



The plan4EU model

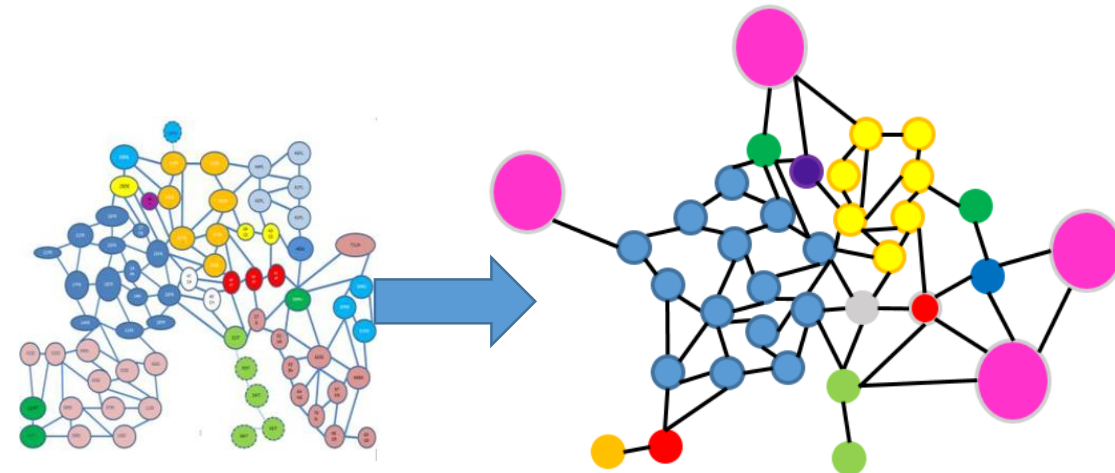
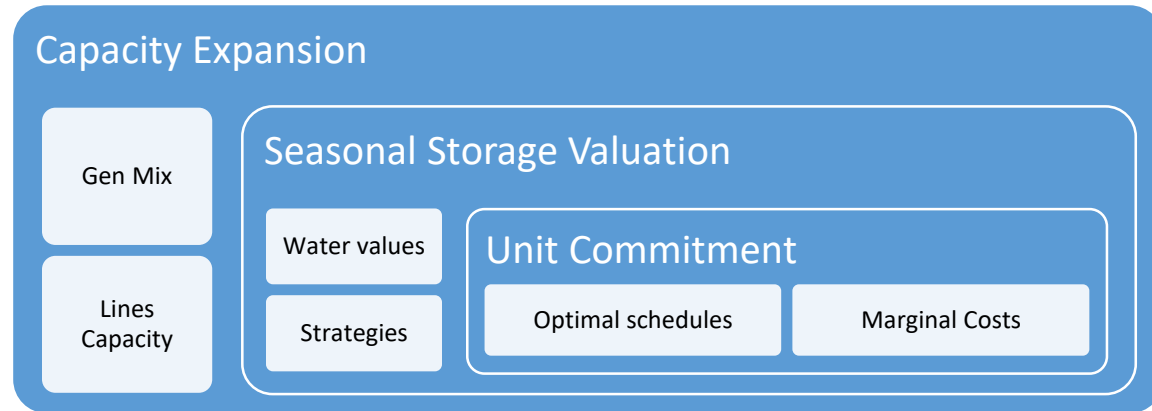


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The plan4EU modelling suite: outputs

- ❑ **The Capacity expansion model computes the optimal mix**
 - electric generation plants,
 - storages,
 - interconnection capacities between clusters
 - distribution grid capacities,
- ❑ **The seasonal storage valuation model computes the operation strategy for seasonal storages**
 - For Hydro reservoirs
 - And also all other 'seasonal' flexibilities such as Demand response
- ❑ **The European unit commitment (EUC) model computes the optimal operation schedule for all the assets dealing with constraints:**
 - Supply power demand and ancillary services
 - Minimal inertia in the system
 - Maximum transmission and distribution capacities between clusters
 - Technical constraints of all assets



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plan4EU : Use cases

- ❑ **One year – Adaptable geographic scope and scale**
- ❑ **Which kind of studies are envisaged:**
 - **What Impact of different levels of RES integration have on system costs?**
 - Electricity generation cost
 - Cost to ensure the dynamic robustness of the system (Reserves, Inertia)
 - **What is the value of flexibility? (system cost reduction coming from using flexibility potentials of different system assets)**
 - RES can be represented as non-flexible, i.e. all generation is 'fatal' or we can account for their ability to be curtailed or can contribute to ancillary services
 - Flexibilities from storages and additional storages can be represented
 - Different demand response flexibilities can be modelled
 - **Impacts of climate change**
 - From the use of different climatic scenarios
 - **Assesment of the feasibility and cost of a long-term scenario**



Thank you



Questions?



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