Statewide and Cross-Sector Policies

Chapter 17. Economywide Strategies

17.1 Overview

The Climate Action Council (Council) has identified the need for a comprehensive policy that supports the achievement of the requirements and goals of the Climate Act, including ensuring that the Climate Act's emission limits are met.[297] A well-designed policy would support clean technology market development and send a consistent market signal across all economic sectors that yields the necessary emission reductions as individuals and businesses make decisions that reduce their emissions. It would provide an additional source of funding, alongside federal programs and other funding sources, to implement policies identified in this Scoping Plan, particularly policies that require State investment or State funding of incentive programs, including investments to benefit Disadvantaged Communities. Equity should be integrated into the design of any economywide strategy, prioritizing air quality improvement in Disadvantaged Communities and accounting for costs realized by low- and moderate-income (LMI) New Yorkers. Pursuant to the Climate Act, a policy would be designed to mitigate emissions leakage. Finally, an economywide strategy would be implemented as a complement to, not as a replacement for, other strategies in the Scoping Plan. A well-designed economywide program will bring about change in the market and promote equity in a way that does not unduly burden New Yorkers or create disadvantages to New York's competitive position with other states, with the nation as a whole, or with the global economy.

After initially identifying three options for consideration, the Council narrowed its consideration to two economywide GHG policies: a tax or fee establishing a carbon price and a program that caps emissions across the economy, or within particular sectors, and allocates emission allowances primarily through an auction mechanism that provide revenues for investment, known as "cap-and-invest." The Council concluded that clean energy supply standards, which would require providers of energy across the economy to reduce the carbon intensity of fuels they introduce into commerce, can complement economywide structures as discussed in this chapter, but because such standards apply only to energy sources, they do not offer the same comprehensive coverage and opportunities for cross-sector efficiency. For this reason, the Council determined that clean energy supply standards (like the Clean Energy

[297] ECL § 75-0109.

Standard [CES] for electricity and clean transportation standard) should be considered separately under sectoral chapters.

A carbon tax/fee would establish the price per ton of greenhouse gas (GHG) emissions that regulated entities would pay. Carbon tax/fee proposals have been considered by the New York State Legislature, and the New York Independent System Operator (NYISO) put forward a proposal for a fee on every ton of carbon dioxide (CO_2) emission from the electricity sector. A cap-and-invest program would also result in a price on emissions, but indirectly as the government entity establishes the emissions cap while the price is determined based on the available supply of and demand for emission allowances, rather than directly by the government entity. It would require regulated entities to purchase emission allowances, usually at an auction, to match their emissions. The difference from carbon tax/fee, however, is that a cap-and-invest program provides emissions certainty. A cap-and-invest program would limit the number of allowances sold, with the available amount decreasing year-by-year to ensure that overall aggregate emissions decline. Cap-and-invest programs have been implemented economywide in California and Quebec, and Washington recently passed legislation and adopted a rule to establish such a program. There are also existing sector-specific cap-and-invest programs, such as the Regional Greenhouse Gas Initiative (RGGI), that cover emissions from the electricity sector and include New York as a participant. In contrast to a carbon tax or fee, which would have to be enacted by the Legislature, the New York State Department of Environmental Conservation (DEC) could promulgate regulations establishing a cap-and-invest program using its existing authority to adopt regulations that reduce emissions.

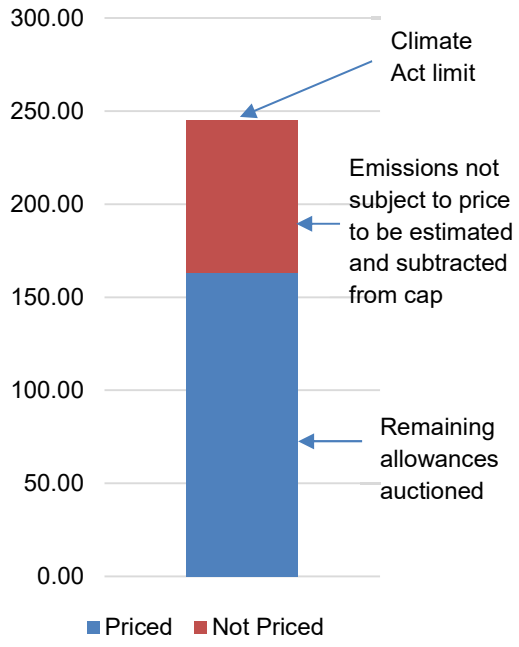
Both carbon tax/fee and cap-and-invest programs provide a price signal stimulating lower emission choices and a source of funding for public investment and incentive programs. Both would regulate the bulk of energy, industrial, and other emissions in New York, including both fossil fuels and alternative fuels consistent with the requirements of the Climate Act. Both would be structured to comply with Environmental Conservation Law (ECL) § 75-0117, which requires that at least 35% of the overall benefits of spending be directed to Disadvantaged Communities, with a goal of 40%. But they have one fundamental difference: while both types of programs place a charge on emissions and invest the revenues, only a cap-and-invest program would implement a declining, enforceable cap on emissions overall and a mechanism for State enforcement of such limits against individual sources, thus ensuring that aggregate emissions do not exceed the statewide emission limits.

17.2 Proposed Program Design to Meet Climate Act Requirements

The Council recommends implementation of a cap-and-invest program designed to meet the Climate Act's requirements and goals, including meeting the economywide emission limits, promoting climate justice, and mitigating leakage. Mindful of current energy price burdens on New York households, the Council recommends gradually phasing in the program with cost containment mechanisms and rebates or subsidies to offset the burden of increased energy prices on LMI households.

Structure of Program to Ensure Compliance with Statewide Emission Limits

To ensure compliance with the statewide emission limits for 2030 and 2050, all emission sectors would be included under a declining, enforceable cap. A few source categories, however, would not have a compliance obligation, at least at the outset, due to federal constraints (e.g., aviation), difficulties monitoring emissions from the individual sources in the emission sector (e.g., non-fossil fuel agricultural emissions), or other considerations like consistency with RGGI. Monitoring emissions from those source categories and removing those emissions from the statewide cap (through the retirement of emission allowances) will ensure that the statewide emission limit is met.



Note: All sectors in New York would be covered by the cap. Only remaining emissions after considering difficult-to-cover sectors would be subject to allowance retirement requirements.

The program would establish enforceable emission caps that decline year-by-year, including emission caps for 2030 and 2050 that correspond with the statewide emission limits established pursuant to the Climate Act and adopted by DEC in 6 NYCRR Part 496. To ensure that the Climate Act's emission limits are met, the State would make emission allowances available at quantities that do not exceed the emissions cap for each year. Allowances corresponding to the emissions of those sectors without a compliance obligation would be retired, with the remainder of allowances being made available to the market and sources with compliance obligations, primarily by auction. The source categories in most sectors would have a compliance obligation, as identified below:

- Transportation: Producers and distributors of transportation fuels would have a compliance obligation equal to the carbon content of fuels they produce or distribute.

- Heating fuels: Utilities and other distributors of heating fuels would have a compliance obligation equal to the carbon content of the fuels they distribute.
- Industry: Industrial entities would have a compliance obligation equal to emissions from process operations and fuel combustion.
- Waste sector: Sources in this sector, including incinerators, landfills, and wastewater treatment plants, would be responsible for emissions of GHGs, including fugitive methane emissions, to the extent reasonably accurate tools for calculating such emissions are available.
- Electricity sector: Sources would be responsible for emissions from the combustion of fuels, although the program should be structured to reflect that many of these sources are also subject to RGGI. This could mean covering electricity exclusively under either the new New York system or RGGI, but not both, or covering the sector under both systems but providing credits for payments made for RGGI allowances under New York's system.

Where the Climate Act includes upstream out-of-state emissions in New York State's inventory of statewide GHG emissions, these emissions would also be covered by this program.

In general, most allowances would be made available to the regulated entities through an auction mechanism. The clearing price in such an auction would establish the price of a ton of GHG emissions in terms of carbon dioxide equivalent (CO_2e) under the Climate Act in New York. At the end of each compliance period of one year or more, each regulated entity would be required to surrender allowances equal to the emissions it is responsible for in that period. For any allowances issued but unused at the end of a compliance period, the cap-and-invest system can allow some banking, but the State should consider careful limits on this mechanism to ensure emissions do not exceed 2030 or 2050 limits and to provide for consistent progress toward those directives in intervening years.

The State could use proceeds from the auction for a variety of purposes consistent with the Climate Act, including investing in clean energy and emission reduction strategies and targeting investments to meet the Climate Act's requirements for investment in Disadvantaged Communities. As described in more detail below, at least 35%, with a goal of more than 40%, of the auction proceeds would be invested in projects and programs that benefit Disadvantaged Communities identified by the Climate Justice Working Group (CJWG). Other areas of investment include funding other emission reduction strategies identified in this Scoping Plan and funding just transition strategies that include programs for retraining and providing wage and pension support for displaced workers.

Addressing Equity and Energy Affordability

As required by the Climate Act, the implementing agencies, DEC and the New York State Energy Research and Development Authority (NYSERDA), potentially in collaboration with other agencies, would develop investment programs that ensure at least 35%, with a goal of 40%, of the benefits of investments flow to Disadvantaged Communities. Those agencies should establish a process to fully engage impacted communities in the identification and implementation of investment strategies in their communities funded with auction proceeds. Projects funded by auction proceeds in Disadvantaged Communities should incorporate a variety of workforce standards, including preferential hire for members of underrepresented communities, individuals with disability, unemployed individuals and others, and competitive advantage for businesses housed and operating in Disadvantaged Communities.

In addition, DEC should evaluate and adopt program design elements that would provide additional assurance that emissions will decline in Disadvantaged Communities. Potential mechanisms for DEC to consider, based on continued engagement with environmental justice and other stakeholders, could include limits on trading allowances that preclude sources within, proximate to, or impacting Disadvantaged Communities from purchasing allowances from outside Disadvantaged Communities; source-specific caps or other mechanisms designed to prioritize reduction of GHG or co-pollutant emissions from sources in, proximate to, or impacting Disadvantaged Communities; and targeted air quality monitoring to ensure continued air quality improvement in Disadvantaged Communities. DEC should also consider whether requiring a multiple of allowances for sources within, proximate to, or impacting Disadvantaged Communities would provide additional protection. In addition, emissions in Disadvantaged Communities would be mitigated by other Scoping Plan strategies and DEC clean air regulatory programs and can be targeted to address areas of higher pollutant levels identified by DEC's comprehensive air monitoring initiatives.

Members of the CJWG have expressed concern that market-based programs that allow emission trading can result in, or allow the continuation of, pollution hotspots in their communities. The design elements described above are intended to preclude that outcome, consistent with Section 7(3) and other requirements of the Climate Act, [298] while ensuring that residents of Disadvantaged Communities share in the air quality, public health, and economic benefits of the clean energy transition. As it proceeds with development of the regulatory program, DEC would engage extensively with representatives of

[298] *See, e.g.,* ECL § 75-0109(3)(c) and (d).

Disadvantaged Communities, including the CJWG, to ensure that their input informs development of the program.

To ensure consistency with Climate Act requirements, the state could produce Disadvantaged Community investment plans intended to ensure air quality improvements every five years in consultation with representatives of Disadvantaged Communities and annual outcome reports for investments enabled with auction proceeds. Plans would identify priority program areas and pollutants, including establishing success metrics for improvements in designated geographic areas. Annual reports would evaluate progress against these metrics and can suggest amendments to plans to improve outcomes.

In addition, the agencies should develop and implement measures to mitigate any impact of higher energy prices on New York households and small business, particularly LMI households. One mechanism would be to use some portion of the auction proceeds for per-household rebates, or climate dividends, that mitigate the impact of higher energy prices. Mitigation methods benefiting LMI households should be designed in a way that does not disqualify them for other assistance, thereby canceling out the intended benefit. In designing and implementing a cap-and-invest system, the State should also evaluate affordability for non-LMI households and businesses and consider mechanisms to manage these impacts. One option would be the inclusion of a cost-containment reserve to moderate allowance prices; this mechanism is already used in RGGI. In developing the program, DEC and NYSERDA should evaluate likely costs and propose additional mitigations as needed.

Energy- or Emission-Intensive and Trade-Exposed Industries and Leakage

To implement the Climate Act's requirement to limit emission leakage, DEC should develop a mechanism to allocate allowances to energy-intensive or emission-intensive industries that are also trade-exposed. This would require the development of criteria to establish the thresholds above which industries would be deemed to be energy- or emission-intensive as well as trade-exposed. Appendix C sets out a method by which the State could identify these industries, and any final definition would be subject to public input. By identifying these energy-intensive and trade-exposed (EITE) industries, the State would be identifying which sectors are vulnerable to leakage. Sources in EITE industries could be allocated allowances based on their output. To ensure that these sources have a continuing incentive to reduce emissions, they could be allocated emissions on a benchmarking approach that is based on the emission intensity of well-performing sources within the industry. Sources with a higher emission intensity than the benchmark would need to acquire any additional allowances needed in the allowance auction. Over time, the benchmark would be reduced in accordance with the reduction trajectory of the emissions cap,

providing a further incentive for covered sources to implement technological advancements to reduce emissions. The measures align with the recommendations from the Just Transition Working Group (JTWG) on measures to minimize leakage and anti-competitive impacts of policies contained in Appendix C, as well as the discussion on leakage in *Chapter 7. Just Transition* and *Chapter 14. Industry* pertaining to impacts on jobs and industry.

17.3 Application of Evaluation Criteria

The Council's recommendation of a cap-and-invest program encompassing all source categories is supported by the application of a variety of criteria, identified in the following sections.

Certainty of Emission Reductions

A primary benefit of a cap-and-invest program is that it would cap and reduce emissions, providing legally binding emission certainty. Setting an economywide cap at a level corresponding with the Climate Act's emission limits provides certainty that those emission limits will be met, while also providing a mechanism for State enforcement of such limits against individual GHG emission sources, as required by the Climate Act.

Although a carbon tax/fee program likely would reduce emissions, it would not ensure a particular level of collective emission reductions from all affected sources. The reductions achieved through imposing a price could vary based on multiple factors including market conditions, weather, technological developments, and the effect of other policies. If the price were set too low, the program might not yield the desired or required level of emission reductions. More certainty in the level of emission reductions could be achieved by including mechanisms to adjust the price upward or downward in response to emission-reduction levels, but ultimately the initial price level and the escalation rates would be, at best, an informed guess.

The inclusion of offset programs in some cap-and-invest programs, such as RGGI, has engendered some criticism, particularly from environmental justice organizations that contend that the availability of offsets reduces the certainty of emission reductions from the regulated sources. In any cap-and-invest program adopted to meet Climate Act requirements, the role of offsets would have to be strictly limited or even prohibited in accordance with the requirements of ECL § 75-0109(4). Under that provision, DEC would have to ensure that any Alternative Compliance Mechanism that is adopted would meet various requirements specified in that provision of the Climate Act. Therefore, offsets would have little, if any, role under a cap-and-invest program designed to comply with the Climate Act.

Price Certainty

Price certainty helps businesses and investors make informed planning and investment decisions. Because renewable energy and other non-emitting energy sources would not bear any cost, potential investors in those technologies could calculate the market advantage attributable to the carbon price in making investment decisions. Likewise, an entity considering investing in emission-reducing technologies could calculate the savings that would result from those investments. Relatedly, the owner of an emitting source could use the certainty of the future price to make an informed decision about when the source would become uneconomic. The certainty of the future prices might also allow consumers to make more informed decisions.

Development of a cap-and-invest program would include measures to provide a level of price certainty. Examples include establishing a minimum allowance price and an emission containment reserve under which fewer allowances are made available if prices are below a specified level, similar to the RGGI program. Cap-and-invest programs could also include soft price ceilings to limit costs. RGGI, for example, includes a cost containment reserve mechanism that releases additional allowances at higher price levels. DEC would design such measures based on stakeholder input and to ensure they do not interfere with ensuring compliance with the Climate Act's overall statewide emission limits.

Carbon tax/fee would generally provide more price certainty because the price trajectory is established in the governing laws or regulations, rather than determined indirectly based on the government-established emissions cap. If, as indicated above, the price is adjusted over time to increase the likelihood of meeting the statewide emission limits, that would have the effect of reducing price certainty, but it would still not provide the same level of emissions reduction certainty as a cap-and-invest program.

Prioritizing Emission Reductions and Avoiding Hotspots in Disadvantaged Communities

The Climate Act requires the Scoping Plan to "identify measures to maximize reductions of both GHG emissions and co-pollutants in disadvantaged communities."[299] Likewise, DEC's regulations to achieve the statewide emission limits must "prioritize measures to maximize net reductions of GHGs and co-pollutants in disadvantaged communities."[300] Carbon tax/fee and cap-and-invest programs would both be subject to the Climate Act's requirement that Disadvantaged Communities receive at least 35%, with a

[299] ECL § 75-0103(14)(d).

[300] ECL § 75-0109(3)(d). See also Climate Act § 7(3).

goal of 40%, of the benefits of clean energy and energy efficiency spending. Either type of program could include mechanisms to ensure compliance with the Climate Act, including a process for obtaining input in investment decisions from Disadvantaged Communities.[301] In their traditional form, because both impose a uniform price for emissions across an economy, neither program offers an advantage relative to the other for local, specific air quality improvements.

As indicated above, however, the proposed design of a cap-and-invest program could also include innovative program designs to directly prevent the formation or existence of emission hotspots that occur when certain sources maintain or increase higher levels of co-pollutant emissions despite the reduction of economywide emissions. In addition, other DEC regulatory requirements limit emissions of criteria and toxic pollutants from individual facilities and vehicles.

Interaction with Other Regulatory Programs

Other policy initiatives or regulatory changes by various agencies may complement and facilitate the efficient and effective implementation of an economywide regulatory approach to reducing GHG emissions. In this regard, a cap-and-invest program has the benefit of minimizing the costs associated with ensuring any specific level of GHG emission reductions, including the level of statewide reductions required by the Climate Act. Where a government is implementing standards and other regulations, funding new investments into clean energy solutions to drive emission reductions on a sectoral basis, or making investments to support emission reductions, the declining emissions result in a lower cost to the public for the cap-and-invest program. That has happened in the RGGI program, where complementary clean energy policies have led to reduced emissions, keeping allowance prices low even with a cap that declines substantially over time. Likewise, Inflation Reduction Act funding, as well as other federal investments, would also support lower emissions that would also reduce allowance prices. In this manner, a cap-and-invest program has the benefit of automatically capturing both the cost- and emission-related benefits of other complementary policies and investments.

On the other hand, in a carbon tax/fee program, the level of a carbon price would not ordinarily vary depending on the emission reductions yielded by other programs. Instead, the emissions reduced by a direct carbon tax/fee would be in addition to the emissions reductions from the regulatory standards or other investments. Even as emissions decrease due to other policies, the level of the carbon tax/fee would remain the same – unlike in a cap-and-invest program – since the value was pre-determined through

[301] ECL § 75-0117.

government action. Of course, as those regulatory standards or other policies reduce emissions, the same carbon tax/fee would be applied to a smaller amount of emissions, potentially reducing revenues. As noted above, in the event a carbon tax/fee does not provide the required level of statewide emission reductions under the Climate Act, additional legally enforceable regulatory measures on certain source categories or sectors may be necessary to ensure the Climate Act's statewide emission limits are met.

Mitigating Risk of Leakage

The Climate Act requires programs to be designed to limit leakage. Consistent with programs implemented elsewhere, the proposed cap-and-invest program design alleviates this risk by allocating free allowances to EITE industries based on a benchmarking approach, an approach well-established in similar programs in other jurisdictions. The same goal could be accomplished in a carbon tax/fee design, by providing rebates to EITE industries, although that model has not been applied elsewhere.

Other Criteria

The other criteria considered by the Council do not favor one particular economywide model over the other.

- **Affordability and avoiding regressive impacts:** One concern often expressed about either pricing mechanism is the potential for regressive economic impacts, due to lower-income households spending a higher portion of their income on electricity, heating, and transportation fuel, which would all become more expensive if the resulting emissions bear a cost. Both carbon tax/fee and cap-and-invest policies could be designed to address those impacts, such as with rebates funded by the revenues or other investments to reduce regressive impacts.
- **Sufficiency of funding and use of proceeds:** Since a cap-and-invest program would be designed to have an economywide cap that corresponds with the Climate Act emission limits, it provides a sufficient level of proceeds by definition. Likewise, the investment of federal funding to reduce emissions has the effect of reducing the need for cap-and-invest revenues. Although a carbon tax/fee could provide more certainty regarding the amount of revenues, it provides less certainty that the revenues are adequate to ensure meeting the economywide emission limits. If the escalation rate is designed to not adequately coordinate with realized emission reductions, a carbon tax/fee program could see falling revenue even as the price does not increase sufficiently to realize Climate Act-level emission reductions.
- **Regional equity:** The Council has identified the need to ensure that an economywide program does not place a disproportionate burden on particular geographic portions of the State. This could occur, for example, in areas of the State where emission-intensive sources are concentrated,

if particular areas have less access to technologies to reduce GHG emissions, if available technologies do not meet local needs as readily (for example as a result of cold weather), or if the residents of particular areas are more reliant on higher-emission fossil fuels to meet their energy needs. Under either a cap-and-invest or carbon pricing program, investment of proceeds would be the primary mechanism to address these regional disparities. Investments could be targeted to those areas with high fossil fuel dependence to assist households and regional businesses in a swifter clean energy transition, for example through efficiency upgrades and other measures, that reduces exposure of the region and its residents to the cost impacts of the cap-and-invest system.

- **Supporting economic development and innovation:** In general, either policy mechanism would be expected to provide a competitive advantage to lower- or zero-emission industrial operations or vehicle fleets using zero-emission technologies and to stimulate private investment in lower-emission sources and technologies. In addition, auction proceeds or revenues could be invested in ways that support sustainable low-carbon economic development.
- **Incorporating multi-jurisdiction programs:** Participating in one or more multi-jurisdiction regional programs could have the benefit of assuring competitive neutrality across the region, reducing emission leakage, and, if New York's participation induces other states to participate, increasing the overall GHG emission reductions. Carbon pricing and cap-and-invest programs could be structured to accommodate regional sector-based programs like RGGI. One mechanism applicable to both types of programs would be to credit the cost of allowances under a regional program toward the payments under the State-specific program. In the alternative, compliance with a regional program could govern a particular sector in place of the State-specific program.