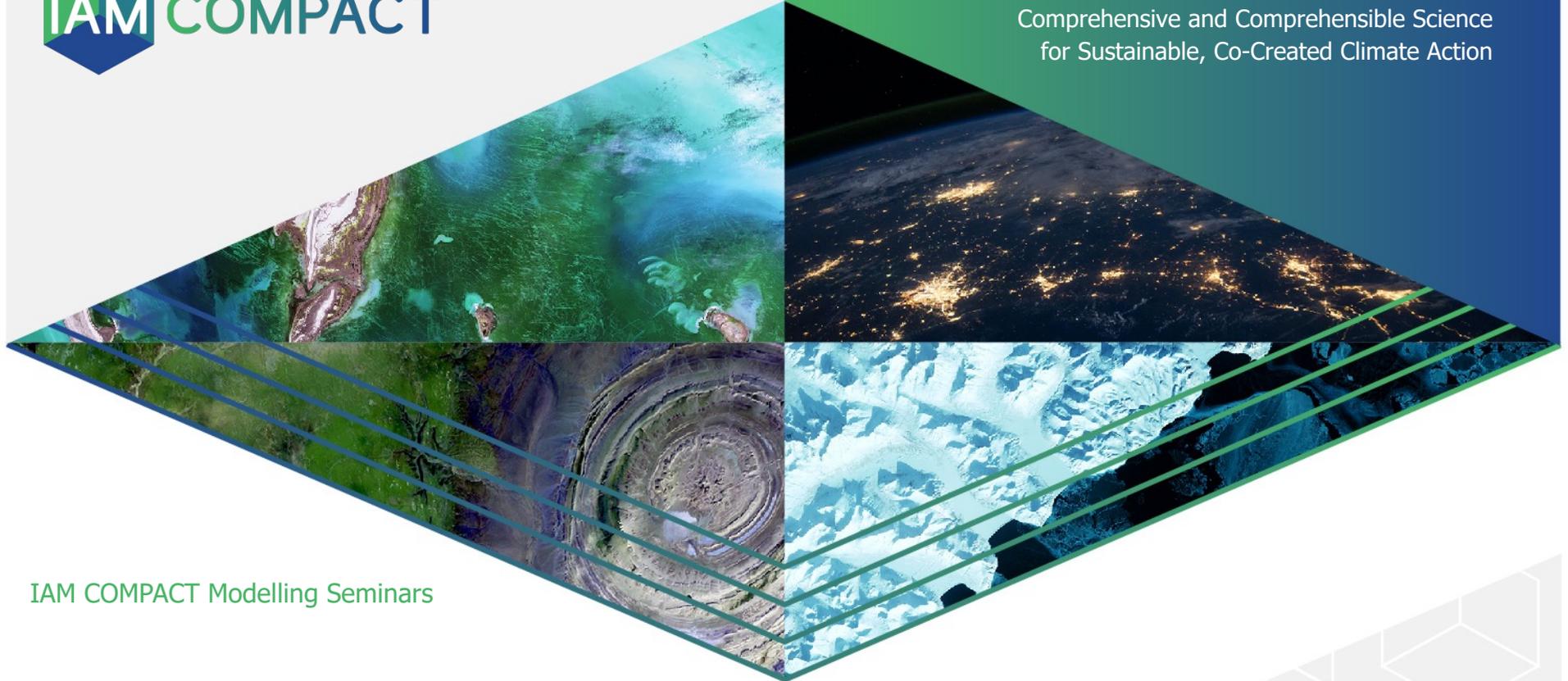




Expanding Integrated Assessment Modelling:
Comprehensive and Comprehensible Science
for Sustainable, Co-Created Climate Action



IAM COMPACT Modelling Seminars

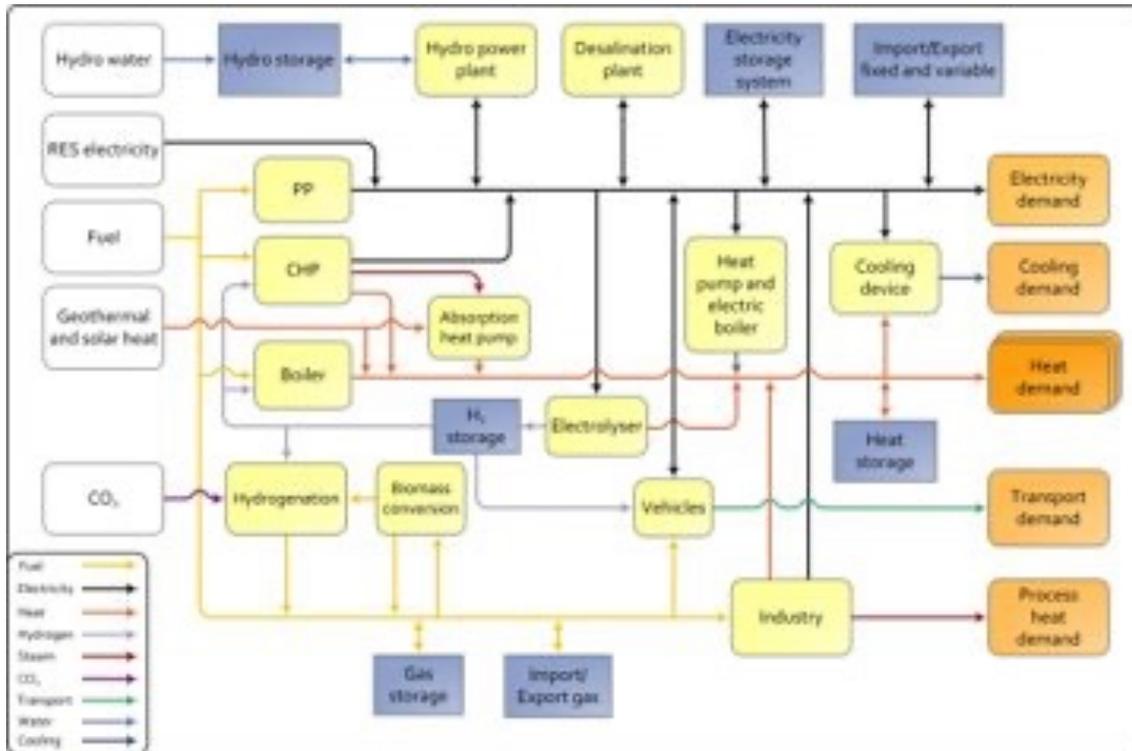
Model Presentation: EnergyPLAN

Aalborg University



The IAM COMPACT project has received funding from the European Union's Horizon Europe Research and Innovation Programme under grant agreement No 101056306.

www.iam-compact.eu



The user can design various energy system

- Focus on DH and RES

Simulate the operation of the entire energy system

- Electricity, heat, transport, industry
- Technical or market operation

Made for investigating scenarios for single region energy systems



- Freeware
- Developed, maintained and updated by Aalborg University
- Possible to run with command line



- Programmed in Delphi Pascal
- Hourly simulation of a whole year
- Focus on sector integration includes storage operation in all energy grids
- User needs to find inputs for demands, capacities, time series and costs
- Analyses from all over the world available in scientific studies and on the website



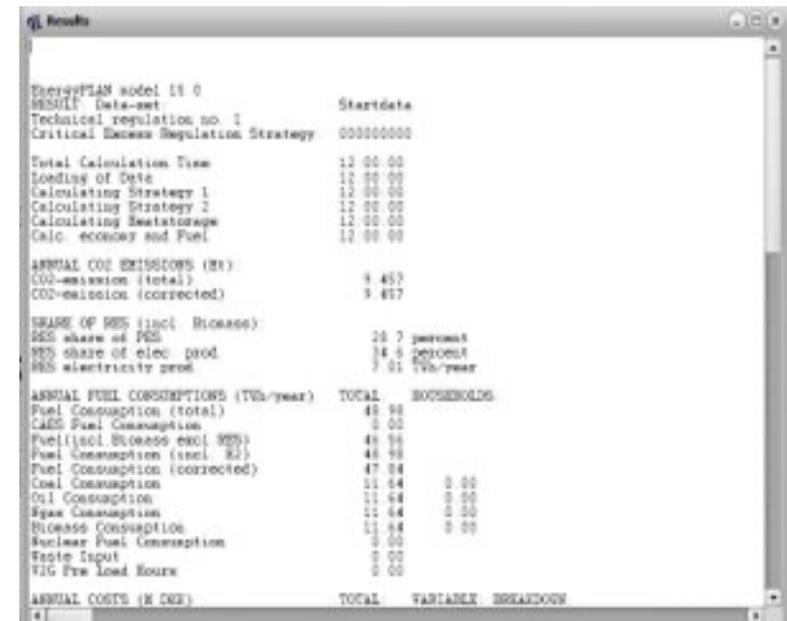
Inputs

- Energy demands
- Capacities on power plants, boilers etc.
- Efficiencies
- Time series for demands and renewable energy
- Investment costs, CO₂ prices, Fuel costs, operation costs
- Emission factors

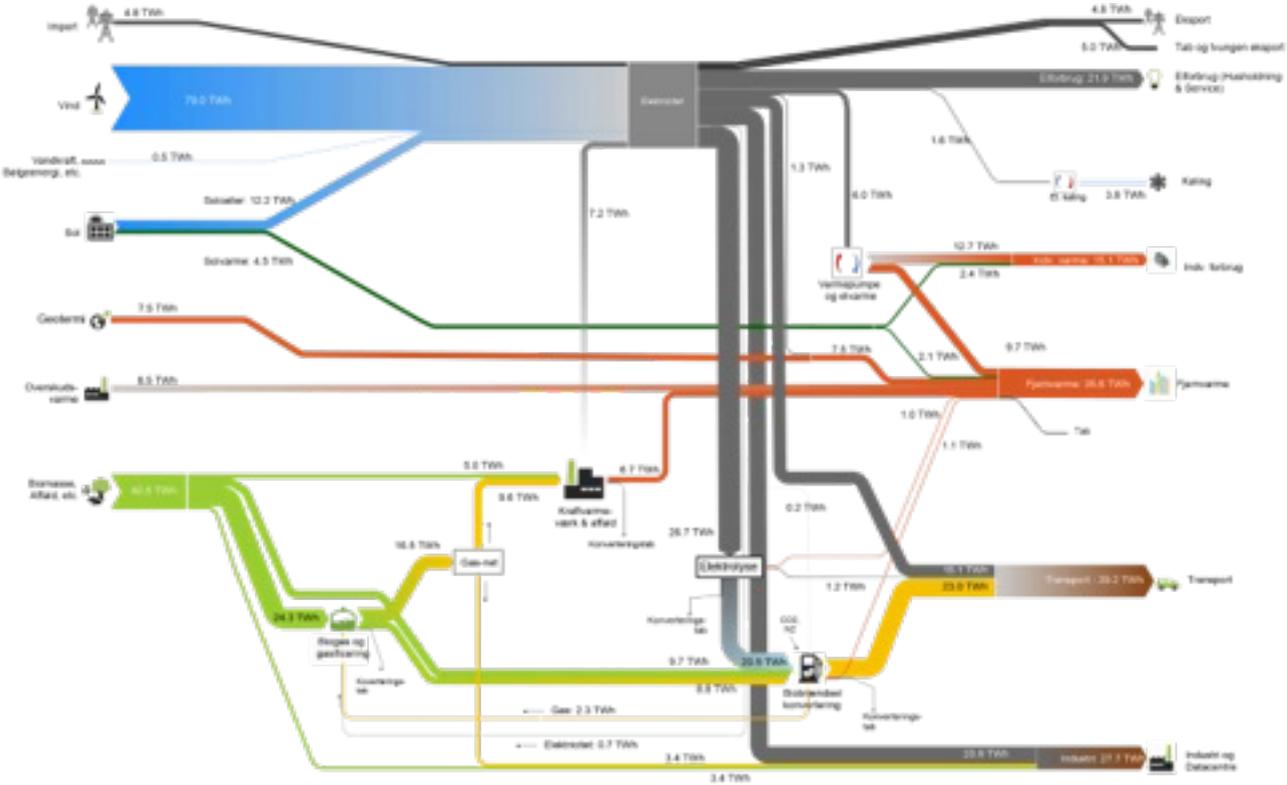
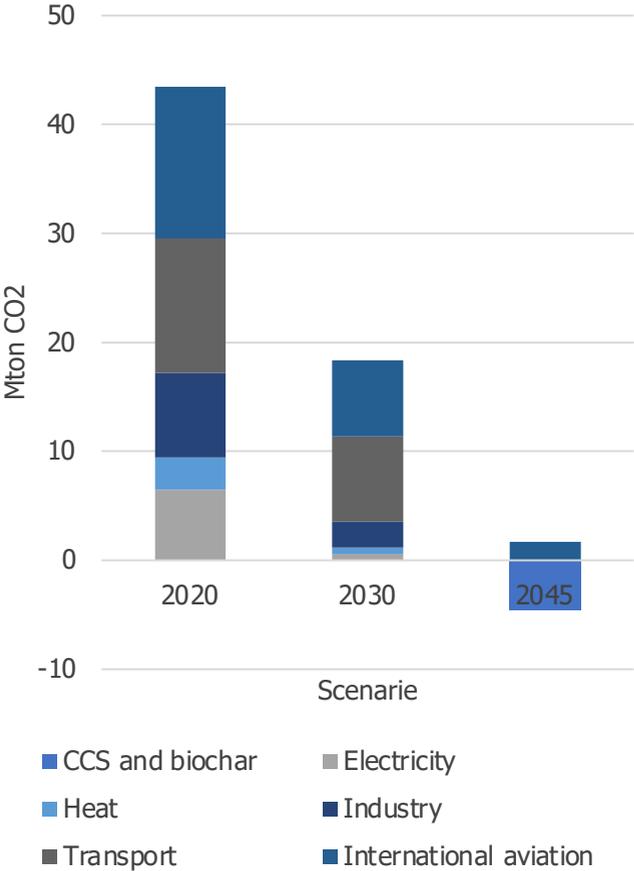
Outputs

- Energy balances for the different part of the energy system
- Hourly operation of each technology
- CO₂ emissions
- Total annual costs



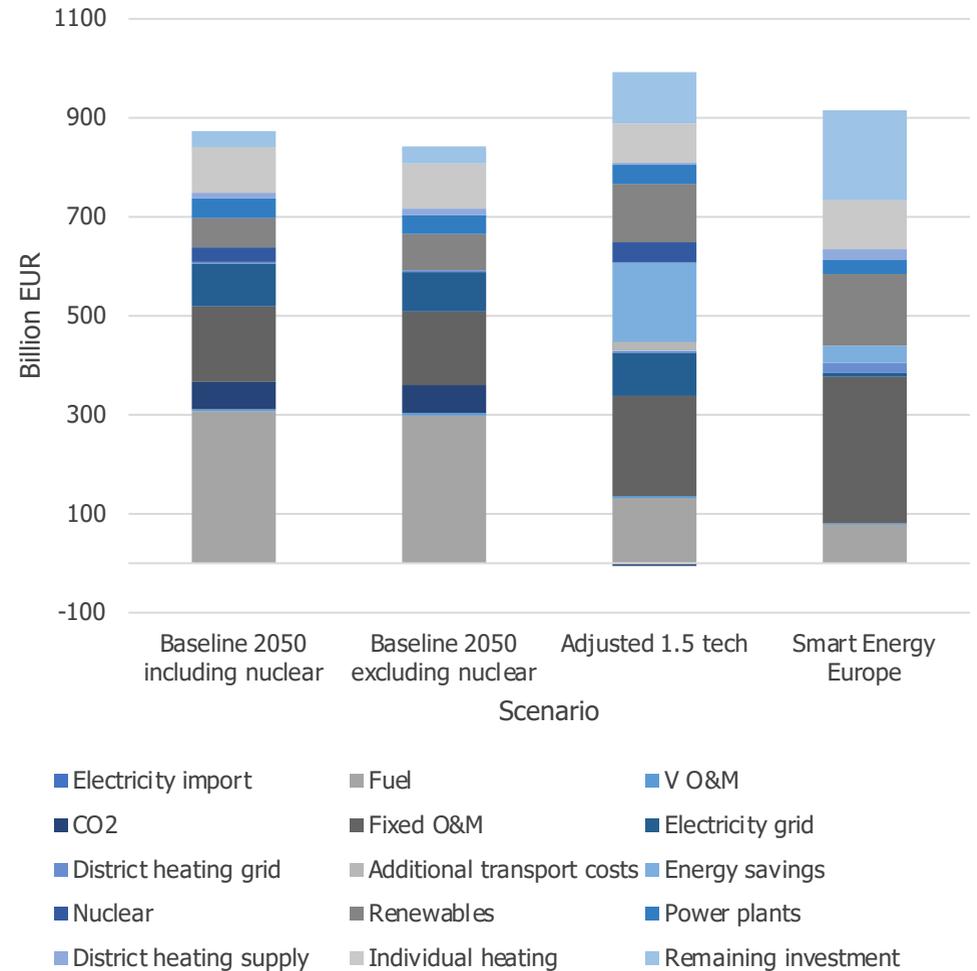
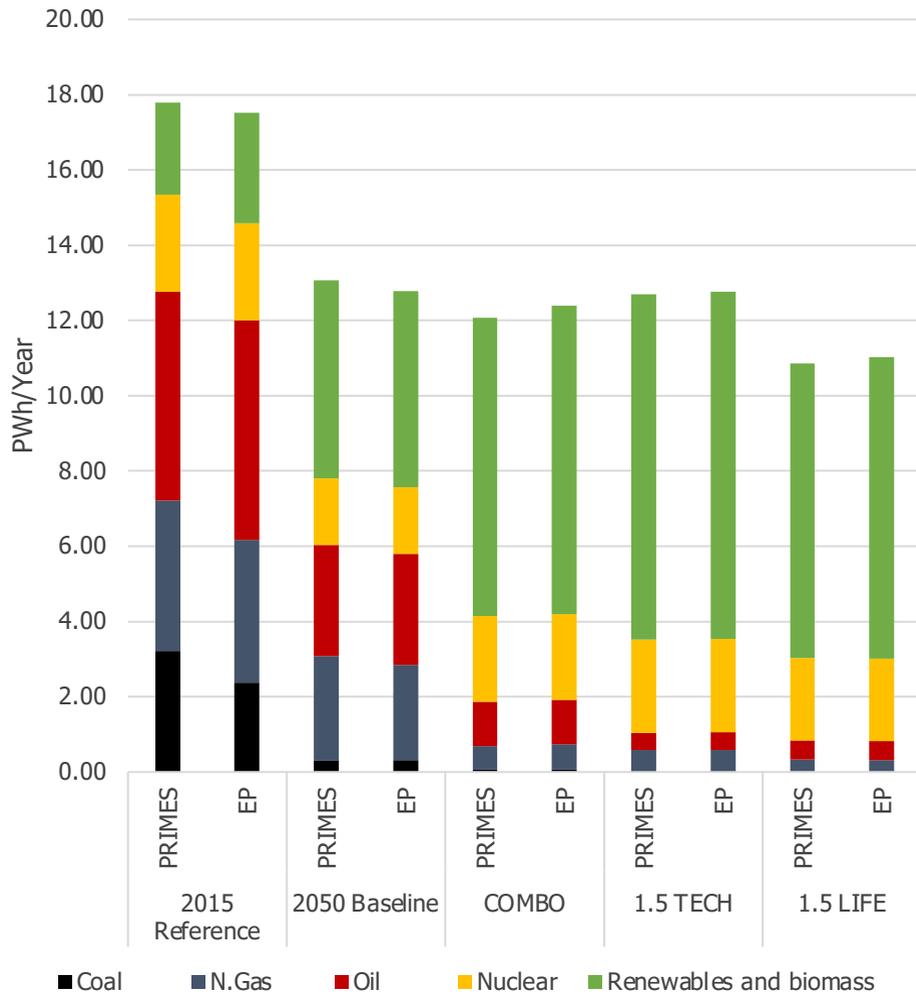


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Examples: Smart Energy Europe



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- <https://doi.org/10.1016/j.segy.2021.100007>
- <https://doi.org/10.1016/j.rser.2022.112724>
- <https://vbn.aau.dk/da/publications/idas-klimasvar-2045-s%C3%A5dan-bliver-vi-klimaneutrale>
- <https://vbn.aau.dk/da/publications/smart-energy-europe-developing-a-renewable-energy-scenario-for-a->





Thank you!

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