



# AUCTIONS: GLOBAL TRENDS AND OPPORTUNITIES FOR RE PROJECTS IN SOUTHEAST EUROPE

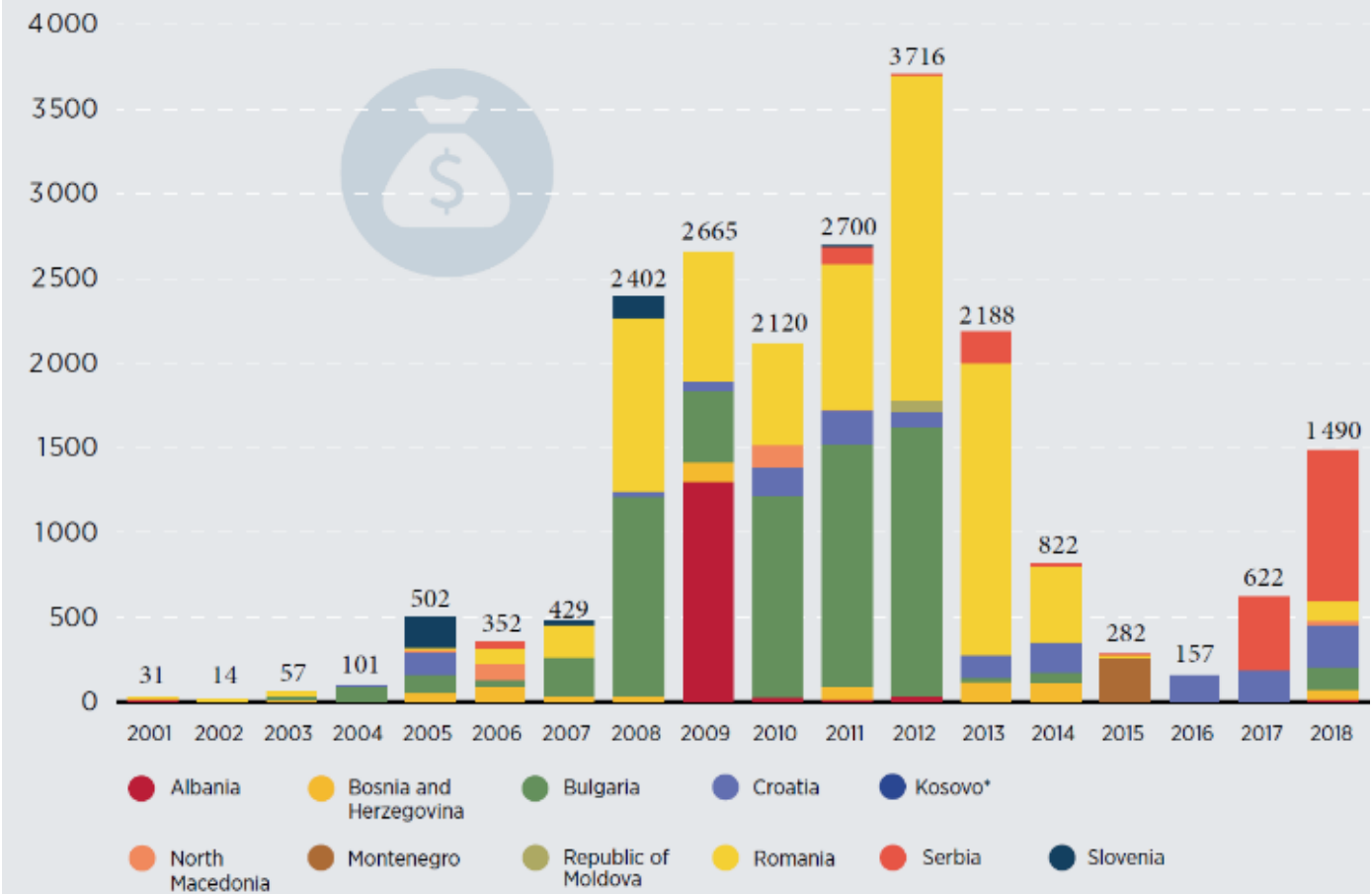
Findings from:

Renewable Energy Auctions: Status and Trends beyond Price

Renewable Energy Market Analysis: Southeast Europe

# Policies at the center of the energy transition

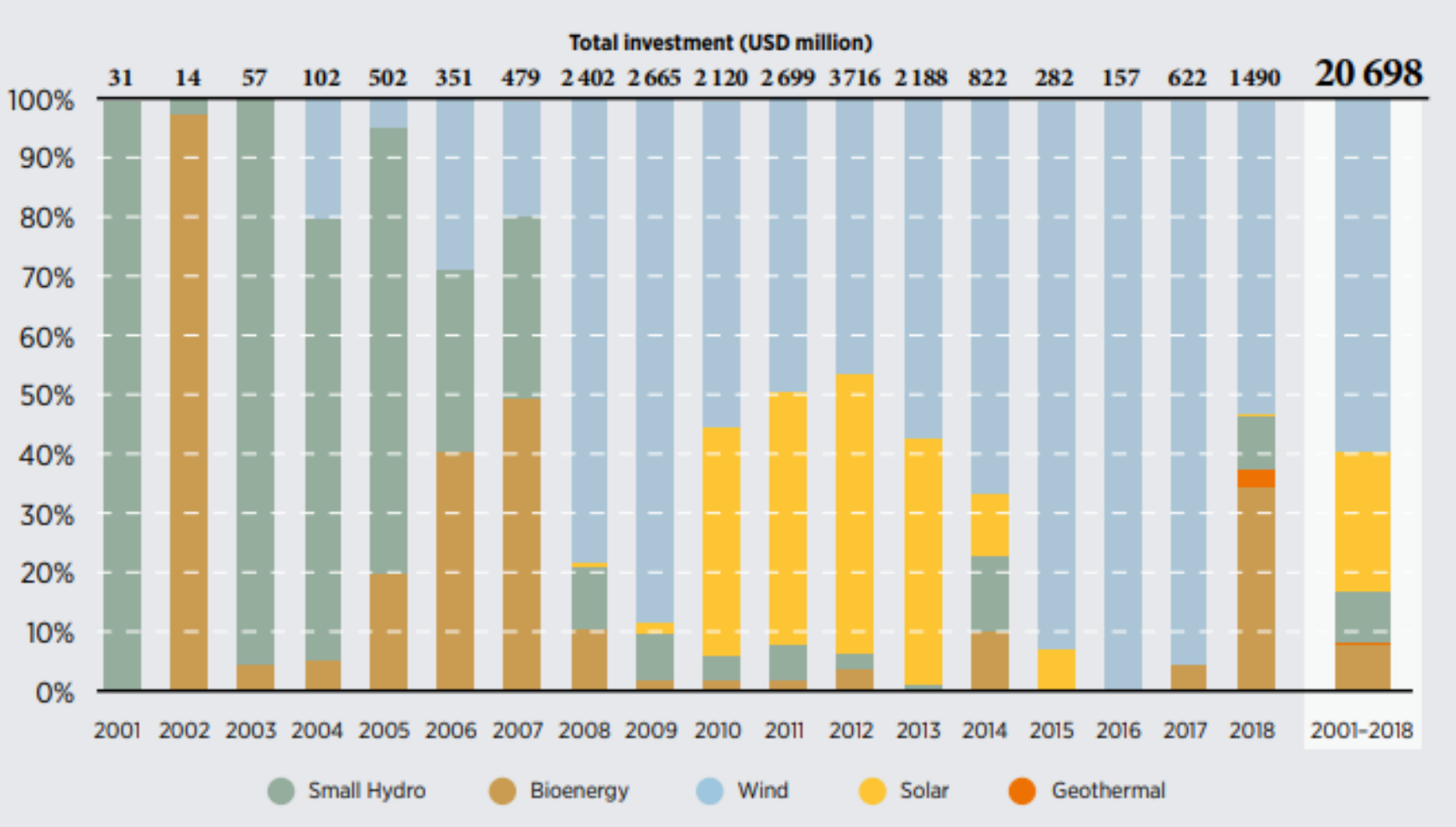
## Investment in renewable energy, by economy [USD million]



Source: BNEF

# Policies at the center of the energy transition

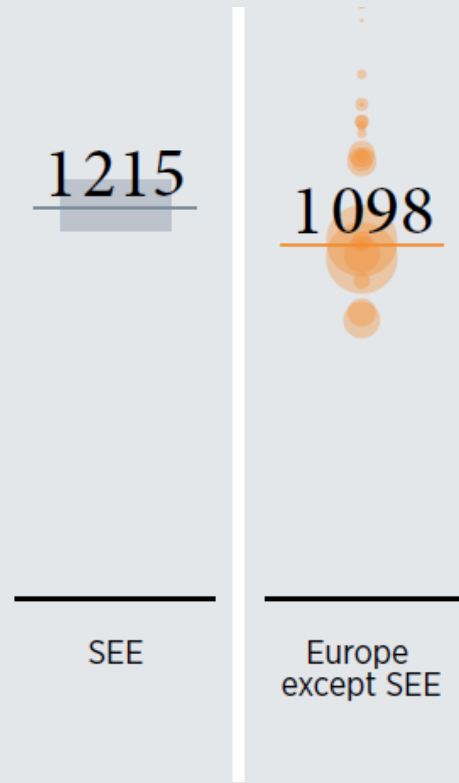
## Investment in renewable energy, by technology [USD million]



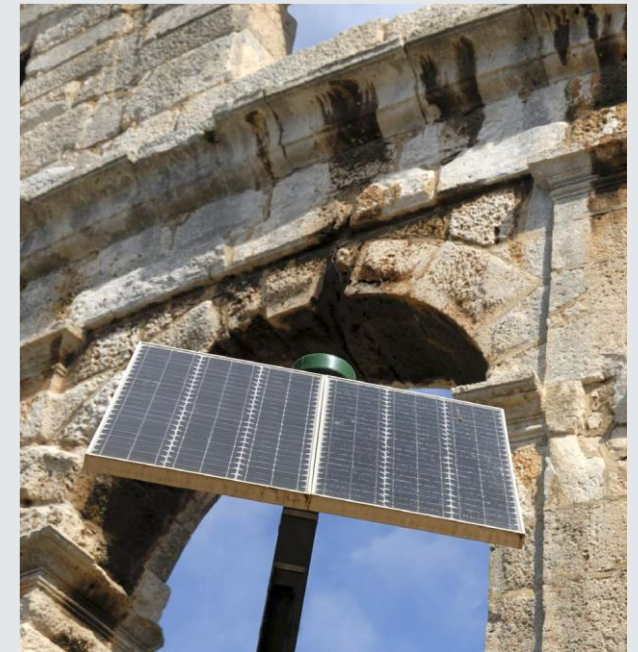
Source: BNEF

# Cost competitive VRE projects – Solar PV

Average invested cost of utility scale Solar PV, SEE vs rest of Europe, 2018 [USD/kW]

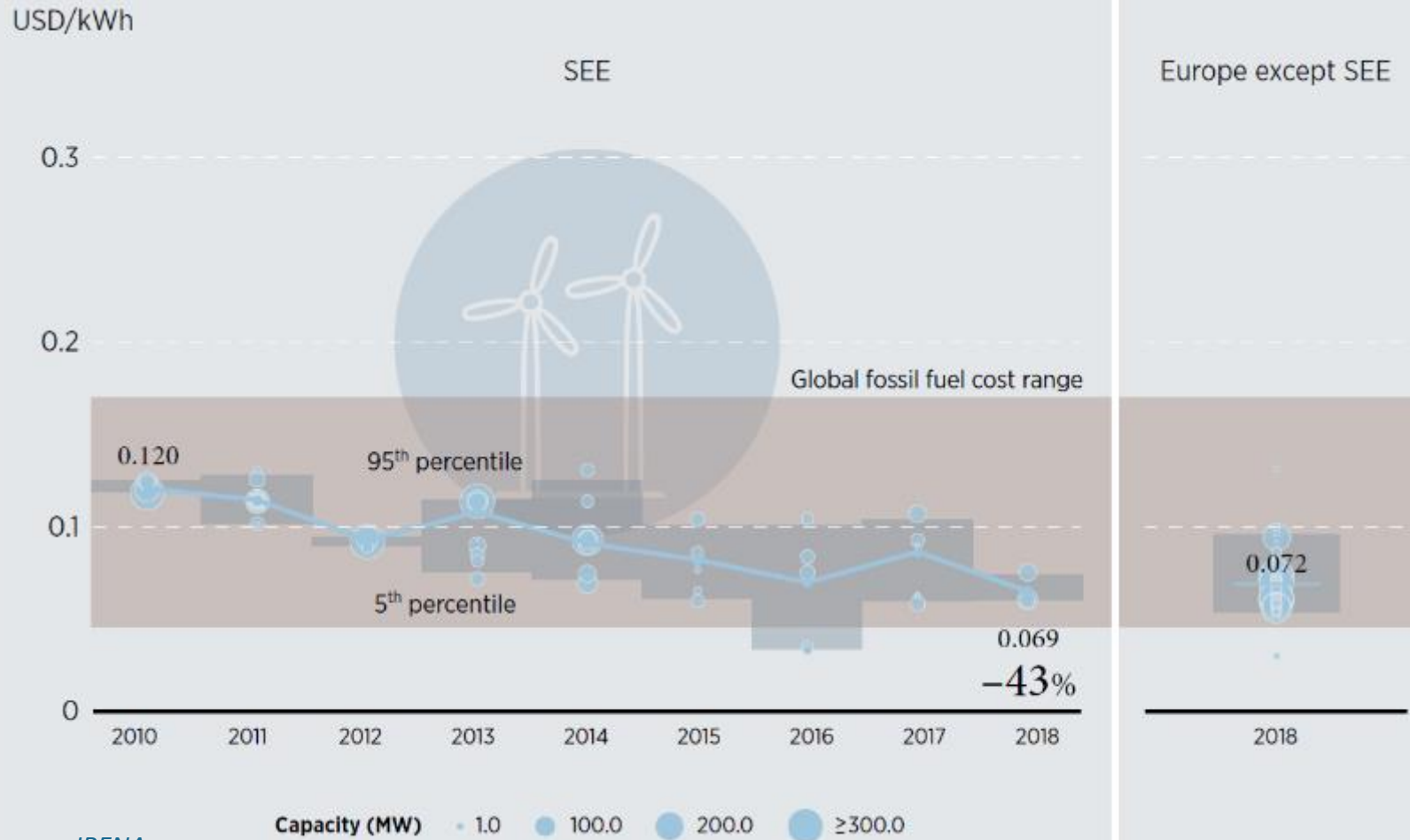


LCOE of utility scale Solar PV, SEE vs rest of Europe, 2018 [USD/kWh]



# Cost competitive VRE projects – onshore wind

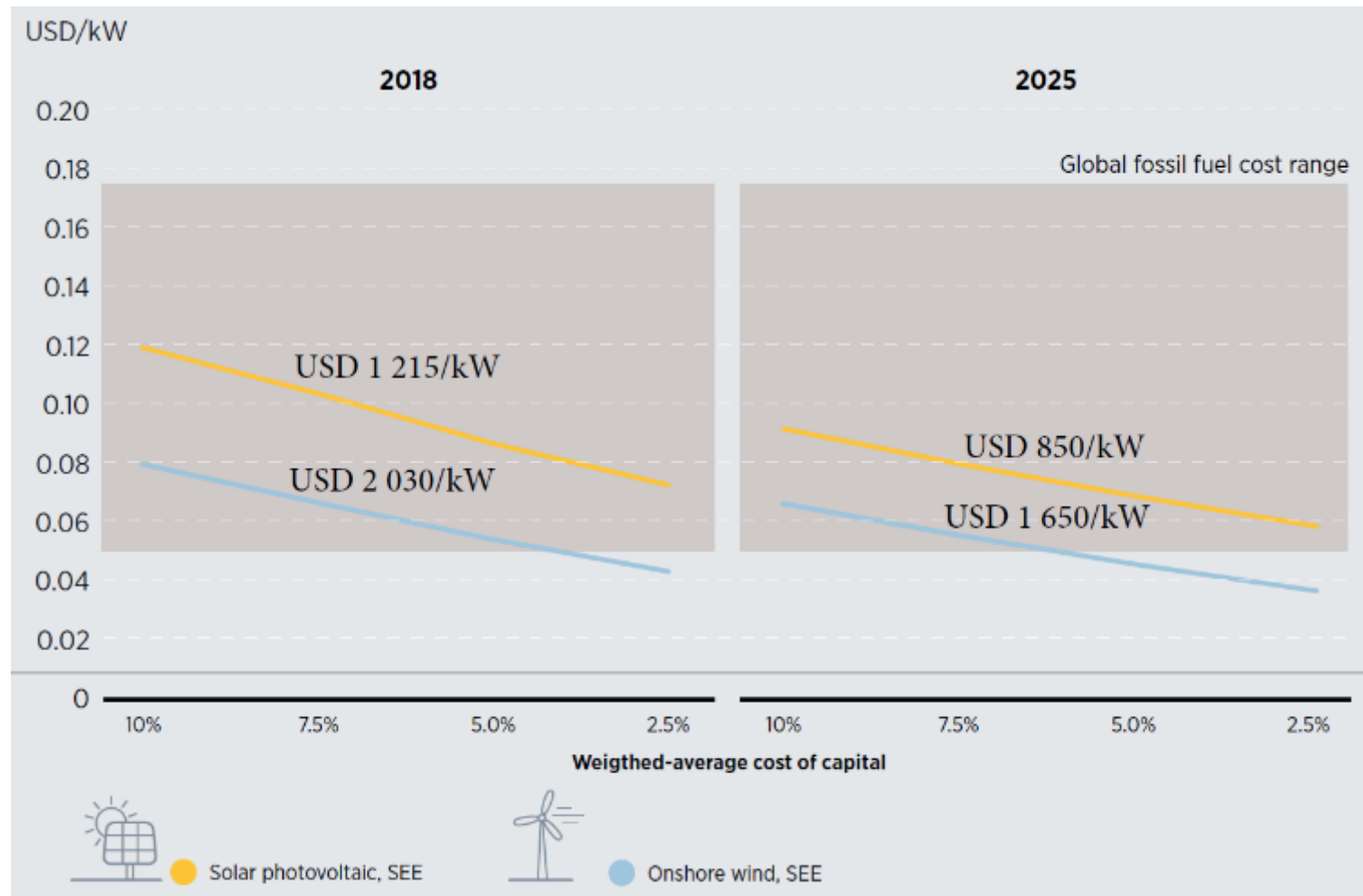
LCOE of onshore wind, SEE vs rest of Europe, 2010-18 [USD/MWh]



Source: IRENA

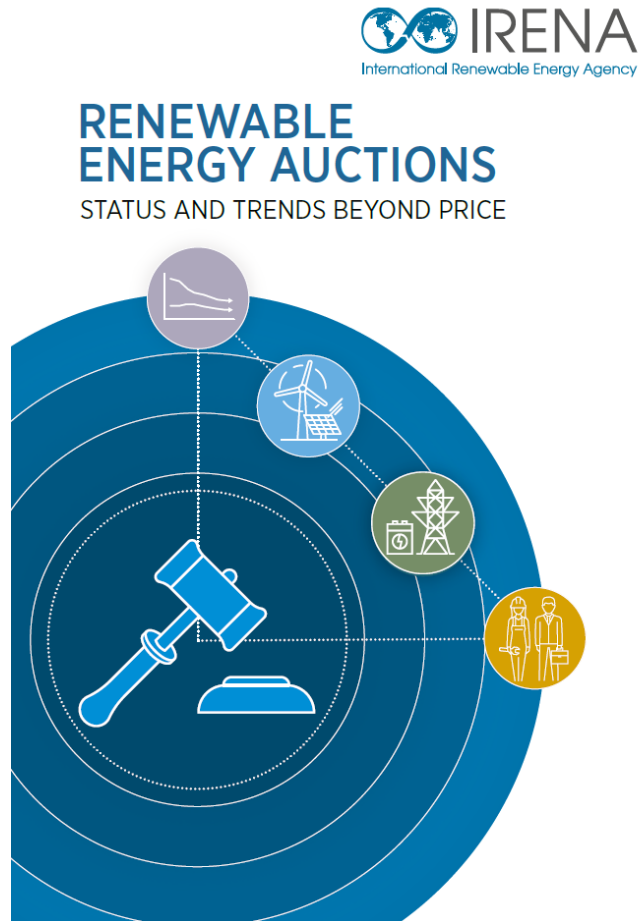
# Cost of capital matters

Solar photovoltaic and onshore wind LCOE sensitivity to WACC, SEE, 2018-25 [USD/kWh]



Source: IRENA

# Objectives of auctions beyond price



Achieving the lowest price

Ensuring timely project completion

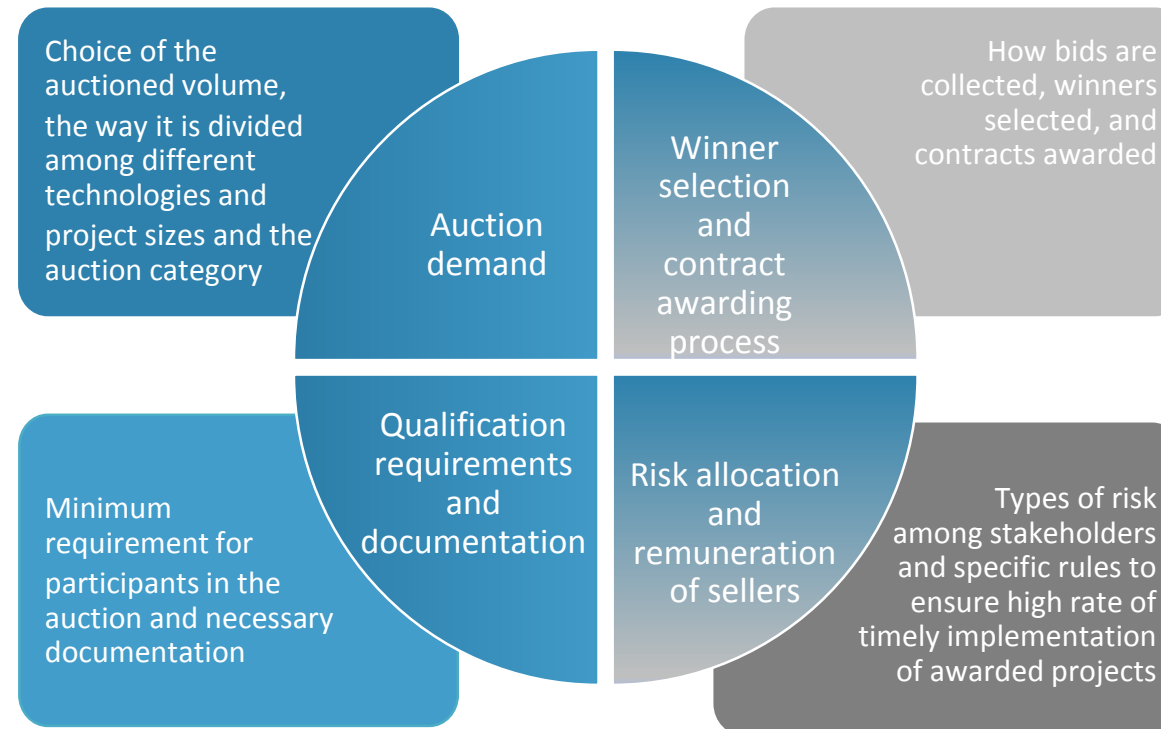
Supporting the integration of VRE

Supporting a just and inclusive transition

# Auction design elements to consider

## The design of the auction considering trade-offs:

- ◆ Ensuring project timely delivery and price
- ◆ Ensuring grid integration and price
- ◆ Contributing to the just and inclusive transition and price

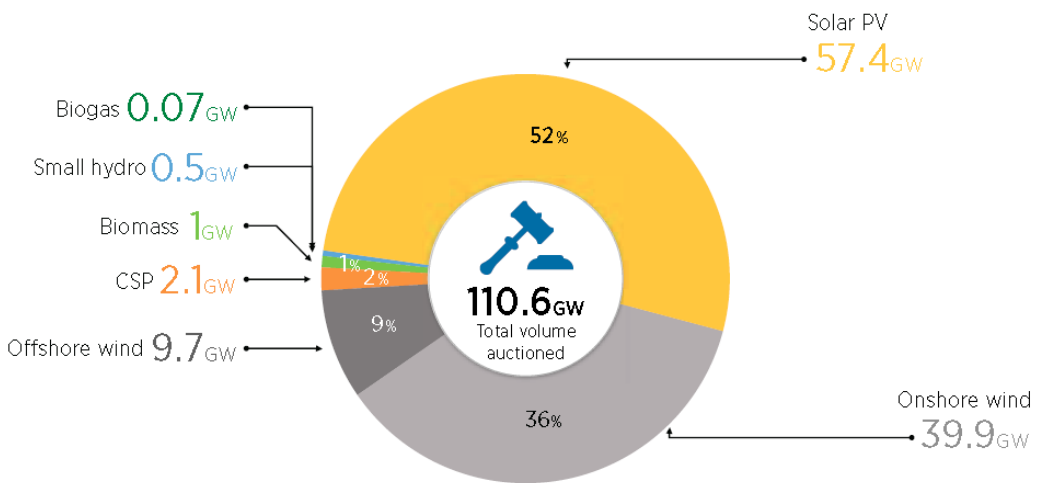


- Auctions are a very flexible tool.
- They can also embed solutions for crisis periods - like the Great Lockdown.
- For example, allowing delay in constructions or with predetermined curtailment risk allocation in case of *force majeure*

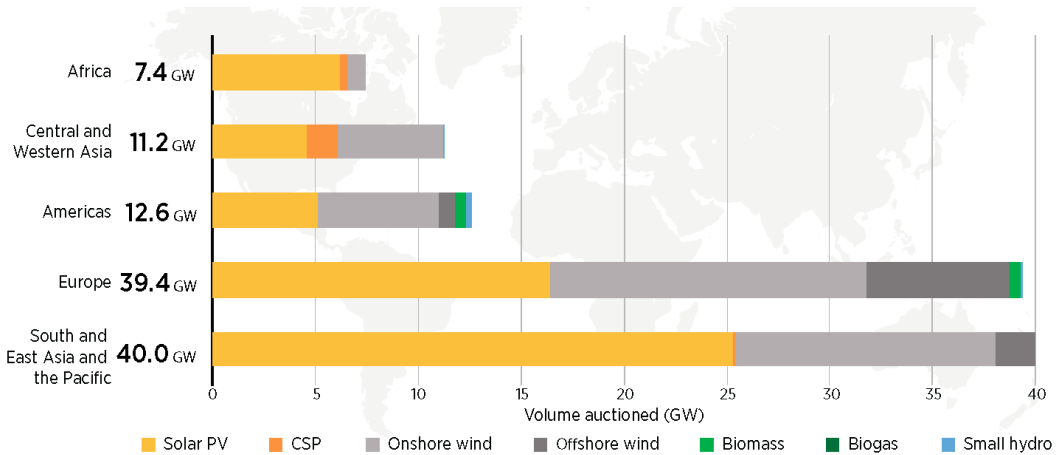


# Auctions global and regional trends by technology, 2017-18

Capacity auctioned 2017-2018 (GW)



Capacity auctioned by region and technology

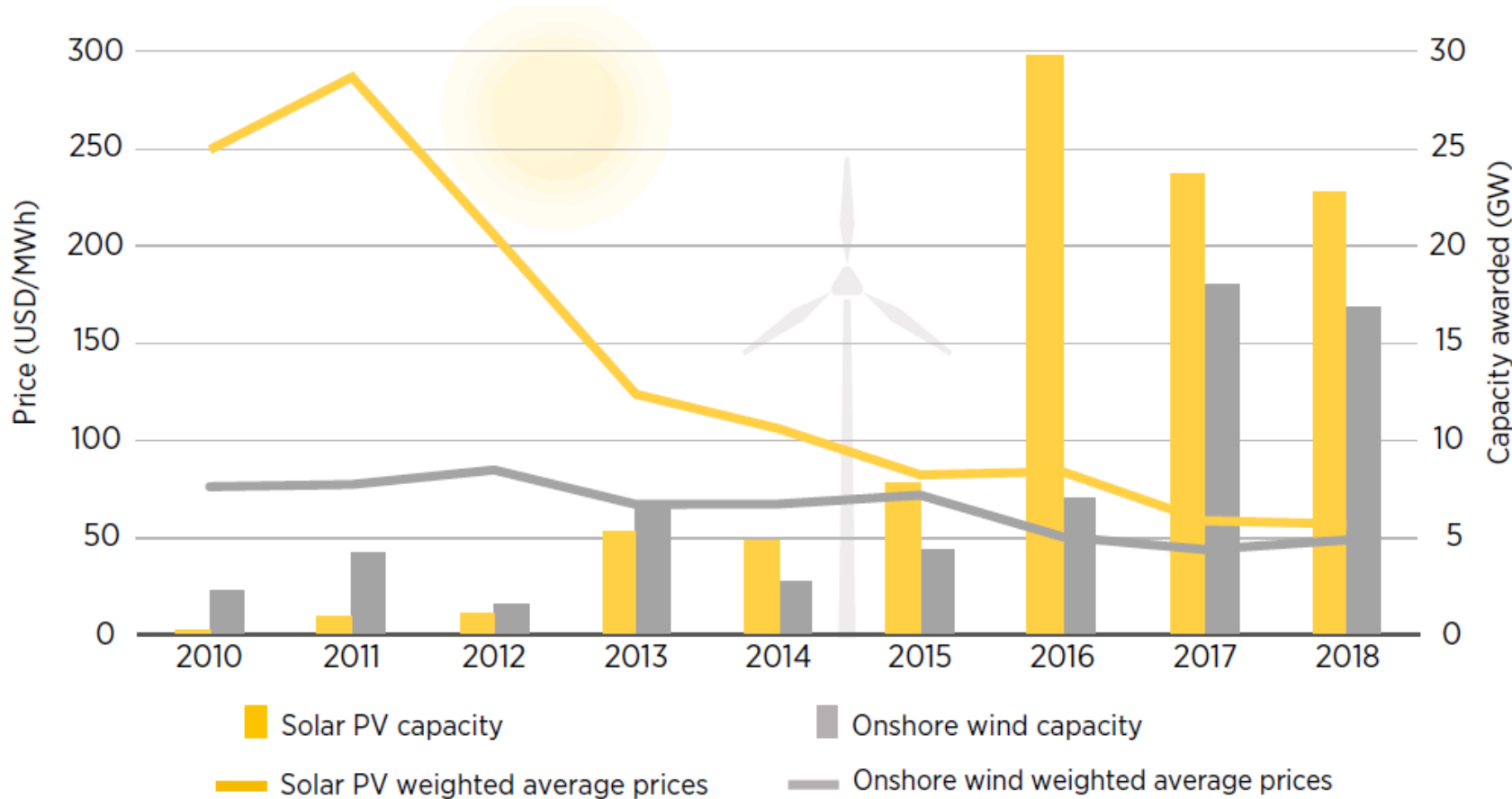


A total volume exceeding **110 GW** auctioned in 2017-18, more than half and a third solar PV and onshore wind, with increasing interest in offshore wind and CSP



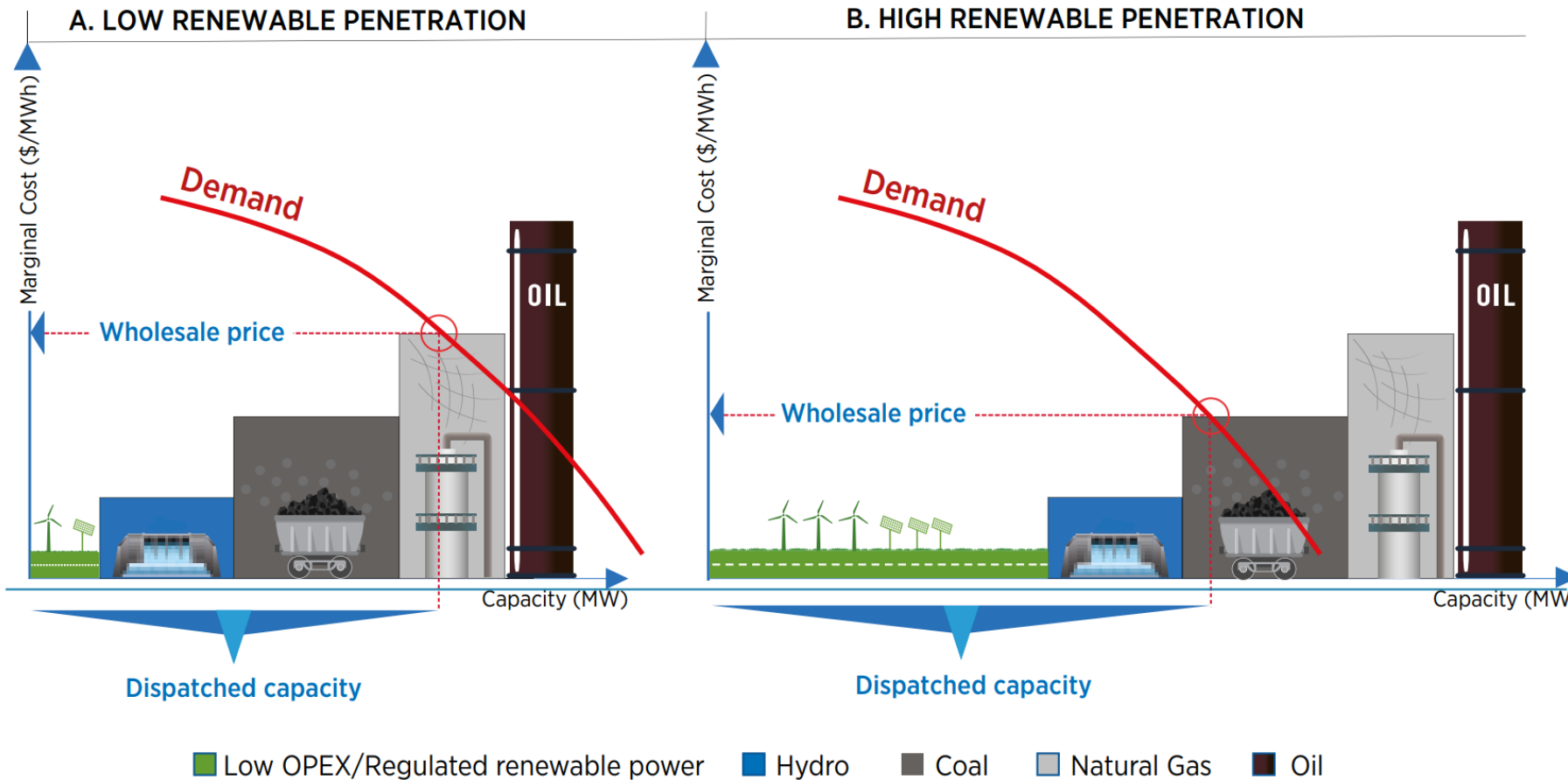
# Latest global trends in price resulting from auctions for solar PV and onshore wind price

## Global weighted average prices resulting from auctions, 2010-2018, and capacity awarded each year

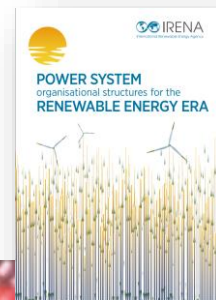


- Solar prices continues to fall, albeit at a slower rate, as PV auctions increasingly expand to newcomers
- Wind edged out, due to higher prices in countries where the majority of volume was auctioned

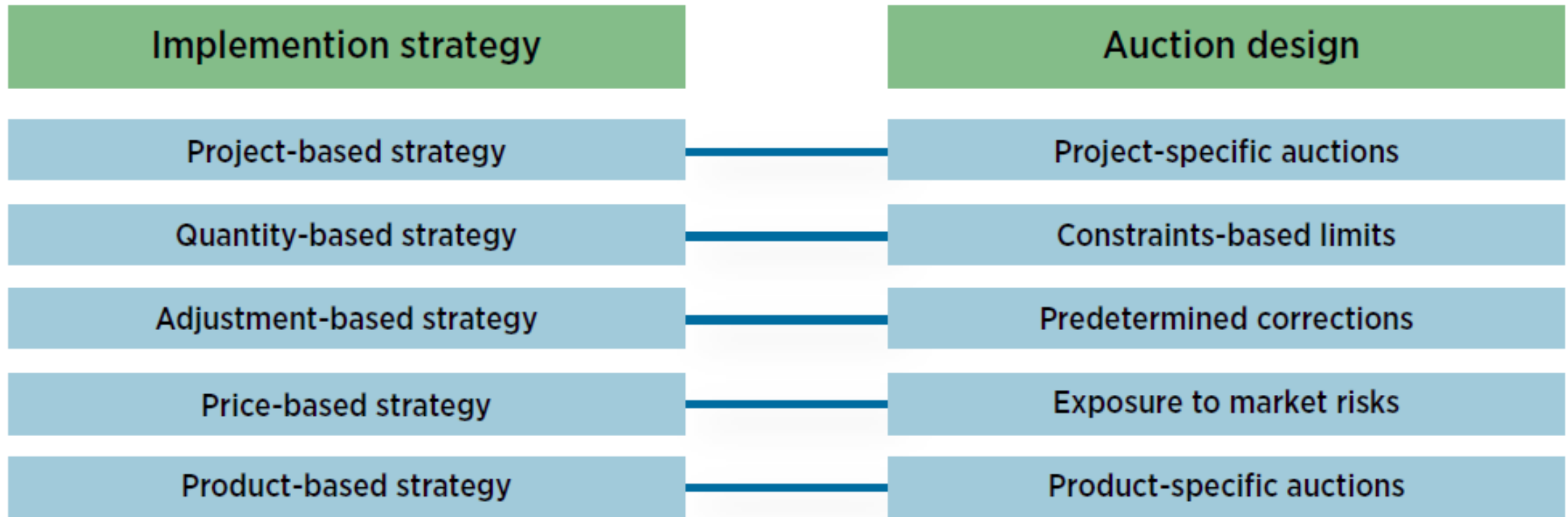
# The missing money problem



- Usually a common occurrence in situations of structural overcapacity
- But also in situation of prolonged low demand (Great Lockdown being a clear real case)
- Structural low prices discourage new investments, both in renewable energy and fossil fuel plants.
- This is a proof that market design needs to be updated for the renewable energy era.



# Implementation strategies for auction design to support increasing shares of VRE



Source: IRENA, [Renewable energy auctions: Status and trends beyond price](#), 2019

# High central planner control



- Project specific auctions aims for a highly predictable outcome, as the auctioneer maintains tight control of the results through pre-determined parameters such as project size, technology, location and technological characteristics.
- Constraints-based auctions present hard limits to what, where and how to build the power plants, whilst allowing some degree of power plant design freedom

# More market-based solutions



- With *ex-ante* conditions, adjustment-based strategies relies on the capacity of the power system operator to forecast future system needs
- With *ex-post* signals (market prices), Feed-in-Premiums let the developer build and operator a plant fit for future system needs

# Ensuring just and inclusive transition

## Inclusion of small and new players



- Predetermined volume set for small and new players
- Technology-specific auctions and limited project size
- Preferential treatment (e.g. discounted bid bond) and less strict qualification req.
- Less strict compliance rules

## Development of local industries and job creation



- Local content requirements and Commitments for local job creation
- Winner selection criteria
- Regularity of auctions that support local industries

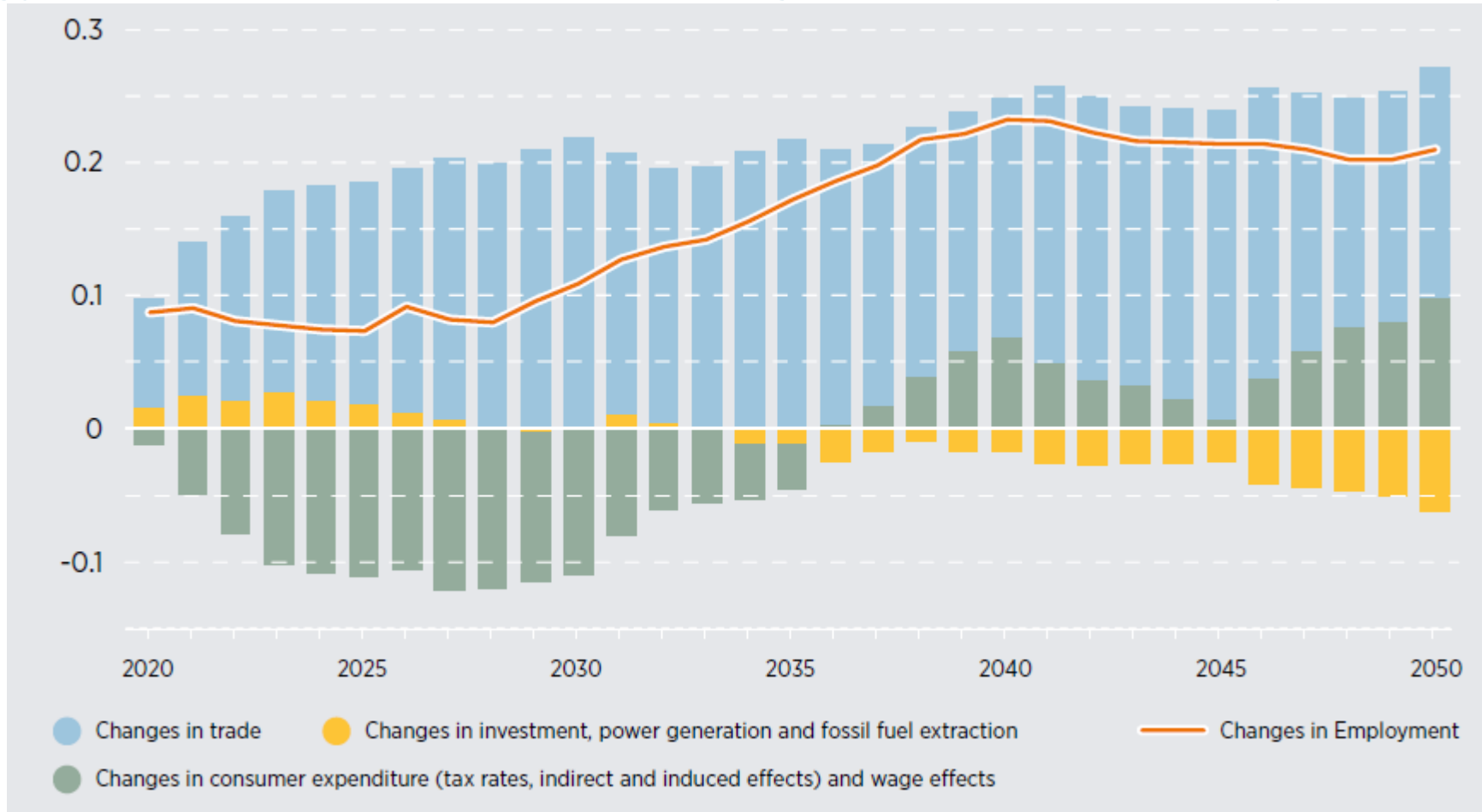
## Subnational development and community benefits



- Zone-, site-, or project-specific auctions, can pre-select the sites and regions that best suit policy objectives
- Proof of land-use rights, grounded in solid documentation that is binding on auction participants

# Socio-economic impact: employment

## Energy transition footprint of the SEE region in terms of employment, 2019-2050 [%]



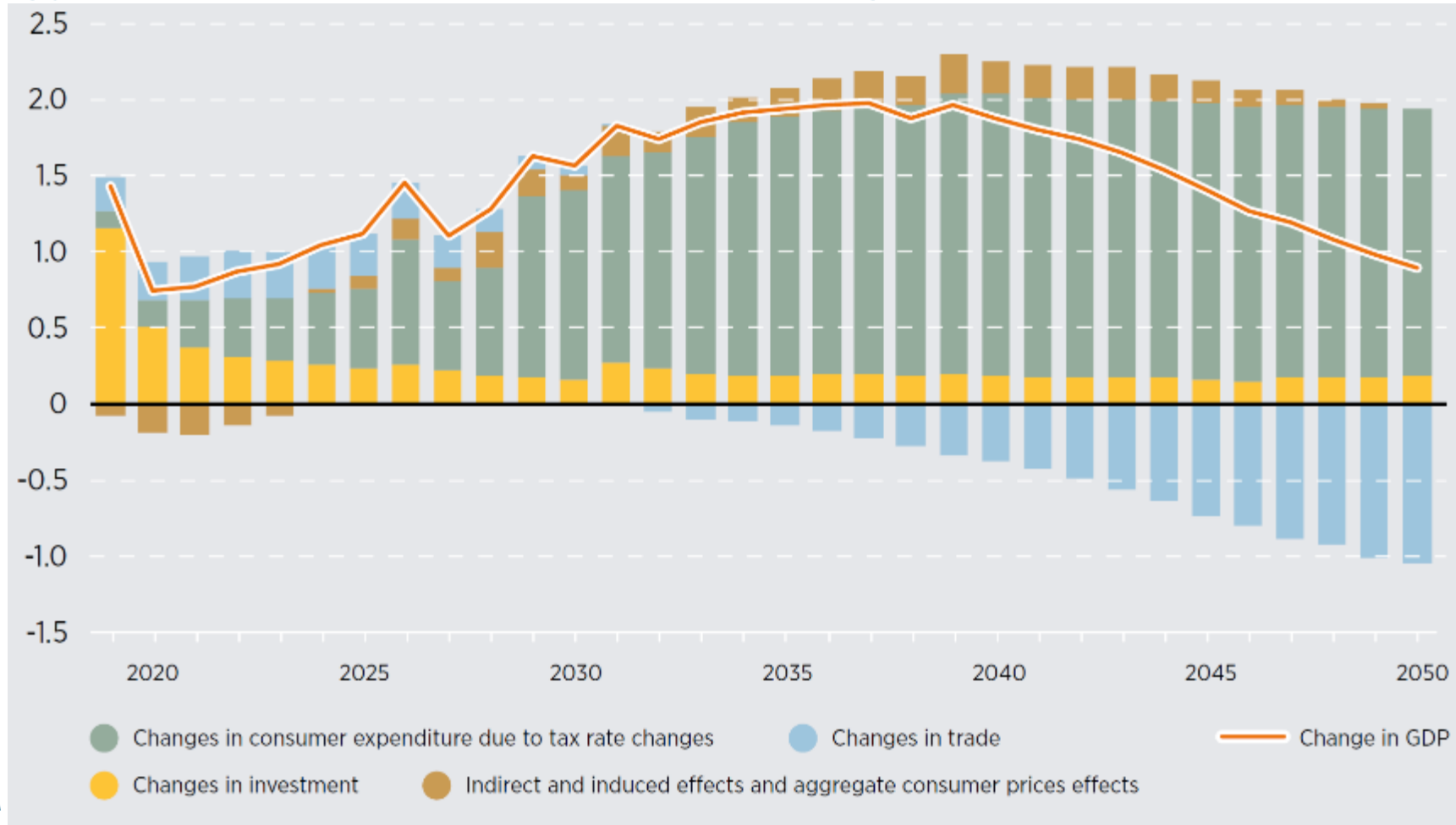
Source: IRENA

**~ 50 000  
additional jobs**



# Socio-economic impact: GDP

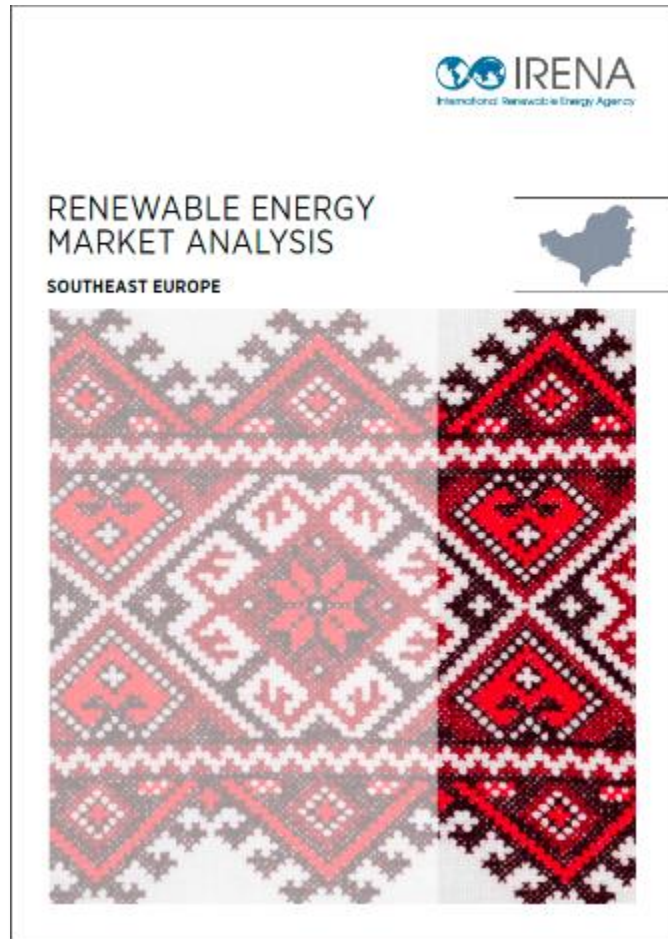
## Energy transition footprint of the SEE region in terms of GDP, 2019-2050 [%]



Source: IRENA

**~500 USD bln  
Cumulated GDP**

- Economies in the region are gaining ground as they address some of the barriers in RE investment – the most important being the high cost of capital in the region, due to policy, off-taker and currency risk.
- The market size of the economies is limited. As a result, investors may look at the region as a whole rather than its individual parts, so the retraction or delay of renewable energy strategies from one economy may be to the detriment of the entire region.
- Harmonised auctions create the opportunity to reduce the risk perception, providing clear signal to attract investors reducing the cost of capital.
- Auctions are flexible: they are not a “one size fits all” solution, but they can be designed to solve (or assist to solve) contingent regional issues, from system integration to low employment rate.



<https://www.irena.org/publications/2019/Dec/RE-Market-Analysis-Southeast-Europe>