



**Fuel Cell and Hydrogen Energy Association Comments on Transportation and Climate Initiative Framework  
for a Draft Regional Proposal**

**November 5, 2019**

The Fuel Cell and Hydrogen Energy Association (FCHEA) appreciates the opportunity to provide feedback on the “Framework for a Draft Regional Proposal” issued by the Transportation and Climate Initiative (TCI) on October 1, 2019. FCHEA represents leading companies and organizations that are advancing innovative, clean, safe, and reliable energy technologies. FCHEA’s membership includes the full global supply chain of the fuel cell and hydrogen technology industry.

FCHEA supports the Framework’s intent to invest in projects that will address the mounting issue of carbon dioxide and other greenhouse gas emissions that stem from the transportation sector. FCHEA hopes that hydrogen infrastructure and zero-emission fuel cell vehicles (FCVs) will be incorporated into the final TCI Memorandum of Understanding (MOU), as well as the various state and regional plans that are developed and implemented across the Northeast and Mid-Atlantic states. Hydrogen infrastructure and FCVs will be critical components to addressing the future environmental and economic needs of the Northeast and Mid-Atlantic states.

Fuel cell vehicles (FCVs) are electric vehicles. Rather than storing electricity from the grid in a battery, FCVs combine oxygen from the air with hydrogen fuel to generate electricity on board the vehicle to power an electric motor, with the only tailpipe emission being water vapor. FCVs are the only zero-emissions vehicle (ZEV) platform now, or for the foreseeable future, that replicates today’s driver experience of being able to travel 300-400 miles on a tank of hydrogen fuel and refuel in 3-5 minutes. In other words, fuel cell vehicles offer Northeast and Mid-Atlantic drivers the option of Zero Emissions with Zero Compromises.

Hydrogen is an environmentally friendly fuel. Hydrogen-powered fuel cell vehicles generate zero carbon, NOx, SOx, or particulate matter emissions from the tailpipe. On a well-to-wheel basis, no matter the source of hydrogen, FCVs dramatically reduce emissions compared to combustion vehicles and are on par in reductions with battery electric vehicles (BEVs). When hydrogen is generated from renewable or zero-carbon sources – such as wind, solar, biomethane, or natural gas with carbon capture and sequestration – carbon emissions are eliminated.

Today there are more than 7,500 light-duty FCVs operating in California. Across the country, fuel cells are being used in tens of thousands of forklifts, dozens of buses, and several demonstrations of class 8 trucks. Due to the scalability of fuel cells, several hard-to-decarbonize industries such as medium- and heavy-duty vehicles, aviation, and maritime applications are looking to fuel cells as a zero-emission alternative for their power needs. To enable deep decarbonization and emission reduction across the entire transportation sector, it is critical that hydrogen and fuel cells are included among policy developments.

FCHEA and its members are available as a resource to TCI officials. As the TCI continues to develop and state and regional plans become realized, we stand ready to provide information to assist in the incorporation of this essential technology. Should you have any questions or wish to discuss further, I can be reached at any time by email at [mmarkowitz@fchea.org](mailto:mmarkowitz@fchea.org) or by phone at 202-261-1331.

Sincerely,

Morry Markowitz, President, Fuel Cell and Hydrogen Energy Association