



WORLD BANK GROUP
Energy & Extractives

Energy Climate Finance

Energy Climate Finance Team

Four large climate finance programs under operation



Under Climate Investment Funds (CIFs)



Clean Technology Fund (CTF)

Supports transformational large-scale RE, EE and transport projects in middle income countries.



Scaling-up Renewable Energy Program (SREP)

Supports scaling-up RE solutions for energy access and clean energy supply in low income countries.



Financing mechanisms under UNFCCC



Global Environment Facility (GEF)

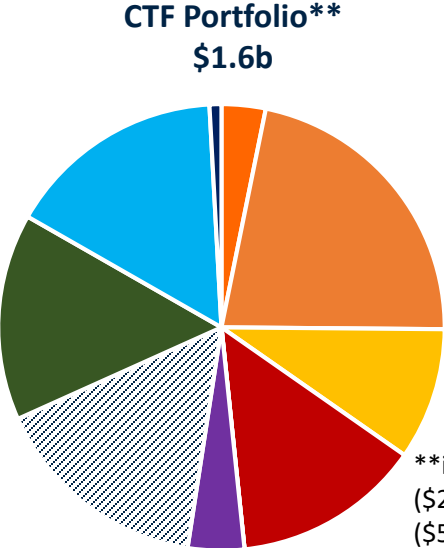
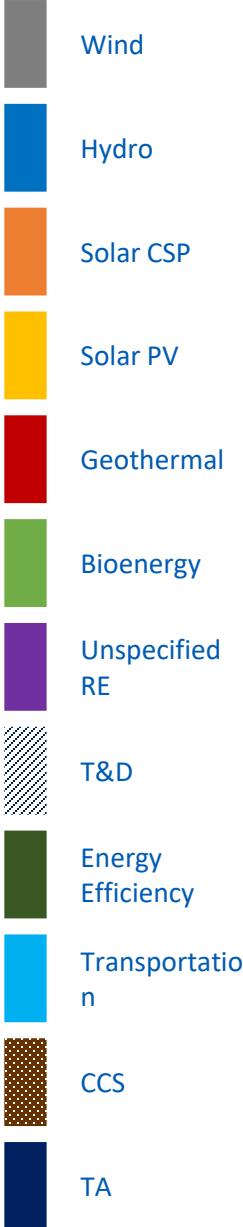
Hosts multiple environmental funds. RE/EE projects with GHG emission reductions are supported under climate change mitigation window.



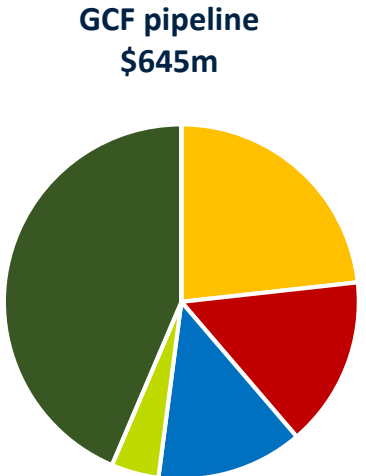
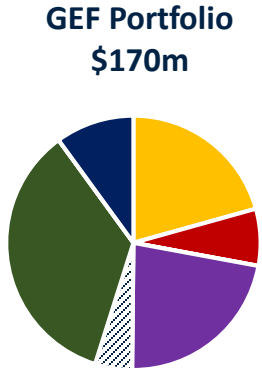
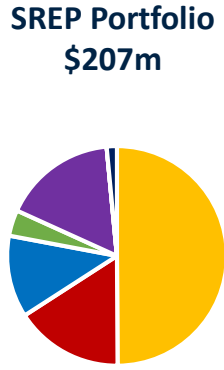
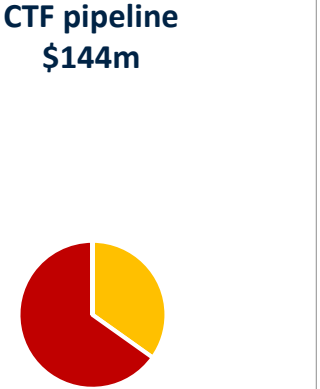
Green Climate Fund (GCF)

An official financing mechanism under the Paris Agreement to support climate change mitigation and adaptation projects in developing countries.

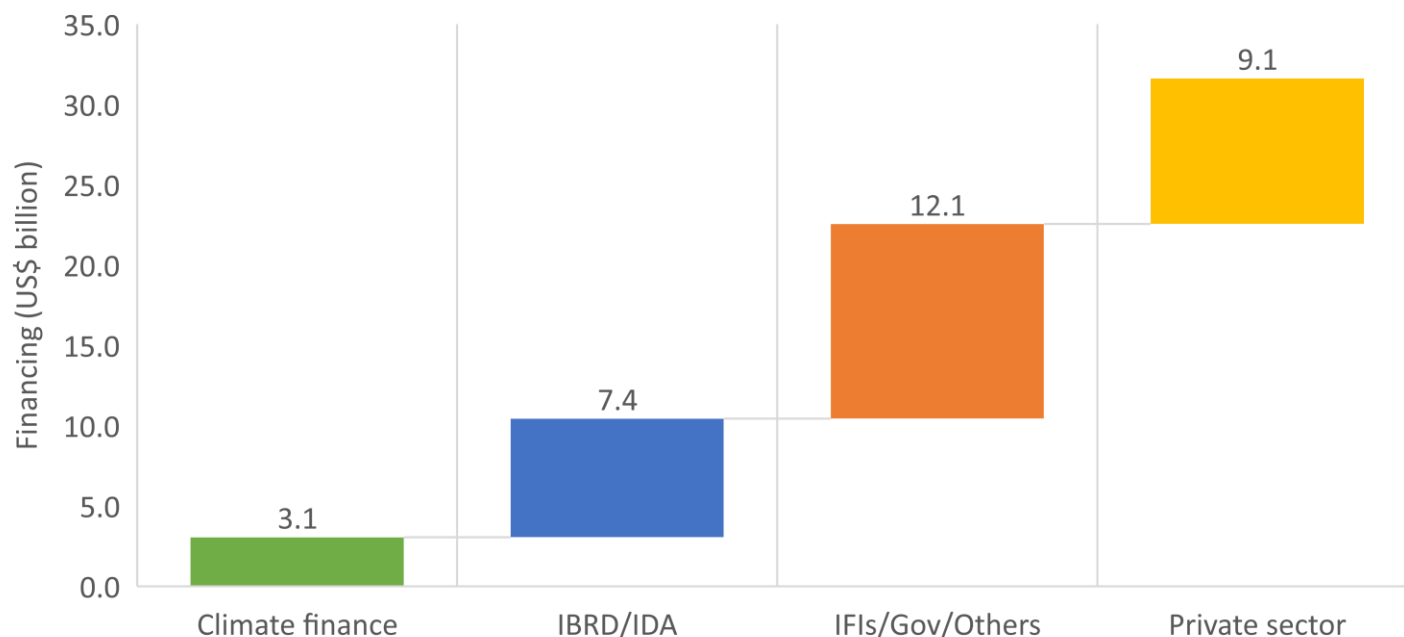
Overview of Energy Climate Finance Program



**includes transportation projects (\$249m) in CTF Portfolio and urban (\$50m) project in CTF EE portfolio



Mobilizes over US\$ 28 billion of investments



* Only from projects in portfolio or pipeline. Closed projects are not included.

Highlighted achievements include:

- Morocco Noor Concentrated Solar Power (CSP): 500 MW installed capacity; \$2.5b mobilized
- Global Geothermal Development Plan (GGDP): support 11 countries; over \$4.0b mobilized
- Energy Efficiency in China: 3 → 5,000+ ESCOs established; over \$3.7b mobilized

How are solar projects being financed?

- Reducing cost of financing for solar projects through direct investments or FI (e.g, Noor, India Rooftop Solar etc.)
- Risk mitigation instruments (e.g, Maldives, Scaling Solar etc.)
- Development of shared infrastructure (e.g, REWA India)
- Results based financing for certain applications such as off-grid projects, solar pumping (e.g, Bangladesh)

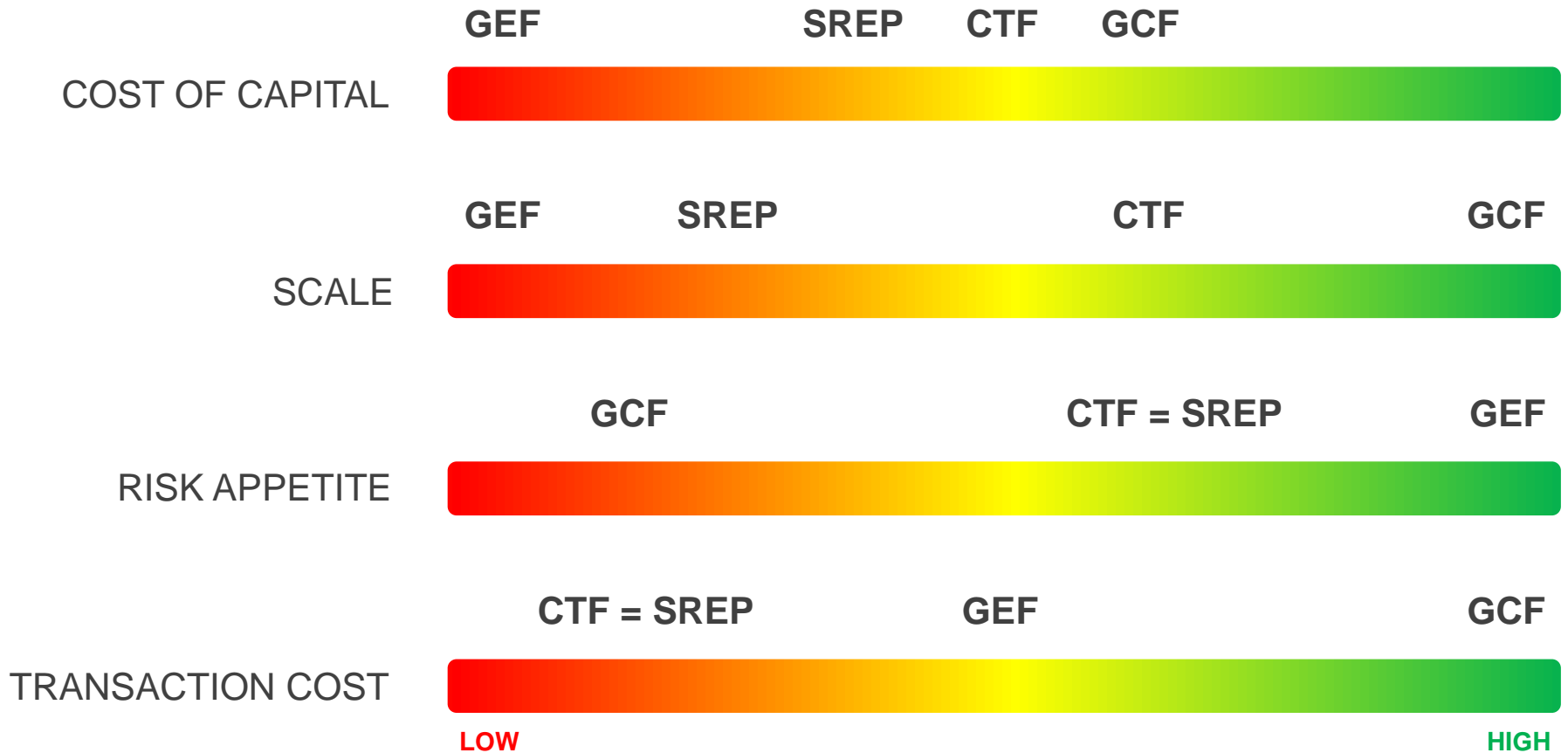
What is Changing?

- Declining costs of Solar (both PV and CSP)
- Challenges in integrating VRE (Need for Storage is increasing)
- Increasing role of Private sector (India, Egypt, Jordan etc.)
- New innovations (batteries, floating solar, hybrids, rooftop solar etc.)

Where can climate finance be useful?

- Reducing costs in frontier solar projects (e.g, utility scale solar with storage (PV or CSP), floating solar, wind-solar hybrids etc.)
- Risk Mitigation Instruments (e.g, payment security mechanisms, off-taker risk cover, currency risk cover etc.)
- Solar park development/infrastructure to lesser extent
- Increasing access to finance for Rooftop solar, Off-grid projects
- Reducing costs for Mini-grid projects, Solar irrigation etc.

Climate finance programs have different characteristics



Concessional climate finance is getting constrained

- CTF and SREP resources are depleted; some cancellations funds likely to be available mainly for solar risk mitigation and battery storage
- CTF 2.0 in discussion; a new financing modality to use reflows from the existing loan portfolio to issue bonds in the capital market; additional US\$ 3.5 billion projected
- SREP 2 in discussion; new financing modality or new replenishment being sought
- GEF 7 (7th replenishment cycle) began in July 2018 for four years with US\$ 4 billion; among which about US\$ 500 million is available for climate change mitigation
- GCF has US\$ 1 billion available for approval; a replenishment drive will begin in 2019
- Canadian bilateral climate change fund: US\$ 275 million for energy transition countries and Small Island Developing States (SIDs); to be available by mid 2019

Opportunities and challenges ahead

OPPORTUNITIES

- **Climate finance pipeline development**
 - GCF for large-scale transformational operations
 - GEF for smaller-scale projects or risk absorbing capital
 - Canada for energy transition and SIDS
- **Expanding business development** to electric mobility, battery storage, urban energy efficiency and innovative solutions that donors want to support

CHALLENGES

- **Fundraising effort** for alternative concessional finance, in particular from bilateral and non-traditional sources
- **Managing political challenges** for replenishing CIFs
- **Building trust and relationship** with GCF, the largest climate finance vehicle
- **Reducing transaction cost** to access climate finance, particularly GCF

Whom to Contact ?



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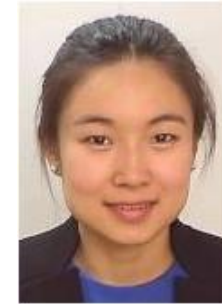
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Thank you

