

Public Hearing – March 8, 2021
Environment Committee

Testimony Submitted by Commissioner Katie S. Dykes

Senate Bill No. 884 – An Act Reducing Transportation-Related Carbon Emissions

Thank you for the opportunity to present testimony regarding Senate Bill No. 884 – An Act Reducing Transportation-Related Carbon Emissions, proposed by Governor Lamont. The Department of Energy and Environmental Protection (DEEP) supports Senate Bill No. 884. The purpose of this bill is to implement the Transportation and Climate Initiative Program (TCI-P), a historic and bipartisan regional collaboration to cap and reduce greenhouse gas (GHG) emissions from on-road transportation and increase investments in an equitable, cleaner, and more resilient transportation system. The TCI-P will establish for the first time a cap on GHG emissions produced from the combustion of gasoline and on-road diesel fuels across Connecticut and the other participating states, and achieve significant reductions in GHG emissions and other air pollution by driving more than \$1 billion in clean transportation investments in Connecticut communities over the next decade—with a special emphasis on ensuring that more than a third of that investment is directed to communities that are overburdened by transportation sector pollution and underserved by the transportation system.

Why Is This Program Needed, and Why Is it Needed Now?

Climate change is accelerating, and is posing unprecedented threat to the economy, infrastructure, agriculture, natural resources, and public health here in Connecticut and around the globe. As a result of GHG emissions that have *already* been released into the atmosphere, Connecticut is experiencing more extreme weather events, and these trends will worsen over time. By 2050, we must be prepared for approximately 20 inches of sea level rise, accompanied by nuisance flooding and greater storm surge; a five-fold increase in the number of days with temperatures exceeding 90 degrees Fahrenheit; increased frequency of drought events and intense precipitation events; and increased frequency in severe storms, on the order of a Superstorm Sandy occurring every five to ten years. These changes alone will place intense pressure on our infrastructure, communities, and economy.

If we do not act urgently, in this decade, to more quickly reduce GHG emissions entering the atmosphere, these climate change impacts will profoundly worsen after mid-century. **The long-term costs of inaction or deferring GHG emissions reductions far exceed the costs of taking action now to reign in emissions.**

The transportation sector is the largest source (38 percent) of GHG emissions in Connecticut. CO₂ emissions from the combustion of gasoline and diesel fuel account for 92 percent of those GHG emissions.¹ **Transportation is also responsible for 67 percent of emissions of nitrogen oxides, a key air pollutant and component of ground-level ozone (smog).**² Connecticut air quality monitors record some of the

¹ DEEP, 2017 Connecticut Greenhouse Gas Emissions Inventory (2020), https://portal.ct.gov/-/media/DEEP/climatechange/2017_GHG_Inventory/2017_GHG_Inventory.pdf.

² U.S. Environmental Protection Agency, Air Pollutant Emissions Trends Data, Air Emissions Inventories. Updated May 31, 2019. Retrieved December 31, 2019 from <https://www.epa.gov/air-emissions-inventories/air-pollutant-emissions-trends-data>.

highest ozone levels in the eastern United States, especially along heavily traveled transportation corridors where criteria air pollutants are most densely concentrated.³

Many communities in Connecticut have historically and disproportionately suffered the impacts of air pollution from transportation and other sources. Poor air quality increases the risk of premature death, cardiovascular damage, and developmental and reproductive harm, and worsens acute and chronic respiratory problems such as asthma and chronic obstructive pulmonary disease. New research indicates that a small increase in long-term exposure to fine particulate air pollution (PM_{2.5})—the kind generated during combustion of fuel in—leads to a large increase in the risk of death from COVID-19.⁴ Many Connecticut communities are also underserved by the transportation system, while the existing options they depend on face significant budget shortfalls. A lack of reliable transportation can exacerbate existing health conditions, restrict access to nutritious food, and limit economic opportunities.

The Global Warming Solutions Act requires the State to reduce GHG emissions economy-wide by at least 45 percent below 2001 levels by 2030, and 80 percent below 2001 levels by 2050.⁵ On and after January 1, 2030, at least 50 percent of all cars and light-duty trucks and 30 percent of all buses purchased or leased by the state must be zero emission vehicles (ZEVs).⁶ The state has near-term commitments under several multi-jurisdictional agreements to work to rapidly accelerate the deployment of light-duty, medium-duty, and heavy-duty zero emission vehicles in the state.⁷ Connecticut’s persistent failure to attain federal National Ambient Air Quality Standards for harmful ground-level ozone is a critical air quality and public health challenge.⁸ These statutory requirements reflect Connecticut’s commitment and desire for cleaner air and better health, for a transportation system that better serves our citizens and supports economic growth, and to protect our communities from worsening effects of climate change. Connecticut needs tools that can effectively reduce GHG emissions and air pollution from the transportation sector if we are to meet these commitments.⁹

What is the Transportation Climate Initiative-Program?

TCI-P is a regional market-based cap-and-invest program that will establish a “cap” on CO₂ emissions from gasoline and on-road diesel fuel and require wholesale fuel suppliers to purchase “allowances” to cover the emissions from covered fuel. Fuel suppliers can purchase allowances at regular allowance auctions and trade allowances on the secondary market. The cap will decline over time, guaranteeing at least a 26 percent reduction in CO₂ emissions from on-road transportation from 2022 to 2032. The program is projected to

³ DEEP, Electric Vehicle Roadmap for Connecticut: A Policy Framework to Accelerate Electric Vehicle Adoption (Apr. 21, 2020), [http://www.dpuc.state.ct.us/DEEPEnergy.nsf/c6c6d525f7cdd1168525797d0047c5bf/f7ed4932eec438d0852585520001c81b/\\$FILE/EV%20Roadmap%20for%20Connecticut.pdf](http://www.dpuc.state.ct.us/DEEPEnergy.nsf/c6c6d525f7cdd1168525797d0047c5bf/f7ed4932eec438d0852585520001c81b/$FILE/EV%20Roadmap%20for%20Connecticut.pdf).

⁴ See Wu, X., Nethery, R. C., Sabath, M. B., Braun, D. and Dominici, F., 2020. *Air pollution and COVID-19 mortality in the United States: Strengths and limitations of an ecological regression analysis*. *Science advances*, 6(45), p.eabd4049.

⁵ Pub. Act 18-82, *An Act Concerning Climate Change Planning and Resiliency*, sec. 7, Conn. Gen. Stat. § 22a-200a; Pub. Act 08-98, *An Act Concerning Global Warming Solutions*, sec. 2, Conn. Gen. Stat. § 22a-200a.

⁶ Pub. Act 19-117, *An Act Concerning the State Budget for the Biennium Ending June 30, 2021, and Making Appropriations Therefore, and Provisions Related to Revenue and Other Items to Implement the State Budget*, sec. 93, Conn. Gen. Stat. § 4a-67d.

⁷ State Zero-Emission Vehicle Programs, Memorandum of Understanding (2013), <https://www.nescaum.org/documents/zev-mou-10-governors-signed-20191120.pdf>; Multi-State Medium- and Heavy-Duty Zero Emission Vehicle Memorandum of Understanding (2020), <https://www.nescaum.org/documents/multistate-truck-zev-governors-mou-20200714.pdf>.

⁸ 40 C.F.R. parts 50-52 and 58; *see also* 42 U.S.C. §§ 108-109.

⁹ In its January 2021 Phase I Report on Near-Term Actions, the GC3 recommended that Connecticut implement TCI-P. GC3, Taking Action on Climate Change and Building a More Resilient Connecticut for All, Phase 1 Report: Near Term Actions (Jan. 2021), https://portal.ct.gov/-/media/DEEP/climatechange/GC3/GC3_Phase1_Report_Jan2021.pdf.

generate annual auction proceeds for Connecticut of \$89 million in 2023, increasing to \$117 million in 2032. The State of Connecticut will receive those proceeds and have full discretion to invest them in a wide range of clean transportation projects and programs. TCI-P is projected to generate significant economic, public health and safety, and environmental co-benefits.

Cap-and-invest programs like TCI-P inherently leverage market efficiencies to achieve guaranteed emissions reductions at the least cost for consumers and businesses. Auctions of tradable emissions allowances will create a dynamic marketplace across the region and encourage fuel suppliers to diversify and innovate as the cap “tightens” to meet emissions goals and fewer allowances become available over time. As auction proceeds are invested in other clean transportation policies and programs that create additional emissions reductions, it will become easier to meet the emissions cap in any given year. TCI-P has been compared to a gas tax because it is a mechanism that will raise revenue for transportation investments, but there the comparison ends. TCI-P is an environmental program that guarantees a reduction in emissions, and funds clean transportation investments by requiring polluters to pay for the pollution caused by their products.

The design of TCI-P is informed by the Regional Greenhouse Gas Initiative (RGGI), the successful cap-and-invest program for the regional electricity sector that Connecticut and several other states founded in 2008. Because of investments in energy efficiency measures made with RGGI auction proceeds, as well as investments in clean energy, innovation, and advances in technology, RGGI has again and again produced lower than expected consumer costs at a fraction of the program’s benefits, which include reduced air pollution and associated health benefits, energy efficiency and avoided energy use, job creation, and economic growth.

Implementing TCI-P on a regional basis will provide significant benefits, in terms of lowering administrative costs and achieving significant emissions reductions on a multi-state basis. On December 21, 2020, Connecticut, Massachusetts, Rhode Island, and the District of Columbia were the first jurisdictions to join a Memorandum of Understanding (MOU) agreeing to work to implement TCI-P.¹⁰ These charter members developed the program in collaboration with eight other Northeast, mid-Atlantic, and Southeast states, and welcome other jurisdictions to join TCI-P in the future.¹¹ Importantly, the emissions reduced in Connecticut and the revenue generated in Connecticut will be the same, regardless of how many states ultimately join the program. Successful implementation of the TCI-P in the District of Columbia, Rhode Island, Massachusetts, and Connecticut is likely to attract more states to join TCI-P over time.

How will TCI-P Advance Equity and Environmental Justice?

For too long, many residents in our state have carried a disproportionate burden of environmental harms—including air pollution—and face greater barriers to utilizing the state’s public transit infrastructure. These burdens and barriers have hindered the health and welfare of these individuals and communities. That is why Connecticut, along with the other jurisdictions participating in TCI-P, has pledged to invest no less than 35 percent of annual proceeds to ensure that communities overburdened by air pollution and underserved by the transportation system benefit from transportation projects and policies that reduce emissions from transportation sources. In Connecticut, this commitment is expected to result in over \$360 million in investments between 2023 and 2032. Connecticut will establish an Equity Advisory Board composed of residents from such communities to gather input and advise on investment decisions and equitable outcomes for the program. DEEP and the Department of Transportation (DOT) are actively engaged with a group of transportation, equity, and environmental justice advocates and community

¹⁰ Transportation and Climate Initiative Program, Memorandum of Understanding (Dec. 21, 2021), <https://portal.ct.gov/-/media/DEEP/climatechange/TCI-P/TCI-MOU-122020.pdf>.

¹¹ See Transportation and Climate Initiative, Next Steps for the Transportation and Climate Initiative (Dec. 21, 2021), <https://www.transportationandclimate.org/sites/default/files/TCI%20Next%20Steps%2012.20.pdf>.

residents to develop these commitments, definitions, and processes. We look forward to continuing these discussions as the legislative session progresses, with the goal of developing mutual recommendations to enhance the equity and environmental justice provisions of the TCI-P legislation.

What can TCI-P proceeds be invested in?

Transportation is the backbone of the state's economy, and TCI-P is projected to raise over \$1 billion in funding between 2023 and 2032 to invest in transportation options that will create jobs and contribute to increased economic activity in Connecticut communities. Increased access to transportation—and other opportunities as listed below, such as broadband expansion—will expand companies' hiring pools and provide individuals with increased job opportunities. Modeling indicates that TCI-P investments will generate significant annual increases in gross domestic product, disposable personal income, and employment.

While TCI-P is a regional program, **Connecticut will have sole discretion to invest our state's TCI-P allowance auction proceeds to address Connecticut's needs and priorities.** Proceeds can be used to support a broad range of transportation GHG emission reduction opportunities, including, but not limited to, supporting and expanding public transit, converting buses and diesel trucks to electric, bus stop shelters and features, bicycle lanes and sidewalk improvements, pedestrian safety improvements, electric vehicle (EV) charging infrastructure and EV purchase rebates, greenways and trail improvements, intersection roundabout conversions, traffic signal modernization and synchronization, railroad system improvements, expanding access to broadband Internet, ride sharing, and more. The budget anticipates a program start date of January 1, 2023 with an estimated \$24.3 million to be used to support public transit investments in FY 2023.

TCI-P can provide significant benefits to Connecticut's rural communities, many of which are underserved by the transportation system and lack access to clean mobility options. For example, TCI-P proceeds could be used to provide incentives to help people transition to lower emitting cars and trucks; expand broadband access to enable telecommuting, telehealth, and job growth; build safer and cleaner roadway intersections; and improve and expand clean transportation options like micro-transit, ride sharing, bus, bike, and pedestrian access in rural areas.

TCI-P will drive down GHG emissions and reduce air pollution by supporting investment in clean transportation solutions, not by raising gas prices. The TCI-P jurisdictions conducted extensive modeling to inform the design of the program.¹² Assuming fuel suppliers pass down 100 percent of the cost of allowances to consumers, TCI-P is projected to increase retail gasoline prices in participating jurisdictions by \$0.05 per gallon in 2023, increasing over time to \$0.10 per gallon in 2032. These increases are about the difference in prices you might see between two gas stations on the same street. It is not the goal of the TCI-P program design to reduce driving or mobility by raising gas prices. In fact, TCI-P was designed with multiple safeguards to limit the impact of the program on consumers, including a cost containment reserve to limit the potential impacts of future uncertainties on program costs, and an emissions containment reserve to ensure the program reduces emissions at a reasonable price. Participating jurisdictions will conduct periodic program reviews to evaluate TCI-P's costs and benefits, engage with stakeholders, update modeling, and make adjustments and improvements.

Conclusion

DEEP and DOT have collaborated closely on the development of TCI-P. Throughout my time as Commissioner at DEEP, it has been my pleasure to work with Commissioner Giulietti, Deputy

¹² See, e.g., Estimating the Regional Environmental, Health, and Economic Benefits and Costs of the Transportation and Climate Initiative Program (Dec. 21, 2021), https://portal.ct.gov/-/media/DEEP/climatechange/TCI-P/TCI-P_modeling-summary_12-21-2020.pdf.

Commissioner Eucalitto, and their DOT colleagues in connection with TCI-P and a variety of other energy and environmental policies. Implementing TCI-P in Connecticut will further enhance our agencies' ability to effectively address our shared climate, transportation, and equity and environmental justice challenges.

TCI-P presents Connecticut with the opportunity to advance multiple policy goals simultaneously, including reducing GHG emissions and air pollution from transportation, decarbonizing, modernizing, and expanding the transportation system, and advancing equity and environmental justice. TCI-P is a program that enables other policies, at least cost to consumers and business, while stimulating the economic activity, generating significant public health and safety benefits, and reaffirming the state's role as a regional and national leader in the fight against climate change. For all of these reasons, DEEP supports Senate Bill No. 884 – An Act Reducing Transportation-Related Carbon Emissions.

Thank you for the opportunity to present testimony on this proposal. Should you have any questions, please do not hesitate to contact James Albis at James.Albis@ct.gov.