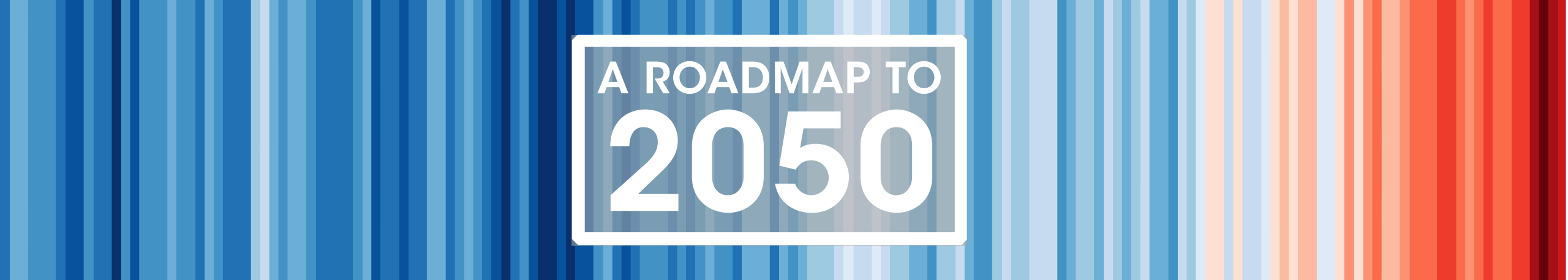


GLOBAL ENERGY TRANSFORMATION

Socio-economic footprint of the energy transformation



A ROADMAP TO
2050

Badariah Yosiyana

31 October 2019 • Singapore International Energy Week • Singapore

Socio-economic Impacts: IRENA's Data and Analytical Reports

2011

2012

2013

2014

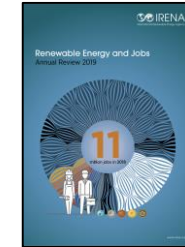
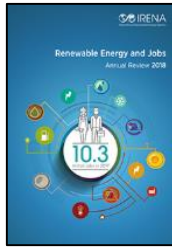
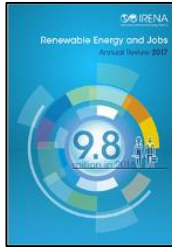
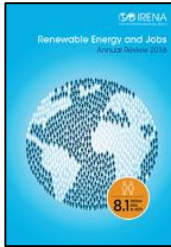
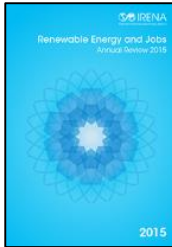
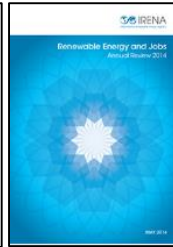
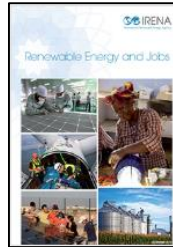
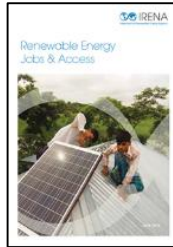
2015

2016

2017

2018

2019

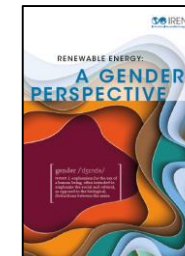
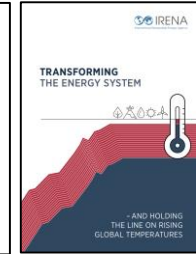
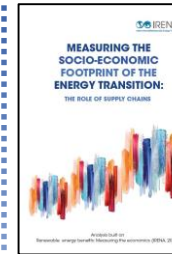
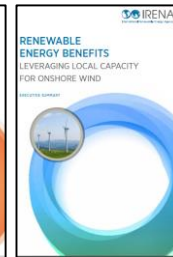
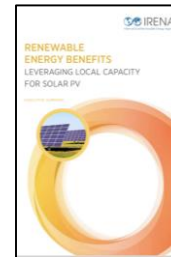


★ **Jobs – Annual Review**

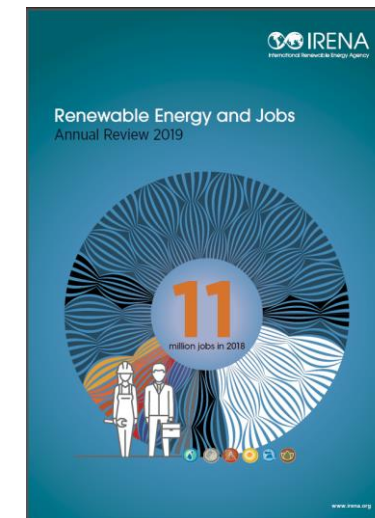
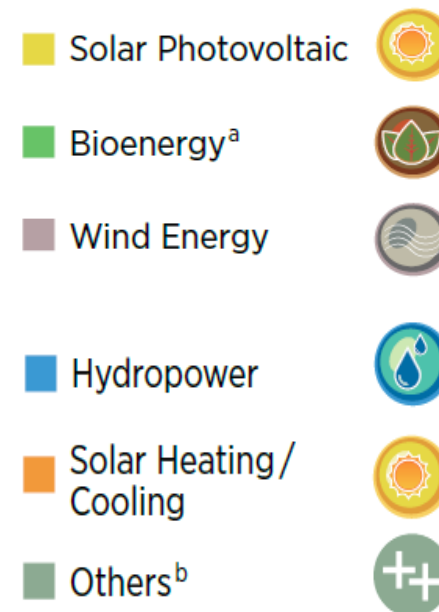
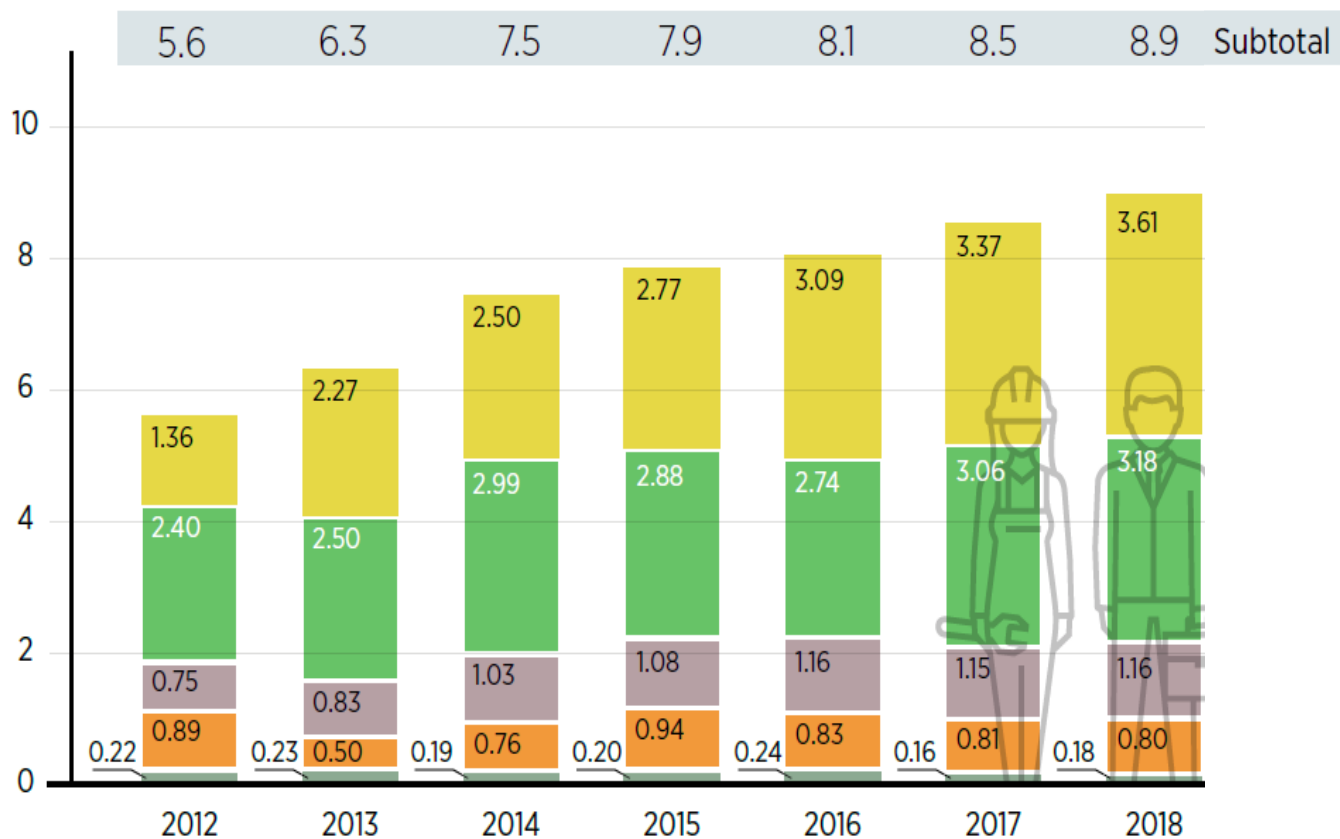
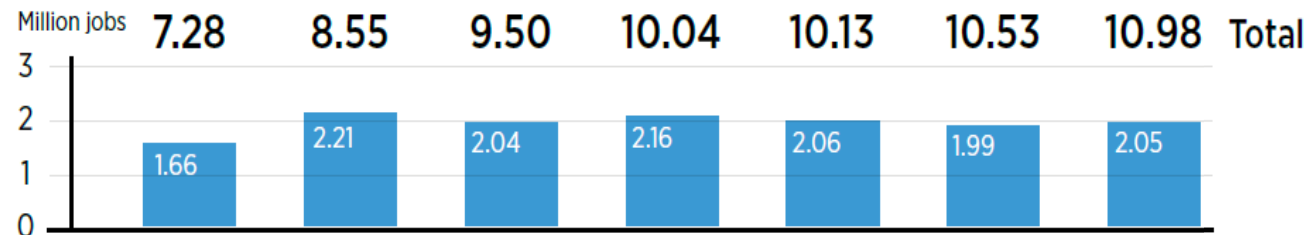
★ **Leveraging Local Capacities**

★ **Measuring the Socioeconomics / Global Energy Transformation**

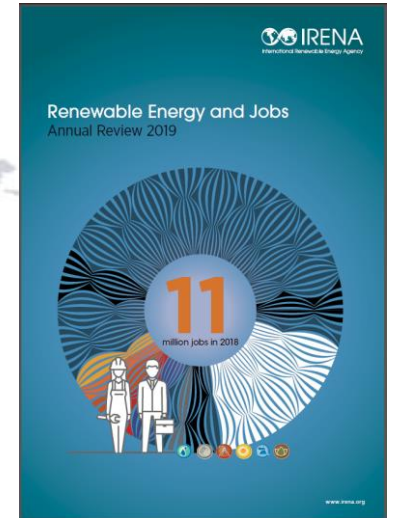
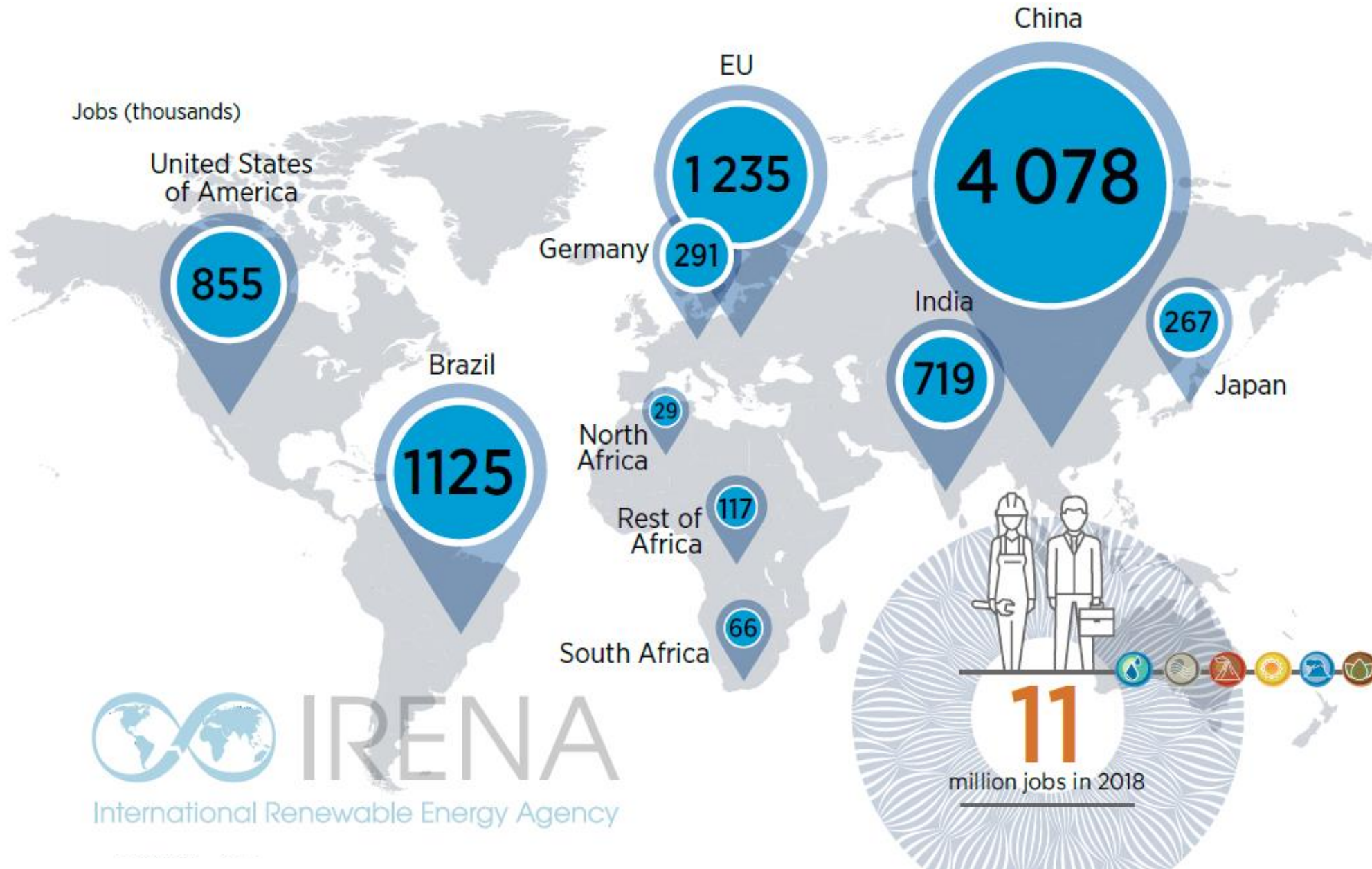
★ **Empowering Women / Community Benefits**



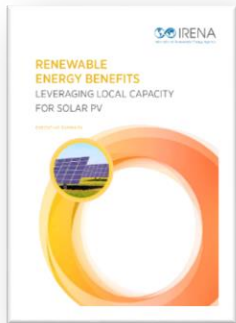
Jobs in Renewable Energy



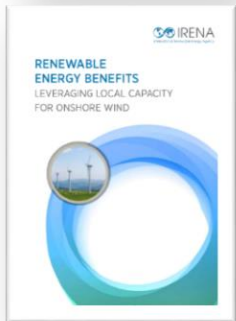
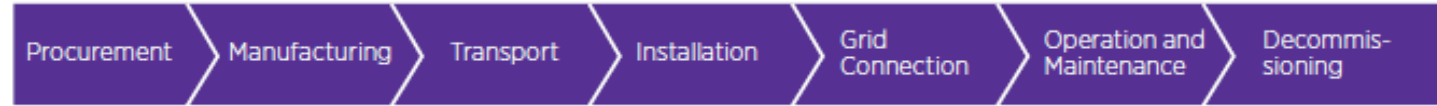
Jobs in Renewable Energy, by Region/Country



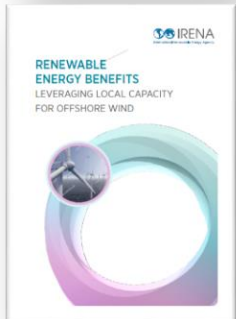
Solar PV and Wind Supply Chains: Labour Requirements



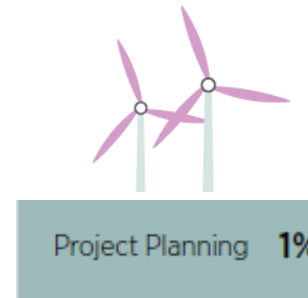
50 MW solar PV:
229 055 person-days



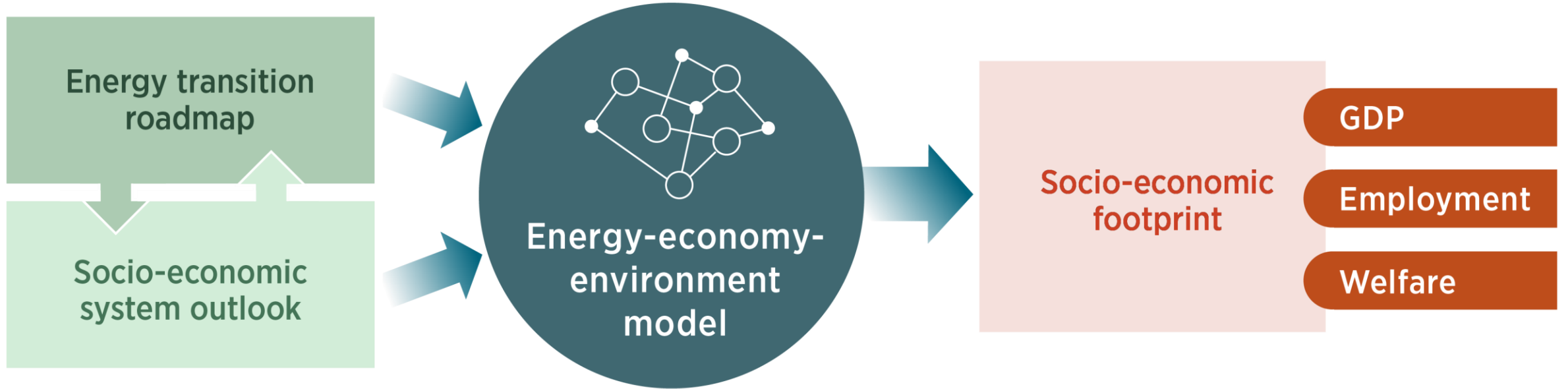
50 MW onshore wind:
144 420 person-days



500 MW offshore wind:
2.1 million person-days

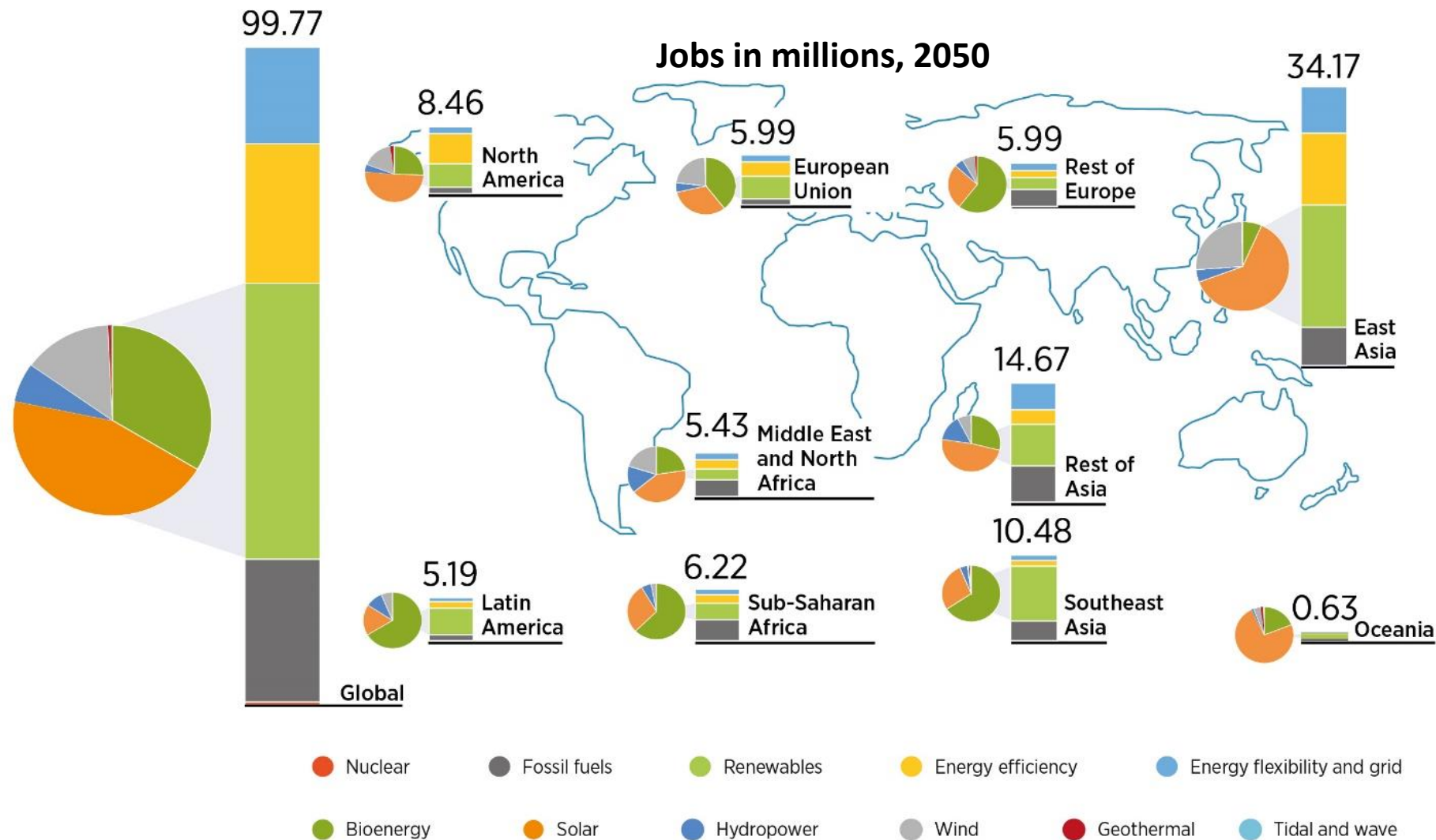


The socio-economic footprint of the energy transformation



- **Both the energy and socio-economic systems will evolve during the transition**, with multiple feedback loops between them.
- **IRENA uses an integrated Energy-Economy- Environment model to evaluate the socio-economic footprint** that results from the interactions among different combinations of the energy transition roadmap and the socio-economic outlook.

Energy transformation creating significant employment opportunities



- Asia will have over half of the global jobs in renewables in 2050 – 26.8 Million
- In Southeast Asia, jobs in renewables will reach to 6.7 million from around 850 thousand jobs today

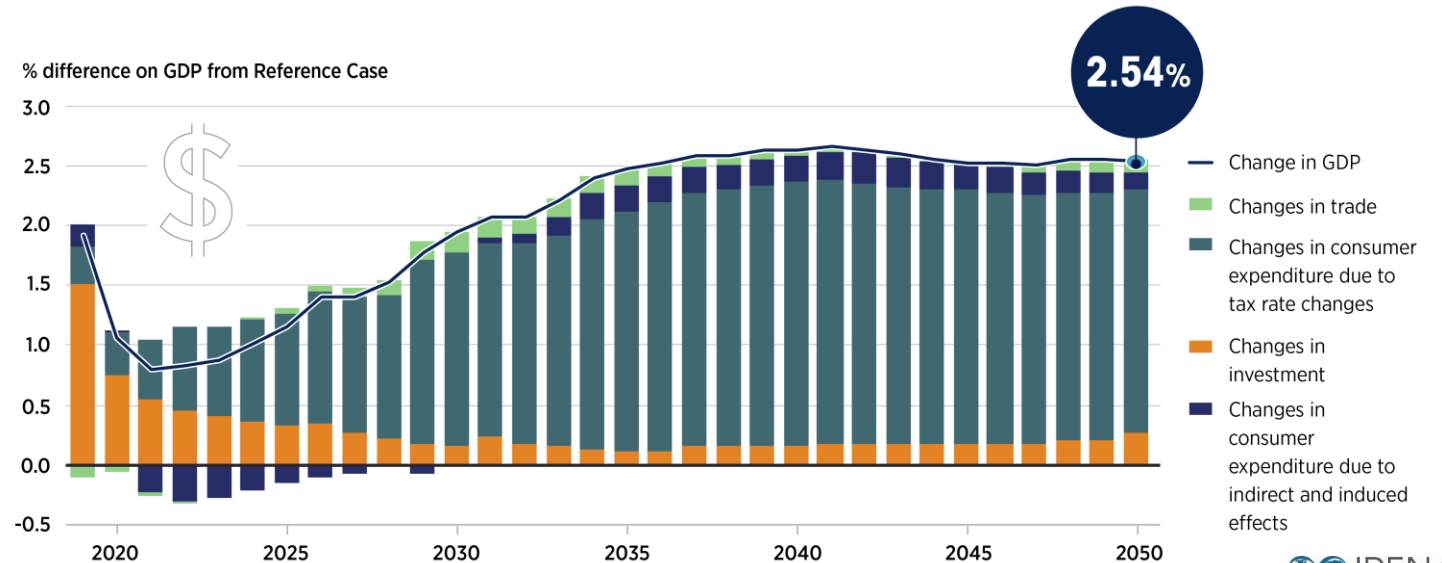
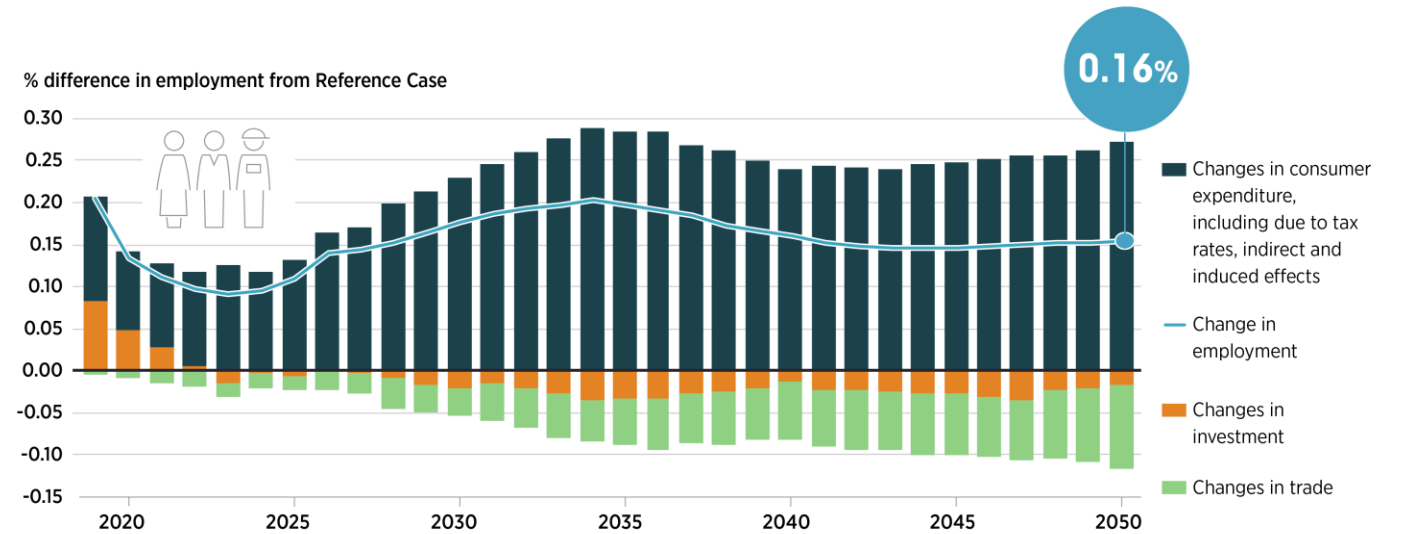
Citizen Benefits: Jobs and Economy in the Energy Transition

Global Economy-wide Employment
(measured in number of jobs)



Period to 2050:
Compared with a
business-as-usual approach,
the energy transformation
yields GDP and job gains
across the entire economy

Global Economic Growth
(measured in GDP)



The Welfare indicator: Measuring beyond GDP



Economic

- Consumption and investment
- Employment

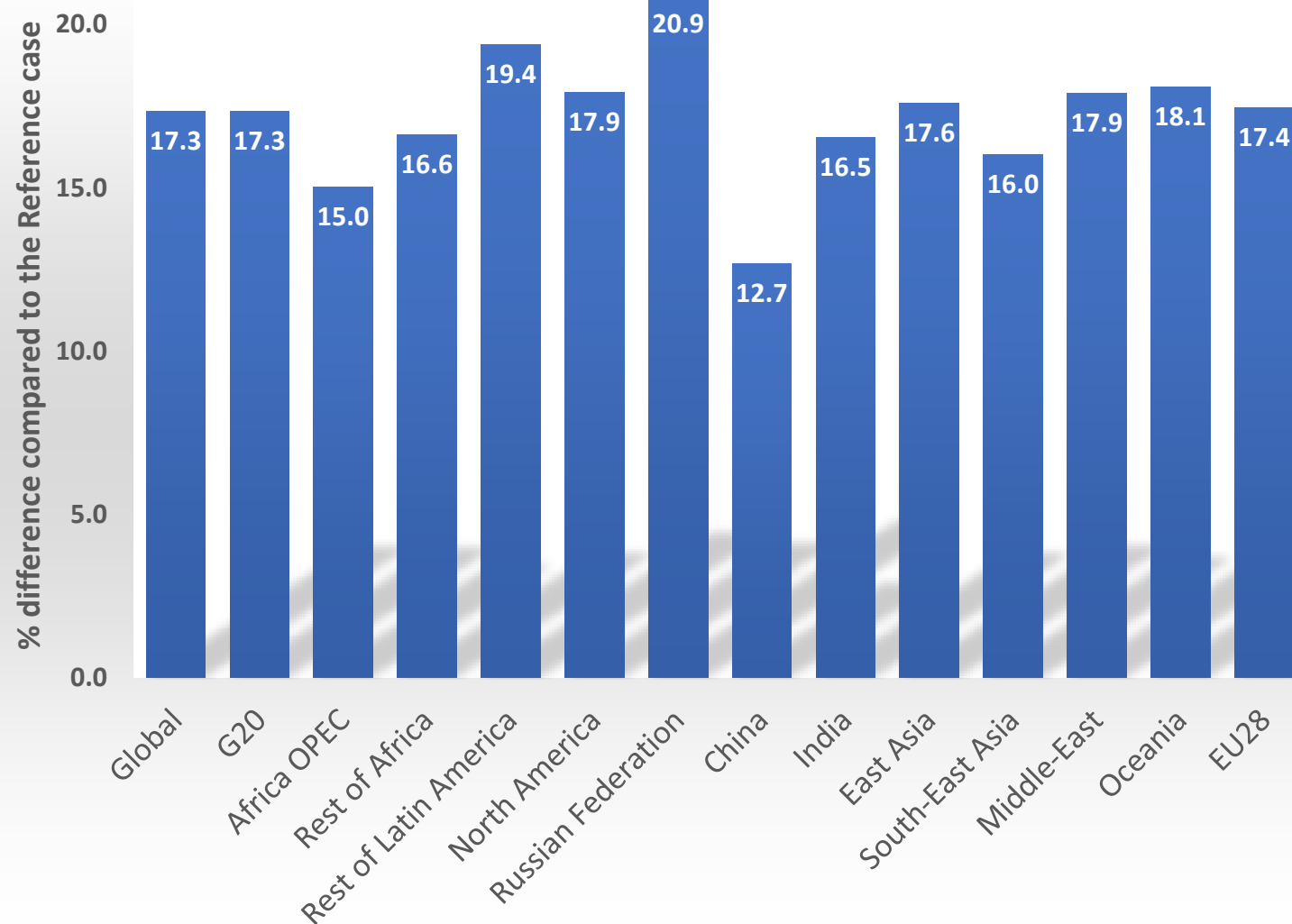
Social

- Health
- Education
- Energy Access

Environmental

- GHG emissions
- Material consumption

Welfare gains compared to the Reference Case, 2050





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Thank you!

BYosiyana@irena.org

