

## New Research Shows Ample Supply of Fuels To Support A More Ambitious Low Carbon Fuel Standard

California’s Low Carbon Fuel Standard (LCFS) has been a key element of California’s climate leadership. The California Air Resources Board (CARB) is considering amendments to extend and strengthen the LCFS beyond 2020. CARB staff have proposed a 20% carbon intensity (CI) reduction target for 2030, and requested input from stakeholders regarding potential fuel supplies. The NextGen Policy Center, Ceres, and the Union of Concerned Scientists have sponsored research, from independent research firm Ceruly, to evaluate potential LCFS credit supplies through 2030.

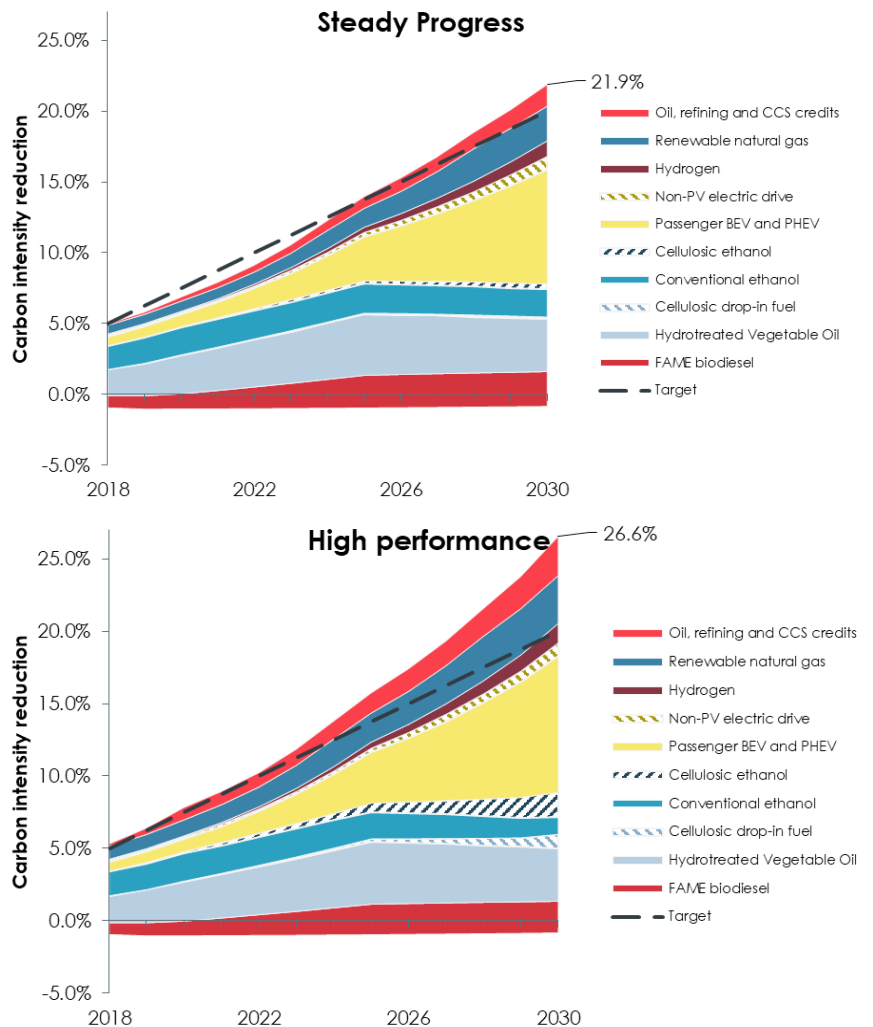
### Higher Targets Are Attainable

Ceruly’s research indicates that there are enough likely supplies of clean fuel to support a target well above the 20% CI reduction currently proposed by CARB.

A conservative estimate of potential fuel availability, the Steady Progress scenario, assumes fuel supplies develop at a moderate pace and the LCFS credit bank retains a necessary balance essential for the health of the program and clean fuel market. This scenario yields feasible reductions well over 20% CI by 2030.

The *High Performance* scenario considers the effect of feasible future policies and innovation which allow fuel supplies to develop at the upper end of their likely range. When this is considered, reductions in excess of 26% are within reach.

A more ambitious target would send a strong market signal supporting the deployment of clean technologies, which would continue to reduce carbon pollution and protect public health by reducing the emission of harmful air pollutants from vehicles.



## A Track Record of Success

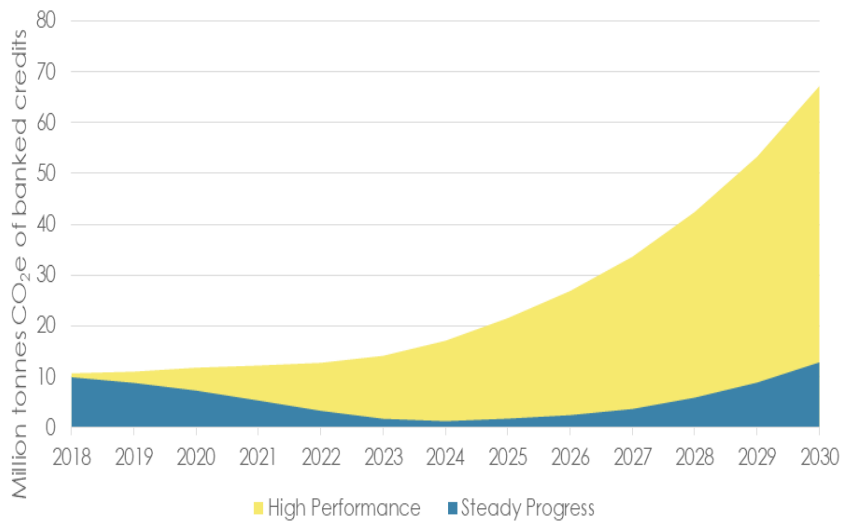
The LCFS requires fuel suppliers to gradually reduce the carbon intensity of their fuels by promoting cleaner alternatives such as electricity, renewable natural gas, ethanol, biodiesel and renewable diesel. The LCFS has reduced carbon pollution by over 30 million metric tons since 2011, and has contributed significantly to improving the state’s air quality, by replacing fossil fuel combustion with cleaner alternatives.

California now has the opportunity to build on this foundation of success by adopting an ambitious 2030 target. A strong target will send a clear, predictable market signal and stimulate investment and innovation in clean transportation. The LCFS helps support the deployment of electric vehicles, including electric transit buses, as well as providing funding for vehicle rebate programs.

The LCFS has:

- **Supported 300+** Clean transportation companies that employ **20,000 workers** across California.
- Promoted **\$1.6 billion** in Clean Fuel investments in California
- **Increased** clean fuel use by **57%**
- **Reduced health impacts** from air pollution by **\$2 billion**

Credit bank at 20% target



## Flexibility for the Future

Cerology analysis indicates that there will likely be ample credit generation opportunities to support reduction targets significantly above 20%. The figure at left shows the expected credit bank for both Steady Progress and High Performance scenarios if the target remains at CARB’s current 20% proposal. The high performance scenario shows significant growth in the credit bank, which could drive down credit prices and undermine the market signal promoting future investment.

**Modelling Methods and Scope** -The analysis used an updated version of the model developed for the 2015 study Low Carbon Fuel Supply to the Pacific Coast Region of North America. The model draws upon research from a variety of sources and consultation with experts in the field to develop estimates of potential LCFS credit generation for likely fuels. The model does not explicitly evaluate credit markets or consumer costs, however most of the data used in this research comes from studies which do consider cost. Dr. Chris Malins, the lead author, was formerly head of the International Council on Clean Transportation’s Fuels Program, and is an internationally-recognized expert on alternative fuels and sustainable transportation.