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PROMOTING ALTERNATIVE AUTOMOTIVE TECHNOLOGIES AND ALTERNATIVE FUELS EFFECTIVELY

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OVERVIEW/INTRODUCTION

The aim of this paper is to present some preliminary results of the project ALTER-MOTIVE funded within the Intelligent Energy-Europe (IEE) programme.

The core objective of the project ALTER-MOTIVE is to derive an action plan consisting of a portfolio of effective least-cost policy strategies to achieve a significant increase in innovative alternative fuels and corresponding alternative more efficient automotive technologies to head towards a sustainable transport system up to 2020 for EU-27 countries. The heart of this project is an investigation of about 80 recently implemented successful case studies of pilot projects for marketing alternative automotive technologies (AAMT) and alternative fuels (AF).

In detail the following aspects of the project ALTER-MOTIVE will be presented:

- Major wrap-ups from econometric analyses of cross-country comparisons of the impact of income, prices, fuel intensity on energy and service (car ownership, vehicle kilometre driven) demand;
- Preliminary major results from an analysis of about 80 bottom-up case studies documented and analysed in this project;
- First results of impact analyses of different types of energy policies as drivers and slowers of cars' energy consumption in different EU Member States.
- Major preliminary elements of an Action plan up to 2020 to promote alternative fuels and corresponding alternative more efficient automotive technologies to head towards a sustainable transport system

METHOD OF APPROACH

To derive the major product of this project – the Action plan – in detail the following steps of analysis are conducted:

- **Results from dynamic modelling based on econometric analyses: What can we learn from the scenarios?**
  Which effects can we expect from different policy instruments due the results of our scenario analysis for car demand and demand for vehicle kilometre driven?
- **Results/Lessons learned from empirical case studies:**
  What are the most important lessons learned from WP4?
  To what extent and which experiences from single case studies can be transferred to other regions?
- **Results/Lessons learned from top-down analyses**
  What are the most important lessons learned from aggregated cross-country comparisons of the impact of different types of policies?
  Which experiences from cross-country comparisons can be transferred (to what extent) to other countries (registr. taxes!)?

- **How is our "feeling"/expert opinion with respect to specific developments for important issues up to 2020?**

Important: due to the short-term period of analysis (up to 2020) for many issues – e.g. H2, fuel cell vehicles – it is rather important to analyse the prospects in an in-depth expert discussion than to rely on results from "abstract" modelling only.

- E.g. for 1st gen biofuels in recent years: has less capacities has been constructed than announced some 5 years ago.?
- With respect to 2nd gen Biofuels the current state is by far behind what was promised some 5 years ago.
- For EVs: What is a realistic technical improvement for batteries up to 2020? How many vehicles can/will be produced and how many are expected to be demanded due to higher customers Willingness-to-pay on a pure voluntary basis?

(PRELIMINARY) RESULTS

The most important perceptions so far are: (i) (Top-down) policies do work! Fuel taxes as well as registration and ownership taxes had a clear impact on energy consumption respectively stock and quality (FI) of cars; (ii) B-Up initiatives as described and analysed in about 80 case studies in this project are also mostly successful but mainly if financial incentives exist (e.g. lower fuel bill, cheaper over-all services)

(PRELIMINARY) CONCLUSIONS

The ultimative goal of A-M is to derive an action plan consisting of a portfolio of effective least-cost policy strategies to achieve a significant increase in innovative alternative fuels and corresponding alternative more efficient automotive technologies …

The major (Preliminary) Conclusions and recommendations With respect to this goal are: (i) Introduce a well-tuned registration and ownership tax system based mainly on specific CO2-emissions per km; The lessons-learned from DK and Sweden are a very good starting point; (ii) Harmonise fuel taxesat the upper level of current overall fuel price range in Europe; (iii) Regarding AF avoid subsidies and focus on (justified) tax exemption based on CO2 relief; (iv) regarding AAT (e.g. electric vehicles and fuel cell vehicles) invest in and emphasize R&D, strive for minimum standards regarding technical reliability (e.g. range, battery quality), promote field tests reasonably and moderately but avoid subsidies for vehicles of any type of technology ! (v) use tax revenues to promote further projects like ALTER-MOTIVE!