

# **OVERVIEW OF GLOBAL ENERGY TRANSFORMATION PROSPECTS FOR CENTRAL ASIA**

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International Renewable Energy Agency (IRENA)**

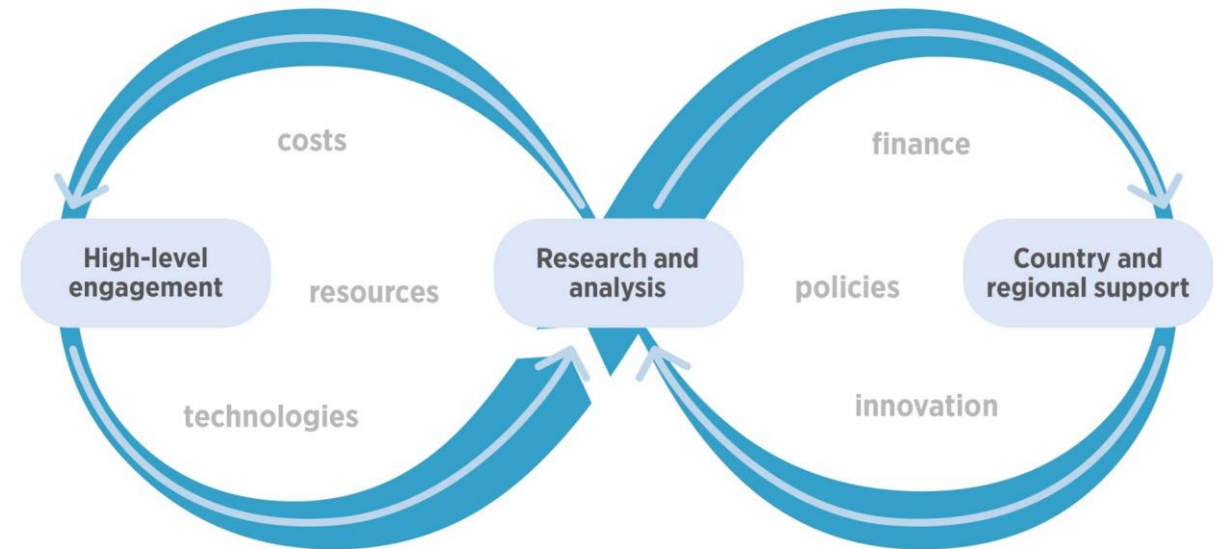
# About IRENA



Established in 2011

Headquartered in Abu Dhabi, UAE

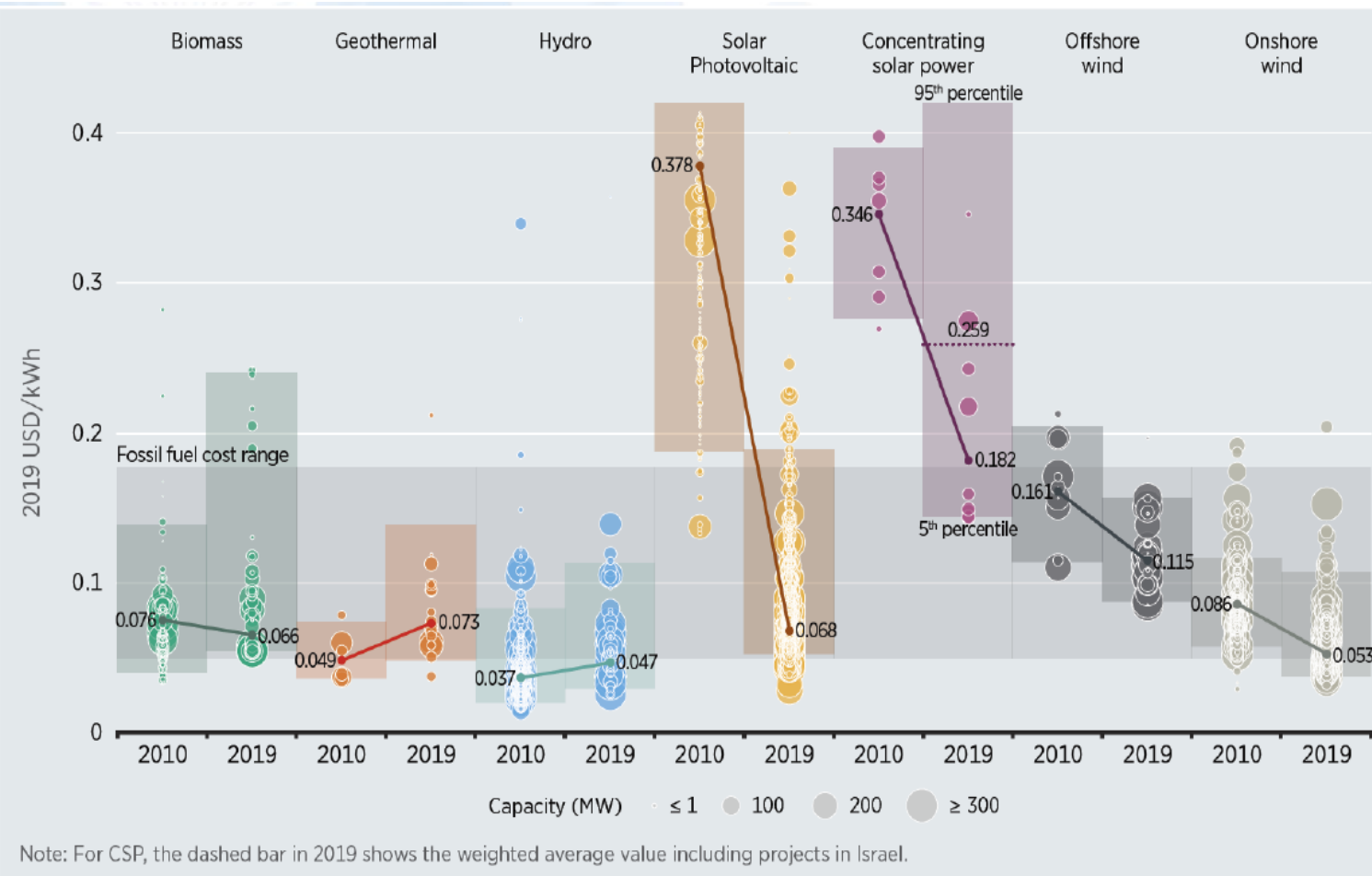
164 Members and 20 States in  
accession



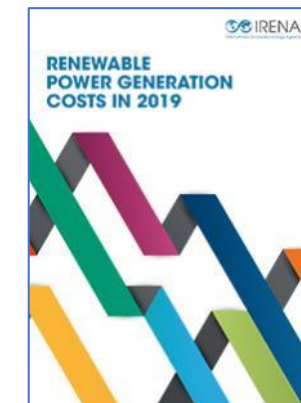
Promote the **widespread adoption and sustainable use**  
of all forms of **renewable energy** worldwide



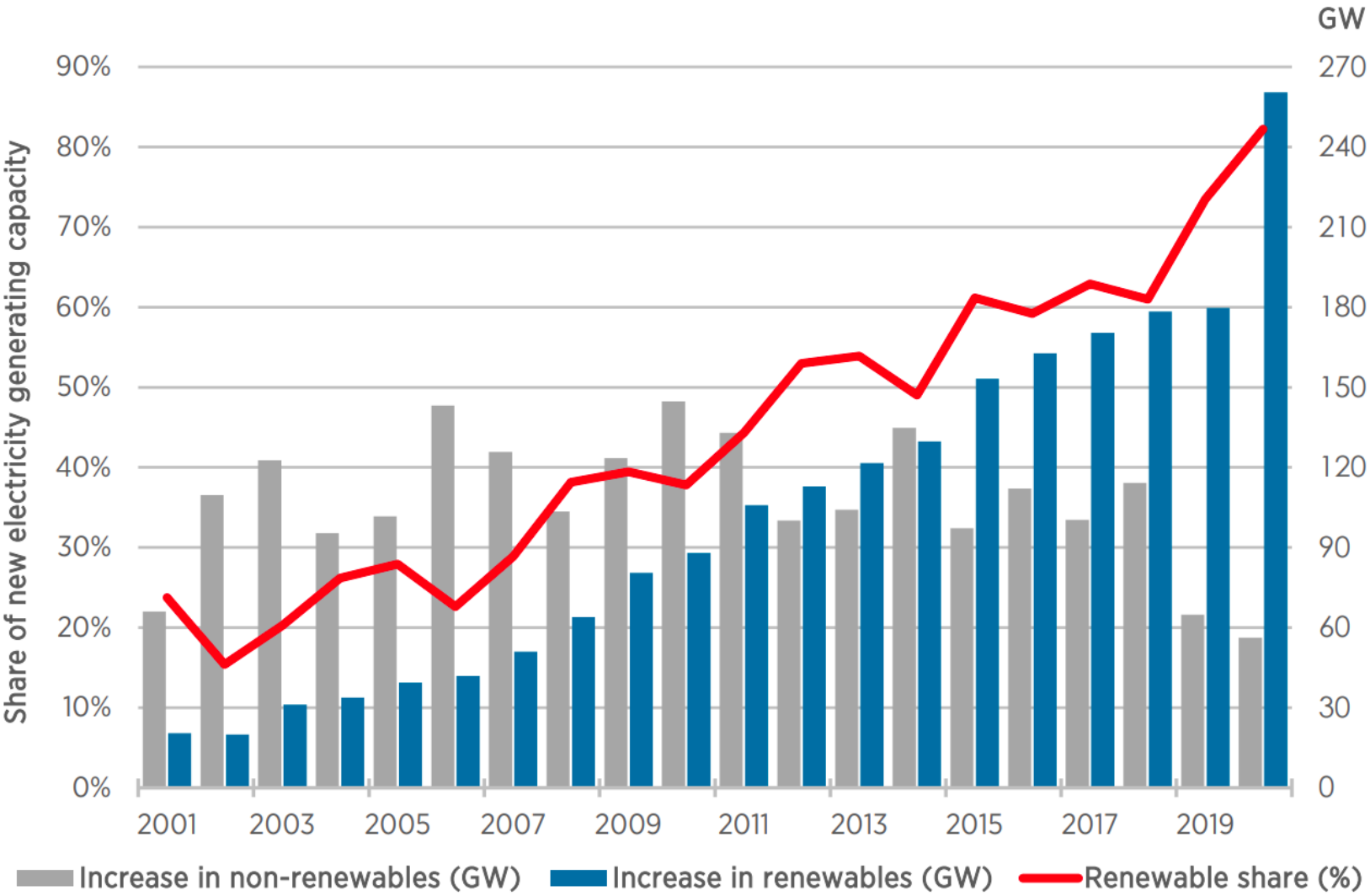
# Recent Costs Evolution



- **In most parts of world RE least-cost source of new electricity:**
  - 56% of utility-scale capacity added in 2019 cost less than cheapest new coal option
- **Cost reductions for solar & wind are coming from:**
  - improved technology, economies of scale more competitive supply chains and developer experience

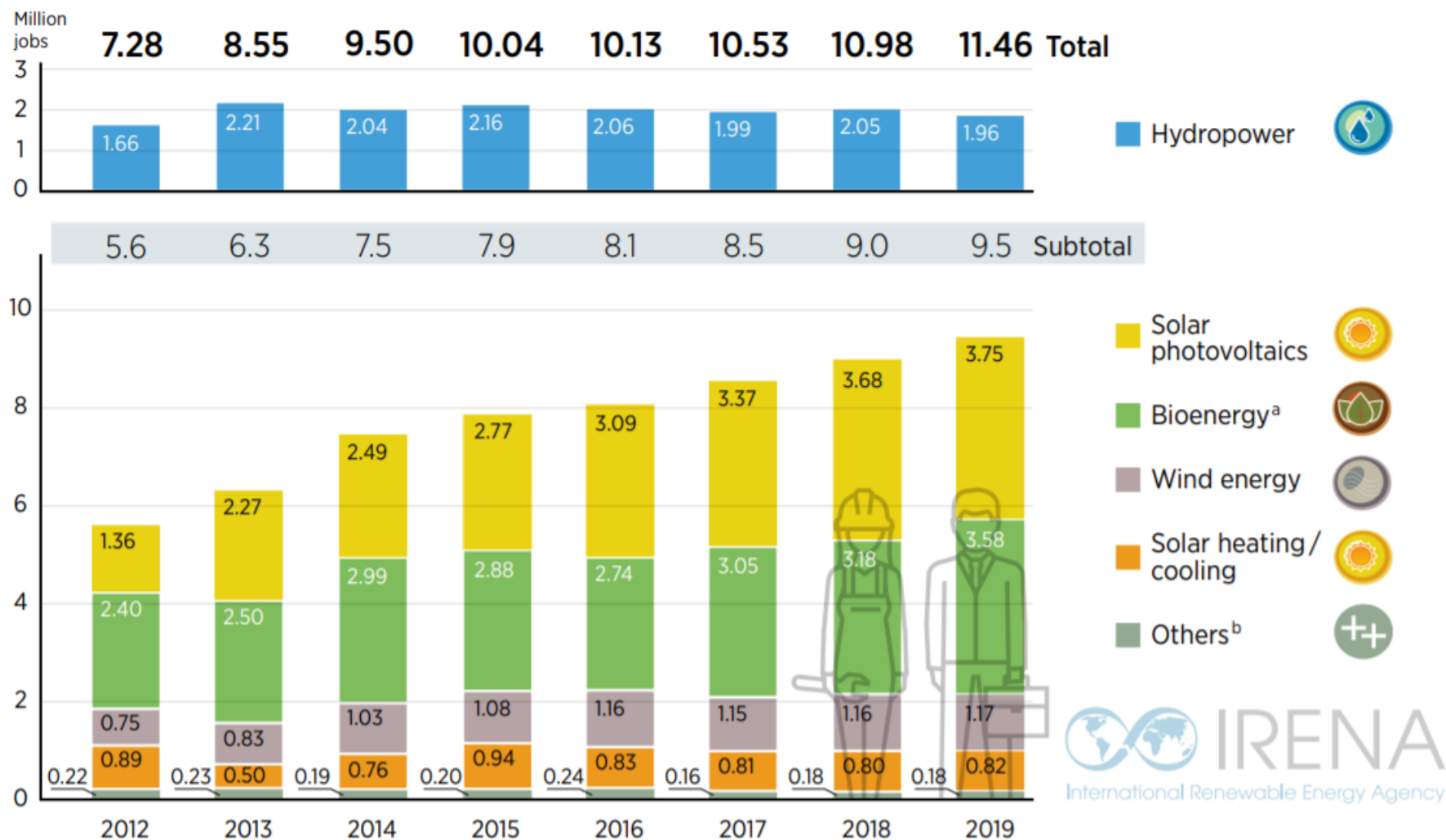


# Renewable Share of Annual Power Capacity Expansion



Renewables now account for one third of global power capacity today

# Employment Benefits



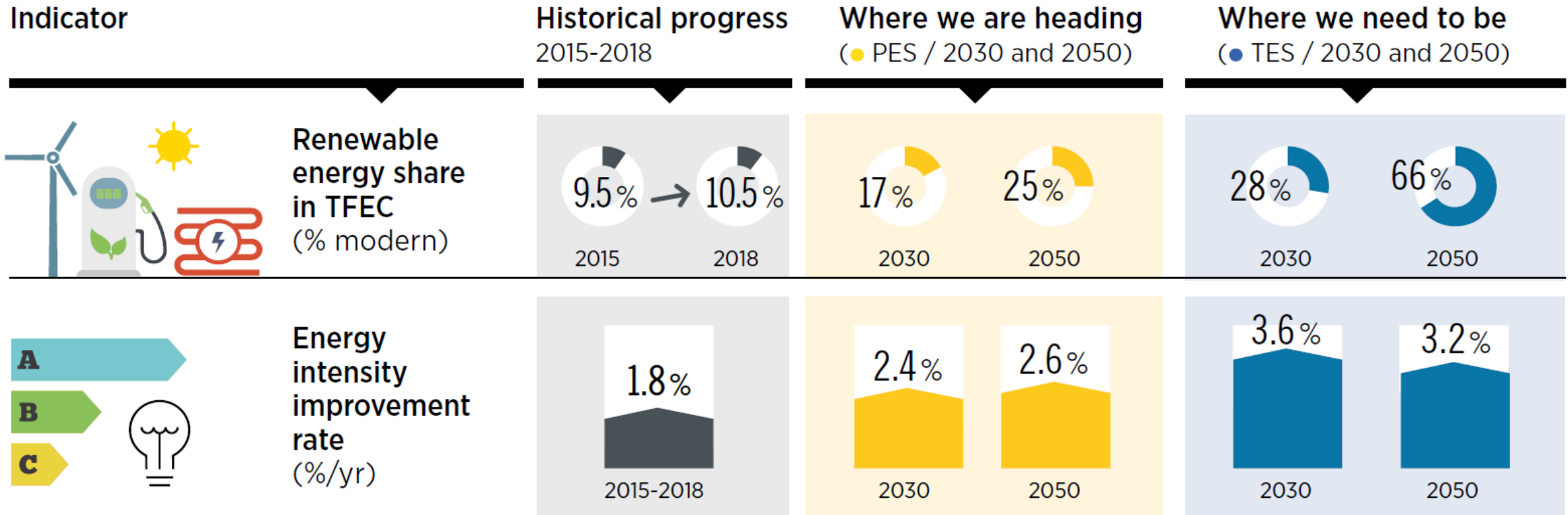
Source: IRENA jobs database.

Note: Except for hydropower, where a revised methodology led to revisions of job estimates, numbers shown in this figure reflect those reported in past editions of the Annual Review.

a. Includes liquid biofuels, solid biomass and biogas.

b. "Others" includes geothermal energy, concentrated solar power, heat pumps (ground based), municipal and industrial waste, and ocean energy.

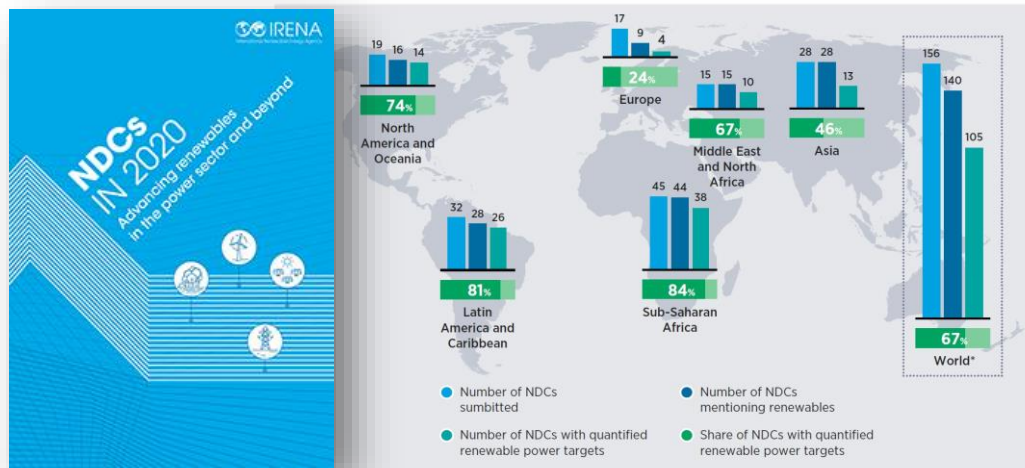
# Renewables in the world's energy mix: Six-fold increase needed



- **Energy efficiency improvements must be scaled up** rapidly and substantially.
- **Renewable energy and energy efficiency together offer over 90% of the mitigation measures** needed to reduce energy-related emissions in the Transforming Energy Scenario.

## SOURCES OF REQUESTS

- IRENA Receiving **Direct Country Requests**
- IRENA Partnership with UNDP on **Climate Promise**
- IRENA Partnership with NDC Partnership on **Climate Action Enhancement Package (CAEP)**



## NDC Enhancement Support

Data and Statistics

Resource Assessment

Long Term Energy Planning (LTEP)

Power System Flexibility (FlexTool)

Renewable Energy Roadmaps (REmap)

Renewable Readiness Assessment (RRA)

RE Policy – Capacity Building

RE Technology – Capacity Building

## NDC Implementation Support

Technical Assistance

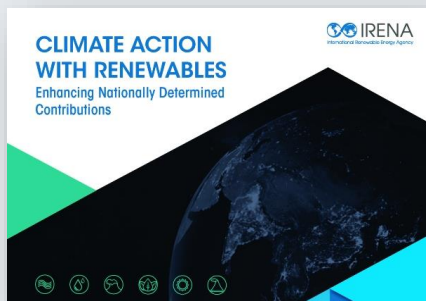
Project Facilitation Support



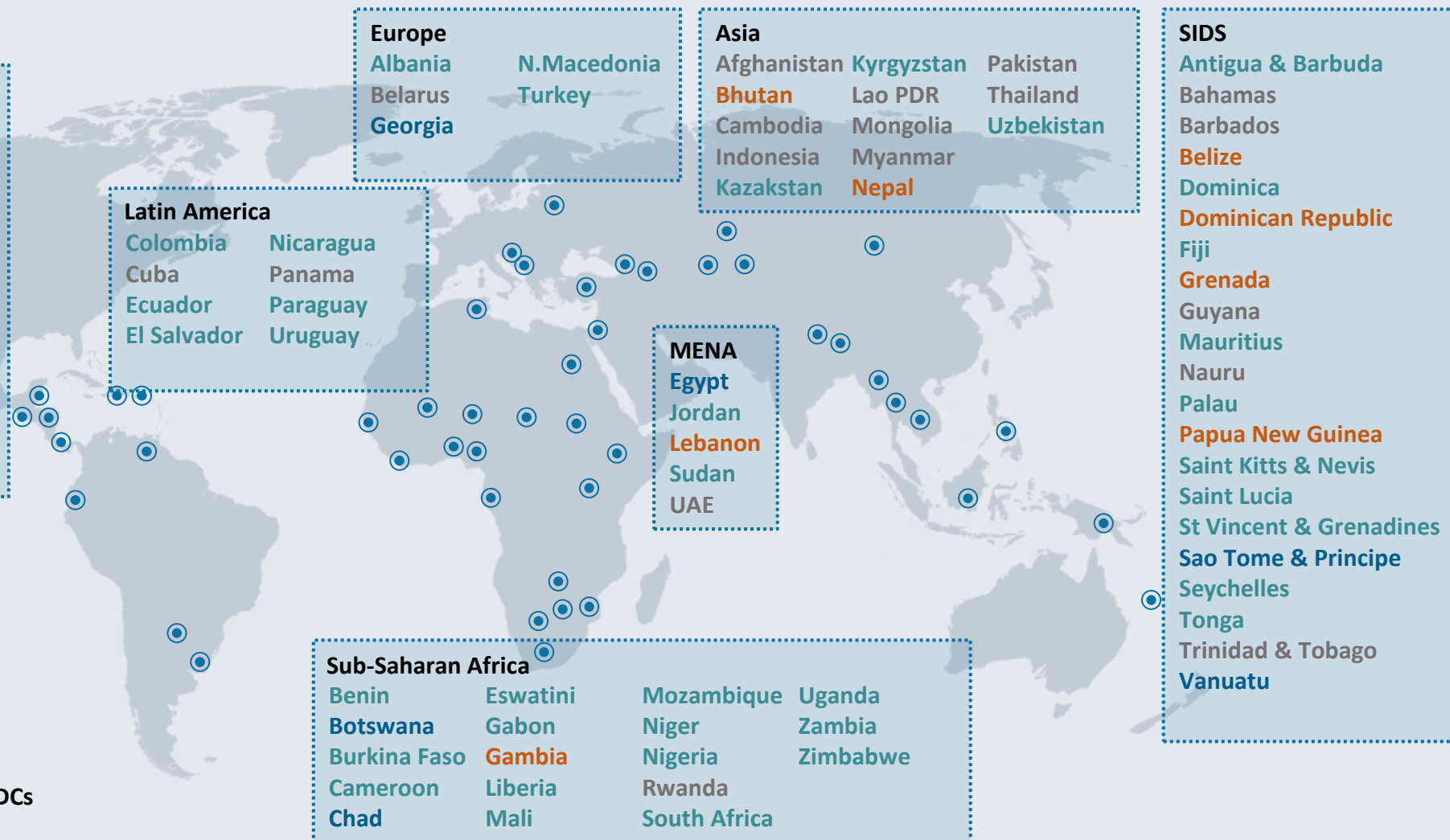
# Energy Transition to Foster Climate Action through NDCs

## IRENA Work-packages

Data and Statistics incl. MRV  
Resource Assessment  
Long Term Energy Planning (LTEP)  
Power System Flexibility (FlexTool)  
Renewable Energy Roadmaps (REmap)  
Renewable Readiness Assessment (RRA)  
Sectoral Assessment  
CB– Policy, Finance, Technology  
Project Facilitation Services



<https://www.irena.org/climatechange/NDCs>



● Input to NDC already provided (8) ● Implementation of Support (38) ● Work plan development (06) ● Scoping (18)

Disclaimer: Boundaries and names shown on this map do not imply any official endorsement or acceptance by IRENA.



# IRENA's Engagement in the region of Central Asia: regional level

## Astana Communiqué on Accelerating the Uptake of Renewables in Central Asia



June 2017, Nur-Sultan

- IRENA has identified key areas of support required for the accelerated deployment of renewables in Central Asia.

## Enabling Policy and Regulatory Frameworks for Renewables



**Regional Workshop on Policy Support Mechanisms**  
October 2018, Baku

- Improving the understanding of design and implementation of renewable energy targets, policies and support schemes

## Renewable Energy Statistics and Data Collection



**Central Asia Renewable Energy Statistics Training**  
September 2018, Abu Dhabi

- Enhancing capacities to improve the collection of reliable data on renewables

## Long-Term Energy Planning



**Central Asia Workshop on Long-Term Capacity Expansion Planning with a High Share of Renewables**  
March 2019, Astana

- Improving understanding of technical and regulatory aspects and facilitate the integration of variable renewable energy into power systems

# IRENA's Engagement in the region of Central Asia: country level

- **Azerbaijan** : Renewables Readiness Assessment, December 2019
- **Kazakhstan** : NDC support: Statistics (Energy data audit report, MRV, Capacity building); LTS review
- **Kyrgyzstan** : RRA with resource assessment and RE targets capacity building
- **Uzbekistan** : NDC support: Statistics (Energy data audit report, MRV, Capacity building)
- **Regional**: Resource assessment project: suitable zones for utility-scale solar and wind projects



# THANK YOU!



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