

‘Alternative’ energy strategies in CEE (?) countries

Sustainable energy systems for CEE countries – modelling and
cooperation meeting

Green Workshop Foundation & Energiaklub, Budapest,
3rd November 2016

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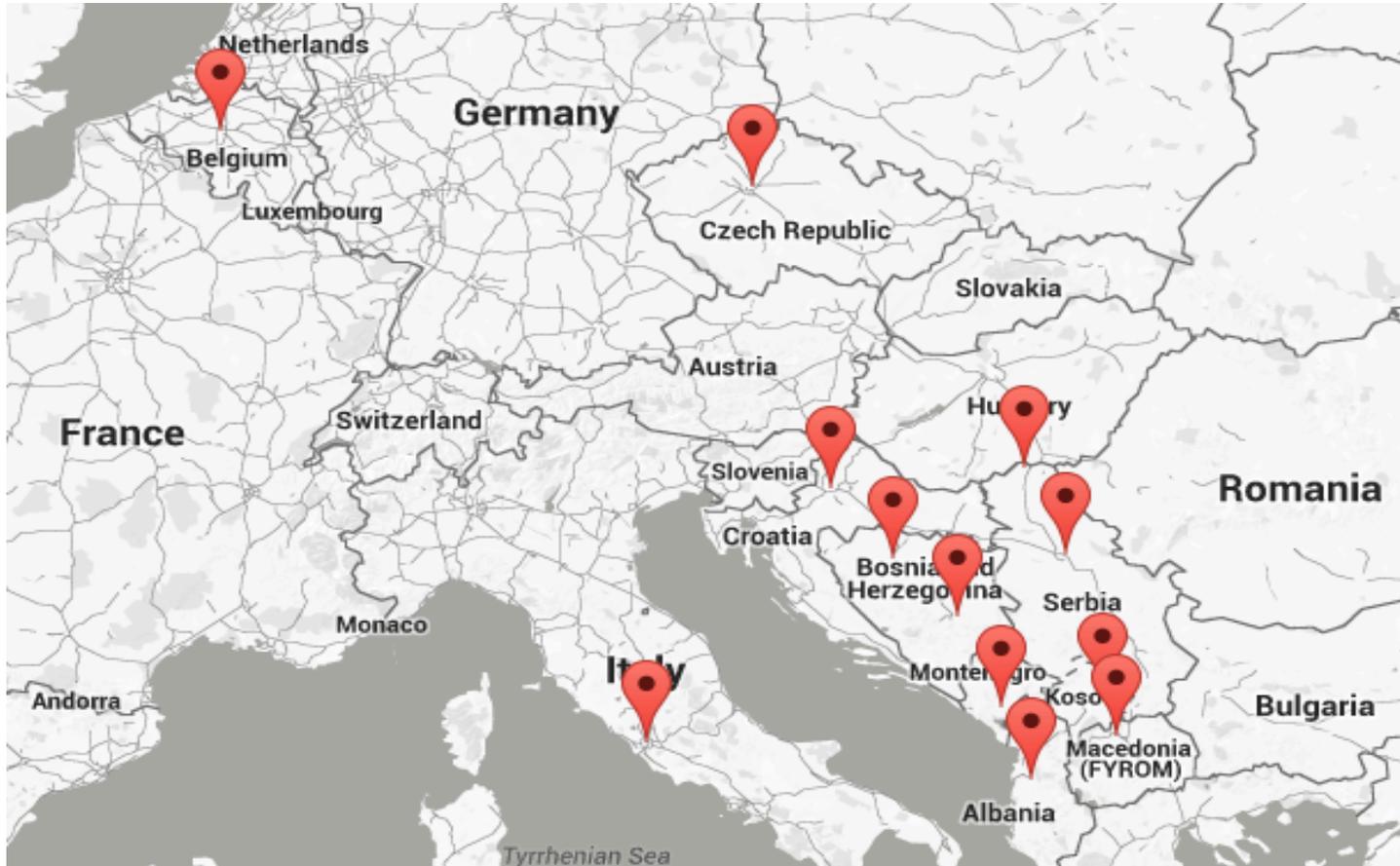


Department
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Main objective of the **SEE SEP** project is **fact based** dialogue with key decisions makers to influence policy and practice for a more sustainable energy system in South East Europe, aligned with key EU Policies and Directives.



18 Civil Society Organizations

Organizations	Role
See Change Net	Lead Partner
WWF, CEEBW, CAN	EU Partners
EDEN center, Ekolevizja group	AB
CPI, CZSS	BA
DOOR, FSO	HR
ATRC	KV
Analytica, Front 21/42, Ekosvest	MK
Green Home, MANS	ME
CEKOR, NGO Fractal	SE

NOTE: 1) 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. Hereinafter referred to as Kosovo; 2) According to the UN, the official name for Macedonia is The former Yugoslav Republic of Macedonia. Hereinafter referred to as Macedonia.

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HOW DO WE SEEK TO INFLUENCE ENERGY PLANNING TOWARDS EU STANDARDS AND GOALS?

PARTNERS



SUPPORTERS



- Seek to redirect money flows
- Influence tightening of legislation
- Reframe policy dialogue
- Awaken public opinion

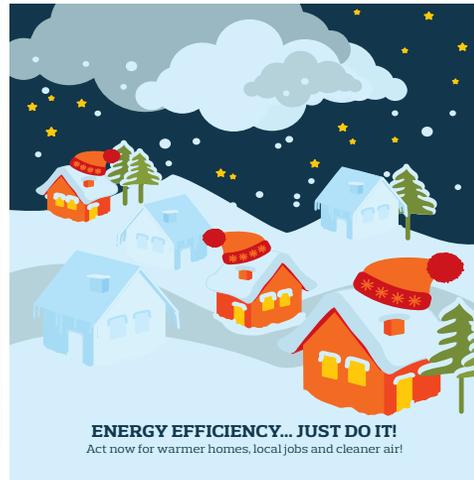
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WHAT DOES THAT STRATEGY INVOLVE ?



South East Europe
Sustainable Energy
Policy



SEE 2050 Energy Model

- Development of SEE Low Carbon Roadmap
- Supply and demand sector analysis
- 7 national, 1 regional model

Red Flag Reports

- Evidence based research in the following areas
 - Financial support from the EU and IFIs for the energy sector in SEE
 - Corruption in SEE energy sector
 - Quality of SEA/EIA of hydropower projects
 - Energy Efficiency in SEE
 - Energy Poverty in SEE

Energy Community

- Monitoring and Policy inputs to the
 - Reform process and extension of the Treaty
 - PECI
 - Other policy developments (LCPD/IED, Energy Efficiency Directive, etc.)

Leadership and Network Development

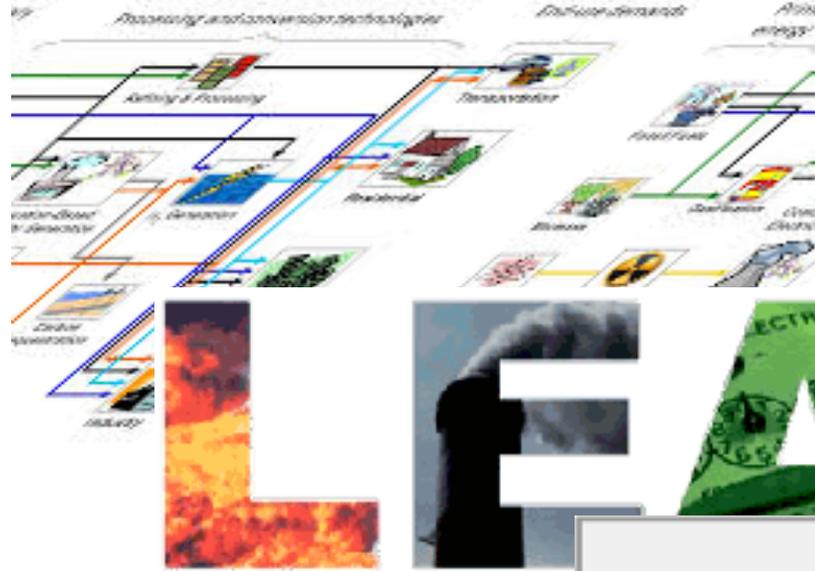
- Strengthening leadership capabilities and network development
 - Collaborative Leadership Workshop

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Models, Models, Everywhere...

MARKAL/TIMES Energy System Model



Criticisms

Public policy energy models have been criticized for being insufficiently [transparent](#). The [source code](#), data sets, and assumptions should at least be available for [peer review](#), if not explicitly published.

To improve transparency and public acceptance, some models are undertaken as [open-source software](#) projects, often developing a diverse community as they proceed.

Network of european models of energy efficiency



NEMS
stands for
National Energy Modeling System

Abbreviations.com

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Why we picked the 2050 Calculator...Part 1

Representative Simulation

The model provides the capacity to easily explore a large variety of scenarios on the full energy system

The model takes into account the existing literature and can represent most scenarios performed in previous studies

Stakeholder Involvement

Key stakeholders are consulted, and brought on-board on the methodology

Key stakeholders are provided with an opportunity to review the assumptions during the consultation and through a final call for evidence process

All stakeholders can generate pathways representing their views

Transparency

All model assumptions are accessible through presentations

All the model assumptions presented are directly placed in the model

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Why we picked the 2050 Calculator...Part 2

Accessibility

The model runs on an open-source spreadsheet in Excel

Three different stakeholder interfaces improve the debate at various complexity levels (schools, decision makers and experts)

Credibility

The model is successfully trialled by the UK DECC(1), and other leading institutions have contributed to enriching it, including the IEA(2), the WRI(3), The Chinese Energy & Resource Institute, the LSE(4) and ICL(5)

In the past 3 years, above 20 countries have started to use this methodology

Potsdam now leads an HORIZON programme called EUCalc to produce a 2050 Calculator for every EU member state

Modularity & Complementarity

Its Excel structure makes it very flexible. It is also often used in combination with other models (both simulation & optimisation)

It clearly states its capability boundaries, which makes it an excellent complement to other models

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Main Actors – Energy Experts



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Guy Turner

Supported by:



Coalition Building



MEP JERZY BUZEK

DR BETRAND PICCARD



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Speak now or forever hold your peace...

Over 1,500 individual
consultation
responses

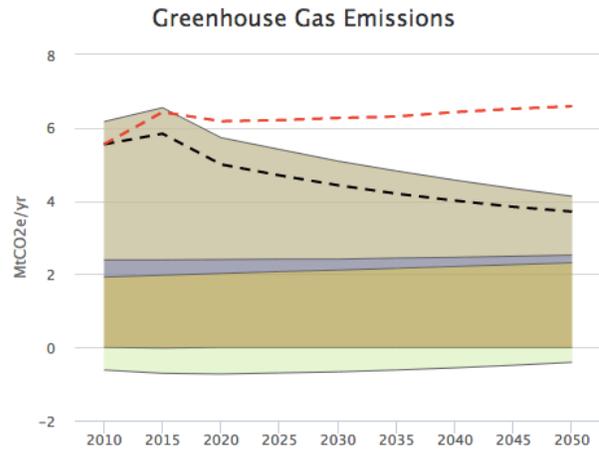
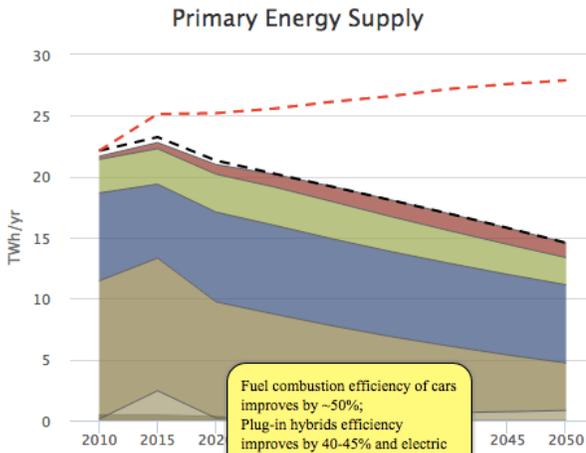
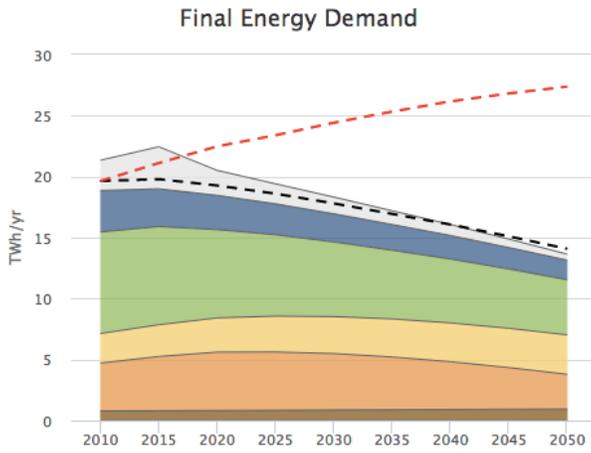
Presentations in
Brussels and Vienna
as well as Tirana,
Sarajevo, Zagreb,
Pristine, Skopje,
Podgorica and
Belgrade

Agreed to be hosted
by Energy Community
Website





SEE 2050 Energy Model - Tier 2



Conversion and distribution losses Industry Transport
Lighting & appliances Heating and cooling Agriculture and others
Total final demand Reference

Environmental heat Coal Oil and petroleum products Gas Nuclear Wind
Total primary supply Reference

Bioenergy credits Industrial processes & solvents Fuel combustion
Agriculture, waste & others
Total net excluding international aviation Reference

Fuel combustion efficiency of cars improves by ~50%;
Plug-in hybrids efficiency improves by 40-45% and electric cars efficiency improves by ~45%;
Fuel combustion efficiency of buses improves by ~36%, hybrid and electric buses efficiency improves by ~20%;
Rail transport efficiency improves by ~20%

- Demographic evolution**
 - Demographic evolution [1] [2] [3]
- Domestic heating and hot water**
 - (i) Compactness [1] [2] [3] [4]
 - (ii) House heating / cooling [1] [2] [3] [4]
 - (iii) Housing thermal efficiency [1] [2] [3] [4]
 - (iv) Electrification level [1] [2] [3] [4]
 - (v) Innovative heating technology [1] [2] [3] [4]
- Domestic lighting, appliances, and cooking**
 - (i) Demand / efficiency [1] [2] [3] [4]
 - (ii) Electrification [1] [2] [3] [4]
- Commercial heating and cooling**
 - (i) Commercial heating / cooling [1] [2] [3] [4]
 - (ii) Efficiency [1] [2] [3] [4]
 - (iii) Electrification level [1] [2] [3] [4]
 - (iv) Innovative heating technology [1] [2] [3] [4]
- Commercial lighting, appliances, and catering**

- Domestic passenger transport**
 - (i) Travel demand per person [1] [2] [3] [4]
 - (ii) Modal shift [1] [2] [3] [4]
 - (iii) Energy efficiency [1] [2] [3] [4]
 - (iv) Technology mix / electrification [1] [2] [3] [4]
- Domestic freight transport**
 - (i) Demand for freight transport [1] [2] [3] [4]
 - (ii) Modal shift [1] [2] [3] [4]
 - (iii) Energy efficiency [1] [2] [3] [4]
 - (iv) Technology mix / electrification [1] [2] [3] [4]
- Industry**
 - Steel Industry Production [1] [2] [3]
 - Energy Intensity of Output [1] [2] [3] [4]
 - Cement Industry Production [1] [2] [3]
 - Energy Intensity of Output [1] [2] [3] [4]
 - Aluminium Industry Production [1] [2] [3]
 - Energy Intensity of Output [1] [2] [3] [4]
 - Carbon Capture & Storage [1] [2] [3] [4]

- Supply**
 - Energy prices trajectories (Generation) [1] [2] [3] [4]
 - Onshore wind [1] [2] [3] [4]
 - Hydroelectricity large [1] [2] [3] [4]
 - Hydroelectricity small [1] [2] [3] [4]
 - Geothermal electricity [1] [2] [3] [4]
 - Solar PV [1] [2] [3] [4]
 - Solar thermal [1] [2] [3] [4]
 - Nuclear power [1] [2] [3] [4]
 - Coal power stations [1] [2] [3] [4]
 - Carbon Capture Storage (CCS) [1] [2] [3] [4]
- Imports of electricity**
 - (i) Share of imported electricity [1] [2] [3] [4]
 - (ii) Share of RES in imported electricity [1] [2] [3] [4]
- Bioenergy**
 - Indigenous biomass production [1] [2] [3] [4]
 - Bioenergy imports [1] [2] [3] [4]
- Agriculture and Others**

7 Models, One for Each Country

One regional interactive model

Demand Levers 28

Supply Levers 14

Designed to engage policy makers

Agreed to be hosted by Energy Community Website

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2050 Energy Model – Interactive Video



7 Models, One for Each Country

One regional interactive model

Simplified to 6 or 7 Demand Levers

Simplified to 6 or 7 Supply Levers

Designed to attract public discussion

Opportunity to become focus for
Global 2050 Calculator Meeting
in 2017

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HOW DO WE SEEK TO INFLUENCE ENERGY PLANNING IN LINE WITH OUR AIMS?

PARTNERS



SUPPORTERS



- Seek to redirect money flows
- Influence tightening of legislation
- Reframe policy dialogue
- **Awaken public opinion**

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2050 petition



POTPISALA

NINA ŽIŽIĆ
predstavica Crne Gore na Eurosongu

#EnergyForTheLongRun

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The “Yes We Can” Moment



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What did the DG NEAR ROM Evaluation conducted in August and September say?

"The Energy Model has been used to increase the awareness among the national decision makers regarding best practice solutions for more sustainable energy policies, aligned to the EC policies and directives. **The national authorities are well aware of and have been involved in the modelling process.**"

What did the DG NEAR ROM Evaluation conducted in August and September say?

"The **interaction with the ministries, energy operators, technical faculties and the EU Delegations (EUD) is remarkably good.**"

"The **ownership at the level of EU institutions is very good.** The representatives of DG ENERGY, European Parliament (selected MPs) and the Energy Community are closely involved and are instrumental to the project's objectives."

Main Actors – Energy Modelers



Ana Ranković



Naida Taso



Ivana Rogulj



Irma Filipović Karadža



Tanja Jokić



Sonja Zuber



Ana Stojilovska



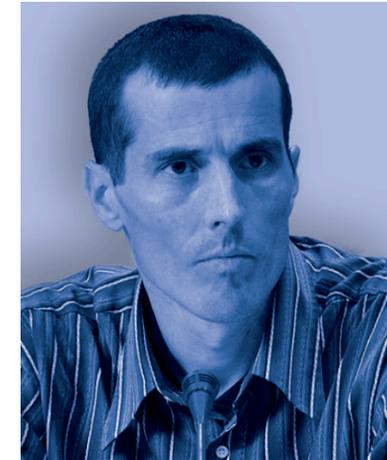
Sanja Orlandić



Anyla Beqa



Lira Hakani



Zvezdan Kalmar

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Thank you for listening

Questions more than welcome...we will see if I can answer them!!!

Garret Tankosic-Kelly – garret@seechangenet.org

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