

Project Synopsis – maximum 2 pages

Objective: What does the project seek to achieve or change?

The project will involve (i) a survey of the status of electric vehicle technology and existing government support initiatives, (ii) an analysis of the potential for its growth and the barriers to commercialization throughout APEC, (iii) proposed policy/intervention options to enable full commercialization and (iv) a workshop to critique the report's findings. It will focus on battery electric vehicles (BEVs), hybrid electric vehicles (HEVs) and plug-in hybrid electric vehicles (PHEVs). The purpose of the project is to increase the capacity of the APEC region to adopt and encourage appropriate electric vehicle technologies (both vehicles and supporting infrastructure models) necessary for maximizing the benefits to each individual economy. Specific objectives are to:

- Summarize and, where possible, quantify the global market status for electric vehicles
- Quantify the potential of electric vehicles to (a) increase energy and use efficiency and (b) reduce exhaust and greenhouse gas emissions from the transport sector of APEC economies;
- Evaluate the potential for electric vehicles to assist and integration of Renewable Energy including providing off-peak virtual charging (storage);
- Identify any potentially harmful impacts (such as battery disposal) and mitigation measures;
- Identify any functionality issues for electric vehicle (e.g. charging, etc.) that could be barriers to the uptake of electric vehicles or impact negatively on owner's lives;
- Identify common economic, behavioral, structural, information and other barriers (actual and potential) to greater commercialization of these technologies in the APEC region, and indicate where APEC economies might undertake further investigation of barriers specific to their economies;
- Identify markets and market sectors most suited to early adoption to maximize the benefits of first generation electric and plug-in hybrid electric vehicle technologies in APEC economies;
- Inventory international policies which may assist APEC economies to develop suitable policies that would enable wider commercialization of electric vehicle technologies to facilitate the benefits and mitigate the risks already identified;
- Increase the opportunities for policy coordination and trade between APEC economies and building capacity in the use of electric vehicle technologies through out APEC.

Relevance: How does the project meet the priorities of your forum and APEC as a whole?

Why should APEC undertake this project?

This project aligns directly with the APEC Leaders' key ECOTISCH priorities of Climate Change, Energy Security and Clean Development (APEC Senior Officials report on Priorities 2005) and also responds directly to the APEC Energy Ministers' Darwin Declaration, 2007 (Statements 4 and 8).

Electric and plug-in hybrid electric vehicles can actively displace the use of imported oil throughout the APEC region. They have potential to reduce greenhouse gases, improve air quality in urban areas, improve transport fuel and use efficiency, increase local and regional energy security, reduce running costs for consumers, and improve resilience in the transport sector. Accordingly, this project directly promotes the development of a highly sustainable (when combined with renewable electricity generation) transport energy technology that is supported in the Manila Action Plan 1996 via a call for clean technologies that promote sustainable development. The project also promotes both short-term and long-term aspects of the APEC Energy Security Initiative by supporting both the initial development and use of electric vehicle technologies, and facilitating greater integration of these technologies over time. It also supports the EWG's commitments to the WISD under its Type II Partnership Initiative "Fostering Regional Energy Cooperation in APEC: Energy for Sustainable Development".

Methodology: How do you plan to implement the project? In this section, address briefly

- Expected project timelines and estimated dates for key events and deliverables

The project will be carried out in three phases:

- Phase 1 will focus on assembling information that will fulfil the objectives listed above. Information will be sought through designated APEC contacts, focus groups, the internet and through direct contacts with stakeholders. It is expected that the database will be largely complete by the beginning of April 2011 and its analysis by the beginning of June 2011. A draft report will be

completed prior to the Workshop.

- Phase 2 will be a Workshop on the project outcomes and will focus on achieving critical examination and review of the draft report, and disseminating information resulting from the project to agencies in economies that are either already involved in electric vehicle programs or which are planning to do so. It will be held in conjunction with an EGNRET meeting in late 2011.

- Phase 3 will involve preparation of a Final Report to all APEC economies upon conclusion of the project by presenting a written and electronic technical report formulated in a manner designed to build capacity in the establishment and use of electric vehicle technologies throughout the APEC economies by providing best practice guidelines to maximize benefit and minimize the risk of stranded investments. The final Report is planned for distribution in November 2011.

- The project's target audience and relevant stakeholders (APEC and non-APEC)

The audience for the project will principally be governments and government agencies focused on meeting Kyoto protocol emission reduction targets, improving their balance of payments through reducing oil imports, and improving their national energy resilience and security, but will also include:

- policy makers aiming to achieve successful deployment of alternative fuels in the transport sector;
- private interests associated with the development of a stable and commercially viable electric vehicle industry and
- APEC citizens receiving the benefits of diminished running costs and improved air quality in urban centres.

- If this proposal builds on the findings or lessons learned from previous projects and if it is intended to contribute to future activities

This project is anatural extension of a position paper presented to Energy Ministers at ENRM entitled *Alternative Transport Fuels in APEC* and approved by the APEC Energy Working Group at ENWG 31. It follows logically from the recently completed project on *Alternative Transport Fuels: Implementation Guidelines* and will help to influence the success of new and existing programs to accelerate the deployment of electric vehicles by government agencies throughout APEC. The project will also build on several previous EWG projects and increase the capability of the APEC region to react to the dual pressures of climate change and energy security.

- Possible indicators of success

There are four possible indicators of success. The first is the extent to which APEC focal points and stakeholder contacts engage in the information gathering phase of the project. The second will be the level of interest in, and attendance at, the project Workshop. The third will be the feedback received from Workshop attendees and industry stakeholders. The final indicator will be the active uptake of project recommendations for the introduction of electric vehicles in APEC economies.

- Plans to communicate the results of this project to others

The workshop and final report will be advertised on the APEC, ENWG and EGNRET websites, through press releases and by targeting stakeholders in all APEC economies. Both CDs and hard copies of the workshop presentations and final project report will be prepared and circulated to each APEC economy and to interested stakeholders. If requested, additional workshops will be conducted after conclusion of the project.