



MINISTERIUM
FÜR EIN
LEBENSWERTES
ÖSTERREICH



European
Climate Foundation

SOUTH EAST EUROPE ELECTRICITY ROADMAP (SEERMAP) PROJECT



REKK REGIONAL CENTRE
FOR ENERGY
POLICY RESEARCH



TECHNISCHE
UNIVERSITÄT
WIEN



Electricity
Coordinating
Center

OGR

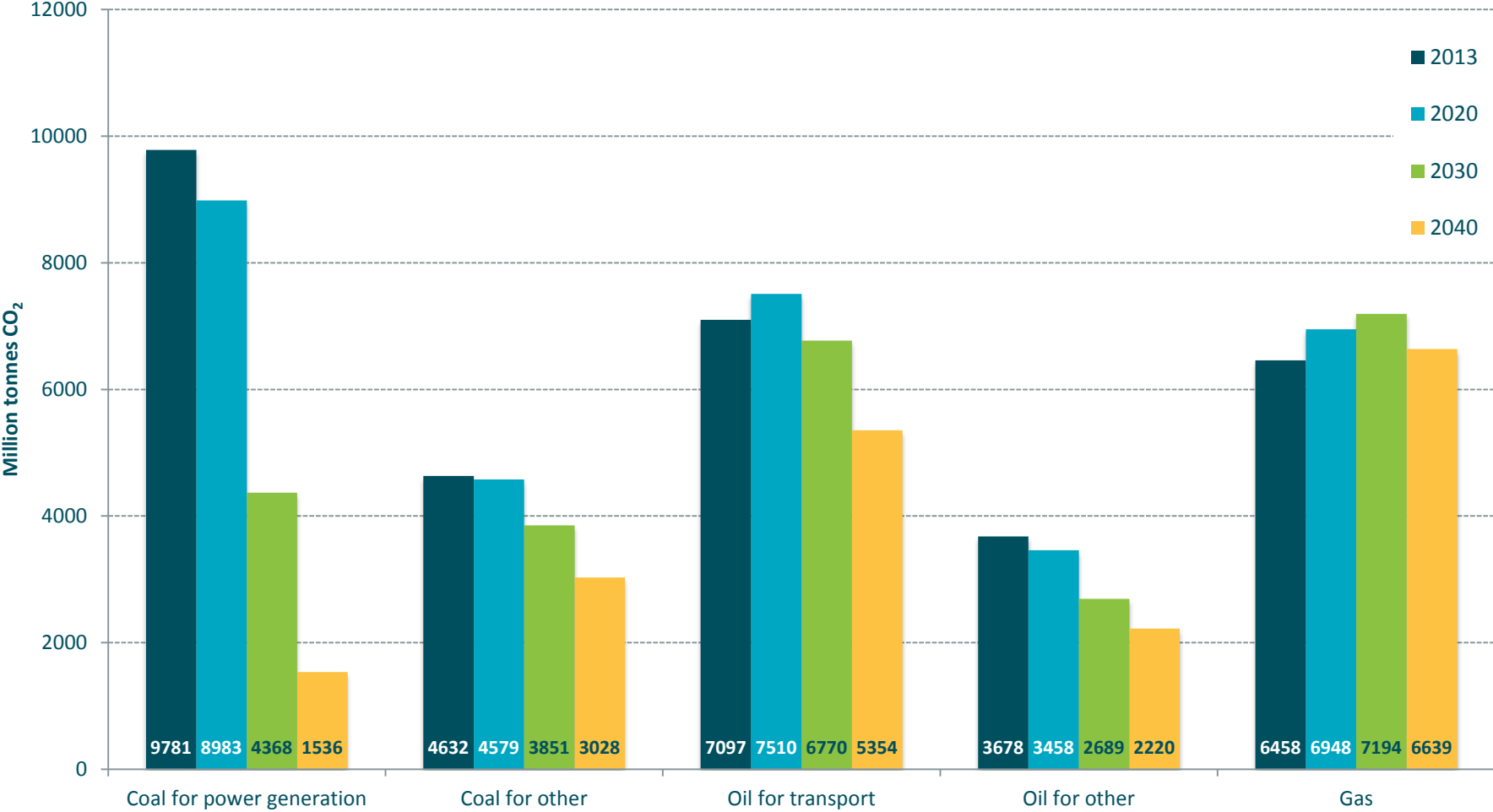
Agora
Energiewende



ERRA
ENERGY REGULATORS
REGIONAL ASSOCIATION

Rationale...

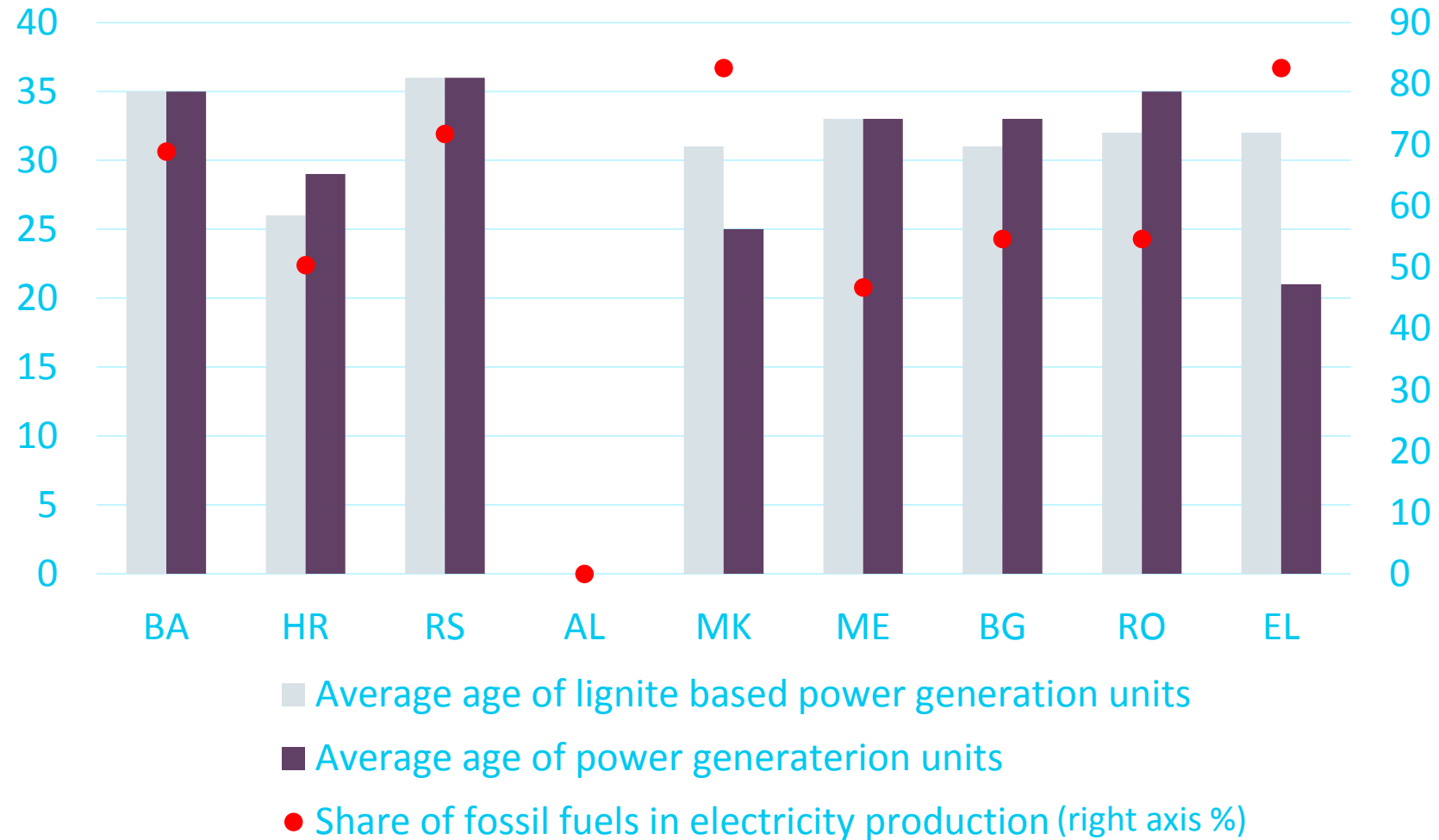
IEA 450PPM SCENARIO (1)



Emission reductions from 2013 levels in the IEA 450ppm scenario for each fuel

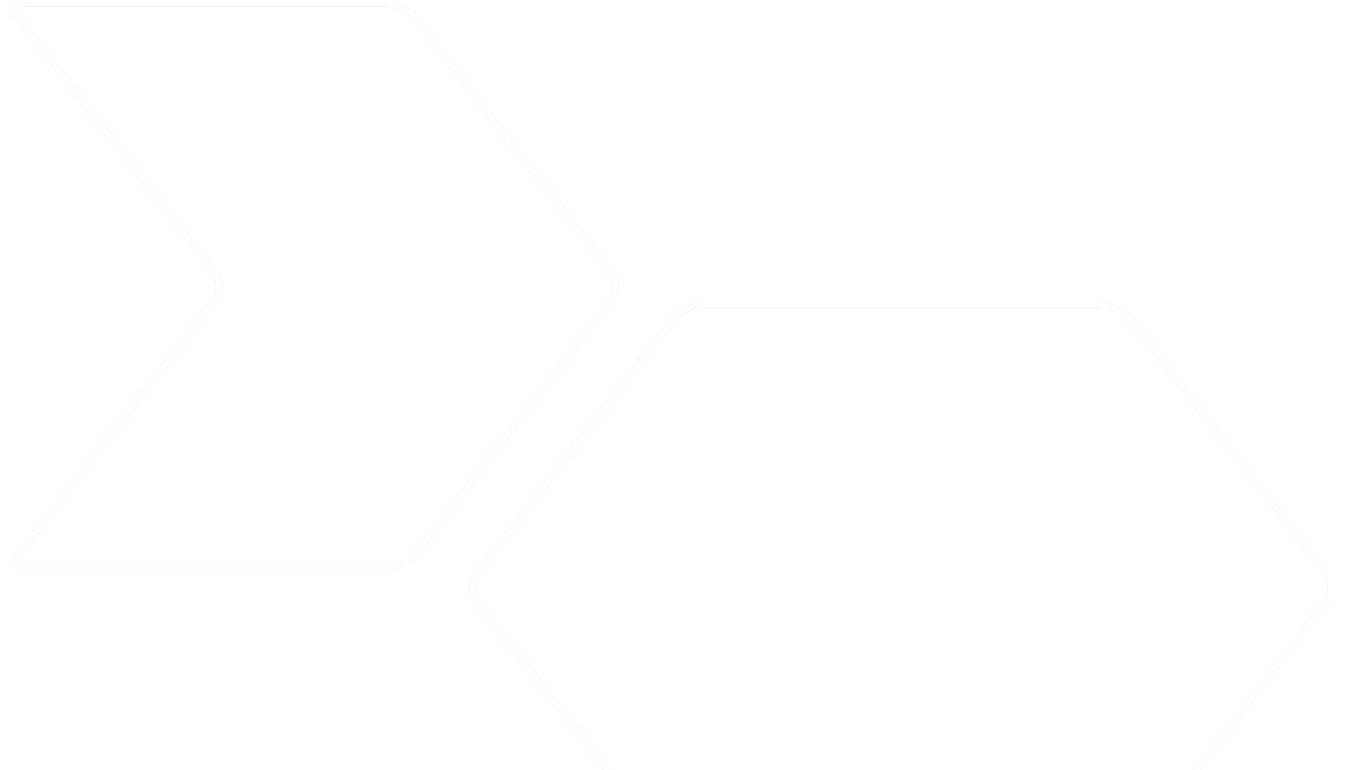
Source: IEA scenario from 'World Energy Outlook 2015'

AVERAGE AGE OF POWER GENERATING UNITS IN SEE



Type of reporting	UNFCCC post Paris Agreement	EU MMR	Remark
Inventory/frequency	Every second year	Every year	Modalities for the UNFCCC reporting is to be seen
PaMs	Every second year for ex-post PaMs for the NDC	Every second year	
Greenhouse gas projections	Every five years at least – necessary for NDC updates, long-term low GHG emission development strategies	Every second year	For the NDC updates and the strategy projections are needed in 2018-19
Low GHG emission development strategy	Non binding request from Parties by 2020	Required	EU plans to engage in the process from 2018 onwards

The Project



CONSORTIUM PARTNERS

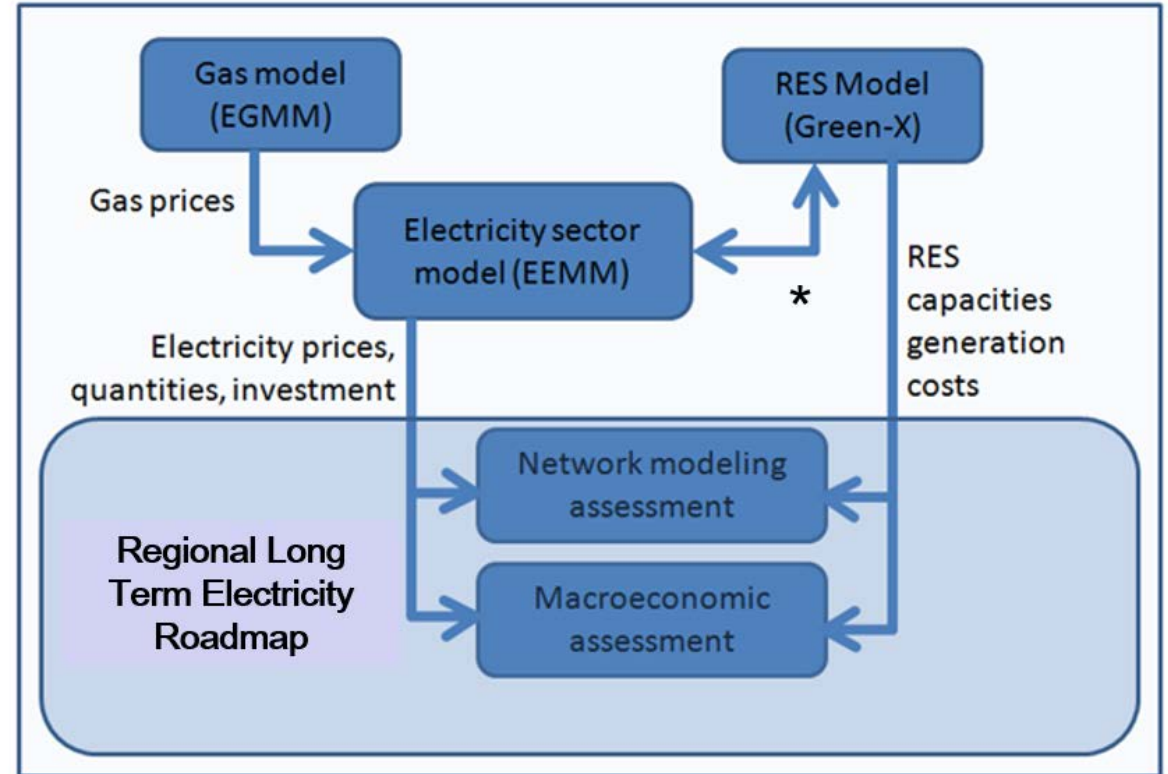
- Regional Centre for Energy Policy Research (REKK) Budapest, Hungary – overall coordination, electricity and gas sector modelling
 - Technical University (TU Wien) Vienna, Austria – Renewable deployment modelling with GREEN-X model
 - Electricity Coordinating Centre (EKC) Belgrade, Serbia – Network modelling
 - OG Research (Czech Republic) – Macroeconomic assessment
 - Energy Regulators Regional Association (ERRA) - Trainings
- + 9 local Think Tanks contracted by REKK and ECF - Contribution to scenario development and mobilisation of and liaising with local decision makers
- + Steering Group tasked with checking progress of project execution bimonthly and proposing changes and adjustments (including representatives of ECF and Agora Energiewende)

SUMMARY OF THE PROJECT

- **Topic:** assessment of potential pathways for the transition to a low carbon economy in the electricity sector until 2050 in line with EU 2050 political agreement
- **Geographic coverage:** South East Europe (Bulgaria, Greece, Romania, Albania, Bosnia-Herzegovina, FYRO Macedonia, Kosovo*, Montenegro, Serbia)
- **Components:** analytical work, training and dialogue with decision makers

ANALYTICAL TOOLS

- Electricity model (EEMM)
- Gas model (EGMM)
- RES-E model (Green-X)
- Network model (EKC Network Model)
- Macro-economic analysis (OG Research)



GENERAL MODELLING APPROACH

- **Objective:** draw realistic and ambitious decarbonisation roadmap for the SEE electricity sector in the timeframe of 2050
 - “Ambitious”: in the range of 93-99% decarbonisation
 - “Realistic”: calibrated models with proven regional background/reference
- **Scenario assessment** with the interlinkage of detailed bottom-up models:
 - European Electricity Market Model (EEMM) and European Gas Market Model (EGMM) - REKK
 - GREEN-X – TU Wien
 - Regional network model - EKC
- Instead of using partial ‘what-if’ scenarios of individual measures, **composite scenarios will be modelled:** complex narratives with combined measures along the dimensions of level of RES deployment and regional electricity market integration

Deliverables by June 2017

- Country level electricity sector development scenarios with until 2050, with electricity market development scenario, including RES-E and network development and macro-economic assessment of scenarios
- Trainings for TSOs, lead ministry staff and think tanks on
 - RES support schemes
 - Infrastructure assessment
- Regional Electricity Roadmap

Follow up

- Continued dialogues on national level, utilization of results, specific questions focusing on electricity sector
- Regional process input: EnCom, CESEC
- Time horizon for the follow up: 4-5 years