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ENERGIZING THE GLOBAL TRANSITION

Ani Dasgupta

President & CEO

MIT Earth Day Colloquium

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 @AniDasguptaWRI

BEYOND CLIMATE



AN UNEQUAL WORLD

PEOPLE 

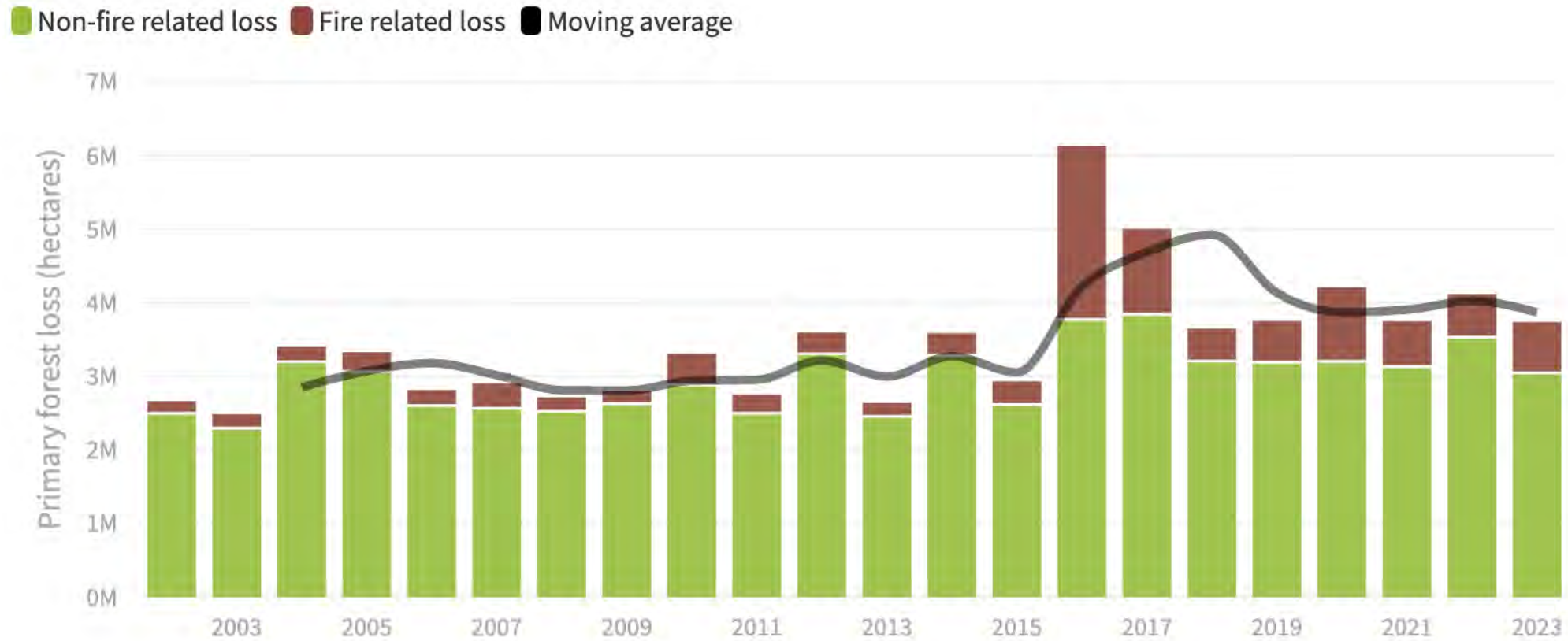
>690 million people living in
extreme poverty in 2023

CLIMATE IS A THREAT MULTIPLIER

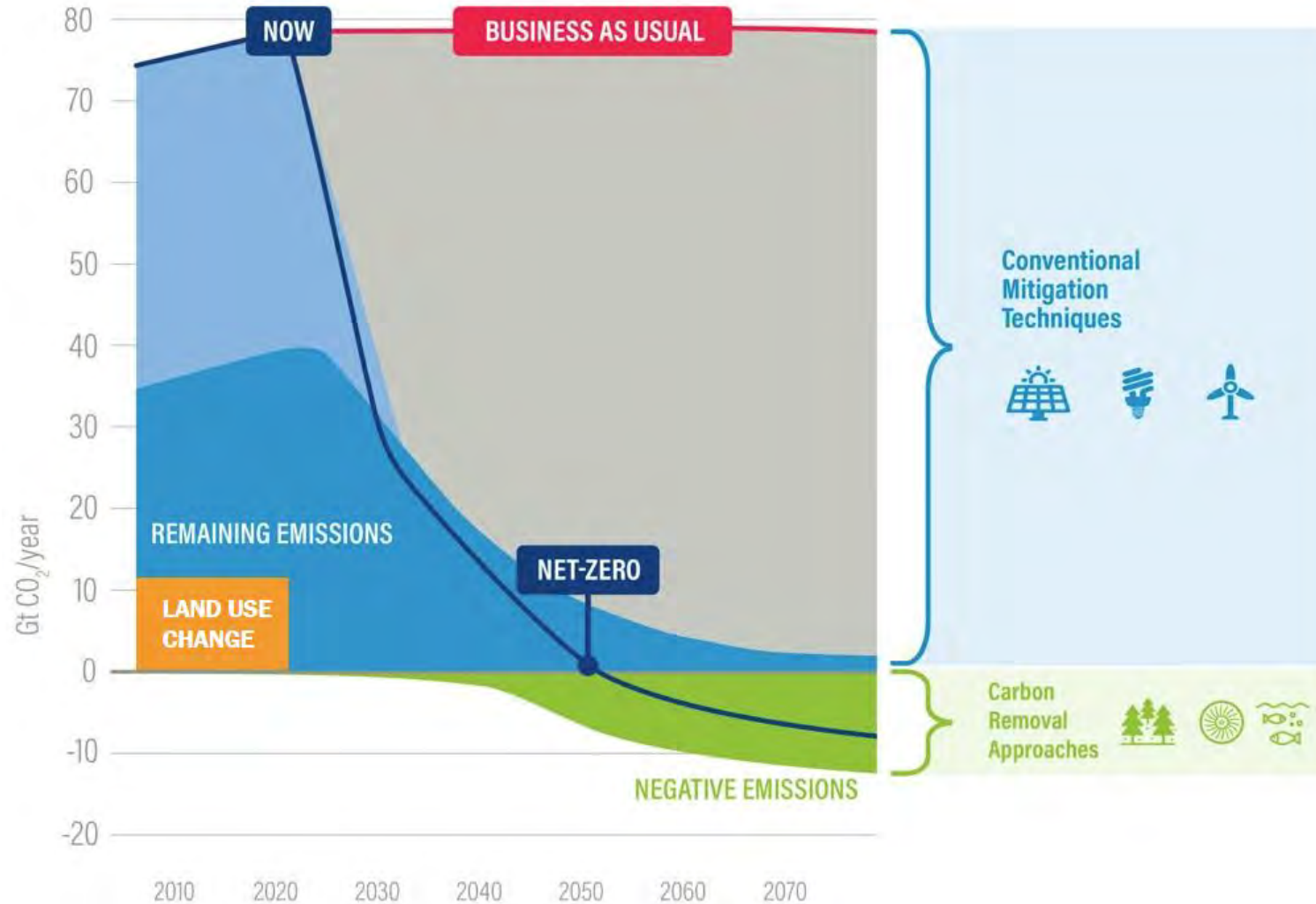


3.6 billion people, or nearly half the global population, live in areas highly susceptible to climate change

TREE COVER LOSS A PERSISTENT PROBLEM



CAN'T REACH 1.5°C WITHOUT NATURE



EVERY FRACTION OF A DEGREE MATTERS



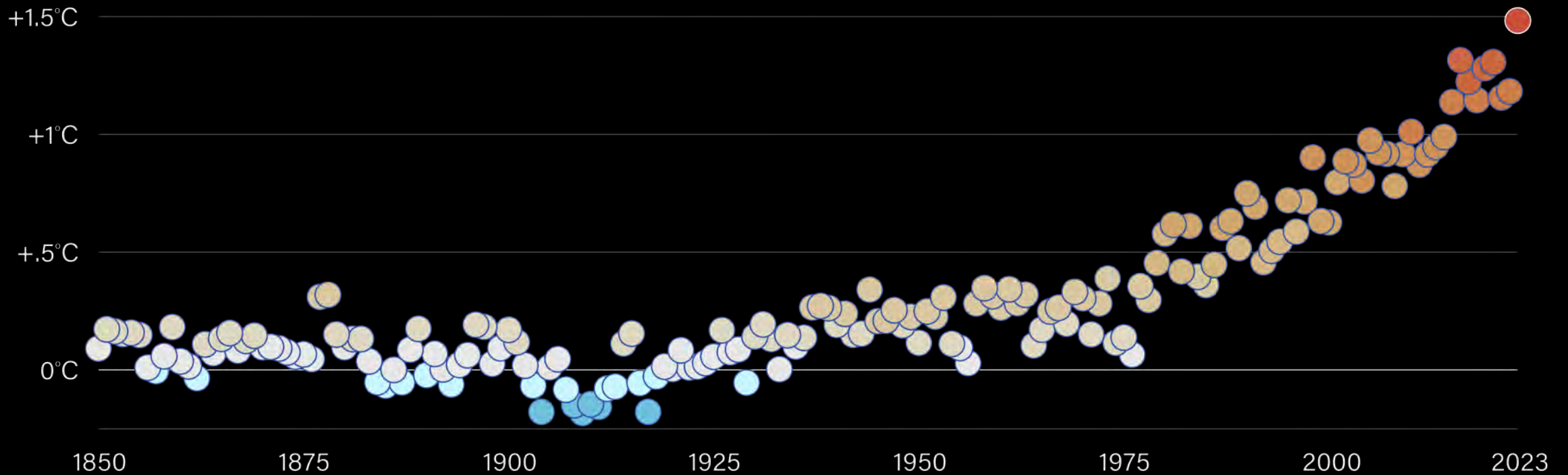
EXPECTED GLOBAL TEMPERATURE INCREASE IN 2100

2010 (CANCUN)	3.7–4.8°C
2015 (PARIS)	3.0–3.2°C
2021 (GLASGOW)	2.6–2.7°C
2022 (SHARM EL-SHEIKH)	2.4–2.6°C

2023: HOTTEST YEAR ON RECORD



Average global temperature compared to 1880-1899

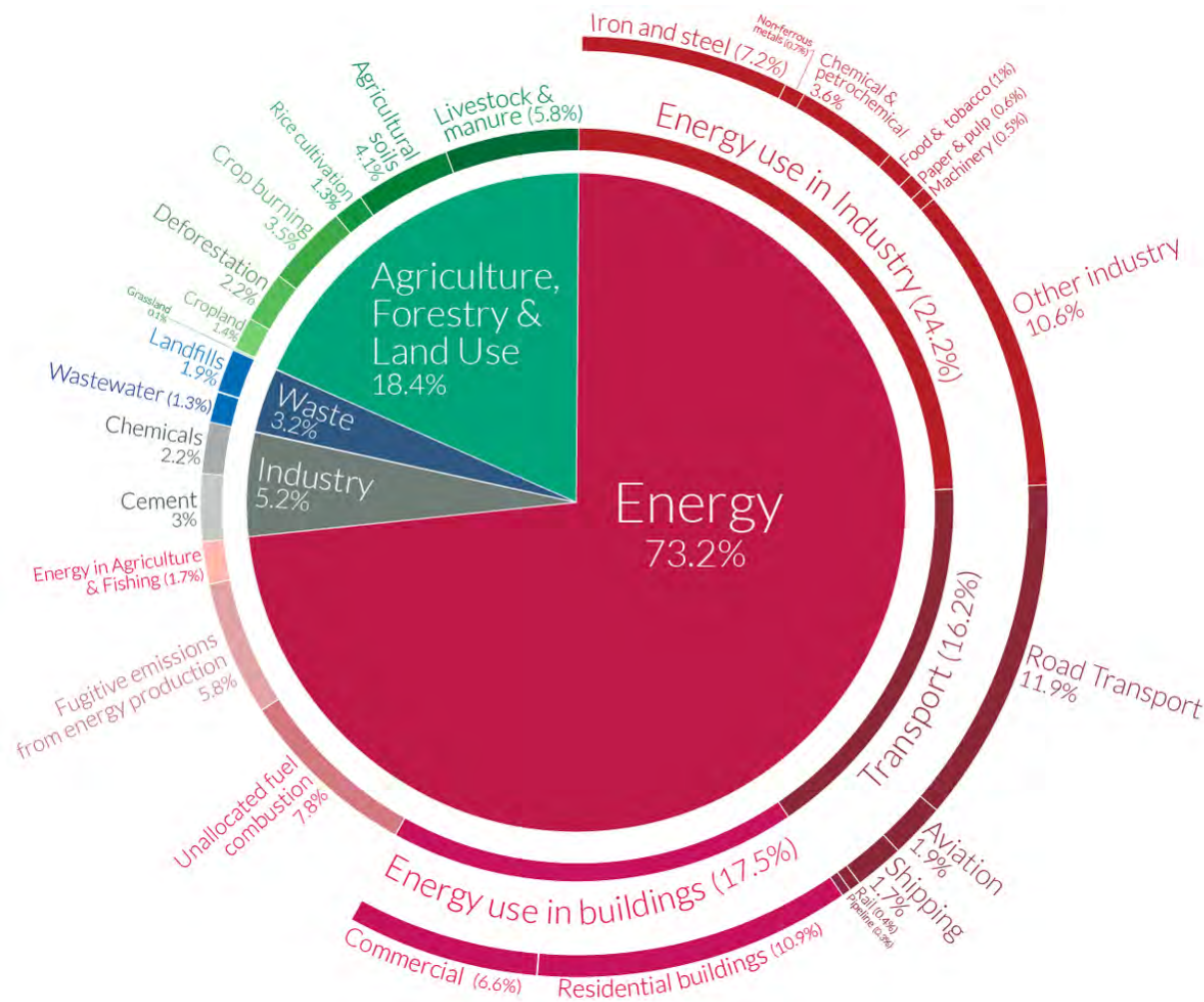




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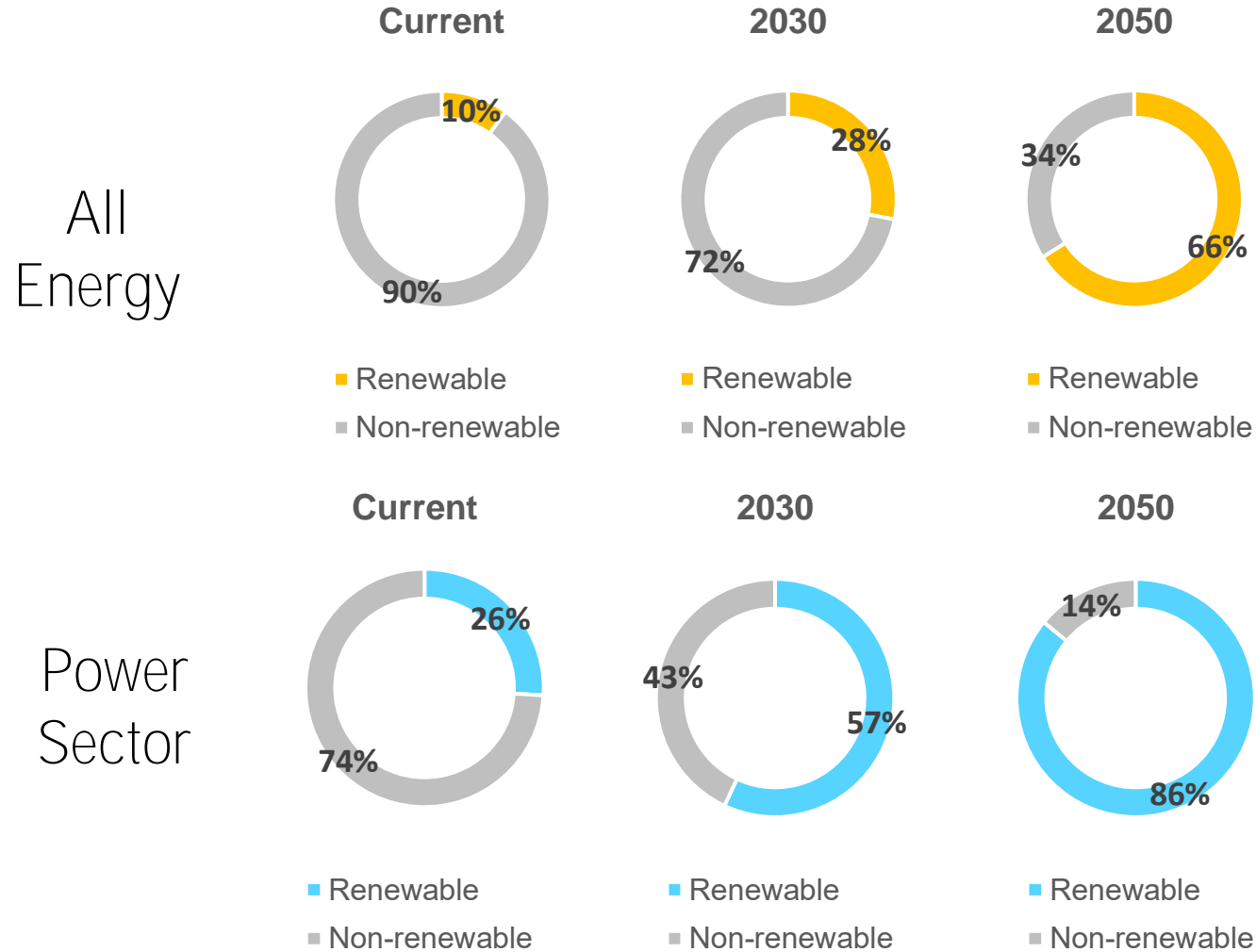
NO NET-ZERO WITHOUT ENERGY

ENERGY IS THE BIGGEST CONTRIBUTOR



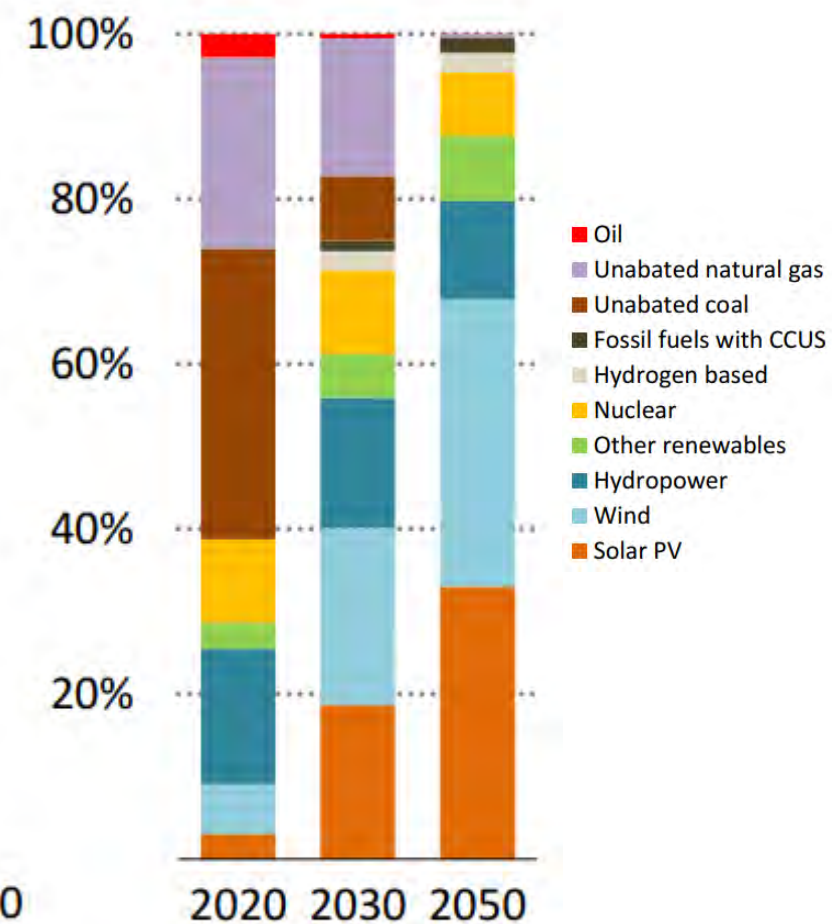
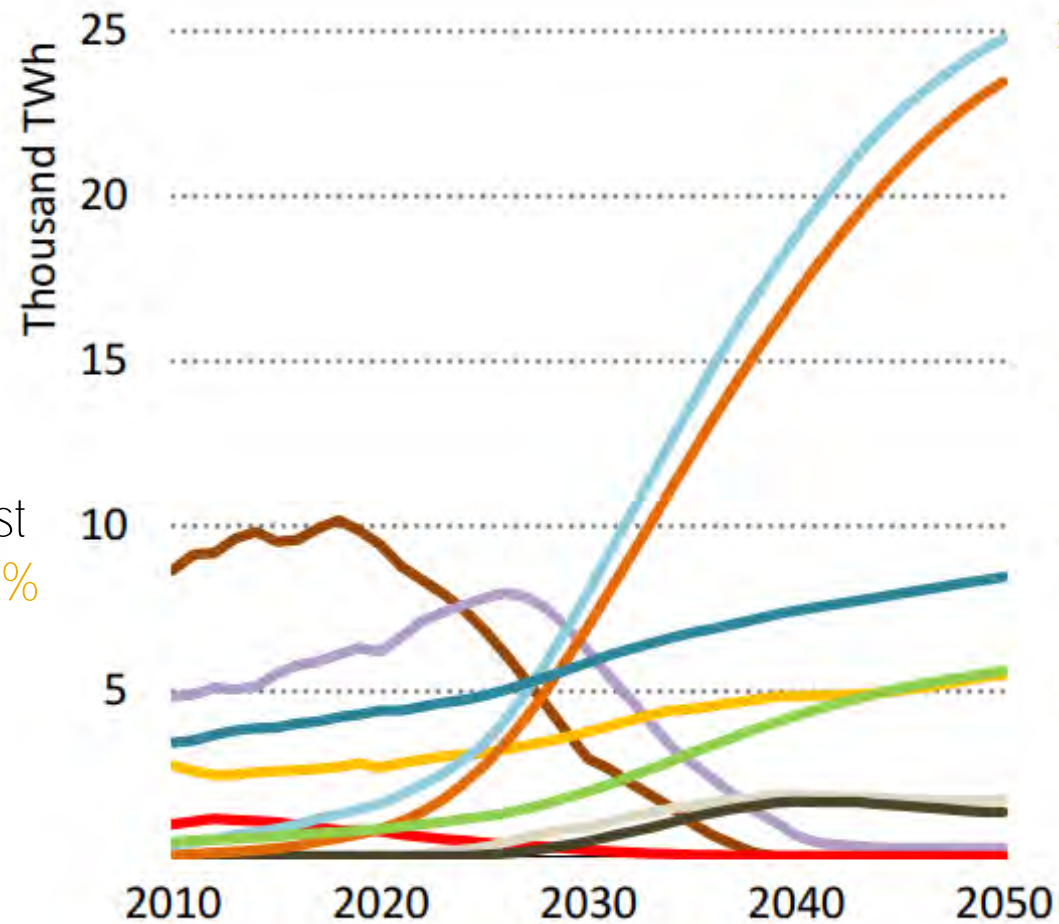
Energy system accounts for 73% of global GHG emissions

WHAT'S NEEDED IN THE ENERGY TRANSITION



THE ROAD TO NET ZERO BY 2050

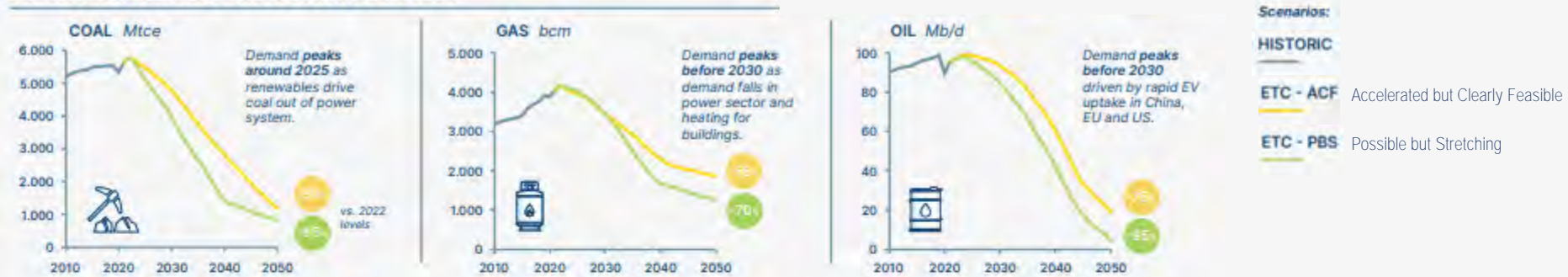
Solar and wind capacity must rise from 29% in 2020 to 90% in 2050



REDUCING FOSSIL FUEL DEMAND IS CRUCIAL

Reducing emissions from fossil production is important, but **reducing fossil fuel demand is crucial**

FOSSIL FUEL DEMAND TO 2050 IN ETC SCENARIOS



ANNUAL FOSSIL FUEL DEMAND BY SECTOR IN PBS SCENARIO



2015: 196 NATIONS COMMIT IN PARIS

Nations Unies

Conférence sur les Changements Climatiques 2015

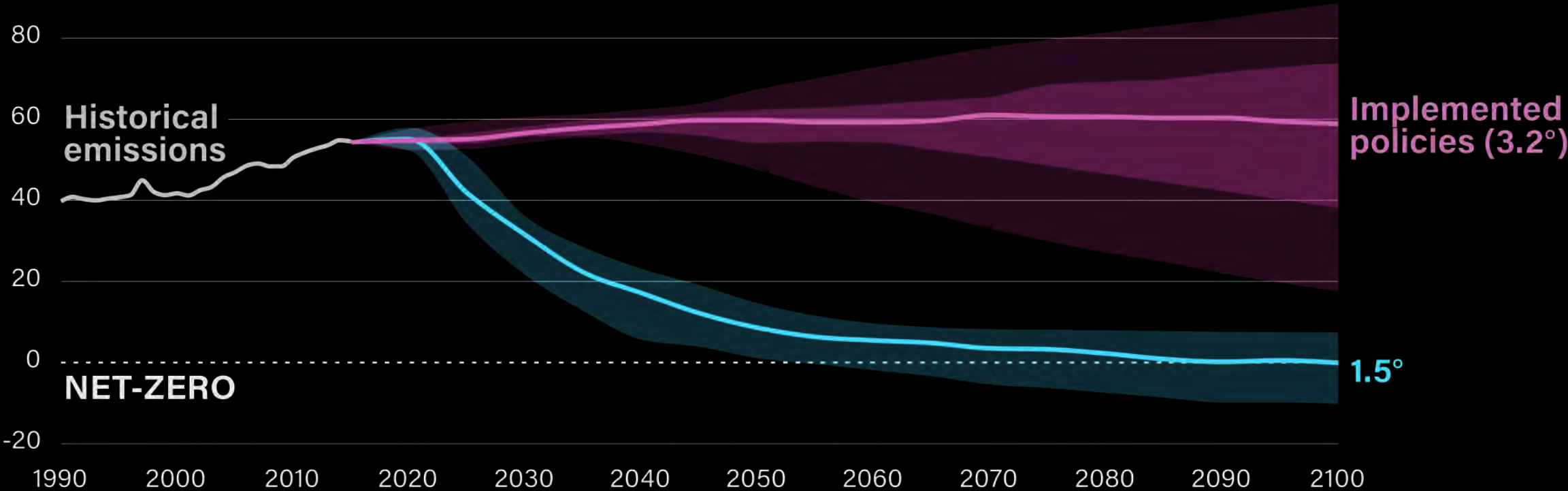
COP21/CMP11

Paris France



GLOBAL STOCKTAKE: THE WORLD IS OFF TRACK

Gigatons of CO₂-equivalent emissions (GtCO₂-eq/yr)

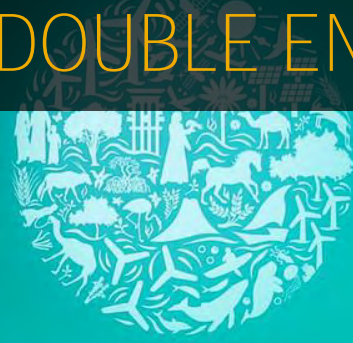


Need to reduce emissions by 43% by 2030 for 1.5°C future
Countries' current plans will at best lower emission by 8%

2023: TRIPLE RENEWABLE ENERGY AND DOUBLE ENERGY EFFICIENCY



United Nations
Climate Change



COP28 UAE

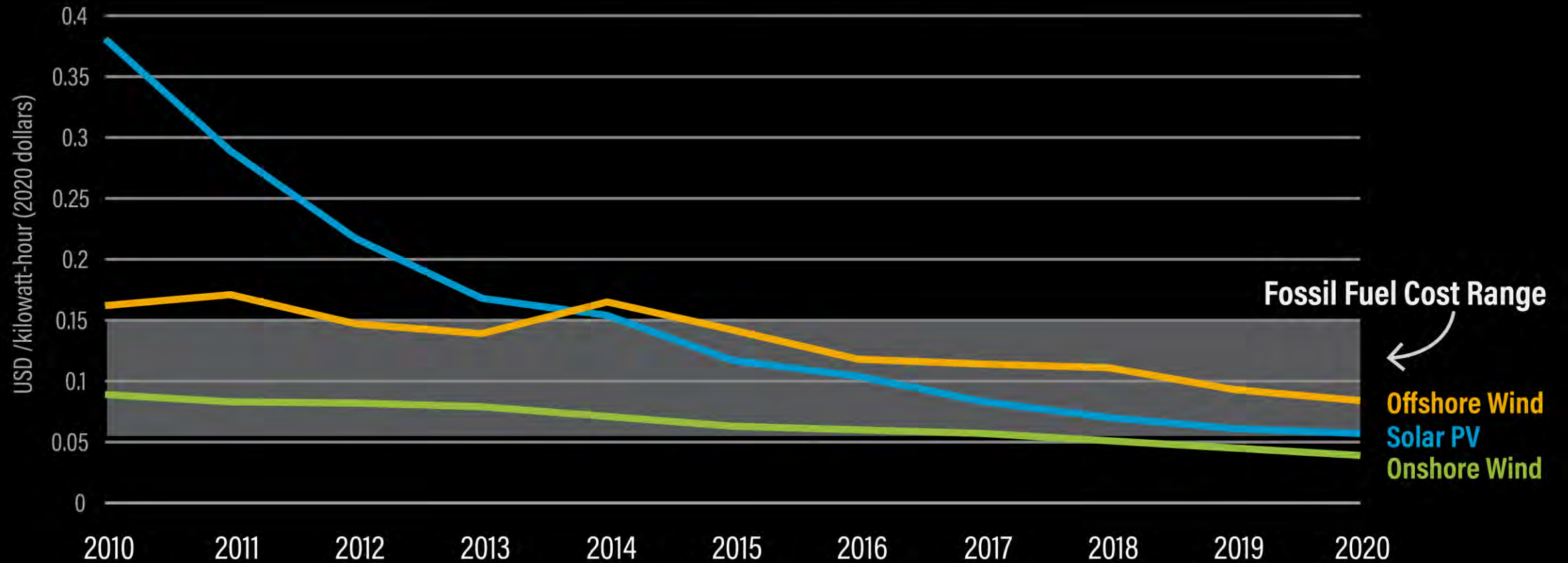
DUBAI 2023



THE ECONOMICS FAVOR RENEWABLES:

Building a New Coal Plant Would Cost More Than Building New Renewables in All Major Markets

Levelized Cost of Electricity

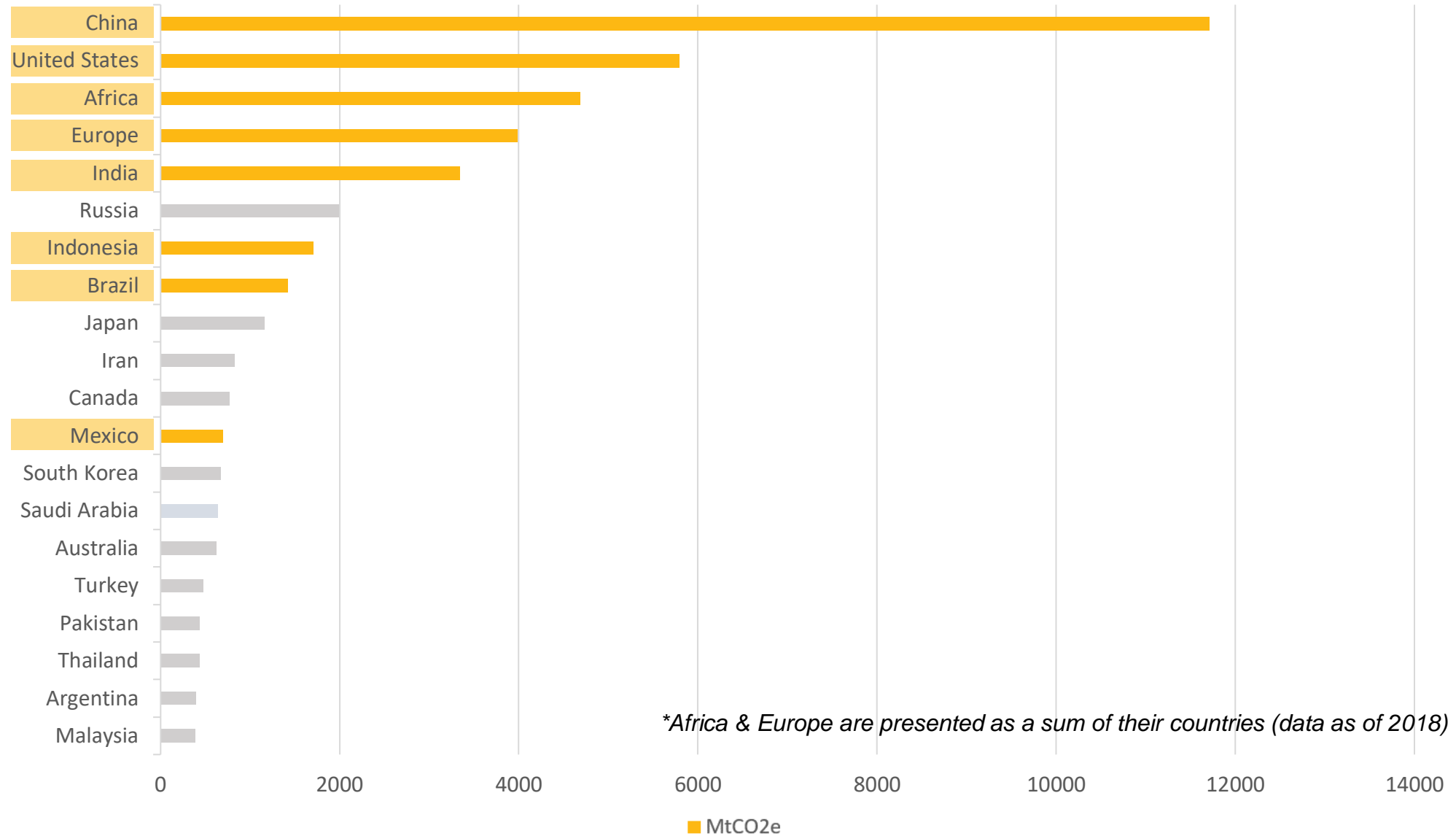




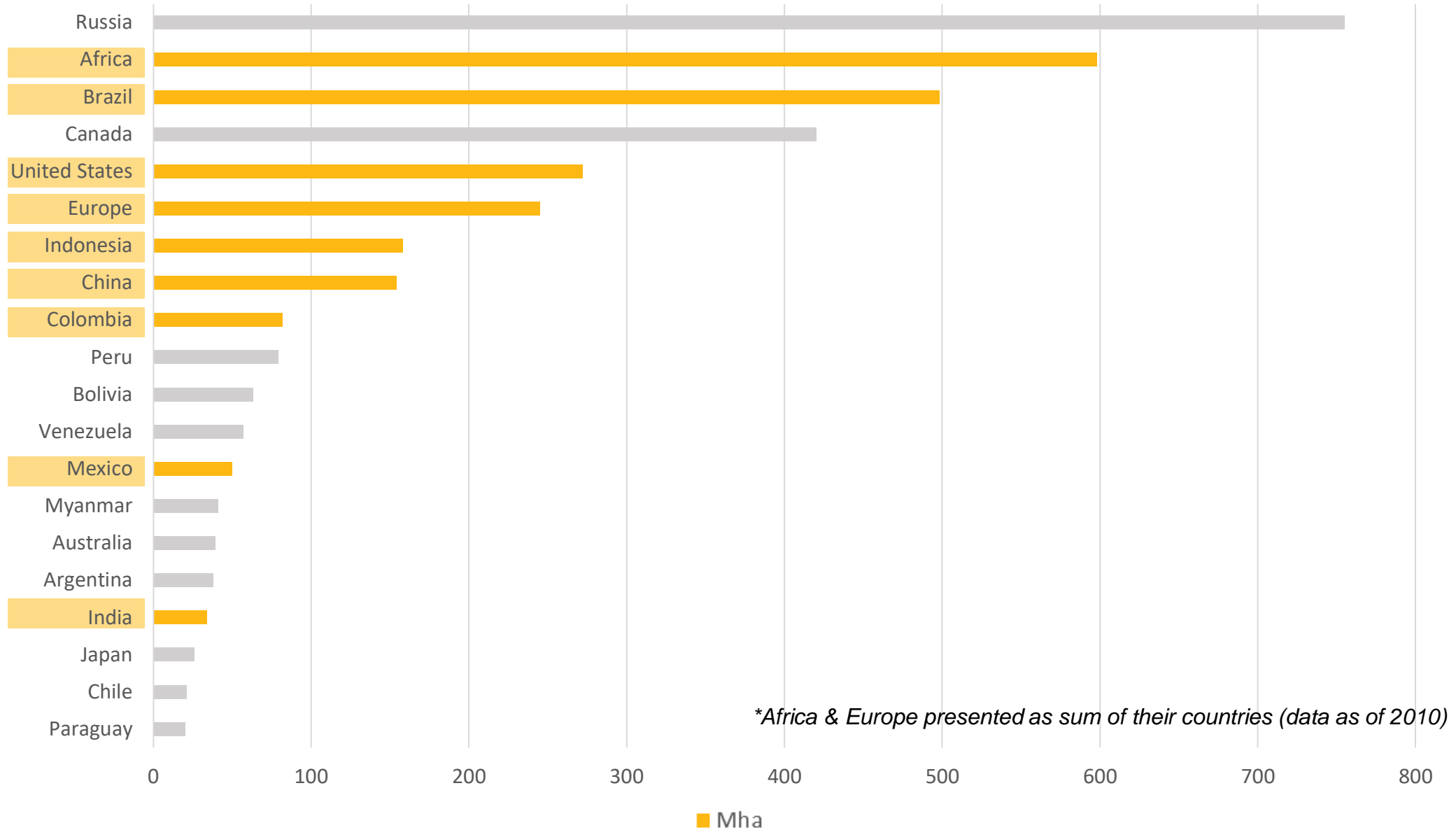
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WE NEED FOCUS

TOP EMITTING GEOGRAPHIES

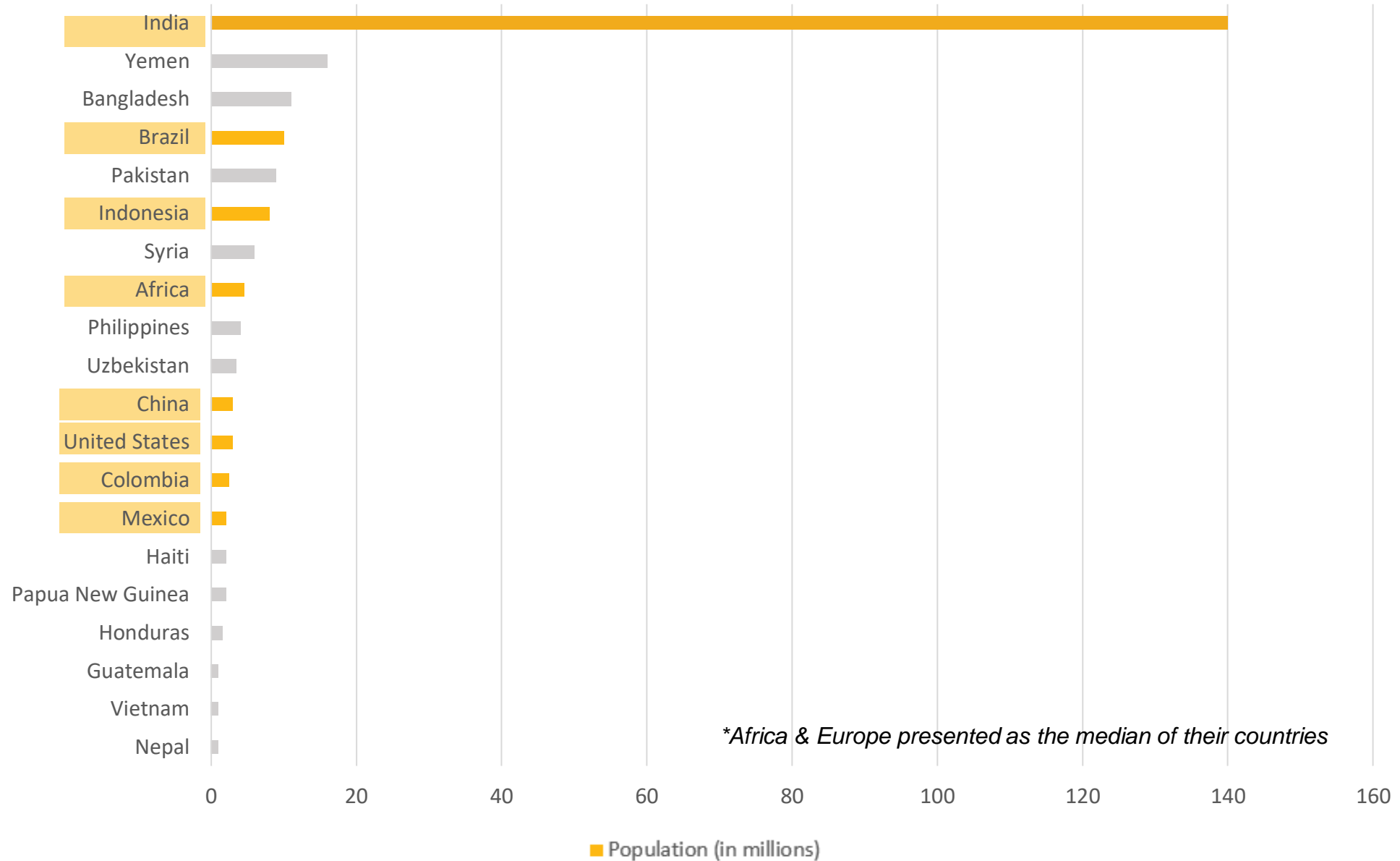


GEOGRAPHIES WITH MOST REMAINING FORESTS

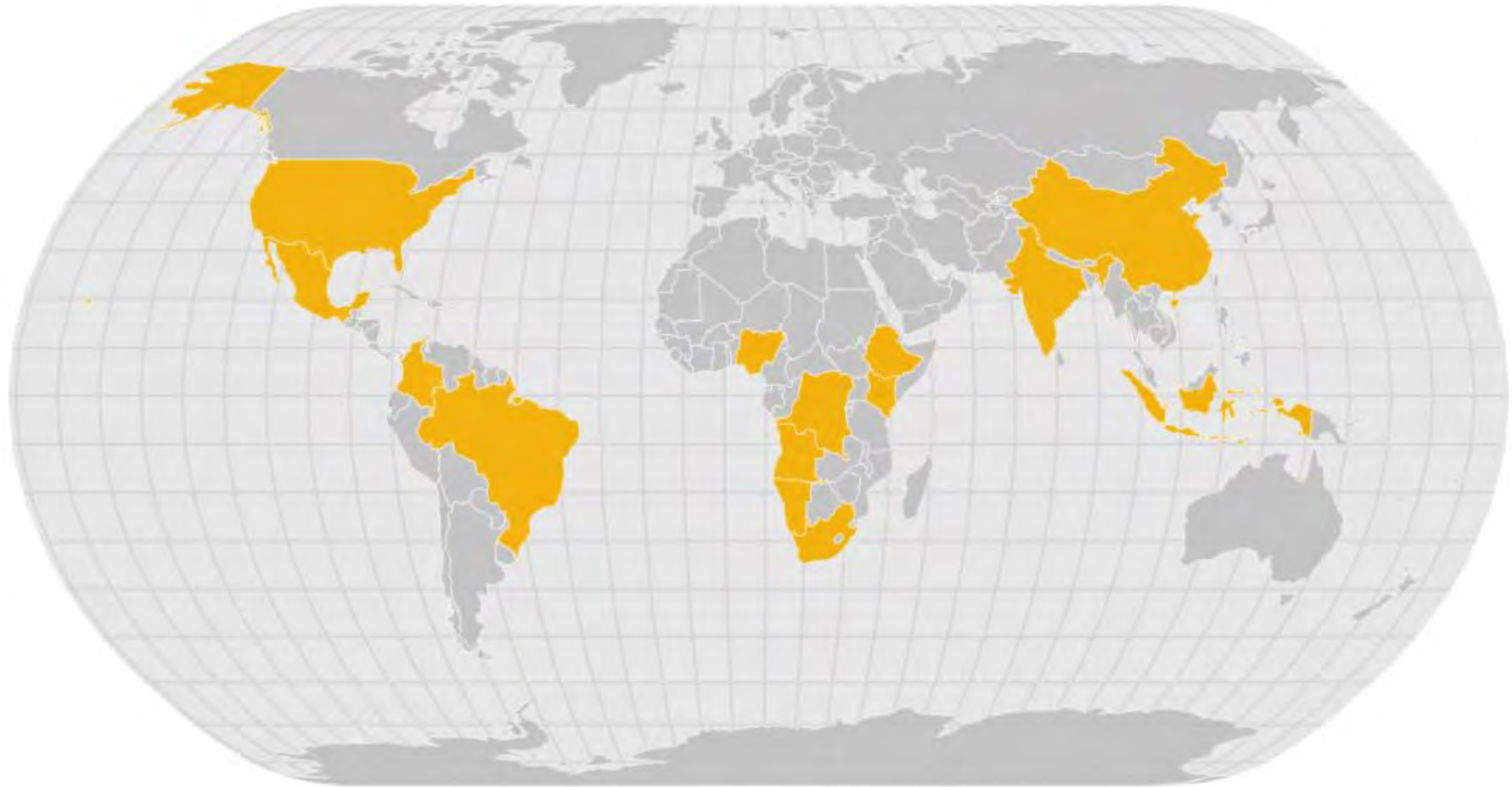


GEOGRAPHIES WITH PEOPLE LIVING UNDER \$1.90/DAY

PEOPLE 



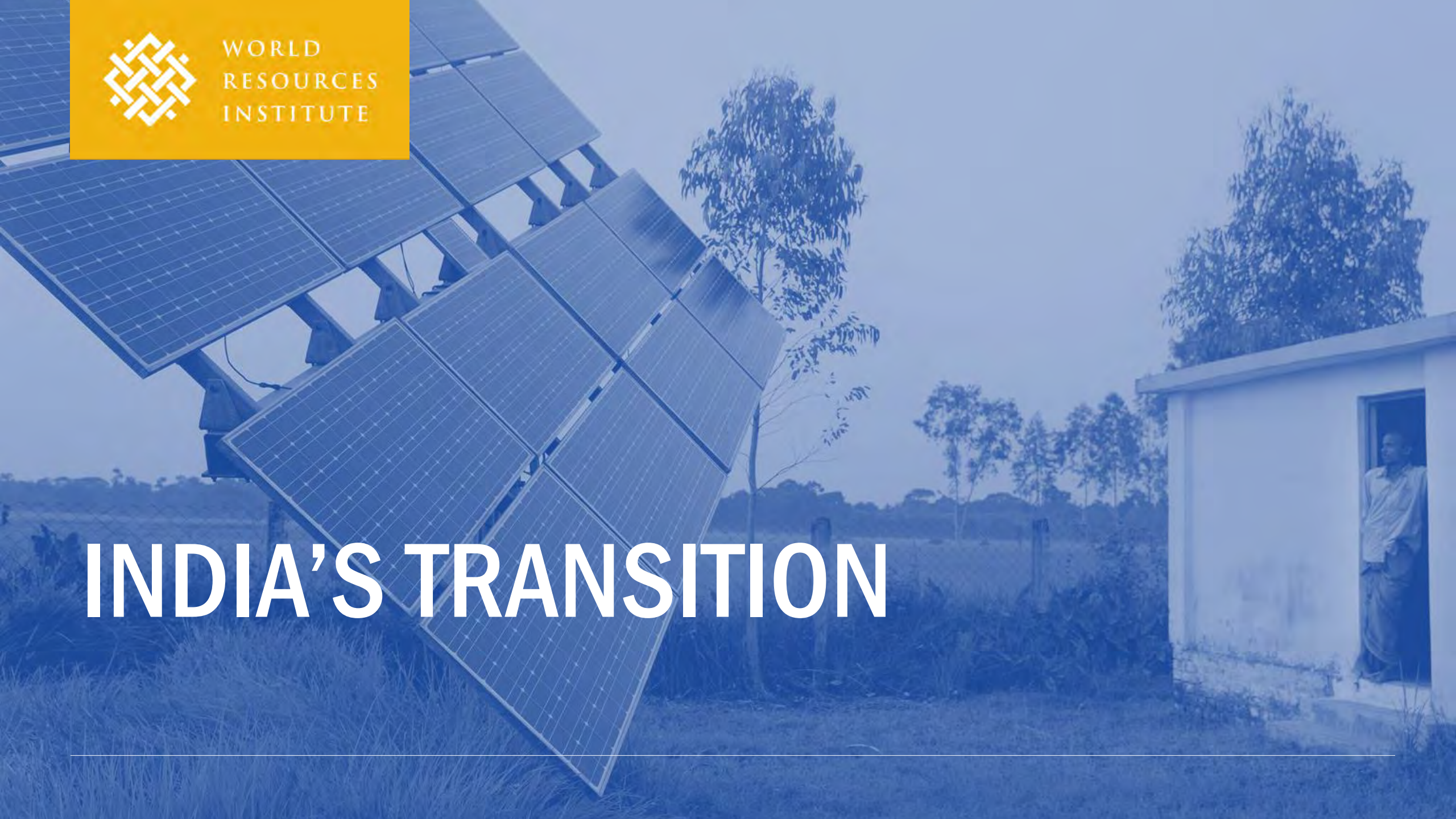
TO REACH TIPPING POINT, MUST FOCUS ON KEY COUNTRIES





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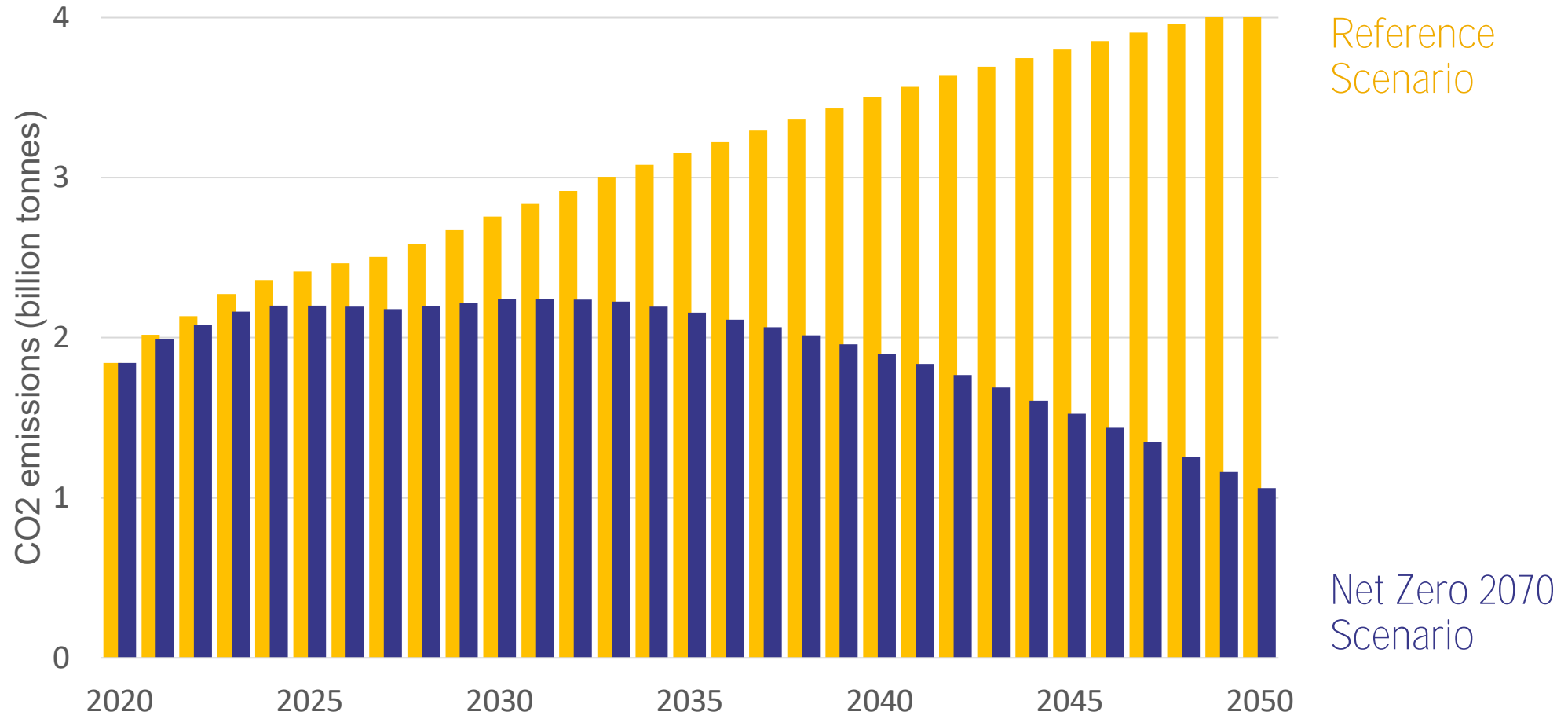
INDIA'S TRANSITION



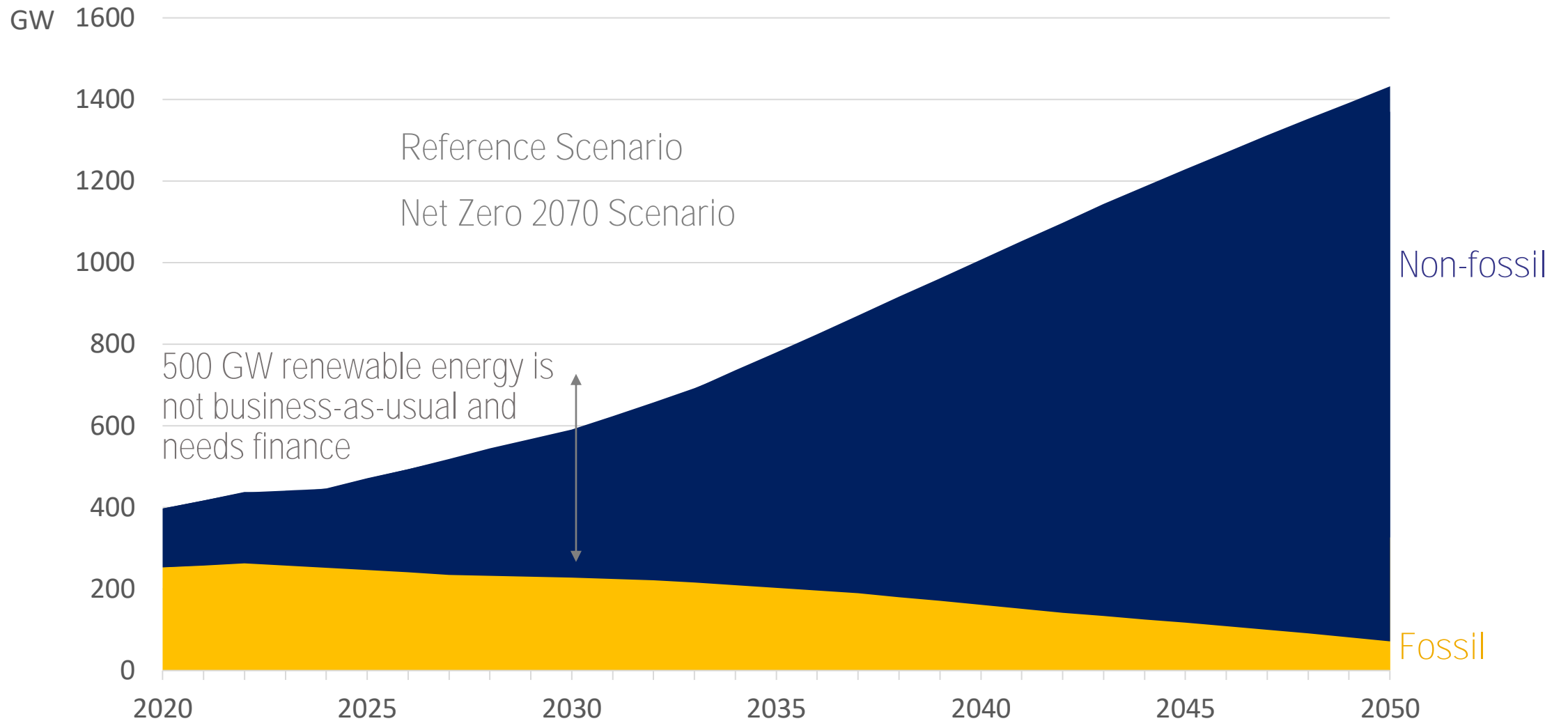
A COMPLEX CHANGE

- 500 gigawatts of renewable energy capacity by 2030
- Reduce emission intensity of GDP by 45% by 2030 compared to a 2005 baseline
- 13 million jobs tied to coal

AS INDIA DEVELOPS, IT CAN CUT CO2 EMISSIONS BY 74%...



...BUT, MUST MEET RISING DEMAND



A SURGING WORKFORCE

- 520 million workers
- 80 million in organized sector
- 8-10 million join work force each year

Low carbon transition can create 1-3 million jobs per year

ADDRESSING URBAN ENVIRONMENTAL STRESS AND INEQUALITY

- Urban population to double to 800 million by 2047
- Urban GDP to be \$25 trillion of \$30 trillion by 2047
- Urban infrastructure investment of \$1 trillion by 2035

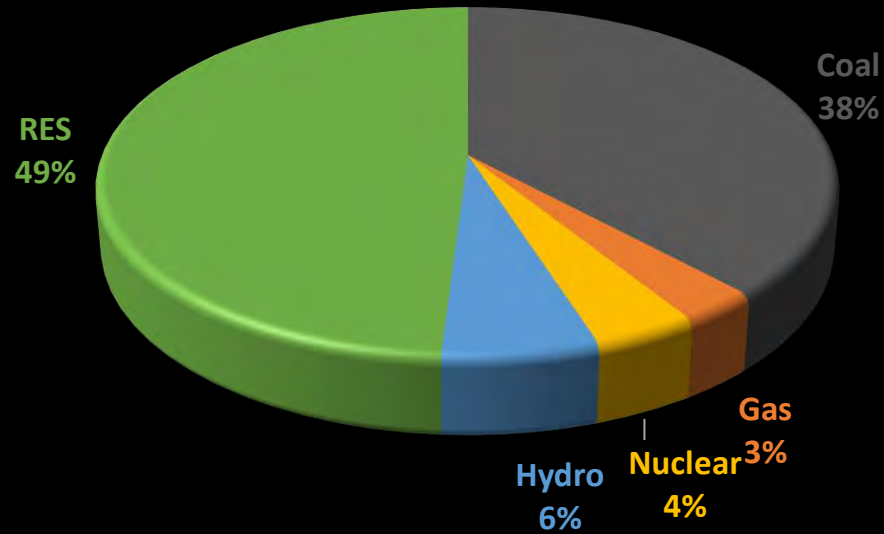
STATE LEVEL FOCUS



WRI INDIA

Tamil Nadu | Rajasthan | Kerala | Jharkhand | Assam | Delhi

TAMIL NADU



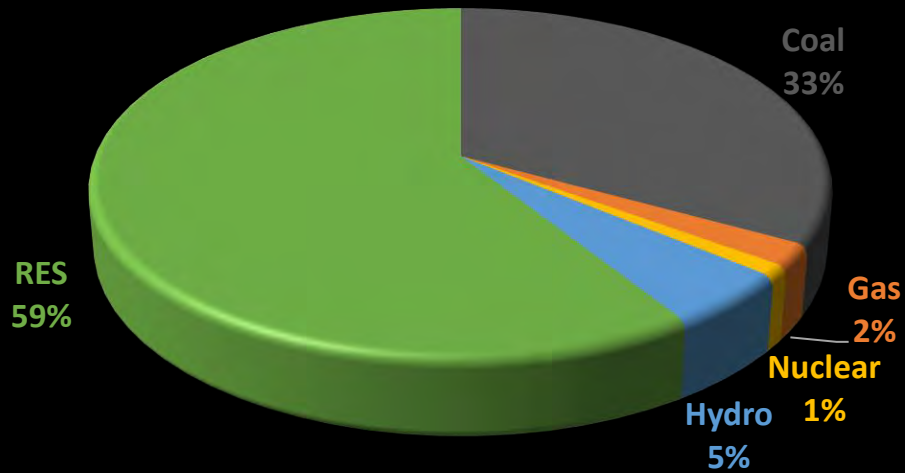
TARGETS

- Net-zero before 2070
- 50% renewable generation by 2030

OPPORTUNITIES

- Utility support for power and green procurement strategies
- Energy planning for greater renewable generation
- Support new technologies

RAJASTHAN

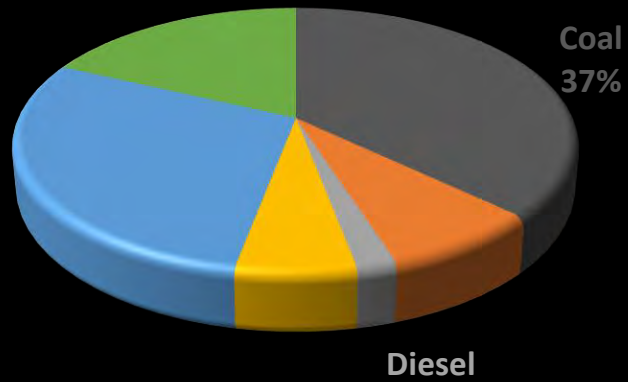


TARGETS

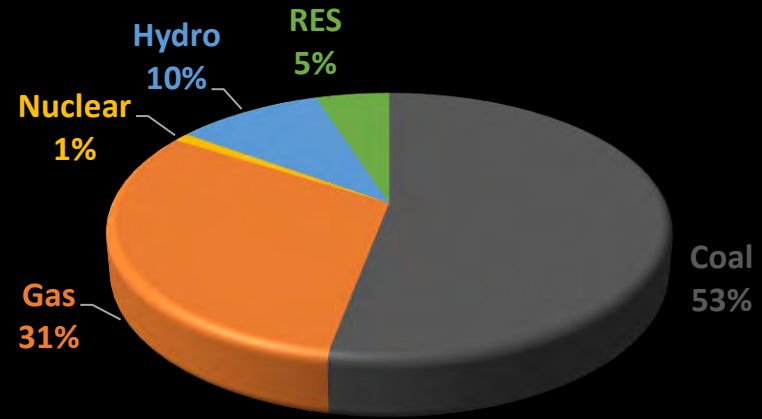
- 30 GW solar by 2025
- 90 GW renewable generation by 2030

OPPORTUNITIES

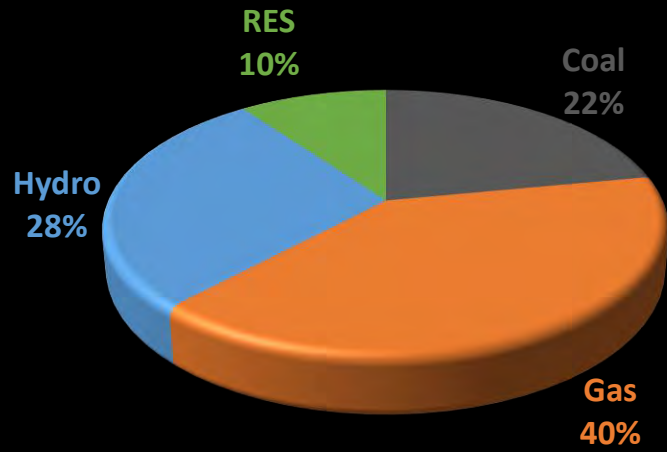
- Energy planning for greater renewable generation
- Energy storage to increase utilization and export of solar
- Increase renewable consumption



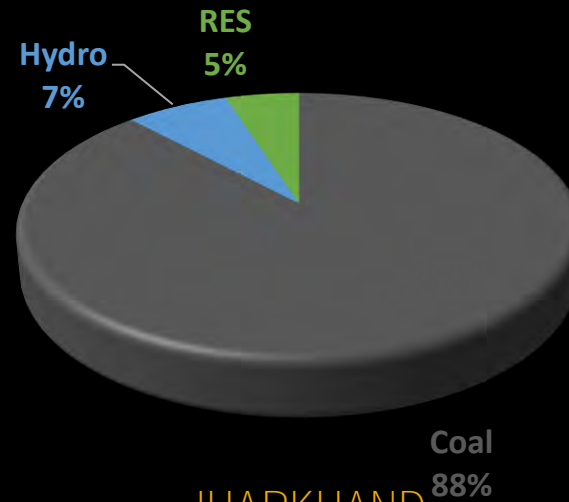
KERALA



DELHI



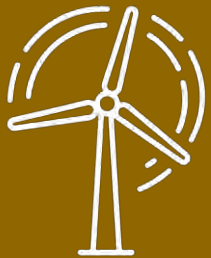
ASSAM



JHARKHAND

OUR WRI INDIA STRATEGY

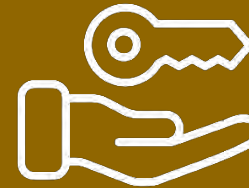
Clean Energy Supply



Decarbonized Energy Consumption



Energy Access for Equitable Development



Energy Minerals, Land and Circularity*



* Scoping

PILLAR 1: CLEAN ENERGY SUPPLY

STRENGTHENING STATE ENERGY TRANSITIONS

- Research on green tariffs, green open access and other renewable products

RESEARCHING NEW TECHNOLOGIES

- Support national government on green hydrogen and offshore wind energy
- Support state specific research on battery energy storage and market mechanisms for more renewable deployment

PILLAR 2: DECARBONIZED ENERGY CONSUMPTION

INDUSTRIAL DECARBONIZATION

- Expanding support for MSMEs
- Pathways for heavy industry

TRANSPORT DECARBONIZATION

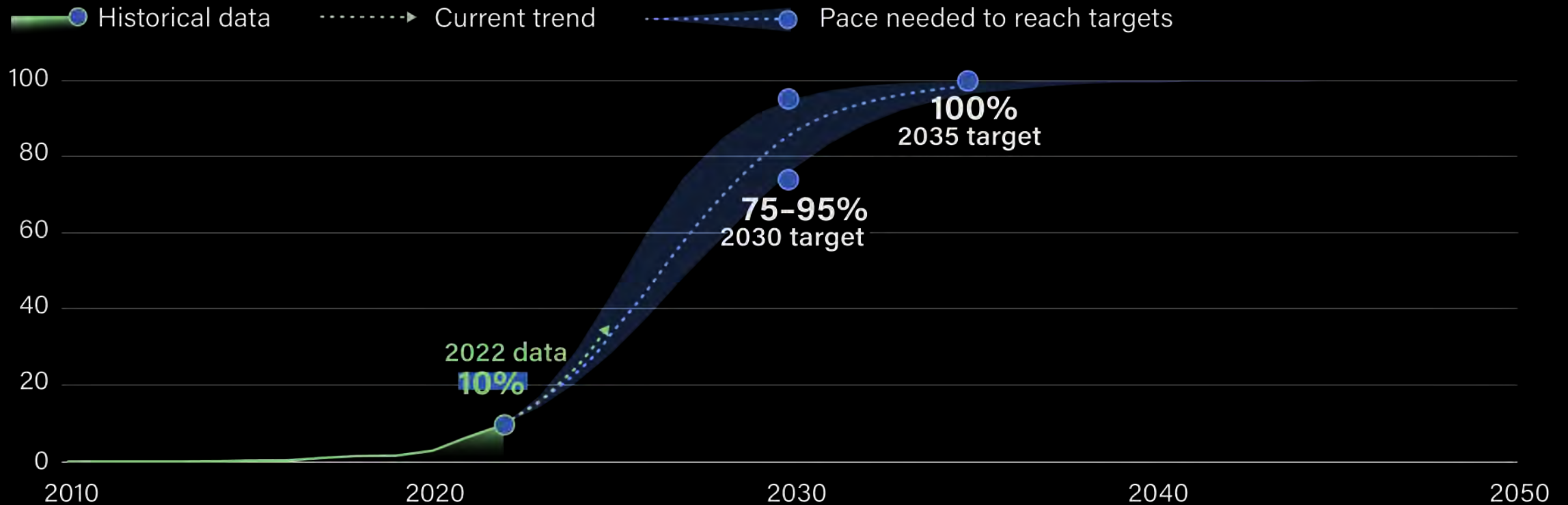
- Cleaner fuels for rail and road
- Inducing modal shift
- Integrated urban planning

BUILDING DECARBONIZATION

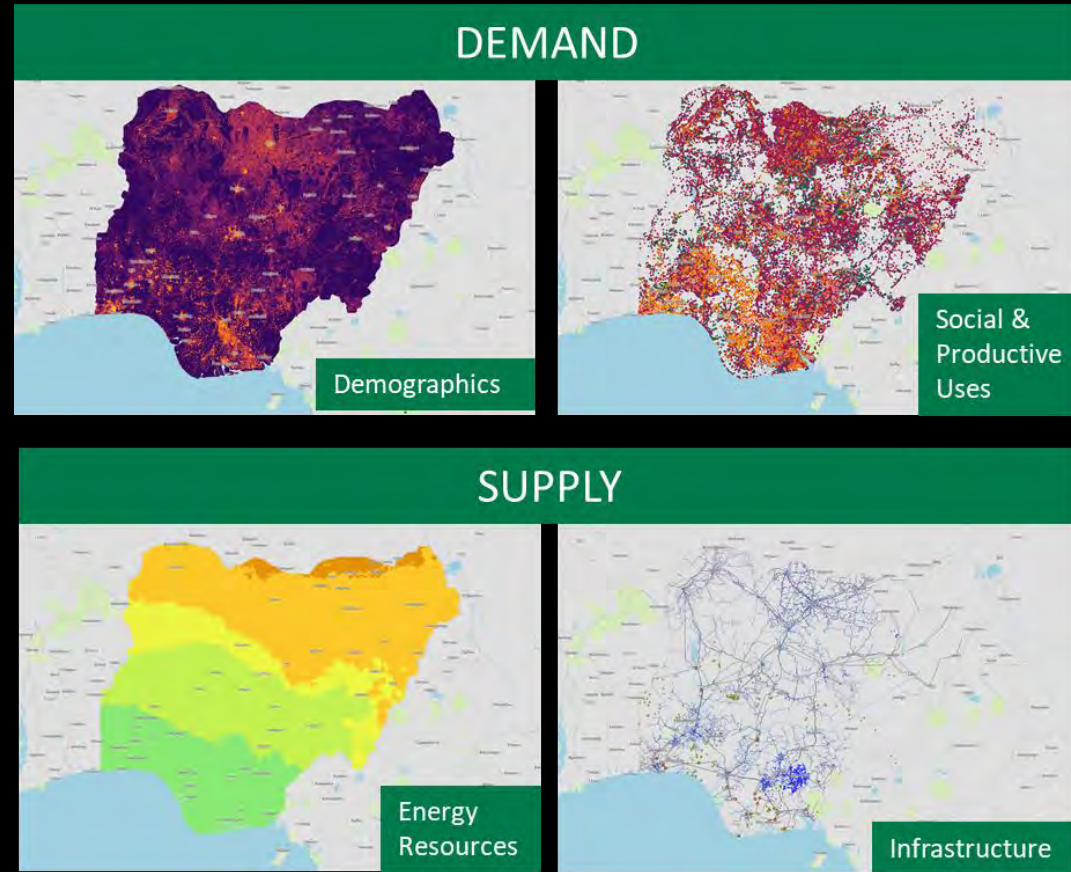
- Implement India Cooling Action Plan
- Clean energy roadmaps for urban governments

EXPONENTIAL PROGRESS IS POSSIBLE

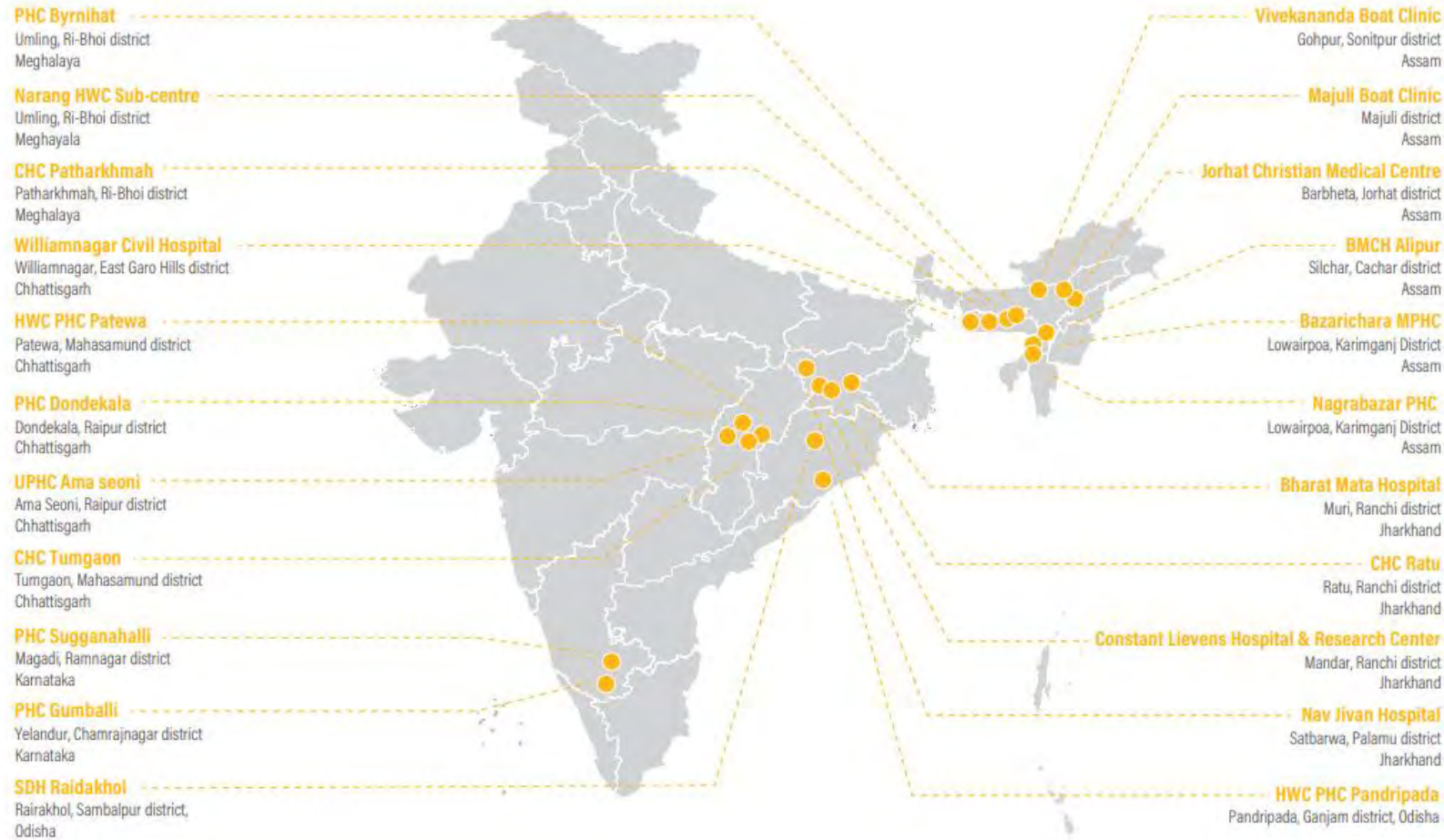
Share of electric vehicles in light-duty vehicle sales (%)



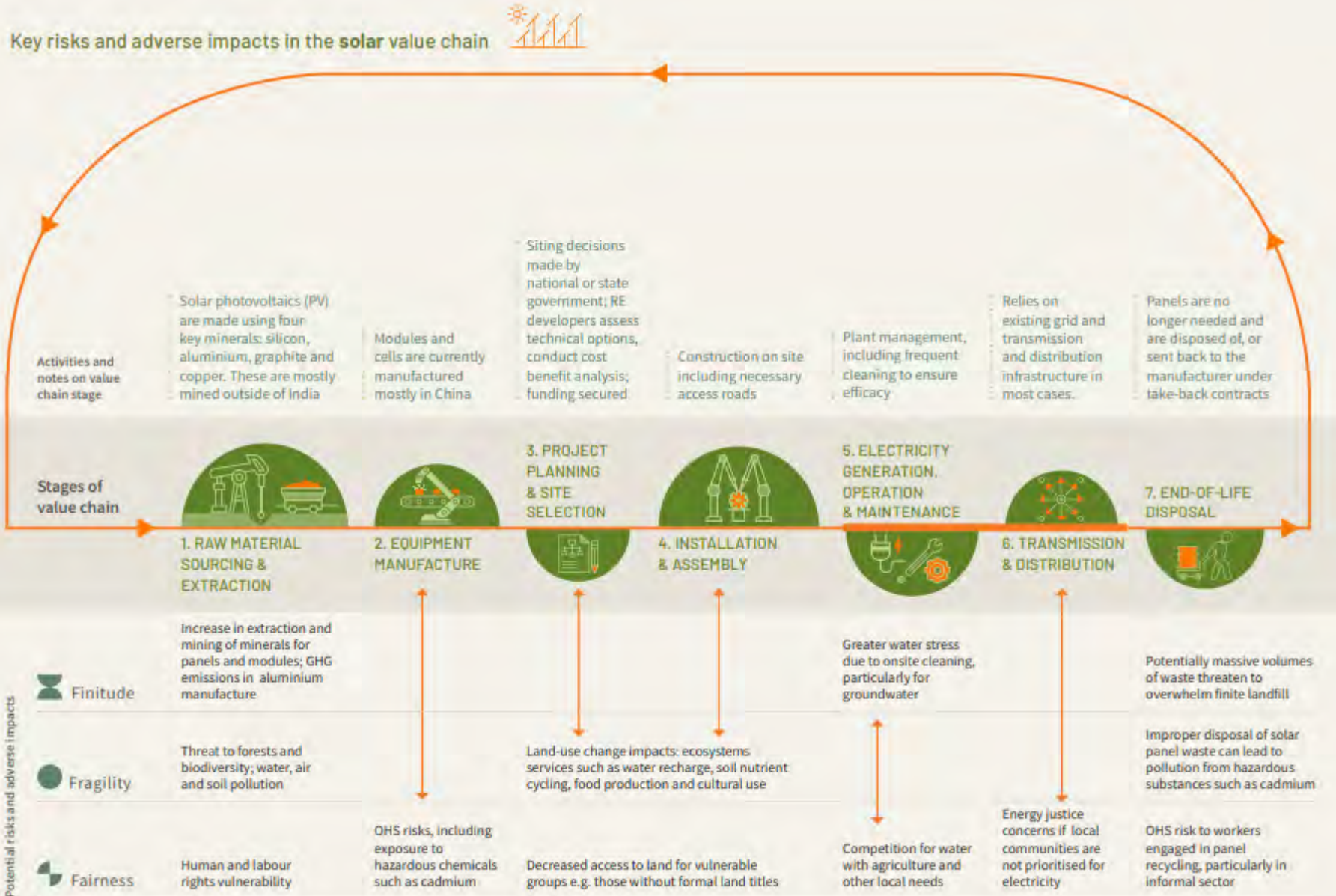
PILLAR 3: ENERGY ACCESS FOR EQUITABLE DEVELOPMENT



ENERGY ACCESS FOR HEALTH



PILLAR 4: ENERGY MINERALS, LAND AND CIRCULARITY



Responsible Energy Initiative India



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A MOMENT FOR RADICAL COLLABORATION





ACTIVISTS



SCIENTISTS



COMPANIES



GOVERNMENTS



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