

DEFINE

DEVELOPMENT OF AN EVALUATION FRAMEWORK FOR THE INTRODUCTION OF ELECTROMOBILITY

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Electromobility is often proposed to be the solution for the problem of combining individual transportation with an ecologically sustainable development. A prediction of the effects on the economic environment triggered by the anticipated change in the mobility paradigm from a fossil fuelbased individual transportation system to one relying on electromobility and public transport requires comprehensive analyses. Thus, the consortium intends to estimate and assess the full economic costs associated with a higher share of electromobility in a framework that suits the complexity of the matter, considering economic and environmental benefits.

The core of the project consists of a significant extension of the existing hybrid bottom-up top-down general equilibrium model of the Institute of Advanced Studies (IHS) in regard to the traffic and electricity sectors. Based on scenarios for transport and energy developed by the Umweltbundesamt for Austria and the Öko-Institut for Germany, this model will be used to conduct a cost-benefit analysis in regard to electromobility for Germany and Austria. Additionally, IHS and the Center for Social and Economic Research (CASE) will analyse consumer behaviour and mobility patterns based on original household-level surveys, the results of which will enter the general equilibrium model.

In parallel, the German Institute of Economic Research (DIW) and the Institute for Energy Systems and Electric Drives (ESEA) of the Vienna University of Technology elaborate on existing unit commitment models and develop these into a partial equilibrium electricity market model to assess the technological interactions between electromobility and the electricity sector. The environmental benefits of the anticipated shift in the mobility paradigm are then quantified departing from model results by CASE, who will also assist in applying both models to Poland to demonstrate how this framework can be extended to any country of the European Union.

PROJECT DATA

Funding/€	Total cost/€	Duration
1.022.897	1.036.815	30 months

Partners	Institut für Höhere Studien, AT Deutsches Institut für Wirtschaftsforschung, DE Umweltbundesamt, AT Technische Universität Wien – Institut für Energiesysteme und elektrische Antriebe, AT Öko-Institut e.V., DE CASE – Center for Social and Economic Research, PL
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