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ODYSSEE-MURE

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Experience in Non-EU Balkan countries: NECP modelling

Johannes Eckstein, Fraunhofer ISI

Experience in Non-EU Balkan countries: NECP modelling

- Background on NECP's in Energy Community
- Modelling project of Fraunhofer ISI in Western Balkans
 - Overview
 - Modelling approach
 - Data requirements
- The activity in perspective of other modelling projects

Background: NECP in Non-EU Countries

- Being part of the Energy Community, non-EU countries are also required to hand in an integrated National Energy and Climate Plan until 2030
 - This covers 9 Contracting Parties
 - Coordinated by the Energy Community Secretariat
 - NECP's should be handed in by the end of 2020










* This designation is without prejudice to positions on status, and is in line with UNSCR 1244 and the ICJ Opinion on the Kosovo declaration of independence.

Source: <https://www.energy-community.org/aboutus/whoweare.html>

Background: NECP in Non-EU Countries

■ Western Balkan 6 – Energy Transition Tracker: State of the NECPs in July, 2020

State of National Energy and Climate Action Plans preparation

	Legal basis adopted 	Working group operational 	Modelling capacity exists 	Policy section (A) drafted 	Analytical section (B) drafted 	Submitted to the Secretariat for peer review 	Final version submitted to the Secretariat 
Albania	●	●	●	●	●	●	●
Bosnia and Herzegovina	●	●	●	●	●	●	●
Kosovo	●	●	●	●	●	●	●
Montenegro	●	●	●	●	●	●	●
North Macedonia	●	●	●	●	●	●	●
Serbia	●	●	●	●	●	●	●

● Finished ● Started ● Planned

Source: compiled by the Energy Community Secretariat.

Source: <https://www.energy-community.org/aboutus/whoweare.html>

Supporting the NECP modelling in 3 non-EU Balkan countries

■ Montenegro and Albania

- Modelling underlying the NECP is carried out by Fraunhofer ISI
- working with local experts in both countries
- closely working with the technical working groups
- in exchange with the Energy Community Secretariat
- in exchange with other consultants active in the countries

■ Kosovo

- modelling is performed by another project
- Fraunhofer ISI has a supporting role

Five work streams in the project

1. Data Collection and Analysis

- Assist and supervise data collection

2. Modelling and Interpretation

- develop modelling underlying the NECP

3. Capacity Building

- on the use of modelling tools, assumptions and interpretation

4. Recommendations

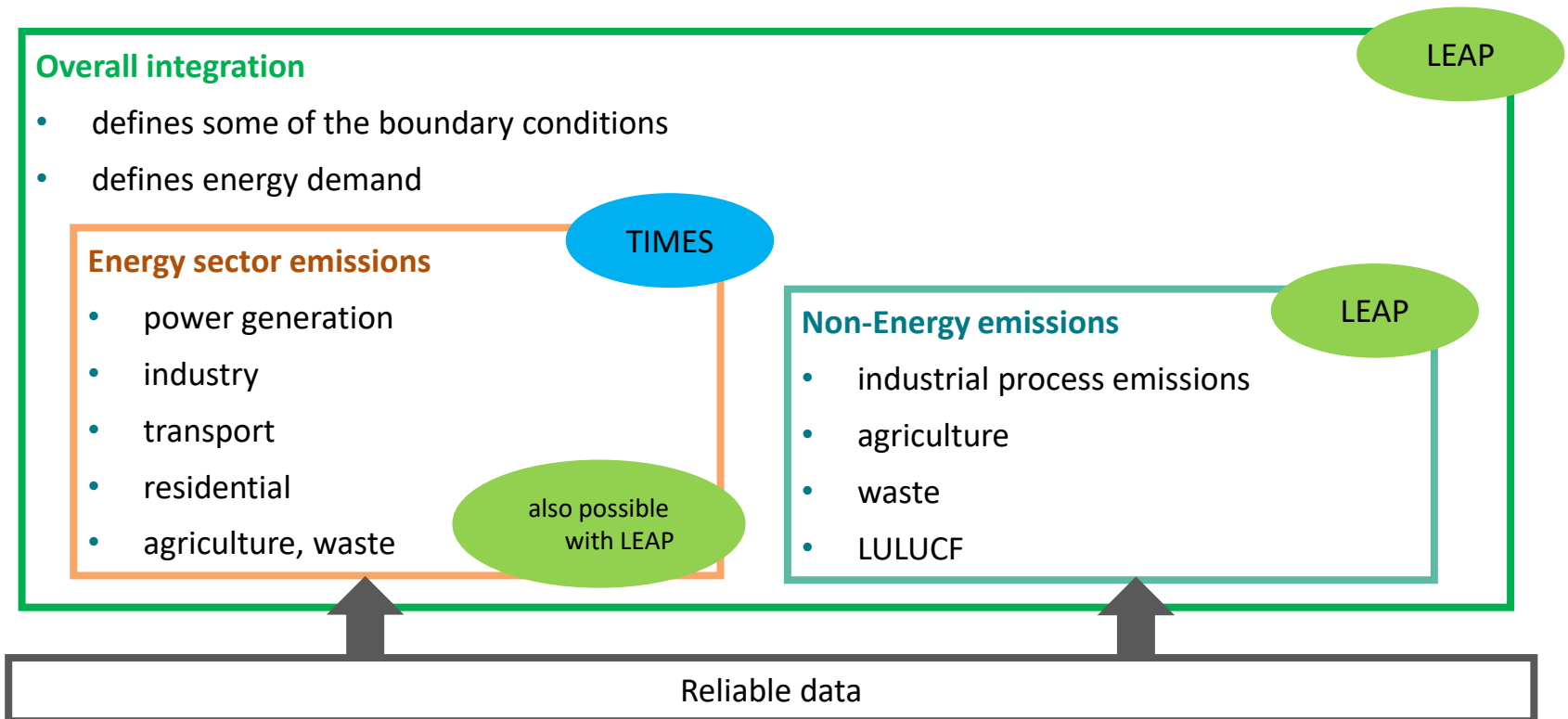
- on administrative processes and policies

5. Input to Report

- modelling work prepared to be presented in the NECP

Modelling and Interpretation

■ Rationale of the modelling setup



Data requirements

- Three types of modelling input data are required
 - **Historic time series**
 - Includes base data like GDP, population, ...
 - sector specific data, e.g.
 - number of livestock, area of cultivated soils, ...
 - physical output of an industry, gross value added per energy-intensive industry,...
 - number of households, heating type, saturation with certain appliances, ...
 - **Projections of key socio-economic data and parameters**
 - e.g. population, GDP growth, value added by sector, households...
 - **Data for policy interventions**
 - Specific data requirements for modelling policies

Scenarios

3 Scenarios to be modelled for 2030 (and a view to 2050)

- **With Existing Measures (WEM)**
- **With Additional Measures (WAM)**
- **EU target-equivalent scenario (EUT)**

Scenarios – WEM

With Existing Measures (WEM)

- also called business-as-usual
- is the baseline to compare results of WAM and EUT

- define a cut-off date, e.g. end 2019
- all PaMs decided before this date are included
- even if they act longer or start acting at a later time
- these policies are implicitly included in the WEM scenario

Scenarios – WAM

With Additional Measures (WAM)

- based on a policy set to be decided on
- gap to a target becomes visible

- includes PaMs after the cutoff date and future PaMs
- future PaMs need to be clearly defined
- PaMs are parameterized in the model

Scenarios – EUT

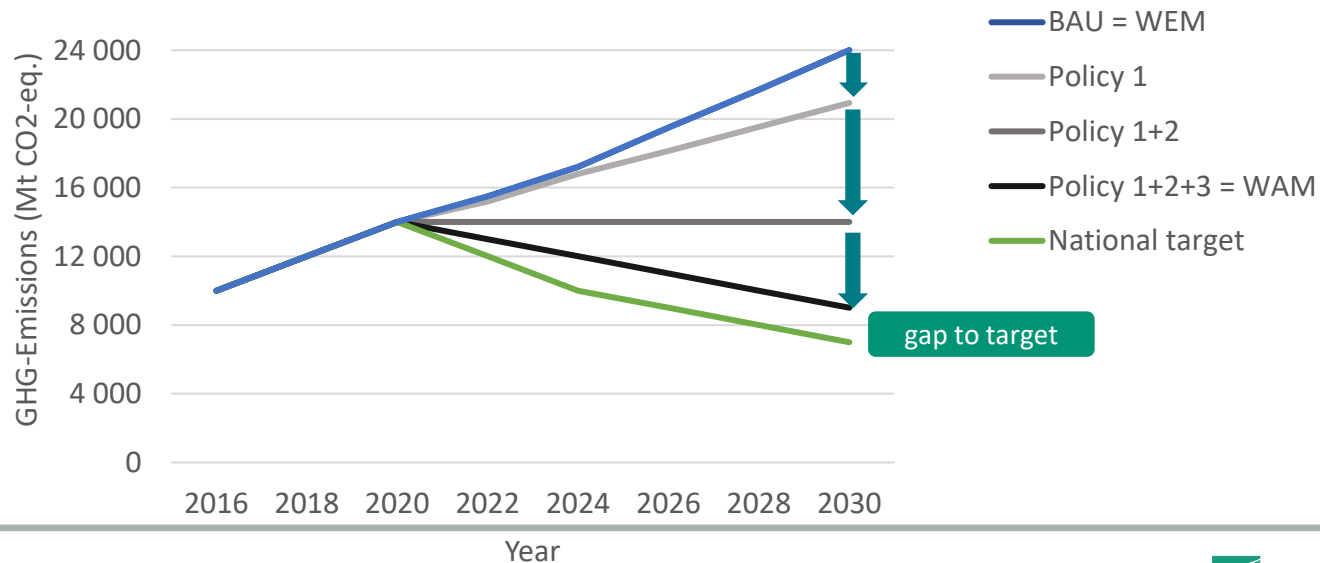
EU target-equivalent scenario (EUT)

- prepares the discussion expected with the EU Commission study
- is a target scenario
- an existing model is optimized to reach the target
 - least cost optimization (particularly for energy system models)
 - here likely: through parameterizations that stand for additional policies

PaMs in the model

■ Policies and measures in the model

- Adjusted modelling parameter according to policy impact
- This needs to be parameterized
- Leads to changes in the model parameter and energy system results
- **Quality and granularity of input data determines how well policies can be parameterized!**



Policies and Measures in the model – required data

■ Specific data is required to parameterize policies in the model

- Policy base information (e.g. sector, policy type, budget, implementing authority)
- Objective and contribution to reach the objective
- Defined specific policy targets
 - e.g. area of photovoltaics collectors, expected energy savings, CO₂-savings
 - emissions affected by the measure
 - number and type of participants
- Required budget and type of measure (grant, loan, labelling,...)
- start and end date
- Time of policy implementation to determine which scenario: WEM or WAM?

Aligning with other work

- There are numerous projects running in parallel

	Sector	NECP	Parallel project	Previous strategy	NDC	EnC study	...
Energy related	Electricity generation	TIMES	TIMES	LEAP	LEAP (in 2015 version)	PRIMES	
	Transport						
	Industry						
	Residential						
	Agriculture						
	Waste						
Non-energy related	Industry	LEAP			Sectoral coverage unclear in revision		
	Agriculture						
	Waste						
	LULUCF						

Aligning with other work

- There are numerous projects running in parallel
 - some (EnC, EU) are overarching and regional
 - others are specific to the countries
- **Very few are carried out by local consultants**

- **All the projects require data**
 - data on policies
 - data on indicators
- **All projects start by collecting data (again)**

- **All are supported by local experts**
 - **But local expertise in modeling remains limited**

- **Introducing the harmonised and shared approach of the ODYSSEE-MURE project could largely improve the policy analysis**

THANK YOU FOR YOUR ATTENTION

Dr. Johannes Eckstein, Fraunhofer ISI

johannes.eckstein@isi.fraunhofer.de

