IRENA
International Renewable Energy Agency

GLOBAL RENEWABLES OUTLOOK

FOCUS ON LATIN AMERICA AND THE CARIBBEAN

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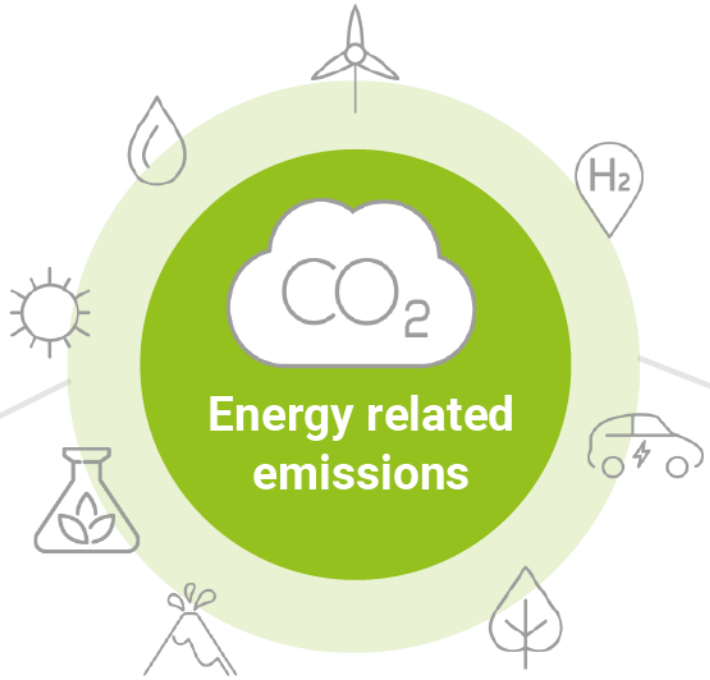
Outlook presents options to cut energy-related CO_2 emissions



2050

(reductions compared to today)

70%

9.5 Gt emissions

Transforming Energy Scenario

Global warming below 2°C

100%

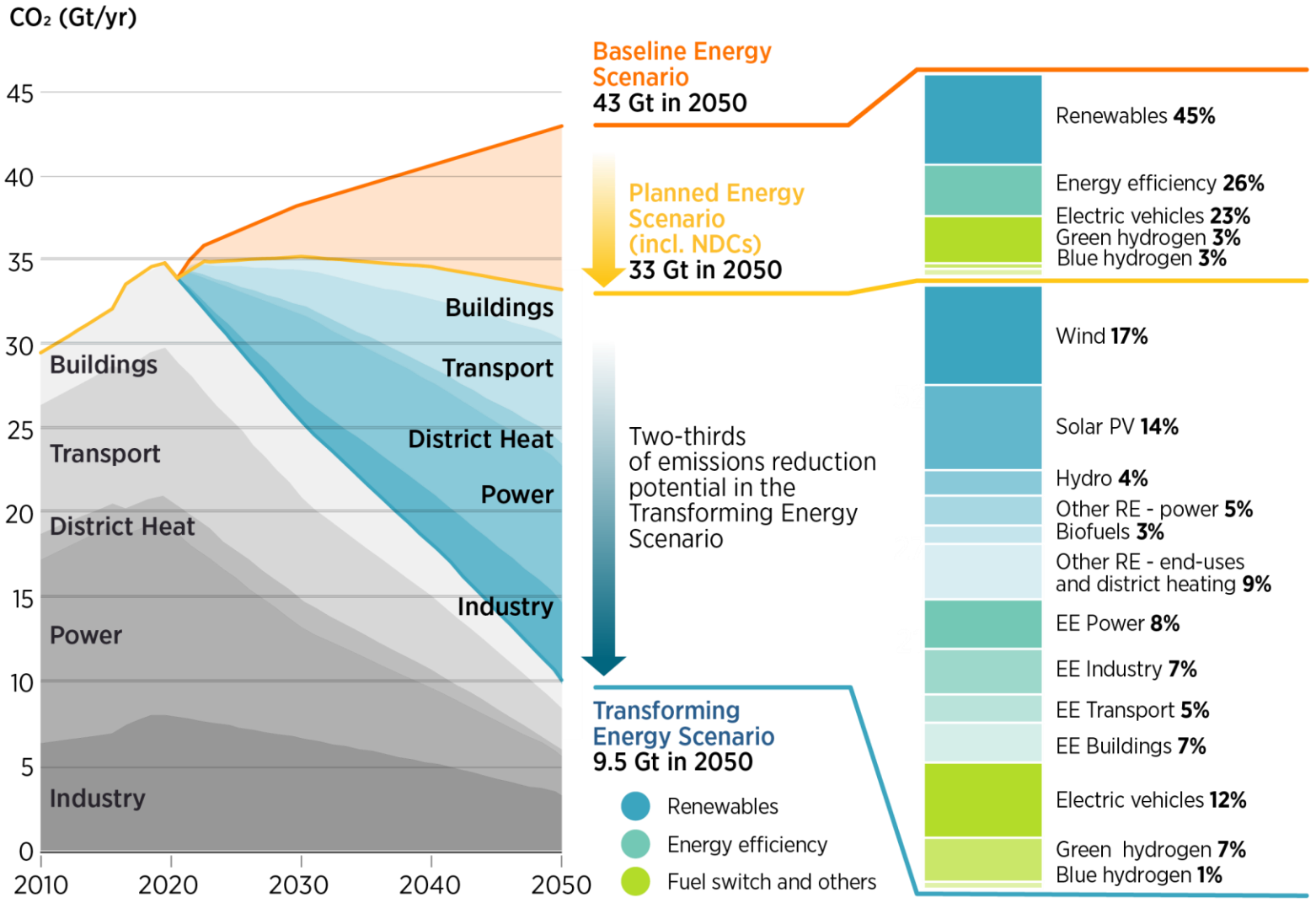
Zero emissions

Deeper Decarbonisation Perspective

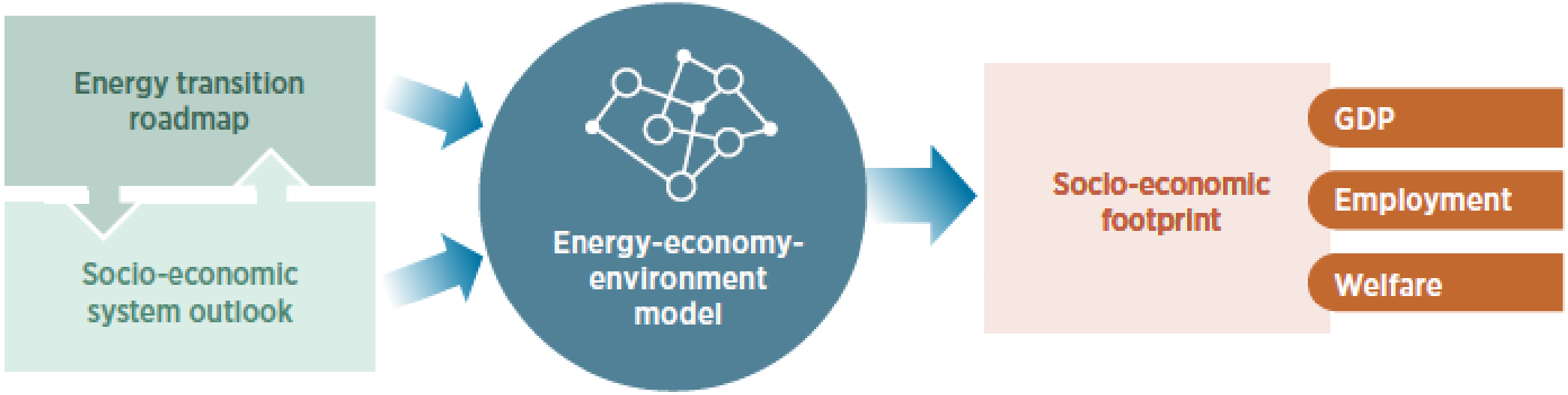
Global warming at 1.5°C

Annual energy-related CO_2 emissions would need to decline by at least 70% below today's level by 2050

Renewables, energy efficiency, electric vehicles and hydrogen can provide bulk of necessary emissions reductions by 2050



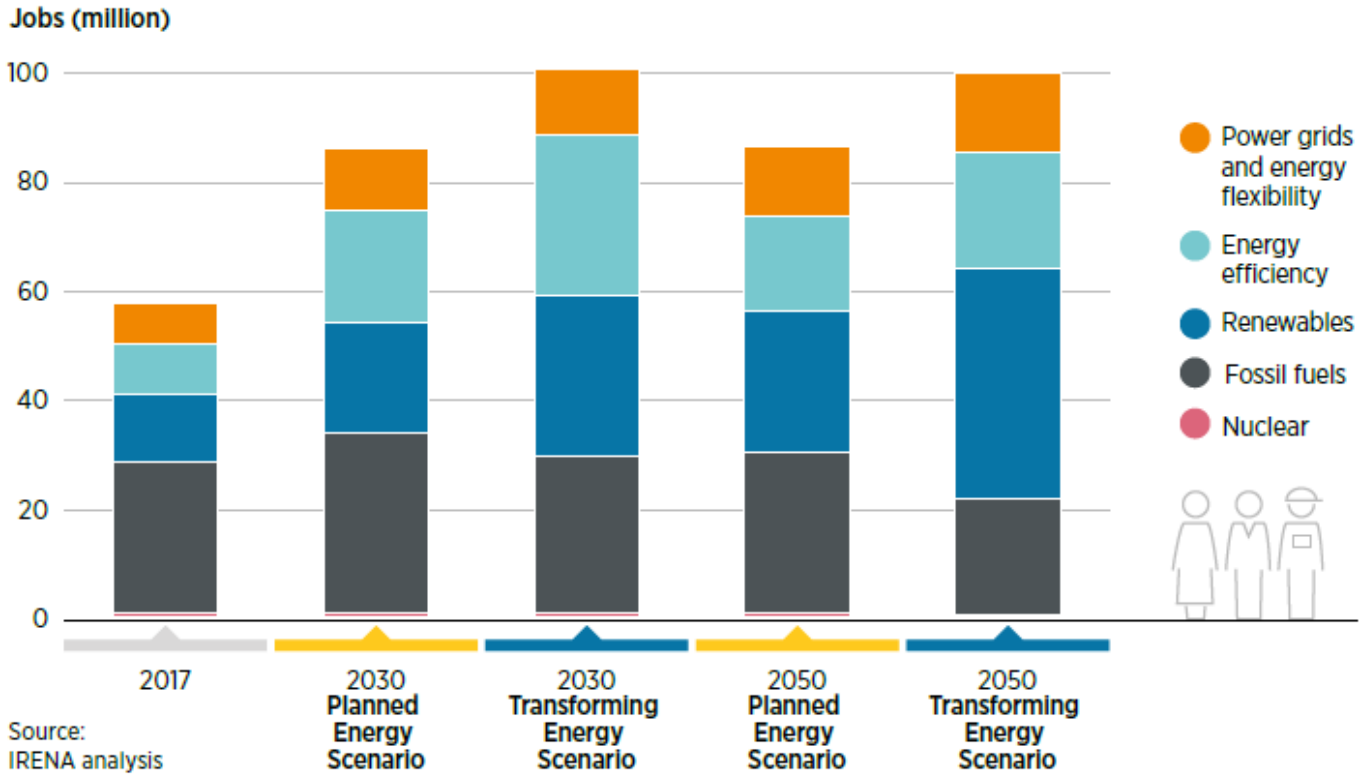
The need for a holistic approach to understand the socio-economic impacts of the energy transition



- A true and complete assessment of the transition includes both the energy sector and the socioeconomic system, and their interlinkages.
- IRENA has undertaken a holistic approach that links the energy system and the world's economies within a single and consistent quantitative framework, and analyses variables such as GDP, employment and welfare.

Transition-related energy jobs lead the way

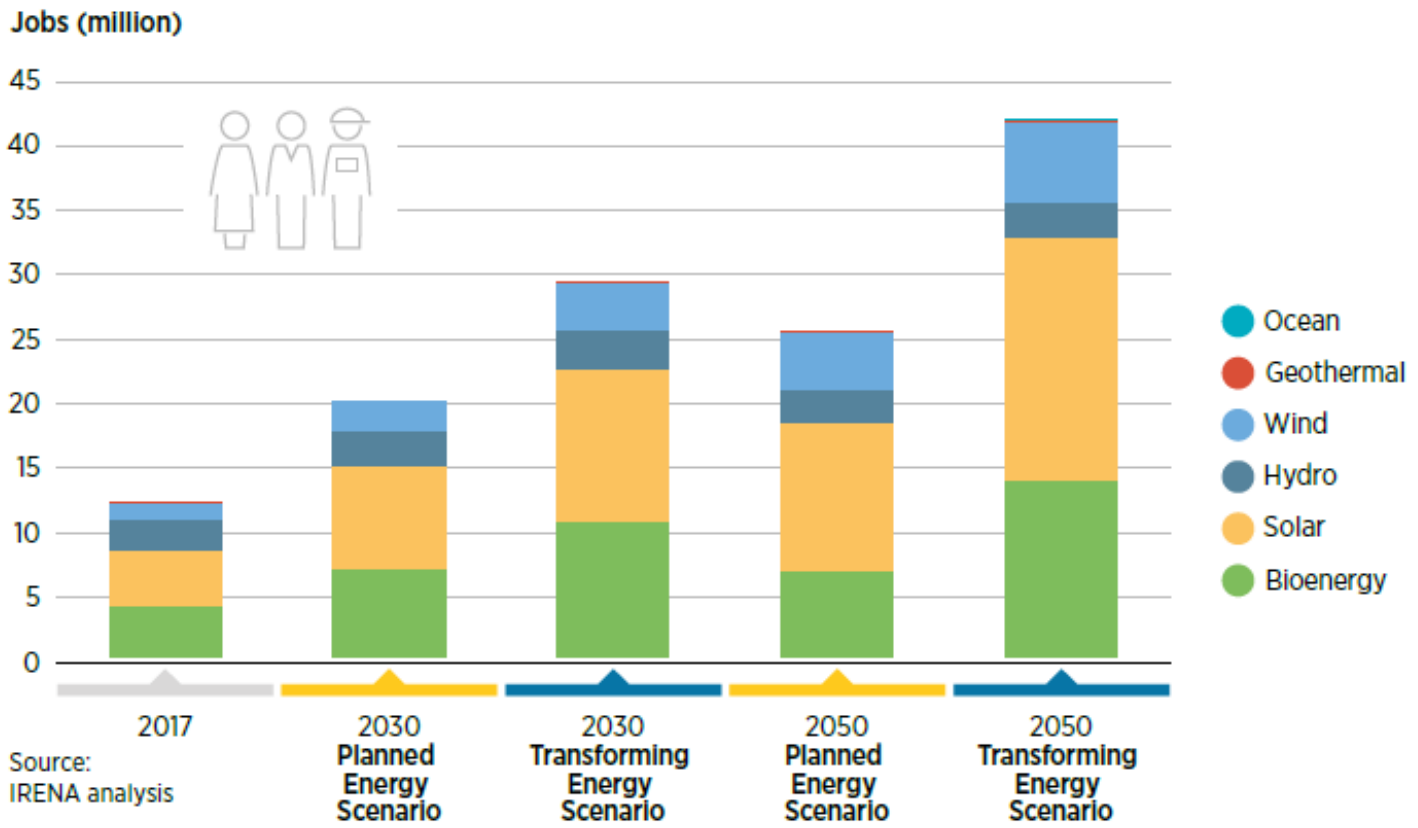
Global energy sector jobs under the Planned Energy and Transforming Energy scenarios, in 2017, 2030 and 2050



- Globally, the energy sector will employ almost 100 million people in by 2050—far more than today.
- Of these, 42 million jobs will be created in renewables, 21 in energy efficiency and 15 million in power grids and energy flexibility.

Solar and bioenergy create the most jobs in renewables

Global renewable energy jobs for the Planned Energy Scenario and the Transforming Energy Scenario in 2017, 2030 and 2050

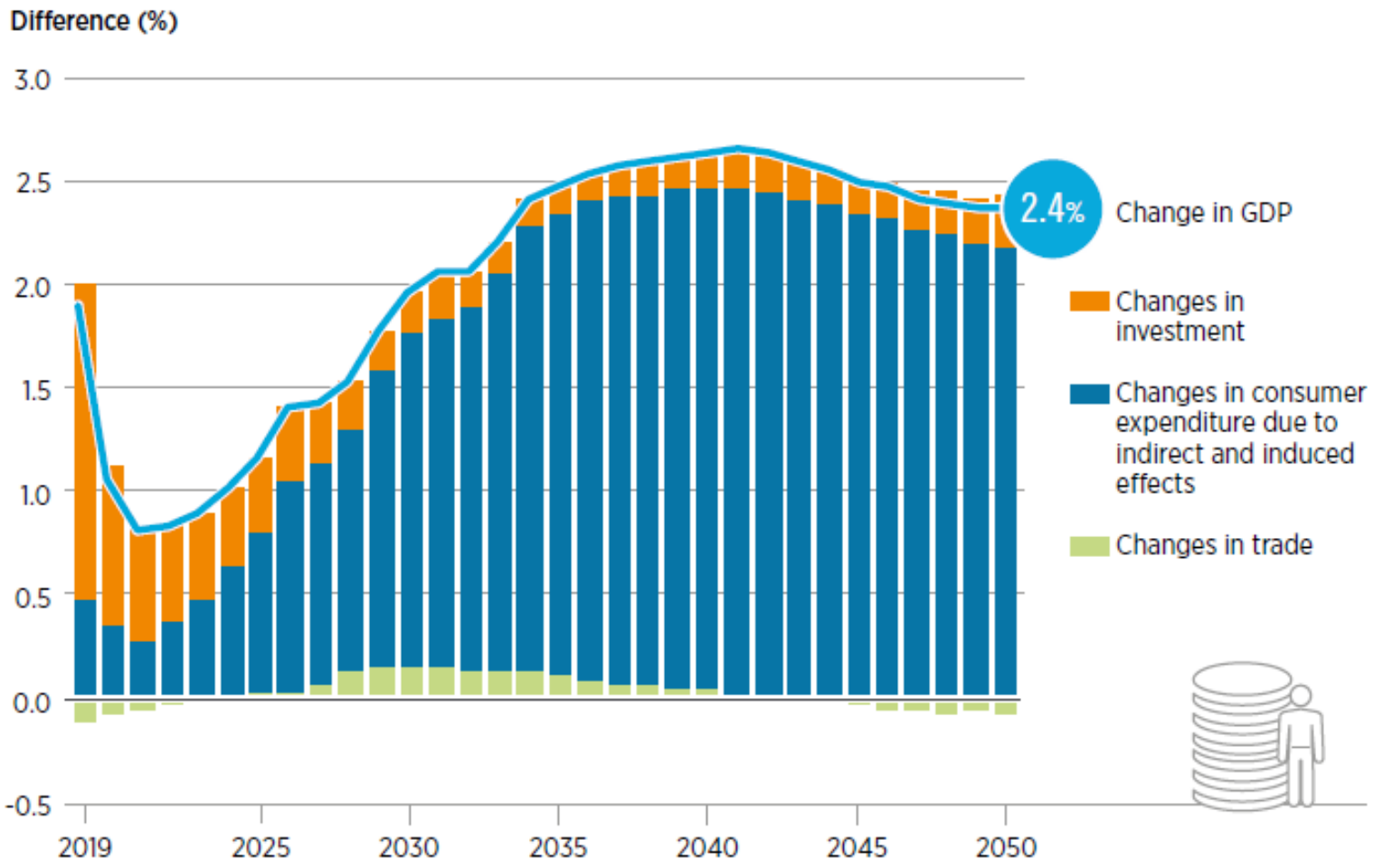


Source: IRENA analysis

- The Transforming Energy Scenario leads to 42 million jobs in renewable energy technologies.
- The additional jobs are dominated by solar and bioenergy, and to a lesser degree by wind technologies.

The global economy, as measured by GDP, will grow

Difference in global GDP between Transforming Energy Scenario and Planned Energy Scenario

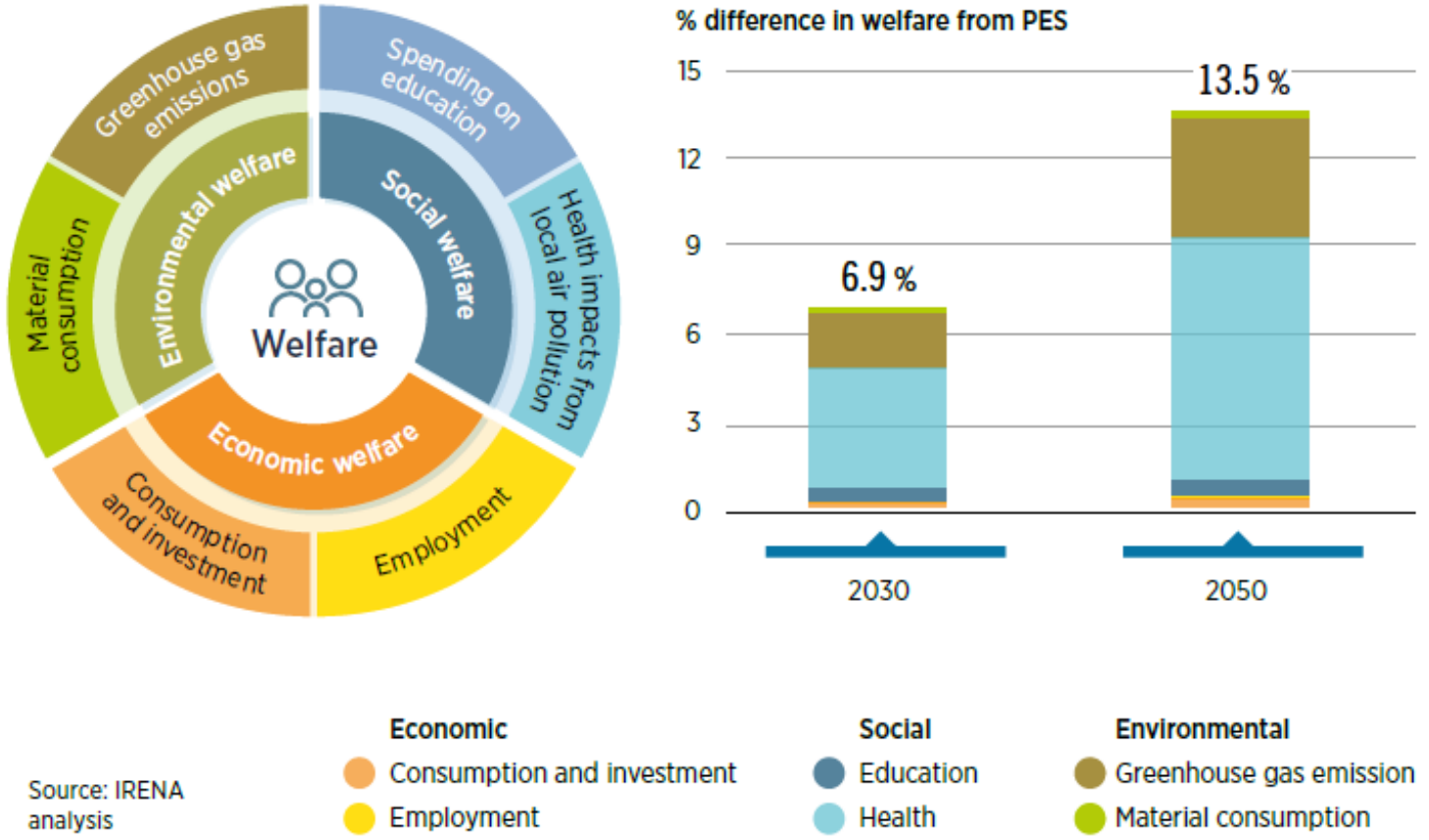


Source: IRENA analysis

- The Transforming Energy Scenario boosts global GDP in 2050 by 2.4% over the Planned Energy Scenario.
- The cumulative gain from 2019 to 2050 amounts to USD 98 trillion, is brought about by different drivers, most notably changes in consumer expenditure due to indirect and induced effects.

The energy transformation offers increased welfare

Global welfare indicator under the Transforming Energy Scenario in 2030 and 2050



Source: IRENA analysis

- The global welfare indicator improves by 13.5% in 2050, compared to the Planned Energy Scenario.
- The gains predominantly result from health benefits and emission reductions.

Regional socio-economic impacts for selected regions: GDP and welfare

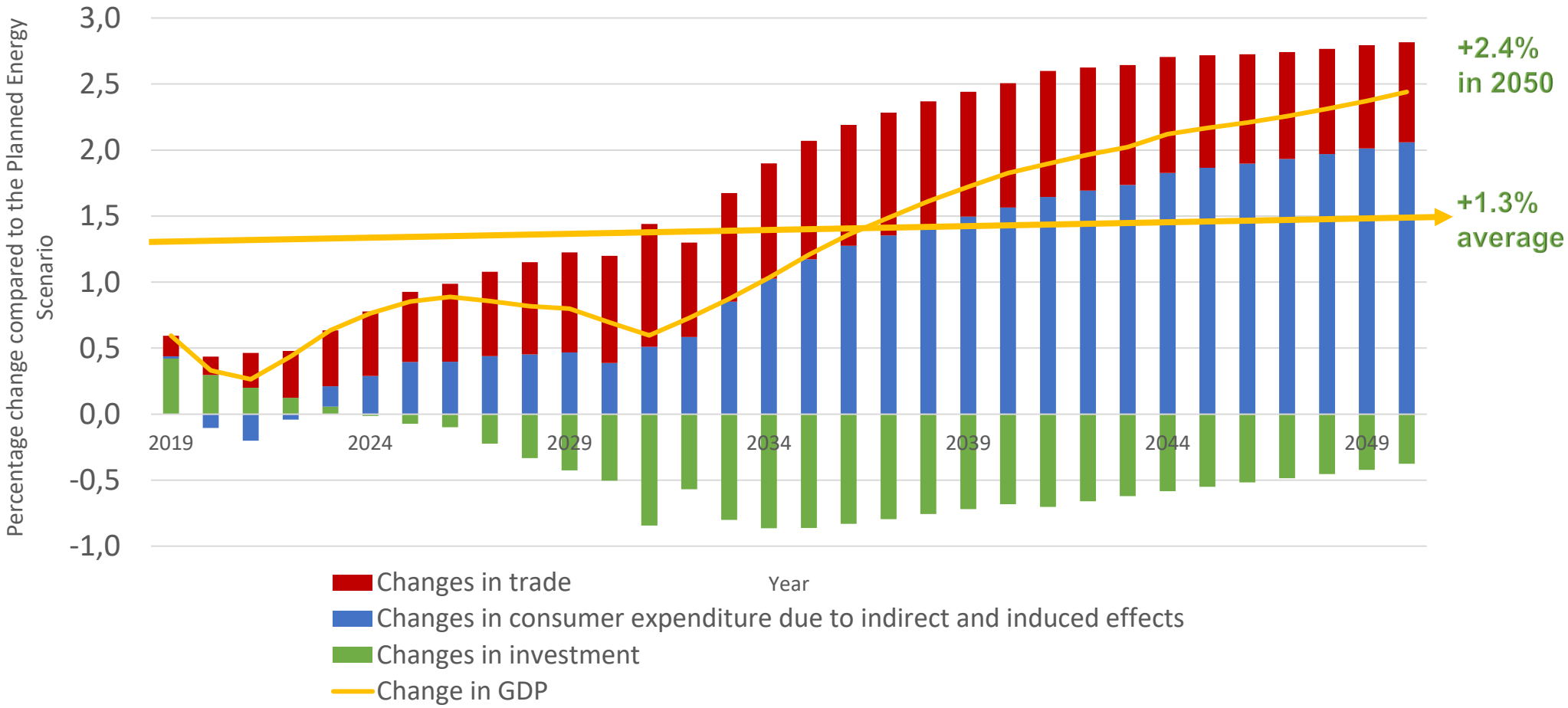
Region	GDP	Average % change 2019-2050	% Change in 2050	Welfare
European Union		4.81	7.39	
Southeast Asia		3.08	2.93	
East Asia		2.59	2.48	
Latin America and Caribbean		1.32	2.44	
Rest of Europe		0.48	1.57	
North America		1.06	1.46	
Rest of Asia		1.16	1.22	
Sub-Saharan Africa		0.56	0.72	

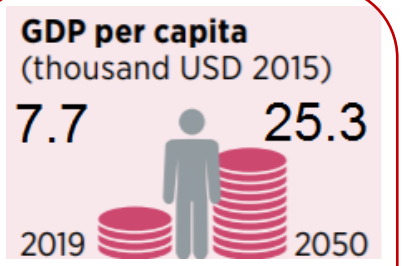
ENERGY TRANSFORMATION

LATIN AMERICA AND THE CARIBBEAN

Regional analysis extends from the Caribbean Islands and Central America to the southernmost tip of South America.

Boost in Latin American and Caribbean economy, as measured by GDP



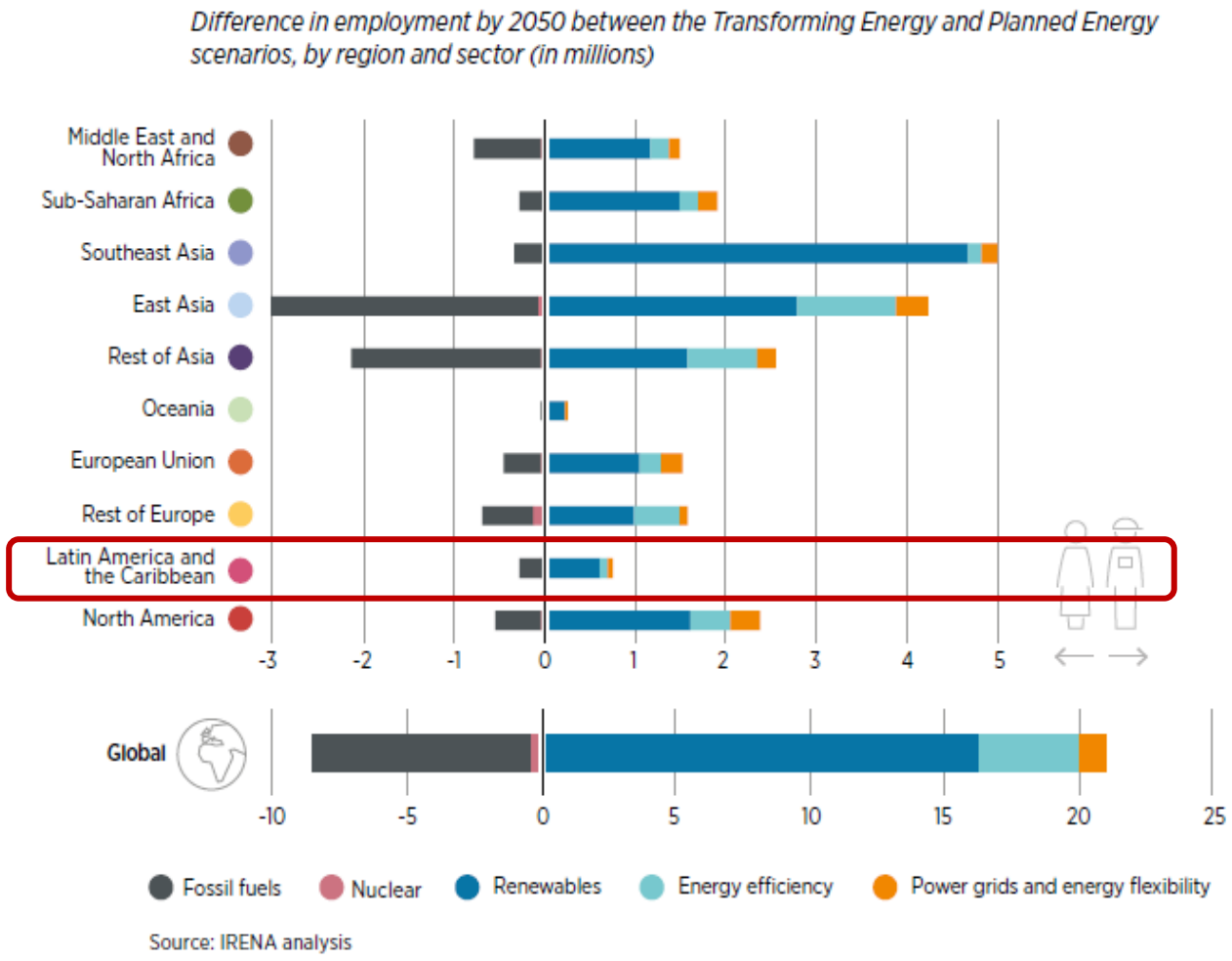


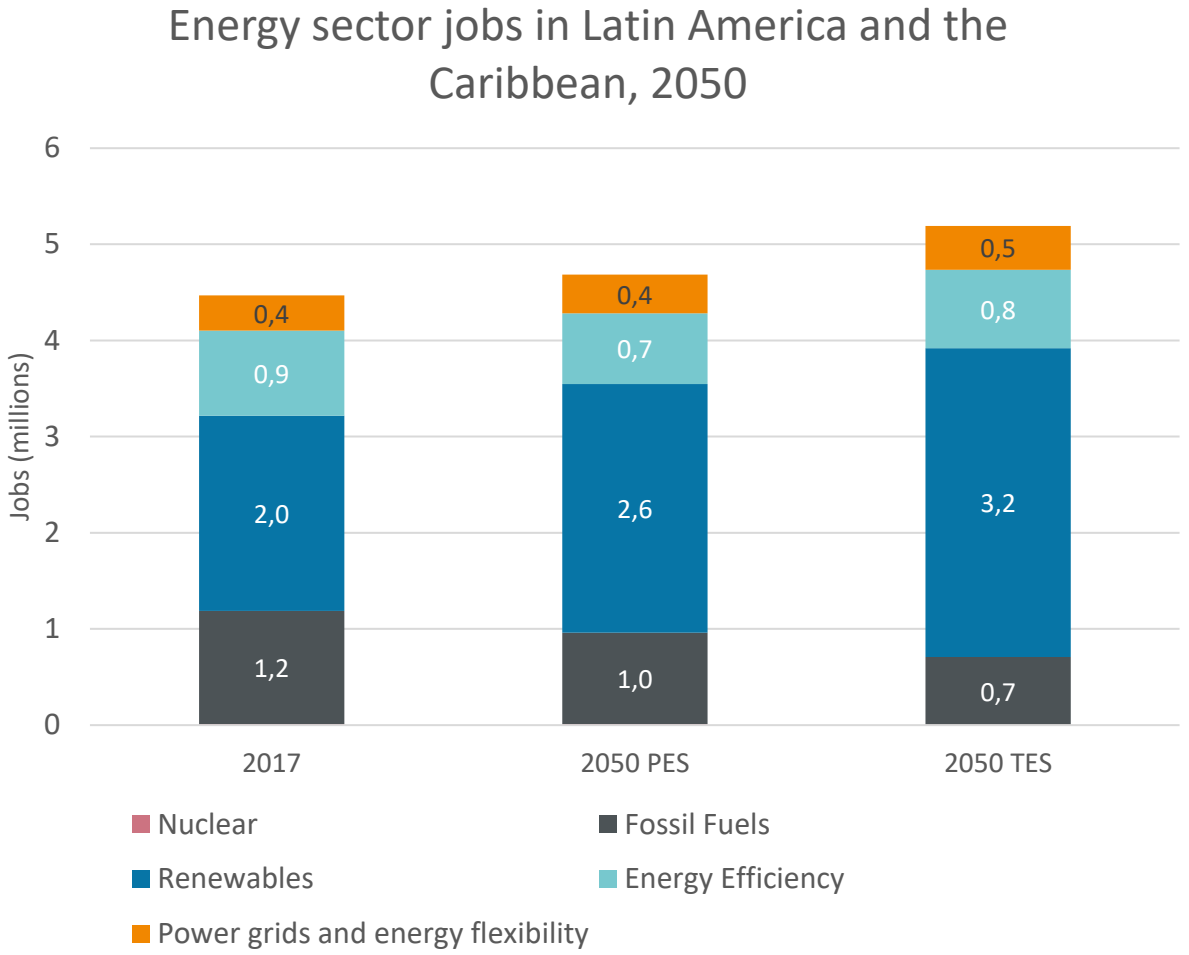
Welfare

+ 1.4.8 %

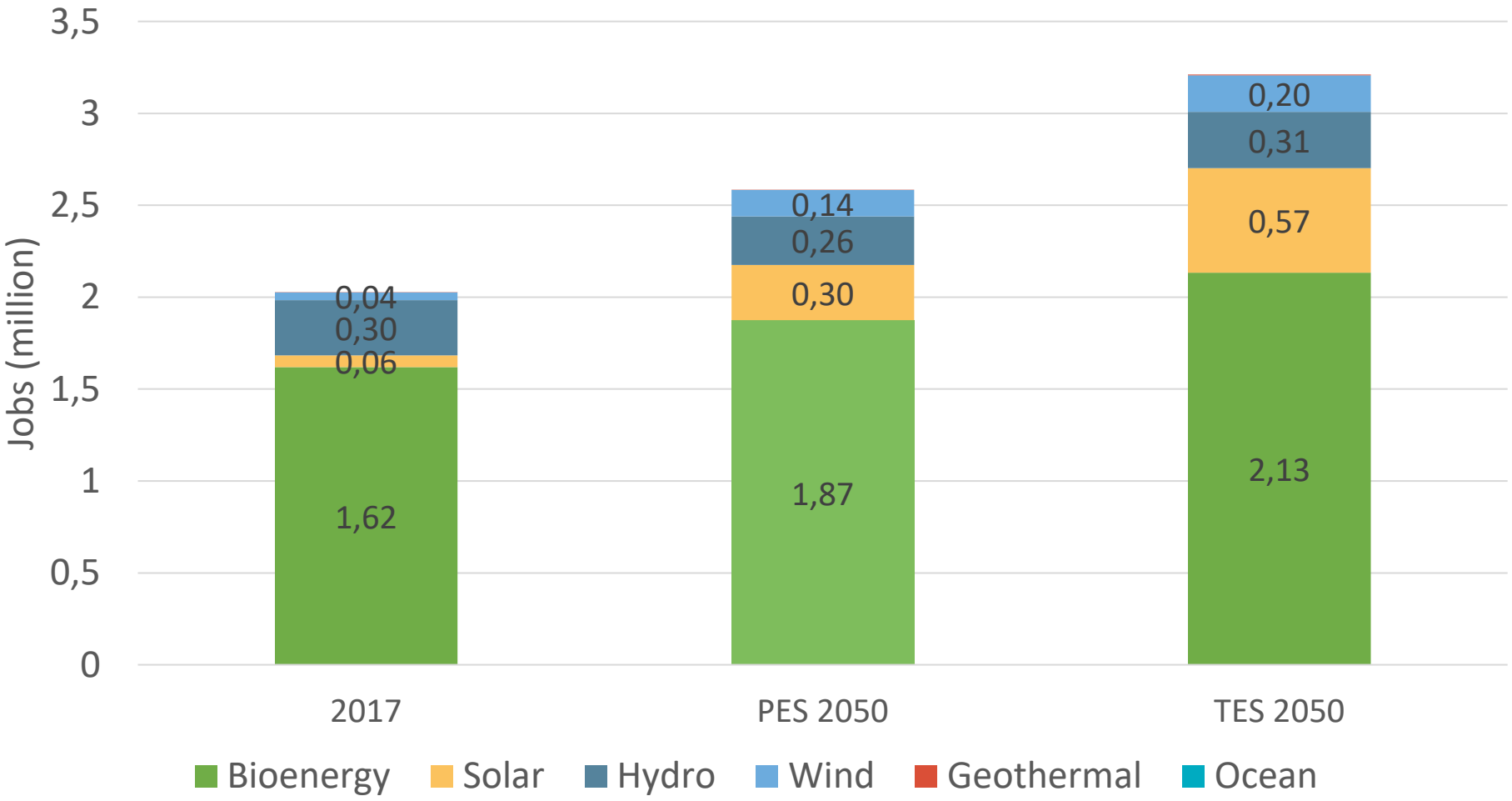
- Latin America and Caribbean GDP improves by 2.4% compared to the Planned Energy Scenario.
- Welfare improves by 14.8%, primarily due to improvement in health and GHG emission reduction

All regions see gains in energy sector jobs, including Latin America and the Caribbean





Jobs in bioenergy creates the most jobs in renewables in Latin America and Caribbean

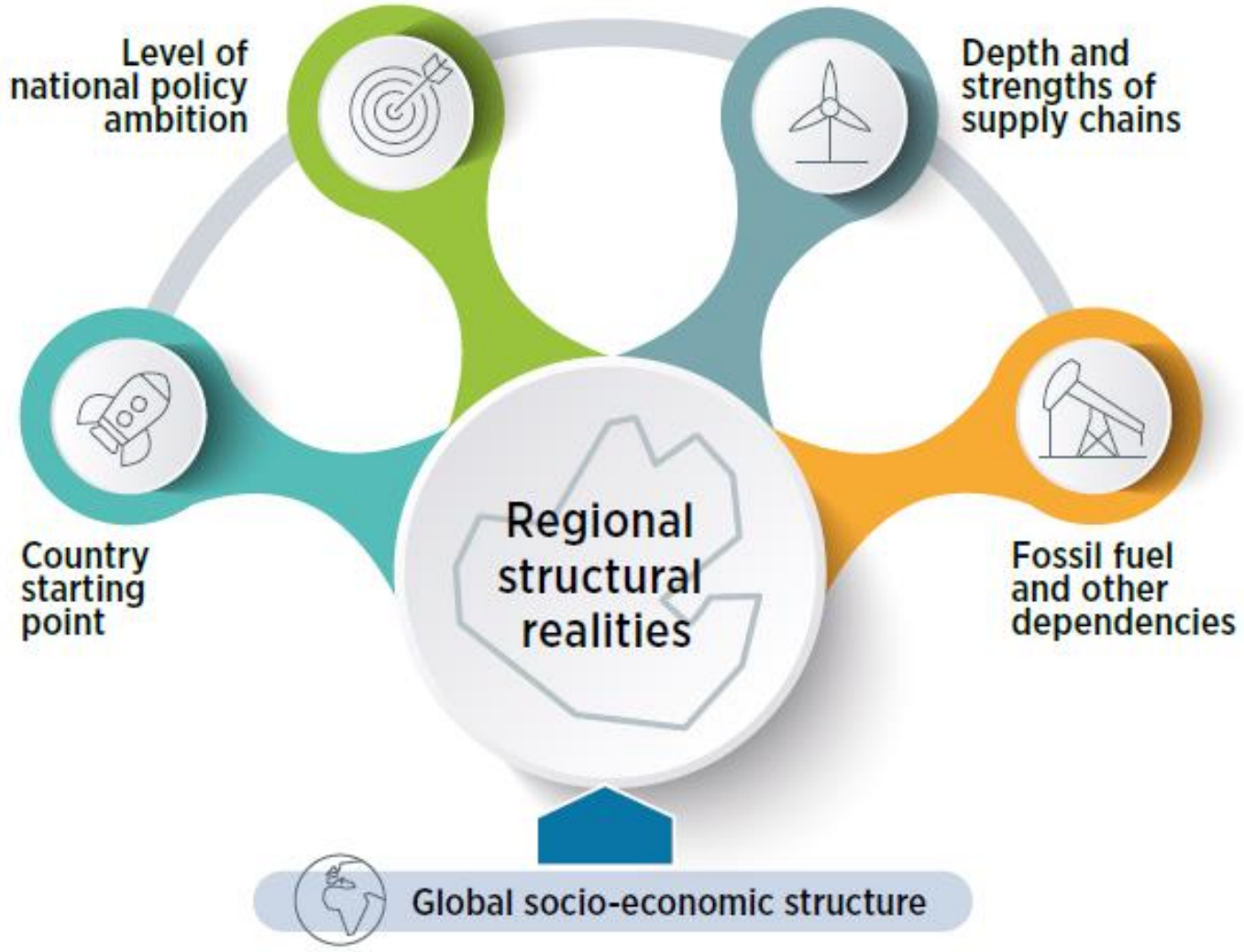


1.8 million RE jobs

0.13 million RE jobs

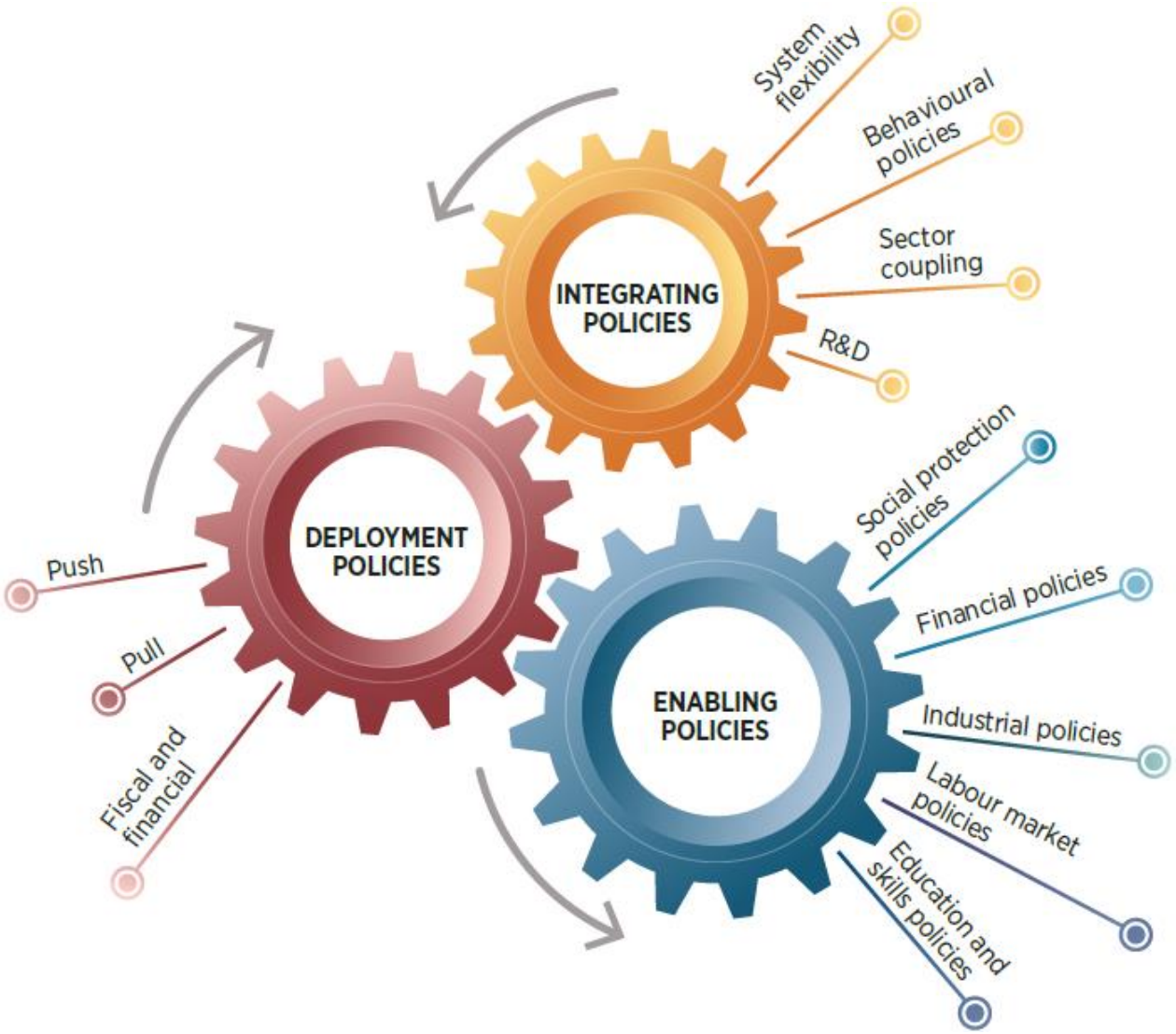
- Jobs in renewables increase by 24% compared to the Planned Energy Scenario, reaching 3.2 million in 2050.

Towards the transformative decarbonisation of societies



- The energy transition will generate highly diverse outcomes for regions and countries.
- Policies devised to drive and support the energy transition and the broader economic transformation must therefore be built on the strengths of individual countries and should enable them to overcome their structural dependencies.

Policy interventions for a decarbonised society



- Investing in clean energy infrastructure is critical, and as essential is investing in people and institutions to support the transition.
- Successful stimulus and recovery packages call for policy cohesion and increased international co-operation.

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