The commercial penetration of plug-in hybrid and fully electric vehicles faces many barriers. The “chicken and egg” problem is a key challenge. Mass production of plug-in vehicles necessitates adequate consumer demand and support infrastructure, yet it is uneconomical to build charging and maintenance stations without large-scale vehicle sales. These new vehicles also cost substantially more than conventional vehicles to build and have a restricted outlook for dramatic reductions in production costs. There are a variety of new concepts and technologies (e.g. quick charge vs. battery swap stations) that could affect production and operational costs.

President Obama has established goals, policies, and public funding to advance plug-in vehicles and overcome the barriers inhibiting commercialization. During his candidacy, he announced a goal of putting one million plug-in electric vehicles on the road by 2015. In 2009, President Obama designated $2.4 billion in stimulus funds to battery technology development and manufacturing capacity expansion ($1.5 billion), recycling capacity development for lithium batteries ($500 million), and infrastructure concepts ($400 million).

The Transport Electrification Panel (TEP), organized and funded by the Indiana University School of Public and Environmental Affairs (SPEA), will be formed to address the adequacy of President Obama’s policies. The panel will be tasked with the following:

1. Assess whether President Obama’s goal of one million plug-in vehicles by 2015 can be achieved, given current federal and state policies and market dynamics.
2. Suggest constructive policy innovations that will advance the prospects of transport electrification in a cost-effective manner.
3. Highlight any undue risks, costs, or unintended adverse side effects that could result from the increasing policy interest in transport electrification.

TEP will be chaired by Gurminder Bedi, a distinguished member of the SPEA Dean’s Council and former Ford executive, and consist of 13 other members representing a range of expertise and perspectives on the topic. The panel will have a diversity of disciplines and perspectives, similar to a panel of the National Academy of Sciences or National Academy of Public Administration, but it is not designed as a stakeholder negotiation. It will draw on international experience as well as the limited U.S. experience.

TEP will ultimately produce a consensus report, targeted for the start of 2011. If a consensus cannot be achieved, panel members will be permitted to author separate or dissenting statements. SPEA personnel will assist the panel by providing background papers, literature reviews, and drafts of a panel report, but the final report will represent the views of the panel members only. The TEP report will be marketed by SPEA to leaders in government, industry, the mass media, non-profit organizations and others with an interest in transportation, energy and the environment.