

## Study 2 Draft Scope of Work

CalEPA Contract with the University of California, Santa Barbara

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**Purpose:** Governor Newsom affirmed the state's goal of achieving carbon neutrality by 2045 in the 2019 Budget Act. To achieve our goal, the state will need to reduce dramatically our greenhouse gas emissions while permanently removing carbon from the atmosphere. These efforts will include managing strategic statewide reductions in fossil fuel demand and supply; electrifying key sectors and end uses; and making significant investments in transitioning the transportation sector and the electrical grid to zero carbon emissions. These shifts will need to take place alongside targeted investments in communities and in the state's workforce to ensure that this transition maximizes equity, resiliency, health, and environmental quality across the state.

The transportation sector is an especially important priority for the state. When including fossil fuel extraction and refining, the transportation sector accounts for half of California's greenhouse gas emissions. Additionally, California's transportation sector relies primarily on petroleum fuels, significant amounts of which are produced and sourced from within the state.

Through the 2019 Budget Act, the Newsom Administration funded two studies to identify strategies to reduce the demand for and supply of fossil fuels, with the goal of dramatically reducing emissions across the transportation sector. The purpose of this agreement is to produce one of two comprehensive, integrated studies that identify paths to significantly reduce transportation-related fossil fuel demand and emissions, and, in parallel, manage a strategic, responsible decline in transportation-related fossil fuel supply. This agreement's study will focus on managing the decline in supply.

The two integrated studies will share common guiding principles and will incorporate common workforce and affordability considerations. The studies will also share aligned scenarios and strategies that the state, local governments and others may consider and implement to support achieving the state's carbon neutrality goal. To the extent possible and relevant to the unique characteristics of the state's local and regional economies, the studies shall also draw upon lessons learned from other models of economic and social transitions.

The guiding principles underlying each of the two studies are:

- a. Equity. Equitably distribute all benefits associated with achieving carbon neutrality. Achieve environmental justice and shared prosperity in the context of a changing climate.

- b. Health. Improve and protect public health. Prioritize health, safety, and opportunity for the state's most vulnerable and disadvantaged residents, and for communities disproportionately burdened by pollution.
- c. Environment. Improve and protect environmental quality across the state.
- d. Resilience and Adaptation. Develop resilience and adaptive capacity locally, across the state.
- e. High Road Jobs. Foster sustainable and diversified local and regional economies, and prioritize the creation of accessible high quality jobs for all communities, particularly the state's most vulnerable and disadvantaged residents and resource-dependent communities.
- f. Affordability and Access. Deliver affordable, accessible, and reliable non-fossil fuel options and technologies.
- g. Minimize Impacts Beyond our Borders. Minimize emissions leakage and external costs beyond the state's borders, to the maximum extent possible.

CalEPA and its interagency partners will facilitate shared and equal access to decision making and related processes during the development of the studies.

## Study 2

### Supply of Transportation Fuels

For purposes of the two studies, carbon neutrality means achieving a balance between sources and sinks of greenhouse gas (GHG) emissions. The focus of the studies will be to evaluate how to both reduce emissions from fossil energy and industrial sources and how to increase sinks.

This study shall be coordinated and integrated with the other study referred to above, here called "Study 1," and shall not duplicate the work of Study 1. Study 1 will focus on strategies to reduce transportation-related fossil fuel demand and emissions and will be led by researchers at the University of California Institute of Transportation Studies ("ITS Team").

The two studies will coordinate the development of potential transportation-related GHG emissions trajectories in California and will develop a common set of scenarios that reduce transportation-related fossil fuel demand, and, in parallel, manage the decline in transportation-related fossil fuel supply.

**Focus Areas:** The contractor shall expend a majority of its time and effort in investigating these Focus Areas as elements of a roadmap to achieve carbon neutrality by 2045:

1. **Evaluate key characteristics, trends and policies already underway and/or under consideration for California**, including:
  - a. Current emissions characteristics: overall emissions (e.g., GHG, criteria air pollutants and other toxic contaminants) associated with transportation-

related fossil fuel ("transportation fuels") production (which includes extraction, refining and distribution) and GHG sinks associated with transportation fuels, e.g., carbon, capture and storage (CCS).

- b. Current market characteristics and trends: global prices and carbon footprint of transportation fuels; projected prices and supply of transportation fuels; fleet-specific transportation fuel use in California; percentage of imported transportation fuels refined in California; percentage of transportation fuel supply produced in state; and comparative carbon content from different transportation fuel sources used in California.
  - c. Current employment characteristics and trends: existing jobs in terms of (1) number (by occupation and industry); (2) quality (e.g., wages, benefits, autonomy, voice); and (3) access (e.g., demography, geography, educational status, and educational or career pathways) across transportation fuel production (i.e., extraction, refining and distribution).
  - d. Current distributional characteristics and trends: (1) distribution and geographic concentration of exposures to and health burdens and vulnerabilities associated with local pollution (e.g., from GHG emissions, criteria air pollutants and other toxic contaminants) and other health and safety risks; and (2) distribution of transportation fuel costs across the state.
  - e. Current relevant policies: (1) policies and strategies that impact the supply of transportation fuels, including those that manage the decline in supply and those that incentivize production (e.g., tax subsidies); (2) workforce policies; (3) local pollution reduction policies; (4) land use policies; (5) permitting criteria and issuance thresholds for transportation fuel production and use permits; and (6) policies that support low-income workers and residents.
2. **Identify scenarios to manage the decline of the state's transportation fuel supply in conjunction with the fuel demand reduction** outlined in Study 1. Across these scenarios the study will identify and evaluate:
- a. Reductions in transportation fuel supply (1) for all transportation-related uses and (2) from all sources.
  - b. Health and safety benefits across state, regional and local geographies including changes in location, magnitude and concentration of supply-related activities and local pollutants, among others.
  - c. Economic impacts and opportunities across state, regional and local economies, including changes in fuel costs across locations, and changes to and impacts on state and local tax revenues, among others.

- d. Environmental benefits across state, regional and local geographies associated with reductions in supply, including improved air and water quality, among others.
- e. Changes in GHG sinks related to transportation fuel production.
- f. Workforce impacts, challenges and opportunities, including those associated with market transitions and economic development, and those represented by changes in job numbers, quality and access, and changes in career pathways, across local and regional economies. Include a focus on:
  - i. Support for an inclusive, high-road transition (i.e., one attentive to job quality and access that addresses the interests of workers and community).
  - ii. Development or expansion of state, industry and/or regional partnerships;
  - iii. Identification of potential sector-specific and cross-sector approaches;
  - iv. Creation and provision of social and economic safety nets; and,
  - v. Facilitation of industry transition planning.
- g. Policies and strategies that maximize benefits and opportunities, and manage impacts, to communities that bear the greatest emissions burdens associated with transportation fuel production and communities that are resource-dependent, including: (1) local pollution reduction policies; (2) land use policies; (3) permitting criteria and issuance thresholds for all oil and gas production and use permits; (4) policies that support and advance economic opportunities for low-income workers and residents, and (5) policies to limit social dislocation; among others.