Welcome to the Online EnergyPLAN Workshop

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Agenda: Analysing Large-Scale Heat Pumps

1. Build a reference model:
   - Load initialize.txt
   - Costs: import cost database (has source for costs in documentation)
   - Demands: Electricity of 20 TWh and district heat of 10 TWh
     - Describe differences between district heating groups
   - Supply:
     - 4000 MW of gas power plants, of which 1000 MW are CHP
     - Gas boilers to match 120% of the peak demand (2500 MW)
     - 5 hours of thermal storage (6 GWh)
     - Technical Optimisation 2

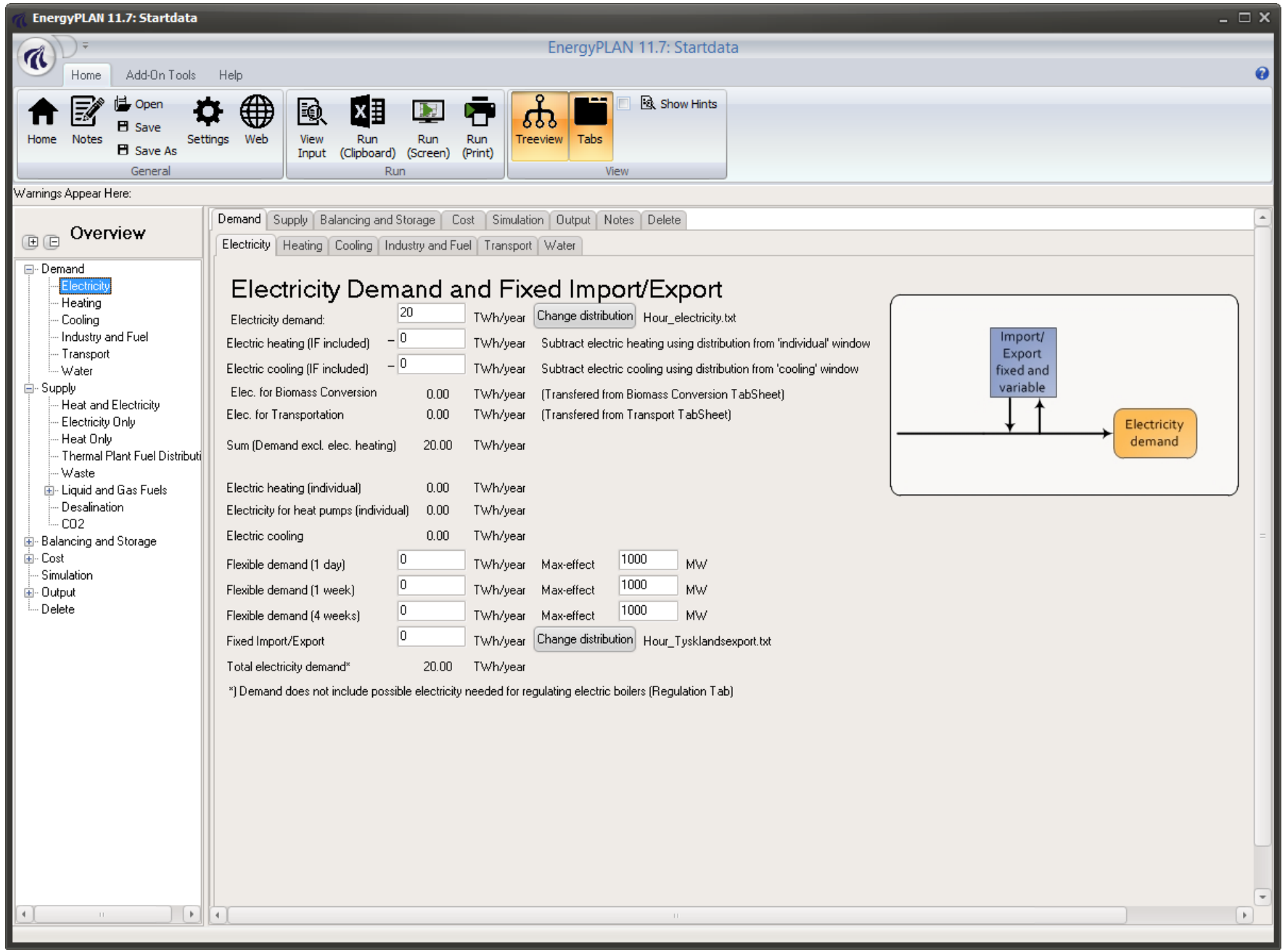
2. Increase the wind power to its maximum level
   - Ref Cost:
   - Max Wind Cost:

3. Add some large-scale heat pumps and thermal storage
   - 200 MWe
   - Measure Costs and CEEP

Agenda: Individual Heat Pumps

- Update Cost Database to fit new methodology
- Reference Individual Heat Demands:
  - 20 TWh Oil
  - 20 TWh Gas
- Replace the oil with Individual Heat Pumps

End with a sneak peak of the future…


EnergyPLAN 11.7: Startdata
EnergyPLAN 11.7: Startdata
Home
Add-On Tools
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General
View Input
Run (Clipboard)
Run (Screen)
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Tabs
Show Hints
View
Warnings Appear Here:
Overview
Demand
Electricity
Heating
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Industry and Fuel
Transport
Water
Supply
Heat and Electricity
Electricity Only
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CO2
Balancing and Storage
Cost
Simulation
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Balancing and Storage
Cost
Simulation
Output
Notes
Delete
Electricity
Heating
Cooling
Industry and Fuel
Transport
Water
Electricity Demand and Fixed Import/Export
Electricity demand: 20 TWh/year Change distribution Hour_electricity.txt
Electric heating (IF included) - 0 TWh/year Subtract electric heating using distribution from 'individual' window
Electric cooling (IF included) - 0 TWh/year Subtract electric cooling using distribution from 'cooling' window
Elec. for Biomass Conversion 0.00 TWh/year (Transfered from Biomass Conversion TabSheet)
Elec. for Transportation 0.00 TWh/year (Transfered from Transport TabSheet)
Sum (Demand excl. elec. heating) 20.00 TWh/year
Electric heating (individual) 0.00 TWh/year
Electricity for heat pumps (individual) 0.00 TWh/year
Electric cooling 0.00 TWh/year
Flexible demand (1 day) 0 TWh/year Max-effect 1000 MW
Flexible demand (1 week) 0 TWh/year Max-effect 1000 MW
Flexible demand (4 weeks) 0 TWh/year Max-effect 1000 MW
Fixed Import/Export 0 TWh/year Change distribution Hour_Tysklandsexport.txt
Total electricity demand* 20.00 TWh/year
*) Demand does not include possible electricity needed for regulating electric boilers (Regulation Tab)
Import/ Export fixed and variable
Electricity demand

Useful Links

- www.EnergyPLAN.eu
- www.EnergyPLAN.eu/training/
- www.smartenergysystem.eu
- www.heatroadmap.eu
- www.dconnolly.net
- www.dconnolly.net/greenplanireland/

- Thank you for attending!

- Feedback: https://docs.google.com/forms/d/1slWj-81ICygtrp7DzLkqRJ4weTomWUW0UzgNUDsZXcM/viewform?usp=send_form