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# Danube Indeet

Integrated and decentralised concept rethinking  
energy and transport systems based on renewable  
energy in the Danube region



2.664.080 €  
Project Budget

2.131.264 €  
Interreg Funds

1/2024-6/2026  
Project duration



# DANUBE INDEET MODEL

The Danube Indeet Model is a decision-support tool for planning investments into and operating integrated e-mobility and hydrogen production in a local community and provides analysis on the optimal infrastructure setup and financial viability of such systems.



The Danube Indeet Model (DIM) is planned to calculate the optimal investment structure for a system that includes EV chargers and green hydrogen production in the first place, but also a photovoltaic system as a renewable energy source, battery energy storage system, fuel cells for generating electricity from hydrogen, use of residual heat from electrolyser and fuel cells stack, water preparation for electrolysis, as well as hydrogen and oxygen sales.



Flexibility in delivering energy to EVs comes from the fact that most of the vehicles are connected to chargers longer than it is needed to charge them. This additional time can be used to optimize energy delivery.



Furthermore, green hydrogen production via electrolysis could also provide flexibility as the produced hydrogen can be stored relatively easily, and thereby its production does not need to follow its demand.



However not all of the components need to be at the exact same location. The model works the same if the components are distributed throughout a municipality where they fit the best, since the model optimizes the structure of the system and sizes of every system component rather than the location of each component.



# TECHNICAL DETAILS

The model accounts a large amount of variables and elements during calculation. The image below represents an overview of the different components used during optimization:

