



Transparency of TYNDP Scenarios

–3rd workshop

Improvements to transparency(1/4)

- Requirements for origins of inputs (references, sources, validation efforts).
 - Try to improve stakeholder involvement as much as possible in the storyline development.
- Requirements for understandable explanations of assumptions and modelling choices
 - More detailed explanation of the energy carriers
 - Eg: Other RES and other non RES –what is included in these energy carriers is not clear
 - Solids– Is it 100 % coal? Coal could be again hard coal and lignite. This is important for costs and emission factors
 - Methane is presented as one data point in the demand overview. Better to split into nat.gas, biomethane and synthetic methane.
 - More detailed explanation/description of the data files including legends/node explanations/units (eg: Electricity market model results)
 - Specification of industry sub process: eg: What is defined as steam process, low enthalpy etc?
 - H2 demand modelling configuration is not completely defined: the share of H2 in each configuration relative to the total demand is not defined.
 - RE. Heat pumps: a market share is provided but not defined: is the market share the percentage of households that own a heat pump or is the definition different?
 - Insights into the number of appliances that are implied by the figures (eg: heat pumps, EVs). This was there in TYNDP 2016.

Improvements to transparency (2/4)

• Requirements for understandable outputs

- Put more focus on explaining DSR approach (bands, prices, etc.) – not very elaborate in the current TYDNP
- Separate files for input and output of the model
- Lack of infrastructure cost.

Improvements to transparency (3/4)

- Appropriate data granularity (e.g. minutes, hours, years, countries, zones), appropriate data formats (raw data, visualizations, ...)
 - Given the timeframe 2030–2050, hourly granularity is sufficient (most simulation tools work on hourly basis)
 - Stick to bidding zones
 - Data formats and visualization are already quite intuitive
 - Italy is represented as one bidding zone rather than actual configuration which is 6 bidding zones
 - Whole of Ukraine should be modelled as it has been synchronized
 - Suggestion to include Norway and Switzerland as these values are necessary to model the EU electricity market as a whole because they are connected by interconnectors.

Improvements to transparency (4/4)

e Openness of data and of the models (allowing replicability)

- As long as there is no access to PLEXOS/TRAPUNTA, the data model is a black-box and there is no possibility to replicate the results of the electricity market model (Generation and Dispatch values)
- Possibly think about open-sourcing the entire modelling approach (electricity market model)
- If open-sourcing is not possible, an open model documentation and description of the simulation methods could provide clarity and improve result replicability