Comments of the Environmental Defense Fund Regarding the Development of New York State's Economywide Cap-and-Invest Regulations

July 2, 2023

I. Executive Summary

Environmental Defense Fund (EDF) appreciates the opportunity to submit the following comments to the New York Department of Environmental Conservation (DEC) and the New York State Energy Research and Development Authority (NYSERDA) on the development of the State's Economywide Cap-and-Invest Regulations. Founded and headquartered in New York, EDF is a non-profit, non-governmental, and non-partisan organization that links science, economics, and law to create innovative, equitable, and cost-effective solutions to urgent environmental problems. EDF has over three million members and activists across the country, including over 260,000 in the state of New York. EDF brings deep expertise to climate policy design, particularly market-based solutions, and has long pursued initiatives at the state, national, and international levels designed to reduce emissions of climate-altering and health-harming air pollutants.

New York's Climate Leadership and Community Protection Act (CLCPA) positions the state as a national and global climate leader. The Climate Action Council's Scoping Plan and Governor Hochul's executive budget articulate the importance of a cap-and-invest program for achieving the emissions requirements of the CLCPA. Additionally, the CLCPA requires that any such regulation not increase co-pollutant emissions in disadvantaged communities (DACs) and in general should maximize benefits in DACs. Establishing an economywide New York cap-and-invest (NYCI) program with declining, enforceable emissions limits consistent with the CLCPA targets, while achieving benefits for DACs and facilitating the competitiveness of New York industries would solidify the State's role as a climate leader. Such a program would serve as an invaluable model for climate policymakers in other states, at the federal level, and around the world.

The rules for the CLCPA's cap-and-invest program will determine how New York's regulated facilities will reduce their emissions over time to comply with the program; effective, environmentally ambitious program design will be critical for making New York's climate commitment a reality. Well-designed program rules are essential to securing quantifiable and enforceable greenhouse gas (GHG) emission reductions consistent with the state's 2030 and 2050 targets. EDF deeply appreciates DEC and NYSERDA's efforts to both develop draft rules and gather input from stakeholders during this informal comment period. Our comments respond to DEC and NYSERDA's questions in areas where EDF is actively engaged and has helped to shape cap-and-invest programs elsewhere. Summarized below are several overarching and key points, many of which are further elaborated throughout our comments:

Ensuring Benefits in Disadvantaged Communities: The NYCI program must be designed to ensure beneficial outcomes for disadvantaged communities. While programs designed to reduce GHG emissions are frequently found to reduce local pollutants that have severe impacts on public health,[1] additional design features can ensure that policies do not perpetuate disproportionate impacts experienced by disadvantaged communities and achieve positive outcomes. The existing CLCPA requirement that at least

[1] Environmental Defense Fund, *How Are Our Air and Climate Connected?*, available at https://www.edf.org/health/how-are-our-air-and-climate-connected.

35%—with a goal of 40%—of investments flow to projects and programs that benefit DACs[2] is a critical piece of achieving these outcomes. Furthermore, EDF recommends that DEC and NYSERDA consider several program design elements to further enhance outcomes for DACs, including:

- *Mandatory emission reductions through the use of source-specific caps:* As a means of ensuring that greenhouse gas emissions and co-pollutants are reduced in communities that are overburdened by air pollution, EDF recommends DEC consider placing individual source-specific greenhouse gas emission reduction requirements on facilities that are contributing to cumulative air pollution burdens in DACs. Such an approach could work alongside the cap-and-invest program's market-based approach to require certain facilities to reduce their emissions at least as quickly as the decline of the program's overall cap on emissions. See further discussion in Section III(B), "Market Rules".

- *Ongoing monitoring, analysis, and program adaptability:* The NYCI program must be responsive to data from ongoing monitoring and analysis of GHG emissions and criteria air pollutants, particularly in DACs. Mechanisms to ensure rigorous monitoring, analysis, and adjustments in response to findings are essential. See further discussion in Section II(F), "Compliance, Enforcement, and Penalties".

- *Disadvantaged community representation in program oversight:* EDF recommends that DEC and NYSERDA define a robust role for the Climate Justice Working Group or otherwise ensure representatives from DACs have an ongoing role in the program review and oversight process. See further discussion in Section II(F), "Compliance, Enforcement, and Penalties".

- *Ambition of the program's declining cap on emissions:* The stringency of the overall cap on emissions has important implications for equity and justice; climate change acts as a threat multiplier, with communities that are already disproportionately impacted by multiple environmental stressors affected first and worst. In addition to pairing the cap-and-invest program's declining limit on emissions with targeted measures to ensure benefits in DACs, the overall program cap must also provide comprehensive coverage of major polluters and require swift, persistent emissions reductions. See further discussion in Section II(D), "Program Ambition".

Opportunities for New York Leadership: The NYCI program has the potential to be the most ambitious and comprehensive in the nation. While there are many program design elements functioning effectively in California, Washington, and other existing cap-and-trade programs which DEC and NYSERDA can readily adopt and seek alignment with, we offer a few areas where we would encourage New York to learn from the experience of programs in other jurisdictions. In addition to adopting robust DAC program design elements, as discussed throughout our comments, we would further urge DEC and NYSERDA to raise the standard for environmental integrity and ambition by considering the following opportunities:

- *Scope of coverage:* Details articulated in the Scoping Plan and by DEC and NYSERDA to date suggest New York is already on the path to establishing a nation-leading cap-and-invest program. We support the Climate Action Council's Scoping Plan recommendations to establish a truly economywide program by covering all emitting sources under the cap and retiring emissions for covered but non-obligated sources. In addition, we support the coverage of as many emitting

[2] New York Environmental Conservation Law (N.Y. ECL) § 75-0117.

sources as practicable as obligated sources from the start of the program. See further discussion in Section II(A), "Applicability and Thresholds".

- *Energy-intensive and trade-exposed industry allocation approach:* If providing allowances directly to energy-intensive and trade-exposed (EITE) industries, EDF recommends that New York consider an allowance allocation methodology that mirrors California's output-based allocation (OBA) approach, which utilizes industry-wide product efficiency benchmarks to determine how many allowances specific facilities should receive. This rewards facilities for in-state production and improvements in the carbon intensity of production compared to similar industrial facilities. See further discussion in Section II(C), "Allowance Allocation".

- *Price ceiling:* EDF recommends *against* the inclusion of a price ceiling in the NYCI program. Traditionally, when a price ceiling is triggered, additional allowances are sold above the cap until demand is met, jeopardizing the integrity of the cap and therefore the environmental effectiveness of the program. As DEC and NYSERDA are well aware, it is urgent that we cut GHG pollution rapidly in line with global temperature targets and the CLCPA targets. The cost of inaction far exceeds anticipated costs of emissions abatement. See further discussion in Section II(E), "Program Stability Mechanisms".

- *Emissions containment reserve:* EDF strongly recommends that New York include an emissions containment reserve (ECR) in its program, which has not been implemented in Washington or California to date. An ECR acts to reduce price volatility in the long-term and creates environmental benefits by ensuring that the supply of allowances is reduced—and therefore the environmental ambition of the program is increased— in a scenario where allowance prices become unexpectedly low. See further discussion in Section II(E), "Program Stability Mechanisms".

- *Budget setting:* To meet CLCPA targets and maximize cumulative pollution reduction under the program, particularly in the next decade, the allowance budget must be carefully and stringently set and follow at least a linear decline to the 2030 and 2050 emissions limits. Program rules should also establish a clear process for ongoing program review and adjustment to ensure that the cap-and-invest program remains responsive to changes in the future, including changes in allowance demand and changes to local air quality. See further discussion in Section II(D), "Program Ambition" and Section II(F), "Compliance, Enforcement, and Penalties: Program Monitoring and Review".

Program Linkage: EDF recommends developing a program that could ultimately be aligned with cap-and-trade and cap-and-invest programs in California, Washington, and Quebec in order to enable a potential linkage between the jurisdictions in the future. Larger, linked markets offer more stability by increasing liquidity, thus decreasing price fluctuations and further insulating the market from potential price shocks. Linkage also reduces abatement costs for participating entities and expands each jurisdiction's base of emission reduction opportunities. This enables increased program ambition (greater pollution reductions on a faster timeline), delivering stronger climate benefits at lower cost. To maintain future linkage as an option, New York should consider alignment with the joint California-Quebec system and Washington's cap-and-invest program throughout its program rules—with particular emphasis given to program ambition, alignment of auction requirements, enforcement, price and emissions containment, and the environmental integrity of program requirements and allowance budgets.

Global Warming Potential (GWP) Accounting Considerations: The CLCPA requires that New York's GHG emissions accounting and economywide limits be expressed in terms of a 20-year GWP (GWP20). In order to develop a cap-and-invest program in New York that can be linked to existing subnational markets that use 100-year GWP (GWP100) for compliance instruments, NY will have to consider whether there is a conversion factor that could adequately account for different GWP values and allow for the exchange of emissions credits across jurisdictions, or whether to take another approach to secure swift abatement of methane. EDF outlines three potential approaches in Section II(B), "Emissions Accounting".

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II. Cap-and-Invest Rulemaking (6 NYCRR Part 252)

A. Applicability and Thresholds

Applicability

EDF broadly supports the approach articulated in the Scoping Plan—and by DEC and NYSERDA—whereby the entire economy would be subject to the emissions cap; with only some sources obligated to surrender allowances, and with allowances associated with emissions from non-obligated sources to be retired.[3] Covering the whole economy with the emissions cap confers the greatest certainty that DEC will achieve the statewide greenhouse gas emissions limits established in the CLCPA. There are a few approaches that DEC could take towards budget-setting that would "cover" all of New York's emissions. Another approach would be to develop projections for expected emissions from "unobligated" sources, and then calibrate the budget (allowable emissions) for the "obligated" sources to ensure that the obligated budget plus unobligated projections are less than the economy-wide cap. It likely makes sense for DEC to evaluate the administrative implications of both, with an eye towards ensuring a mechanism is in place that facilitates an accurate "true-up" based on emissions actuals of unobligated sources, to the extent possible.

EDF recognizes that it may currently be difficult or impractical to obligate all sources of statewide greenhouse gas emissions (as defined by the CLCPA) to participate in NYCI. In general, when establishing which source categories should be obligated, EDF recommends minimizing exemptions (maximizing the number of obligated sources), while keeping the overall program administratively feasible. Broader inclusion, in many cases,[4] gives the State greater control over emissions reductions trends and activities, and therefore increases certainty that CLCPA targets will be met. Furthermore, broader inclusion generally will have the effect of increasing program affordability and flexibility, with a greater set of sources to draw from when achieving least-cost abatement.

More specifically, EDF recommends obligating all sources (above a given emissions threshold—see below) that the State has the legal authority to regulate, and *where it is possible for emissions to be accurately quantified and directly reported*. Furthermore, EDF recommends obligating sources in a way that will maximize the ability to "[e]nsure that activities undertaken to comply with the regulations do not result in a net increase in co-pollutant emissions or otherwise disproportionately burden disadvantaged communities".[5] Below are further sector-specific recommendations.

Electricity

DEC and NYSERDA are seeking input on how the NYCI program should treat electric generating units (EGUs) already subject to the Regional Greenhouse Gas Initiative (RGGI) program. EDF appreciates the agencies' ongoing efforts to further model and analyze the implications of including the electricity sector within NYCI. The results of this analysis will be important to inform the optimal policy design. In principle, EDF believes New York's approach to treatment of EGUs should maximize environmental

[3] New York State Climate Action Council, *New York State Climate Action Council Scoping Plan,* (2022), p. 341.
[4] This depends on what other policies the State employs to achieve emissions reductions from non-obligated sources. For example, incentive-based policies provide little certainty that given emissions targets will be met. Even ancillary regulatory policies that establish emissions rates provide less certainty than the mass-based NYCI cap.
[5] N.Y. ECL § 75-0109(3)(c).

ambition, benefit DACs, and minimize costs. As DEC and NYSERDA continue to assess this question, we encourage consideration of the following potential benefits to obligating electricity under NYCI:

- Obligating New York EGUs under NYCI could help to ensure that DAC guardrails can be established for EGUs. Specifically, source-specific caps—a potentially high-value opportunity to ensure co-pollutant reductions in DAC communities—is not currently an option under RGGI. Including NY EGUs as obligated sources creates the option for establishing SSCs if appropriate for any fossil EGUs.
- Many low-cost abatement options are—by and large—still found in the electric power sector. It is worth considering the opportunity for New York's power sector sources to deliver faster and cheaper near-term reductions than would be secured under other regulations or policies. Neither RGGI nor the Clean Energy Standard are currently designed to fully maximize cost-effective electricity sector carbon dioxide reductions. By obligating electricity under NYCI, New York could secure additional near-term electricity sector reductions and potentially help lower compliance costs across the economy.

Buildings

Current NYCI design discussion (including the Scoping Plan) focuses on reducing building point-source emissions by obligating fuel suppliers. This approach, taken in California and Washington, is appropriate to ensure broad coverage of emitting fuels in a manner that is administratively feasible and helps to control cost impacts to end-use consumers. EDF further recommends that DEC and NYSERDA evaluate whether there are buildings located in, proximate to, or impacting DACs that have on-site fossil fuel sources with significant co-pollutant impacts. If so, DEC may want to consider whether there are opportunities—either within the design of the NYCI program or through complementary measures—to facilitate additional on-site reductions.

Establishing thresholds for obligated emission sources

In establishing thresholds for coverage for obligated sources of emissions under the cap-and-invest program, EDF recommends an approach that secures comprehensive coverage of entities that emit climate pollution while also balancing practical and administrative burdens. In Washington and in California, a threshold of 25,000 MT CO_2e per year has proven to be an effective threshold for program coverage. It is also important that the threshold for reporting of emissions be lower than the threshold for coverage under the cap-and-invest program—that way, facilities will be required to monitor their climate pollution well before triggering coverage under the cap and the state will have a more accurate picture of total statewide greenhouse gas pollution.

B. Emission Accounting

Emissions accounting regarding global warming potential assumptions

The CLCPA uses a different accounting than the conventional format developed for national parties to the United Nations Framework Convention on Climate Change (UNFCCC). It differs in the scope of emissions, the use of gross and net emission totals, and Global Warming Potential (GWP).

Table 1. Comparison of GHG Emission Accounting Formats

	CLCPA	CARB	UNFCCC
Emissions Scope	In-state sources, imported electricity and fossil fuels, exported waste	In-state sources, imported electricity	In-state sources only
Global Warming Potential	20-Year GWP from IPCC 's Fifth Assessment Report (AR5)	100-year GWP from IPCC's Fourth Assessment Report (AR4)	100-year GWP from IPCC's Fourth Assessment Report (AR4)

Explanation of Carbon Dioxide Equivalent

Carbon dioxide equivalent (CO_2e) is a metric that allows us to compare the impact of various greenhouse gases on climate change relative to CO_2. This is measured in terms of the GWP. The GWP is how much a particular GHG contributes to increasing global temperature over a specific time compared to CO_2. This means the ability of different gases to trap heat in the atmosphere over a specific period relative to the same ability of CO_2. **To calculate CO_2e, the emissions of different GHGs are multiplied by their corresponding GWP values.**

By construction, GWP of 1 unit of CO_2 equals 1 unit of CO_2e. Then for any other GHG, the GWP gives how many units of CO_2 will be equivalent to 1 unit of a particular GHG in a determined period.

Consider the example of calculating the CO_2e for 10 tons of methane emissions (tCH_4) over 20 years: According to Intergovernmental Panel on Climate Change (IPCC) 2013 (which is the value that the DEC is using), the GWP of 20 years (GWP20) is 84, meaning that CH_4 is 84 times more potent than CO_2. So, 10 tons of CH_4 multiplied by GWP20 of 84 results in 840 tons of CO_2e. It is common to reflect the measurement period (in this case, 20 years) using the nomenclature “tons of CO_2e-20”, or “tCO_2e-20”.

Further, the choice of GWP values can significantly impact the calculated CO_2e. Different organizations and frameworks may use different GWP values depending on their specific guidelines and scientific assessments. For instance, the IPCC provides GWP values for 20, 100, and 500 years.

If we redo the previous example, but now want to calculate the value over 100 years, first identify that the GWP100 of CH_4 from IPCC 2007 is 25. Therefore, the same 10 tons of CH_4 multiplied by GWP100 of 25 results in 250 tons of CO_2e (250 tCO_2e-100).

Table 2: Global Warming Potential Values

Gas	Conventional AR4 GWP100 (IPCC 2007)	CLCPA[a] AR5 GWP20 (IPCC 2013)	AR6 GWP 100 (IPCC 2021)	AR6 GWP 20 (IPCC 2021)
CO_2	1	1	1	1
CH_4	25	84	27.9	81.2
N_2O	298	264	273	273
HFC-23	14,800	10,800	14,600	12,400
HFC-32	675	2430	771	2690
HFC-41	92	427	135	485
HFC-125	3500	6090	3740	6740
HFC-134a	1430	3580	1530	4140
HFC-143a	4470	6940	5810	7840
HFC-152a	124	506	164	591
HFC-227ea	3220	5360	3600	5850
HFC-236fa	9810	6940	8690	7450
HFC-43-10mee	1640	4310	1600	3960
HFC-245fa	1030	2920	962	3170
HFC-365mfc	794	2660	914	2920
PFC-14	7390	4880	7380	5300
PFC-116	12,200	8210	12,400	8940
PFC-218	8830	6640	9290	6770
PFC-318	10,300	7110	10,200	7400
PFC-3-1-10	8860	6850	10,000	7300
PFC-5-1-14	9300	5890	8620	6260
SF_6	22,800	17,500	25,200	18,300
NF_3	17,200	12,800	17,400	13,400

(a) 6 NYCRR Part 496; Source: IPCC (2007, 2013, 2021)

Linkage Potential Given Divergent GWP Accounting

Linking cap-and-invest programs can be a valuable tool for reducing greenhouse gas emissions as it can help to achieve cost-effectiveness, market liquidity, environmental effectiveness, and political momentum. However, certain rules and regulations between the different jurisdictions must be harmonized.

EDF recommends that New York develop its cap-and-invest program to be compatible with existing subnational markets. The fact that New York must calculate CO_2e emissions using GWP20, while most jurisdictions use GWP100, could lead to issues in a linked market if some sort of correction is not taken when designing the market. To link the NYCI market with other CO_2e emissions markets that include methane (CH_4) and have different GWPs to convert CH_4 into CO_2e, New York would have to establish a mechanism that accounts for the different GWP values and allows for the exchange of emission credits between the markets.

Assuming New York retains the requirement to use GWP20 in its accounting framework to determine whether it is on track to hit economywide goals, and assuming that other states with cap-and-invest programs decline to switch to using GWP20 for their CO_2e values, there are a few approaches available for New York.

EDF outlines three specific options below for New York to consider that could potentially facilitate future linkage with markets in other jurisdictions. In any design where methane is translated and traded in CO_2e, there will be impacts on which sources are incentivized to abate and how.

Under all scenarios, EDF echoes its strong recommendation from October 2020 that *DEC should consider establishing separate emission targets for methane and carbon dioxide,[6] as well as pursue ambitious complementary strategies to directly abate methane emissions.*

As EDF noted in our October 2020 comments, limiting damages from climate change over the next few decades as well as over the next century requires immediate cuts to emissions of both short-lived and long-lived climate pollutants. The most prominent short-lived climate pollutant, methane, has a more pronounced warming effect on the climate over a 12-year period. Carbon dioxide can remain in the atmosphere for thousands of years, so CO_2 emissions entering the atmosphere over the next decade will continue to warm the planet for many decades to come. In order to address climate change damages over all timescales, it is critical that New York reduces emissions of both gases as quickly as possible.

While using GWP20 to establish the emissions baseline and reduction targets is a suitable proxy for capturing near-term climate impacts of greenhouse gases, it has the unintended consequence of deemphasizing long-term climate impacts, and thus could downplay the importance of CO_2 reductions. To place equal emphasis on the importance of reducing emissions of both gases as the state identifies its policy priorities, EDF recommends establishing separate targets for methane and carbon dioxide that align with the overall reduction targets of the CLCPA, which states that, "Greenhouse gas emission limits shall be measured in units of carbon dioxide equivalents **and identified for each individual type of greenhouse gas.**"[7] Targets for both gases should ensure that emissions decline on a timeline consistent with the trajectory needed to limit warming as much as possible.

Scenario 1: New York uses GWP100 for its cap-and-invest program, inclusive of any methane sources that are appropriate as obligated sources, and adds another policy mechanism (or comprehensive set of

[6] Comment of Environmental Defense Fund on Proposed Rule 6 NYCRR Part 496, Statewide Greenhouse Gas Emission Limits (2020, Oct. 27).
[7] N.Y. ECL § 75-0107.

mechanisms) to directly abate more methane emissions (high ambition direct regulations, specific cap for methane, etc.).

Scenario 2: New York establishes separate markets for methane and CO_2 emissions without trade between the two gases. Doing so would avoid the need for a conversion factor to make the different gases fungible. Further, the cap could be set independently, allowing different stringency and alignment of incentives—*while retaining the high value of using a cap as a backstop to ensure emissions decline at the pace and scale required*. Under this structure, New York could create an on-ramp for linking CO_2 to other markets, while retaining the potential to link the methane market with other jurisdictions in the future if they followed suit and separated out methane emissions.

Scenario 3: DEC strives to develop a program that uses a cap-and-invest framework as a comprehensive backstop to ensure New York is on track to achieve its economywide goals, alongside complementary policies. With thoughtful attention paid to the development of New York's allowance-holding requirements, the State can potentially design the program carefully enough to ensure that *compliance* with those allowance-holding requirements would achieve the reductions required by the CLCPA statute.

Specifically, to keep the option open for collaboration and future linkage with other jurisdictions, New York can potentially develop a program that uses a GWP100-denominated allowance that is fungible with allowances in the GWP100 market—yet at the same time use GWP20 in its accounting to determine whether it is on track to hit its economywide goals.

To do this, New York would need to craft its allowance budget and holding requirements so that the allowable emissions are consistent with a declining trajectory to its GWP20 goal: to reduce CO_2e-20 emissions by 40% by 2030 and 85% by 2050 from 1990 levels. This would mean that the number of allowances issued each year would decrease over time, in line with the declining emissions target. In addition, New York would need to ensure that the GWP100-denominated allowances are compatible with the GWP100 market. This would likely involve establishing a conversion factor between GWP20 and GWP100 to trade allowances from the two markets, as outlined in the following steps:

- Methane has a GWP20 of 84 and a GWP100 of 25. If New York wanted to develop a cap-and-invest program that used a GWP100-denominated allowance that was fungible with allowances in the GWP100 market, it could use a conversion factor of 25/84 = 0.29761904761. This would mean that 1 ton of methane would be equivalent to 0.2976 tons of CO_2 for the program. **In this example, 1 ton of CH_4 is initially accounted as 84 tCO_2e-20.**
- Assess the share of each gas under the cap to apply the proper conversion factor.
- In 2020, total methane CO_2e-20 emissions were 139,934,297.00. The conversion into GWP100 would be: 139,934,297*factor = 139,934,297*0.29761904761= 41,647,112.2 tCO_2e-100.
- By applying these conversion factors (one for each gas), New York can express its non-CO_2 emissions in a format compatible with GWP100 and facilitate trading emission allowances and credits with other jurisdictions using GWP100. But at the same time, by setting caps and budgets based on GWP20, they can prioritize and incentivize actions that yield quick results.

It is important to note that this scenario assumes that the jurisdictions willing to link their cap-and-trade programs with New York's are open to accepting emissions converted using the GWP20-to-GWP100 conversion factor.

<u>Emission accounting regarding upstream out of state fossil fuel emissions</u>

EDF has been working for over a decade on analysis of oil and gas supply chain emissions and has conducted extensive scientific research in this area, including on upstream leakage rates. We look forward to sharing more detail on upstream accounting considerations in a future comment submission.

C. Allowance Allocation

EDF supports distribution of allowances primarily through auction with targeted direct allocation of no-cost allowances to electric and gas utilities solely for the purposes of mitigating any price impacts for low-to-moderate income customers. Furthermore, any proceeds from the sale of allocated allowances by electric and gas utilities should be used to benefit the entity's low-to-moderate income customers.

If no-cost allowances are provided to any entity for a purpose other than low-income cost mitigation, a compliance entity should not receive 100% of their allowances, and free allocation should at a minimum decline over time consistent with the rate of decline of the program cap. DEC and NYSERDA should also establish eligibility requirements for any entities receiving direct allowance allocations in order to protect environmental and public health for nearby communities. For example, eligibility for direct allocations could require that entities are in compliance with existing regulations to control greenhouse gas and co-pollutant emissions and that covered facilities, particularly those in or proximate to DACs, provide continuous air pollution monitoring data.

Auctions are the most effective and efficient method for allocating the bulk of allowances under the cap-and-invest program. By utilizing an auction as the default mechanism for distributing allowances, DEC can ensure that regulated businesses obtain allowances through a system that is fair, transparent, generates revenue, and accurately reflects the cost of reducing emissions across New York's economy. This is an approach that has proven effective in California and Washington. California has generated over $23 billion in revenue for climate investments since its cap-and-trade program went into effect in 2013[8], and Washington has generated over $800 million for climate investments since its cap-and-invest program went into effect at the beginning of this year.[9] In addition to raising revenue, auctions also provide a clear, predictable process for ensuring that regulated parties can secure allowances—including for new entrants to the program, or when ownership changes for facilities that produce emissions.

Oregon's Climate Protection Program—which places a declining, enforceable limit on greenhouse gas emissions from transportation and natural gas fuel usage—illustrates some of the drawbacks of foregoing an auction as the default method of distributing allowances. Instead of utilizing an auction, Oregon regulators designed the program to provide 100% of emissions allowances to regulated businesses for free, with the number of allowances that regulated entities receive calculated using an emissions baseline and declining in line with the overall decline of the cap. The program is an important step forward for regulating transportation and natural gas fuels under a declining limit on climate pollution, but by foregoing an auction, Oregon is missing an opportunity to raise revenue for investments in a heathier, safer climate—instead providing valuable credits to polluters with no restrictions or requirements for how the value of allowances is utilized.

<u>Allocation of allowances to EITEs</u>

In considering the direct allocation of allowances to EITE facilities, EDF's core goals are to maintain the environmental integrity of the emissions cap while creating a system that will cut pollution in line with New York's science-based greenhouse gas reduction targets, minimize the risk of emissions leakage,

[8] California Climate Investments, *2023 Annual Report to the Legislature on Californica Climate Investments Using Cap-and-Trade Auction Proceeds* (2023, Apr.), available at https://ww2.arb.ca.gov/sites/default/files/auction-proceeds/cci_annual_report_2023.pdf.

[9] Washington Department of Ecology, *Washington Cap-and-Invest Program Auction #2 May 2023 Public Proceeds Report* (2023, Jun. 28), available at https://apps.ecology.wa.gov/publications/documents/2302058.pdf.

encourage early investment in more efficient technologies to drive near-term emission reductions, and uphold the environmental justice and air quality commitments that are a fundamental part of the CLCPA.

To achieve these goals, direct allocation of allowances to EITEs should start lower than 100% and should decline at a level consistent with the decline of the overall emissions cap from the beginning of cap-and-invest program implementation. As noted above, threshold environmental and public health requirements should similarly apply for EITE entities to be eligible for direct allocations.

EDF recommends that New York consider an allowance allocation methodology for EITEs that mirrors California's output-based allocation (OBA) approach, which utilizes industry-wide product efficiency benchmarks to determine how many allowances specific facilities should receive. OBA ensures that facilities are rewarded based on two key metrics: 1) how much they produce in-state, and 2) how efficiently they produce compared to similar industrial facilities. Facilities that increase their in-state production while reducing their emissions receive relatively more allowances than facilities that are not increasing production or not reducing their emissions.

A key component of this approach is the greenhouse gas benchmark, a metric for comparing emissions performance across similar industrial facilities. Product-based benchmarking establishes an emissions performance standard for each product, which is used to reward more efficient facilities on a comparative basis. Benchmarks are developed on a product-by-product basis and are developed to reflect the emissions intensity of "highly-efficient, low-emitting facilities within each sector." The California Air Resources Board (CARB)—the state agency responsible for implementing California's cap-and-trade program—targeted a level of stringency created by evaluating each industrial sector's production weighted average emissions intensity during a historical base period and targeting the benchmark to allocate 90% of this level per unit produced. In developing and evaluating benchmarks, CARB discovered that this stringency approach, "worked for many sectors but, in some cases, would set the benchmark at a level that was more stringent than the current emissions intensity of any existing Californian facility. For the sectors for which this occurred, staff selected a benchmark based on the "best-in-class" value (i.e., the emissions intensity of the most GHG-efficient California facility)." New York could take a similar approach that leverages the work that California has already done to develop product benchmarks; New York could use California's benchmarks as a starting point and make this manual "best-in-class" adjustment based on New York's facilities on an as-needed basis, particularly for sectors where there may not be multiple producers of a product.

A methodology that uses industry-wide, product-specific benchmarks rewards facilities that have taken early action to increase their efficiency. Product benchmarks also create a stronger incentive for continued improvement by comparing between similar facilities on an ongoing basis.

D. Program Ambition

<u>Defining the cap & allowance budget</u>

In setting the program cap, EDF recommends adopting an approach that approximates actual GHG emissions in the starting year as closely as possible. This could be achieved by projecting emissions for the starting year of the program based on historical trends, economic factors, and complementary policies in place, or by taking an average of annual emissions over a historical period. The latter approach has been effective in Washington, though a projection may end up being most appropriate for New York given the depth of analytical work completed for the Integration Analysis and updates underway, provided the inputs into the projections are transparent and credible.

The annual budget should at a minimum decline at a linear rate from the starting year to the 2030 and then 2050 targets. The rate of decline in the early years of the program could be steeper before leveling off, or follow a step-down decline, but in order to control cumulative GHG pollution—the essential metric to limiting warming—any budget trajectory that does not at least match or exceed a linear decline must be avoided.

In order to establish the allowance budget for obligated sources and the set-aside allowance account for non-obligated sources, accurate projections of emissions levels for non-obligated sources will be essential. Recognizing non-obligated source categories are likely those for which emissions are challenging to measure and measurement capabilities are improving over time, EDF strongly recommends that DEC articulate an allowance budget review and "true-up" process based on reported emissions data and updates to best-in-class methodology for emission estimates. Such a process should enable DEC to adjust the allowance budget in the case that reported and verified emissions from non-obligated sources are higher or lower than estimated.

We would note that emissions in hard-to-measure sectors that might be defined as non-obligated under the program (such as methane emissions from agriculture or landfills) have historically been underestimated. It is worth considering the relative merit of a conservative (i.e., higher relative to current GHG inventory data) approach to projecting emissions for non-obligated sectors.

EDF also encourages DEC to consider establishing source-specific caps, which would fall under the overall cap, for facilities in, near, or impacting cumulative pollution burden in DACs as a means of ensuring pollution in those communities declines *at least* at a rate proportional to statewide pollution cuts. This recommendation is further elaborated in Section III(B), "Market Rules".

DEC's ability to adjust the allowance budget to ensure consistency with GHG emissions limits is essential to meeting New York's statutory greenhouse gas reduction limits. Adjustments should be informed by regular analysis of the State's progress toward GHG limits tied to the GHG reporting requirements and timelines or made at DEC's discretion. This is a critical part of program success, and we recommend DEC detail its methodology and process for review and adjustments as part of the forthcoming rulemaking. We also recommend a more comprehensive NYCI program review process, as elaborated in Section II(F), "Compliance, Enforcement, and Penalties".

E. Program Stability Mechanisms

<u>Cost Containment Reserve, Emission Containment Reserve, Auction Reserve Price</u>

EDF supports an allowance market design that includes a price floor (or auction reserve price (ARP)), emissions containment reserve (ECR), and cost containment reserve (CCR) (or allowance price containment reserve (APCR)), collectively "price triggers", which escalate at the same rate over time. Program rules in Washington and California require that the floor price, ceiling price, and allowance price containment reserve tier prices increase annually by 5% plus the rate of inflation. While we would recommend that New York exclude a hard price ceiling, as elaborated below, we recommend the State take a similar approach to increasing the program's price triggers in a predictable way over time. In setting a long-term trajectory for these prices, is it important to avoid any narrowing of the gap between the price triggers as this could impede proper market function and jeopardize cap integrity, particularly if the CCR tier prices and ceiling price do not increase quickly enough.

Price Ceiling

EDF recommends against the inclusion of a price ceiling in the NYCI program. Traditionally, when a price ceiling is triggered, additional allowances are sold above the cap until demand is met. This jeopardizes the integrity of the cap and therefore the environmental effectiveness of the program. As DEC and NYSERDA are well aware, it is urgent that we cut GHG pollution rapidly in line with global temperature targets and the CLCPA targets. The cost of inaction far exceeds anticipated costs of emissions abatement. A CCR, or multiple CCR tiers, can serve as soft price ceilings to control costs, with allowances set in reserve from the budget specifically for this purpose.

If New York chooses to include a price ceiling, it is important that the program's price ceiling be set sufficiently high enough to: 1) protect the environmental integrity of the program by avoiding the sale of price ceiling units above the cap, and 2) allow the market adequate flexibility to set the appropriate allowance price for incentivizing the necessary level of emissions abatement.

In determining the price ceiling, EDF urges DEC to consider the potential impacts of hitting the price ceiling on New York's progress towards reducing emissions. If the price ceiling is set too low, there is a higher likelihood of hitting the ceiling in early years and releasing allowances above the cap, potentially setting New York back in achieving its emission reduction targets. DEC must ensure that the price ceiling is high enough to incentivize adequate investment in emissions reductions by covered entities. A high price ceiling offers a range of benefits that should be considered, including:

- A higher price ceiling makes it less likely that allowances will be released from the price containment tier—and therefore less likely that allowances from above the cap will be utilized.
- A higher price ceiling provides more market flexibility to allow the market to set the appropriate price for incentivizing abatement.
- A higher price ceiling means more revenue will be available to secure high-quality reductions outside the cap, making it more likely that the state will be able to achieve (or even exceed) the critical ton-for-ton requirement in statute.
- A higher price ceiling could also encourage more emission reductions even if the price does not reach the price ceiling. Companies will plan their reduction investments based on the price certainty from the price ceiling. Therefore, a higher price ceiling could cause businesses to invest in more emissions reductions in order to protect themselves from the risk of higher prices. This activity could contribute to lower emissions overall, making it even less likely that the price ever reaches the ceiling.
- The price ceiling should be significantly higher than the price tiers included in the CCR, which creates a soft price ceiling.

If the price ceiling is met—and therefore price ceiling units are sold above the cap—resulting revenues should be used to secure GHG emission reductions on at least a ton-for-ton basis. This approach, which applies in Washington and California's programs, is an essential safeguard for the environmental integrity of the program in the event that allowance prices reach the price ceiling.

Cost Containment Reserve or Allowance Price Containment Reserve

EDF recommends the inclusion of a Cost Containment Reserve (CCR). It is critical that the CCR tier prices are set high enough to ensure that the reserve functions as intended, as a soft price ceiling. In setting the CCR tier prices and the ceiling price, DEC's key priority should be ensuring that the ceiling and CCR tier prices will function in concert to provide cost containment while protecting the integrity of the cap.

Allowances set aside to populate the CCR should come from under the program's planned emissions budget for the compliance period to maintain the integrity of the declining cap on emissions. Borrowing allowances from future budget years for the CCR should be avoided as it weakens the cumulative emissions reductions the program will deliver.

EDF recommends that New York structure its CCR to mirror the approach that California has taken, wherein 5% of allowances from the program's allowance budget each year are set aside in the reserve, and those allowances are made available at auction at a predictable, sufficiently-high trigger price.

Emissions Containment Reserve

EDF strongly recommends that New York include an emissions containment reserve (ECR)[10] in its cap-and-invest program design. An ECR acts to reduce price volatility in the long-term and creates environmental benefits by ensuring that the supply of allowances is reduced—and therefore the environmental ambition of the program is increased— in a scenario where allowance prices become unexpectedly low. An ECR provides a rule-based approach to adjusting allowance supply, reducing uncertainty, and helping to avoid the need for administrative adjustments to the allowance supply, which can be challenging and administratively burdensome. Establishing an ECR at the beginning of program implementation helps protect against uncertainty and ensure the durability of the program by setting market expectations for the long-term.

Neither Washington nor California have included a functional emissions containment reserve in their programs. Legislators in Washington initially included an ECR in the state's cap-and-invest program, but regulators chose to suspend the ECR trigger price—meaning that the ECR will not be triggered if prices fall to lower-than-expected levels in the future. By failing to utilize an ECR, both California and Washington have missed an important opportunity to ensure that in the long-term, their programs are *accelerating* emissions reductions when it is inexpensive to do so.

EDF recommends improving upon the design of Washington's suspended ECR. Washington's suspended ECR defines the ECR as a separate account which allowances are placed in if the trigger price is reached—however, many of the allowances placed in Washington's ECR can be recycled back into the program's allowance supply through supplemental auctions and direct allocation to EITEs. This approach undermines the ability of the ECR to reliably reduce the excess supply of emissions when prices are low, and therefore reduces the ability of the ECR to prevent the market price from dropping.

To design an ECR effectively, EDF recommends instead defining the ECR as the 10% of allowances that can be removed from any allowance auction at the ECR trigger price. Any auctioned ECR allowances not meeting the trigger price should ideally be retired—or in the next best case, added to the APCR and only made available at the relatively-high APCR tier prices. Additional detail on EDF's recommended ECR design—and a schematic of the recommended ECR configuration—can be found in Resources for the Future's comments on the proposed cap-and-invest program rules in Washington.[11]

[10] Environmental Defense Fund, "As Washington state sets the rules for its ambitious climate program, regulators shouldn't overlook this policy tool" (Sep. 13, 2022), available at https://blogs.edf.org/climate411/2022/09/13/as-washington-state-sets-the-rules-for-its-ambitious-climate-program-regulators-shouldnt-overlook-this-policy-tool/.
[11] Resources for the Future, *Comments on the proposed WAC 173-446: Climate Commitment Act Program Rule* (Jul. 15, 2022), available at: https://www.rff.org/publications/testimony-and-public-comments/comments-on-the-proposed-wac-173-446-climate-commitment-act-program-rule/.

Banking and borrowing

A key outcome of an ambitious cap-and-invest program is cumulative abatement of greenhouse gas emissions over time. Given the near-term impact of methane pollution and the cumulative build-up of long-lived greenhouse gases that can stay in the atmosphere for centuries, the program's declining cap must deliver swift, persistent emissions reductions—especially in the near-term. Banking can be an effective tool for increasing the level of emissions abatement in the near-term; it allows covered entities to save allowances for use in a later year, providing a financial incentive to reduce emissions more than would otherwise be required in the near-term. This creates a climate benefit, reducing the level of cumulative emissions under the program cap. Banking can also provide cost benefits, giving covered entities flexibility in the timing of their emissions budgets without negatively impacting the cumulative emissions budget of the program.

To maximize climate benefits, allowance banking should operate under a cap that is ambitious and stringent. The pace at which the cap declines—and therefore the total supply of allowances available in each year—is the key determinant of the program's climate impact. In California, successful implementation of complementary policies has led to lower allowance demand than anticipated at the cap-and-trade program's outset. This lower-than-anticipated demand has led to lower prices, enabling the accumulation of a substantial bank of allowances. California's Independent Emissions Market Advisory Committee has recommended steps that California can take to reduce its allowance supply, increasing the program's climate ambition.[12] However, New York will face a different situation—with a steeper cap decline in the early years of the program, broad coverage from the outset, and therefore a much lower potential for compliance entities to build up a large bank of allowances. The likelihood of compliance entities accumulating a large bank of allowances would be further reduced through the inclusion of an emissions containment reserve, which would ensure that the overall allowance supply is reduced if prices become lower than expected.

EDF recommends that DEC disallow any borrowing of allowances from the emissions budget of future years for program compliance. Borrowing functions as the inverse of banking; it involves utilizing allowances from the emissions budget of a future year, enabling a higher level of emissions in the near-term and leading to higher levels of cumulative emissions—a detriment to the climate. Borrowing can also create supply constraints in future years, which could potentially increase volatility in the market.

F. Compliance, Enforcement, and Penalties

Timing of compliance

While EDF does not have a strong view on the duration of the compliance periods, we recommend that DEC consider adopting California's approach which has been proven over the last decade of the program's operation. The program includes three-year compliance periods where obligated entities are required to surrender allowances each year for 30% of the previous year's emissions and allowances for the balance of their emissions at the end of the period. A multi-year compliance period has the benefit of helping to avoid price spikes and can smooth market function. The annual or regular partial compliance deadlines, characteristic of both California and Washington's programs, can help to ensure obligated

[12] California Independent Emissions Market Advisory Committee (IEMAC), *2022 Annual Report of the Independent Emissions Market Advisory Committee* (Feb. 3, 2023), available at https://calepa.ca.gov/wp-content/uploads/sites/6/2023/02/2022-ANNUAL-REPORT-OF-THE-INDEPENDENT-EMISSIONS-MARKET-ADVISORY-COMMITTEE-2.pdf.

entities are on track and positioned to meet their full allowance obligations at the end of the compliance period.

Penalties and enforcement

Robust enforcement and stringent penalties for non-compliance are critical elements for effective program implementation. Penalties must be strong enough to ensure program compliance, and the amount of the penalty must be clear and predictable for regulated parties. California's approach utilizes penalty allowances, wherein covered entities are required to submit four penalty allowances per allowance that the entity fails to submit by the compliance deadline. This has proven to be a strong model, with a near 100% compliance rate over the decade that California's program has been operational.[13] Washington utilizes a similar approach, with a combination of penalty allowances and monetary fines for violations.

EDF also recommends ensuring that there are penalties in place for misrepresentation or misreporting of annual greenhouse gas emission data to ensure that compliance obligations under the program are an accurate representation of emissions.

Program Monitoring and Review

EDF recommends a regular and robust NYCI program review take place in conjunction with required CLCPA implementation reporting and Scoping Plan update processes.[14] Regular program review can be a transparent and effective mechanism for adaptive management, ensuring that the program is delivering desired outcomes and keeping New York on track to meet its emissions limits and delivering benefits to DACs. As part of the NYCI rulemaking, EDF encourages DEC to provide detail about how the cap-and-invest components of the CLCPA program review process will be structured—and solicit feedback on that structure—so that the program review process is predictable, clear, and accessible to all stakeholders.

EDF would underscore the following critical components of such a review, many elements of which are required by the CLCPA implementation reporting provisions:

- Assess progress towards New York's 2030 and 2050 emissions limits and the cumulative emissions implications of current program design.
- Assess the performance (in terms of reducing emissions cost effectively) of existing regulations, including the NYCI program and complementary or sector-specific policies. Complementary policies and their performance are a key determinant of allowance demand, and information on these policies can help DEC calibrate allowance supply and build a better understanding of the role that cap-and-invest is playing in reducing New York's emissions. The effect of policies related to non-obligated NYCI sectors will be particularly important to assess to ensure those sectors are reducing emissions on pace with CLCPA limits.
- Assess reductions in co-pollutants, benefits to public health, and whether NYCI regulations disproportionately burden DACs.
    - Air quality monitoring should be used to evaluate whether pollution is worsening in DACs or not improving as quickly as in other communities. We recommend using a cumulative impacts approach to capture the true environmental health impacts faced by communities. In addition to leveraging existing programs, monitoring can be funded through program revenue.

[13] California Air Resources Board, "Cap-and-Trade Program: Frequently Asked Questions" (September 2022), available at https://ww2.arb.ca.gov/sites/default/files/2022-09/nc-FAQ_CT.pdf.
[14] N.Y. ECL § 75-0103, 75-0119

- Clear mechanisms for the program to adapt if monitoring shows pollution is not declining in DACs, including specific, mandatory follow-up measures. Remedies could include for example, increased regulation of co-pollutants, or use of program revenues reserved for funding environmental or public health programs in impacted communities.

- Assess whether the program can support increased ambition. For example, evaluate the volume of banked allowances held by regulated entities. Banking is an important design feature to enable near-term emission reductions, which in turn maximize the cumulative emission reductions that are most important to the climate. DEC should regularly evaluate whether the size of the allowance bank supports greater ambition in the cap moving forward—meaning fewer allowances released in future compliance years. Similarly, DEC should evaluate the amount of allowances held in reserves, again to ensure that the overall availability of allowances remains aligned with maximizing the cumulative abatement trajectory towards the statutory emission reduction targets.

This list is non-exhaustive, and additional elements of the program's environmental performance and market function will need to be identified for inclusion in reviews.

In addition to consultation with the CJWG on implementation reporting and Scoping Plan updates, as required under the CLCPA, EDF also recommends that DEC define an ongoing role for the CJWG in the NYCI program review and oversight process in particular. EDF recommends that New York consider Washington's approach as an example—Washington's cap-and-invest program is subject to ongoing oversight by the state's Environmental Justice Council, which provides recommendations on program development, program implementation, and the investment of program revenue. Washington's Environmental Justice Council is also responsible for recommending goals for reducing local air pollution in overburdened communities, and the Council receives annual reports from Washington's Department of Ecology on progress towards meeting environmental justice and health goals. By laying out a clear process for oversight and providing adequate resources (including technical support), New York can build on Washington's approach and ensure that environmental justice advocates have a voice in both program development and longer-term program implementation.

III. Auction Rulemaking (6 NYCRR Part 510)

A. Auction Rules

Generally, EDF recommends aligning NYCI's auction rules as closely as practicable with the requirements of California and Washington's programs, which have proven to be an effective approach. These programs feature quarterly auctions with advance notice of total allowances offered for sale and any relevant price triggers, such as the auction floor price and APCR tier prices. Auctions are conducted using a single-round, sealed-bid, uniform-price format, resulting in a single settlement price for all awarded allowances. Eligible entities include those with a compliance obligation as well as opt-in entities and general market participants. To participate in auctions, entities must submit an application and be registered with the program's administering agency as well as the compliance tracking service. Auction participants must disclose any affiliated entities or business relationships with other participating entities. Participants are subject to purchase and holding limits, also communicated in advance of each auction. A centralized tracking system is utilized to provide a clear understanding of how allowances move through the system, tracking allowance from issuance to ownership, potential transfer, and retirement for compliance.

The auction mechanics, timing, and format should be designed with the goal of enabling potential

program linkage with other jurisdictions. To this end, we recommend DEC and NYSERDA consider the use of WCI, Inc. as the auction administrator and WCI, Inc.'s web-based Compliance Instrument Tracking System Service (CITSS) and auction platform. WCI, Inc.'s tracking system and auction platform have proven highly effective for administering the California-Quebec program auctions over the past decade, and now the Washington program auctions. Using WCI, Inc.'s proven auction infrastructure will set New York up for success while helping to further align New York's program with the California-Quebec system and Washington's program in the event of a future linkage.

B. Market Rules

Driving mandatory emissions reductions through source-specific caps to benefit DACs.

EDF urges DEC to include guardrails in the cap-and-invest program to ensure an equitable distribution of benefits from reductions in greenhouse gas emissions and health-harming co-pollutants. The ability to buy and sell allowances provides many benefits for cost-effectiveness and program affordability—however, this flexibility must be paired with specific provisions that ensure greenhouse gas emissions will decline at least as quickly as the overall cap in DACs.

EDF recommends DEC consider individual source-specific GHG emissions reduction requirements in the cap-and-invest program. We refer to these requirements using the Scoping Plan terminology of source-specific caps, or SSCs. As stated in the Scoping Plan, these SSCs could apply to facilities "in, proximate to, or impacting Disadvantaged Communities." Applying these SSCs to a specific subset of sources would allow other sources to benefit from the flexibility of carbon pricing (thus making the program more affordable) while still guaranteeing greenhouse gas emission reductions—and the attendant co-pollutant reductions— from the sources that are most harmful to DACs.

In considering which facilities are proximate to or impacting DACs—and therefore, should be subject to SSCs—we recommend considering the following approaches:

- Source-specific caps could be triggered for any facility determined to be contributing to the cumulative air pollution burden for a DAC.
- Source-specific GHG caps could also be triggered for any source that has not adopted best available control technologies (BACT) for all conventional pollutant emissions, or for any facility that has had a material violation under existing air pollution control regulations in the prior calendar year.

To mitigate potentially higher costs for sources with an SSC, DEC could also consider creating a revolving loan fund or other competitive incentive program to help finance BACT investments at sources with SSCs. Such a program could be funded through allowance revenue or by other mechanisms.

In 2021, EDF developed proposed climate pollution regulations in Colorado that allowed for flexibility in meeting economy-wide pollution limits while establishing facility-specific limits for any facility that violated an air quality permit or that was found to contribute to cumulative air pollution burden in a disadvantaged community.[15] For additional information on facility-specific or source-specific restrictions on greenhouse gas emissions, we also recommend the 2022 Annual Report from California's Independent

[15] Environmental Defense Fund, *Memorandum of Notice for Amendment to Regulation 22 to Add Colorado Greenhouse Gas Program, Attachment: Proposed Regulation Language – Regulation 22, Parts A and C* (2021, Feb. 4), available at https://www.edf.org/sites/default/files/documents/Proposed%20Amendments%20to%20Regulation%2022%20Text%20and%20SBAP_0.pdf. For relevant proposed regulatory language see p. 30.

Emissions Market Advisory Committee (IEMAC), which provides an in-depth discussion of options and considerations for facility-level restrictions on emissions to benefit disadvantaged communities.[16]

Any NYCI program guardrails implemented to benefit DACs must be paired with the effective and timely implementation of existing and related policies and programs to protect DACs, such as the ongoing community air monitoring program and air pollution reduction strategies, as required under the CLCPA.[17]

Trading

EDF supports the use of trading to minimize program compliance costs – thereby boosting program affordability for New Yorkers. Trading gives regulated businesses a strong financial incentive to reduce emissions faster, and allows the market to find the cheapest methods for cutting pollution to stay under the program's cap.

This includes support for trading among sources subject to SSCs, understanding that regulated entities subject to SSCs cannot purchase or hold allowances *above* their source-specific cap. SSCs would place an enforceable, declining limit on greenhouse gas emissions from specific facilities, ensuring that their emissions decline at least as quickly as the decline of the overall cap. However, we also want to provide an incentive for sources subject to a SSC to reduce emissions even faster than the pace set by the overall cap. Trading incentivizes such facilities to cut emissions even faster than the SSC requires because they have the option to sell allowances, thus increasing their abatement—while the SSC ensures that trading will not result in greater emissions at these sources.

EDF supports New York's pursuit of linkage with other jurisdictions, such as California, Quebec, and Washington. In a linked market, covered entities in all the linked jurisdictions would participate in shared auctions and would be able to trade allowances. Linkage creates an even greater pool of low-cost opportunities to cut emissions, amplifying the cost-effectiveness benefits of trading and increasing further increasing the linked jurisdiction's ability to secure deep emission reductions in an affordable way.

Ongoing monitoring, analysis, and adaptability

As is further elaborated in Section II F., "Program Monitoring and Review", local air pollution monitoring and adjustment mechanisms should inform adaptation of SSCs, any additional DAC guardrails, or other aspects of the NYCI program design to ensure GHG and co-pollutants are declining at pace in DACs.

As is further elaborated in Section II(F)., "Program Monitoring and Review", local air pollution monitoring and adjustment mechanisms should inform adaptation of SSCs, any additional DAC guardrails, and other aspects of the NYCI program to ensure GHG and co-pollutants are declining at pace in DACs.

IV. GHG Reporting Rulemaking (6 NYCRR Part 253)

EDF recommends that DEC advance a comprehensive reporting rule that requires all emitting sources and all fuel and electricity importers to report greenhouse gas emissions data to the Agency. The adoption and implementation of a robust and comprehensive reporting rule is important for long-term achievement of the state's climate objectives and will aid the state in tracking progress towards the CLCPA emissions

[16] California Independent Emissions Market Advisory Committee (IEMAC), *2022 Annual Report of the Independent Emissions Market Advisory Committee* (Feb. 3, 2023), available at https://calepa.ca.gov/wp-content/uploads/sites/6/2023/02/2022-ANNUAL-REPORT-OF-THE-INDEPENDENT-EMISSIONS-MARKET-ADVISORY-COMMITTEE-2.pdf.
[17] N.Y. ECL § 75-0115.

limits and refining the NYCI program over time. In addition to reporting from entities with a NYCI compliance obligation, a comprehensive rule should require reporting from sources that fall below the NYCI applicability thresholds and those that fall within the non-obligated sectors of the NYCI program. Such a rule would also include sources that fall below the federal Greenhouse Gas Reporting Protocol thresholds established under 40 CFR Part 98. This is common across reporting rules for climate leadership states working to achieve ambitious, science-based emissions targets.

State-specific GHG reporting rules in place in California, Washington, Oregon, and elsewhere provide examples of comprehensive reporting requirements.[18] We encourage DEC to consider these and would highlight Oregon Department of Environmental Quality's Greenhouse Gas Reporting Program as one that is particularly robust and comprehensive.[19]

DEC should also ensure that it collects or has access to necessary product data from EITEs in order to inform any direct allocation of allowances that EITEs might receive. This includes data on the value of EITE facilities' annual production, which is needed in order to adequately determine emissions intensity as a measure of emissions per unit of output or value added.

We encourage DEC to require a rapid compliance timeline for emissions and related data reporting, as this framework will be valuable when operationalizing the cap-and-invest compliance requirements and adjusting the program budget over time.

V. Conclusion

We appreciate the opportunity to submit feedback as DEC and NYSERDA develop the NY cap-and-invest proposed rules. EDF appreciates the work to date of the agencies and the Climate Action Council to outline a structure for the program that ensures high climate ambition and environmental integrity, delivers benefits for disadvantaged communities, and builds a foundation for partnership with other jurisdictions. We look forward to working with DEC and NYSERDA as the rulemaking process continues.

[18] 17 California Code of Regulations § 95100-95163; 173 Washington Administrative Code § 441; 340 Oregon Administrative Rules § 215.
[19] 340 OAR § 215, available at https://secure.sos.state.or.us/oard/displayDivisionRules.action?selectedDivision=1538.