



June 22, 2022

California Air Resources Board  
1001 I Street  
Sacramento, CA 95815

Re: Draft 2022 Scoping Plan Update – Achieving Carbon Neutrality by 2045

Dear California Air Resources Board and Staff,

Recover Inc. (RECOVER) greatly appreciates the opportunity to provide comments on the Draft 2022 Scoping Plan Update. As a company focused on reducing greenhouse gas (GHG) emissions from the carbon intensity of fuels, we applaud California Air Resources Board (CARB) and staff on the inclusion of actions to increase low carbon fuels and improvements to oil and gas facilities to help California achieve carbon neutrality by 2045.

RECOVER is a leading technology company focused on the recovery and recycling of oil and natural gas waste, significantly reducing GHG emissions and the carbon intensity of transportation fuel. Founded over fifteen years ago, RECOVER employs a solvent extraction technology that was adapted from numerous other applications (such as food grade oils) and tailored to process oil and natural gas waste streams. Currently, this hydrocarbon waste is sent to Class II uncovered landfills in California and across the United States, which rapidly evaporates and biodegrades into the atmosphere and releases GHG and other harmful emissions. RECOVER currently operates its commercial demonstration facility in Alberta, Canada and has partnered with a large industrial waste company in North America to build waste-to-energy facilities directly on their Class II uncovered landfills. To date, RECOVER has identified twenty expansion sites across the United States, including California.

Hydrocarbon waste is a major problem in California and beyond. This includes drilling waste, tank bottoms, and oil spills/contaminated soils that are all sent to uncovered Class II landfills that do not have methane capture systems. These hydrocarbon waste streams biodegrade rapidly and emit up to 18 million metric tons of GHG emissions annually. In addition to the daily exposure to airborne contaminants from oil and natural gas waste from the Class II uncovered landfills, there is also risk of the waste leaking into the local environment and contaminating soils and groundwater supplies. This is especially concerning, as many of these Class II uncovered landfills and active oil and natural gas development areas are often located near or adjacent to disadvantaged communities.

There is an opportunity to mitigate these emissions by recovering and recycling the hydrocarbon waste. RECOVER's solvent extraction technology recycles the carbon from the oil and natural gas waste, producing a new diesel product that avoids between 300 gCO<sub>2</sub>e to 530 gCO<sub>2</sub>e of emissions per MJ of created energy. We respectfully request recognizing the source of these emissions within the Scoping Plan Update and specifically including the "construction of hydrocarbon waste recycling facilities" within the *Low Carbon Fuels Actions* and *Improvements to Oil and Gas Facilities Actions* as actions to reduce these GHG emissions. Specifically, we recommend including:

1. Low Carbon Fuels Actions



- a. “Reasonably foreseeable compliance responses associated with the low carbon fuels actions include...*construction of hydrocarbon waste recycling facilities...*” Pg. 19 2022 Scoping Plan Draft Environmental Analysis
2. Improvements to Oil and Gas Facilities Actions
  - a. “Reasonably foreseeable compliance response could include modifications to existing oil and gas facilities to reduce emissions, such as the installation of vapor recovery systems, the installation of low-bleed or zero-bleed pneumatic devices, ~~and~~ the replacement of leaking equipment, *and on-site construction of hydrocarbon waste recycling facilities.*” Pg. 21 2022 Scoping Plan Draft Environmental Analysis

To further accelerate the construction of hydrocarbon waste recycling facilities in California, RECOVER is also working with CARB Low Carbon Fuel Standard (LCFS) staff to respectfully request the inclusion of the recycled fuel from oil and natural gas waste. Specifically, we strongly support (1) recognizing the GHG emission reductions from recovering and recycling oil and gas waste, similar to other waste streams, and (2) creating a new method or project type within the Innovative Crude or Refinery Investment Credit programs. Including hydrocarbon solvent extraction from oil and natural gas waste in the LCFS Program will create the incentive needed to address the significant GHG emissions emitted from disposing hydrocarbon waste in open, Class II uncovered landfills, as well as help reduce the carbon intensity of fuels in California.

We appreciate the opportunity to provide comments on the Draft 2022 Scoping Plan Update and thank you for your consideration of these, or other options to include the *construction of hydrocarbon waste recycling facilities* in the 2022 Scoping Plan Update to mitigate harmful emissions from oil and natural gas extraction in California and beyond.

Kind regards,

A handwritten signature in blue ink, appearing to read 'Stanley Ross'.

Stanley Ross  
President & CEO  
Recover Inc.