

# Flex-fuel ICE Range Extender Vehicle Model & Control Strategy Development

- Development of a 0-D Range extender vehicle model (REEV) including:
  - Longitudinal vehicle dynamic calculations
  - Modelling of key powertrain hardware components (ICE, battery, electric motor, electric generator, transmission, ...)
  - Fuel/electric energy consumptions and emissions models
  - Control strategy targeting the maximum range via an efficient usage of ICE
  - Possibility to use different fuels (focus on potential of alternative fuels)
- The final target is to estimate and compare the energy consumption benefit provided by the REEV vehicle with alternative fuels on transient RDE cycles
- A preliminary study of the state of the art for REEV is also requested