

Zero Emissions and Electrified Mobility

GOING GREEN FOR A SUSTAINABLE MOBILE FUTURE



Demand for zero emission cars, buses and trucks, along with the infrastructure needed to support them, is rising exponentially and impacting stakeholders from every industry.

Climate and resiliency provisions in the Infrastructure Investment and Jobs Act provide funding to increase investment in electric vehicle supply equipment and alternative fuel infrastructure.

Wherever you are in your journey to zero emissions, we'd like to partner with you to develop and execute a roadmap for sustainable, long-term success.

Taking You from Idea to Implementation

As industry-recognized experts in transportation, energy and facility design, we'll collaborate with you on research, planning and design through operations for the full scope of your initiative, giving you one stop accountability.

First Things First

Focusing on your zero emissions goals, we'll help you lay a solid foundation with research, planning and design to create a clear roadmap that helps avoid pitfalls down the road. We can save you time, money and priceless political capital by preventing scaling issues and unnecessary purchases down the road.

Data-driven Decisions

Our industry leading **Zero+** fleet optimization and feasibility modeling tool provides you with superior operating, charging and energy cost scenarios. This is the quality data you need to better assess your zero emission options and formulate a feasible plan. When combined with our **EconMOVES** decision support tool, you can also evaluate financial implications as they relate to your existing long-range operating, capital and financial plans. Better information leads to better decisions, helping you move your ZE vision forward with confidence.

KEY SERVICES

- Strategic and Readiness Planning for EVs
- Fleet Transition Planning
- Charging Network Infrastructure Design and Planning
- Facility Design and Modifications for EVs



Key Zero Emissions and Electrified Mobility Projects



West Coast Clean Transit Corridor Initiative

Southern California Edison, CA, OR, WA

With a goal to drastically reduce emissions, 11 West Coast electric service providers teamed up and brought HDR on board to lead a study designed to provide recommendations for electric charging infrastructure along the I-5 corridor. The visionary project focused on medium- and heavy-duty electric trucks, which have greater charging demands and greater potential for emissions reductions. The study explored how and where to provide electric vehicle charging stations along the 1,300-mile route.



Battery Electric Bus Infrastructure Study, Grant Support, Design Kitsap Transit, Kitsap County, WA

HDR worked with Kitsap Transit to develop a plan to convert their existing diesel bus fleet to battery electric buses. Our transportation and power experts teamed up to research bus technology, routing, base and facility modifications to support BEBs, backup power supply, charger count and cost, and grid requirements. We then provided grant assistance to help secure funding for the Phase 1 installation of chargers and are assisting with the FTA required IIJA Fleet Transition Plan.



Zero Emission Bus Electric Chargers San Diego Metropolitan Transit System, San Diego, CA

To ensure a smooth rollout of their ZEB fleet, we developed plans, specifications and construction cost estimates for the installation of six owner-furnished, contractor-installed, electric vehicle supply equipment chargers. We also took on geotechnical engineering required for underground work and concrete paving. In close collaboration with San Diego Gas & Electric, we worked to ensure the electrical service upgrade aligned with the project schedule.



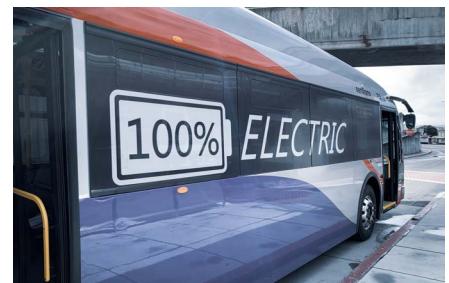
Electric Vehicle Readiness Plan City of Steamboat Springs, Steamboat Springs, CO

In an effort to "encourage" EV adoption, rather than simply "support" EV demand, HDR was hired to develop a public-facing, detailed EV Readiness Plan. The goal was to encourage and prepare for greater EV adoption and illustrate that EVs were, in fact, more affordable to operate and that charging would be locally accessible. HDR identified barriers and developed action items to remove them. Steamboat Springs uses the guide to promote EV readiness within the community as a public entity, within its workforce as an employer, and within its vehicle fleet as a fleet operator.



Battery Electric Bus Charging Infrastructure Consulting Services C-TRAN, Vancouver, WA

With a grant to install electric bus chargers for a planned transition to BEBs, C-TRAN needed to know what type of chargers to install, where to place them and how to power them. HDR was enlisted to design and oversee the construction of depot charging station infrastructure for their future heavy-duty battery electric transit buses. Using the HDR Zero+ fleet optimization tool, we evaluated routes and charging locations and helped C-TRAN select the chargers. We have completed planning, design and assistance with charger procurement. Construction management and infrastructure commissioning is in progress.



Zero Emissions Bus Transition Management San Mateo County Transit District, San Mateo County, CA

HDR serves as program manager/owner's representative to SamTrans as they plan their aggressive transition to zero emission bus technology — one of the largest programs the agency has undertaken. We've supported the agency in understanding the capabilities, service considerations, infrastructure needs and operational impacts of both battery electric buses and fuel cell electric buses, and we are working to create a comprehensive fleet transition plan to meet FTA requirements and streamline the pursuit of their aggressive timeline.