternatives, and Transmission & Distribution
10		Planning activities for NYSEG and RG&E. In my
11		role, I am responsible for overseeing
12		comprehensive planning analyses, which include
13		the identification of all disparate needs (e.g.,
14		Transmission, Substation, Distribution),
15		developing cost-effective solution alternatives
16		to address those needs, and memorializing those
17		analyses in the most appropriate format in
18		support of the Companies' capital investment
19		plans. I received my undergraduate degree from
20		SUNY Buffalo in the field of Electrical
21		Engineering. I also have an MBA from University
22		of New Haven, and a Master of Engineering degree
23		in the field of Power Systems from Worcester

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- 1 Polytechnic Institute. My CV is set forth in
- 2 Exhibit (ECE-01).
- 3 Q. Have you previously testified in other
- 4 proceedings before the Commission or any other
- 5 state or federal regulatory agency?
- 6 A. Yes. I testified in the Companies' last rate
- 7 case proceedings, Cases 22-E-0317 et al. (the
- 8 "2022 Rate Case").

#### 9 II. OVERVIEW OF TESTIMONY & CURRENT STATE ASSESSMENT

- 10 Q. How is the Panel's testimony organized?
- 11 A. The Panel's testimony is organized as follows:
- 12 Section I is the introductory section; Section
- 13 II provides an overview and current state
- assessment of the Panel's Testimony; Section III
- 15 identifies the exhibits used to support the
- Panel's testimony; Section IV provides an
- overview of the planning process and electric
- 18 project origination; Section V explains each of
- the principal categories of the Companies'
- 20 capital plans for the years 2025-2031; Section
- 21 VI provides an overview of the Companies'
- 22 electric capital investment strategy; Section
- VII describes the major areas of electric
- capital investments under each category; Section

- 1 VIII provides an overview of generation assets
- 2 and describes the major areas of generation
- 3 investments; Section IX discusses an initiative
- 4 to insource additional resources and Section X
- 5 is the conclusion.
- 6 Q. Would the Panel please describe the timing of
- 7 the Companies' Five-Year Capital Investment Plan
- 8 ("Five-Year Plan") and how that filing relates
- 9 to the Panel's capital investment plan presented
- in these rate proceedings?
- 11 A. The original date for the Companies' Five-Year
- 12 Capital Investment Plan filing was April 1,
- 13 2025. However, given the timing of these rate
- 14 filings, the Companies were granted an extension
- to file the Five-Year Plan by June 30, 2025.
- 16 Q. Are the principal categories, discussed in
- 17 Section V of your testimony, consistent with the
- 18 categories that will be utilized by the
- 19 Companies in their upcoming Five-Year Plan
- 20 filing?
- 21 A. Yes. The Panel's discussion of principal
- 22 categories is consistent with what will be
- presented in the NYSEG and RG&E Five-Year Plan.

- 1 Detailed category descriptions will be addressed
- 2 later in our testimony.
- 3 Q. Is the amount of capital investment that will be
- 4 proposed in the upcoming Five-Year Plan
- 5 completely aligned with the Electric Capital
- 6 Expenditures presented in your testimony?
- 7 A. No, due to timing differences. The Five-Year
- 8 Plan will address capital expenditures spanning
- 9 the period 2025-2029, whereas the proposed
- 10 expenditures being advanced by the Panel's
- 11 testimony in these proceedings spans the next
- 12 five rate years starting on May 1, 2026, through
- 13 April 30, 2031 (calendar years 2026-2031).
- 14 Although the total capital expenditure levels
- differ across these data sets (i.e., five
- 16 calendar years verses seven calendar years), the
- total level of expenditures, and itemized
- allocation to individual projects/programs are
- intended to be very similar, if not identical,
- 20 within the initial five-year calendar span.
- 21 Q. Please provide an overview of the Panel's
- testimony.
- 23 A. The Panel identifies and supports \$16.1 billion
- in electric capital expenditures for the period

1	2025 through 2031 to address the Companies'
2	critical electric capital needs and to position
3	the Companies to continue to provide safe and
4	adequate service to customers. Of this amount,
5	the Companies are proposing \$11.0 billion at
6	NYSEG and \$5.1 billion at RG&E. These capital
7	investments are intended to improve overall
8	system reliability and resiliency measures,
9	address asset condition needs, and meet the
10	needs of our customers based on New York State
11	("NYS") load growth projections through 2031.
12	The investment plan also identifies investment
13	projects that position the Companies to advance
14	projects to achieve targets laid out in the
15	Climate Leadership and Community Protection Act
16	("CLCPA"). Finally, the Companies' capital
17	investment plan identifies incremental
18	transformational investments described later in
19	our testimony. Exhibit (ECE-02), Table 1 and
20	Table 2, provide investment forecast summaries
21	for NYSEG and RG&E respectively. Investments
22	are summarized at the macro level, at the
23	category level (e.g., Asset Condition,

- 1 Reliability), and at the project/program level
- 2 later in our testimony.
- 3 Q. The Panel referenced earlier "macro level"
- 4 categorizations. Is the Panel proposing a new
- 5 categorization for the purpose of this
- 6 testimony?
- 7 A. Yes. The Panel presents the Companies' electric
- 8 capital investments utilizing three new macro
- 9 level categories: (1) Base, (2) CLCPA, which the
- 10 Companies also refer to as Powering NY ("PNY")
- 11 and (3) Transformational.
- 12 Q. Why is the Panel presenting these new macro
- 13 level categories?
- 14 A. The three new macro level categories provide a
- useful "big picture" view of the Companies'
- 16 capital investment plans. This view helps to
- 17 explain and highlight where the Companies are
- making capital investments that meet their most
- important needs. For example, the macro level
- 20 categories demonstrate on a high level that the
- 21 Companies' electric capital investment is first
- and foremost focused on essential Base category
- investments.

1	Q.	Please describe in more detail the types of
2		investments that fit within the "Base" category.
3	Α.	Investments categorized within "Base" are those
4		considered to be core to the Companies' needs to
5		serve customers and address immediate and known
6		system needs such as facility replacement
7		programs, incremental capacity upgrade projects,
8		and programs that facilitate the connection of
9		new customers on the grid. This is the largest
10		category of investment at approximately \$7.9
11		billion at NYSEG and \$2.7 billion at RG&E.
12		Investments in this category are necessary to
13		maintain the integrity of the Companies
14		fundamental power delivery infrastructure, which
15		must be reliable and resilient to serve
16		customers as the power deliver infrastructure
17		provides the critical network backbone that
18		supports power delivery and innovation,
19		renewable energy technologies and
20		electrification efforts. Further discussion
21		regarding the importance of maintaining the
22		reliability of the Companies' electric system is
23		set forth in the Electric and Hydro Operations
24		Panel.

1	Q.	What	types	of	investments	are	included	in	the

- 2 "CLCPA" or "PNY" category?
- 3 A. Investments categorized within this category are
- 4 those designated as CLCPA Phase 1 Transmission
- 5 and Substation ("T&S") Projects. For the
- avoidance of confusion, we note that CLCPA Phase
- 7 II projects are not included in this category.
- 8 The costs of the CLCPA Phase II projects will be
- 9 allocated to all statewide load serving entities
- 10 through the NYISO tariff, as further detailed in
- 11 Case 20-E-0197. However, this category would
- 12 encompass other investments intended for the
- purpose of meeting NYS or local municipal clean
- 14 energy objectives.
- 15 Q. Please describe the types of capital investments
- the Panel has included in the Transformational
- 17 category.
- 18 A. Investments categorized within the
- 19 Transformational category are those needed to
- improve outdated and unreliable system
- 21 topologies, convert legacy assets currently
- 22 operating at inadequate voltage levels, and
- right-sizing equipment in a scalable manner to
- accommodate load growth (capacity) projections

within the NYSEG and RG&E service territories. 1 2 For example, The Comprehensive Area Study 3 ("CAS") for Plattsburgh evaluated both immediate 4 and long-term system needs within a prioritized sub-area, proposing comprehensive solutions to 5 address these needs. The proposed solutions aim 6 7 to mitigate issues related to capacity, asset condition, resiliency, and reliability over a 8 9 defined period (up to 2040). In some cases, CAS 10 solution proposals may include the use of 11 targeted undergrounding, the retirement of legacy substations, retrofitting existing 12 13 transmission substations to serve distribution 14 load, and introducing enhanced resiliency concepts such as distribution switching stations 15 to achieve full N-1 distribution circuit 16 17 redundancy. This area-wide study approach was adopted by the Companies in 2023, following the 18 19 completion of the Lancaster 21st Century Study, 20 and is essential to prepare the grid for the 21 anticipated significant load growth from now 22 until 2040. 23 Did placing the Companies' capital investments 24 in projects or programs into the macro level

- 1 categories of Base, CLCPA, and Transformational
- 2 require the Panel to exercise its informed
- 3 judgement?
- 4 A. To a certain extent, yes. The three enumerated
- 5 macro level categories are not perfectly
- 6 amenable to a numerical bright line selection
- 7 methodology. While the vast majority of the
- 8 Companies' planned investment programs or
- 9 projects fell squarely within one of the three
- 10 macro level categories, a limited number could
- arguably fit in more than one category. For
- these projects or programs, the Panel utilized
- its judgment to identify the category that was
- 14 the most appropriate fit.
- 15 Q. Has the Panel prepared an exhibit that
- identifies the projects that were assigned to
- each of the three Marco Level categories?
- 18 A. Yes. Please see Exhibit (ECE-02).
- 19 O. What is the breakdown of total NYSEG and RG&E
- 20 capital investments among the three macro level
- 21 categories of Base, CLPA, and Transformational?
- 22 A. Of NYSEG's approximately \$11.0 billion of
- capital investment, \$7.9 billion is categorized
- as Base, \$1.5 billion is categorized as CLCPA,

1		and \$1.7 billion is categorized as
2		Transformational. The portion of investments
3		associated with the electric generation category
4		total \$189 million and are included within the
5		Base categorization. Of RG&E's approximately
6		\$5.1 billion of capital investment,
7		approximately \$2.7 billion is categorized as
8		Base, \$2.5 billion is categorized as
9		Transformational, and there are no planned
10		investments under the CLCPA category. The
11		portion of investments associated with the
12		electric generation category total \$165 million
13		and are included within the Base categorization.
14		Table 3 and Table 4, set forth in Exhibit
15		(ECE-02), provide a breakdown among the three
16		macro level categories in tabular format for
17		both NYSEG and RG&E, respectively.
18	Q.	What immediate conclusions can be drawn from
19		Exhibit (ECE-02)?
20	Α.	First, that the Base category is by far the
21		largest of the three macro level categories.
22		Second, the CLCPA category is, at this time,
23		closely aligned with the Companies CLCPA Phase 1
24		projects. Finally, the Transformational

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1		category has expected investment starting in
2		2027.
3	Q.	Since projects or programs included by the Panel
4		in the Transformational category will be
5		initiated in 2027 and are not forecast to go
6		into service until well beyond the Rate Year,
7		why did the Panel expend the resources and time
8		needed to identify and quantity this macro level
9		category?
10	Α.	The Transformational category capital
11		expenditures would greatly benefit the
12		Companies' electric system and customers,
13		particularly over the longer term. Projects
14		under this category are designed to provide full
15		N-1 redundancy at the transmission and
16		distribution voltage levels, increase overall
17		capacity, and renew assets that are deemed to be
18		beyond their useful operating life. It should
19		also be noted that projects within this category
20		are generally designed to be scalable to both
21		limit initial investment levels and future
22		retrofits if additional load were to materialize
23		in the future. Should the Commission ultimately
24		determine that all or certain Transformational

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1		projects should be implemented at this time, and
2		if sufficient incremental rate support is
3		provided, the Companies would be well-positioned
4		to undertake such Transformational projects.
5		A. CURRENT STATE ASSESSMENT
6	Q.	Turning to the current state assessment, have
7		the Companies identified new electric capital
8		investments required in response to an increase
9		in customer demand or a change in electric
10		system conditions?
11	Α.	Yes. Over the past several years, the Companies
12		have experienced a significant increase in the
13		number of customer load interconnection requests
14		("spot loads") and overall loads (Mega-Watts or
15		MW) associated with these customer requests.
16		Summaries of load requests, by year, from 2022-
17		2024 as well as the sum-total of load (kVA)
18		requested by division and OpCo are set forth in
19		Exhibit (ECE-02) Figures 1 through 5. Based
20		on these historical trends, current load
21		forecasts (through 2040) for NYS, projected
22		economic development activities, and many of the
23		clean energy policies and technology transitions

being pursued by NYS, local municipalities, and

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1		its residents indicate to the Companies that
2		this trend is likely to continue.
3	Q.	Would the Panel please discuss the key takeaways
4		for the data summarized in Exhibit $\_$ (ECE-02),
5		which sets forth the various NYSGE and RG&E load
6		interconnection request figures?
7	Α.	Yes. The data show a significant increase in
8		the number of customer load requests, and the
9		sum of load (kVA) proposing to be
10		interconnected. Both the number of customers
11		and requested load amounts results in
12		significant impacts to overall grid reliability.
13		For perspective, between 2022 and 2024, NYSEG
14		received an approximate total of 426 MVA of load
15		interconnection requests, which represents 14.1%
16		of load relative to NYSEG's total 2022 native
17		load levels (NYSEG actual 2022 system-wide load
18		levels were approximately 3,030 MVA). For RG&E,
19		between 2022 and 2024, an approximate total of
20		120 MVA of load interconnection requests were
21		received which represents 7.8% of load relative
22		to RG&E's total 2022 native load levels (RG&E
23		actual 2022 system-wide load levels were
24		approximately 1,523 MVA). As we will discuss

1	throughout	the	Panel's	testimony,	these

- 2 increased load levels create significant system
- 3 impacts requiring large levels of grid
- 4 infrastructure investment to accommodate these
- 5 loads.
- 6 Q. Does the increased number of load
- 7 interconnection requests, paired with existing
- 8 grid capacity constraints, have the potential to
- 9 impact the Companies' ability to easily connect
- new customers to the grid (i.e., connect without
- 11 major system upgrades being required)?
- 12 A. Yes. The significant increase in the number of
- 13 customer load interconnection requests, coupled
- 14 with existing capacity constraints and native
- load increases, have together manifested in the
- form of newly identified system needs, further
- 17 exacerbating existing system needs and other
- needs previously identified as marginal.
- 19 Q. Would the Panel please provide an example to
- 20 help illustrate this condition and describe how
- 21 the Companies are addressing these types of
- 22 emergent needs?
- 23 A. Yes. Beginning in 2023, NYSEG's Liberty
- 24 Division has been subjected to an unforeseeable

- and dramatic increase in new load requests that
- 2 has had a significant impact on the Company's
- 3 ability to easily connect prospective customers.
- 4 Q. Please explain further the developments in the
- 5 Liberty Division and why they were
- 6 unforeseeable.
- 7 A. In 2022, the Company only received a total of
- 8 eight new load requests within the Liberty
- 9 Division. This figure more than doubled to
- 10 eighteen load requests received in 2023 before
- increasing once more to forty-nine new load
- 12 requests received in 2024. These 75 new load
- requests within the Liberty Division, all
- received between 2022 and 2024, represent a
- 15 total of about 26 MVA of incremental load in a
- 16 division with a coincident summer peak load of
- about 189 MVA (an approximately 14% increase).
- 18 Q. What impact has the increase in the number of
- 19 load interconnection requests had on the Liberty
- 20 Division?
- 21 A. While the Liberty Division had seen marginal
- 22 capacity constraints prior to 2022, the increase
- in interconnection requests exhausted the
- capacity that remained, or which could be

1		achieved with minor system upgrades. With
2		available capacity depleted on numerous circuits
3		and substations, new load requests, even
4		relatively small ones, have frequently been
5		unable to proceed without requiring major
6		network upgrades. Based on the combination of
7		native load growth and new load
8		interconnections, several electric facilities in
9		the Liberty Division were identified to be at a
10		significant risk of overloading during the 2025
11		summer peak load period (June-September).
12	Q.	What is NYSEG doing to mitigate these capacity
13		needs?
14	Α.	To mitigate the risk to reliability and electric
15		infrastructure posed by this condition, the
16		Company has taken action to deploy an
17		operational solution (i.e., a mobile substation
18		to form a temporary 115/12.5 kV substation
19		adjacent to the existing Ferndale Substation) as
20		well as to construct the most urgently-needed
21		distribution network upgrades identified by
22		Integrated System Planning (i.e., system
23		topology upgrades and voltage conversions to
24		allow for load to be transferred to the mobile

1		substation). This emergent capacity upgrade
2		project is expected to be in-service by June
3		2025 and will allow customers in-queue to
4		connect to the grid. The daily operational
5		challenges in Liberty reflect what other
6		divisions have been and are likely to experience
7		in the near future. Please see Exhibit (ECE-
8		03) for more information regarding this emergent
9		project.
10	Q.	Have the Companies recently observed changes in
11		the number of system needs that involve T&S
12		upgrades?
13	Α.	Yes, system capacity constraints are now more
14		commonly resulting in the need to upgrade T&S
15		facilities, which requires a higher level of
16		investment versus distribution system upgrades.
17		In the past, typical distribution system
18		upgrades such as reconductoring and other
19		limiting element replacements were more common
20		for single load interconnection requests.
21		However, over the past several years the number
22		and size (MW) of these requests, across the
23		Companies' service territory, has caused
24		additional strain on the T&S system

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1	Q.	In consideration of these electric capacity
2		challenges, how have the Companies approached
3		the development of prospective solutions?
4	Α.	To provide customers with the most cost-
5		effective solution(s), Integrated System
6		Planning reviews possible available alternatives
7		that are not as capital intensive, such as
8		distribution field-tie switching (to neighboring
9		circuits and/or substations), distribution line
10		extensions, installation of substation
11		transformer fans, and in limited instances, has
12		entertained post-contingency (N-1) load-shedding
13		options with customers. However, in many cases
14		these types of solutions are unavailable or
15		infeasible, and as a result, large capital
16		investments are needed to interconnect these
17		loads.
18	Q.	Has the recent surge in load interconnection
19		requests and observed increases in native load
20		over the past several years led to a change in
21		the Companies' electric investment strategy as
22		compared to the 2022 Rate Case?
23	Α.	Yes. Although the Companies had proposed
24		targeted investments to alleviate system thermal

1		and voltage constraints (i.e., Capacity), in the
2		2022 Rate Case, the strategy at the time was
3		heavily focused on resolving outage risks (i.e.,
4		system average interruption frequency
5		("SAIFI")), renewing existing assets (i.e.,
6		Asset Condition), advancing clean energy
7		initiatives such as CLCPA, and improving
8		resiliency measures to provide Operators with
9		the tools necessary to restore customers' power
10		as quickly as possible. Programs designed to
11		address capacity needs, as identified in the
12		2022 Rate Case, included the Distribution Load
13		Relief Program, Comprehensive Area Studies, and
14		the Transmission Reinforcement Program.
15	Q.	How have emergent project opportunities been
16		managed and how are system needs balanced within
17		the Companies to ensure that priority projects
18		are included in the capital plan?
19	Α.	Regular discussions are held within the
20		Companies to address emerging needs, and
21		decisions are made to incorporate these needs
22		into the capital plan if they are deemed higher
23		priority than other projects. For mandated
24		projects, such as breaker failure replacements

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1	(i.e., 22-unit replacements in 2024) or
2	substation (power) transformer failures (e.g.,
3	Cobble Hill in December 2022), the Companies
4	identify financial offsets from lower priority
5	items and promptly execute on asset replacement
6	projects. For other emergent needs that are not
7	mandated, the Companies first conduct
8	comprehensive needs and solution analyses, then
9	develop and approve technical materials to
10	identify the selected solution alternative.
11	Annually, during the development of the
12	subsequent year's five-year plan, the electric
13	capital portfolio undergoes a prioritization
14	exercise to determine whether emergent needs
15	should be included and offset by other in-
16	progress projects. With finite resources and
17	competing priorities, this effort is challenging
18	for the Companies. However, the annual electric
19	capital planning process allows the Companies to
20	align planning needs with the strategic
21	objectives and priorities of the Companies.

1	Q.	In consideration of these challenges, are the
2		Companies proposing new or modified strategies
3		to mitigate known system needs?
4	Α.	Yes. The Companies will continue to pursue
5		projects and programs with the intention of
6		improving overall system reliability and
7		resiliency, and meeting CLCPA objectives. In
8		parallel, the Companies will make significant
9		investments to mitigate existing and anticipated
10		capacity needs in support of CLCPA goals and
11		electrification initiatives throughout the NYSEG
12		and RG&E territories. The newly established
13		Customer Cost Allocation Program ("CCAP"), CAS
14		Program, along with the existing Distribution
15		Load Relief Program, and Transmission
16		Reinforcement Program will allow the Companies
17		to address known, emergent, and anticipated
18		capacity needs. In addition, specific projects
19		such as RG&E Station 255 (Henrietta) and NYSEG
20		Ferndale (Liberty) are designed to mitigate
21		known capacity constraints and enable new
22		customer connections within these communities.
23		Section VI provides more detail regarding the
24		overall electric capital planning strategy in

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## DIRECT TESTIMONY OF THE ELECTRIC CAPITAL EXPENDITURES PANEL

1		support of the proposed portfolio. Projects
2		being advanced to meet these strategic
3		objectives will be described in more detail
4		later in the Panel's testimony.
5	Q.	How is the capital investment associated with
6		Generation expenditures presented?
7	Α.	The Generation category provides the capital
8		requirements to replace obsolete, damaged, and
9		aged infrastructure, addresses items included in
10		Federal Energy Regulatory Commission ("FERC")
11		licensing requirements, and capital expenditures
12		to improve these electric capital assets.
13	Q.	Due to the number of competing priorities across
14		the electric portfolio, how did the Companies
15		effectively prioritize electric capital
16		investments to achieve an optimal outcome for
17		NYSEG and RG&E customers?
18	Α.	Portfolio prioritization is not specific to
19		electric expenditures, and therefore
20		prioritization was applied across the entire
21		portfolio of NYSEG and RG&E capital investments.
22		The NYSEG and RG&E portfolio prioritization

methodology will be included in the Companies'

upcoming Five-Year Plan and is further described

Case 25-E- ; Case 25-E-DIRECT TESTIMONY OF THE ELECTRIC CAPITAL EXPENDITURES PANEL 1 within the testimony of the Investment Planning 2 and Common Capital Expenditures Panel. 3 IDENTIFICATION OF EXHIBITS III. Is the Panel sponsoring any exhibits? 4 Q. 5 Yes. This Panel is sponsoring the exhibits Α. identified below. 6 1) Exhibit (ECE-01): Panelist CVs 7 2) Exhibit \_\_ (ECE-02): Electric Capital 8 9 Expenditures Panel Summary of Figures and Tables 10 3) Confidential Exhibit (ECE-03): Ferndale 11 12 Phase 1 Distribution Upgrades Project 13 Workpaper 14 4) Exhibit (ECE-04): Electric CAPEX Project Binders 15 16 5) Confidential Exhibit (ECE-05): NYSEG 17 Ferndale Substation Expansion Project 18 Workpaper 19 6) Exhibit (ECE-06): Full Time Equivalents 7) Exhibit (ECE-07): NYSEG and RG&E Spare 20

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8) Confidential Exhibit (ECE-08): NYSEG and

RG&E Distribution Load Relief Workpaper

Transformers Program Workpaper

9) Exhibit (ECE-09): NYSEG and RG&E Customer 1 2 Cost Allocation Program (CCAP) Workpaper 10) Confidential Exhibit (ECE-10): NYSEG and 3 RG&E Comprehensive Area Studies Program 11) Exhibit (ECE-11): NYSEG and RG&E 5 6 Comprehensive DAC Project Matrix How are each of the project and program exhibits 7 Q. structured? 8 9 Each of the project exhibits, at minimum, 10 include a project whitepaper that summarizes 11 components such as the project description, 12 scope of work, project benefits, project risks, project alternatives, basis for cost estimates, 13 14 and a cost estimate by resource class and by year. In addition, stand-alone projects equal-15 to-or-greater-than \$40.0 million dollars from 16 17 2026-2031, include a summarized cost estimate(s) highlighting major material costs in support of 18 the project. Detailed cost estimates for 19 20 programs are not provided because it is 21 difficult to provide precise estimates for 22 reactive-type programs, which are not pre-23 planned, and those planned beyond 2027. 24 Typically, sub-projects within proactive

1	programs are defined the year before they are
2	executed, using information such as outage and
3	capacity data to determine where best to invest
4	in the grid. In certain instances, supplemental
5	source materials such as study reports, project
6	presentations, and workpapers have been included
7	to further support the need for the project.
8	Programs, which are generally represented as a
9	collection of smaller sub-projects, were treated
10	in a similar manner and include the same level
11	of documentation as stand-alone projects. Sub-
12	projects, within programs, that exceed \$0.5
13	million in investments were broken out
14	individually from their parent program to
15	provide visibility on the specific investment
16	being made. Sub-project level granularity was
17	not available for investments beyond end-of-year
18	2027 since, as stated above, many of these
19	programs rely on updated reliability and loading
20	statistics as the basis for their development.
21	As more information becomes available through
22	subsequent planning analyses, it allows for
23	periodic updates to sub-project breakdowns to
24	occur This provides the Companies with

1		additional flexibility in future years to
2		effectively prioritize new investment
3		opportunities in line with each program's core
4		objective and prioritization methodology.
5	Q.	Can the Panel please provide an example of how
6		additional flexibility is provided in future
7		years?
8	Α.	Yes. On an annual basis, the Distribution Load
9		Relief Program assesses emerging system
10		constraints and prioritizes study work based on
11		those facilities with the greatest need for
12		intervention. These needs and solutions
13		assessment studies result in proposed project
14		opportunities to meet program objective(s).
15		However, considering electrification of
16		transportation and buildings, evolving economic
17		development opportunities and other calls for
18		local and regional growth, there is no reliable
19		way to anticipate precisely where these local
20		constraints will occur beyond 2027. Therefore,
21		program expenditure levels beyond 2027 are
22		represented within the parent program and will
23		be broken-out in future years once a defined
24		plan has been established.

1		IV. PLANNING PROCESS AND ELECTRIC PROJECT
2		ORIGINATION
3	Q.	Specific to electric capital investments, please
4		provide a detailed description of the technical
5		portion of the Companies' capital planning
6		process.
7	Α.	At its core, the inception of any project idea
8		arises from an individual or organization
9		performing their routine tasks and identifying a
10		system need that requires attention. This need
11		can emerge from various activities, such as
12		routine maintenance inspections, emergency
13		system outages, or analytical planning and/or
14		compliance studies. Once identified, the need
15		is then grouped with other similar needs
16		originating from the same input source (e.g.,
17		inspections, study work, etc.). After system
18		needs are categorized into their respective
19		work-streams, further efforts are made to
20		prioritize these needs. Subsequent studies are
21		then conducted to ensure that the proposed
22		project addresses any additional needs as
23		identified. Alternatives, including
24		opportunities for non-wires alternatives, are
25		then developed and evaluated with the final

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1	selection	being	informed	bv	various	factors,

- 2 including but not limited to, cost-
- 3 effectiveness, execution feasibility, and post-
- 4 project system performance (e.g., SAIFI
- 5 improvement, capacity enhancement, asset
- 6 renewal). Project alternative selection,
- 7 whether a single project or within a program, is
- 8 unique and is based on the stated objective of
- 9 the project or program in question.
- 10 Q. Does the Panel have an example of how the
- 11 planning process is applied in practice to the
- 12 development of an electric capital program?
- 13 A. Yes. A description of the typical planning
- 14 process using the NYSEG and RG&E Circuit Breaker
- Replacement Program is a useful illustrative
- 16 example.
- 17 Q. Why is the Circuit Breaker Replacement Program a
- 18 good example?
- 19 A. Circuit breakers are critical pieces of
- 20 substation infrastructure that protect thousands
- of customers from experiencing long-duration
- 22 outages and protect other substation equipment
- from dangerous situations when an outage does
- occur. The Companies' fleet of circuit breakers

1		is increasingly exposed to failures as the
2		circuit breaker asset class continues to age.
3		Over the past five years, circuit breaker
4		failures have increased by 20%, with an average
5		of 2,328 customers affected per each breaker
6		failure. At NYSEG, the Company has identified
7		847 circuit breakers that are beyond their
8		useful operating life and in need of replacement
9		with 516 being identified in "very poor"
10		condition. There are 438,416 customers
11		currently connected to the circuit breakers that
12		are in poor condition, and 89,641 customers
13		currently connected to circuit breakers in very
14		poor condition.
15	Q.	Please continue with your explanation of how the
16		Planning Process applies to the Circuit Breaker
17		Replacement Program.
18	Α.	On an annual basis, the circuit breaker fleet is
19		assessed against a pre-determined health and
20		risk algorithm. This assessment is then used to
21		inform the development of a list of poor/very
22		poor performing breakers that are deemed to be
23		beyond their useful operating life and in need
24		of replacement. Please note, that the Poor and

1	Very Poor designations are health-level
2	designations assigned as part of Asset
3	Management's annual circuit breaker assessment
4	report. Poor and Very Poor scores correlate to
5	Level 4 (of 5) and Level 5 (of 5), respectively.
6	The circuit breakers that fall into the Poor and
7	Very Poor categories are considered to be in
8	need of urgent attention and, typically,
9	replacement. The risk portion of the circuit
10	breaker assessment algorithm was improved in
11	2023 to include a more precise consequence of
12	failure calculation that considers customer
13	outage exposure upon the potential circuit
14	breaker failure under study. The risk portion
15	of this analysis is then used to prioritize
16	additional study work to be done at facilities
17	determined to be most at-risk. Supplemental
18	needs, associated with the breaker under study,
19	are identified and included in the scope of work
20	at the facility. Items such as in-line switch,
21	insulator, and/or foundation replacements are
22	typically included within the overall scope of
23	work since these components are often considered
24	integral to the success of any single sub-

1		project. This example helps to illustrate how
2		study-work and sub-project development is
3		prioritized within a program to ensure that the
4		Companies are maximizing SAIFI benefits at the
5		lowest cost possible (i.e., minimizing scope to
6		meet the stated objective within the program).
7		This approach allows the Companies to address
8		the maximum number of system needs, across
9		numerous facilities, to improve system SAIFI
10		statistics more effectively.
11	Q.	Would the Panel also provide an example of how
12		the planning process is applied to the
13		development of another type of electric capital
14		project?
15	Α.	Yes. Another good example is the typical
16		planning process using a generic transmission
17		line project that was initiated by an analytical
18		planning study. In this example, a targeted
19		compliance or area study was conducted which
20		resulted in the identification of a thermal need
21		on a transmission line facility which is
22		considered as the "origination" ("IP1") stage to
23		authorize provisional inclusion into the capital
24		investment plan. Subsequent study work is then

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1		conducted to identify any additional needs such
2		as terminal limitations and/or existing
3		structural limitations on the transmission line
4		under study. Following the completion of a
5		comprehensive needs assessment, solution
6		alternatives are developed and evaluated against
7		numerous factors such as cost, time of
8		execution, construction sequencing
9		considerations, and system performance.
10	Q.	What follows next?
11	Α.	The alternatives' assessment is then used to
12		make an informed decision on the selected
13		alternative which is used to obtain technical
14		approval (i.e., "Technical" or "IP2" stage which
15		serves to memorialize technical agreement and
16		approval among electric network area
17		stakeholders) and later prioritized within the
18		larger capital investment portfolio. Figure 6,
19		set forth in Exhibit (ECE-02), provides a
20		high-level illustration of a project's typical
21		evolution from the origination through execution
22		phases.

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1	Q.	When and how do the Companies complete their
2		technical review process for newly established
3		electric capital investments?
4	Α.	On a monthly basis, a New York System Review
5		Group ("NYSRG") meeting is held which consists
6		of numerous stakeholders from System Planning,
7		Investment Planning, System Operations,
8		Protection and Control, Projects, and other
9		relevant areas. The primary purpose of these
10		monthly NYSRG meetings is to ensure that all
11		electric projects and programs are appropriately
12		vetted, the full suite of needs have been
13		identified, alternatives have been developed and
14		evaluated, Non-Wires Alternatives ("NWAs") were
15		considered, and the analyses are appropriately
16		documented in a consistent fashion. Projects
17		that receive origination (i.e., IP1) or
18		technical approval (i.e., IP2), at the NYSRG,
19		are then incorporated within the larger electric
20		capital portfolio and prioritized among the
21		overall portfolio in accordance with the
22		Companies' Investment Planning Prioritization
23		Methodology, as referenced in Section IV.

1	Q.	In what manner do the Companies evaluate
2		projects to determine NWA eligibility for those
3		projects being submitted for technical approval?
4	Α.	All newly established projects, seeking NYSRG
5		technical (IP2) approval, must submit an NWA
6		screening form. This form evaluates the needs
7		driving the project and the specific timing
8		related to anticipated capacity limitations
9		(i.e., time of need), if applicable. For
10		projects initiated solely due to capacity needs,
11		where the time of need is 36 months or more in
12		the future, the Companies would require an NWA
13		Request for Proposal ("RFP") to solicit cost-
14		effective solution(s) to avoid or defer the
15		traditional "wires" solution. If the identified
16		NWA solution is deemed cost-effective, based on
17		the Societal Cost Test ("SCT"), the NWA project
18		would be considered as the preferred solution
19		and proceed to implementation. If unsuccessful,
20		the traditional wires solution would be
21		submitted for full IP2 technical approval.
22		Please note that NWA screening forms are not
23		required for IP1 Project Origination since the
24		full project scope of work remains pending at

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1 this stage gate and is subject to a more 2 comprehensive needs and solutions assessment 3 (i.e., IP2 analyses). In what way do the Companies screen for the Q. 5 cost-effectiveness of NWA Projects? 6 Α. The Companies currently utilize the NYSEG/RG&E 7 Benefit Cost Analysis ("BCA") Handbook Version 4.0, which was filed as part of the 2023 8 9 Distributed System Implementation Plan ("DSIP"). 10 The BCA is used for all NWA projects to compare the present value of the net costs and benefits 11 12 of an NWA project versus the present value of 13 the net costs and benefits of a traditional 14 infrastructure project. The handbook outlines three relevant cost-effectiveness tests: the 15 SCT, the Utility Cost Test ("UCT"), and the Rate 16 Impact Measure ("RIM"). The SCT is the primary 17 18 test, as it evaluates the overall impact on 19 society. If a project passes the SCT with a BCA 20 over one, the project will move forward. 21 UCT and RIM are used to assess the preliminary 22 impact on utility costs and ratepayer bills. If 23 an NWA project passes the SCT but does not 24 satisfy the UCT and RIM test the project would

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- 2 impact is defined as unacceptable as defined by
- 3 the BCA Order in Case 14-M-0101.
- 4 Q. Have the Companies identified NWA opportunities
- 5 resulting from this NWA screening process step?
- 6 A. Since the establishment of the NYSRG (2020), the
- 7 Companies have only identified one new project
- 8 that meets the screening criteria.
- 9 Q. What are the key reasons behind the limited
- 10 number of NWAs being identified as part of the
- 11 monthly NYSRG screening process?
- 12 A. Due to the current condition of the NYSEG and
- 13 RG&E system assets, the Companies have observed
- 14 few opportunities where proposed upgrades are
- 15 limited solely to capacity (load relief or
- 16 reliability) needs that are at least 36 months
- in the future and do not require additional
- 18 upgrades, such as addressing asset condition
- 19 needs within the facility under study.
- 20 Q. Have the Companies taken steps to accelerate the
- identification of potential NWA opportunities?
- 22 A. Yes. In response to the observed trend of
- limited NWA opportunities, the NWA Team
- 24 conducted a proactive 2023 screening assessment.

1		This assessment targeted facilities expected to
2		have a capacity need at least 36 months in the
3		future and in adequate condition, requiring no
4		additional upgrades. The results of this
5		assessment will be used to inform subsequent
6		planning activities, enabling the advancement of
7		future NWA opportunities. This initiative,
8		combined with the existing NYSRG screening
9		requirement, will better position the Companies
10		to identify and advance NWA project
11		opportunities moving forward.
12	Q.	Did the proactive screening process result in
13		the Companies' identification of any NWA
14		opportunities?
15	Α.	Yes. The Companies plan to pursue an NWA
16		solution to complement the Ferndale Substation
17		Expansion Project being pursued in NYSEG's
18		Liberty Division. This initiative is
19		distinctive due to its integration of both an
20		NWA solution and a traditional wires approach.
21		The NWA component aims to reduce peak load at
22		NYSEG's Hilldale and Swan Lake Substations
23		within the Liberty Division, while the
24		traditional solution addresses urgent

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transmission, substation, and distribution 1 2 capacity constraints in the Liberty Area. Additionally, this project offers long-term 3 benefits to disadvantaged communities. Additional information on this project can be found in Exhibit (ECE-04) and Exhibit 6 7 (ECE-05). Is the Panel proposing any additional NWA 8 Q. 9 projects? 10 In 2027, the Companies plan to restart the Java Microgrid Project, located in Wyoming County 11 (NYSEG Lancaster Division). This project will 12 13 address an identified reliability need resulting 14 from an (N-1) substation transformer contingency loss through the installation of a Microgrid 15 16 utilizing a Battery Energy Storage System ("BESS"). This investment is an innovative 17 solution with planned ownership by NYSEG to gain 18 19 integration and operational experience with 20 these types of technologies. Additional 21 information on this project can be found in Exhibit (ECE-04). In addition to the Java 22 23 Microgrid Project, the Companies' also plan to

release an RFP for Holland Substation located in

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1		NYSEG's Lancaster Division. The Companies
2		originally proposed this project as a
3		Distribution Load Relief project opportunity,
4		but based on NWA screening, it was deemed
5		eligible for NWA consideration. If successful,
6		the proposed NWA project would defer the need
7		for a substation upgrade. Procuring an NWA
8		solution will help to improve reliability,
9		extend equipment life, improve efficiency, and
10		maintain better power quality. Additional
11		information on this project can be found in
12		Exhibit (ECE-04).
13		V. PROJECT & PROGRAM CATEGORIZATION
14	Q.	What principal categories were used for each of
15		the projects and programs listed within the
16		Panel's testimony and associated exhibits?
17	Α.	As noted earlier in our testimony, we have
18		presented investment projects and programs
19		categorized and grouped at a macro level (i.e.,
20		Base, CLCPA, and Transformational). However,
21		the Companies also continue to utilize various
22		categories that are more granular in nature such
23		as Asset Condition, Reliability, Resiliency,
24		Compliance (electric only), Electric Clean

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1		Energy, Customer Focus, Modernization, and
2		Innovation, as described later in our testimony.
3	Q.	Are each of the macro level groupings (Base,
4		PNY, and Transformational) limited to a certain
5		number of specific project types or
6		categorizations?
7	Α.	No. The macro level groupings are not tied to
8		any single project category or type. For
9		example, a project classified under the
10		Transformational grouping could include projects
11		which are categorized, at the granular level, as
12		reliability, resiliency, or any other defined
13		category. The primary factor for determining a
14		project's macro level grouping designation
15		involves a qualitative assessment of investments
16		and their respective time-of-need. For example,
17		the Comprehensive Area Studies Program,
18		categorized under the Transformational grouping,
19		is designed to address immediate system needs
20		and those expected to occur later in the
21		planning horizon (2034 and beyond). While many
22		of the needs identified in this program are
23		considered near-term, a significant portion of
24		needs and related investments are informed by

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	1 the	Companies'	latest	load	forecast	data,	based
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- 2 on New York Independent System Operator
- 3 ("NYISO") zonal projections. While these
- 4 investments are critical for future grid
- 5 expansion and for our customers overall, it is
- 6 difficult to prioritize these over competing and
- 7 immediate system needs that often affect
- 8 customers already connected to the grid.
- 9 Q. Before the Panel explains the categories that
- 10 are applied across the portfolio of projects and
- programs, are there any points you would like to
- 12 make?
- 13 A. Yes, we would note that these categories are not
- 14 listed or identified in any order of priority.
- Moreover, while a project could have aspects of
- one-or-more categories, a project has been
- assigned to one and only one project specific
- 18 category that reflects the most predominant
- 19 underlying system need being addressed.
- 20 Q. Please continue your description of the specific
- 21 project level categories.
- 22 A. The categories can be defined and described as
- 23 follows:

1	<u>Asset Condition</u> - This category includes those
2	projects and programs that are needed to address
3	assets deemed to be beyond their useful
4	operating life expectancy. These projects and
5	programs are identified based on various
6	Planning studies, ongoing Maintenance programs,
7	and immediate needs identified by System
8	Operations. Addressing asset condition needs
9	will allow the Companies to proactively mitigate
10	the risk of customer outage exposure prior to an
11	equipment or facility failure, thus avoiding
12	future SAIFI impacts to our customers
13	Reliability - This category includes those
14	projects and programs that are needed to address
15	immediate and long-term system needs such as
16	thermal overloads, and voltage violations. In
17	addition, this category of projects includes
18	investments that are targeted to address system
19	facilities with a history of repeat SAIFI
20	impacts and single element loss-of-load
21	violations. It is important to note that the
22	Companies have historically categorized thermal,
23	voltage, and SAIFI improvement-based projects
24	under the Reliability category. In recent

1	years, the term "Capacity" has been used to
2	describe projects and programs aimed at
3	addressing thermal and voltage needs. To
4	maintain consistency with past practices, and
5	avoid disrupting historical trending analyses,
6	the Companies have decided not to create a new
7	stand alone "Capacity" category.
8	Resiliency - This category encompasses projects
9	and programs aimed at reducing restoration costs
10	and outage durations, while enhancing
11	reliability after unplanned transmission and
12	distribution contingencies. These unplanned
13	transmission and distribution events are often
14	triggered by severe weather events, which are
15	expected to intensify due to the change in
16	climate as concluded in the Companies' most
17	recent Climate Change Resiliency Plan ("CCRP").
18	These initiatives improve resilience through
19	various methods, such as hardening or relocating
20	assets, and boosting system capability and
21	flexibility. This includes enabling automatic
22	or remote-controlled system reconfiguration to
23	quickly restore power and minimize customer
24	impact following a contingency event.

1	Compliance (Electric Only) - This category
2	includes those projects and programs that are
3	needed to address compliance
4	requirements/criteria (e.g., NERC Requirements),
5	mandates, orders, or other regulatory or
6	governmental direction.
7	Electric Clean Energy - This category includes
8	those projects and programs that are needed to
9	enhance system capabilities and accommodate an
10	increased level of renewable resource
11	penetration and support proposed New York State
12	and local municipality grid modification
13	initiatives (e.g., "electrification"). This
14	category includes the suite of New York CLCPA
15	Transmission Projects (Phase I and Phase II)
16	that were recently developed in support of the
17	CLCPA and filed in two separate petitions in
18	Case 20-E-0197. In addition to the CLCPA
19	projects, potential NWA projects also play a
20	role within this category.
21	<u>Customer Focus</u> - This category includes those
22	projects and programs that are needed to meet
23	specific needs of the customers. For example,
24	it includes initiatives such as new connections,

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1		state and municipal projects, and customer
2		lighting.
3		Modernization - This category includes those
4		projects and programs that are needed to enhance
5		the Companies' ability to operate the system in
6		a more effective and efficient manner. For
7		example, it includes projects and programs
8		designed to address outdated business systems or
9		metering infrastructure.
10		<u>Innovation</u> - This category includes projects
11		that introduce a new or significantly improved
12		products or process, new marketing methods, or
13		new organizational methods in support of
14		business practices, workplace organization, or
15		external relations.
16		VI. ELECTRIC CAPITAL INVESTMNET STRATEGY
17	Q.	How are the Companies' annual study plans
18		derived and what factors are considered to
19		inform their prioritization / development?
20	Α.	On an annual basis, System Planning, Electric
21		Operations, and other electric organizations
22		determine where best to focus their engineering
23		resources to advance study work (i.e., Project
24		Origination). This focus allows the engineering

1		teams to perform needs and solutions studies
2		necessary to develop project opportunities to
3		mitigate system needs that are determined to be
4		most impactful to system performance and to
5		customers in general. Given the current state
6		of the Companies' grid infrastructure and future
7		load growth projections, which are showing an
8		upward trend, it is necessary that study plans
9		consciously consider the balance between
10		immediate system needs and mid- to long-term
11		needs.
12	Q.	What are the differences between an immediate
13		and mid- to long-term system need?
14	Α.	The difference is best illustrated utilizing the
15		following example. An immediate system need may
16		be a distribution circuit that has a high
17		customer count, no available circuit ties, and a
18		history of outages caused by numerous initiating
19		factors such as equipment failures and tree
20		contacts. Conversely, a long-term need may be
21		in the form of a 2035 capacity need (thermal or
22		voltage violation) identified by performing
23		routine area studies which leverage the most
24		current NYISO load forecast data.

1	Q.	Please explain how the Companies' study plans
2		are organized and how work is appropriately
3		distributed to ensure that the proper balance
4		between the evaluation of immediate and long-
5		term needs is met.
6	Α.	Generally, immediate needs are grouped within
7		specific annual program buckets and prioritized
8		in accordance with the program's stated
9		objective and approach. For example, the
10		Distribution Line Deficiency ("DLD") program is
11		used to remediate distribution deficiencies
12		(e.g., leaning poles, cracked cross arms, etc.)
13		and to proactively replace distribution poles,
14		cross-arms, and other ancillary equipment to
15		avoid outage risks caused by distribution
16		equipment failures. It should be noted that the
17		number of known deficiencies across the
18		Companies' territory is quite significant, and
19		therefore, annual prioritization within this
20		program is performed to ensure that the
21		Companies are targeting the most critical
22		facilities. Long-term needs assessments can be
23		informed by any number of factors such as
24		mandatory compliance obligations (e.g., NERC TPL

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1 Requirements), area study boundaries (e.g., 2 NYSEG/RG&E division boundaries), public policy mandates (e.g., CLCPA), and other related 3 initiatives. What happens after completion of the long-term 5 Ο. 6 area assessments? 7 Upon completion of these long-term area Α. assessments, specific projects and project 8 9 groupings are identified and broken out as 10 individual projects since they are typically higher-cost projects (i.e., ≥ \$1.0 million), 11 12 span multiple years, and require a dedicated 13 project team to execute on the proposed scope of 14 work. While long-term needs are often initially included in programs as order-of-magnitude 15 16 placeholders, once individual projects receive 17 technical (IP2) approval, they are subsequently listed as separate line items within the capital 18 19 plan. These prioritized work plans and 20 resulting outputs are used as conduits for inclusion into the capital investment plan and 21 22 serve as new project opportunities to mitigate 23 known and anticipated (future) system needs.

1	Q.	Can you please further expand on the Companies'
2		overall electric capital investment strategy
3		that the Panel referenced earlier in its
4		Overview of Testimony discussion?
5	Α.	Yes. For the electric teams, the annual study
6		work plans aim to prioritize facilities and/or
7		areas with the most critical and largest number
8		of system needs. The overall electric capital
9		investment strategy must address the full
10		spectrum of the Companies' respective needs
11		while balancing other non-electric priorities.
12		This capital investment strategy is designed to
13		allocate capital resources using a consistent
14		and objective methodology. After reviewing all
15		system needs and associated capital investment
16		requests (e.g., Electric, Gas, Common),
17		Investment Planning applies a prioritization
18		methodology across the portfolio. This
19		overarching evaluation determines the best
20		allocation of resources to meet customer needs
21		and other strategic initiatives within the
22		Companies. The Investment Planning and Common
23		Capital Panel Testimony describes this
24		prioritization methodology in greater detail.

1	Q.	What additional information is evaluated when
2		considering the advancement of projects or
3		programs to mitigate immediate system needs?
4	Α.	When evaluating annual study plan development,
5		which is used to yield project opportunities,
6		the Companies closely examine areas or
7		individual facilities that, if upgraded, would
8		provide benefits such as overall system SAIFI
9		improvements and/or alleviate known and
10		measurable capacity constraints. For example,
11		over the past two years (2023 - 2024), NYSEG has
12		observed that its SAIFI indices have somewhat
13		stabilized at 1.29 in 2023 and 1.30 in 2024. As
14		discussed in the testimony of the Electric
15		Operations Panel, these SAIFI statistics are
16		notwithstanding continued impacts from non-
17		utility-controlled events, such as third-party
18		make ready work, customer felled trees and tree
19		deaths caused by the invasive Emerald Ash Borer.
20		This improvement is partly due to targeted
21		investments in facilities that experience
22		repeated outages. These results are a slight
23		decrease from the previous three years (2020 -
24		2022), where SAIFI indices were 1.38, 1.46, and

1		1.45, respectively. Although this five-year
2		trend is promising, increased levels of
3		investment, included herein, that target SAIFI
4		improvements are critical to continuing NYSEG's
5		improved SAIFI trajectory. Accordingly, Wood
6		Pole Inspect and Treat ("WPIT"), Distribution
7		Line Deficiencies ("DLD"), Resiliency,
8		Distribution Automation, and other annual
9		programs are designed to evaluate system
10		deficiencies that are deemed most impactful to
11		system SAIFI performance and to develop cost-
12		effective plans to address these needs. A
13		similar type of annual evaluation is done to
14		target study areas or individual facilities
15		where capacity constraints exist or are
16		determined to be imminent.
17	Q.	What are the capital investment strategies and
18		goals for the generating assets that are owned
19		and operated by NYSEG and RG&E?
20	Α.	The capital investment strategy and goal for
21		these assets is to prioritize and efficiently
22		execute projects that continue to improve public
23		safety and the safety of personnel, protect the
24		environment, and extend the life of the asset

1 while continuing to meet regulatory requirements 2 and commitments. By reinvesting and extending 3 the life of the generating assets and associated 4 structures, NYSEG and RG&E will continue to improve electric generation available capacity 5 6 and operational reliability in support of New 7 York State's clean energy goals and initiatives. 8 VII. MAJOR AREAS OF ELECTRIC CAPITAL INVESTMENTS Would the Panel briefly describe the Companies' 9 Q. 10 electric capital investment requirements for each of the categories shown in Table 1 and 11 Table 2 within Exhibit (ECE-02)? 12 13 The following sub-sections of the Panel's Α. 14 testimony discuss key projects and programs included within each category as identified 15 16 within Exhibit (ECE-02) Table 1 and Table 2. 17 Please provide a high-high level summary of the Q. 18 incremental resources necessary to execute on 19 the Panel's proposed capital plan and to support 20 projects and programs already in progress during 21 the Companies' existing rate plan term. To continue advancing projects in the queue, 22 23 develop annual work plans to address immediate 24 reliability, resiliency, and capacity needs,

1	create executable plans for future system
2	requirements, support the advancement of clean
3	energy projects, and maintain safe and adequate
4	service for existing customers, the Companies'
5	are seeking to internalize 36 positions within
6	the Integrated System Planning Organization with
7	the expectation that these positions would be
8	filled by end-of-year 2025. The Companies are
9	not proposing a revenue requirement change from
10	the historic test year for this effort at this
11	time. Open roles, associated with these
12	proposed resource additions were removed from
13	the revenue requirement calculation to avoid
14	duplication. Other positions to support
15	planning are considered incremental to the
16	historic test year. Specifically, the Companies
17	are proposing twelve incremental Full Time
18	Equivalents ("FTEs") within the Integrated
19	System Planning Organization to support ongoing
20	CLCPA Projects, Coordinated Grid Planning
21	Process ("CGPP") studies, and additional
22	planning workload expected to occur during the
23	Rate Year and over the proposed five-year rate
24	period. Details associated with the twelve

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1 inc:	remental po	sitions	are	set	forth	in	Exhibit
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 $2 mtext{(ECE-06)}.$ 

#### 3 A. ASSET CONDITION

- 4 Q. Turning back to the major areas of electric
- 5 capital investment, what are the projected
- 6 capital investments in the Electric Asset
- 7 Condition category for the Companies?
- 8 A. The capital forecast for the Electric Asset
- 9 Condition category from 2025-2031 for NYSEG and
- 10 RG&E can be found in Table 5 and Table 6
- 11 respectively set forth in Exhibit (ECE-02).
- 12 Q. Please provide a summary of key projects and
- programs that are attributable to the items
- 14 listed in Table 5 and Table 6 related to the
- 15 Electric Asset Condition category.
- 16 A. While we will provide brief descriptions of key
- 17 programs, selected for their significant
- contribution to the proposed Asset Condition
- investment, we note that individual projects
- 20 have been excluded from this section as they are
- 21 uniquely defined and do not align with high-
- level program objectives. As stated previously
- in our testimony (in Section III), the Panel has
- included whitepapers for the entire range of

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1	Asset Condition Investments. For more details,
2	please refer to Exhibit (ECE-04). Turning
3	back to the specific programs by title:
4	
5	Transmission Line Deficiency ("TLD") Program
6	Each year, the Companies conduct several types
7	of transmission line inspections (e.g.,
8	crossarm, aerial, infrared, ground line, and
9	visual inspections) to identify transmission
10	line asset condition needs at NYSEG and RG&E.
11	These needs are prioritized based on factors
12	such as TLD severity, the number of TLDs per
13	line segment, voltage level, and connected
14	customers. Once prioritized, individual project
15	scopes are developed to address these
16	deficiencies. Generally, this program employs
17	an in-kind replacement strategy, adhering to the
18	latest National Electric Safety Code ("NESC")
19	and NYSEG/RG&E structural requirements, focusing
20	on needs identified through previous inspection
21	surveys. In some cases, additional scoping is
22	necessary to address secondary needs like
23	conductor sag and span length violations.

1	Distribution Line Deficiency ("DLD") Program
2	The DLD Program consolidates distribution
3	notifications generated from several pole
4	inspection programs that the Companies routinely
5	perform (i.e., distribution infrared inspections
6	and distribution line visual inspections).
7	These notifications identify needs such as
8	cross-arm, insulator, guy wire, and pole
9	deficiencies. These identified needs are then
10	grouped and prioritized for action based on
11	their severity level (i.e., Level I, Level II,
12	and Level III), number of DLDs per segment, and
13	connected customers. It is important to note
14	that Level I DLD needs are immediately
15	prioritized and addressed at the division level.
16	
17	Wood Pole Inspect and Treat ("WPIT") Program
18	Each year, the Companies conduct a Wood Pole
19	Inspect & Treat Program to address the growing
20	number of asset condition needs identified among
21	NYSEG's and RGE's fleet of wooden-type
22	distribution and transmission poles as part of
23	routine field inspections. Field inspections
24	are performed across all NYSEG and RG&E

1	divisions, on a yearly basis, to identify wood
2	poles that are deemed in need of replacement or
3	repairs. Inspections include ground line
4	evaluations to identify instances of wood decay,
5	excavation, and boring techniques to identify
6	decay at-or-below ground line, and "Sounding"
7	the pole, which includes striking the pole with
8	a mallet and listening for signs of a hollow
9	structure. This program employs an in-kind
10	replacement strategy, adhering to the latest
11	National Electric Safety Code ("NESC") and
12	NYSEG/RG&E structural requirements.
13	Notifications are prioritized based on
14	reliability impact for NYSEG and RG&E, by the
15	number of customers downstream of the specific
16	location, the historical customer impact, the
17	device type, and the historical incident count.
18	
19	Transmission and Substation Asset Condition
20	<u>Program</u>
21	The main objective of the T&S Asset Condition
22	Replacement Program is to conduct system-wide
23	T&S facility surveys, to determine the overall
24	health of the NYSEG and RG&E systems and develop

1		a long-term mitigation strategy (projects) to
2		enhance the condition of these assets. The
3		Companies' five-year plan is to comprehensively
4		assess underground cable facilities at RG&E and
5		NYSEG, prioritize needs based on risk of failure
6		and impacts to customers, and develop projects
7		to replace underground cable that is deemed
8		beyond its useful operating life with a high
9		risk of failure and customer exposure. In
10		addition to replacement, the plan includes
11		rejuvenation of cables that are still within
12		their useful life but show signs of aging. To
13		conduct these specialized cable assessment
14		studies, the Companies' investment plan includes
15		small expenditures in 2026 and larger
16		investments in 2027 and beyond to be used for
17		specific underground replacement and
18		rejuvenation projects as identified.
19	Q.	Would the Panel elaborate on the significance of
20		ongoing investments in these specific asset
21		condition programs, as well as the overall asset
22		condition portfolio?
23	Α.	Yes. Continuing to invest in asset condition
24		programs and projects is critically important

1	because they are designed to proactively replace
2	deteriorated assets before equipment failures
3	occur, thereby avoiding future outage risks - a
4	reality that has unfortunately affected many of
5	our customers in recent years. The ongoing
6	evaluation and development of mitigation
7	strategies around deteriorating infrastructure
8	is not a temporary effort and is considered
9	fundamental to the Companies' mission. All
LO	equipment ages and eventually reaches the end of
L1	its service life. Addressing this fact is not a
L2	discretionary issue; it is an inherent
L3	obligation, particularly relating to the
L 4	underlying infrastructure, which is considered
L5	as the backbone within the power delivery
L 6	business. These investments are multi-faceted,
L7	as renewing deteriorated assets to current
L8	standards not only strengthens the system
L 9	(resiliency) but also helps prevent future
20	equipment failures (reliability). Over time,
21	this will lead to improvements in system
22	reliability indices which will have direct
2.3	benefits for NYSEG and RG&E customers.

1 Q. Are there any other projects or programs that

2		the Panel would like to highlight that are
3		important to the overall Asset Condition
4		category of investments?
5	Α.	Yes. Over the past several years, the Companies
6		observed a trend of power transformer failures
7		within the NYSEG and RG&E service areas. As a
8		result of these observations, the Integrated
9		System Planning Team analyzed the existing
10		population of power transformers and developed a
11		Spare Transformers Program. This program
12		utilizes a newly developed process that
13		objectively predicts the prioritization of spare
14		transformer purchases based mainly on number of
15		units, within the population, and health and
16		risk statistics leveraging established Asset
17		Management algorithms. This program aims to
18		better prepare the Companies to address long-
19		term customer outage risks associated with
20		substation-connected power transformers. Since
21		2019, the Companies have experienced ten
22		substation power transformer failures, with
23		seven occurring on or after 2022. For more
24		details associated with this program, please

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- 1 refer to Exhibit \_\_ (ECE-04) and Exhibit \_\_
- $2 mtext{(ECE-07)}.$

#### 3 B. RELIABILITY

- 4 Q. What are the Companies' projected capital
- 5 investments in the Electric Reliability
- 6 category?
- 7 A. The capital forecast for the Electric
- 8 Reliability category from 2025-2031 for NYSEG
- 9 and RG&E can be found in Table 7 and Table 8,
- 10 respectively set forth in Exhibit (ECE-02).
- 11 Q. Please provide a summary of key projects and
- 12 programs that are attributable to the items
- listed in Table 7 and Table 8 related to the
- 14 Electric Reliability category.
- 15 A. Below are descriptions of key programs, selected
- 16 for their significant contribution to the
- 17 proposed Reliability investment. Individual
- 18 projects have been excluded from this section as
- they are uniquely defined and do not align with
- 20 high-level program objectives. As noted earlier
- in our testimony, the Panel has included
- 22 whitepapers for the entire range of Reliability
- 23 Investments. For more details, please refer to
- 24 Exhibit (ECE-04).

1	Distribution Load Relief Program
2	The Distribution Load Relief Program comprises
3	sub-projects aimed at addressing immediate or
4	imminent capacity needs across the NYSEG and
5	RG&E fleet of substations and selected
6	distribution circuits. Each year, the
7	Integrated System Planning Team conducts a
8	system-wide study to prioritize facilities most
9	affected by distribution-level capacity
10	constraints. These prioritized facilities are
11	further evaluated to identify additional
12	capacity needs, including those on sub-
13	transmission or transmission facilities.
14	Solution alternatives are developed and compared
15	based on various factors, such as cost,
16	execution duration, and post-project headroom
17	(MW) availability. After an internal technical
18	review and approval process, selected project
19	alternatives are separated from the program
20	level and executed as individual sub-projects.
21	The program's objective is to mitigate known
22	capacity needs in the most effective and timely
23	manner while avoiding additional scope that
24	could increase project costs and duration. The

1	Companies rely on this program as a short-term
2	strategy to address capacity needs, ensuring
3	system operators can manage the system under
4	"all-lines-in" N-O conditions. Since its
5	establishment in 2023, the Companies have
6	completed five load relief projects, currently
7	have 13 in execution, and plan to invest in 30-
8	40 projects over the next five years. Of the 13
9	in execution, nine projects are expected to be
10	in-service in 2025 and the remaining four
11	projects have in-service dates ranging from
12	2026-2030. Exhibit (ECE-08) includes more
13	information associated with this program.
14	
15	Customer Cost Allocation Program
16	The CCAP is a newly established initiative aimed
17	at supporting emergent system capacity needs
18	initiated by customers wishing to connect to the
19	NYSEG and RG&E systems. As noted by the Panel
20	earlier in its testimony, NYSEG and RG&E have
21	seen a significant increase in load
22	interconnection requests, many of which require
23	substantial T&S upgrades that are more costly
24	than distribution-only upgrades. The Companies

1	have observed that, upon completing these load
2	interconnection studies and reviewing tariff
3	requirements, interconnecting customers are
4	often responsible for some or all the upgrade
5	costs. Without a dedicated funding source, the
6	Companies are faced with the difficult decision
7	to delay a prioritized project within the
8	portfolio or propose that the customer fund
9	these upgrades. Both scenarios are undesirable,
10	as they disrupt the capital plan and may lead to
11	prospective customers canceling their projects
12	and/or relocating elsewhere in or outside of New
13	York. The CCAP will enable the Companies to
14	fund their portion of emergent capacity-driven
15	projects, allowing new customers to connect to
16	the NYSEG and RG&E grid. The portion of the
17	Companies' investment will be objectively
18	determined based on the unique characteristics
19	of the project and in consideration of the NYSEG
20	and RGE tariff procedures. In some cases, this
21	will bring economic opportunities, housing, and
22	access to electrification infrastructure within
23	the NYSEG and RG&E territories. Exhibit

1	(ECE-09) provides more information associated
2	with this newly established program.
3	
4	Comprehensive Area Studies Program
5	The CAS Program consists of sub-divisional area
6	solutions aimed at addressing all system needs
7	within the studied area. Areas within the
8	Companies' 17 divisions are prioritized based on
9	the sum of current and future (10- and 20-year
10	forecasted) capacity needs at the distribution-
11	level, as well as other factors like known T&S
12	asset condition needs and distribution line
13	deficiencies. While areas may include known and
14	near-term system needs, the primary objective of
15	this program is to transform the system and
16	position the Companies to develop a 21st-century
17	grid model that improves resiliency,
18	reliability, and capacity. Ultimately, the
19	grouping of area projects is designed to
20	accommodate NYISO load growth projections
21	through 2040, with winter demand expected to
22	double within 20 years due to electrification
23	and ongoing load growth. The Companies will
24	make significant investments in 11 sub-areas

1	(four RG&E and seven NYSEG) and will continue to
2	conduct studies across their territories to
3	support future customer demands and CLCPA goals.
4	Notably, in 2023, NYSEG developed its first CAS-
5	type area project, the Lancaster 21st Century
6	Project. This project, comprising 18 different
7	sub-project components, aligns with the
8	Companies' overall objectives and will serve as
9	a model for future transformational studies.
10	Exhibit (ECE-10) provides more information
11	associated with sub-area projects being proposed
12	as part of this program.
13	
14	Transmission Reinforcement Program
15	The Transmission Reinforcement Program aims to
16	address system reliability needs identified
17	through periodic NYSEG and RG&E transmission
18	reliability assessments, known as Local Area
19	Studies ("LAS"). These assessments, last
20	completed in 2023, identify existing and future
21	thermal, voltage, and loss-of-load needs across
22	the Companies' territories and propose pre-
23	conceptual (electrical-only) solution
24	alternatives to mitigate these needs A key

1	distinction between the CAS Program and the
2	Transmission Reinforcement Program is in study-
3	area prioritization. Transmission area
4	constraints do not always align with the
5	Companies' distribution limitations. In cases
6	of overlap, the Integrated System Planning
7	Organization develops comprehensive solutions to
8	address all transmission, substation, and
9	distribution needs. However, the Transmission
10	Reinforcement Program focuses on advancing
11	project opportunities that impact transmission-
12	only elements which are capacity constrained or
13	pose a single element contingency loss-of-load
14	risk to customers. Starting in 2028, the
15	Companies will make significant investments in
16	the transmission system under this program. The
17	prioritization strategy focuses first on loss-
18	of-load risks, which support short-term SAIFI
19	improvements and can be executed more quickly
20	and at lower costs compared to larger system
21	capacity upgrades. The next priority will be
22	projects designed to mitigate thermal and
23	voltage (a.k.a., capacity) needs, including line

1	reconductoring, line rebuilds, substation
2	upgrades, and capacitor bank installations.
3	
4	Circuit Breaker Replacement Program
5	The Circuit Breaker Replacement Program is an
6	annual initiative focused on replacing
7	transmission and distribution circuit breakers
8	that have exceeded their useful operating life.
9	As detailed earlier in our testimony (Section
10	VI), the Companies annually select specific
11	substation locations where breakers are deemed
12	most impactful to customer outage exposure or
13	future SAIFI risks. Although the Asset
14	Management circuit breaker health and risk
15	algorithm informs scoring based on field data
16	inputs, the prioritized list of sub-project
17	opportunities considers substation topology,
18	networked versus radial facilities, downstream
19	customer count, and construction challenges
20	within the existing substation yard. For
21	example, if a Risk Index 5 (RI-5) breaker is
22	identified at a 115 kV breaker-and-a-half
23	substation and the connected line is networked
24	with no direct customer exposure, the Integrated

1	System Planning Team would not consider this an
2	immediate priority. Instead, prioritization
3	would focus on RI-4 or RI-5 breakers connected
4	radially on distribution circuits or sub-
5	transmission circuits connecting to neighboring
6	substations without automatic isolation
7	capabilities, which would have direct SAIFI
8	impacts if the breaker under study were to fail.
9	Most current circuit breaker data for the
10	Companies indicates that 37% of NYSEG breakers
11	and 29% of RG&E breakers are in poor/very poor
12	condition. Although this program could fall
13	under the asset condition category, the
14	Companies believe the program offers significant
15	reliability benefits (i.e., SAIFI avoidance) and
16	therefore it belongs within the reliability
17	category. Moreover, changing the category now
18	may disrupt historical trend analyses across
19	project categories.
20 Q.	Would the Panel like to provide any additional
21	details to reinforce the importance of the
22	proposed investments within the Reliability

1		category and the significance of advancing these
2		types of projects and programs?
3	Α.	Yes. Exhibit (ECE-02) includes three figures
4		(Figures 7-9) that illustrate the current
5		transmission and distribution capacity
6		constraints across the Companies' territories
7		and the Companies' strategy to address near-
8		term, emergent, and long-term capacity
9		challenges. Figure 7 is a pie chart showing all
10		NYSEG and RG&E transformers identified as
11		constrained or unconstrained. These constraints
12		can occur at the transmission level, substation
13		level, distribution level, or any combination of
14		these. The data indicate that 46% of NYSEG's
15		substation transformers are constrained, with
16		35% due to transmission constraints, 7% due to
17		distribution constraints, and 4% due to both
18		transmission and distribution constraints. For
19		RG&E, 45% of substation transformers are
20		constrained, with 37% due to transmission
21		constraints, 6% due to distribution constraints,
22		and 2% due to both transmission and distribution
23		constraints. Figure 8 is a pie chart showing
24		all NYSEG and RG&E distribution circuits

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1 identified as constrained or unconstrained. 2 data indicate that 2% of NYSEG's distribution circuits are constrained, while 6% of RG&E's 3 distribution circuits are constrained. The data suggests that most constraints are upstream from 6 the distribution system and require transmission 7 and substation upgrades to mitigate these needs. It should be noted that these existing capacity 8 9 constraints are expected to worsen over time as New York State and its residents continue their 10 11 efforts to further electrify. Figure 9 12 illustrates the Companies' strategy to mitigate capacity constraints in the near-term and long-13 14 term. High-level descriptions of programs to address these challenges are provided above, and 15 16 detailed whitepapers can be found in Exhibit 17 (ECE-04). 18 C. RESILIENCY 19 What are the projected capital investments in Q. the Electric Resiliency category for the 20 21 Companies? 22 The capital forecast for the Electric Resiliency 23 category from 2025-2031 for NYSEG and RG&E can

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1		be found in Table 9 and Table 10, respectively
2		set forth in Exhibit (ECE-02).
3	Q.	Please provide a summary of key projects and
4		programs that are attributable to the items
5		listed in Table 9 and Table 10 related to the
6		Electric Resiliency category.
7	Α.	Below are descriptions of key programs, selected
8		for their significant contribution to the
9		proposed Resiliency investment. Individual
10		projects have been excluded from this section as
11		they are uniquely defined and do not align with
12		high-level program objectives. As noted
13		previously in our testimony (Section III), the
14		Panel has included whitepapers for the entire
15		range of resiliency Investments. For more
16		details, please refer to Exhibit (ECE-04).
17		
18		Distribution Automation Program
19		The Distribution Automation Program is an annual
20		initiative designed to address distribution
21		circuits experiencing customer outages across
22		the NYSEG and RG&E service territories. Each
23		year, the Companies identify the most negatively
24		impacted distribution circuits from a SAIFI

1	perspective using three years of historical
2	SAIFI data. This process ensures that
3	investments are prioritized on circuits with
4	higher levels of criticality. Solutions
5	typically involve the deployment of reclosers
6	and SCADA switches on identified circuits, using
7	customer count criteria (i.e., 500 customer
8	pockets) as the basis to inform the design of
9	each circuit. Since its inception, this program
10	has successfully reduced customer outage
11	exposure, particularly for faults occurring
12	downstream from the substation circuit breaker.
13	
14	Resiliency Program
15	The Resiliency Program is an annual initiative
16	aimed at addressing distribution circuits with
17	the highest levels of customer outages across
18	the NYSEG and RG&E service territories,
19	identified using three years of historical SAIFI
20	data including those from storms. For those
21	circuits under study, Integrated System Planning
22	conducts a comprehensive needs and solutions
23	assessment to ensure all electrical and asset
24	condition needs are identified. This assessment

- 1 informs the development of complete solutions to
- 2 address all identified needs. Solutions may
- include upgrades to system topologies (e.g., new
- distribution tie points), hardening of pole and
- 5 wire infrastructure, and the deployment of
- 6 automation devices based on established criteria
- from the Distribution Automation Program (i.e.,
- 8 500 customer pockets). Although new projects
- 9 are identified annually, the circuit-level sub-
- 10 projects are more complex and require extensive
- 11 engineering and material procurement as compared
- 12 to the Automation Program. Consequently, it is
- 13 not uncommon for these sub-projects to span
- 14 multiple years.

#### 15 **D. COMPLIANCE**

- 16 Q. What are the projected capital investments in
- 17 the Electric Compliance category for the
- 18 Companies?
- 19 A. The capital forecast for the Electric Compliance
- 20 category from 2025-2031 for NYSEG and RG&E can
- be found in Table 11 and Table 12, respectively
- 22 set forth in Exhibit (ECE-02).
- 23 Q. Please provide a summary of key projects and
- 24 programs that are attributable to the items

Case	25-E-	; Case	25-E-	

1		listed in Table 11 and Table 12 related to the
2		Electric Compliance category.
3	Α.	Below are descriptions of key programs, selected
4		for their significant contribution to the
5		proposed Compliance investment. Individual
6		projects have been excluded from this section as
7		they are uniquely defined and do not align with
8		high-level program objectives. As noted earlier
9		in our testimony (Section III), the Panel has
10		included whitepapers for the entire range of
11		Compliance Investments. For more details,
12		please refer to Exhibit (ECE-04).
13		
14		NERC BES Program
15		The NERC BES Program aims to identify and
16		address system deficiencies on the portion of
17		the Bulk Electric System ("BES") owned by NYSEG
18		and RG&E, in line with mandatory NERC
19		reliability standards. The criteria and
20		performance requirements for the BES are
21		outlined in NERC's TPL-001 standard. Each
22		transmission owner must demonstrate through
23		planning studies that their portion of the BES
24		complies with all mandatory NERC requirements.

#### DIRECT TESTIMONY OF THE ELECTRIC CAPITAL EXPENDITURES PANEL

- 1 If unacceptable reliability performance is
- detected, a documented Corrective Action Plan or
- 3 Project must be developed to mitigate the
- 4 identified deficiencies. To achieve compliance
- 5 with NERC TPL-001 requirements, a comprehensive
- 6 planning assessment was conducted, resulting in
- 7 the development of multiple projects to address
- 8 system reliability needs.

### 9 E. ELECTRIC CLEAN ENERGY

- 10 Q. What are the projected capital investments in
- 11 the Electric Clean Energy category for the
- 12 Companies?
- 13 A. The capital forecast for the Electric Clean
- 14 Energy category from 2025-2031 for NYSEG and
- 15 RG&E can be found in Table 13 and Table 14
- 16 respectively set forth in Exhibit (ECE-02).
- 17 Q. Please provide a summary of key projects and
- programs that are attributable to the items
- 19 listed in Table 13 and Table 14 related to the
- 20 Electric Clean Energy category.
- 21 A. Below are descriptions of key programs, selected
- 22 for their significant contribution to the
- 23 proposed Electric Clean Energy investment.
- Individual projects have been excluded from this

#### DIRECT TESTIMONY OF THE ELECTRIC CAPITAL EXPENDITURES PANEL

- section as they are uniquely defined and do not
- 2 align with high-level program objectives. As
- 3 noted previously in our testimony (Section III),
- 4 the Panel has included whitepapers for the
- 5 entire range of Electric Clean Energy
- 6 Investments. For more details, please refer to
- 7 Exhibit (ECE-04).

### 8 CLCPA Phase 1

- 9 Q. What is the objective of the CLCPA Phase 1
- 10 Program?
- 11 A. The objective of the CLCPA Phase 1 Program is to
- 12 execute on BES facility upgrades to unlock
- capacity headroom which will serve to enable the
- interconnection of renewable energy resources.
- This program is composed of 15 T&S projects
- across NYSEG's service territory.

### 17 **F. CUSTOMER FOCUS**

- 18 Q. What are the projected capital investments in
- 19 the Electric Customer Focus category for the
- 20 Companies?
- 21 A. The capital forecast for the Electric Customer
- 22 Focus category from 2025-2031 for NYSEG and RG&E

- can be found in Table 15 and Table 16,
- 2 respectively set forth in Exhibit (ECE-02).
- 3 G. MODERNIZATION
- 4 Q. What are the projected capital investments in
- 5 the Electric Modernization category for the
- 6 Companies?
- 7 A. The capital forecast for the Electric
- 8 Modernization category from 2025-2031 for NYSEG
- 9 and RG&E can be found in Table 17 and Table 18,
- 10 respectively set forth in Exhibit (ECE-02).
- 11 H. INNOVATION
- 12 Q. What are the projected capital investments in
- the Electric Innovation category for the
- 14 Companies?
- 15 A. The capital forecast for the Electric Innovation
- 16 category from 2025-2031 for NYSEG and RG&E can
- be found in Table 19 and Table 20, respectively
- set forth in Exhibit (ECE-02).
- 19 VIII. GENERATION OVERVIEW AND INVESTMENT FORECAST
- 20 Q. Does NYSEG own and operate generating
- 21 facilities?
- 22 A. Yes, NYSEG currently owns and operates six
- 23 active hydroelectric generating facilities and
- four small fossil-fueled facilities with a total

1	nameplate capacity of approximately 69.5 MW
2	(61.4 MW hydro and 8.1 MW fossil). The
3	hydroelectric and fossil-fueled generating
4	facilities are in the Plattsburgh,
5	Mechanicville, and Adirondack regions. All
6	active NYSEG hydroelectric facilities are under
7	License of FERC. All active hydroelectric
8	generating facilities are operated as run-of-
9	river, which means that upstream river (water)
10	flow that enters the facility cannot be stored
11	but is used to produce energy that is available
12	at the time. NYSEG has one hydroelectric
13	facility (Keuka) that is retired from service,
14	which includes the dam. NYSEG has continued
15	responsibility to maintain the powerhouse and
16	operate and maintain the dam, which is under the
17	jurisdiction of the NYS Department of
18	Conservation. NYSEG's Rainbow Falls
19	hydroelectric facility is the only NYSEG
20	hydroelectric facility located in a designated
21	Disadvantaged Community ("DAC").

1	Q.	Please	provide	а	brief	overview	of	NYSEG's	four

- 2 small fossil-fueled generating facilities.
- 3 A. NYSEG presently has four fossil-fueled standby
- 4 diesel generators, with a total combined
- 5 capacity of 8.1 MW. The diesel generators are
- 6 located at Harris Lake, Blue Mountain and Long
- 7 Lake substations in the Adirondack region. The
- 8 diesel generators are dispatched to generate
- 9 electric energy to serve NYSEG customers as
- 10 needed upon loss of National Grid's 46-kV
- 11 transmission line, which supplies NYSEG's
- 12 service area.
- 13 Q. What is the nature of the generating facilities
- that RG&E owns and operates?
- 15 A. RG&E owns and operates three active
- 16 hydroelectric generating facilities, located in
- the city of Rochester, with a total nameplate
- capacity of 57.1 MW. All active RG&E
- 19 hydroelectric facilities are under License of
- FERC. RG&E has two hydroelectric facilities
- 21 (Station 160 & Station 170), which are in the
- 22 southern tier region and are retired from
- service. RG&E has continued responsibility to
- 24 maintain the dams, which are under jurisdiction

- of NYS Department of Conservation. RG&E's
- 2 Station 2, 5, 26 and 160 hydroelectric
- 3 facilities are located in a designated DAC.
- 4 Q. Does RG&E own any fossil-fueled generating
- 5 facilities?
- 6 A. No. RG&E does not own or operate any fossil-
- 7 fueled generating facilities.
- 8 Q. What is the forecasted capital investment in
- 9 NYSEG's and RG&E's Generation portfolio?
- 10 A. The forecasted capital investment between 2025
- and 2031 for NYSEG's and RG&E's Generation
- portfolio is provided in Table 21 and Table 22
- for NYSEG Electric and RG&E Electric,
- 14 respectively set forth in Exhibit (ECE-02).
- 15 Q. What are the key projects at NYSEG that are
- being undertaken as part of the Generation
- investment portfolio?
- 18 A. There are currently four major Generation
- 19 projects at NYSEG that make up approximately 34
- 20 percent of the proposed capital investment plans
- 21 from 2025 through 2031. The projects are NYSEG
- 22 Kent Falls Capital, Kent Falls Internal Riser
- 23 Shaft and Tank, Upper Mechanicville Intake

1	Upgrade	and	Upper	Mechanicville	Unit	1	Turbine-
2	Generato	or Ma	ajor O	verhaul.			

- Q. Please describe further the NYSEG Kent FallsCapital and Internal Riser Shaft and Tank
- 5 Projects.
- 6 The Kent Falls Capital Project involves the 7 removal of an existing section of water conveyance penstock, installation of a new 8 9 section of water conveyance penstock, and 10 associated structures, coating the penstock 11 trifurcation and relining of three individual 12 penstocks to extend the life of the facility and 13 assets. The water conveyance penstock(s)
- 14 provides river water from upstream of Kent Falls
- dam to the hydroelectric turbine-generating
- units for the generation of electricity. The
- 17 Kent Falls Internal Riser Shaft and Tank Project
- 18 involves removal of the existing surge tank and
- internal riser shaft, which connects to the
- 20 water conveyance penstock, and removes water
- 21 surge from the system during the generation of
- 22 electricity. The infrastructure identified for
- 23 replacement and upgrade in both projects are at
- end-of-life.

1	Q.	What is the nature of the NYSEG Upper
2		Mechanicville Intake Upgrade and Unit 1 Turbine-
3		Generator Major Overhaul Projects?
4	Α.	The Upper Mechanicville Intake Upgrade Project
5		involves replacement and installation of new
6		intake trash racks, which are necessary to
7		prevent river debris from entering and damaging
8		the turbine-generating equipment, along with
9		replacing the current equipment used to clean
10		and remove debris that accumulates on the (under
11		water) trash racks during generation of
12		hydroelectric energy. The Unit 1 Turbine-
13		Generator Major Overhaul Project involves the
14		disassembly, inspection, and overhaul of the
15		8.265 MW generating unit. As a requirement of
16		NYSEG's new 50-year FERC Hydropower operating
17		license, effective April 1, 2021, which includes
18		new federal and state regulatory requirements,
19		NYSEG is required to increase the protection and
20		survivability of aquatic species, specifically
21		American Eels, at the Upper Mechanicville
22		hydroelectric facility. The Unit 1 Turbine-
23		Generator Overhaul Project involves upgrading
24		and outfitting the turbine-generating unit with

1		a new fish-friendly runner at the time of unit
2		reassembly to comply with this requirement. The
3		intake trash racks, trash rack raking equipment,
4		and Unit 1 turbine-generator runner and
5		associated equipment are original to the
6		facility and were installed circa 1981 - 1983.
7		Additional details regarding these electric
8		generation projects are set forth in Exhibit
9		(ECE-04).
10	Q.	What are the key projects at RG&E that are being
11		undertaken as part of the proposed Generation
12		investment portfolio?
13	Α.	There are currently five major Generation
14		projects at RG&E that make up approximately 45%
15		of the proposed capital investment plans from
16		2025 through 2031. The projects are RG&E
17		Station 2 Modernization, Station 5 Water
18		Conveyance (Tunnel) System, Station 5 Surge Tank
19		Expansion, Station 5 Penstock Relining Upgrade,
20		and Station 5 Unit 3 Turbine-Generator Isolation
21		Valve.

- 1 Q. Please describe the RG&E Station 2 Modernization 2 Project.
- 3 A. The RG&E Station 2 Modernization Project
- 4 involves the installation of a new and larger
- 5 water conveyance penstock for increased water
- 6 supply to Unit 1 turbine-generator and for the
- 7 future addition of a second hydroelectric
- 8 generating unit. The current penstock is at
- 9 end-of-life and does not allow future expansion
- of the hydroelectric facility. Installation of
- 11 the new and larger penstock is required to
- 12 comply with FERC's Station 2 License Amendment.
- 13 O. Please explain the four major projects at RG&E's
- 14 Station 5 hydroelectric facility.
- 15 A. RG&E Station 5 Water Conveyance (Tunnel) System,
- 16 Surge Tank Expansion, Penstock Relining Upgrade
- 17 and Unit 3 Turbine-Generator Isolation Valve
- 18 Project are four separate projects that involve
- different construction work scopes throughout
- 20 the water conveyance system. The water
- 21 conveyance system is a conduit that allows river
- 22 water from upstream of Station 5 Headgates Dam
- to flow to the Station 5 Powerhouse for use in
- 24 generating hydroelectric energy.

- 1 Q. Why are all four separate projects scheduled for construction around the same time?
- 3 A. All four projects require the water conveyance
- 4 system to be isolated from the Genesee River and
- 5 dewatered. Due to the significant effort,
- 6 resources, time, and cost associated with
- 7 isolating the water conveyance system, it is
- 8 most efficient to align all four projects to
- 9 maximize the benefit of the work activities and
- 10 effort involved in gaining access to the water
- 11 conveyance system (including dewatering) once,
- 12 rather than doing so for each individual
- 13 project.
- 14 Q. Would the Panel please provide additional
- information regarding these proposed projects?
- 16 A. Yes. Additional information and details
- 17 regarding Generation's proposed capital
- investment projects and programs at RG&E are
- included in Exhibit (ECE-04).
- 20 IX. RESOURCE INSOURCING INITIATIVE
- 21 Q. Do the Companies currently rely on outside
- 22 vendor resources as well as internal resources

- 1 to support the Companies' capital planning and
- 2 capital projects?
- 3 A. Yes. Currently these functions are performed
- 4 using a combination of in-house resources and
- 5 outside vendor resources.
- 6 Q. What type of functions and tasks are performed
- 7 by external resources?
- 8 A. The bulk of external resources have been used to
- 9 perform routine analytical planning tasks such
- 10 as load and generator interconnection studies,
- 11 the development of hosting capacity maps, and
- 12 general planning support to supplement our
- internal staff.
- 14 Q. Did the Companies insource or internalize FTEs
- into the Integrated System Planning Organization
- 16 in 2024?
- 17 A. As we testified previously, in 2024, the
- 18 Companies began efforts to internalize 36
- 19 positions within the Integrated System Planning
- 20 Organization with the expectation that these
- 21 positions be filled by end-of-year 2025.

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CT	TESTI	MONY OF THE ELECTRIC CAPITAL EXPENDITURES PANEL
1	Q.	Are the Companies proposing to further modify
2		the existing balance between internal resources
3		and external resources?
4	Α.	Yes. Given the increasing importance of capital
5		planning, implementation and oversight, the
6		Companies are pursuing an initiative to insource
7		additional critical roles, capabilities, and
8		functions in the electric capital area. Adding
9		incremental internal FTEs that are highly
10		skilled, internally supervised, and fully
11		integrated will enhance the Companies' ability
12		to directly support capital related activities
13		and functions.
14	Q.	Please provide an example of how this would
15		enhance the Companies' abilities in this area.
16	Α.	As we testified earlier, the Companies have seen
17		a substantial increase in load interconnection
18		requests. This highlights a need to transfer
19		external staffing resources to internal
20		resources so that the Companies have enough
21		employees possessing the necessary engineering
22		and leadership qualifications to perform this
23		essential work in an effective and sustainable

manner. This strategic change to internalize

1		Transmission and Distribution Interconnections
2		staffing would also allow the Companies to
3		conduct load studies internally and to expedite
4		the process, thereby helping to reduce the queue
5		time for customers.
6	Q.	Does the Panel have any additional emerging
7		issues it wishes to discuss?
8	Α.	Yes. One issue that the Companies are looking
9		to address, along with other utilities
10		throughout the region and the country, is how to
11		grapple with the emerging and growing threat of
12		wildfires. The reduction of risk from the
13		impacts of wildfires is a multi-faceted and
14		long-term initiative. The Companies continue to
15		explore appropriate methodologies to reduce the
16		Companies' long-term risk from wildfires and
17		other climate-related hazards. Examples of
18		possible risk reduction methodologies include
19		the integration of risk assessment results into
20		secondary project prioritization, the
21		utilization of materials and standards that
22		lower the risk of ignition during high-risk
23		conditions, and the further investment in
24		infrastructure modernization and vegetation

23

24

## DIRECT TESTIMONY OF THE ELECTRIC CAPITAL EXPENDITURES PANEL

1		management. For more information about the
2		Companies' overall wildfire prevention and
3		response strategy, please see the Electric
4		Operations Panel testimony.
5	Q.	Does the Panel wish to provide any additional
6		exhibits in support of its testimony.
7	Α.	Yes. Exhibit (ECE-11) is a matrix outlining
8		all electric projects and indicates whether each
9		is located within a DAC.
10	Q.	Does the Panel have any additional emerging
11		issues to discuss?
12	Α.	Yes, the Companies recently received an update
13		on the projects they submitted in the
14		Commission's Proactive Planning Proceeding. By
15		its Order Establishing Proactive Planning
16		Proceeding issued on August 15, 2024 in case 24-
17		E-0364 ("August 15 Initiating Order"), the
18		Commission initiated the Proactive Planning
19		Proceeding, with the purpose of developing a
20		framework for the planning and approval of
21		electric infrastructure upgrades to address
22		increased system demand from transportation and

State policy goals. In its August 15 Initiating

building electrification in accordance with

1		Order, in addition to other measures, the
2		Commission created an opportunity for Urgent
3		Upgrades to be proposed by the Companies in
4		instances where project construction must begin
5		prior to the conclusion of the envisioned
6		Proactive Planning process that was to be
7		developed as part of the proceeding. Of the ter
8		Urgent Upgrade proposals submitted by the
9		Companies in their November 26, 2024, filing,
10		two were approved by the Commission in its Order
11		Addressing Urgent Upgrade Filings (the "Urgent
12		Upgrade Order"), issued June 12, 2025 in the
13		Proactive Planning Proceeding.
14	Q.	Which of the Companies' Urgent Upgrade proposals
15		were approved?
16	Α.	In the Urgent Upgrade Order, the Commission
17		approved one NYSEG project, named "Proactive
18		Planning - Kents Falls". The Commission also
19		approved one RG&E project, named "Proactive
20		Planning - Station 124."
21	Q.	Are the capital expenditures for these projects
22		included in the Companies' respective Revenue

1	Requirements	and	Accounting	Panel	testimonv

- 2 capital forecasts?
- 3 A. The Kents Falls Project is not included in
- 4 NYSEG's electric capital forecast. The Station
- 5 124 Project is included in RG&E's electric
- 6 capital forecast, however, the project start
- date, as represented in the forecast, is not
- 8 consistent with the start date included within
- 9 the Proactive Planning Proceeding.
- 10 Q. Why do these discrepancies exist?
- 11 A. The Commission's Urgent Upgrade Order approving
- the two Urgent Upgrade projects was issued on
- 13 June 12, 2025. At the time that the capital
- 14 investment forecasts were finalized for this
- filing, the Companies were still reviewing the
- 16 Urgent Upgrade Order and there was not
- 17 sufficient time to revise the capital forecast.
- 18 Q. Do the Companies intend to update their project
- 19 plans for the two approved Urgent Upgrade
- 20 projects?
- 21 A. Yes. The Companies will continue to evaluate the
- 22 Urgent Upgrade Order, and as part of their
- 23 update submittal filed in these proceedings, the
- 24 Companies will incorporate the two approved

- 1 Urgent Upgrade Projects within the capital
- 2 forecast and also include any other necessary
- 3 information or updates based upon further
- 4 analyses of the Urgent Upgrade Order.
- 5 X. CONCLUSION
- 6 Q. Does this conclude the Panel's testimony at this
- 7 time?
- 8 A. Yes.