46.   Output (new regs)

Overview

Target

The target of this view is to display graphically information on the new vehicle registrations, disaggregated at different levels and stacked in several ways.

Structure

The powertrain technologies considered by ForFITS are gathered in several categories in order to simplify the visualisation of the outputs. In particular, two groups are created (POWERTRAIN GROUP A and POWERTRAIN GROUP B) to focus respectively on the various technology types entering into the market and on the particular fuel used in case of Internal Combustion Engines (ICE).

The POWERTRAIN GROUP A contains the following categories, each one including a number of powertrains:

- ICE
  GASOLINE PI ICE, METHANE PI ICE, LPG PI ICE, DIESEL CI ICE, DME CI ICE, HYDROGEN ICE, KEROSENE TURBINE.

- ICE-HYDRAULIC HYBRID
  GASOLINE PI ICE-HYDRAULIC HYBRID, METHANE PI ICE-HYDRAULIC HYBRID, LPG PI ICE-HYDRAULIC HYBRID, DIESEL CI ICE-HYDRAULIC HYBRID, DME CI ICE-HYDRAULIC HYBRID, HYDROGEN ICE-HYDRAULIC HYBRID.

- ICE-ELECTRIC HYBRID
  GASOLINE PI ICE-ELECTRIC HYBRID, METHANE PI ICE-ELECTRIC HYBRID, LPG PI ICE-ELECTRIC HYBRID, DIESEL CI ICE-ELECTRIC HYBRID, DME CI ICE-ELECTRIC HYBRID, HYDROGEN ICE-ELECTRIC HYBRID.

- ICE-ELECTRIC HYBRID PLUG-IN
  GASOLINE PI ICE-ELECTRIC HYBRID PLUG-IN, METHANE PI ICE-ELECTRIC HYBRID PLUG-IN, LPG PI ICE-ELECTRIC HYBRID PLUG-IN, DIESEL CI ICE-ELECTRIC HYBRID PLUG-IN, DME CI ICE-ELECTRIC HYBRID PLUG-IN, HYDROGEN ICE-ELECTRIC HYBRID PLUG-IN.

- FUEL CELLS
  FC, FC-ELECTRIC HYBRID, FC-ELECTRIC PLUG-IN HYBRID.

- ELECTRIC
  ELECTRIC MOTOR.

The POWERTRAIN GROUP B is mainly intended to distinguish the evolution of each ICE fuel in the ICE vehicles. Powertrains are merged as follows in this group:

- PI ICE LIQUID

GASOLINE PI ICE, GASOLINE PI ICE-HYDRAULIC HYBRID, GASOLINE PI ICE-ELECTRIC HYBRID, GASOLINE PI ICE-ELECTRIC HYBRID PLUG-IN.

- PI ICE LPG
  LPG PI ICE, LPG PI ICE-HYDRAULIC HYBRID, LPG PI ICE-ELECTRIC HYBRID, LPG PI ICE-ELECTRIC HYBRID PLUG-IN.

- PI ICE METHANE
  METHANE PI ICE, METHANE PI ICE-HYDRAULIC HYBRID, METHANE PI ICE-ELECTRIC HYBRID, METHANE PI ICE-ELECTRIC HYBRID PLUG-IN.

- CI ICE LIQUID
  DIESEL CI ICE, DIESEL CI ICE-HYDRAULIC HYBRID, DIESEL CI ICE-ELECTRIC HYBRID, DIESEL CI ICE-ELECTRIC HYBRID PLUG-IN, KEROSENE TURBINE.

- CI ICE DME
  DME CI ICE, DME CI ICE-HYDRAULIC HYBRID, DME CI ICE-ELECTRIC HYBRID, DME CI ICE-ELECTRIC HYBRID PLUG-IN.

- ICE HYDROGEN
  HYDROGEN ICE, HYDROGEN ICE-HYDRAULIC HYBRID, HYDROGEN ICE-ELECTRIC HYBRID, HYDROGEN ICE-ELECTRIC HYBRID PLUG-IN.

- FCELLS
  FC, FC-ELECTRIC HYBRID, FC-ELECTRIC PLUG-IN HYBRID.

- ELECTRIC
  ELECTRIC MOTOR.

- PIPELINE
  PIPELINE PUMP.

Figure 46.1 shows the sketch of the view.

Figure 46.1   Vensim sketch of the view "output (new regs)"
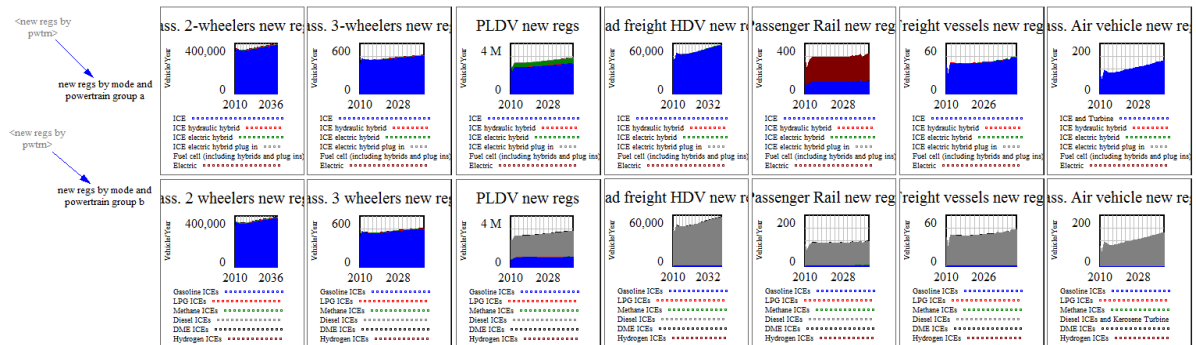
Detailed description of the view

Inputs

The only variable entering this view is "NEW REGS BY PWTRN". This variable is calculated in the view "vehicle by age" and contains the new vehicle registrations forecasted over time disaggregated by area, service, mode, vehicle class and powertrain.

The number of new vehicles is summed up across all areas and vehicle classes, while the powertrains are grouped according to the existing categories in POWERTRAIN GROUP A and POWERTRAIN GROUP B mentioned earlier.

Outputs

The results of the aggregations are stored in the variable "NEW REGS BY MODE AND POWERTRAIN GROUP A". The graphs related to this variable are shown in the first row of figures. All graphs distinguish in different colours each category defined under POWERTRAIN GROUP A. From left to right each graph represents one specific mode in the particular service expected to be more relevant: PASSENGER TWO WHEELERS, PASSENGER THREE WHEELERS, PASSENGER LDVS, FREIGHT LARGE ROAD, PASSENGER RAIL, FREIGHT VESSELS and PASSENGER AIR.

The identical structure is reproduced in the second row but of figurers, but in this case the results are stacked by POWERTRAIN GROUP B.