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**SEERMAP**

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South-East Europe Electricity Roadmap

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# Network assessment workshop - Introduction

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**SEERMAP Network Training**

Athens, March 6-8, 2017



## Basic SEERMAP project data

**SEERMAP**

South-East Europe Electricity Roadmap

Project title	South East European Electricity Roadmap	
Country/region of implementation	Albania, Bosnia and Herzegovina, Kosovo*, Montenegro, Macedonia, Serbia, Romania, Bulgaria, Greece	
Project cycle:	July 2016	June 2017
Donors:	Austrian Federal Ministry of Agriculture, Forestry, Environment and Water Management	 <p>MINISTERIUM FÜR EIN LEBENSWEERTES ÖSTERREICH</p>
	European Climate Foundation	 <p>European Climate Foundation</p>
Web:	<a href="http://www.seermap.rekk.hu">www.seermap.rekk.hu</a>	

# Goals of the project

## Modelling

- Analyse the impact of the transition to a low carbon and energy secure pathway the electricity sector until 2050 in line with EU 2050 Roadmap (*Long Term Electricity Roadmap for the SEE region*) that highlights the potential synergies beyond the limited confines of national assessments
- Application of state of the art energy sector models of the participating consortia partners (electricity and gas sector market models of REKK, Green-X of Technical University of Vienna and the regional electricity network model of EKC)

## Dialogue and capacity building

- Effectively distribute the findings of this roadmap to the high level decision-makers in the energy administration of the countries
- Build up capacities – in the form of training courses - amongst policy makers, TSO members, energy regulators and local think tanks in the field of renewable energy deployment and transmission network planning issues
- Build up a network of regional think tanks capable of contributing to the debate on the long term decarbonisation pathways in the SEE region
- Trigger discussions on electricity scenarios at a national level

## Consortia and Local Partners

Consortium partners	Task
Regional Centre for Energy Policy Research (REKK) Budapest, Hungary	Overall coordination, electricity and gas sector modelling
Technical University (TU Wien) Vienna, Austria	Renewable deployment modelling with GREEN-X model
Electricity Coordinating Centre (EKC) Belgrade, Serbia	Network modelling
OG Research (Czech Republic)	Macroeconomic assessment
Energy Regulators Regional Association (ERRA)	Trainings

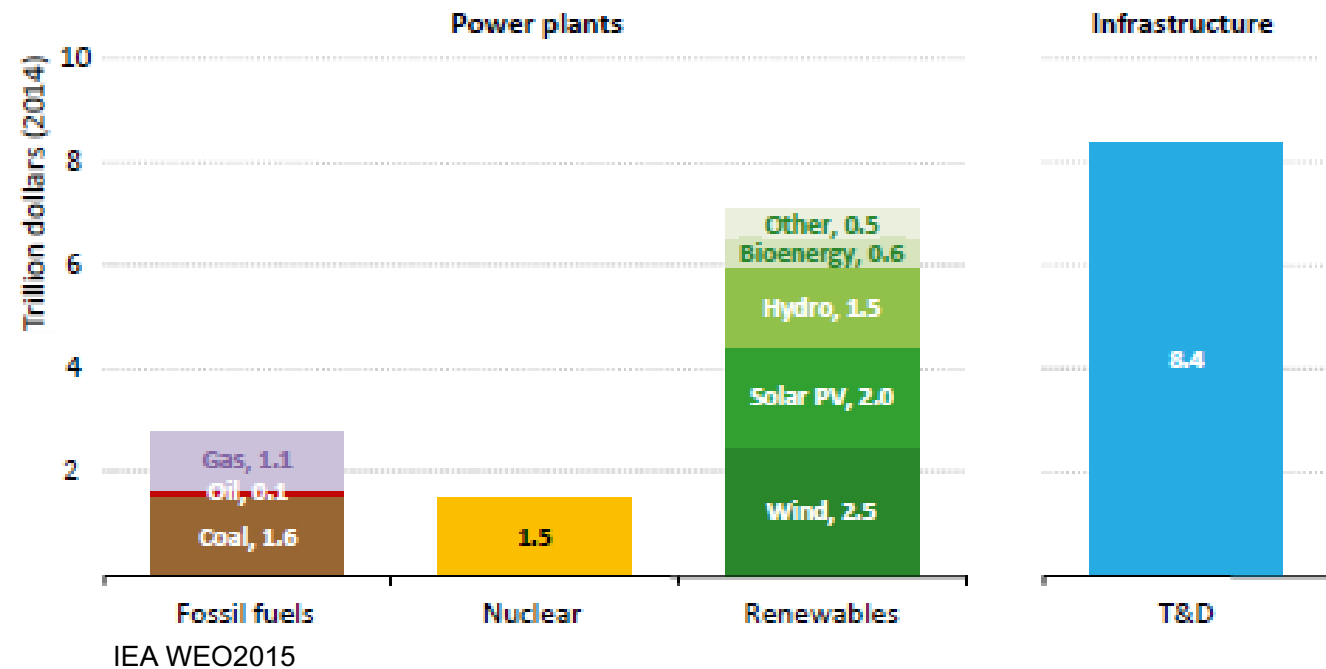
Country	Local partner organisation
Serbia	RES Foundation
Albania	POLIS University
Macedonia	MACEF – Macedonian Center for Energy Efficiency
Montenegro	IPER - Institute for Entrepreneurship and Economic Development
Kosovo*	INDEP – Institute for Development Policy
Bosnia	Enova
Romania	Energy Policy Group
Bulgaria	Center for Democracy
Greece	FACETS

# Why focus on network infrastructure?

„At USD 288 billion in 2015, or over 40% of the total, renewables are firmly established as the largest source of power investment.”

(IEA World Energy Investment, 2016)

Potential impact of INDCs on global cumulative investment in the power sector, 2015 – 2040



# Benefits of increasing interconnection capacities

- Competitiveness
  - higher transfer capacities would result in price convergence amongst the markets
- Security of supply
  - increasing capacity might help to avoid black-outs in the national electricity systems
- Sustainability
  - higher transmission capacities would allow increased electricity flows generated by RES-E producers in low-cost generating zones to the higher priced load centres.
- Balancing service
  - import system balancing services from neighbouring countries

# Agenda of the course 1

	Day 1: Introduction to networks		Day 2: Low carbon electricity transition and challenges		Day 3: Network development assessment
		9.00-10.30	1. Challenges of Low Carbon developments on <b>network integration</b> (REKK -Kaderjak)	9.00-10.30	1. Assessing the impacts of network expansion - Case study presentation on modelling and assessment: <b>Technical</b> (EKC - Markovic) <b>and economic impacts</b> (REKK - Szabó)
			Coffee break		Coffee break
		11.00-12.30	2. Challenges of Low Carbon developments: <b>DSM and distribution networks</b> (REKK – Pató)	11.00-12.30	2. Assessing the impacts of network expansion - Case study presentation on modelling and assessment: <b>Financial impacts</b> on TSO, regulatory consequences (REKK - Felsmann) <b>Exercise 1:</b> Simplified calculation exercise of TSO impacts and regulatory consequences (REKK - Felsmann)
	Welcome coffee		Lunch break		Lunch break
13.30-15.00	<b>Introduction</b> (REKK -Szabó) (45 min) Introduction to transmission network characteristics - technical features: (EKC -Markovic: 45 minutes)	13.30-15.00	Introduction to transmission network assessment methodology: - ENTSO-E <b>CBA methodology</b> - <b>PCI process</b> (REKK - Kaderják)	13.30-15.00	cont. Round table - Local partners presentation/discussion on the results (Local Partners/REKK –Felsmann)  Course evaluation
	Coffee break		Coffee break		
15.30-17.00	<b>CBC lines:</b> regulatory issues - Capacity allocation methods: from NTC to coupled markets - Investment and financing in CBC (REKK - Szabó) - Introduction of network issues in <b>Greece</b> (Facets)	15.30-17.00	Energy Community and EU member state Electricity infrastructure priority projects – <b>PECI/PMIs</b> Nenad Sijakovic (EnC)		
19.00-	Joint dinner	19.00-			

# Agenda of the course 2

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First day is split to introduction (technical and economical) and specialties of the CBC lines.

Second day: Introduction to long term challenges the European electricity system and network faces:

- Network integration issues
- DSM and distribution network
- EU processes (PCI and PECEI)

Third day dedicated to Network Assessment methodology:

- Technical, Economic, Financial assessment
- Financial assessment exercise