

New York State Climate Action Council

October 13, 2022
Meeting 26



**Climate Action
Council**

Agenda

- > Welcome and Roll Call
- > Co-Chair Remarks and Reflections
- > Integration Analysis Update
- > Discussion of Feedback by Topic:
 - Adaptation & Resilience
 - Gas System Transition
 - Buildings
 - Industry
 - Health
 - Transportation
- > Next Steps

Co-Chair Remarks and Reflections

Recent Announcements

Recent activity from New York State

- **10/12/2022** [Governor Hochul Announces \\$18.1 Million for Development of Innovative Nature-based Solutions to Lower Emissions And Sequester Carbon](#)
- **10/7/2022** [Governor Hochul Announces \\$8.5 Million to Support Companies Commercializing New Climate Technologies](#)
- **10/07/2022** [DEC Announces Nearly \\$1.35 Million in First Round of Grants Supporting Land Trust Forest Conservation Easements](#)
- **10/06/2022** NYC Dept of Buildings released [Proposed Rules to Implement LL97](#) for public comment, comments due 11/14
- **10/4/2022** [Governor Hochul, U.S. Senate Majority Leader Schumer, Onondaga County Executive McMahon, and Micron CEO Mehrotra Announce Micron will Invest \\$100 Billion Over the Next 20 Years to Build Semiconductor Manufacturing Campus in Onondaga County](#)
- **10/3/2022** [Governor Hochul Announces Six New Partners Selected in Empire Building Challenge to Advance Climate-Friendly Buildings in New York State](#)
- **10/3/2022** [Governor Hochul Announces Electrovaya to Establish Lithium-Ion Gigafactory in Chautauqua County](#)

Integration Analysis Update

Building peak analysis

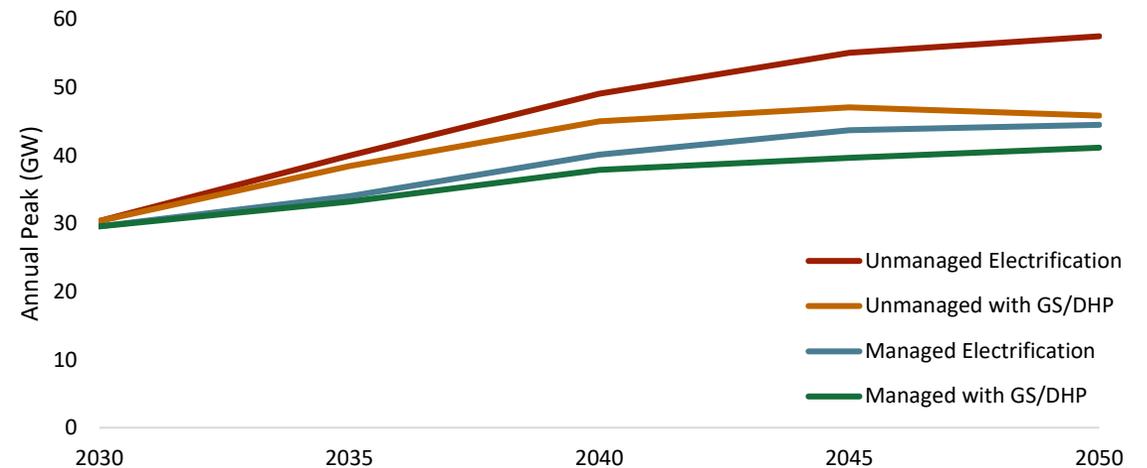
- > Objective: explore the implications of unmanaged load growth and the potential impacts of ground source / district heat pumps (GS/DHP) under different conditions
 - Managed building electrification with significant investment in efficiency coupled with expected air-source heat pump performance during coldest peak times, which aligns with Scenario 2 assumptions
 - Unmanaged building electrification with lower investment in building efficiency and smart device measures coupled with lower air source heat pump performance during coldest peak times

	ASHP Peak COP	2050 GS/DHP Stock Share	2050 Deep Shell Stock Share	Smart Device / Conservation
Managed (S2 Core)	1.6	25%	26%	15%
Managed w GS/DHP	1.6	65%	26%	15%
Unmanaged	1.3	25%	5%	8%
Unmanaged w GS/DHP	1.3	65%	5%	8%

Peak impacts

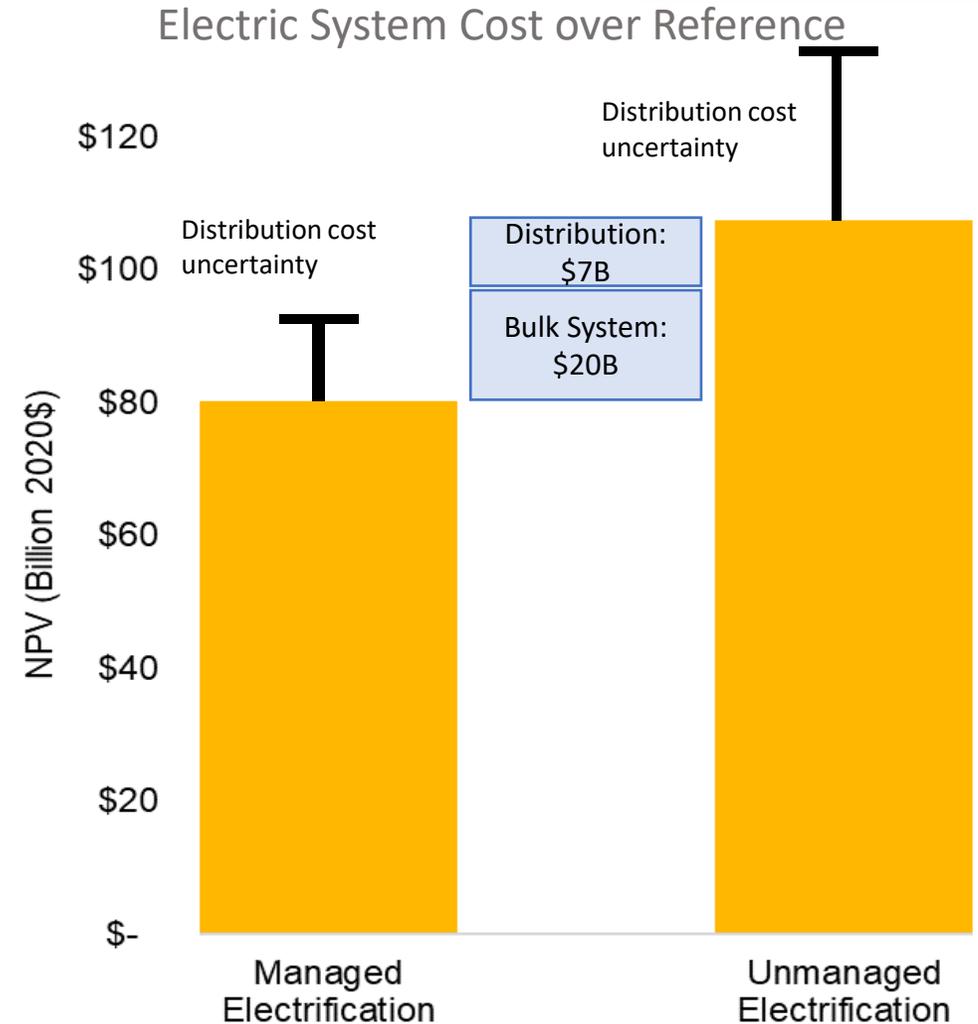
- > Without higher investment in building efficiency and higher peak heat pump performance, electric peaks could rise to up to 58 GW by 2050
- > The range of electric system peak reduction from higher ground source/district heat pumps is 4-12 GW depending on the level of efficiency and heat pump performance

Building Sensitivities
Annual Peak Load (GW)



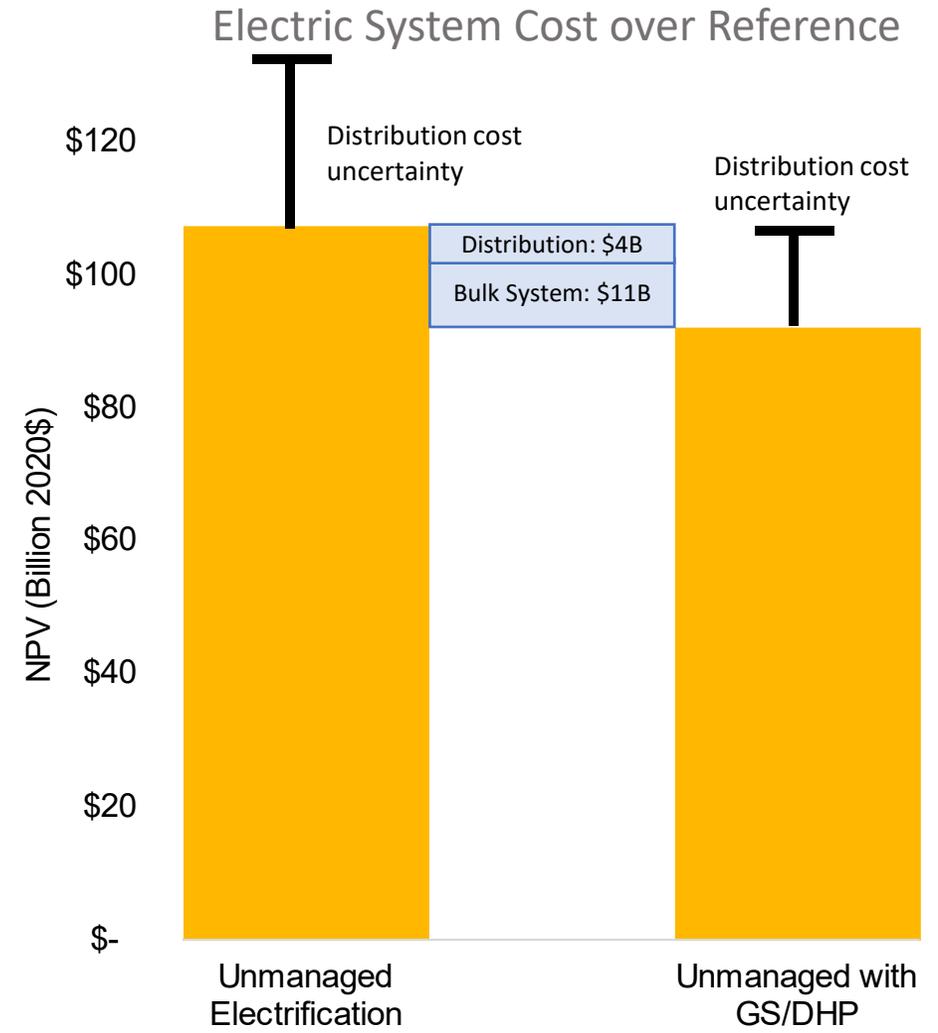
Electric system impact

- > With Unmanaged Electrification, the electric system costs would rise by \$27B, due to increased generation and T&D
- > This includes up to 14 GW of additional firm capacity and battery storage resources, as well as 4 GW of incremental renewables
- > Higher distribution system costs would further raise the relative cost of the unmanaged case by \$14B, increasing the growth in electric system costs to \$41B



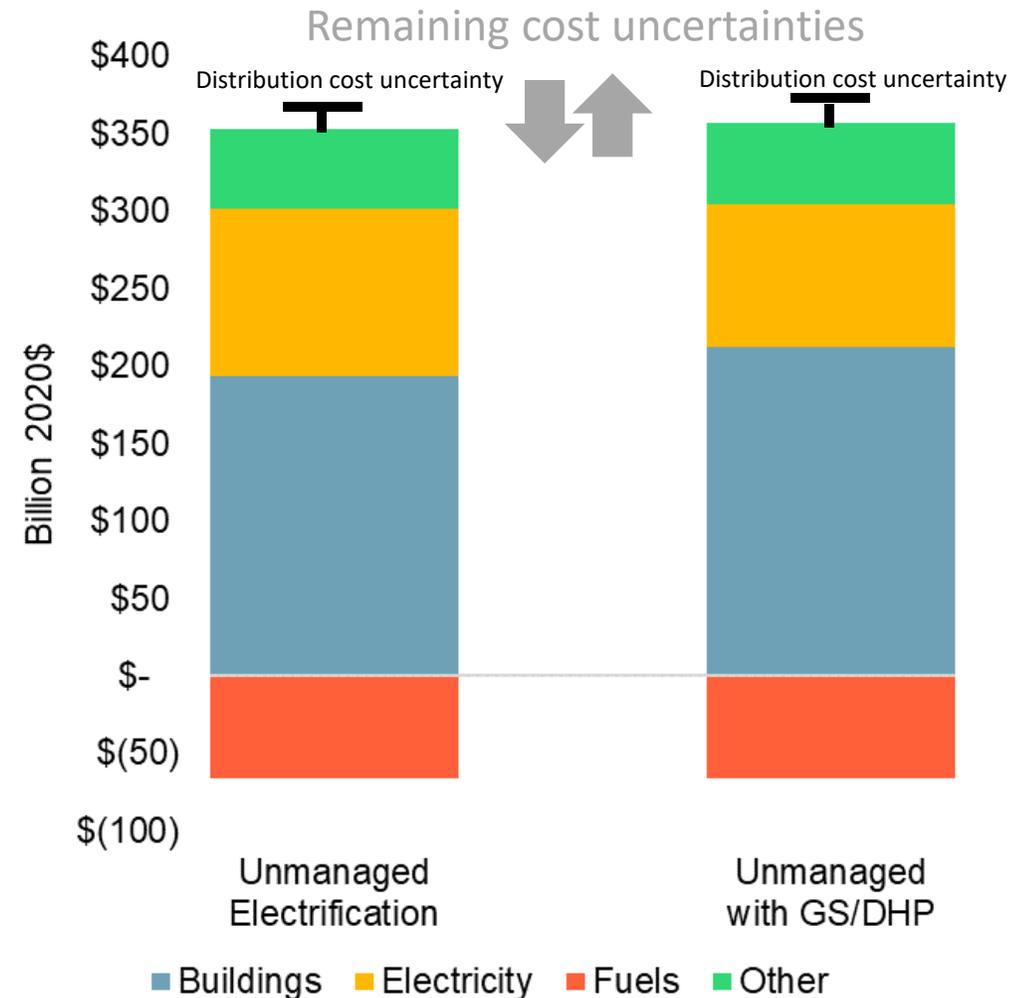
GS/DHP Impact

- > Higher adoption of GS/DHPs can reduce electric system costs by \$15B-\$23B if efficiency and ASHP performance lag
 - Higher distribution system costs would reduce the relative cost of the GS/DHP electric system by \$8B
- > Higher adoption of GS/DHPs leads to a reduction of firm capacity and battery storage of 13 GW relative to the unmanaged case without high GS/DHP adoption, as well as a reduction of 2.4 GW of renewables



GS/HDP cost impact

- > Because GS/DHPs are more expensive than ASHPs, building sector costs rise in the GS/DHP scenarios by up to \$19B
- > Given that electric system benefits increase by \$15-23B, net cost differences are within modeling uncertainty. Ongoing work is warranted to monitor the relative cost trajectories of GS/DHPs versus electric peak costs
- > Substantially higher adoption of GS/DHPs will require novel financing and coordination solutions



Takeaways

- > Affirmed that energy efficiency is critical for achieving CLCPA emission limits and managing electric system peaks
- > GS/DHPs are potentially an important measure for limiting peak growth and development risks
- > Continued effort to monitor and evaluate the relative trajectories of GS/DHPs and electric system costs is warranted

Discussion of Feedback by Topic

Discussion of Feedback: Adaptation and Resilience

Summary Themes

Equity and just transition

- > Incorporation of equity and just-transition considerations into adaptation and resilience programs and the use of such programs to address injustices and inequities was a recurrent theme, summarized by this comment,
 - "Policymakers have failed to establish a comprehensive set of goals, processes and selection criteria for identifying and implementing protective resiliency projects that involve meaningful community consultation and empowerment, especially in frontline and Black, Indigenous, and People of Color (BIPOC) and economically disadvantaged communities."

Municipal and stakeholder support

- > Several comments supported enhanced state funding, guidance and technical assistance to municipalities and other stakeholders to facilitate regional and local adaptation planning, and disaster response and recovery, including enactment of the Emergency Responder Act.

Natural resilience measures

- > Preference for use of natural resources and nature-based features, including urban forests, was also a recurrent theme, including targeting disadvantaged communities.

Summary Themes

Protective, design guidelines and regulations

- > Several comments emphasized need for more protective design guidelines and regulations for buildings and natural systems.
- > A few comments addressed incorporation of the value of ecosystem services into decision making.

Outreach, education and information

- > Several comments suggested K-12 climate education or public outreach campaigns.
- > Others suggested more readily available climate change information, including enacting of a flood risk disclosure law.

Unresolved CJWG Feedback

Unresolved CJWG Comment	Staff Response
Provide clarity on the positioning of the Adaptation & Resilience Sub-Cabinet position	Staff recommends that the state resilience officer report to the director of state operations and that the sub-cabinet comprise heads of relevant agencies or their designees.
Update DOS Coastal Management Program to require diesel emission reductions from land and water based vehicles	Coastal management policies are focused on land use and development and are not applicable to vehicular emissions. This feedback is better directed toward the transportation policies.

Staff Recommendations

Equity and just transition

- > Strengthen language throughout chapter to emphasize commitment to incorporate equity and just-transition considerations into adaptation and resilience programs, including in appointment of a chief state resilience officer and prioritization of resilience investments in frontline communities.
- > Develop more detailed recommendations for programs to address past and current injustices and inequities.

Municipal and stakeholder support

- > Consider support for the Emergency Responder Act.
- > Develop a recommendation to encourage development of resiliency zones/hubs, especially in frontline communities.
- > Recommend prioritized investment in frontline communities.
- > Recommend guidance materials be provided in several languages.
- > Recommend guidance on development of evacuation plans and use of solar+storage and V2G systems in local plans.

Staff Recommendations

Protective, design guidelines and regulations

- > Recommend assessment of need for additional standards to ensure resilience of manufactured and mobile homes.
- > Recommend all comprehensive plans be required to address forest and farmland protection.
- > Recommend more flexible permitting for adaptation projects.
- > Recommend policy and guidance on incorporation of value of ecosystems in decision making.
- > Emphasize preference for use of nature and nature-based features to enhance resilience, including in frontline communities.

Outreach, education and information

- > Emphasize importance of both school-based and public education.
- > Support a flood risk disclosure law.

Discussion of Feedback: Gas System Transition

Summary Themes

Rapid and just transition away from gas use

- > The most common comments were to rapidly and completely move away from gas heating, including a ban on new gas hookups, ban of new investments into the gas system, and zero emissions standards for appliances to phase out the use of fossil fuel appliances.
- > Support for a statewide plan for the transition away from use of gas that preserves safety, reliability and affordability.
- > Need for a just transition plan for gas utility workers, including thermal energy networks.
- > Some commenters expressed concerns with emissions impacts and costs of alternative fuels.

Allow consumer choice and support for alternative fuels

- > Concern with the elimination of energy choices that could increase costs related to home heating needs.
- > Support for an “all of the above” approach that includes use of hybrid heating systems, electric heat pumps, and low carbon fuels such as RNG, hydrogen, and biofuels in buildings.

System safety and reliability

- > Support CLCPA, but strong concerns that relying on only the electric system for everything is too risky when there is a need for overall energy system reliability, resilience, and recovery from more frequent and severe weather events.
- > Concerns with reliability of the electric grid as a result of increased electrification and the need for coordinated planning of the gas system transition with the build out of the electric grid.

Summary Themes

Small business and economic development impacts

- > Concerns about cost impacts to small businesses in the transition to a gas free future including the cost to retrofit buildings for electrification.
- > Restaurant and commercial kitchen industries are especially concerned about the cost associated with the transition away from gas to electric and the capacity of the electric grid, especially when cooking appliances currently feed the most vulnerable in times of natural disaster and power outages.
- > Concerns about increased energy costs and the potential for economic leakage of businesses out of state.

Energy affordability, equity, and increased consumer education

- > Concern that expensive energy costs will disproportionately affect elderly and low-income residents.
- > Concerned with the significant costs associated with renewable energy development and grid expansion, unknown costs to consumers, and to be determined projections in rising consumer costs from supply and demand issues.
- > Need for a detailed cost analysis and statewide outreach and education plan to ensure consumer awareness of energy options, timing of the transition away from fossil fuels, and impacts to residents, businesses, and industrial consumers.
- > Some commenters expressed the belief that benefits will exceed the cost of inaction.
- > Express the need for equity to be centered in recommendations and funding for energy efficiency and electrification should be prioritized in disadvantaged communities and for low-income residents.

Unresolved CJWG Feedback

Topic (Location in Draft Scoping Plan)	CJWG input as reflected in the Draft Scoping Plan	Draft Scoping Plan recommendations
Transition Away from Gas (p. 267)	The CJWG supports the transition away from gas infrastructure and stresses the need for cost-effectiveness and equity to ensure the transition is just. The CJWG recommends that progress be prioritized in Disadvantaged Communities, where co-pollutants pose a high cumulative burden, and that any progress support the denial of fossil gas infrastructure permits.	The Draft Scoping Plan calls for a detailed analysis to determine the most equitable and cost-effective strategy for transitioning from fossil gas while maintaining affordable, safe, and reliable service. It further calls for (p. 268) the state to develop a comprehensive equity strategy to prioritize the needs of LMI households and Disadvantaged Communities in the transition to ensure they are not left behind.
Reduce Fugitive Emissions from Gas Infrastructure (p. 271)	To cap abandoned wells, the CJWG suggests that public funds be used as a last resort and that the State consider ways the oil and gas industry could contribute to reducing emissions from these sources.	The Draft Scoping Plan does not indicate where funding to properly plug and abandon wells would come from, rather it states that appropriate funding sources should be identified to locate, plug, and abandon wells. Currently, the oil and gas industry provides funding through financial security requirements and well permit fees, but these are insufficient to properly plug and abandon the inventory of known orphaned wells in New York. Staff recommends revising the draft scoping plan to include a recommendation to adjust the financial security amounts in Environmental Conservation Law to cover the true cost of this work. Public funds will also be necessary to cover costs for plugging unmapped wells with unknown ownership.

Staff Recommendations

Include a framework for development of a statewide gas system transition plan

- > The draft framework developed by the Gas System Transition subgroup that is currently under consideration by the CAC systematically addresses the concerns raised in public comments to ensure the transition away from fossil gas use.

Ensure the transition of the gas system maintains overall energy system reliability, safety, and resiliency

- > Emphasize the need for a well-planned and strategic transition of the gas system that includes coordinated planning with the decarbonization of the power generation sector and build-out of local electric transmission and distribution systems to meet anticipated increases in electric demand throughout the State.
- > Clarify the transition will include a strategic downsizing of the gas system and substantial reduction in fossil gas use.

Consider the strategic role of alternative fuels in the transition away from fossil fuels

- > Include detail on the potential use of alternative fuels such as RNG or green hydrogen in gas system planning to meet customer needs for uses such as process use in manufacturing or industrial facilities where electrification is not yet feasible or to decarbonize the gas system as it transitions. However, note that additional analysis is needed to evaluate the GHG and co-pollutant emissions impacts, impacts on energy affordability, and safety and reliability considerations for use of alternative fuels in the existing gas system infrastructure.
- > Ensure that any strategic use of alternative fuels is aligned with the integration analysis scenarios and CLCPA emission reduction requirements.

Reduce energy burdens and ensure energy affordability

- > Ensure the statewide gas transition plan includes a detailed cost and benefits analysis and mitigates disproportionate impacts to vulnerable consumers including low-income residents and those located in disadvantaged communities.
- > Prioritize and target public financial support of energy efficiency upgrades and electrification initiatives for distressed housing, low- and moderate-income households, affordable and public housing, and buildings in disadvantaged communities.

Ensure a just transition for the gas industry workforce

- > Underscore the importance of a clear plan for the just transition of the gas industry that includes a focus on workforce development, training opportunities, and a timeline for what this transition means and when.

Discussion of Feedback: Buildings

Summary Themes

Support for the adoption of State Codes that require new construction to be highly efficient, zero-emission, and resilient – with clear dates

- > Many commenters supported the dates in the draft Plan; some urged earlier dates, e.g., for mid-rise buildings.
- > Proposed variant to B1: Focus on removing on-site fossil fuel combustion in new buildings rather than requiring to be all-electric, to allow for new low-/zero-emission solutions.

Support for setting State zero-emission standards that prohibit replacement of gas/oil HVAC and hot water equipment and appliances (at end of useful life) – with clear dates allowing the market to adjust

- > Commenters in favor of these standards also supported market transformation incentives, pairing electrification and thermal efficiency, and dedicated assistance for LMI/DACs.
- > Proposed variants to B2: (1) Establish emissions and energy efficiency standards where not preempted; (2) Apply standards in the short-to-mid-term to primary space heating equipment; longer-term, validate grid reliability before requiring 100% of supplemental heater sales to be electric/zero-emission.

Avoid regulation/mandates and instead pursue incentives and market transformation to increase market demand for low-emission technologies

- > Commenters with this view emphasized consumer choice and tended to express support for electric heat pumps, dual-fuel heating, and low-carbon fuels as heating options.
- > Hospitality industry requested that commercial kitchen equipment be exempted from all-electric codes/requirements.

Attention to rural and upstate community needs

- > Some commenters believed the needs of rural/upstate communities were not adequately considered, citing that rural households depend on gas or delivered fuels due to their reliability (vs. above-ground electric infrastructure).
- > Some questioned the reliability of heat pumps in very cold temperatures.
- > Commenters divided on wood burning, either supporting wood burning as option in rural areas or expressing concern about the associated public health impacts.

Summary Themes

Cost and affordability impacts for households and businesses, with attention to disproportionate burdens

- > Commenters in support of zero-emission codes and standards expressed belief that benefits will outweigh the potential costs of delayed action, whereas opposers asserted that the draft Plan does not adequately analyze costs.
- > Commenters broadly called for thoughtful attention to the cost of transitioning to alternative technologies and expressed concern about disproportionate impacts on LMI households, DACs, and those on a fixed income, as well costs to small businesses.
- > Commenters urged that equity must be centered when decarbonizing the buildings sector.
- > Proposed: All implementing State agencies should assess the consumer costs from individual new regulations/mandates.

Energy system infrastructure; Low-carbon fuels

- > Some commenters in opposition to zero-emission codes and standards questioned the reliability of the current electric grid infrastructure and its ability to handle increased load; other commenters supported proactive upgrades to grid infrastructure.
- > Commenters generally divided in their views toward future use of RNG, green hydrogen, and biofuels in the buildings sector.
- > Utility company commenters called for optimizing the gas and electric system and adopting low carbon fuel standards.

Support for Thermal Energy Networks (TENs)

- > Multiple stakeholder coalitions called for strategies to accelerate and scale up TENs, including regulatory planning and expedited siting and permitting processes.

Summary Themes

Workforce readiness and training

- > Commenters recommended analyses of the industry workforce for building decarbonization, e.g. to map out assets/needs, create (county-level) workforce development/just transition plans, and account for readiness in implementation timelines.
- > Broad support for workforce development, education, and training, emphasizing engagement of existing buildings trades and improving outcomes for workers from disadvantaged communities.
- > Specific call to develop a trained workforce of craftspeople to restore and retrofit existing and historic buildings (re-use).

Broad support for continued State investment in market development and innovation across:

- > Public outreach and consumer education, research and development (R&D), New York-based technologies and manufacturing, and re-use of buildings and building materials.

Federal HFC phasedown timeline

- > Some industry representatives commented that NYS should not seek a faster transition to lower-Global Warming Potential refrigerants than what the EPA will implement nationwide (AIM Act), citing feasibility and leakage concerns.

Address HFCs in commercial refrigeration in food stores, the largest source of HFC emissions

- > Regulatory recommendations included requiring by 2026 leak detection equipment for all commercial refrigeration.
- > Commenters recommended utility rebates, low-cost loans, and subsidies and advisors for food stores in DACs.

Summary Themes

Expanding public financial incentives and low-cost financing for building decarbonization

- > Broad support for incentives and reduced interest rate financing for decarbonization solutions for new and existing buildings, with emphasis on geothermal heat pumps, air-sealing/insulation, weatherization + electrification, and commercial refrigeration.
- > Commenters called for establishment of a revolving loan fund for building decarb, and for the reuse of buildings/materials.
- > Commenters noted need to motivate contractors and the replacement of systems before failure; called for simplifying paperwork; recommended convening a working group on incentive and financing programs.

Dedicate and coordinate public assistance for energy efficiency and electrification for LMI/DAC households while improving housing conditions and safety

- > Numerous commenters called for at least \$1 billion per year to assist LMI households with energy-efficient electrification or to capitalize a Retrofit and Electrification Readiness Fund providing direct investments to DACs and affordable housing.
- > Commenters stated that deferred maintenance (energy and non-energy related) also should be funded, and incentive structures should address the upfront cost and liquidity challenges for LMI adoption (e.g., for GSHP).
- > Improve coordination among state entities (OTDA, HCR, NYSERDA) and programs to assist low-income individuals.

Protections for tenants, consumers, and LMI households [also see next slide]

- > Commenters stated that fair safeguards are needed so that energy improvements don't drive significant rent increases; others advised that policies grant buildings flexibility for capital planning/operations to mitigate disruption and burden on tenants.
- > Commenters urged expanding low-income energy utility bill assistance (needs-based focus, eliminate funding caps).

Unresolved CJWG Feedback

Topic (Location in Draft Scoping Plan): Align Energy Price Signals with Policy Goals (p. 139)	
CJWG input as reflected in the Draft Scoping Plan: The CJWG called for a more expansive set of actions related to consumer protection than are proposed, including a "Utility customer bill of rights" that would include a safety net style guarantee of renewable energy to every household.	Draft Scoping Plan recommendations: PSC and DPS to consider subsidized rates or expanded bill discounts for low-income households that adopt heat pumps.

Related Public Comment

Numerous public comments were supportive of CJWG feedback around consumer and community protections. Commenters specifically urged that the following CJWG recommendations be included in the final scoping plan:

- > Utility customer bill of rights
- > Safety net guarantee of affordable renewable energy to every household
- > Public education to combat the power of the investor-owned utilities and the opaqueness of the energy system
- > Clawback provisions around public subsidies to private landlords as an anti-displacement strategy to mitigate rent increases and evictions

Staff Recommendations

Importance of Climate Justice and consumer protections

- > Clarify that the Home Energy Fair Practices Act and NYS DPS regulations provide consumer protections for utility customers.
- > Add text re: ensuring that the PSC Energy Affordability Policy and other current or future public utility bill assistance programs recognize and adjust for increased cooling needs and the shift from traditional forms of heating to efficient electrification.
- > **B4.** Add implementation of a strategy for community solar projects that provide electric bill savings to income-eligible households and/or benefit affordable housing or public buildings in DACs, with program rules that direct benefits to residents.
- > **B8.** Add support for public awareness and education around how to participate in public and regulatory processes.

Attention to geographic differences and consumer cost

- > Expand discussion in the Chapter of distinctions between upstate and downstate NY with respect to weather, building stock, socio-economic factors, and potential impacts from the Plan.
- > Expand examples of costs for efficient building electrification to additional building types.

Incorporate recent analytic work conducted to inform the CAC process

- > Integration Analysis, notably buildings sector peak sensitivities.
- > NYS Disadvantaged Communities Barriers & Opportunities Report.

Staff Recommendations

State Codes for New Construction

- > Update text to note the enactment of the NYS Advanced Building Codes, Appliance and Equipment Efficiency Standards Act of 2022 and of NYC Local Law 154.
- > **Strategy B1:** Revise text to read: "Adopt State codes **that prohibit building systems or equipment used for the combustion of fossil fuels in new construction**" statewide **by 2025** [2024] for single-family and multifamily residential buildings having three stories or less and by **2028** [2027] for new construction of multifamily buildings having more than three stories and commercial buildings.

Zero-Emission Equipment Standards

- > **Strategy B2:** Revise date to **2025** [2024] to prohibit utilities from providing new gas service to existing buildings
- > **Strategy B2:** By 2030/2035 [dependent on building size], revise text to read: "Adopt zero-emission standards that prohibit replacements (at end of useful life) of gas/oil **combustion equipment** for heating, cooling, and hot water"
 - Add description that emission standards for building equipment to be sold in NYS will be developed and proposed through a full public engagement and regulatory process. Such standards shall ensure that compliance will not disproportionately burden Disadvantaged Communities. As part of the emissions standards development process, the following shall be considered: consumer costs and benefits; technical, industry, and grid-readiness; and building-level resilience and potential for future connection to clean thermal energy networks.

Benchmarking and Disclosure

- > **Strategy B3:** Revise date to **2024** [2023] to commence a statewide energy benchmarking and disclosure program.

Staff Recommendations

Public Financial Incentives and Access to Low-Cost Financing

- > Update discussion of funding sources to include the federal Infrastructure Bill, IRA, federal and State tax credits.
- > Underscore the significant investment of public funding that will be needed to decarbonize and improve the quality of housing for LMI households, affordable and public housing, and in DACs, including a scale up that aligns with the proposed timelines for new codes and standards.
- > **Strategy B4.** In discussion of incentives for building decarbonization, underscore the importance of weatherization, motivating upgrades before heating system failure, the benefits of ground source heat pumps, and community solar.
- > **Strategy B4.** Add that for projects that receive State/utility incentives for heat pumps and other upgrades, data on the installed cost be collected and published in an anonymized and aggregated format to increase market transparency on cost.
- > **Strategy B5.** Add detail on HCR Sustainability Guidelines and Housing Plan, and on support offered to lenders.

Thermal Energy Networks (TENs)

- > **New Strategy.** Describe the State Utility Thermal Energy Networks and Jobs Act and the PSC implementation process and add a strategy to support the development of TENs that provide a clean heating solution for buildings and a just transition employment path for gas utility workers, to include: (1) partnership on workforce training for gas sector workers to operate TENs; (2) appropriate regulations and permit fees for geothermal wells greater than 500 feet deep; (3) streamlined access to public and utility rights of way; (4) proactive mapping of heat sources and analysis of achievable potential for TENs; (5) public-private partnerships for financing and development; and (6) prioritizing TENs that serve LMI housing and buildings in DACs.

Staff Recommendations

Workforce Development

- > **Strategy B7.** Provide a more standardized presentation of the workforce segment, training priority for that segment, and associated timeframes to support a just transition.

Public Awareness and Consumer Education

- > **Strategy B8.** Add/expand text around increasing awareness of new and upcoming requirements, how to participate in public and regulatory processes, opportunities to get engaged in the clean energy economy, available incentives to replace equipment before failure, and the "co-benefits" of healthy, efficient, low-carbon building systems and building materials.

Transition from Reliance on HFC Use

- > **Strategy B9.** Create separate components for HFC education and for incentives, incl. incentives for commercial refrigeration.
- > Staff does not recommend adjusting the State regulatory timeline since it aligns with the Climate Act emissions limits.

Reference recent federal, State, and local legislation, Executive Orders, PSC Orders, and Agency Guidance

Discussion of Feedback: Industry

Summary Themes

Energy-Intensive and Trade-Exposed Industries (EITEs)

- > The most extensive comments concerned EITE Industries.
- > Many commenters expressed the view that the Scoping Plan should include a specific definition or listing of EITE industries.
- > Some comments advocated for a specific industry to be identified as an EITE.
- > A number of comments recommended that the Scoping Plan include specific recommendations on how to mitigate compliance costs for EITE industries so as to prevent both domestic and international leakage and avoid anti-competitive impacts.
- > Other comments went further and proposed specific mechanisms that should be incorporated into economywide carbon pricing strategies to protect EITEs, such as carbon credits or allocations, or outright exemptions from regulation.

GHG Emissions Benchmarking

- > Some commenters expressed concern that new requirements might disregard the considerable resources already spent to comply with current rules.
- > A few comments recommended that the State set industry-specific benchmarks for use in measuring production emission intensity.

Alternative Compliance Mechanisms (ACMs)

- > There was a comment that industry, particularly EITEs, be offered compliance flexibility by authorizing the use of ACMs based on economic infeasibility if the likely outcome without their use would be the out-of-state leakage of emissions and economic activity.

Low Carbon Procurement

- > Some commenters recommended that any low carbon procurement rules consider the product's full lifecycle emissions.
- > There was a comment that the Scoping Plan's low carbon procurement discussion should address independent safety and engineering validations impacting construction materials and methods.

Unresolved CJWG Feedback

Topic (Location in Draft Scoping Plan)	CJWG input as reflected in the Draft Scoping Plan	Draft Scoping Plan recommendations
Financial and Technical Assistance (p. 185)	Directing State assistance toward reducing industrial emissions in Disadvantaged Communities would be supported by the CJWG. Industrial facilities often disproportionately affect Disadvantaged Communities, and investments can be prioritized to target industries with the greatest impact on these communities. Additionally, the CJWG noted that emissions reductions strategies for Industry do not mention regulation to drive down industrial emissions as close to zero as is technically possible. Additional regulation on industrial sources must be carefully considered within the Climate Act requirements to limit emissions leakage.	The Draft Scoping Plan proposes that the State provide technical and financial assistance to overcome barriers and other challenges to implementing emission reduction solutions necessary for decarbonization. The Draft focuses on incentive-based strategies for mitigating industrial emissions in recognition of the need to avoid emissions and economic leakage. The Draft recommends focusing investments and their associated benefits in Disadvantaged Communities.
Low Carbon Procurement (p. 187)	The CJWG supports this strategy, as well as other demand-side approaches, since State procurement preferences for low carbon building materials can encourage less energy-intensive manufacturing in some sectors. The CJWG also recommended using a “best value” procurement framework to score bids that commit to climate mitigation efforts and related workforce, training, local hire, and apprenticeship programs targeted to residents in Disadvantaged Communities.	The Draft Scoping Plan proposes that the State create procurement incentives so that manufacturers will produce less emission-intensive goods to capitalize on the increased demand for goods made with fewer emissions. The strategy would aim to identify carbon intense materials, develop standards, and provide policy support. The specific procurement framework and scoring methodology for any such procurement preferences need to be evaluated against a set of criteria that would effectively and equitably reduce emissions and grow a robust local workforce and manufacturing sector.
Research, Development, and Demonstration (p. 189)	The CJWG has raised concerns around technology solutions such as carbon capture and storage and hydrogen. The CJWG supports reducing fossil fuel combustion for industrial heat, replacing it with electric heat whenever feasible. The CJWG inquired specifically as to the future use of green hydrogen and made the point that combusting hydrogen has the potential to produce potentially harmful levels of nitrous oxide emissions. The CJWG recognized, however, that some industrial high-heat processes may not be electrifiable, and that in these cases green hydrogen is a potential alternative fuel. Identifying, quantifying, and mitigating these types of harmful effects associated with new technologies and approaches to eliminate hard-to-abate industrial emissions will be a necessary, critical concern of future research efforts.	The Draft Scoping Plan recognizes that long-term, deep decarbonization in the industrial sector will require the development of new technologies and that the State could speed the deployment of some of these new solutions with a robust RD&D agenda. However, it should be noted the specific technologies and solutions for deep decarbonization of the industrial sector have yet to be identified.

Staff Recommendations

Energy-Intensive and Trade-Exposed Industries (EITEs) / GHG Emissions Benchmarking

- > The definition of EITE Industries, and any special accommodations to mitigate leakage with regard to those industries, should be deferred until these items can be addressed as part of the possible development of an economywide carbon pricing system.
- > Decisions on emission benchmarking for EITEs also should be deferred until the designing of any such economywide carbon system.
- > Appendix C of the Draft Scoping Plan sets out a method by which the State would define EITE Industries.

Alternative Compliance Mechanisms (ACMs)

- > The question of whether ACMs should be available to avoid leakage where emission reductions are not economically feasible should be considered by DEC in light of its authority to administer ACMs under the Environmental Conservation Law, with the understanding that industrial sources and EITEs in particular should be treated in a manner to avoid leakage.

Financial and Technical Assistance

- > Add language to acknowledge that, within the Climate Act requirements to limit emissions leakage, other potential measures must be carefully considered in the event that incentive-based strategies do not achieve sufficient reductions of industrial emissions.

Low Carbon Procurement

- > Add language to clarify that any low carbon procurement rules should consider the product's full lifecycle of emissions.
- > Add a recommendation that safety and engineering validations be addressed with regard to low carbon construction materials and methods.
- > Explore use of the Best Value procurement framework to score bids that commit to climate mitigation efforts and related workforce, training, local hire, and apprenticeship programs targeted to residents of Disadvantaged Communities.

Research, Development & Demonstration

- > Add language stating that identifying, quantifying, and mitigating harmful effects (such as nitrous oxide emissions from hydrogen combustion) that might be associated with new technologies and approaches to eliminate hard-to-abate industrial emissions will be a necessary, critical concern of future research efforts.

Discussion of Feedback: Health

Summary Themes

Request for tracking of health outcomes associated with climate policies

- > The Scoping Plan should include a plan to track or measure improvements in health outcomes (e.g., respiratory illness) that occur over the next 20-30 years.
- > Need to track health outcomes associated with extreme heat and maintain an ongoing analysis of health implications from extreme heat climate projections.

Health concerns about alternative fuels, renewable energy, and carbon capture

- > Commenters expressed concerns about hydrogen, including green hydrogen, and renewable natural gas.
- > Commenters expressed concerns about particulate matter emissions and health impacts of wood burning, noting use not only for heat, but increasing recreational backyard burning, not only in rural areas but upstate cities.
- > There are concerns about wind turbines and associated noise.
- > Commenters expressed concerns about energy use for carbon capture increasing emissions.

Summary Themes (cont.)

Opportunities to enhance climate justice

- > There are concerns about co-pollutants and associated public health risks, especially near waste incineration sites, high-traffic areas, and other high-emitting infrastructure in DACs.
- > Commenters expressed concerns over creation of co-pollutant “hot-spots” in DACs as a result of making improvements in state and regional air quality.
- > There are concerns about flooding, building code violations and health risks with the changing climate.
- > There is support for more green space in DACs and associated health benefits designate minimum land-use plans.
- > Calls for steps in energy efficiency programs to allow the State to take action to address polluted indoor home environments, particularly in DACs and low-to-moderate income communities.

Concerns about reliability of electricity and public health impacts

- > Commenters expressed concerns over potential public health risks of power outages and unreliable electricity supply, especially during winter months.

Summary Themes (cont.)

Suggestions to discuss additional health effects associated with carbon-based fuels and climate change

- > Consider a broader range of contaminants associated with carbon-based fuel emissions.
- > Consider increased risks of other health effects associated with poor air quality: dementia, COVID-19, and endocrine and reproductive health impacts.
- > Discuss social and mental impacts of climate change, such as lack of community cohesion and increased sense of helplessness.
- > The health chapter should also address risks of “storage” and “disposal” of carbon-based fuels.

Staff Recommendations

Tracking of health outcomes

- > Clarify that DOH will continue to track actual health outcome data associated with respiratory and cardiovascular disease and other relevant health outcomes going forward.
- > Indicate that DOH plans to develop subcounty health outcome indicators for additional relevant outcomes.
- > Add text indicating that DOH tracks heat-related illness for NYC and the State excluding NYC; and that DOH has published county level heat-related illness data and will update this data periodically.
- > Add that the State will provide an updated overview every four years of reductions in co-pollutants and benefits to public health (e.g., from regulations and other measures) as per the requirements of the Climate Act.
- > Add language indicating that, as required by the Climate Act, New York State will measure, track, and report on the investments, benefits, and positive outcomes (including health and outdoor air quality) for DACs associated with Clean Energy and Energy Efficiency spending.

Addressing the health concerns about alternative fuels and renewable energy

- > Add more detail about potential direct and indirect impacts and risks of hydrogen and other alternative fuels as appropriate.
- > Incorporate any additional health considerations identified by the CAC's Alternative Fuels subgroup.
- > Emphasize that DOH will continue to monitor scientific literature related renewable energy sources (e.g., wind turbine noise) and health.

Staff Recommendations (cont.)

Enhancing climate justice

- > Incorporate the importance of ensuring that policies to reduce GHG emissions also reduce co-pollutant emissions both statewide and locally with potential associated health benefits in DACs and elsewhere.
- > Better emphasize the benefits of increasing green space in DACs.
- > Better emphasize the public-health importance of enforcement of building codes that prevent flood impacts.

Addressing health concerns related to the reliability of electricity

- > More clearly emphasize the importance of a reliable grid for public health.
- > Add detail as appropriate to health effects of power outages.

Addressing the additional health effects associated with carbon-based fuels and climate change

- > Add additional detail about potential health effects of co-pollutants.
- > Add more detail to the mention of mental health effects.
- > Mention fuel storage and disposal risks.

Follow up Discussion: Transportation

Clean Fuel Standard Design Considerations

At the September 13 CAC meeting, the Council asked how we might be able to design a CFS that addresses the Climate Justice Working Group's concerns:

- Electrification should be prioritized
- Combustion of renewable fuels releases harmful air pollutants

To address those concerns, program design would need to:

- Advance (and not interfere with) the electrification emphasis of CAC scoping plan
- Reduce co-pollutants, especially in Disadvantaged Communities

The following potential program design elements were developed for Council feedback

Potential Clean Fuel Standard Design – Promoting Electrification

- Ensure that credits are easily attainable for electricity use
- Set a clear timeline for carbon intensity reductions out to 2050
 - This will send easily understood price signals and clarify that the long-term trajectory will be designed to meet Climate Act targets
 - May reduce the market signal for biofuel investments that would cease generating credits as the target carbon intensity decreases.
- Reinvest credit value from electrification into supporting further electrification, targeted primarily to Low- and Moderate-Income households and Disadvantaged Communities. Two options could be:
 1. Consistent with Western states' model, allow utilities to aggregate credits for home charging and generate revenue from the sale of those credits. PSC/DPS would regulate the spending of this revenue consistent with this target.
 2. Diverging from Western states' model, direct the State of New York (potentially NYSERDA) to aggregate credits for home charging and sell credits via regularly scheduled auctions. Proceeds would be spent consistent with this target.

Potential Clean Fuel Standard Design – Other DAC Benefits

> Addressing Criteria Pollutants

- Implement a screen limiting eligibility to fuels with lower overall co-pollutant emissions than petroleum fuel being displaced (this may vary by application)
- Fuels not meeting this test would not generate credits

> Additional benefits for Disadvantaged Communities

- Transit agencies earning credit value for their provision of electrified transit reinvest credit value in new/expanded electrified transit in DACs, or electrification of existing high-emitting transit service in DACs.
- Public agencies, non-profits and potentially others could be issued advance credits before deploying a vehicle to address upfront cost of deploying electric transportation that benefit DACs. In this way, the state would support air quality improvements without the use of other state revenue.
- Potential use of credit value from electrification to provide rebates to LMI households. Those rebates could be in the form of cash or credit on a utility bill or could help fund lower carbon options including:
 - Receive a free transit pass good for a specified period of time;
 - Receive supplemental rebate for purchase of new/used EV.

Next Steps

Next Steps

Tentative Council Meetings and Topics

Tuesday, October 25, 2 – 5 pm	Integration Analysis Update Discussion of Feedback: Electricity, Climate Justice, any remaining feedback topics
Monday, November 7, 2 – 5 pm	Discuss redlines of interest
Monday, November 21, 9 am – noon	Discuss redlines of interest
Monday, December 5, 2 – 5 pm	Final resolution of outstanding items
Monday, December 19, 2 – 5 pm	Vote on Final Scoping Plan, member statements