COPERT - SIBYL workshop

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Brussels, Belgium

Policy making and scenario evaluation tool for road transport emissions

What can SIBYL do?

- Scenario formation starting with a baseline
  - Modify the stock growth potential
  - Change the new/second-hand market evolution
  - Alter the vehicle lifetime function
  - Test alternative activity and trip patterns
  - Adjust the efficiency of vehicles through time
  - Calibrate or infer the technology mix
  - Incorporate details on electrified vehicles (electric, HEV, PHEV)

- Examples:
  - increase electric vehicle new registrations at the expense of ICE vehicles
  - increase the efficiency of conventional vehicles
  - add CNG/LPG fuel as an option for conventional cars
  - edit the urban mileage share or the average speed

What can SIBYL do?

- Policy assessment
  - use the above options to test specific policies
  - execute scenario variations based on reasonable assumptions or expert judgement
  - assess the results based on a variety of metrics

- Examples:
  - introduce and evaluate accelerated scrappage schemes
  - estimate how realistic CO_2 limits can be and alter policies accordingly
  - examine the impact of a variety of strategies:
    - electrification, hybridisation, alternative fuels,
    - downsizing, dieselisation,
    - speed/traffic limits,

What can SIBYL do?

- Target setting
  - focus on specific goals and equivalent metrics
  - add constraints based on estimations from higher-tier models
  - set CO_2 targets and apply variations in order to reach them

- Examples:
  - assume a projected stock for a new technology for a target year
  - set CO_2 targets and apply variations in order to reach them
  - design a combination of targets (lower GHG without increasing NO_x and PM excessively)

SIBYL capabilities

- SIBYL contains up-to-date vehicle stock datasets and energy and emission factors of all vehicle types in each EU MS and EU-28 (as a whole).

- Based on calibrated baseline projections, custom scenarios may be built by adjusting the model parameters

Software features

- Easy to use and flexible graphical user interface
  - Familiar MS-office type of environment
  - Fully interactive graphs for data interaction and presentation
- ‘Intelligence’ functions
  - Technology replacement
  - Similarities between data-types
- Data input
  - Traditional type-in
  - Graphical data input
  - Copy-paste
- Enhanced I/O
  - COPERT 4 data file
  - MS Office Excel

SIBYL clients

- The EU Joint Research Centre
  - Policy assessment

- Bundesministerium für Umwelt, Naturschutz und Reaktorsicherheit
  - Super-credits evaluation

- Toyota Motor Europe
  - Technology sustainability assessment

- IVECO

SIBYL clients

- University of Stuttgart
  - Transport scenarios

- CONCAWE
  - Transport scenarios

concawe

- European Biofuels Board
  - Policy assessment

- CITEPA

- ACEA
  - Policy assessment