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We're working to rapidly reduce climate pollution at scale, starting in California.

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Contact

theclimatecenter.org
1275 4th Street #191
Santa Rosa, CA 95404
707-525-1665

March 14, 2023

The Honorable Al Muratsuchi
Chair, Assembly Education Committee
1020 N Street, Room 159
Sacramento, CA 95814

Assembly Bill 579 (Ting) Zero-emission school buses:
Support-if-Amended

Dear Chair Muratsuchi,

The Climate Center writes to respectfully request that you consider two supportive amendments to [AB 579](#) by Assemblymember Ting, which as currently written would establish a goal for all new schoolbuses purchased or leased in California to be zero-emission by 2035.

- Change the year-certain to 2030
- Include mandatory bidirectional charging capability

The 2030 Year-Certain – While we appreciate the overall intent of the bill, we are concerned that 2035 is simply too late. The average useful life of a diesel schoolbus is twelve to fifteen years. This means that young lungs could still be suffering from toxic diesel emissions five years *after* the state will have achieved overall carbon neutrality – 2050.

The Climate Center's analysis has found, based on the most recent climate science, that for California to be doing its part in this global effort it is necessary the State must accelerate its statutory greenhouse gas emissions reduction target from 40% by 2030 to *at least* 55% by 2030. The rapidly worsening climate crisis demands nothing less.

According to United Nations Secretary General Antonio Guterres "it's code red for humanity," time is running out, and we must act decisively starting now. "2023 is a year of reckoning. It must be a year of game-changing climate action" including the urgent priority of halving emissions in this decade.¹

¹ UN News, Feb. 6, 2023. <https://news.un.org/en/story/2023/02/1133192#>

In July 2022, after the release of the draft Scoping Plan update, Governor Newsom wrote to the Air Resources Board to say that “because of the severity of the impacts California faces, we need to up our game” in addressing the climate crisis. He pledged his commitment to work “with the Legislature in the coming weeks to make carbon neutrality state law and to increase our ambition toward our 2030 climate goals.”

Many studies conducted in the years since the release of the 2018 United Nations’ Intergovernmental Panel on Climate Change “1.5C report” support the Governor’s call for a more ambitious target and have found that “[w]e have underestimated the risks of unleashing irreversible change. The next decade is our window.”² In a paper authored with other climate experts, Professor Daniel Kammen, Chair of UC Berkeley’s Energy and Resources Group, agrees that “long an innovator in this arena, California is falling behind in its climate leadership and would benefit economically and ecologically, and in terms of social justice, by establishing more aggressive totals that enable a carbon-negative economy.”³

For the reasons above, we urge moving the target year up from 2035 to 2030.

Charging Bidirectionality – Technology currently exists that can equip schoolbuses to not only charge up *from* the grid, but to feed stored power at times when the bus is out of service *to* the grid.

Electric cars, trucks, and buses are an untapped energy asset. On any given sunny day in California, bidirectional schoolbuses can *load-shift* energy, with the schoolbus batteries capturing abundant solar energy generated during the day and discharging that stored energy to the grid during evening peak demand hours. Schoolbuses in particular offer a duty cycle that is very well matched to the need for electricity supply in the evening ramp period as solar capacity wanes.

In addition, with increased frequency and severity, Californians are threatened with planned and unplanned power outages caused by extreme weather events. The State narrowly averted outages on September 6, 2022 when the State grid load reached a record high of 52 gigawatts GW during an extreme heatwave. More recently, extreme storms early in 2023 caused statewide power outages. Instead of relying on highly polluting fossil fuel back-up generators during power outages and expensive fossil gas-fired peaker plants (typically located in frontline communities) to serve during these disruptions, California should build a more resilient and reliable grid by harnessing the energy storage capacity of schoolbuses and other EVs. We estimate that by 2030 there will be about 75 gigawatts of latent capacity in these powerplants on wheels. At least from that year forward, we should be able to avail ourselves of that valuable resource.

For the reasons stated above, we urge your committee to consider mandatory bidirectional capability by 2030.

The time is now to pursue the speed and scale transition to healthful school transportation, building upon the progress that has already been made to date, thanks to a suite of existing core programs.

² Lenton, Rockstrom, Gaffney, Rahmstorf, Richardson, Steffen, Schyellhuber. Nature, Nov 27 2019 <https://www.nature.com/articles/d41586-019-03595-0>

³ Kammen et al. Accelerating the timeline for climate action in California. <https://arxiv.org/abs/2103.07801>

California has already signaled a multi-billion dollar commitment to schoolbus electrification, with a range of programs and finance tools in place to defray the costs of transitioning to healthier school transportation. In addition to ongoing state agency and utility programs, California policymakers authorized \$1.5 billion in new investments for zero-emission schoolbuses and associated infrastructure in last year's budget agreement. With these proposed amendments, AB 579 will send a strong market signal to manufacturers and attract private investment into the market, which will further drive down the costs of these vehicles over time.

2030 is not too soon. Over the next five years, billions of dollars will be flowing toward schoolbus electrification from the federal Infrastructure Investment and Jobs Act through a competitive grant process administered by the US Environmental Protection Agency (EPA). In 2022, California schools received \$68.2 million in total grants from the first round of funding for the EPA's new Clean School Bus Program. Setting an ambitious yet achievable statewide goal and strengthening California's leadership on this issue will better position our school districts to apply for and secure federal funding into the future to support electric schoolbus purchases.

The Climate Center looks forward to supporting this bill robustly once it is strengthened with proposed amendments.

Sincerely,

A handwritten signature in black ink, appearing to read 'Ellie Cohen', with a long horizontal flourish extending to the right.

Ellie Cohen,
Chief Executive Officer, The Climate Center

cc: The Honorable Phil Ting, California State Assembly