

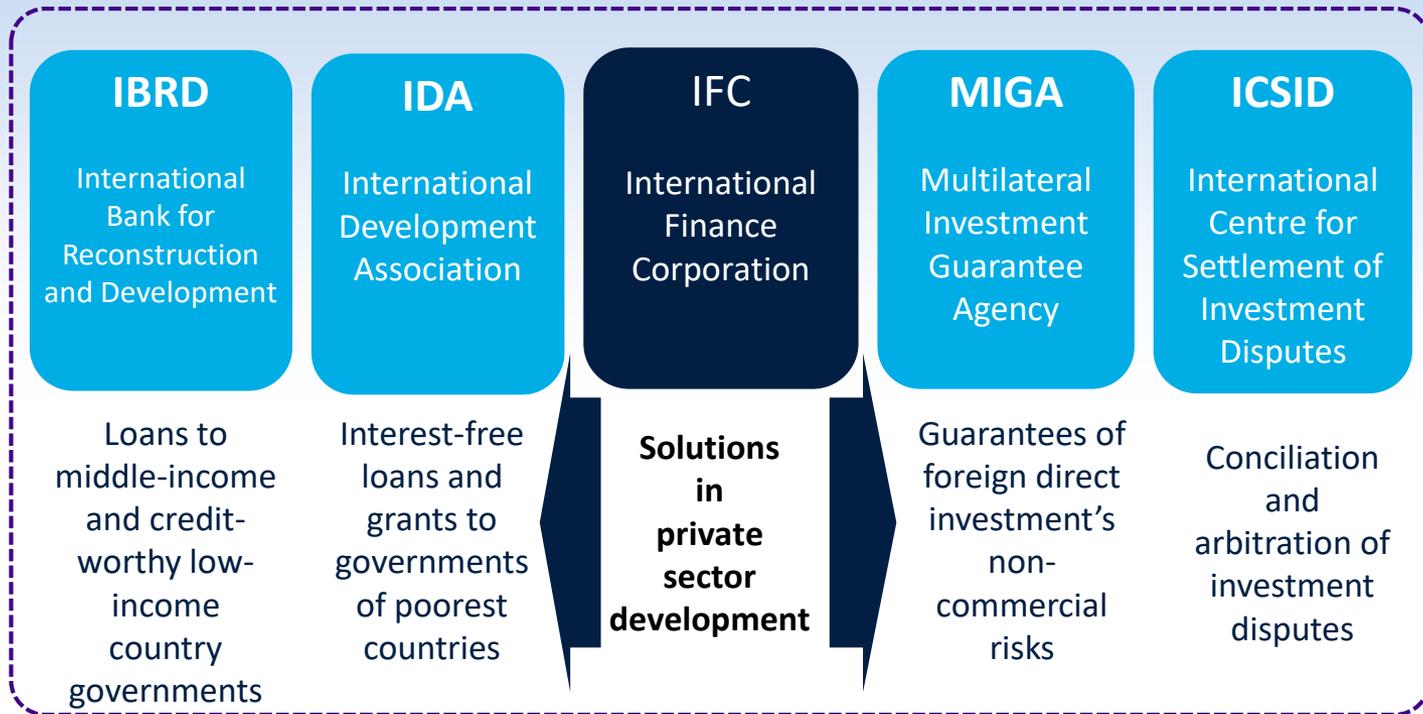
Creating Green Markets Aligned with the Paris Agreement

REM 2017
October 23, 2017



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Global Head
Climate Strategy and Business Development

IFC is the largest development bank focused solely on the private sector



IFC is investing in core climate sectors in emerging markets

WBG Goal



28% of own account
in climate by 2020



Mobilize \$13billion in
external capital

IFC's Core Climate Business Sectors



Climate-
smart cities



Clean
energy



Green buildings

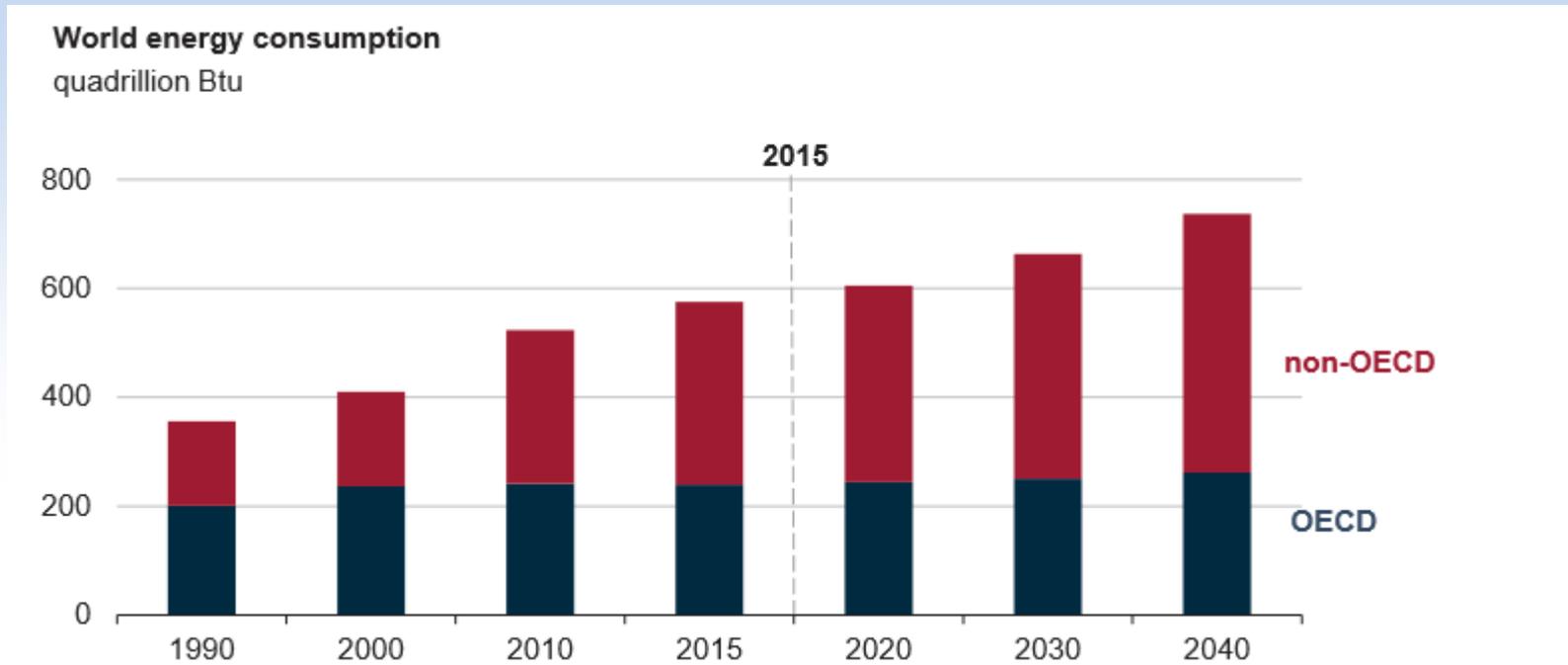


Green finance



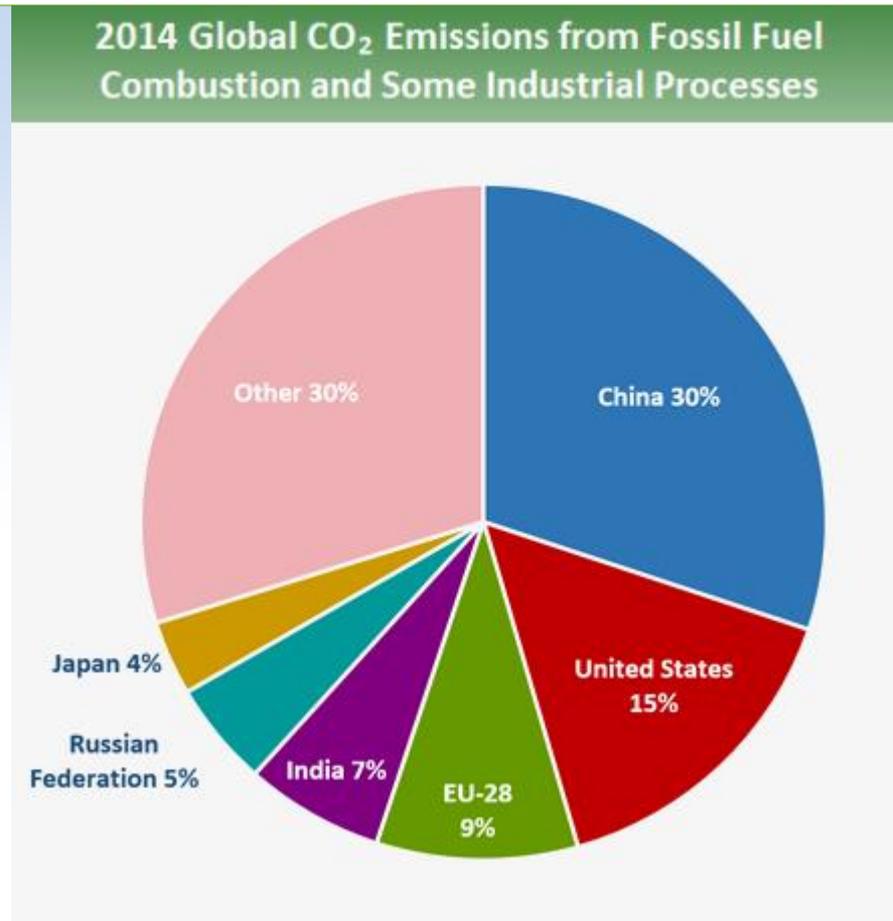
Climate-
smart
agribusiness

Global energy demand is expected to be constant in OECD countries, but increasing in developing countries



U.S. Energy Information Administration 2017 Outlook

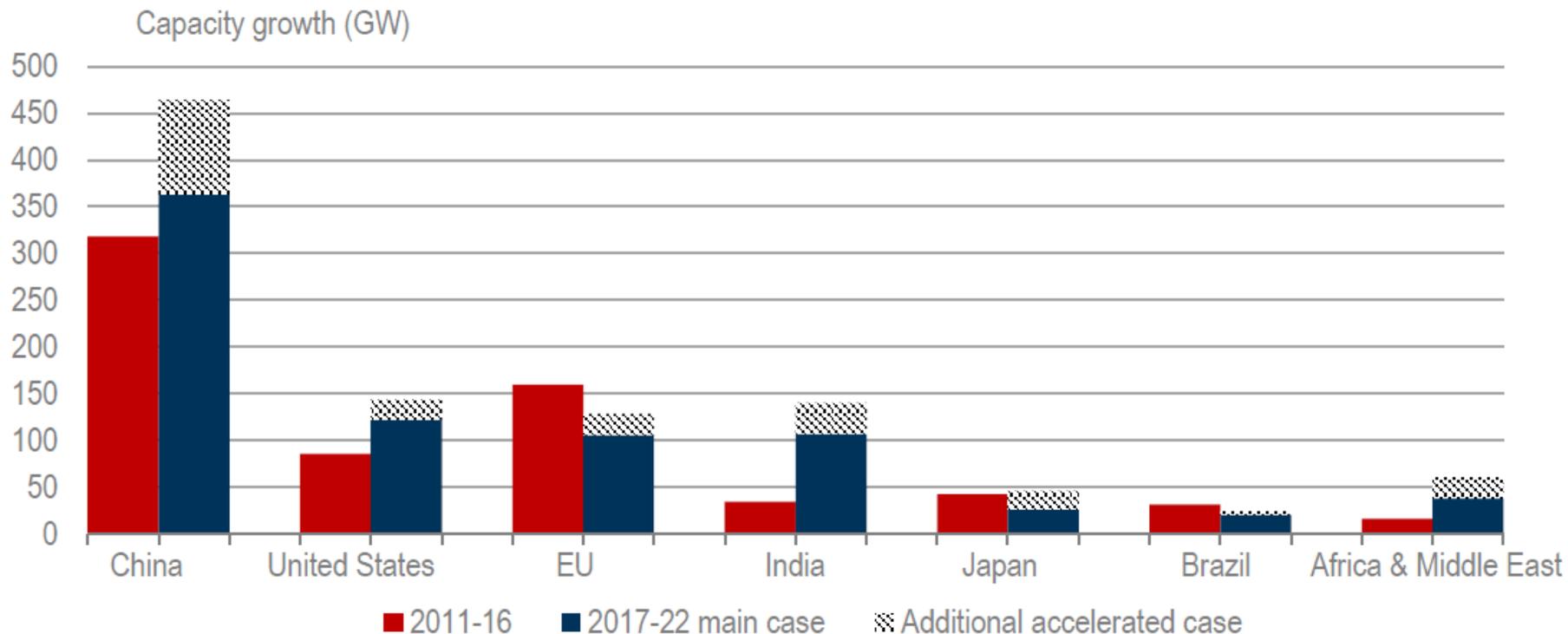
China and India alone account for 37% of annual global CO₂ emissions



Oak Ridge National Lab, 2017, U.S. EPA website

However, China leads solar growth and India has overtaken the EU

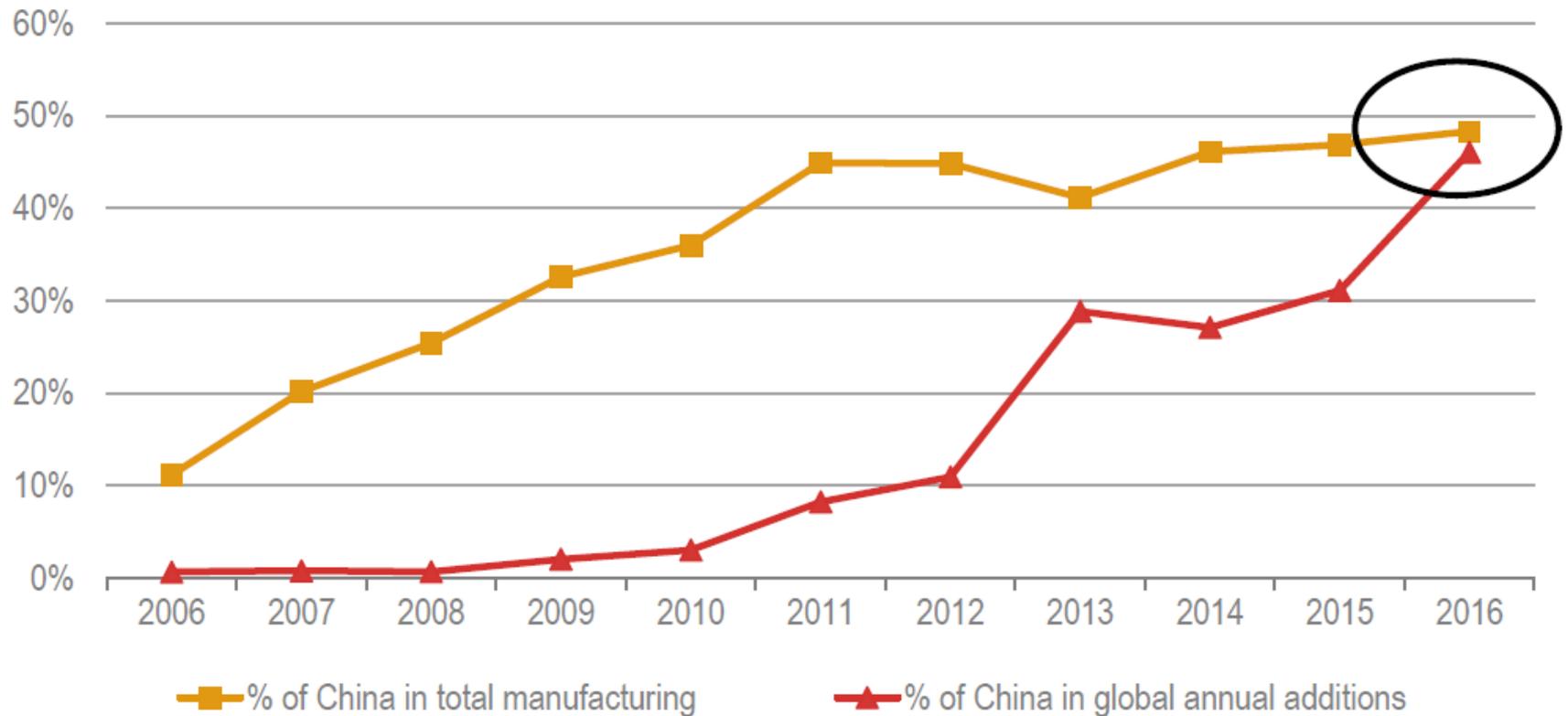
Renewable capacity growth by country/region



International Energy Agency, 2017

China leads not only in capacity growth, but in manufacturing

China's share in global solar PV manufacturing and demand



International Energy Agency, 2017

The Paris Agreement both encouraged and was driven by private sector engagement



PARIS AGREEMENT

- Limit warming to 2 degrees Celsius
- Revisit commitments every 5 years
- Reach zero emissions as soon as possible
- Developed world to provide \$100 billion to developing countries



PRIVATE SECTOR COMMITMENTS

- Emission reduction pledges from 179 companies
- Corporate 100% RE commitment from 81 multinationals



COUNTRY PLEDGES

- NDCs – Nationally Determined Contributions
- Specific to each country
- Database available on World Bank website (indc.worldbank.org)
- 130 NDCs related to RE

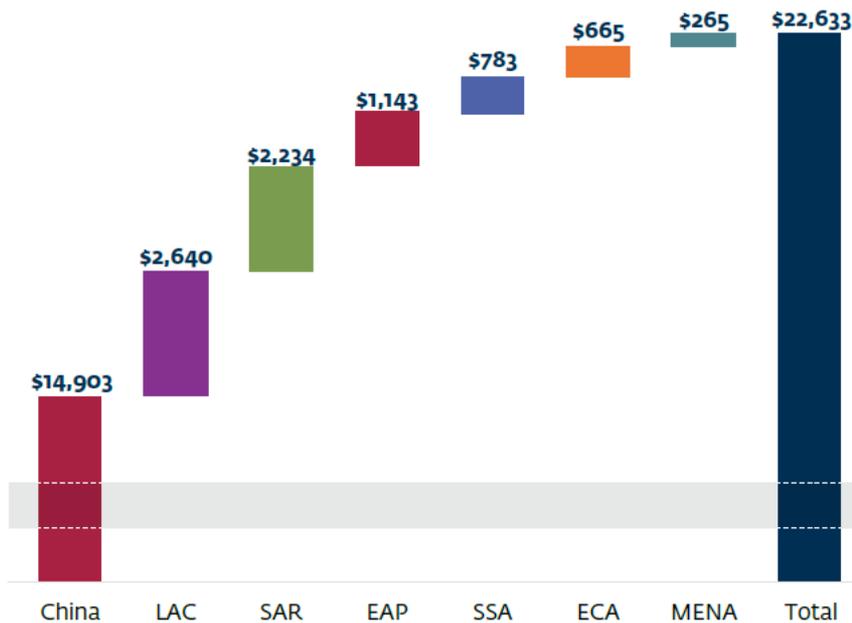


INVESTOR COMMITMENTS

- \$600bn pledged through Portfolio Decarbonization Coalition
- \$150bn Goldman Sachs
- \$125bn pledged by BofA/Merrill Lynch
- \$100bn pledged by Citibank

There is a \$23 trillion climate investment opportunity in just 21 emerging markets

Climate-Smart Investment Potential
2016 - 2030 (\$ billion)



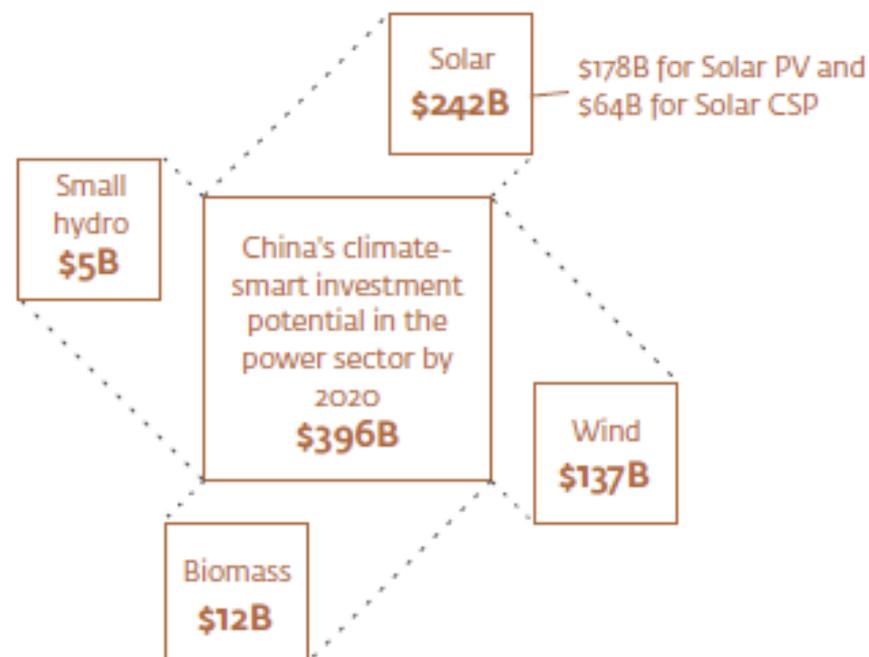
Note: EAP = East Asia Pacific; ECA = Europe and Central Asia; LAC = Latin America Caribbean; MENA = Middle East and North Africa; SA = South Asia; SSA = Sub-Saharan Africa.

The total potential renewable energy investment spread across these regions is \$1.8 trillion.

China's NDC calls for low carbon sources to increase to 20% of their energy portfolio by 2030



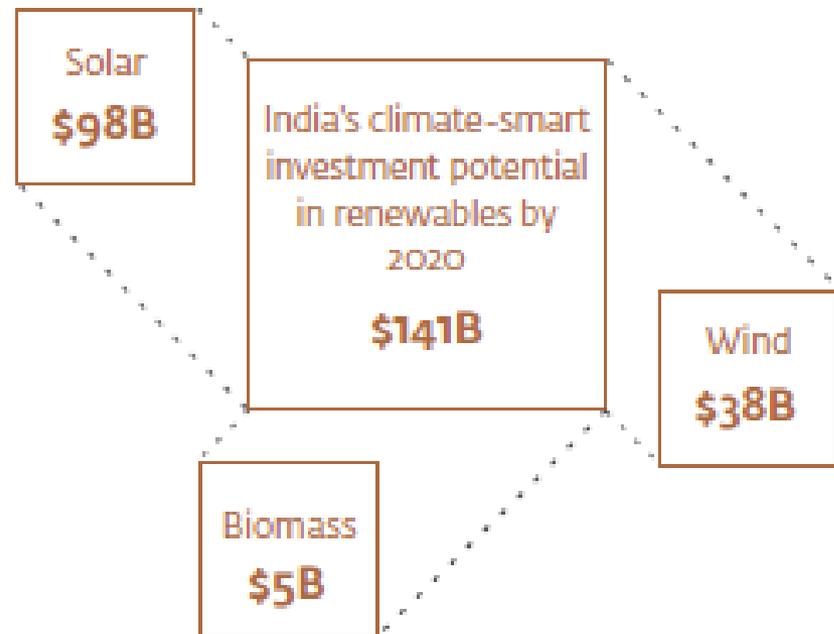
Potential investment of \$396 billion in renewables by 2020



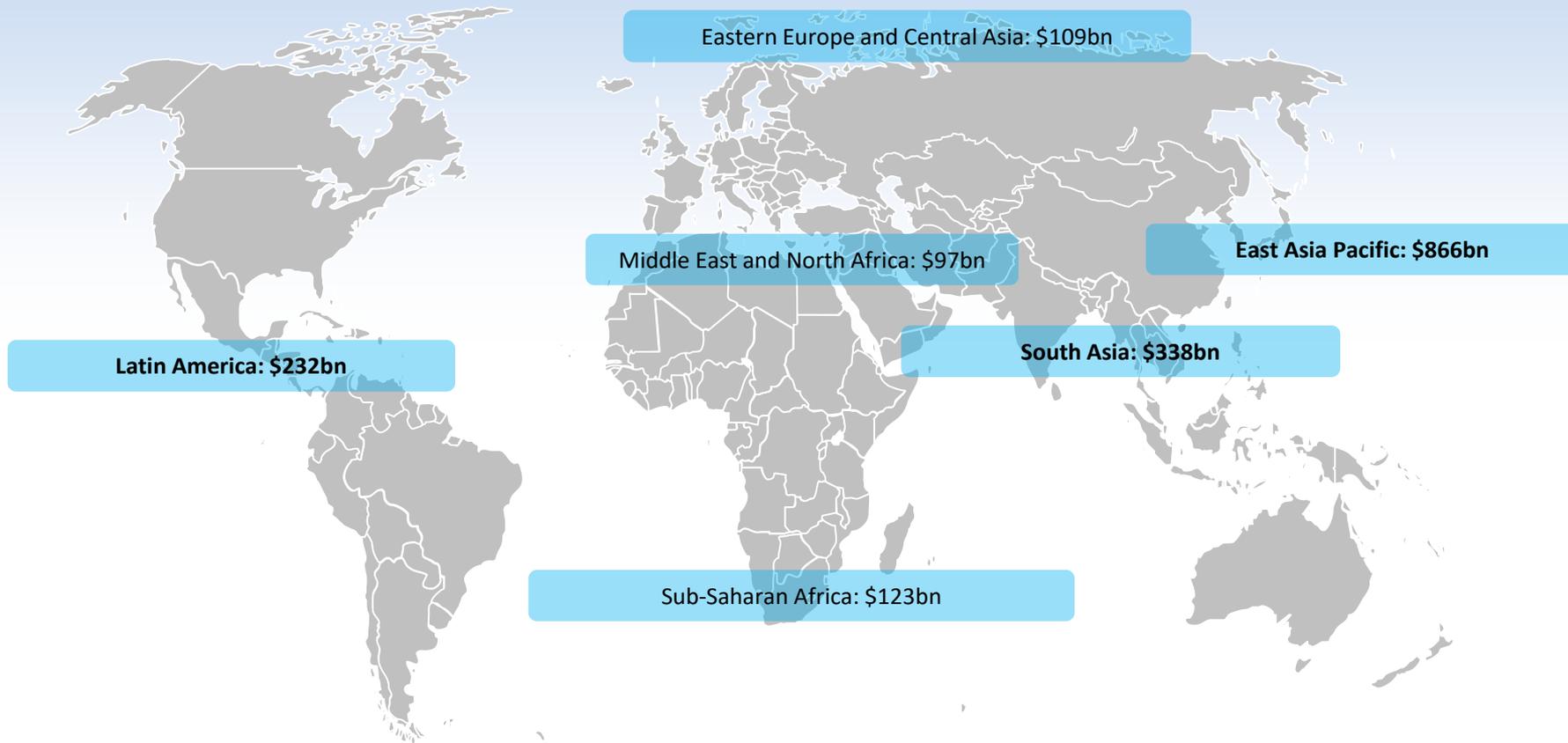
India's NDC calls for tripling renewables capacity by 2022



Potential investment of \$141 billion in renewables by 2020



Hotspots for renewable energy opportunities are in East Asia Pacific, South Asia, and Latin America



"IFC (2016), *Climate Investment Opportunities Report*"

Challenges persist, and initiatives such as IFC's Scaling Solar seek to address these programmatically

CHALLENGES

- LIMITED INSTITUTIONAL CAPACITY
- LACK OF SCALE
- LACK OF COMPETITION
- HIGH TRANSACTION COSTS
- HIGH PERCEIVED RISK

SOLUTIONS

- ADVICE
- SIMPLE AND RAPID TENDERING
- FULLY DEVELOPED TEMPLATES
- COMPETITIVE FINANCING AND INSURANCE
- RISK MANAGEMENT AND CREDIT ENHANCEMENT



Attracting private capital is especially important for newer tech, such as energy storage

Energy storage offers vast opportunities to integrate renewables in the electricity grid. Governments can promote this technology by aggregating smaller, de-risked assets across sectors to attract institutional investors.



- IFC's \$7m venture capital investment (incl. \$1.3m in blended finance) in Fluidic will further expansion into Asia and Latin America
- Climate-smart batteries for cell phone networks in developing countries
- In 2016, Fluidic partnered with the Madagascar government to provide renewable energy solutions for more than 400,000 people in 100 remote villages who lack reliable access to electricity

“Climate change is still often treated as a political and environmental issue [by the media], but the best reason to be optimistic...comes from people who spend their days trying to make money.”

-- Michael Bloomberg