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# Interactive Workshop on the Energy Sector Results Summary

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# Interactive workshop on the energy sector



- 6 Working Groups formed on 5 themes:
  - **Energy access for the hardest to reach (Francophone)**
  - **Energy access for the hardest to reach (Anglophone)**
  - **Scaling up renewable energy markets**
  - **Setting the path towards 50% RE by 2030 and net-zero energy by 2050**
  - **Energy efficiency**
  - **Hardest-to-abate sectors**
- The intent was to solicit the attendees' opinion on the GCF priorities for interventions and financing for each of these themes.

# Energy Access for the Hardest to Reach



- Across the drivers of the GCF strategic plan and in respect to promoting access to modern renewable energy (RE) for hardest to reach areas, the GCF is targeting the following possible interventions:
- **Transformational planning and programming**
  - **Policy and regulatory reforms in renewable energy access** (e.g., RE rural concessions, mini-grid regulations, policies related to the arrival of the national grid).
  - Promoting actions including local community engagement and consultations when designing energy access initiatives.
  - Supporting strategic, long-term energy planning that integrates power systems, energy access, and climate goals.
- **Catalysing climate innovation**
  - **Supporting innovative business models that provide energy services for productive uses of electricity** (e.g., cooling, processing, milling, graining, vacuum packaging).
  - Promoting leasing arrangements to enable access to machinery and equipment for productive and value adding electricity uses.
  - Funding innovative and impactful renewable energy access technologies including to address last-mile electrification.
  - **Supporting community-level energy projects or cooperative business and financial models**, including through microfinance.
- **Mobilization of finance at scale**
  - **Credit lines to local financial institutions** for energy access services linked to productive RE use, including linkages to food production, health, education, and others.
  - **Capitalisation of rural energy funds.**
  - Addressing liquidity risks for small scale service providers through creation of special purpose funds.
  - Improving business models through linkages with partners such as digital financial service providers.
  - Unlocking local financial institution and private capital to finance low emission energy access projects.
- **Coalitions and knowledge to scale up success**
  - **Promoting local/national skills development and application of best practices.**
  - Promoting renewable energy access knowledge products in communities of practice.
  - Promoting articulation of causal links between energy access and climate resilience.

# — Energy Access for the Hardest to Reach



- What broader/other actions should be prioritized to promote access to energy in hardest-to-reach areas, in particular to favour a just transition for Africa.
  - Consensus that climate innovation and mobilizing finance at scale is key.
  - Key to provide support for the development of feasibility studies and stakeholders' consultation.
  - Key to combine different sources of RE (e.g. solar and biogas).
  - Catalyse innovation, with a focus on diversifying funding sources and supporting community-level projects and business and financial models.
    - There is no 'one solution fits all.'
    - Need climate-smart solutions from the private sector and involvement of local institutions.
  - Mobilization of large-scale financing to unlock local financial institutions and private capital to finance low-emission energy access projects, while promoting access to energy.
- Besides energy generation and access, what other GCF result areas, particularly on the adaptation side, do you think should be prioritized to design cross-cutting funding proposals:
  - Energy to support food processing and preservation.
  - Energy supply for irrigation.
  - Energy and water quality.
  - Ecosystems services.
  - Health and wellbeing.

# Scaling up Renewable Energy Markets



- Across the drivers of the GCF strategic plan and in respect to scaling up renewable energy markets, the GCF is targeting the following possible interventions:
- **Transformational planning and programming**
  - **Supporting policy and legislative reforms** (e.g., renewable energy legislation, renewable energy pricing policies).
  - **Supporting renewable energy programming mechanisms** (e.g., renewable portfolio standards, feed-in-tariff, competitive auctions, carbon pricing frameworks).
  - Supporting regulatory developments (e.g., standardized RE power purchase agreements, license/concession regulations, RE grid access/connection regulations).
  - **Supporting the development and availability of updated renewable energy resource mapping** (e.g., wind and solar irradiation maps, geothermal resource mapping).
- **Catalysing climate innovation**
  - Promoting technological innovation in lesser mature RE generation technologies (offshore or floating wind, **bioenergy**, ocean energy).
  - Supporting technology transfer for local production/integration of renewable energy technologies.
  - Taking anchor investment positions in early deployment of innovative and scalable low emission generation technologies.
  - Supporting development of green electricity products offering to consumers.
- **Mobilization of finance at scale**
  - **Creating financing facilities dedicated to scaling up energy transition investments.**
  - Crowd-in private investment at scale via early phase financing, first loss position, tenor extensions etc.
  - Anchor investments for large-scale renewable energy generation investments.
  - De-risk counterparty risks and potential periodic loss of revenue for independent power producers.
- **Coalitions and knowledge to scale up success**
  - Promoting best practices for the design of RE generation plants.
  - Developing knowledge transfer to grid operators.
  - Developing procurement guidelines for renewable energy services.
  - Promoting environmental, safety, and quality standards.

# — Scaling up Renewable Energy Markets



- What broader/other actions should be prioritized to scale up RE markets:
  - Support partnership interactions between countries and entities to optimize use of resources.
    - Strengthen local and sub-regional expertise to build a homegrown pool of experts.
    - Regional programming should be emphasized over country-specific programming.
  - Support partnerships between research institutions and industry – align education and training programs.
    - Countries often lack access to local experts with deep knowledge and experience in renewable energy.
    - Access to adequate and accurate RE resource data is often a barrier and is critical to RE projects' development.
    - Empowering in-system experts to customize approaches to climate change is critical.
  - Special emphasis should be put on **hydropower resources and biomass**, in alignment with some countries' NDCs.
  - Consider integrating **carbon market mechanisms** in funding proposals, in alignment with Article 6 of the Paris Agreement.
  - Create self-sustaining and innovative financing facilities, e.g. based on **green bonds**.
  - Integrate circularity in project proposals to effectively address disposal of RE waste.
  - Consider consumer protection to ensure that projects are human-centric.



# — Path to 50% RE and Net-zero Energy



- Across the drivers of the GCF strategic plan and in respect to setting a path towards 50% renewable energy by 2030 and net-zero energy by 2050, the GCF is targeting the following possible interventions: :
  - **Transformational planning and programming**
    - Support long-term grid modelling and planning of transmission, distribution, and storage for integrating rising shares of variable RE.
    - **Support diversification of renewable energy sources.**
    - **Support market rules development for auxiliary, flexibility, and storage services.**
    - **Support upgrades / climate resilience of transmission and distribution grids.**
    - Support regional power markets for renewable energy trade.
    - Support development of local skills for manufacturing, assembly, and operations of storage technologies, to reduce costs and improve local implementation, disposal, and recycling.
  - **Catalysing climate innovation**
    - **Support grid digitalisation, system integration, and long-distance RE transmission.**
    - Support innovative solutions for optimizing power factor, flexibility, storage, and demand-response.
    - Support the development of virtual power plants and 'behind the meter' storage.
    - Support the transfer of new storage technologies (pumped-storage hydro, compressed air energy storage, green-hydrogen-based solutions (power to gas), gravity-based storage solutions and various types of batteries.
  - **Mobilization of finance at scale**
    - Leverage national and private capital by creating financing facilities, participating in syndication, and de-risking large scale transmission, distribution, and storage investments.
    - Support financing for demand response and smart grid technologies to integrate flexibility services (e.g. electric vehicle charging and desalination plants).
    - Provide risk mitigation and take anchor investment positions in early deployment/piloting stage of new scalable storage technologies.
    - Support new business models for transmission, distribution, and storage services for green grids.
  - **Coalitions and knowledge to scale up success**
    - Develop grid flexibility knowledge products within communities of practice.
    - Develop grid codes knowledge transfer to operators for highly flexible grid operations.
    - Promote application of best practices, and safety, environmental, and quality standards.

# — Path to 50% RE and Net-zero Energy



- What broader/other actions should be prioritized towards reaching 50% RE and net-zero energy:
  - There was a consensus among all countries participating in the workshop that **mobilizing finance at scale** is key to reaching 50% RE and net-zero energy.
  - **Upgrading the transmission and distribution systems** is necessary to reduce T&D losses, which can attain 35% in some countries.
    - Long-term grid modelling and planning of transmission, distribution, and storage, must be combined with diversification of RE generation.
  - Countries echoed that capacity building and climate education at the grassroots level is very much needed to achieve these targets.
    - Develop grid flexibility knowledge products within communities of practice.
  - **A harmonized approach to policies at the national level is required**, as the policies from different government entities are not aligned with each other.
    - It is still noteworthy that all participant countries have a roadmap to achieve net-zero by 2050 and have policy tools in place.
  - **Integration of climate finance function across sectors** is needed, for example climate finance in integrated package for projects in energy, agriculture, water nexus.



# — Energy Efficiency



- Across the drivers of the GCF strategic plan and in respect to enabling ‘space’ energy efficiency and market switch to highest efficiency appliance/equipment, the GCF is considering the following interventions:

## 2. Transformational planning and programming

- Promoting zero-carbon materials and retrofits for residential, commercial, public, and industrial spaces.
- Scaling layered and zero-carbon building design codes and link or merge with resilience standards.
- Harmonizing minimum efficiency performance standards (MEPS).
- Scaling testing labs and monitoring and verification practices for EE standards and labelling practices.
- Adopting green public procurement standards.

## 4. Catalysing climate innovation

- Scaling up innovation in building materials that significantly reduce energy demand.
- Integrating ecosystem-based solutions in building plans.
- Switching to co-generation and tri-generation from standard HVAC solutions.
- Adopting internet-of-things and data analytics for appliance/equipment/space energy demand reduction.
- Support supply chains for market switch to high efficiency appliances.

## 3. Mobilization of finance at scale

- Aggregated finance models (e.g. including local currency finance), green mortgages, white certificates.
- De-risking tools (e.g. guarantees, risk and energy saving insurance).
- EE products and service supply chain capitalization and financing.
- EE standards-based and products-based revolving funds and credit lines.
- Supporting service models (e.g., ESCOs, bulk procurement, bulk distribution).

## 1. Coalitions and knowledge to scale up success

- Capturing experiences and developing knowledge products on EE business models.
- Establishing green procurement and distribution guidelines for energy efficient services.
- Capacity building, technical assistance, and knowledge hubs (e.g., for ISO 50001 implementation).
- Establishing MEPS repository.

# — Energy Efficiency



- What broader/other actions should be prioritized towards scaling up energy efficiency:
  - Supporting the establishment of **energy efficiency baselines**, data collection, monitoring, reporting, and verification standards.
  - **Capturing experiences and developing knowledge products** on EE business models.
  - Strengthening regulatory frameworks and governance.
  - Establishing energy-efficiency roadmaps.
  - Favoring public-private partnerships.
  - Harmonizing minimum efficiency performance standards (MEPS).
  - Integrating ecosystems-based solution in building plans.

# — Hard-to-Abate Sectors



- The 'hard-to-abate sectors, include, among others, long range transport, mining, cement, metals (steel, aluminium), pulp and paper, glass, ammonia, petrochemicals, plastic, building materials. Across the drivers of the GCF strategic plan and in respect to hard-to-abate sectors, the GCF is targeting the following possible interventions:
- **Transformational planning and programming**
  - Promoting time-bound roadmaps for phasing out high-emitting industrial processes and fostering fuel switches (e.g. green H<sub>2</sub>, alternate fuels).
  - **Mainstreaming technical and financial planning and programming across hard-to-abate sectors.**
  - Promoting best-practice international management standards for hard-to-abate sectors.
  - **Supporting hard-to-abate technology transfer from developed countries.**
- **Catalysing climate innovation**
  - Participating in high-impact research and technology demonstration and scale-up pilots for hard-to-abate technologies.
  - **Promoting alternative solutions for substitution of fossil fuels.**
  - **Promoting carbon capture use and storage technologies (CCUS).**
  - Promoting innovations in reuse/recycling of industrial waste materials.
  - Demonstrating anchor investments in new breakthrough high risk and high potential business models.
  - Testing and deploying large-scale market-based financial instruments for hard-to-abate breakthrough technologies.
- **Mobilization of finance at scale**
  - **Guarantees** and political risk insurances to de-risk novel, large scale, and catalytic technologies for hard-to-abate sectors.
  - Policy-based loans for transformational industrial value chain developments.
  - **Hard-to-abate funds and credit lines for industries.**
  - (Junior) equity and patient capital for early-stage, breakthrough, private sector-driven hard-to-abate technology adoption.
  - Hard-to-abate-specific export financing schemes for global value chains
- **Coalitions and knowledge to scale up success**
  - Capturing experiences and developing knowledge products on hard-to-abate technologies.
  - Capacity building, technical assistance, and knowledge hubs.
  - Establishing hard-to-abate technology repository.

# — Hard to Abate Sectors



- What broader/other actions should be prioritized towards reaching 50% RE and net-zero energy:
  - All of the workstreams identified are important and interrelated, there is a need to prioritize and rank the interventions.
  - The priority area noted was Transformation Planning & Programming with a focus on:
    - **Green hydrogen.**
    - Energy and water access.
    - Agri-value chains (methane production from livestock).
  - In the planning process, special attention should be paid to vulnerable populations, and working with youth and women.
  - CSO engagement is critical to ensure a just transition for countries.
  - **Need for domestic and multinational companies to access concessional funding.**
    - Need for expertise in financial structuring of transactions to support abatement of industries.
  - GCF can also consider issuing guarantees for all types of projects.

# — Conclusion



- There is universal consensus that more climate finance is required.
- The need for local capacity building came up as a priority for all working groups.
- The need for regulatory reform is seen as key to scale up renewable energy markets (hardest-to-reach, setting the path to 50% RE).
- Strengthening electricity grids and diversifying RE sources is essential to reach 50+% of renewable energy:
  - Strengthening transmission and distribution grids for loss reduction and climate resilience.
  - Improving grid flexibility to incorporate more variable renewable energy (VRE).
  - Diversifying RE sources, with emphasis on hydropower and biomass/bioenergy solutions.
- Basic baselining and roadmapping is required to implement energy efficiency.
- There is strong interest in green H<sub>2</sub> from more advanced economies but there is a need to identifying and prioritize specific solutions for specific hard-to-abate sectors.



# Thank you

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# Suggested countries / working groups



WG 1a	WG 1b	WG 2	WG 3	WG 4	WG 5
Energy access (Francophone):	Energy access (Anglophone):	Scaling up RE markets	Path towards 50% RE and net-zero	Energy efficiency	Hard to abate sectors
Bénin	Guinea-Bissau	Algeria	Comoros	Angola	Algeria
Burkina Faso	Lesotho	Angola	Egypt	Botswana	Cote d'Ivoire
Burundi	Liberia	Eswatini	Ethiopia	Cabo Verde	Egypt
Rép. Centrafricaine	Malawi	Ethiopia	Ghana	Cameroon	Kenya
Tchad	Mozambique	Ghana	Kenya	Comoros	Morocco
RD Congo	Rwanda	Mozambique	Liberia	Congo, Dem. Rep.	Namibia
Madagascar	Sierra Leone	Mali	Nigeria	Djibouti	Nigeria
Mauritanie	Somalia	Mauritius	South Africa	Equatorial Guinea	Senegal
Niger	South Sudan	Mozambique	The Gambia	Eritrea	South Africa
Togo	Tanzania	Senegal	Tunisia	Sao Tome & Princ.	Tunisia
	Uganda	Sudan		Seychelles	
	Zambia			The Gambia	
	Zimbabwe				