

Global Energy Transformation and Regional Action Plan for Latin America

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Energy transition has made progress but acceleration is needed



Costs of renewable energy continues to decline rapidly.



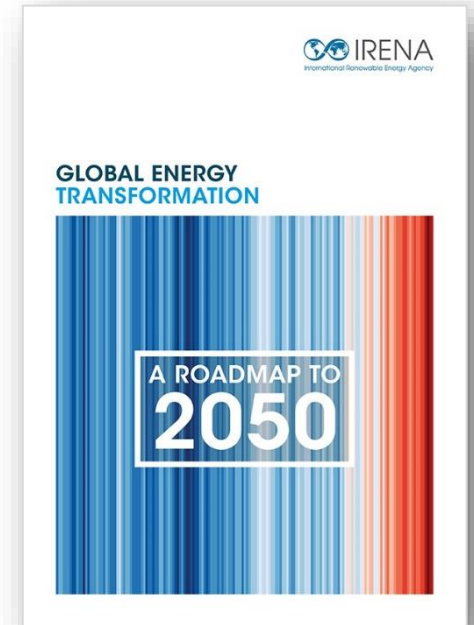
Wind and solar lead the power capacity expansion: wind and solar PV accounted for 84% of new power capacity in 2018.



Economies are increasingly powered by renewables: they provided 33% of electricity generation in the UK and around 40% in Germany and Spain in 2018.

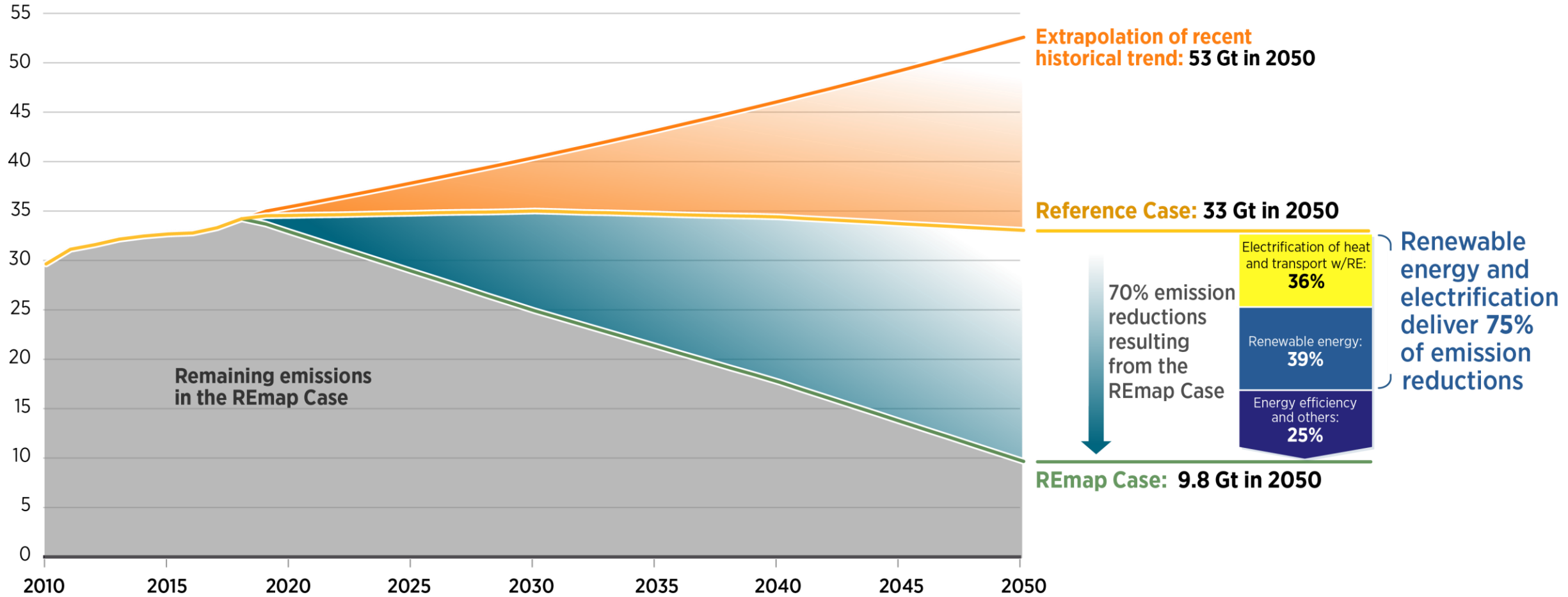


Expanding electricity use can be the main driver for accelerating the energy transformation: e.g. EV sales surpassed 2 million units in 2018.



Renewables & electrification can deliver 75% of energy-related CO₂ emission reductions needed

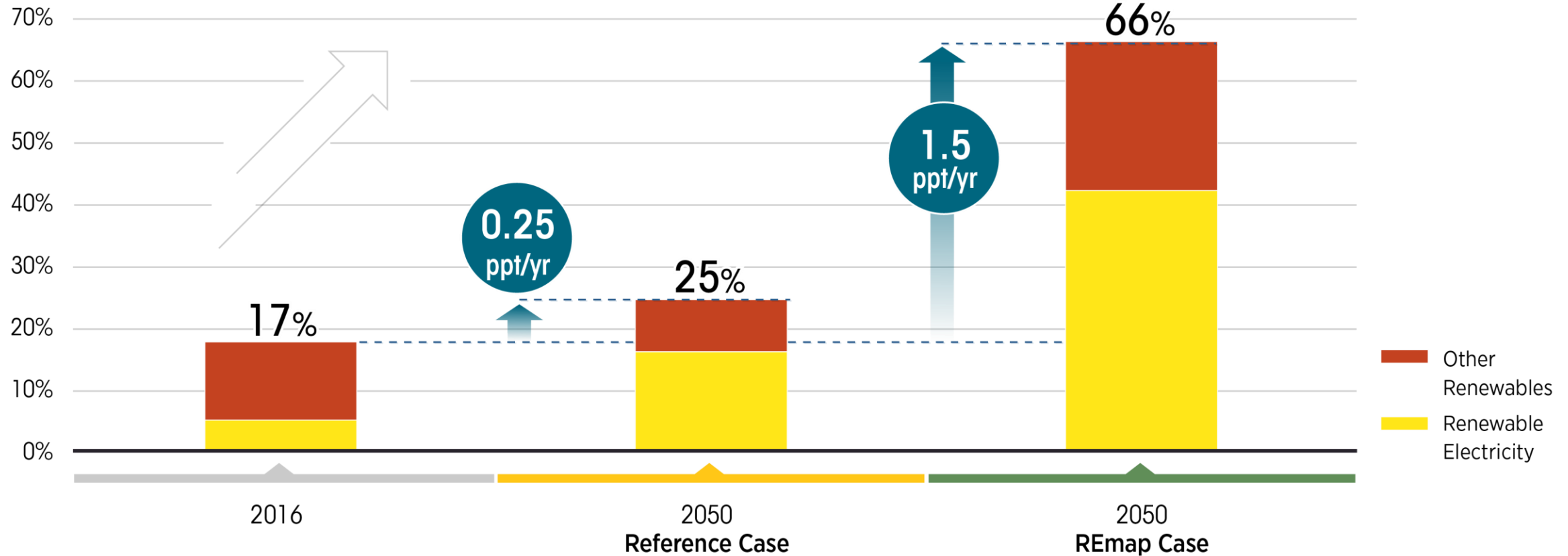
Annual energy-related CO₂ emissions, 2010-2050 (Gt/yr)



With energy efficiency included, this rises to over 90%.

Renewables growth must increase six-fold

Renewable energy share in total final energy consumption (%)

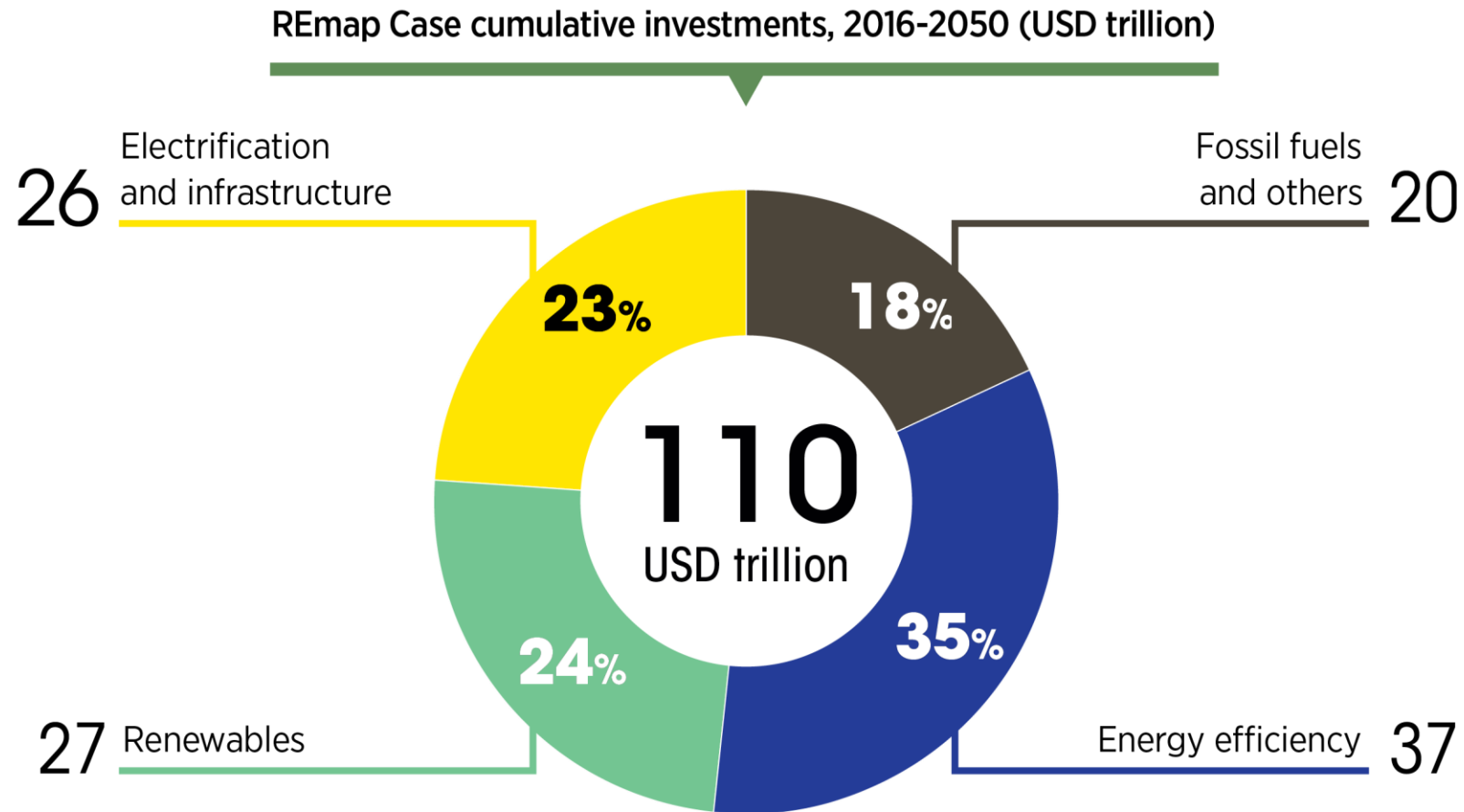


- The growth in renewable energy share must increase six-fold compared to current plans
- Energy intensity improvement needs to increase by a third, to 3.2% per year

Regional key indicators infographic for the Americas

			NORTH AMERICA			LATIN AMERICA		
			REmap			REmap		
			2016	2030	2050	2016	2030	2050
Energy use	TPES	EJ/yr	113	90	82	27	30	33
	TFEC	EJ/yr	82	69	58	22	22	21
RE shares	RE share in TFEC	%	10%	29%	68%	29%	47%	67%
	RE share in TPES	%	10%	30%	67%	31%	53%	73%
	RE share in power generation	%	22%	60%	85%	63%	85%	93%
Electrification	Share of electricity use in TFEC	%	20%	28%	52%	18%	26%	39%
	Share of electricity use in Industry	%	20%	21%	29%	22%	27%	33%
	Share of electricity use in Transport	%	0%	13%	57%	0%	9%	24%
	Share of electricity use in Buildings	%	48%	54%	78%	44%	61%	78%
Power capacity	Wind	GW	100	448	1 314	15	93	188
	Solar PV	GW	38	485	1 728	3	108	281
Emissions	Energy-related CO ₂ emissions	Mt CO ₂ /yr	6 632	3 653	1 435	1 234	951	551
	Avoided emissions (vs Ref Case)	Mt CO ₂ /yr	-	-2 925	-5 369	-	-484	-1 124
	Reduction relative to 2016	%	-	-45%	-78%	-	-23%	-55%

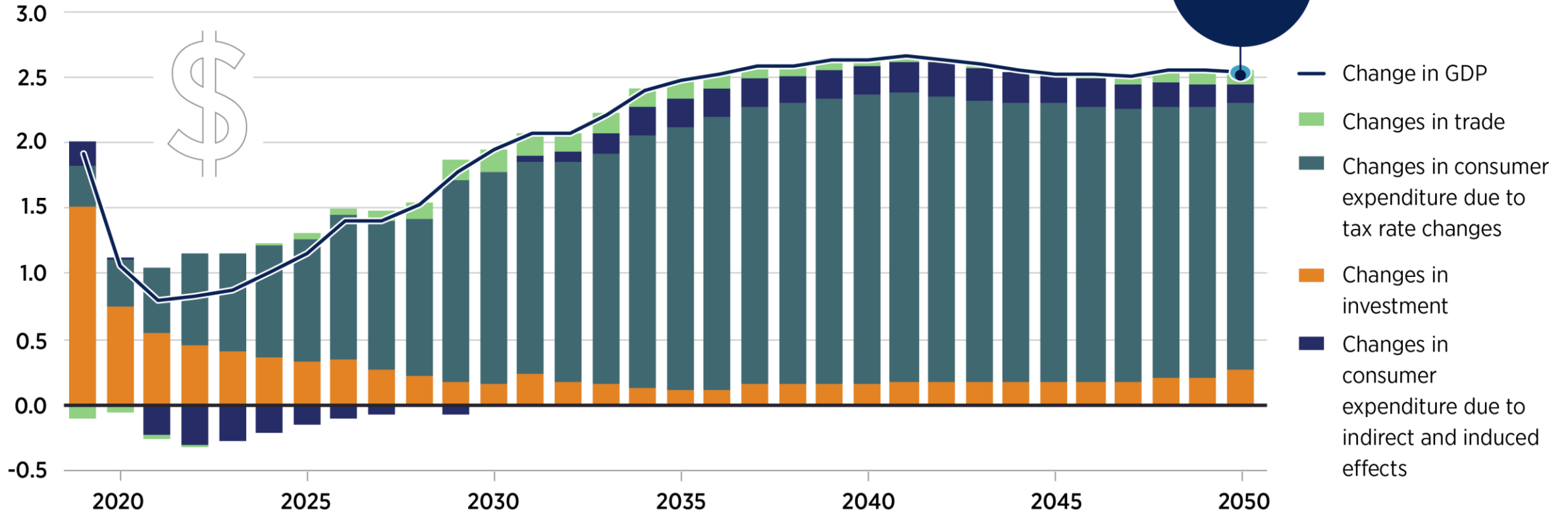
Additional investments are required upfront to realise the benefits



- USD 110 trillion needed by 2050 is equivalent to around 2% of global GDP/year over the period.
- Additional investments on top of the business-as-usual are USD 15 trillion from now to 2050.

The energy transformation boosts global GDP

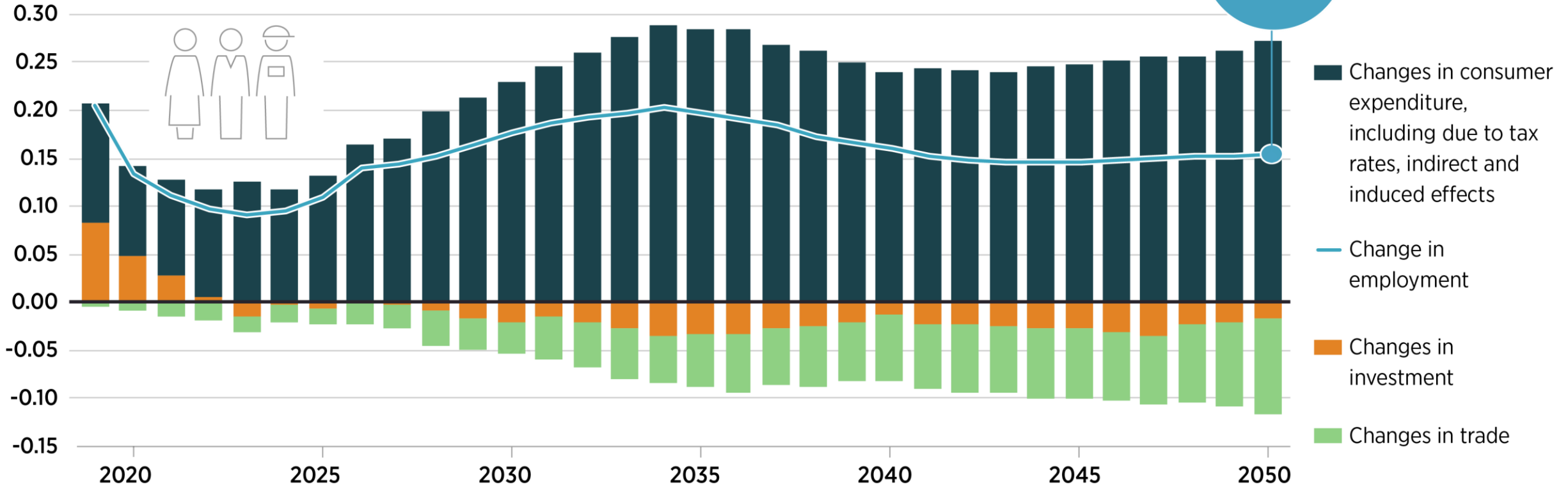
% difference on GDP from Reference Case



- Every dollar spent in the global energy transformation saves 3 to 7 USD.
- Global GDP is boosted by 2.5% in 2050, with a cumulative gain of USD 99 trillion from 2019-2050.
- Significant differences in regional footprints and the role played by the different drivers

Economy-wide employment witnesses growth

% difference in employment from Reference Case



- Global employment increases by 0.2% → 7 million jobs
- Sectoral and regional imbalances exist:
 - RE & EE experience a strong increase in employment
 - Jobs lost in fossil fuels & other sectors of the economy → actions needed for a just transition

GET2050 recommendations

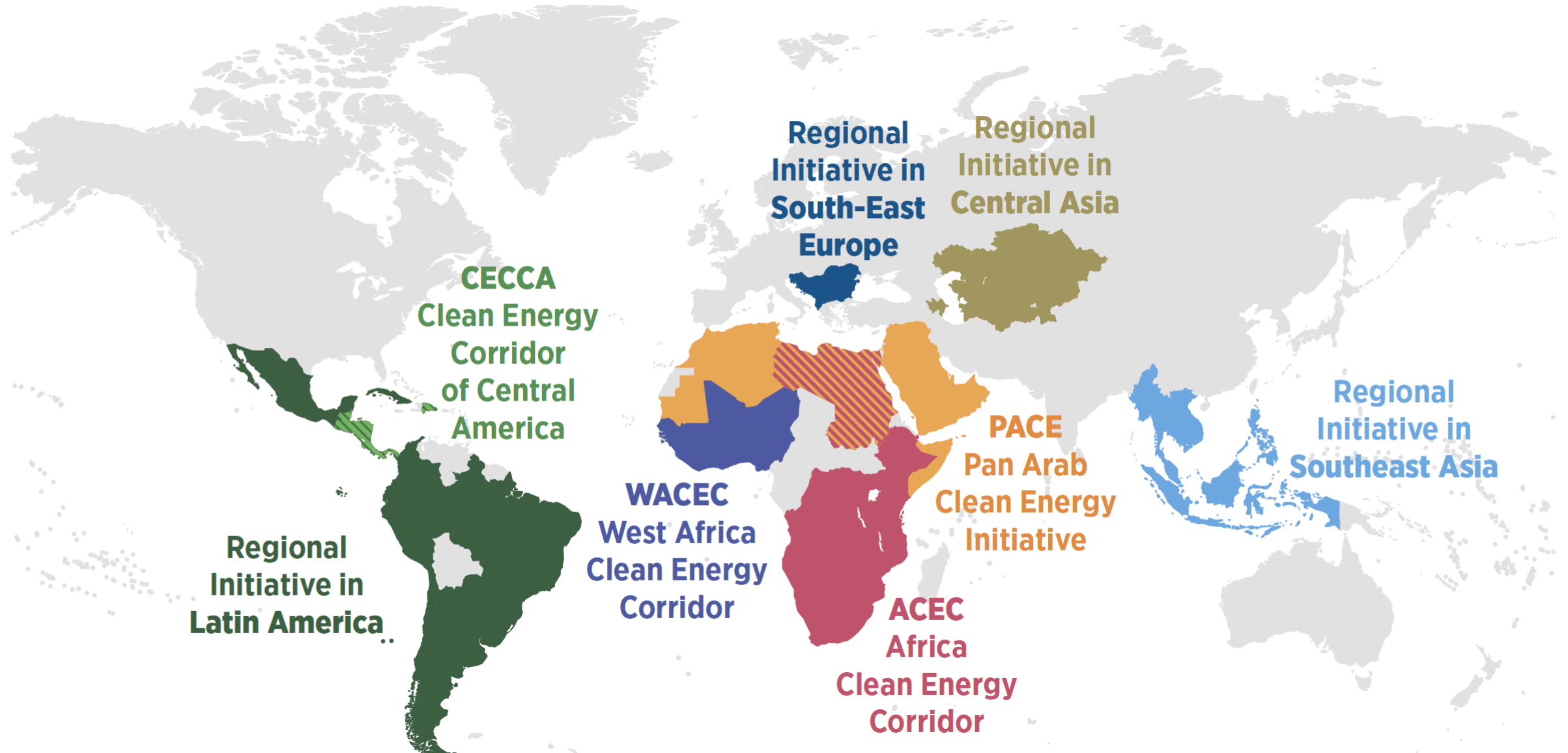
- Modernizing energy systems for the renewable energy age
- Aligning energy policies and climate objectives
- Unlocking investments and scaling-up renewable energy projects

IRENA driving the energy transition

- Facilitating high-level dialogue to establish the required investment framework
- Strengthening local capacities and fostering local ownership
- Strengthening international cooperation and partnerships, including with multilateral institutions and IFIs
- Providing technical assistance

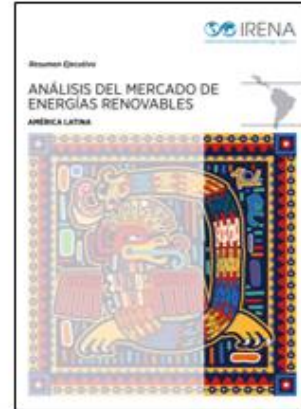


IRENA Regional Initiatives



Development of the Regional Action Plan for Latin

Abu Dhabi Communique
on Accelerating
Renewable Energy
Uptake in Latin America



Consultative
process to develop
Regional Action
Plan



2015



2016



2018



2019



Regional Market
Analysis:
Latin America



Regional Action
Plan: Accelerating
Renewable Energy
Deployment in
Latin America

Regional Action Plan: Priority Areas of Cooperation

1. Long-term power sector planning

Enhance understanding of best practices for long-term power system planning and modelling with high shares of variable renewable energy

2. Power system flexibility

Enhance power system flexibility and national electricity planning through the application of flexibility assessments

3. Grid integration of variable renewable energy

Build capacity on operating and managing power systems with rising shares of variable renewable energy penetration

4. Regional Renewable Energy Roadmap (REmap)

Evaluate all renewable energy options to support the energy transformation at the country, regional and global level

5. Enabling policy and regulatory frameworks, and socio-economic impacts

Support the development of enabling policy and regulatory measures to help create a conducive environment for renewable energy investments

6. Project development and finance

Support development of bankable projects, facilitate access to finance and enhance understanding of risk mitigation measures

7. Geothermal Energy

Promote geothermal energy in regional renewable energy engagements

8. Clean Energy Corridor of Central America

Synchronise the implementation of CECCA with the Regional Action Plan for Latin America

Support development of bankable projects, facilitate access to finance and enhance understanding of risk mitigation measures

Global Atlas FOR RENEWABLE ENERGY

Site Appraisal Service

- Obtain reliable wind speed and solar irradiance data
- Assess annual energy production and financial feasibility

SUSTAINABLE ENERGY MARKETPLACE

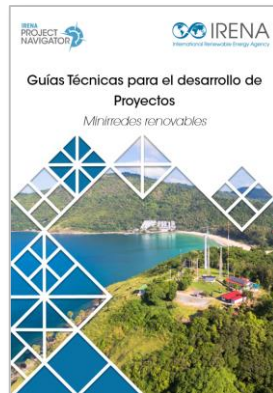
- 11 projects in Central America
- 68 projects in South America
- Total installed capacity of 2.1 GW
- Total investment size of USD 4.4 bn



- Technical guidelines for geothermal power projects, utility-scale solar PV projects and mini-grid applications under development (in Spanish)



(2019)



(2019)

IRENA ADFD

Supporting Energy Transition

- 7th cycle ongoing (Feb. 2019); USD 50 million available; Up to 50% project costs covered with 20-year loan period



The Regional Action Plan for Latin America will leverage key partnerships and regional forums / platforms





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