



New York State Capitol
State Street and Washington Ave
Albany, NY 12224

Chair Liz Krueger
Chair Kevin Parker
Chair Pete Harckham
Members of the Senate Standing Committee on Finance
Members of the Senate Standing Committee on Energy and Telecommunications
Members of the Senate Standing Committee on Environmental Consideration

18 January 2023

Re: Written Testimony from Advanced Energy United regarding the implementation of the Climate Action Council Final Scoping Plan and the Climate Leadership and Community Protection Act to be discussed at the Joint Hearing on January 19, 2023

Dear Chairs Krueger, Parker, Harckham, and Members of the Senate Standing Committees on Finance, Energy and Telecommunications, and Environmental Consideration:

Thank you for the opportunity to submit this written testimony on the examination of legislative and budgetary actions necessary to implement the Climate Action Council Final Scoping Plan (CAC Scoping Plan) and the Climate Leadership and Community Protection Act (CLCPA). Recommendations included in the CAC Scoping Plan concerning transportation and building electrification, renewable energy generation, gas system transition, and the reduction of greenhouse gas emissions through a cap-and-invest program all directly relate to the work of Advanced Energy United's (United) member companies. We hope that the below information is helpful to the Joint Committees as you continue to deliberate these issues that are critical to New York's energy future.

Advanced Energy United is an association of businesses that are making the energy we use secure, clean, and affordable. Advanced energy encompasses a broad range of products and services that constitute the best available technologies for meeting the nation's energy needs today and tomorrow. These include energy efficiency, demand response, energy storage, solar, wind, hydroelectric power, nuclear energy, electric vehicles, and smart grid technologies. As of

2021, the advanced energy industry employs over 165,000 New Yorkers. Our companies are eager to help New York achieve its CLCPA goals, and we stand ready to offer our assistance and perspective in whatever ways are most helpful.

New York's CLCPA established some of the country's strongest state-level targets for clean energy production and carbon reduction, but the achievement of the goals outlined in the CLCPA will require adherence to a strategic and ambitious implementation framework. The CAC was tasked with the identification and elaboration of such a framework, and the recommendations outlined in the Final Scoping Plan represent a major step forward for the state in its energy transition. Critically, the CAC has presented the Joint Committees with a thorough compendium of regulatory and legal proposals, market mechanisms, and technological solutions that collectively create a roadmap for state decision makers in their efforts to achieve CLCPA objectives.

United supports the CAC's inclusion of carbon pricing, clean energy supply standards, low carbon fuel standards, a cap-and-invest program, and many of the other economy-wide strategies in the Final Scoping Plan. United encourages the Joint Committees and other state decision makers to advance the implementation of these strategies with urgency as the state seeks to finance its transition to a decarbonized economy. Specifically, United recommends that the legislature should:

Advance Transportation Electrification

New York's transportation sector accounts for nearly half of the state's carbon dioxide emissions and is the largest emitter of pollutants that contribute to climate change. In order to reduce this impact, it is critical that the state implements measures to accelerate vehicle efficiency, clean fuels, and a clean energy grid to power electric vehicles. The establishment of a low carbon fuel standard is a central feature of efforts to scale advanced transportation technologies and meet the CLCPA's goals. Low carbon fuel standards work to transform the fuels market from one that relies nearly exclusively on petroleum-based fuels to a diversified one that uses a variety of clean alternatives, effectively making polluters pay for the development and deployment of clean alternatives and electric vehicles ("EVs") through a credit-trading system based on total life-cycle emissions. Under this paradigm, all fuels produced in or imported to New York are assessed on a carbon intensity scale that measures the full lifecycle emissions of each fuel, including extracting and refining oil, growing crops and



producing biofuels, or generating electricity. A low carbon fuel standard is established based on an assessment of the life cycle analyses of individual vehicle fuels. Fuels that pollute more than the established standard generate deficits while fuels cleaner than the standard generate credits. Over time, the low carbon fuel standard is gradually reduced, creating a growing market for advanced transportation fuels. The legislature should support initiatives that establish such a carbon intensity standard for all transportation fuels, requiring the production or purchase of low carbon fuels and/or credits and. The Final Scoping Plan underscores the importance of such measures in its recommendation to adopt a clean transportation standard.

Additionally, the legislature should heed the CAC's recommendation in the Final Scoping Plan and enact legislation supporting direct-to-consumer sales of zero emissions vehicles. Currently, the number of electric vehicle sellers in the state is limited to traditional franchise auto dealers, meaning that large electric vehicle manufacturers are unable to sell vehicles to New Yorkers directly. The legislature should additionally follow the CAC recommendation of directing NYSERDA to partner with industry participants and stakeholders to fund consumer engagement activities to make New Yorkers more aware of the benefits of a transition to zero emissions vehicles. Without implementing these measures, it is difficult to see how New York car buyers will ever have the awareness of or direct access to EVs that will be necessary to achieve the EV adoption rates needed to meet the state's carbon reduction goals.

Finally, the legislature should help spur the adoption of electric school buses (ESBs) by funding direct incentives to support the purchase of ESBs, as recommended in the Final Scoping Plan. The 2022-2023 Education Budget included language addressing the transition of the state's school bus fleet to zero-emissions vehicles by 2035. While schools do receive reimbursement from the State to facilitate this transition, the lag in payment resulting from the reimbursement's payout in the year following purchase - in addition to the tax cap limiting districts' ability to raise taxes - limits their ability to move quickly toward the achievement of this goal. With over 50,000 school buses in the state, and ESB purchase prices up to \$275,000 more than those of diesel school buses, the cost of electrifying the state's school bus fleet could be as high as \$15 billion. The legislature should put the state on the path to school bus fleet electrification by 2035 by developing a fund or grant program to cover these expenses, utilizing a portion of the \$500 million available in the Clean Water, Clean Air, and Green Jobs Environmental Bond Act of 2022.

Expand Transmission Infrastructure to Facilitate the Integration of Renewable Resources



To achieve the CLCPA’s ambitious renewable energy and net zero goals in the allotted time frame, the transmission infrastructure that underpins the state’s grid must expand rapidly to accommodate the large influx of both renewable generation and demand. A recent study conducted by the REPEAT Project estimated that the current pace of transmission expansion in the United States is approximately 1% per year. Unlocking federal emissions reduction opportunities in the Inflation Reduction Act will require a doubling of this rate of transmission expansion. In addition to being a necessary step toward achieving federal and state clean energy goals, transmission expansion comes with great economic and grid reliability benefits. In the Eastern US alone, expanding and modernizing the transmission grid would unleash up to \$7.8 trillion in investment and generate more than 6 million net new jobs, primarily in rural areas. Further, the electricity grid’s ability to withstand damage from natural events, systemic failures, cyberattacks, and other stressors is an issue of increasing importance in a world dominated by the impacts of climate change, and a robust transmission grid can greatly contribute to a reduction of such vulnerabilities. Transmission expansion can relieve line overloading onto existing systems, minimizing grid strain that leaves it vulnerable to extreme weather events or shocks. Long-distance transmission can also enable the development of renewable energy resources over wider geographic areas, making targeted cyberattacks on the grid more difficult to plan and execute.

Advanced Energy United supports the Scoping Plan’s recognition of the state’s transmission needs and related recommendation that the state expand transmission and distribution systems to support growing demand and renewable generation. This expansion will include not only the construction of new transmission lines, but additionally the utilization of advanced grid technologies, the forecasting of electrification-driven load growth, and the upgrading of the distribution system to better support distributed energy resources. United encourages the Joint Committees to explore avenues for legislative support of these objectives. Further, the legislature should support efforts to facilitate transmission build out by directing the New York Power Authority to utilize the authority granted to it under the Accelerated Renewable Growth Act to propose ‘priority projects’ that solve transmission constraints, provide economic and reliability benefits, and create greater capacity for large scale renewables.

Take Full Advantage of Demand-Side Resources



With electricity demand in New York projected to increase by over 60% by 2050, the achievement of CLCPA goals within the established timeline is put under even greater pressure. By reducing wasted energy through investment in energy efficiency measures and decreasing energy consumption with demand-response programs and technologies (creating targeted reductions in energy use during periods of high demand), the state can make great strides toward achieving its goals and at the same time reduce unnecessary expenditures. Illustrative of these benefits is research recently completed by The Brattle Group and United member company Oracle, which found that energy efficiency is poised to be the single largest contributor to emissions reductions in 2030. The research also found that consumer-driven demand-side solutions can contribute nearly two times the avoided emissions value compared to supply-side solutions alone, and at a significantly lower cost. The legislature should heed the recommendations made by the CAC in the Final Scoping Plan concerning demand-side solutions and improve access for demand side resources by directing DPS and NYSERDA to complete a study on the avoidance or reduction of grid upgrade costs with the use of demand response technologies, and should additionally direct DPS and NYSERDA to evaluate the benefits of changing the success metrics of utility demand response programs to primarily concentrate on avoided greenhouse gas emissions.

Thank you for your time and consideration. If Advanced Energy United can serve as a resource for the Joint Committees, please do not hesitate to reach out.

Signed,



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