



**MEMBERSHIP BENEFITS, RESPONSIBILITIES & PROCESS OUTLINE**  
**SUSTAINABLE TRANSPORTATION ENERGY PATHWAYS RESEARCH PROGRAM**

**STEPS is a four-year (2007-2010) research project** designed to develop self-consistent and transparent comparisons of promising alternative energy and vehicle pathways – hydrogen, biofuels, electricity and fossil fuels. **STEPS is developing an overall scenario project** that will combine results from other projects. This will create projections of transportation sector evolution over the next several decades under various industry and policy assumptions. Program Sponsor input will be welcome and valuable.

**MEMBER BENEFITS**

Conferences, Workshops and Advisory Committee

- Conferences and Workshops. STEPS members and specially invited technical experts are invited to attend the workshops and conferences of the STEPS program. There are at least two gatherings in the conference/workshop format each year. For 2007, they will be: *Transportation Pathways Research Symposium* (May 21-22) and the *STEPS Policy & Outreach Symposium* planned for fall 2007. Companies typically send 2-3 key technical or planning staff members to attend these one and a half to two day events.
- Conferences and workshops offer companies an opportunity to provide input to the STEPS research agenda.
- The moderate size and highly-informed attendees for these gatherings allows for valuable discussion and excellent technical exchanges between researchers, industry and public agency sponsors.
- Preliminary, unpublished research results and research posters are presented and discussed at these events.
- Advisory Committee. Each Program Sponsor will appoint a representative. This body will meet at least once a year, and possibly twice, to provide input on STEPS research and outreach directions. The first meeting will be held on August 21, 2007 at the Asilomar Conference Center.

### Research and Publications

- Publications – presentations, draft papers, and published papers – are posted on the STEPS web site which has a special password for Program Sponsors. All STEPS members receive the password.
- A quarterly newsletter will highlight recent program news including research results, new projects and events.
- Program Sponsors become familiar with preliminary and final research results between 6 – 18 months prior to publication or formal public talks. For example, Joan Ogden presented hydrogen research findings at the CARB ZEV hearing in the fall of 2006. That work was part of the Hydrogen Pathways program at ITS-Davis for a few years before her delivery of the final results at the CARB workshop.
- Prior to the completion of a research project, it is often very helpful for Program Sponsors to know that ITS-Davis is conducting studies on an issue. This may assist member's internal studies and/or reduce duplication of efforts.

### Special Meetings

- As part of the STEPS program, Program Sponsors may request meetings with our researchers and graduate students on topics of mutual interest. Program staff facilitate these sessions throughout the program's four-year duration.
- Special meetings usually occur on campus, but when feasible, can be at member facilities. In our experience, these visits often coincide with a company's preparation of a special internal report on a subject closely related to the UC Davis research program and may assist a member in confirming or refining its conclusions.
- Special public process events will be held. These may include tutorial workshops for public agency leaders and staff, policy issue forums, and information gathering sessions.
- Where there is a strong shared interest, Program Sponsors and STEPS researchers interact closely on specific projects, arrange for student internships at member locations, and host extended visits from sponsors at UC Davis.

### Diversity of Members

- STEPS members are anticipated from industry (auto OEMs, energy firms and biofuels) and government (state, national and international).
- For our H2 Pathways Research Program (2003-2006), 17 companies and five government agencies held membership. For STEPS, we anticipate a similar mix, and fully anticipate strong participation from CARB, California Energy Commission and Caltrans.

- The 14 members formally committed to STEPS as of March 29th are: auto OEM (BMW, DaimlerChrysler, Nissan, Subaru, Toyota); energy (BP, Chevron, PG&E, Shell, TOTAL); government (Caltrans, NRCan, U.S. DOT, U.S. EPA).

#### Connections to Government

- ITS-Davis research supports California and national transportation energy policy development. During our H2 Pathways Research Program, Joan Ogden was the primary U.S. academic supporting the California Hydrogen Highway initiative, and she continues in that role. When the state prepared its Hydrogen Highway Blueprint Plan, no fewer than ten of our faculty, researchers and students supported the report. Every committee of that project included at least one ITS-Davis member. Our students compiled much of the background information for the report. For California's low carbon fuel standard (LCFS), we are playing a similar role. STEPS will overlap with government research related to the UC Davis role in policy support.
- Because there is such strong overlap between the research themes of STEPS and LCFS issues, companies participating in STEPS will gain an early window on the state's LCFS considerations. California's LCFS will be a point of study for STEPS, but the level of analysis that will occur within STEPS is still to be determined.

#### **MEMBER RESPONSIBILITIES**

- Program sponsorship is at a single level on a calendar year basis: \$50,000 in 2007 and 2008; \$60,000 in 2009 and 2010. Program Sponsors are invited to renew on an annual basis. See below.
- Members designate two STEPS contacts. A Key Contact will serve as the member organization's designee for day-to-day issues. An Advisory Committee Representative will also be designated. Typically the Advisory Committee Representative is a more senior manager, though in some cases the Key Contact and the Advisory Committee Representative are the same person.
- All other member inputs are optional. Often companies wish to provide data or to arrange to have visiting researchers spend time on campus. Typically, this comes from a strong mutual interest in a certain aspect of a project's research agenda. When it makes sense for members, ITS-Davis welcomes the integration of their expertise into our studies.

#### **PROCESS FOR ESTABLISHING MEMBERSHIP**

- Because UC Davis defines the research agenda (with advisory input from members), STEPS membership does not require a formal contract between UC Davis and its members.
- All member support will be directed to the STEPS research program. There is no overhead charge.
- While the duration of STEPS will be four years (2007-2010), no pledge of support is required for the duration of the program. If a Program Sponsor is not pleased with the level of output, the member may decline to support STEPS in the coming year. Support decisions by all members

are made on an annual basis. In our experience, this is the most efficient way for a large, multi-member research consortium to operate. Annual or multi-year contracts with 20+ members would be cumbersome to administer. In the ITS-Davis H2 Pathways program (2003-2006), 100 percent of the 22 members that began as members in 2003 continued through 2006. We hope our operation of the STEPS program will lead to the same positive level of member satisfaction.

- ITS-Davis will invoice the designated office of a Program Sponsor, if requested, to help facilitate the transfer of its annual support.