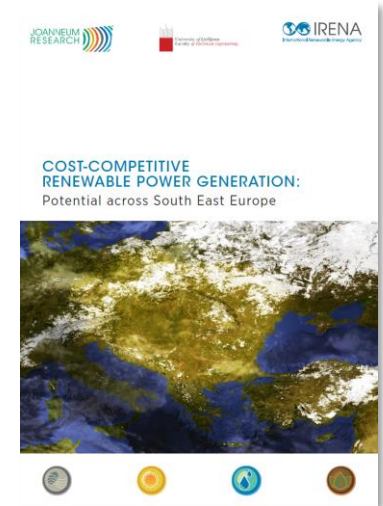


COST-COMPETITIVE RENEWABLE POWER GENERATION: Potential across South East Europe

A Snapshot of Findings

Gurbuz Gonul
Senior Programme Officer, Regions



Brussels - 29 March 2017

Unlocking the Potential for Renewable Energy and Energy Efficiency in South-Eastern Europe

Contracting Parties of the Energy Community

- Albania
- Bosnia and Herzegovina
- Kosovo*
- Montenegro
- Republic of Moldova
- Serbia
- The former Yugoslav Republic of Macedonia
- Ukraine



Members of the European Union

- Bulgaria
- Croatia
- Romania
- Slovenia



Assessment of the overall renewable electricity potential in the region



Identification of cost-competitive RE potential – focus on wind & solar PV



Input to decision making in the upcoming process of undertaking new commitments and developing long-term strategies for renewables

Cost-Competitive Potential

- LCOE within the ranges of the fossil-fuel supply options
- Level of cost-competitive potential today, 2030 and 2050
- Sensitivity analysis for cost of capital (WACC)

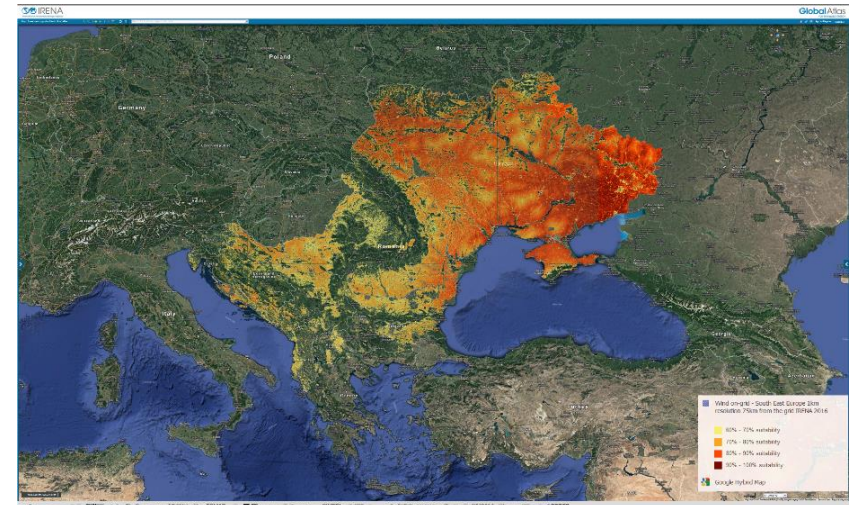
RESOURCE ASSESSMENT

SOLAR PV AND WIND SUITABILITY ANALYSIS

Suitable locations
for **Solar PV** investments in SEE



Suitable locations
for **Wind** investments in SEE



What is a good site?

- Renewable energy resource intensity
- Topography
- Population density
- Distance to the grid
- Land cover
- Protected areas

COST ANALYSIS

DRAMATIC DECLINE IN SOLAR PV & WIND COSTS



Significant cost reductions since 2009:

- Solar PV module costs by 80%
- Wind turbine prices by a third

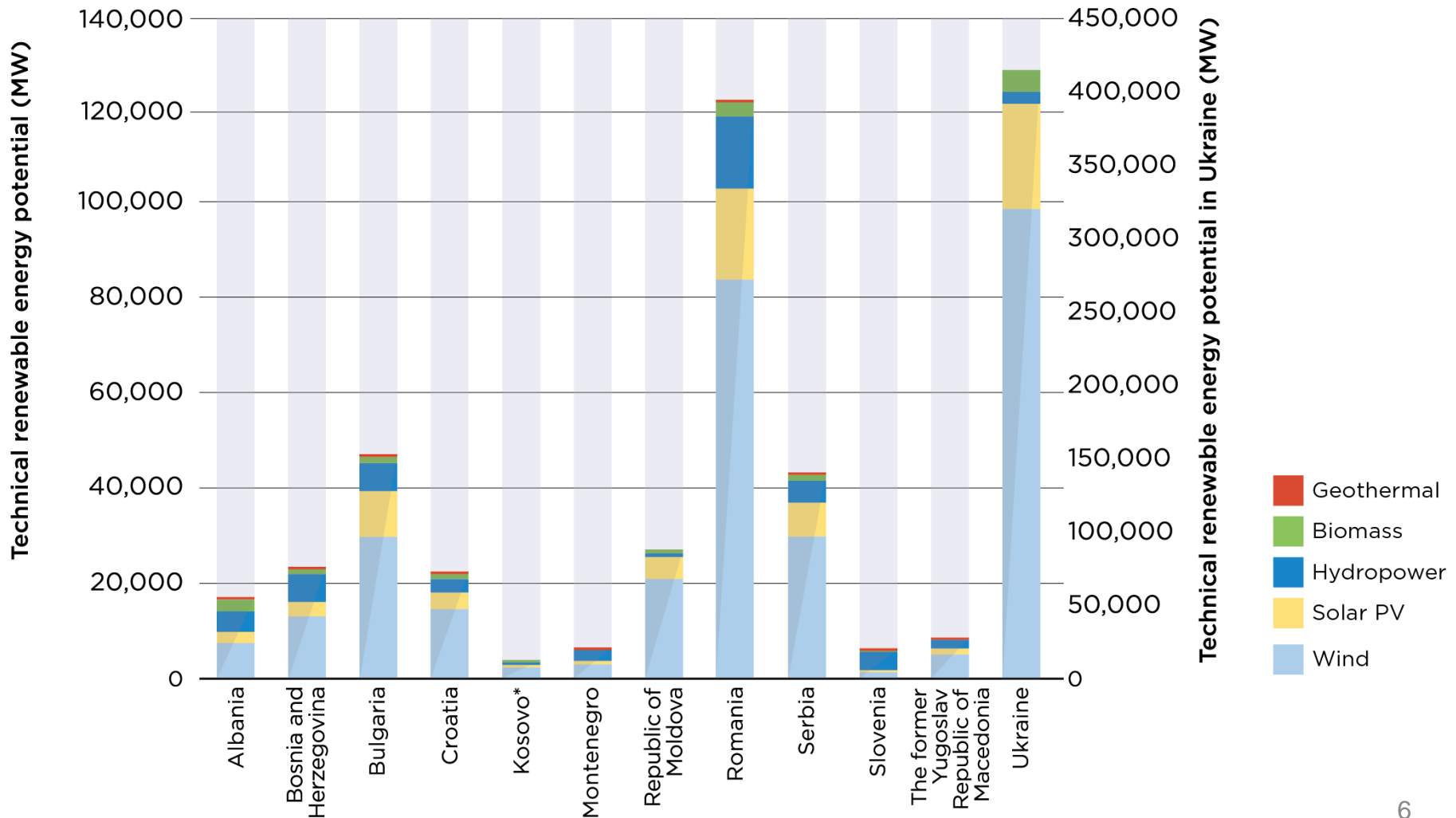
Potential for further reduction by 2025:

- Solar PV - 59%
- Onshore wind - 26%
- Offshore wind - 35%



IRENA Renewable Costing Alliance
IRENA Renewable Cost Database
based on data from
over 9,000 utility-scale RE projects

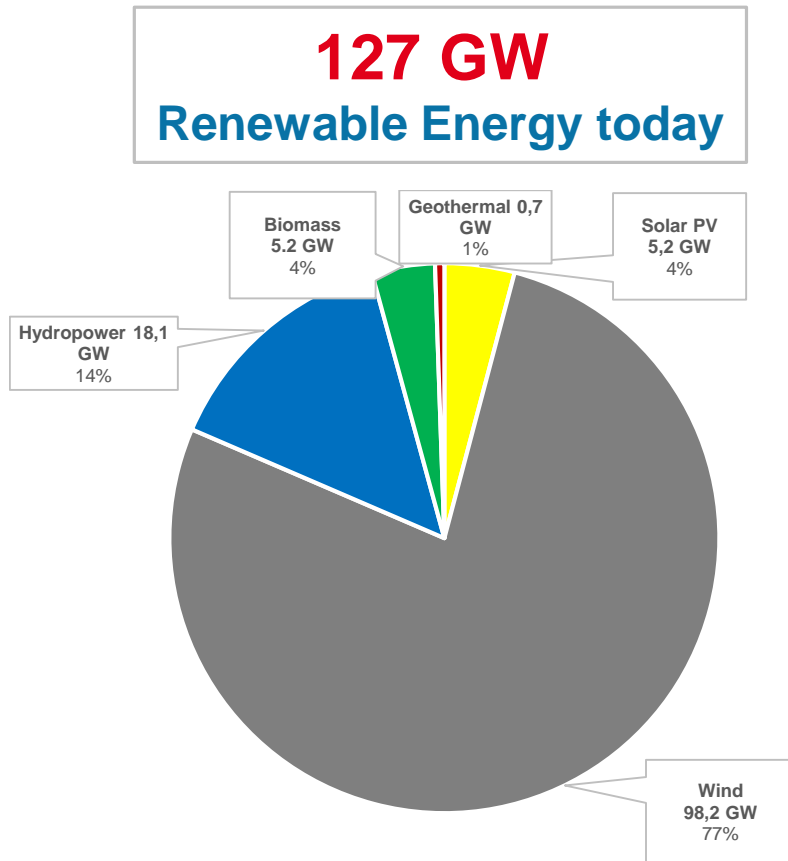
740 GW Technical renewable energy potential in South East Europe



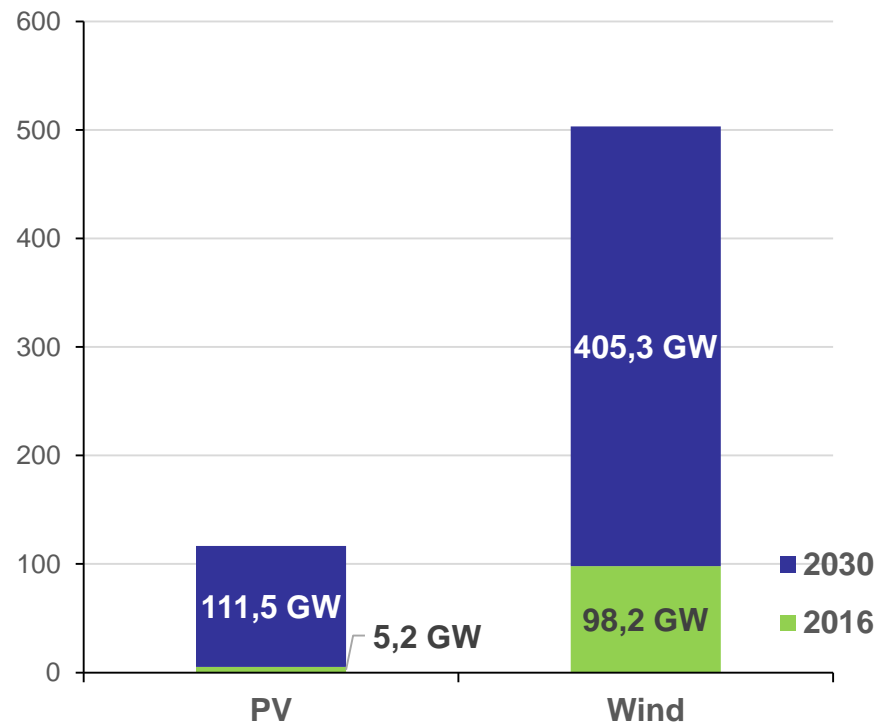
NREAP TARGETS VS. COST-COMPETITIVE ADDITIONAL POTENTIAL

8.2 GW

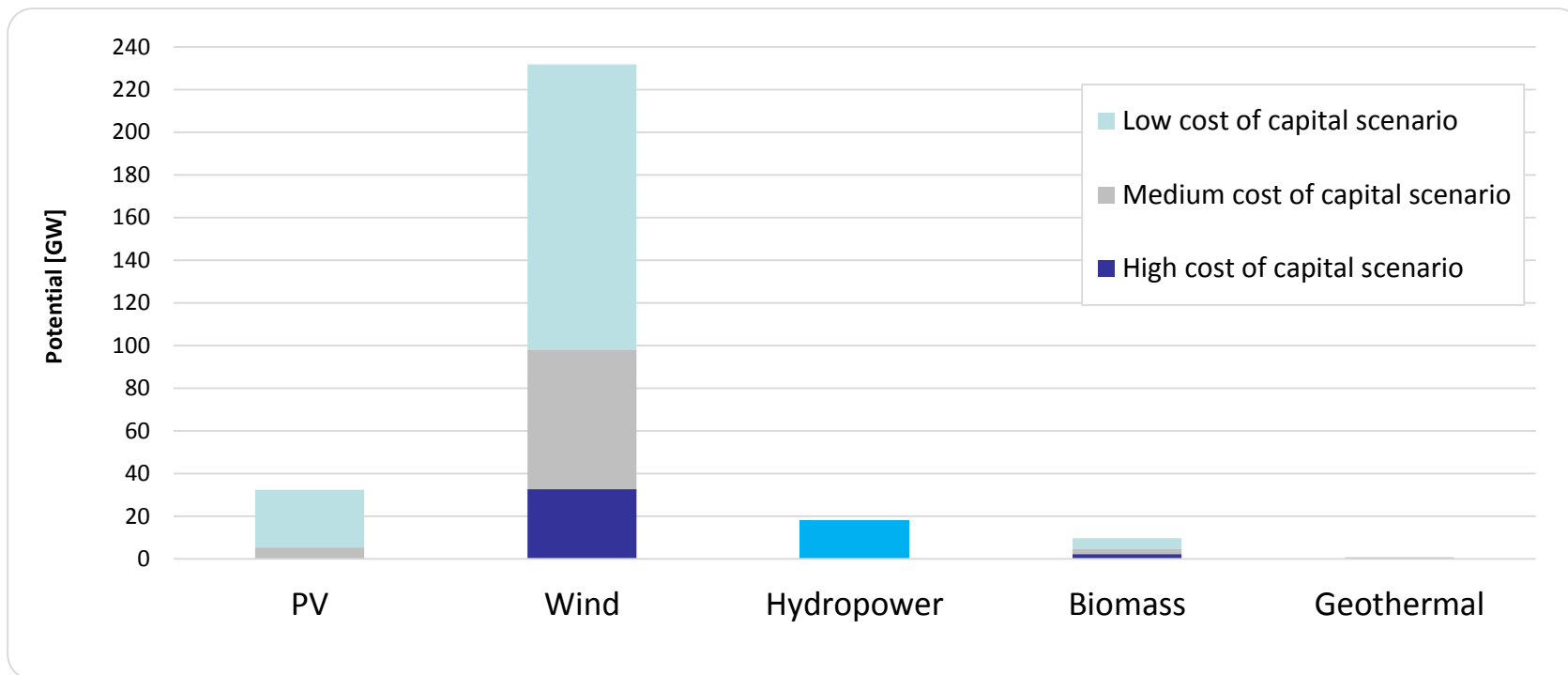
Gap to achieve cumulative RE deployment target for 2020 (based on NREAPs)



620 GW
Wind and Solar PV by 2030



Additional cost-competitive potential in 2016



How to improve the risk perception of the region?

- Eliminate administrative barriers and improve market access
- Create attractive and consistent RE support schemes
- Improve PPA structure
- Address grid integration challenges
- Enhance skills and capacities
- Facilitate access to finance

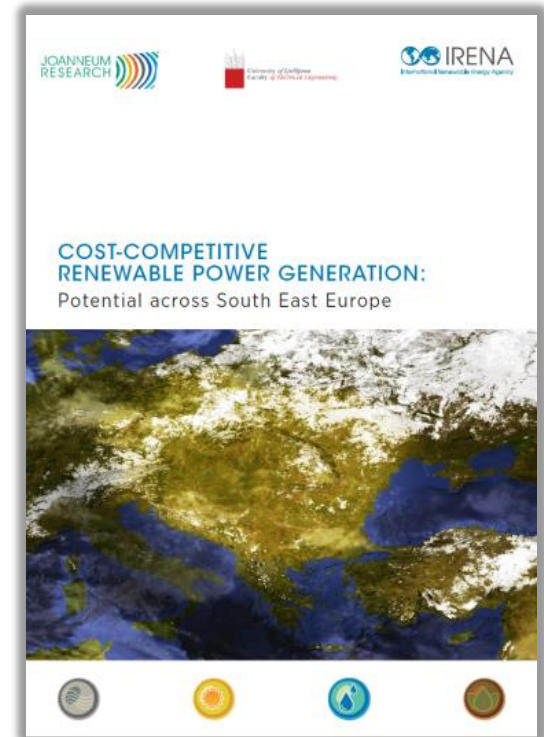
Abu Dhabi Communiqué on Accelerating the Uptake of Renewables in South East Europe

Action Areas

- Long-term planning for RE deployment
- Market based RE support schemes
- Socio-economic benefits vs. affordability
- Enabling frameworks: technical, policy, regulatory, institutional
- Access to financing for RE projects




Thank you.



giz Deutsche Gesellschaft
für Internationale
Zusammenarbeit (GIZ) GmbH

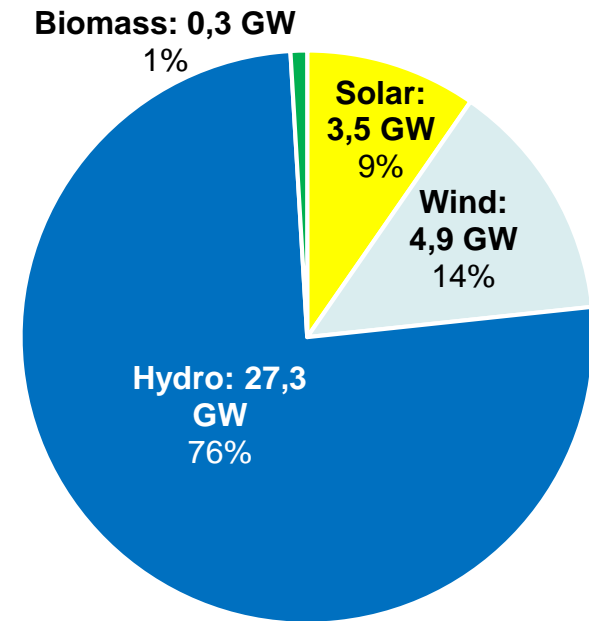
On behalf of:

 Federal Ministry for the
Environment, Nature Conservation,
Building and Nuclear Safety

of the Federal Republic of Germany

This project is part of the International Climate Initiative (IKI). The Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB) supports this initiative on the basis of a decision adopted by the German Bundestag.

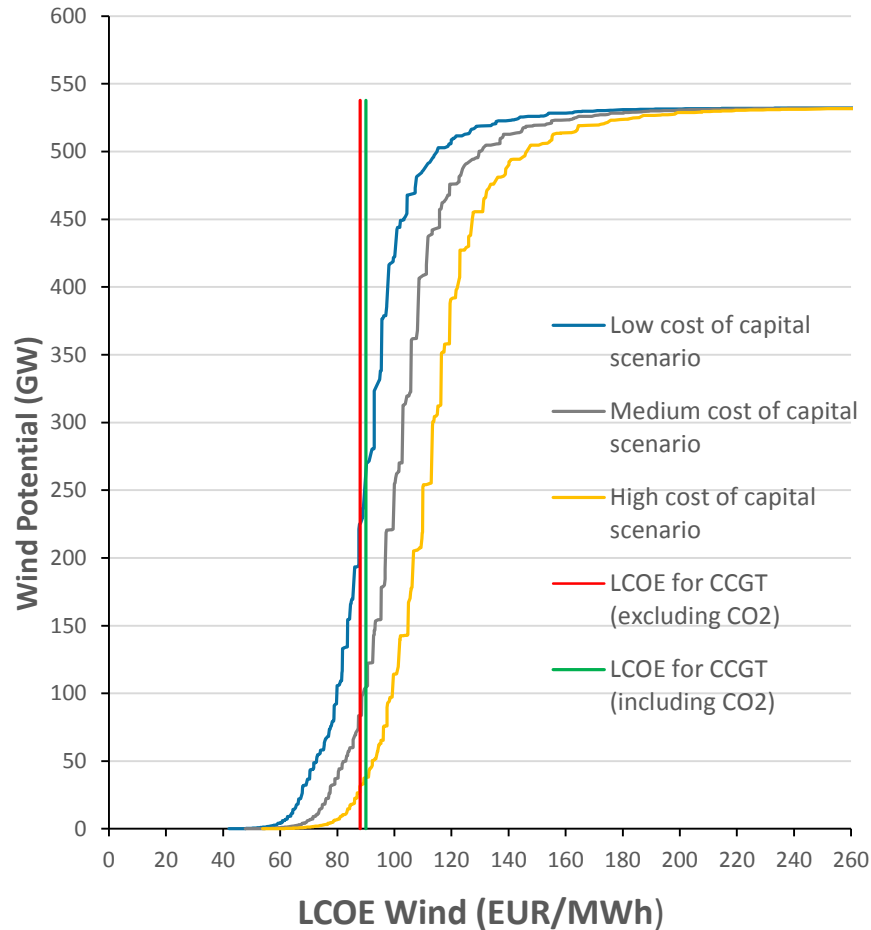
- Energy Community Renewable Energy targets for 2020 → NREAPs
- Alignment with 2030 Energy and Climate framework of the EU
- 30% RE share in regional electricity mix; but mostly hydro installed decades ago
- Limited share of solar PV and wind despite the dramatic cost decline
- Ongoing discussions on the future electricity mix



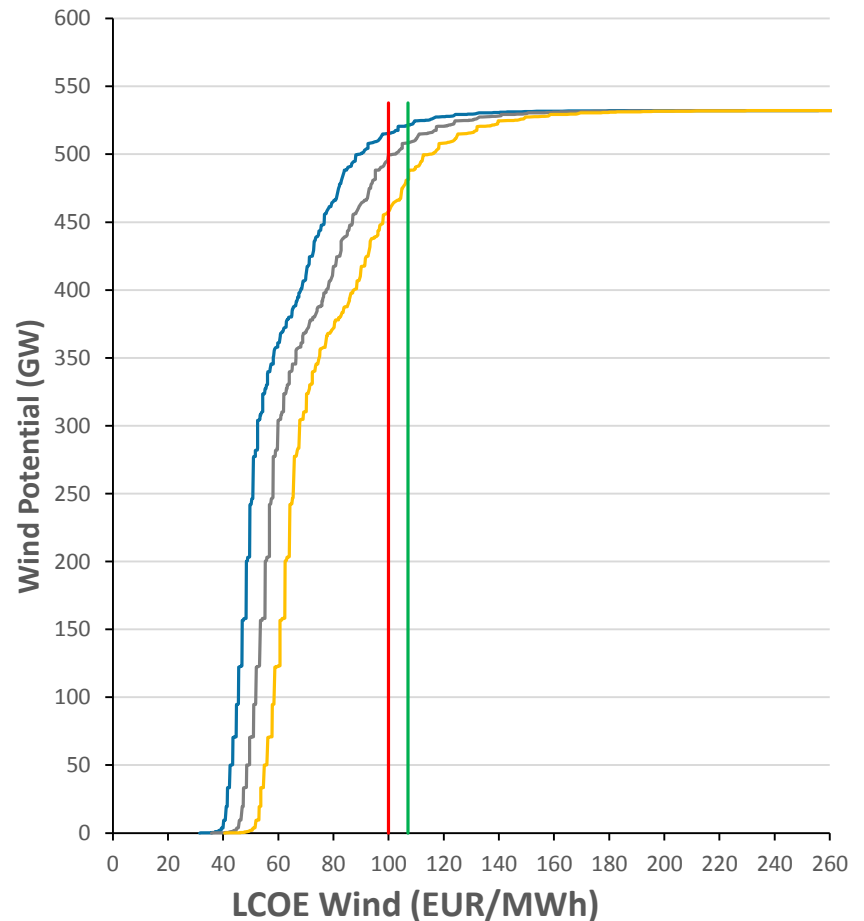
Shares of Renewable Power Capacity in SEE
Total: 36 GW (2015)

SEE COST-COMPETITIVE WIND POTENTIAL

2016

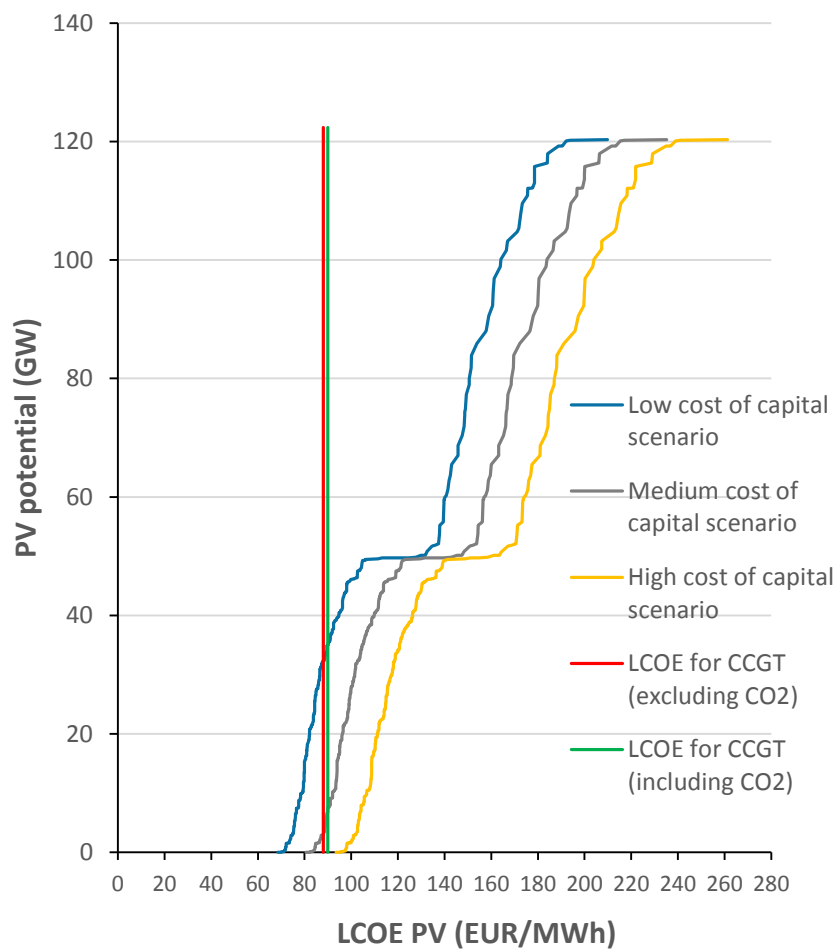


2030



SEE COST-COMPETITIVE SOLAR PV POTENTIAL

2016



2030

