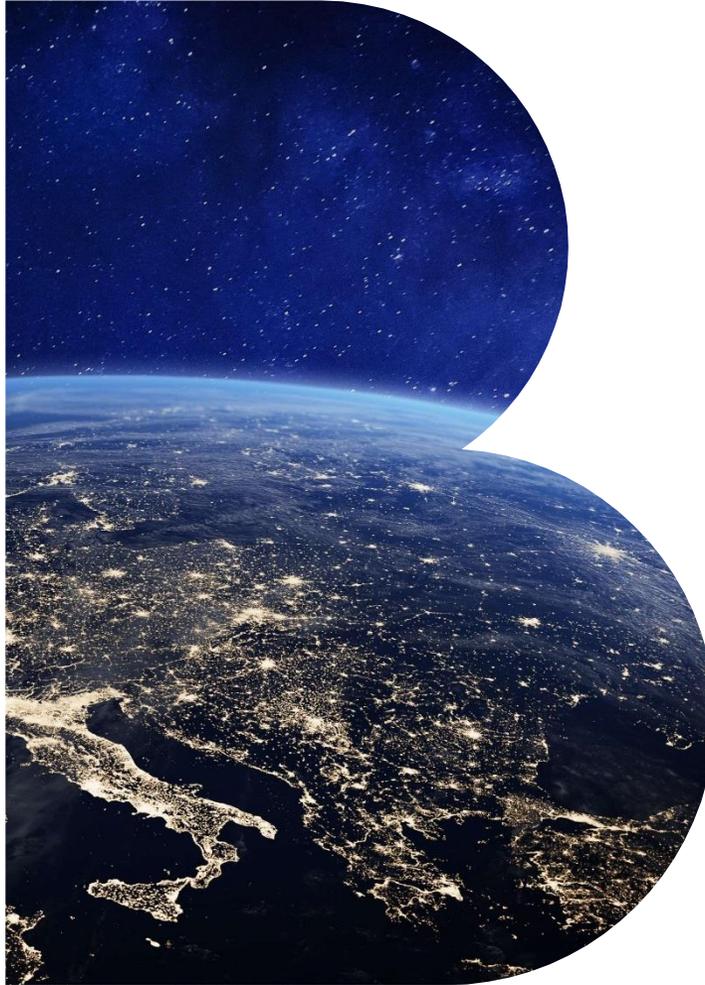


# Regional energy integration

Effective strategies and project support as  
key success factors



# The energy market is currently undergoing changes worldwide – Key drivers are climate change, digitalization and new technologies

## Change in the energy landscape

### Climate change



- > Reconstruction of the international energy system
- > More and more renewable energies conquer the market
- > Total international **installed capacity of renewables** has increased by **300%**, from 437 GW in 2010 to 1,236 GW in 2017

### Digitalization



- > Digitalization enables **higher networking**, automation and integration of different systems
- > Energy data can be exchanged more quickly
- > Digitalization enables a **holistic energy system**/market approach that functions across national borders

### Technology

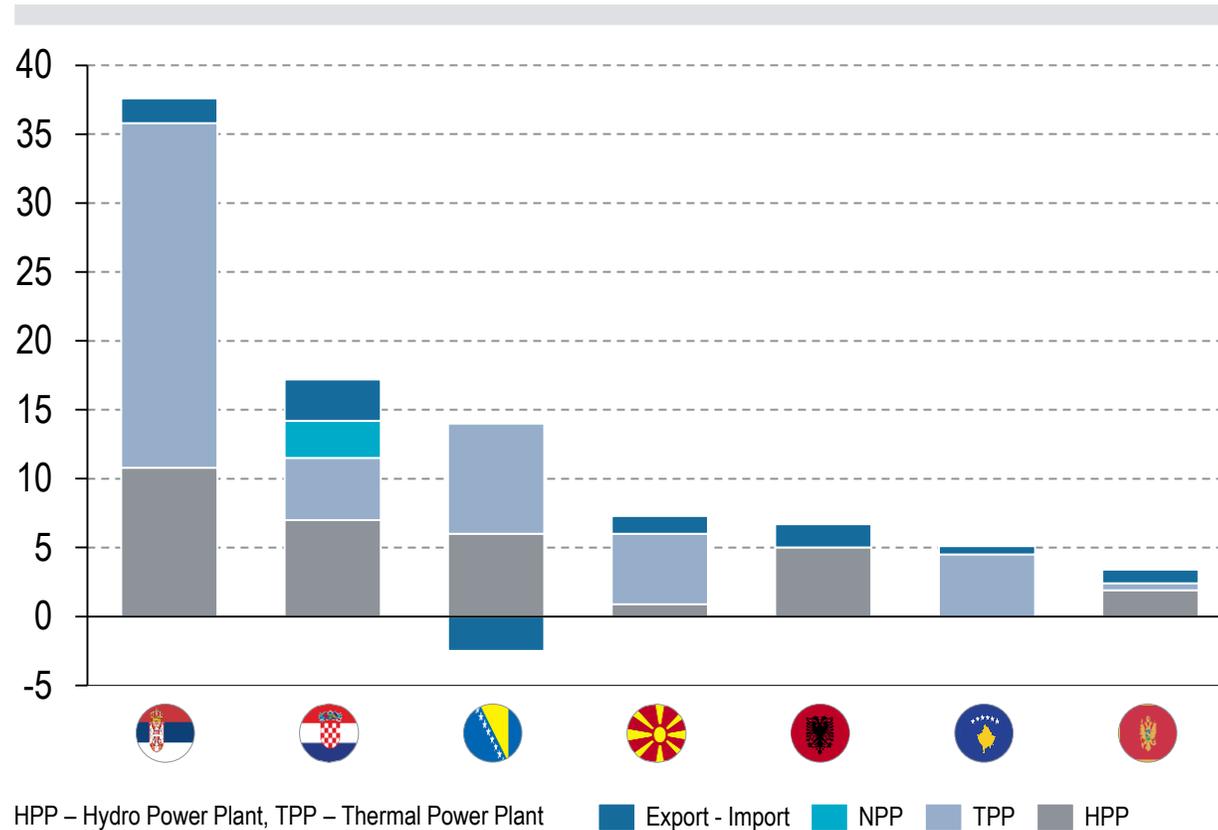


- > The **GreenTech** market has shown growth in the last 10 years
- > Product innovations that improve the energy **efficiency** as well as promote the **integration** of regenerative energies are developed
- > Innovations in the fields of energy storage, electromobility and innovative PV demonstrate growing **importance of electricity** for energy system

# Countries in the south of the Balkans are net importers of electricity, and depend on two types of electricity: HPP and TPP

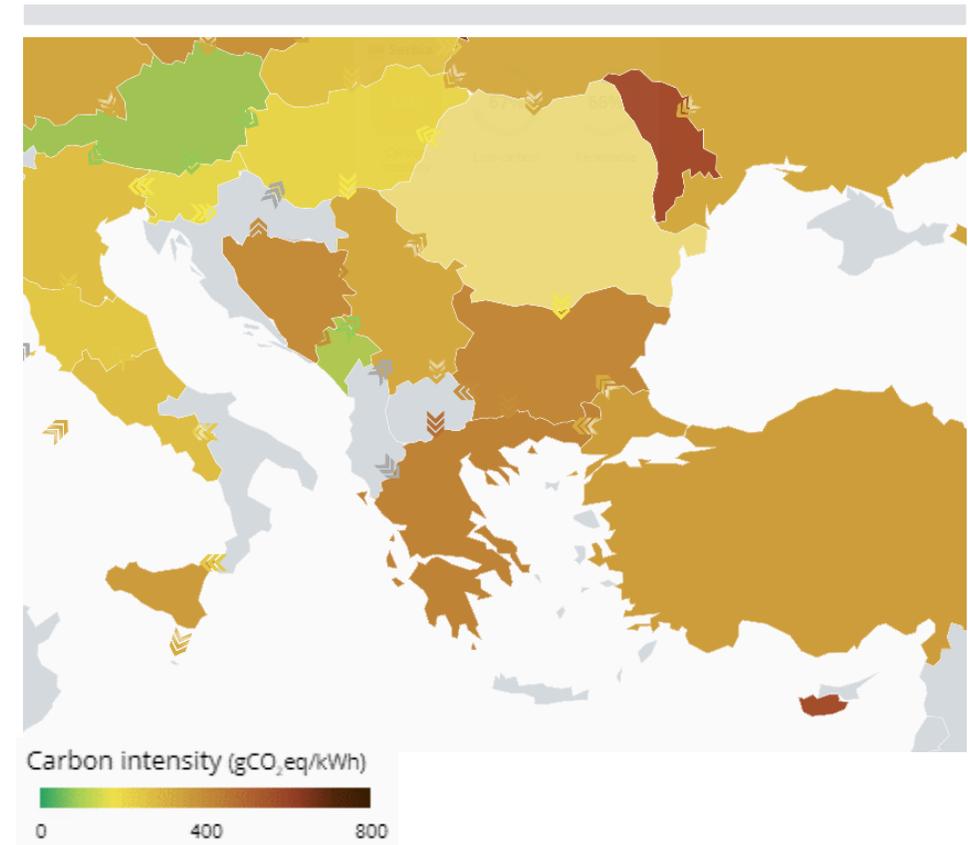
Electricity generation and export – import in the Balkans [TWh]

## Electricity generation and export – import [TWh]



Source: EIHP, [www.impactlab.org/map/](http://www.impactlab.org/map/), Roland Berger

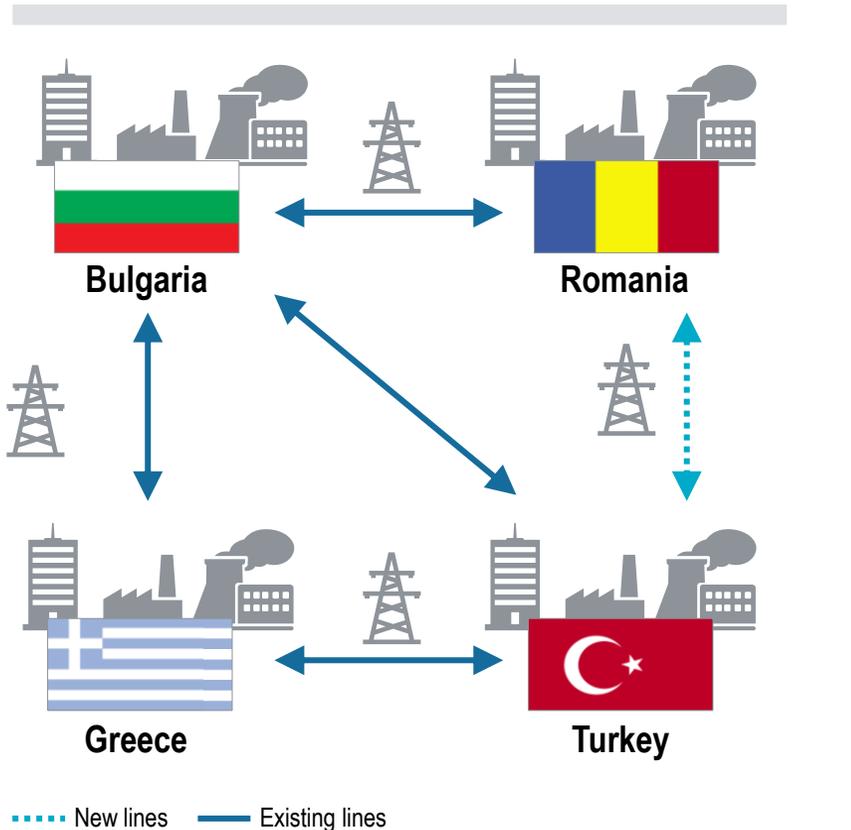
## Climate Impact by Area (29.05.2019, 10:52)



# Regional energy integration offers many advantages for energy efficiency but also CO<sub>2</sub> savings by leveraging synergy effects

Regional energy integration – Recent example

## REH case study focus

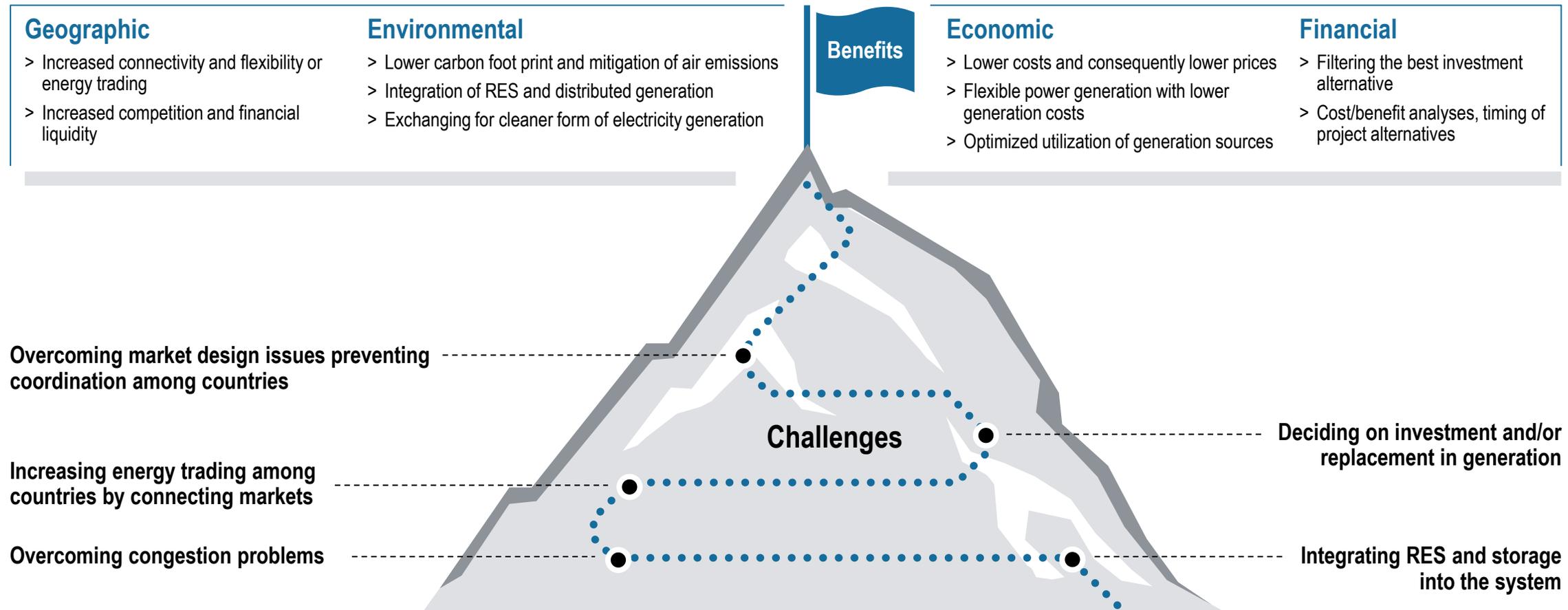


## REH costs before and after transmission investment

	REH Cost (USD/hour)	Generation	CO <sub>2</sub>	Total
<b>Peak</b>	Before	1,893,075	602,672	2,495,747
	After	1,895,451	603,445	2,498,896
	Difference	2,376	772	3,149
	Change	0.13 %	0.13 %	0.13 %
<b>Mid</b>	Before	1,070,841	341,451	1,421,292
	After	1,050,841	334,951	1,385,792
	Difference	- 20,000	- 6,500	- 26,500
	Change	- 1.87 %	- 1.90 %	- 1.88 %
<b>Base</b>	Before	785,927	275,273	1,061,200
	After	759,090	266,551	1,025,641
	Difference	- 26,837	- 8,722	- 35,559
	Change	<b>- 3.41 %</b>	<b>- 3.17 %</b>	<b>- 3.35 %</b>

# In order to realize all potentials of a regional energy integration, systemic thinking as well as interfaces have to be optimized

## Regional energy integration – Benefits of cooperation and obstacles to overcome

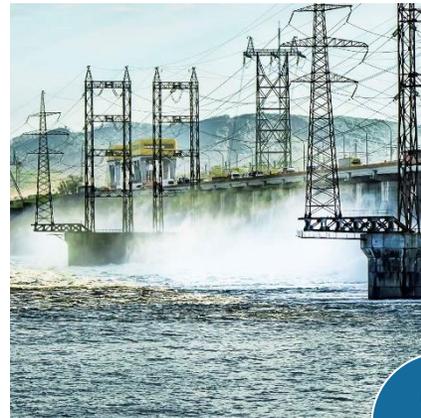


# An efficient strategy and active project support are decisive for the success of regional energy integration

## Key success factors



- > **International view** of the energy market
  - Location and depth of value creation
  - Energy market development and sustainability
  - Maintenance and further development of the transmission and distribution system infrastructure
- > **Country-specific** targets must be taken into account
  - Emission targets and efficiency of the energy system
  - Energy prices



### Overarching Strategy



### Project Management



- > **Coordination** of national and international stakeholders
- > **Integration** of potential investors and financiers
- > Reliable project **management** based on national targets (common benefit)
- > **Independent** strategic management with long-term objectives within in the international regional energy community

# A holistic strategy must take into account both national and international goals – New disruptive way of thinking presupposed

Regional energy hub – Virtual and physical approaches

## Background check



- > **Analysis** of the existing situation including national and international energy strategies and existing and planned interconnectors
- > **Simulation and scenario planning** for the energy requirements in the regions
- > **Concept development** for the establishment or expansion of a regional energy hub
- > **Establishment** of a virtual or physical regional energy hub

## Focus topics

### Energy strategies



It must be ensured that the national energy strategies are aligned

### Interconnectors



The strategic expansion of interconnectors has top priority for all forms of energy transmission

### Prosperity

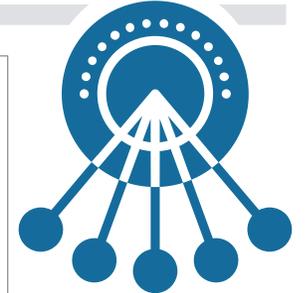


All regional actors must be able to profit from the added value, for which SPV must be created

### Funding



Efficient financing with existing funding programmes should be considered



# At the core of project management needs to be a comprehensive, interdisciplinary methodology to get a grip on complex issues

Integrated, holistic approach

Governance,  
organization



Technical,  
engineering



Legal,  
regulatory



Commercial,  
financial



Environmental,  
stakeholder  
management



- 1 Cross-disciplinary task forces with flexible adaptation of management focus
- 2 Reporting and monitoring structures to guarantee "one truth" in all management reporting
- 3 Holistic de-risking and risk mgmt. approach that mitigates typical interface risks
- 4 Stakeholder management as integrated part of project organization in all phases
- 5 Regular re-focus of management, review and adaptation of organization, timeline, budget
- 6 World class tools to create a strong, agile team and a high performance culture

# Roland Berger has been active in Albania for more than 5 years accelerating developments in the domestic energy market

Projects approach and success factors for energy project development

## Capacity building approach

### Trans Adriatic Pipeline

With the support of the project team, GoAL was able to **negotiate a substantial increase in the level of financial benefits** provided by TAP consortium to the GoAL under the HGA

### Albgaz

Albgaz has been **conceptualized and formed** with the support of the project team. Albgaz is now in the process of being officially recognized as the Albanian gas TSO/DSO on a European level and by TAP

### Oil and Gas Institute

Together with the Ministry and other relevant stakeholders the project team has developed a **detailed concept** for an oil and gas institute

### Legislation adaption

Energy regulator ERE and the project team has developed a **full set of legislation** for future gas market in accordance to European law



## Our key success factors

- > **International experience** and in-depth industry knowledge
- > **Integrated project team**
- > **Close cooperation** with all stakeholders (State Authorities, Donor Community, International Investors)
- > **Independent** economic calculations



If you have any questions or suggestions, please do not hesitate to contact me at

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