

# Modellering av energisystem

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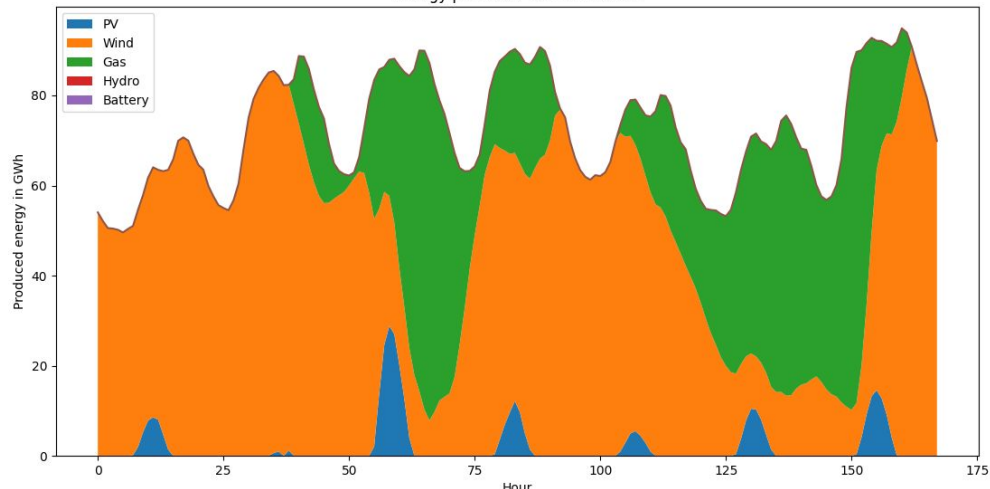
# Uppgiften

- Modellera och minimera kostnaden för energiproduktionen i Tyskland, Danmark och Sverige.
- Analysera hur olika scenarier och teknikformer påverkar systemet.

## Våra beslutsvariabler:

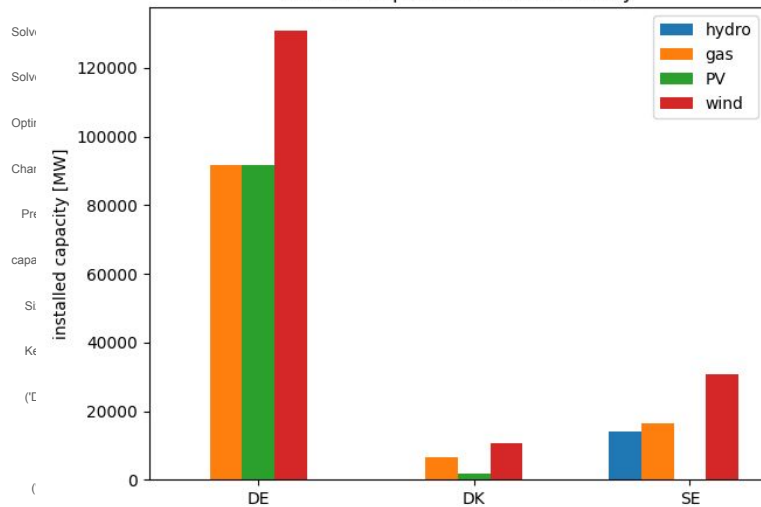
- installerad kapacitet (land, teknik)
- producerad energi (land, teknik, timme)
- vattennivån i reservoaren (timme)
- energinivåer i batterierna (land, timme)
- installerad transmissionskapacitet (land, land)
- transmitterad energi (land, land, timme)

Energy produced 1st week in DE

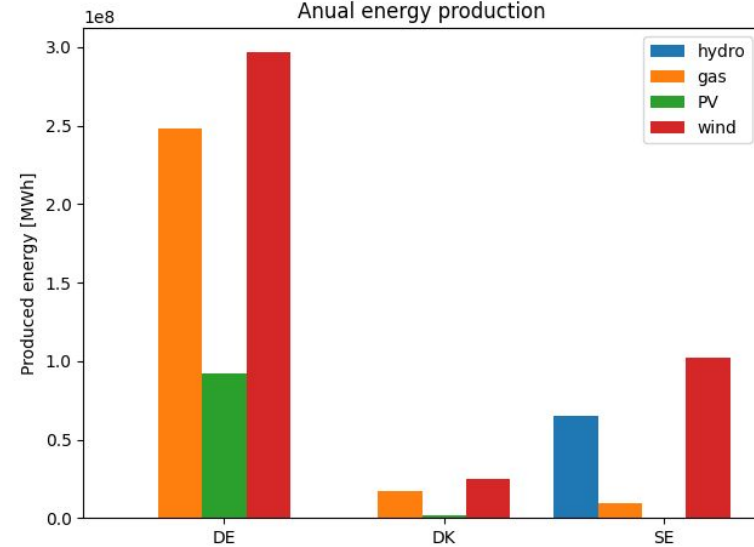


Optimal objective:  
 37238073398 € ( $37.2 \cdot 10^9$ )  
 Emissions: 138774449 ton

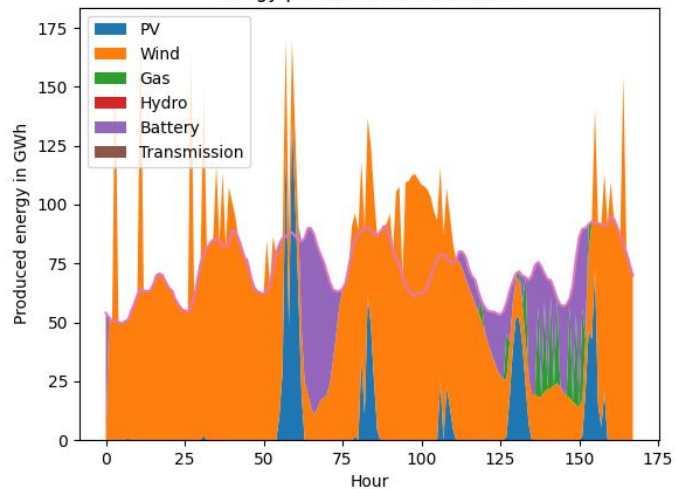
installed capacities for each country



Annual energy production

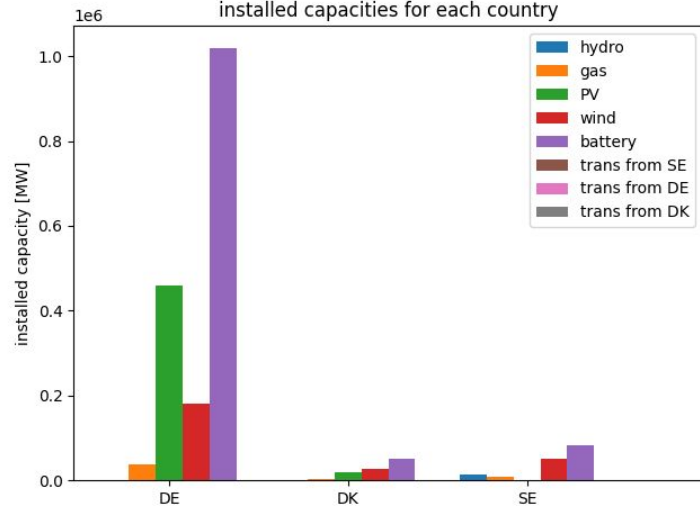


Energy produced 1st week in DE

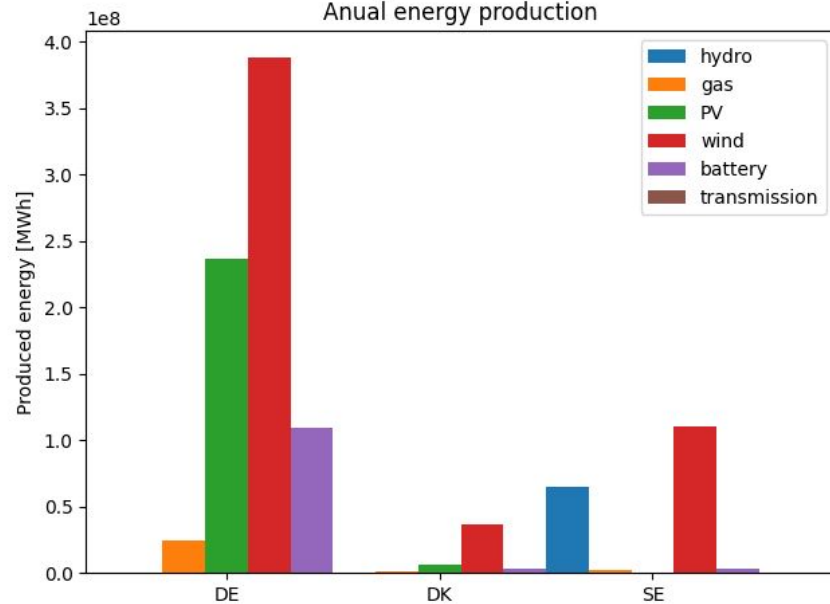


Optimal objective:  
 66346858089 € ( $66.4 \cdot 10^9$ )  
 Emissions:  
 13 877 445 ton

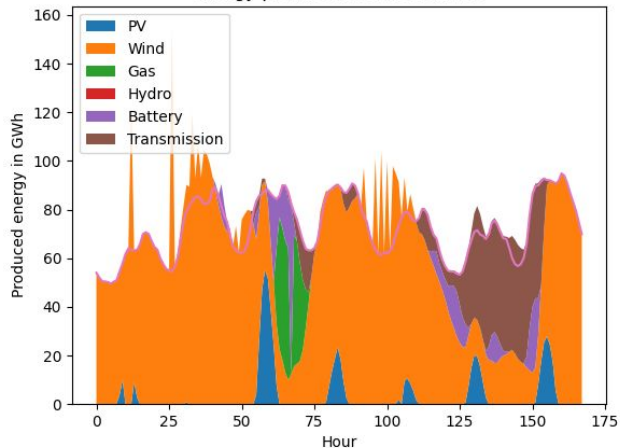
installed capacities for each country



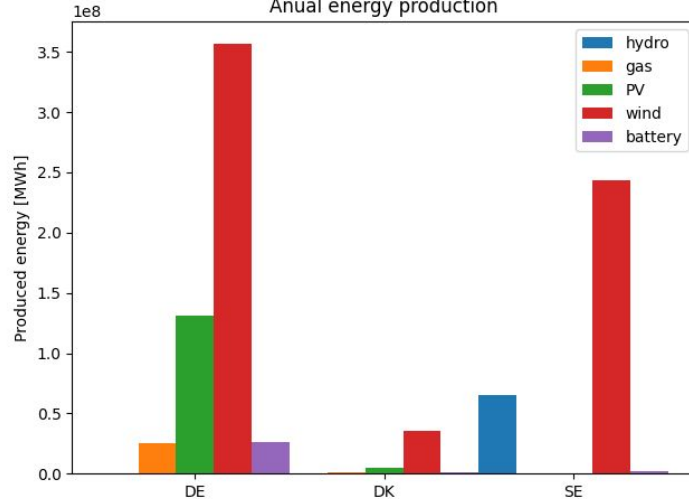
Annual energy production



Energy produced 1st week in DE

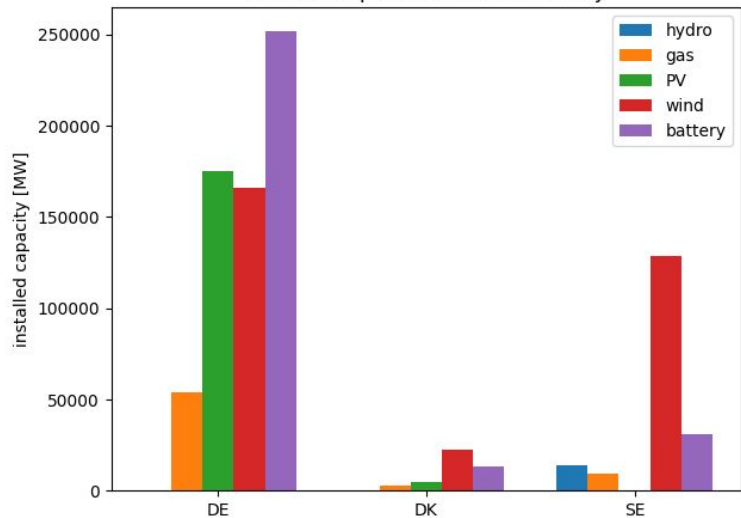


Anual energy production



Optimal objective:  
 49134036802 € ( $49.1 \cdot 10^9$ )  
 Emissions:  
 13 877 445 ton

installed capacities for each country



Installed transmission capacity

