Using the electricity profile from GENeSYS-MOD provided on the scenario explorer as indata to eTransport

Import/Export from eTransport

Some general pointers for how the workflow goes:

- Inside Visio, export the data to create a *.mdb file containing the whole eTransport database.
- Open that file in Microsoft Access, and go to the CASE_*_ATTR table in the left sidebar. Right-click and export it to Excel.
- This excel file can now be processed using scripts (see below a description of the script handling the input data from GENeSYS-MOD)
- In Microsoft Access: delete everything in the CASE_*_ATTR table
- Import the adjusted excel file in Microsoft Access (this creates again a *.mdb file that etransport can read.
- Open eTRANSPORT in visio and open the adjusted *.mdb file

Data adjustment in Python

Script/Function: main_ readGenesysModData4eTransport

- Import the CASE_*_ATTR.xlsx file using "pandas.read_excel";
- Save the data to pickle for faster handling (pandas.DataFrame.to_pickle)
- Call/Run manipulateData_readGenesysModData4eTransport (can be run stand alone for testing)
- Load new pickle file (created in manipulateData_readGenesysModData4eTransport)
- Export back to the CASE_*_ATTR file using "pandas.DataFrame.to_excel".

Script/Function: manipulateData_readGenesysModData4eTransport

- Read eTransport Data from pickle (that is the data from the CASE_*_ATTR.xlsx file, saved in the main script) -> create eTransport data dataframe
- Read concordance between time steps in eTransport and time steps in data from scenario explorer (eTransport can have another time resolution than hourly, so we map to each of the eTransport time steps a time step from the hourly data from the scenario explorer)

	A	B
1	eT	se
2	1	01-01 00:00+01:00
3	2	01-01 05:00+01:00

eT = eTransport time steps here only have a number
se = scenario explorer time steps here are in format mm-dd hh:mm etc.

- Read data from scenario explorer (all Genesys-mod data)
- Extract the relevant variable (f.ex. electricity demand) from the Genesys -mod data
- Extract corresponding variable (f.ex. electricity demand) from eTransport dataset -> this we want to replace with GENeSYS-MOD data
- Update these values with the values from GENeSYS-MOD
- Merge these extracted and updated values back into the eTransport data dataframe
- Save this data as pickle.