

# Towards 2020:

## New Horizons for RTD and Innovation in the Western Balkan Region

WBC-INCO.NET Final Conference & Brokerage Event

Tech Gate Vienna / Donau-City-Straße 1 / 1220 Vienna / Austria

Parallel Session 3:  
Secure, Clean and Efficient Energy

### **Cooperation between the West Balkan and EU countries to stimulate the deployment of renewable energy sources**

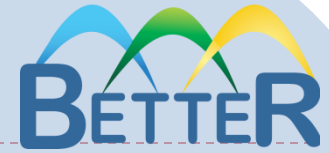
**Dorian FRIEDEN,  
JOANNEUM RESEARCH**

# Dorian Frieden, JOANNEUM RESEARCH Forschungsgesellschaft mbH

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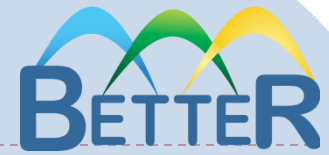
- ▶ Graduated in environmental sciences (forestry) in Germany and France
- ▶ Additional qualification in international cooperation/rural development
- ▶ Research in different fields with relation to climate change: emissions trading, land use, bioenergy, environmental and energy policies
  
- ▶ JOANNEUM RESEARCH:
  - ▶ Second largest non-governmental research institution in Austria (around 450 employees, mainly in Graz)
- ▶ Institute RESOURCES:
  - ▶ Around 65 employees
  - ▶ water resources, geophysics and geothermal technologies. bioresources, energy research

# Project BETTER



- ▶ Exploration of potentials for renewable energy cooperation between the EU and neighbour countries:
  - ▶ West Balkan Countries, Turkey, North Africa
- ▶ Focus on the cooperation mechanisms of the EU renewable energy directive (2009/28/EC)
  - ▶ Expansion of RES capacities in EU neighbour countries
  - ▶ Transfer of renewable energy to the EU
  - ▶ WB: also internal cooperation
- ▶ Funded by the Intelligent Energy Europe programme
- ▶ July 2012-March 2015
- ▶ [www.better-project.net](http://www.better-project.net)

# Project BETTER

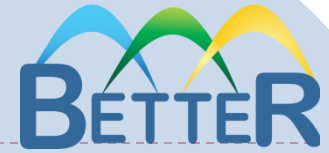


## ▶ Partners

- ▶ CIEMAT, Spain (Coordinator)
- ▶ DLR, Germany
- ▶ PIK, Germany
- ▶ ECN, Netherlands
- ▶ NTUA, Greece
- ▶ OME, France
- ▶ TU Vienna, Austria
- ▶ UNDP Croatia
- ▶ JOANNEUM RESEARCH, Austria

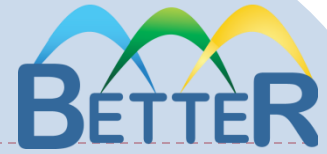


# Renewable energy in the WB region



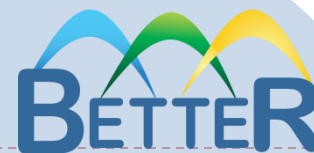
- ▶ Adoption of EU RES directive via the Energy Community Treaty
- ▶ Adoption of 2020 RES targets
- ▶ Large potentials for hydro, wind, solar and bioenergy
- ▶ Plans to invest mainly in small and large hydro power for 2020 target achievement (National renewable energy action plans, NREAP)
  - ▶ Few countries to invest in wind power and/or solar heat.
  - ▶ So far, almost no increase in solar electricity planned.
- ▶ → Important potentials untapped in the mid-term

# Cooperation mechanisms of EU RES directive



- ▶ Basic principle: energy is generated in one country while counting towards the RE target of another country
- ▶ West Balkan countries eligible to make use of all cooperation mechanisms of the RES directive

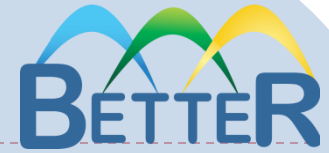
# Use of the cooperation mechanisms



- ▶ Part of renewable potential may be used and exported with support by EU countries (joint projects)...
- ▶ ...at the same time helping EU Member States to achieve renewable targets.
- ▶ ...enabling to expand RES beyond what the countries would be able to expand themselves, given economic and network restrictions.
- ▶ ...providing for increased capacity for later domestic use or immediately shared consumption.
- ▶ Costs and benefits of such cooperation need to be well balanced for all parties.
- ▶ WB countries may support each other in reaching their targets through joint projects or statistical

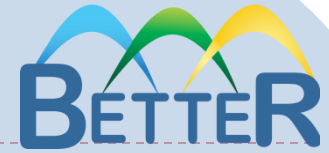
▶ 7 transfers

# Further linkage of WB grid to the EU

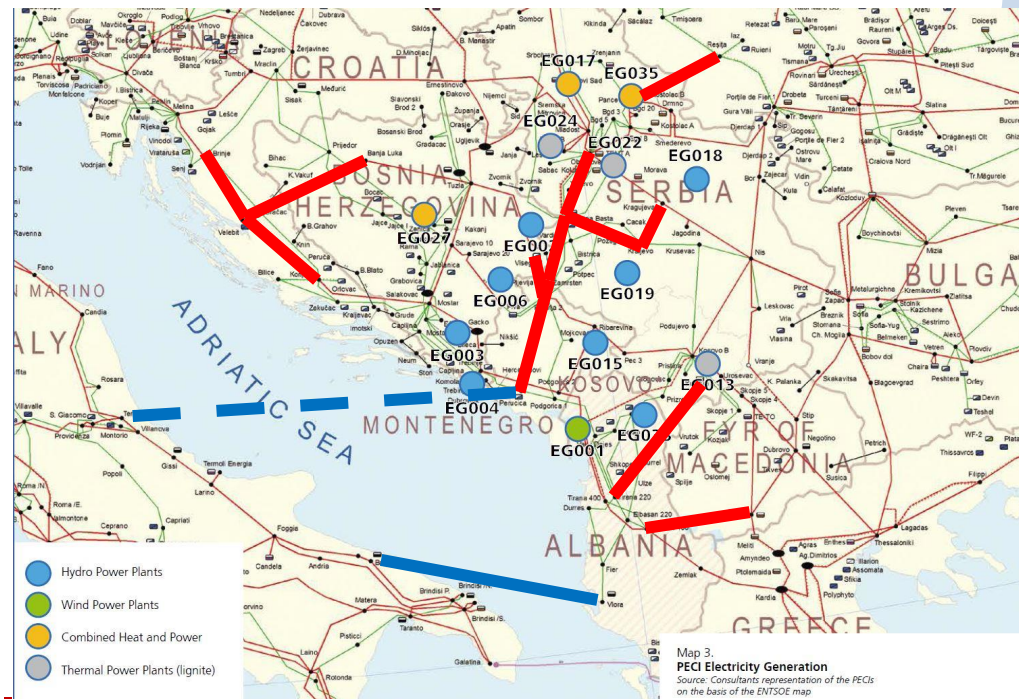




# Further linkage of WB grid to the EU

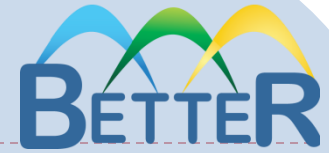


- ▶ Possibly significant changes to the regional energy markets from construction of two new undersea interconnection lines to Italy, one from Montenegro and one from Albania...
- ▶ ...facilitating the export of electricity from renewable sources, potentially also stimulating fossil fuel- based electricity generation.



# Lessons learnt so far

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- Huge potentials that are partly not needed domestically in the mid-term
- Energy efficiency could put WBs in a much better situation for exports of electricity.
- Rehabilitation and expansion of pump storage could support flexibilisation of RE for regional use and export.
- The use of the cooperation mechanisms could be an incentive for an integration of energy systems in the region.

# Research Needs

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- ▶ Additional research is needed to assess the consequences of integrating the West Balkans energy system with the EU regarding:
  - ▶ Socio-economic effects (e.g. energy prices)
  - ▶ Environmental effects and the risk of carbon leakage
  - ▶ Energy security
  - ▶ Change of electricity prices also in comparison to the EU due to market liberalization

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# Thank You For Your Attention!

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