



**MOVING FORWARD  
WITH CLEAN TRANSPORTATION**



Advanced Transportation Technologies  
Clean Transportation Solutions

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**WestStart-CALSTART** is dedicated to supporting and accelerating the growth of the advanced transportation technologies industry and its related markets, with the goals of cleaning the air, increasing energy efficiency, and creating high-quality jobs.

**Insecure and dwindling oil supplies, climate change, air pollution, highway gridlock—these growing problems are strongly linked to transportation.** Transportation accounts for 67 percent of U.S. petroleum consumption—while booming world demand, conflict in oil-producing regions, and declining production are wreaking havoc with prices and supplies. Cars, trucks, buses, and other vehicles generate a large and growing share of greenhouse gas emissions, along with smog and particulate pollution.

**We don't have to wait for solutions—WestStart-CALSTART is acting now.** As an internationally known catalyst for the advanced transportation industry, we work with manufacturers, suppliers, fleets, public agencies, and policy makers to bring clean, efficient technologies to market. We get the right partners together for funding, development, and demonstration, and find cost-effective ways to put clean transportation strategies on the street.

**WestStart-CALSTART is uniquely qualified to spur market success and sustainable transportation systems.** Our unmatched combination of resources, expertise, and contacts lets us help clean technology pioneers navigate every bend in the road. We work with multiple fuels and technologies, so we can give unbiased advice on what's right for particular uses and users. And we're a nonprofit organization, so we're motivated solely by the vision of competitive companies driving a clean, efficient transportation future.

**WestStart-CALSTART is making that future happen today. Join us.**

## Participants Get Key Insights and Support

WestStart-CALSTART members, called Participants, provide essential support for our work—and we give it back to them many times over.

More than 130 organizations have joined WestStart-CALSTART as Participants. We form a powerful coalition of businesses, manufacturers, and agencies, working together to create a sustainable clean transportation industry. Any organization or business involved in clean transportation technology anywhere in the world is welcome.

### Participant benefits

Joining WestStart-CALSTART as a Participant lets you build productive partnerships, identify new opportunities, reduce economic risks by making informed decisions, and find potential funding resources.

#### Benefits include:

- Information alerts on funding opportunities, conferences, and new programs
- Referrals to industry contacts and partners
- Publications covering technology developments, trend and policy analysis, and industry events
- Opportunities for technology assessments by our influential Technical Advisory Committee

To get the right mix of services for your needs, you can join at established benefit and fee levels or use our customized consulting services.

## Move Forward with WestStart-CALSTART

WestStart-CALSTART is a nonprofit organization that works with businesses and the public sector to develop and implement clean, efficient transportation solutions. We've been at the epicenter of these efforts since 1992, when we launched in California. Since then we've expanded our focus across North America and helped drive transportation technology successes worldwide.

We believe that a better environment and economic growth must go hand in hand, but we know the status quo won't change by itself—promising solutions need help to get a fair shot at success. We act as a catalyst for that success by bringing together people, technologies, and resources to bridge the gap between development and commercialization.

#### Our breadth of expertise is unparalleled:

We're knowledgeable about all advanced fuels, technologies, and vehicles—and how they stack up.

We provide technology development and demonstration, fleet consulting, trend analysis, and advocacy under one roof.

We're creators and facilitators—we identify opportunities, find solutions, build teams, secure resources, and spark action.

#### What We Do

**We help manufacturers** evaluate the feasibility and marketability of new technologies and build the teams that can move them forward.

**We help fleet operators** determine what clean technologies are best for them and implement those solutions in ways that make good business sense.

**We serve as strategic brokers**, connecting agencies and governments with industry and helping them work together to seize opportunities and find optimal solutions.

**We promote innovative ways** to make transit more attractive and give commuters alternatives to private automobiles.

**We identify potential funding** and incentives for implementing clean, efficient transportation strategies.

### MOVE FORWARD

Call (626) 744-5600 and ask for our manager of participant services, or go to [www.weststart.org/joinus](http://www.weststart.org/joinus).

*"Volvo Car Corporation believes in frank discussions and partnerships. Through CALSTART, we have gained better understanding of the motivations behind many activities being initiated in the interest of cleaner transportation."*

—Ichiro Sugioka  
Science Officer, Volvo Monitoring and Concept Center

## MOVE FORWARD

- » **Become a Participant** and let us help you monitor industry developments and take advantage of trends; evaluate your technology; and refine, test, and demonstrate new technologies, fuels, or vehicles.
- » **Work with us one-on-one or through our programs** to identify opportunities or set up demonstration projects that will speed commercialization.

Call (626) 744-5600 or go to [www.weststart.org](http://www.weststart.org).

## SUCCESS SNAPSHOT

Longtime WestStart-CALSTART Participant ISE Corp. developed a unique gasoline-electric hybrid system under one of our programs. The company received major investment funding in 2005 and began delivering a refined hybrid drive “package” for bus and truck applications.

**THE RESULT:** ISE now produces hybrid and fuel cell systems for the transit, truck, and military markets.

## Manufacturers & Developers: Speed Technology to Market

WestStart-CALSTART can help manufacturers and developers speed to market with advanced technologies involving any alternative fuel, vehicle, or system that will help reduce our dependence on oil, prevent global warming emissions and air pollution, and create new economic opportunities.

We work with start-up and established companies—one-on-one or through our programs—to help them develop the cleanest, most efficient systems for light-, medium-, and heavy-duty vehicles, focusing on decreasing cost and increasing reliability. In our first 14 years, we managed nearly \$180 million worth of environmentally progressive technology development and demonstration projects, resulting in an array of firsts.

Perhaps the greatest benefit we offer manufacturing partners is our broad network of relationships across technology and fuel boundaries. This network—and the wealth of information it brings—helps companies identify opportunities, see how their technologies fit into market and policy trends, and gain international visibility. Opportunities include presentations to our Technical Advisory Committee (TAC) of industry experts, which provides valuable feedback and analysis of new technologies.

We also help develop market demand for clean, efficient technology. Through our Hybrid Truck Users Forum (HTUF), for example, we work with fleet operators to identify emerging vehicle needs and let manufacturers know which features could improve their business. Fleet operators then commit to buying new technology if it meets their criteria.



MULTIFUEL EXPERTISE

INDUSTRY CONTACTS

TECHNOLOGY ASSESSMENT

BUSINESS OPPORTUNITIES

TREND ANALYSIS

*“WestStart-CALSTART is known for being a technology-neutral proponent of clean transportation options. They perform a valuable service that benefits their participants, the end users of clean transportation technologies, and society.”*

—Bradley Bohlmann  
Business Development Manager, Eaton Corp.

## Fleets: Get Low Emissions, High Efficiency

Whether fleet operators want to reduce exposure to fuel price spikes, meet emissions requirements, or use clean transportation technologies to advance business goals, WestStart-CALSTART can help them find the best solutions and avoid costly missteps.

We work with fleet operations of all kinds—transit agencies, trucking, corporate, airports, seaports, and others—to identify reliable and cost-effective clean transportation technologies tailored to their unique challenges. Because we’re fuel neutral, we can provide unbiased advice. Because our teams are multidisciplinary—involving planners, policy analysts, engineers, and scientists—we can untangle the complex web of emissions, operations, and economic issues. And because we’re well connected with technology providers and policy makers worldwide, we know what’s coming down the pike.

Fleets can take advantage of WestStart-CALSTART’s expertise in several ways: by using our consulting services, by drawing on our knowledge of funding sources for conversion to alternative fuels and new vehicle systems, and by participating in our clean vehicle programs, designed to bring technology creators and users together and speed adoption of the most promising solutions. The Port of Long Beach, for example, engaged us to organize and manage a liquefied natural gas (LNG) yard hostler demonstration and evaluation project that included testing performance and analyzing the business case for using the equipment. In a follow-up project, we’re evaluating hybrid technology.

### Clean Fleets Expertise

We can help fleet operators evaluate and implement advanced transportation technologies with these services and programs:

- **Assessment and analysis**, including feasibility studies, emissions testing, technology and fuel assessments, drive-cycle development, and life-cycle cost analysis
- **Identifying and securing funding** for vehicle deployment and demonstration
- **Implementation strategies** designed to suit specific requirements
- **Ongoing clean vehicle programs**, such as Bus Rapid Transit and the Hybrid Truck Users Forum (HTUF), which provide guidance and resources

## SUCCESS SNAPSHOT

**Colorado’s Roaring Forks Transportation Authority engaged us to develop a roadmap toward a greener, cleaner, and quieter fleet. We helped RFTA gain community support for the initiative and for expanding its fleet with hybrid buses.**

**THE RESULT: RFTA is looking to expand its use of hybrids, has added biodiesel to its fueling mix, and is a model for other transit properties in the region.**



### MOVE FORWARD

- » **Engage our consulting practice** to help you evaluate and implement clean, efficient transportation technologies.
- » **Become a Participant** and stay up-to-date on clean transportation issues.

Call (626) 744-5600 or go to [www.weststart.org](http://www.weststart.org).

FUEL-NEUTRAL ADVICE

FUNDING OPPORTUNITIES

COST-EFFECTIVE STRATEGIES

PRODUCTIVE PARTNERSHIPS

*“Anytime you start with new technologies there are a lot of ideas and different things to choose from. WestStart-CALSTART provides exposure to a number of vendors and to other fleets—they act as a consensus-building team to help move technologies forward.”*

—Sid Gooch  
Managing Director, Federal Express Corp.

## Programs Snapshot

Our work as strategic brokers—bringing the right people together to pursue high-value initiatives—has resulted in many successful programs, such as:

### **Bus Rapid Transit (BRT):**

We manage the Federal Transportation Administration's BRT Action Plan for implementing high-capacity express bus systems. Our work includes connecting vehicle manufacturers, component suppliers, and transit agencies.

**CalSTEP:** We launched the California Secure Transportation Energy Partnership, a public-private initiative to create an economy-building, practical action plan that will help the state reduce petroleum use and increase use of alternative fuels.

### **Hybrid Truck Users Forum (HTUF):**

Bringing together North American fleets and manufacturers, HTUF is speeding commercialization of medium- and heavy-duty hybrid vehicles by making the business case for them, setting performance standards, and securing fleets' commitment to purchase.

### **National Fuel Cell Bus Technology Program:**

We helped develop funding for this \$49 million program and leads a coalition of users and suppliers working to develop, deploy, and commercialize fuel cell and hydrogen-powered drive systems for transit.

**New Fuels:** We're working with U.S. and international partners to advance alternative and renewable fuel production, development, and use. Projects include a California-Sweden biomethane collaboration and a Renewable Roadway refueling network with E-85 and hydrogen stations.

## Tap Our Expertise

### **Partnerships**

WestStart-CALSTART helps to expand the clean transportation industry by working closely with federal, state, and local agencies to develop and implement policies and programs that further goals for clean air, energy security, and economic growth.

Our partner network spans industry, government, and nongovernmental organizations that share our commitment to clean, efficient transportation. And our board of directors includes experts from manufacturers, state and regional government agencies, utilities, energy companies, private and public fleet operators, environmental organizations, and others. (Go to [www.weststart.org](http://www.weststart.org) to see who's on the board.)

### **Funding**

We have a long track record of connecting projects with the right funding source and pulling people together to create programs that get funded. Our funding partners include research institutions, regional and local public agencies, and federal and state government agencies.

### **Information Resources**

Who's doing what? What's working—and what isn't? Getting the latest and best information is essential for moving forward with clean transportation strategies. WestStart-CALSTART is the industry's premier information source. We produce:

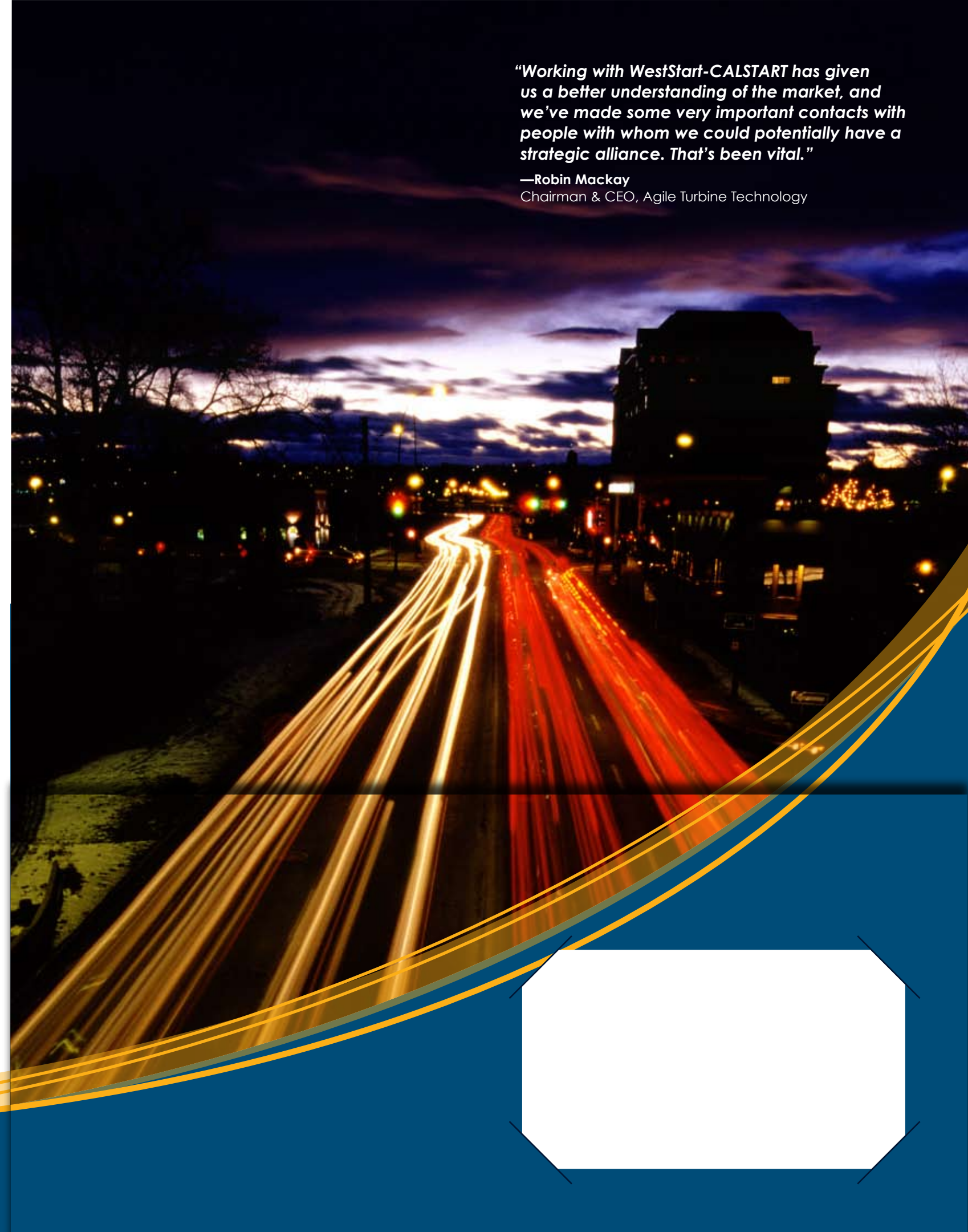
**Technology newsletters:** Our focused newsletters deliver the latest information on hybrids; hydrogen transportation; and public transit vehicle, service, and access innovations. All are free—subscribe at [www.weststart.org](http://www.weststart.org).

**Web news:** We provide industry news, research findings, and program reports through our Web site, along with back issues of newsletters. Our signature publication, *NewsNotes*, is a compendium of the latest news, posted daily. Participants also receive the quarterly *Global Update* on worldwide trends in the advanced transportation industry.

**Events:** Our conferences, symposiums, and forums draw a diverse range of participants who share information, identify opportunities, and make alliances—these gatherings are essential for staying on top of industry developments. Our premier annual event is the Clean Heavy Duty Vehicle Conference; other industry-leading events include California's Transportation Energy Future conferences, the Hybrid Truck Users Forum (HTUF) national meetings, and the Hydrogen Internal Combustion Engine Symposium.

*“Working with WestStart-CALSTART has given us a better understanding of the market, and we've made some very important contacts with people with whom we could potentially have a strategic alliance. That's been vital.”*

—Robin Mackay  
Chairman & CEO, Agile Turbine Technology





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