The 1950s has been called the decade of the American Dream. The United States economy grew by 37 percent, and homeownership surged as suburban houses—equipped with their white picket fences—"sold like hotcakes." But this American Dream has come at a steep cost. Let's fast forward to today; more than half a century of government housing policy favoring sprawling, car-dependent development has spawned long commutes, increased exposure to air pollution, and segregated communities. And across the United States, the transportation sector is now the largest source of greenhouse gas (GHG) emissions.

Today, California has set goals to decrease the number of miles we travel by car to address these impacts, which calls for novel approaches to land use and environmental mitigation—a topic CLEE is investigating in a new research project.

In California, transportation is responsible for over 40 percent of GHG emissions and is a leading contributor to emissions of health-harmful air pollutants, such as particulate matter and nitrogen oxides. Even with electric vehicles, Californians still need to reduce the number of miles they travel by car, a term referred to as vehicle miles traveled (VMT).

The California Air Resources Board's (CARB) 2022 Scoping Plan—the state's roadmap for climate strategies—calls for per-capita VMT reductions of 30 percent below 2019 levels by 2045 (equivalent to slashing the average person's VMT from 24.6 to 17.2 miles per day). Furthermore, under the California Environmental Quality Act (CEQA) and an amendment from SB 743 (2013), government agencies are required to mitigate (where feasible) VMT impacts of new discretionary projects when located in high-VMT areas.

Mitigation "bank" and "exchange" programs (MBEx) present a promising opportunity to achieve the significant VMT and GHG reductions necessary to meet the state's climate goals. In a new research effort sponsored by CARB, CLEE is evaluating how local and state leaders can maximize the potential of these programs.

MBEx programs would enable agencies and project developers to fund or implement offsite mitigation measures under CEQA to reduce VMT and GHG emissions at the local or regional scale when it is infeasible to mitigate all impacts at the project site. For example, a new housing development that cannot mitigate VMT or GHGs through on-site design features could fund a local biking infrastructure project or public transit expansion project to facilitate VMT or GHG reductions in the vicinity of

the project site. These programs offer local governments a crucial tool to achieve rapid reductions in a cost-effective and practical manner while promoting a range of development and transportation goals.

Previous research from CLEE and others has shaped a preliminary framework for how local and state agencies might craft MBEx programs. CLEE's 2022 report, *Implementing SB 743: Design Considerations for Vehicle Miles Traveled Bank and Exchange Programs*, provided guidance for state, regional, and local leaders developing plans for VMT MBEx programs. It gave recommendations on program design elements including geographic scope and administrative design, project prioritization and selection, pricing and fiscal matters, mitigation monitoring, additionality, and equity.

In a new research project, CLEE is building on its existing research to provide further guidance to state and local governments on the best framework, practices, and protocols to design and implement VMT and GHG MBEx programs. CLEE is investigating challenges and opportunities to developing these programs by:

- Analyzing proposed and existing designs for MBExes throughout California;
- Conducting expert interviews with a range of stakeholders; and
- Assessing considerations of project costs, administrative costs, benefit quantification, additionality, and equity.

In its initial survey of programs, CLEE has identified more than a dozen cities, counties, transportation authorities, council of governments, and metropolitan planning organizations in the process of developing or operating MBEx programs. Key findings so far include:

- MBEx programs are geographically distributed, spanning urban, suburban, and rural areas from northern to southern California;
- Most programs are still in the planning or pilot phases, and many have developed preliminary frameworks for the selection and prioritization of cost-effective and community-responsive mitigation projects;
- There appears to be an early preference for exchange-type programs with fewer centralized oversight mechanisms and administrative responsibilities; and
- Local governments are prioritizing strategies to meet the legal requirements of SB 743 and CEQA while balancing cost-effectiveness of investment with retention of funds as close to a development site as possible.

Based on its research and expert interview findings, CLEE will identify a set of best practices for the development and implementation of MBEx programs at local and regional scale. By evaluating emerging practices and key considerations from programs around California, this new research project will assess progress to date and move toward consensus on program design for the future.

Learn more about the project here.