National Energy and Climate Plan
for the Republic of Croatia, period 2021 - 2030

– Scenario Assessment –

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Energy Institute Hrvoje Požar

- founded in 1994 to provide expert support in energy system restructuring and liberalization
- now we implement national and international research projects, provide support to national and local government institutions, act as a consultancy

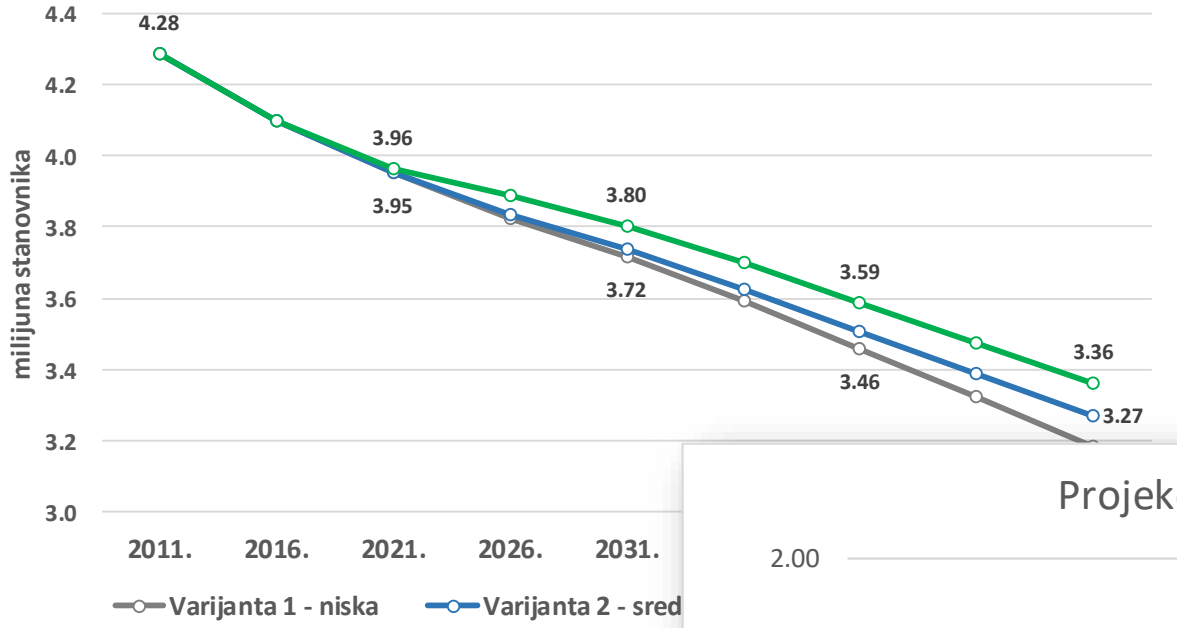
- in 2018 provided expert support to the ministry in charge of energy in developing the National Energy and Climate Plan for the period 2021-2030

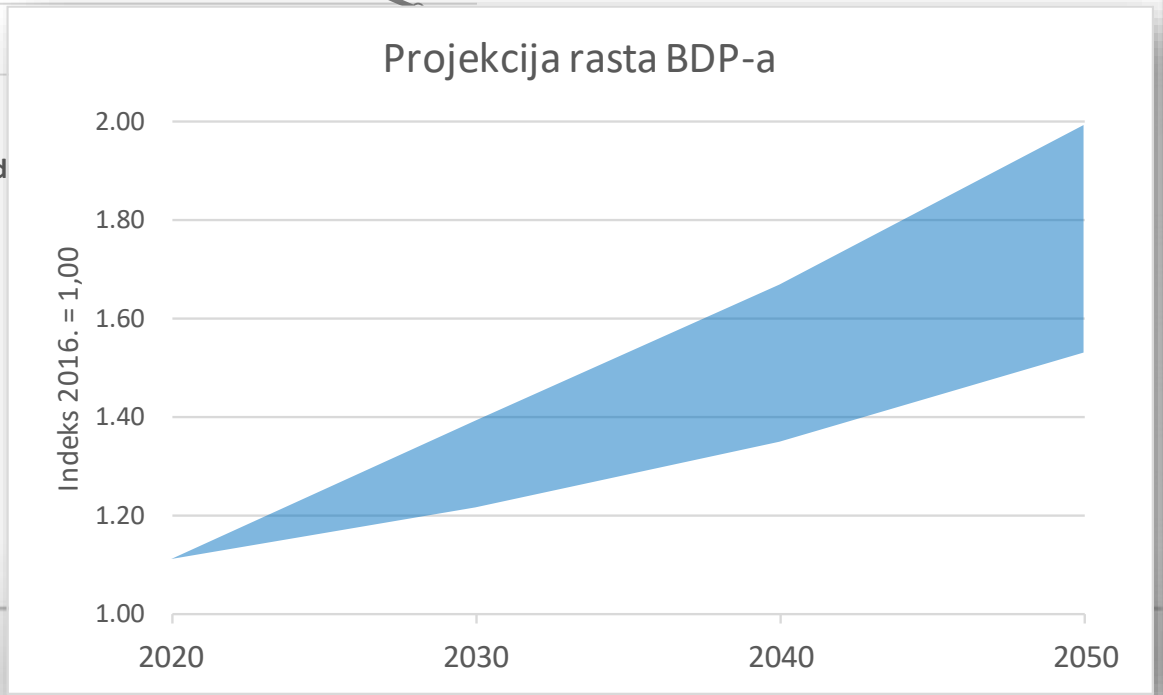
National Energy and Climate Plan

- Obligation stemming from the **“Governance regulation”** - Regulation on the Governance of the **Energy Union and Climate Action**, (EU) 2018/1999 of 11 December 2018
- The regulation proscribes NECP content, covering five dimensions of the Energy Union:
  - Energy security (diversification, imports, flexibility)
  - The internal energy market (interconnections, transmission infrastructure, market integration, energy poverty)
  - Energy efficiency
  - Decarbonisation (GHG emissions and removals, renewable energy)
  - Research, innovation and competitiveness
  - + Impact assessment of the planned policies and measures
- National plans covering the first period from 2021 to 2030 should pay particular attention to the **2030 targets** for **greenhouse gas emission reductions**, **renewable energy**, **energy efficiency** and **electricity interconnections**

NECP scenario development inputs (1/2)

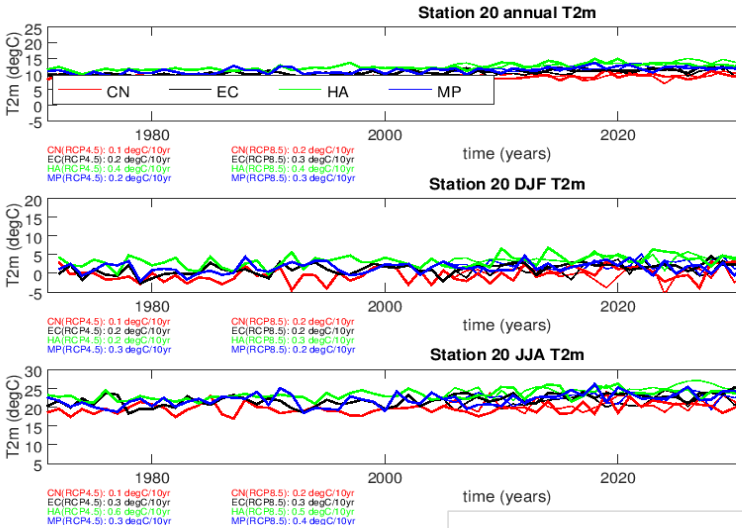
- demographic and macroeconomic trends

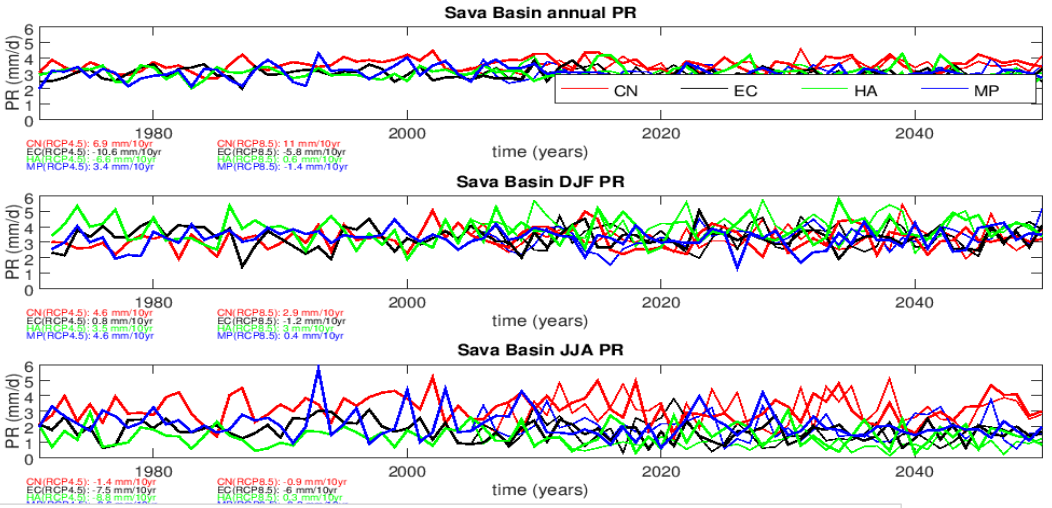


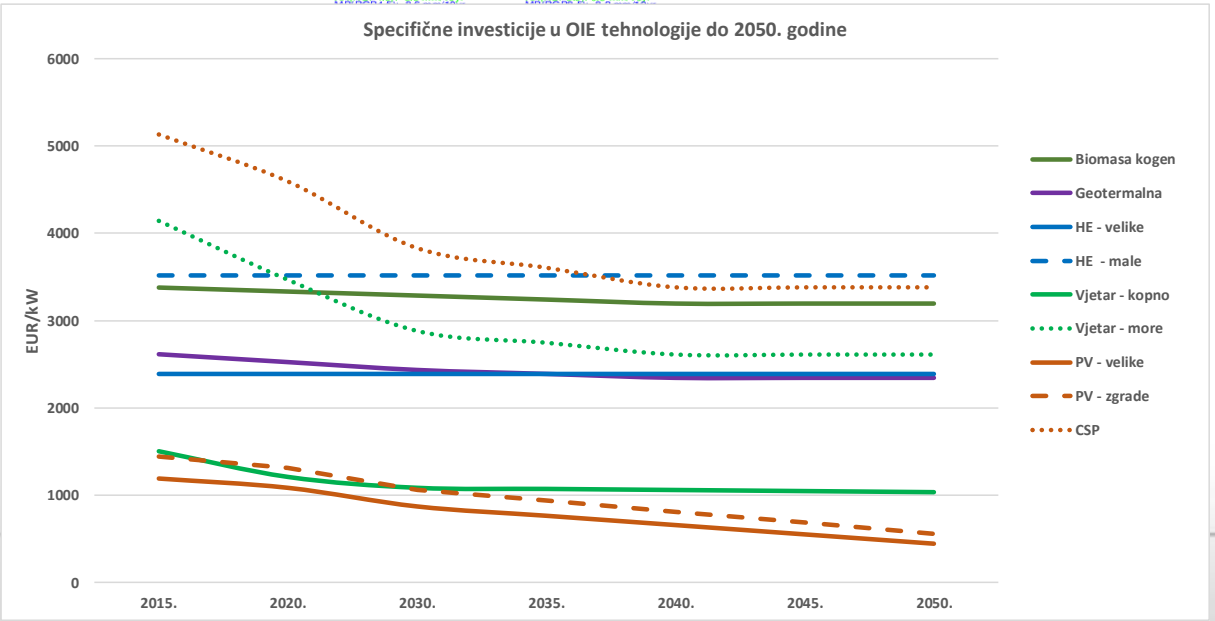


NECP scenario development inputs (2/2)

- climate change (temperature and precipitation) and technology prices





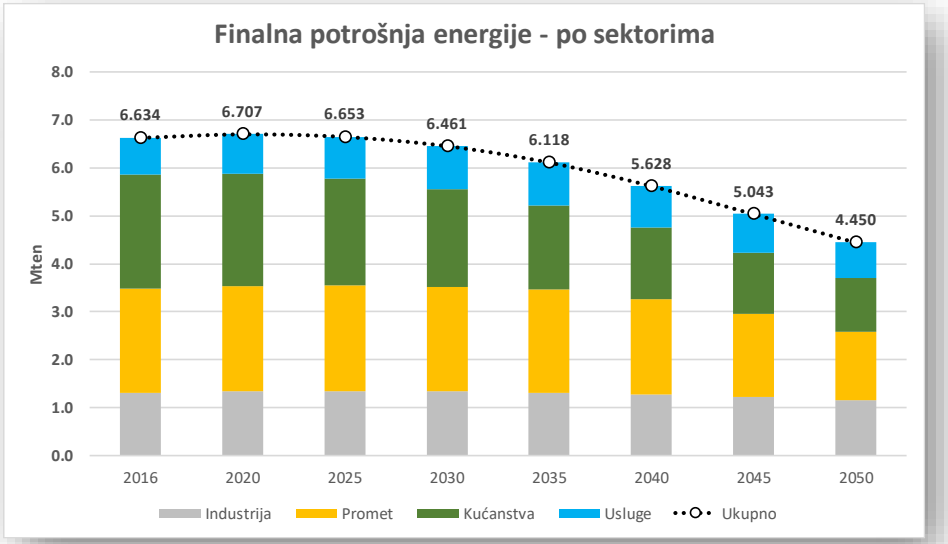


NECP scenario development

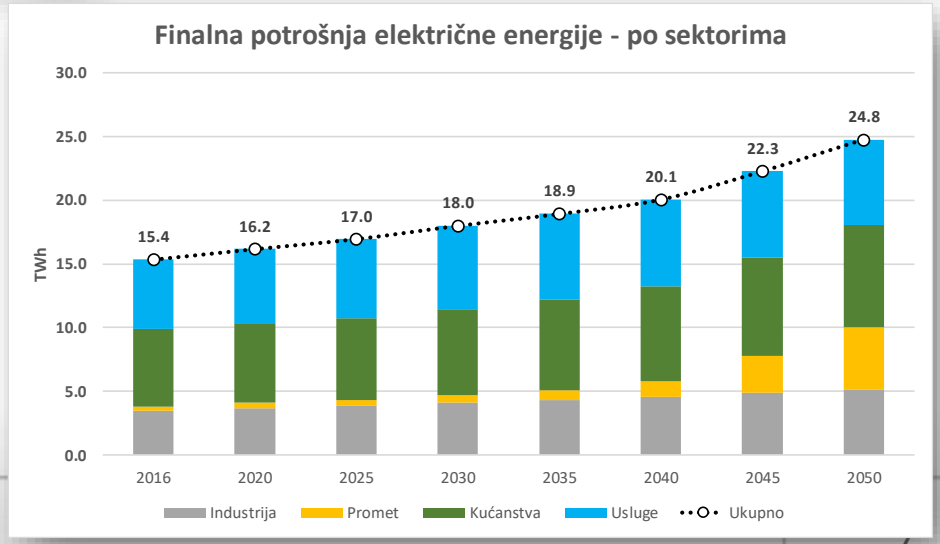
- three scenarios until 2050 – business as usual (S0), moderate transition (S2) and accelerated transition (S1)
- S1 and S2 differ primarily in buildings renovation rate, projections made in transport (modal shift + shift towards renewables + electrification), share in renewable energy sources and targeted CO_2 emission reduction
- consumption sectors were modelled “bottom-up”
  - households
  - services
  - industry
  - transport

Results: accelerated transition

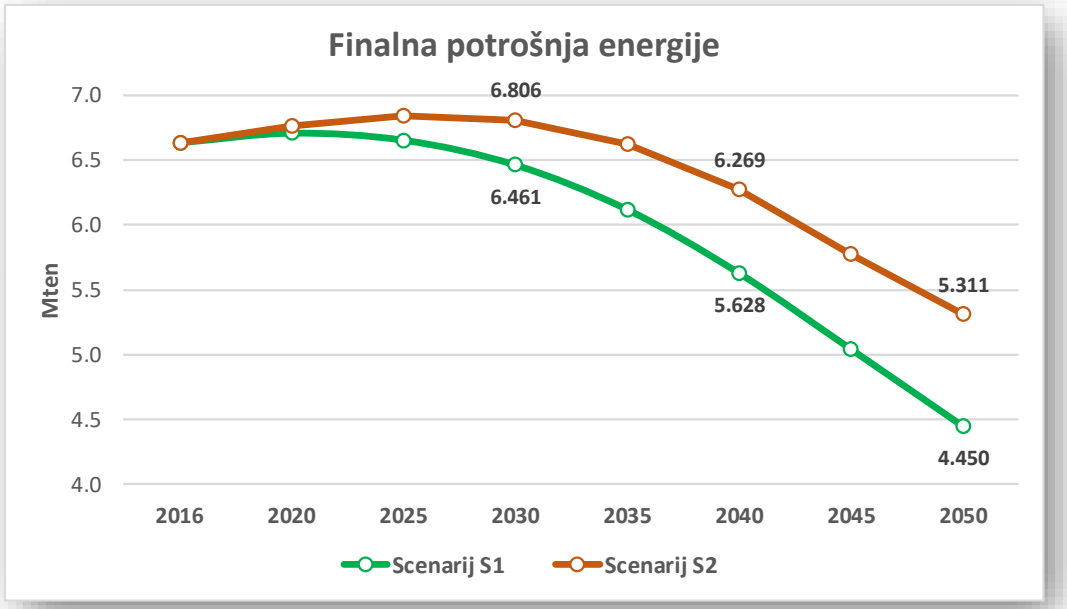
Final energy consumption

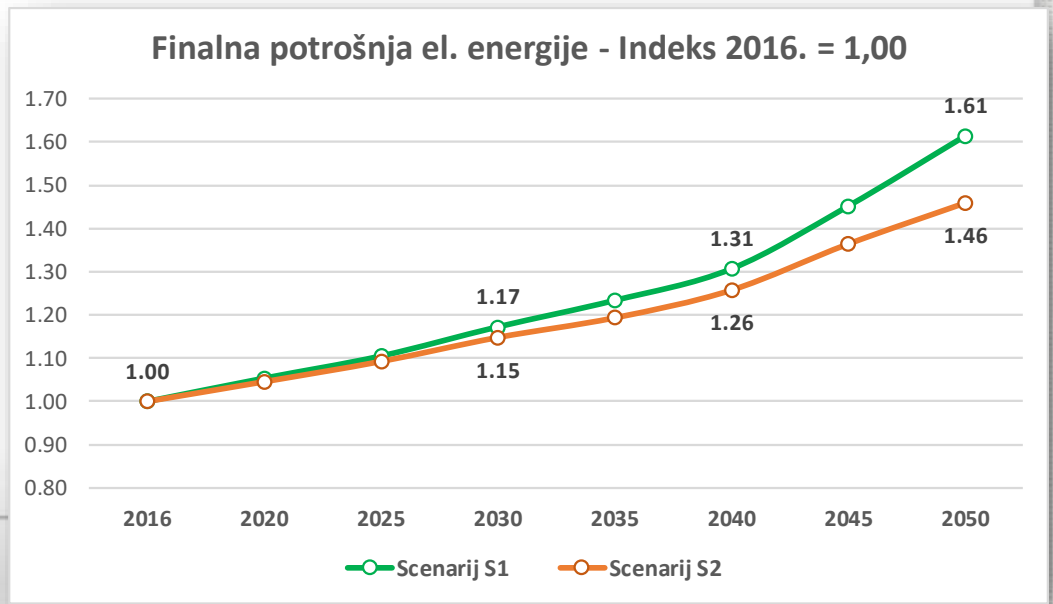


Final electricity consumption



Scenarios comparison





NECP scenarios – on going process

- Political decision in 2019: choice of the moderate transition scenario
- EC comments and recommendations: RES – high ambition (except in transport), EE – low ambition
- Green Deal, Green Growth and Recovery Fund
- New 2030 GHG emission reduction goals
- New scenario with net zero GHG emissions
- ...

Questions, comments?

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