

Event Outcome
**Event: “Implementation Lab: A cleaner power sector
by 2030: Scaling renewable and storage-based
systems”**
UNFCCC COP 27
Sharm El Sheik

Marrakech Partnership for Global Climate Action

ENERGY DAY – 15 November 2022

14:00-15:30 EET, Lotus Room (120 person capacity)

Organised by Global Wind Energy Council (GWEC), International Energy Agency (IEA), World Business Council for Sustainable Development (WBCSD) and ReNew Power

‘Implementation Lab: A cleaner power sector by 2030: Scaling renewable and storage-based systems’

SECTION 1 - ACTION EVENT

Key Messages:

- Around 100 state and non-state actors convened at the Energy Day Implementation Lab on “A cleaner power sector by 2030: Scaling renewable and storage-based systems,” to discuss how to achieve the 2030 Breakthrough for renewable energy to make up at least 60% of global electricity generation (40% of which will be from wind and solar power generation). The primary message was around solidarity and collaboration between the multiplicity of stakeholders in the power sector, from governments to state-level authorities to business to NGOs. The forum was meant to foster greater interaction and dialogue between different actors, to encourage learning and shared experience of barriers to renewable energy deployment on the ground. It was generally acknowledged that there are insufficient platforms for such cross-sector exchange under a shared decarbonization target.
- Another key message which emerged from the Lab was around the need for technical details and complex planning to achieve near-term implementation of targets. In particular, it was acknowledged that high-level goals within NDCs or even the Breakthrough Agenda were simplifications of complicated energy models and calculations, as decision-makers are unable to synthesise and support extremely technical planning. Nonetheless, the need for detailed policy frameworks and regulatory reforms at country level was seen by many as the necessary groundwork to align action with targets within a narrowing time window to keep a 1.5C pathway alive.
- Finally, several stakeholders highlighted the socioeconomic opportunities of renewable energy, especially if we are to achieve an accelerated transition in this decade. The dimension of green job creation and labour intensity of growing sectors like battery storage and electrolyser manufacturing was highlighted, in addition to national balance of trade and export opportunities. Multiple speakers pointed out that the shift to renewable energy-based system offered a chance to ensure that human capital is developed in more equitable ways than has been seen in the conventional sector.

Outcomes:

1- Demonstrate implementation and showcase concrete examples of action;

- a. Renewable energy projects are growing in scale – Hornsea One in the UK, for instance, is now dwarfed by progress in offshore wind scale in places like Guangdong, China.
- b. This moment of urgency around implementation to meet 2030 decarbonisation targets is compelling the renewables industry to move faster and make crucial supply chain investments. The announced pipeline for manufacturing capacity today is already enough to meet 2030 capacity for solar PV. It is close to sufficient for batteries, and more than 50% of the way there for electrolyzers and lithium production. This level of manufacturing capacity is well on the way to meeting the levels required for a net zero-compliant pathway by 2030.
- c. The IEA also acknowledged that peak fossil fuel demand is coming this decade. For the first time, the STEPS scenario shows that policy settings today will produce a distinct peak in fossil fuel use before 2030. Due to curbed fossil fuel demand and ramp-up of renewable energy in the global power mix, policy and technology progress has already shaved 1C off projected warming pathways – this is a step in the right direction, but much more work is needed to reach a Paris-compliant pathway and meet the 2030 Breakthrough.

2- Contribute to the COP27 outcomes on progress in implementation of mitigation/resilience and finance goals;

- a. The focus on implementation was strong throughout the Lab. Stakeholders recognised the need for governments to move beyond targets and acquire policymaking and regulatory capability with detailed plans and technical know-how to translate NDCs into action.
- b. Stakeholders also recognised that a holistic approach to the energy transition was increasingly necessary for mitigation to be aligned across a climate and energy agenda – for instance to look at the socioeconomic metrics around clean power generation, and not just focus on kilowatt-hours, gigawatts or levelized cost of electricity.
- c. UNECE highlighted that investment flow in renewable energy in 17 UNENEC countries amounted to \$7.2 billion in 2018, but many bankable renewable energy project proposals have been identified, such as the Virovi Wind Farm in North Macedonia (\$578 million) and the Khizi-Absheron Wind Power Plant in Azerbaijan (\$300 million)

3- Target near-term implementation and action to accelerate progress;

- a. Stakeholders highlighted the need to shorten permitting schemes and consenting processes to accelerate the deployment of renewable energy – otherwise a net zero scenario by 2050 or 2030 Breakthrough will be “fantasy.” Stakeholders also noted that if streamlining permitting can be done holistically, it could also contribute to biodiversity protection and environmental conservation, with the support of a broader base of politicians and civil society groups.

- a. Stakeholders also noted that emerging markets and developing economies (EMDEs) will need to be a focus of near-term implementation as they will be more challenged to keep pace with coal phaseout targets while ramping up solar and wind installations. This could mean adopting a new approach to risk evaluation of renewable projects in EMDEs.
- b. Buildout of power infrastructure, such as transmission lines, was also recognised as an urgent need for planning and investment to get renewable energy projects connected. This goes hand-in-hand with grid digitalisation initiatives required across both developed and developing economies.

4- Contribution towards achieving the goals/milestones set in the [Climate Action Pathways](#), [2030 Breakthroughs](#) and [Adaptation and Resilience Outcome](#)

Targets;

- a. IEA outlined that solar and wind already make up 11% of the global electricity mix today, and under the Stated Policies scenario (today's policy settings), the world is on-track to reach 25% wind and solar in the mix by 2030. This is largely driven by new policies like the US Inflation Reduction Act, the EU's Fit for 55 package, Japan's GX, China's new clean energy targets and India's solar revolution. This is an improvement from recent years, but still falls short of the 40% Breakthrough target for wind and solar.
- b. The focus is shifting to short-term actions the world needs to do to achieve 2030 Breakthrough.

5- Highlight the importance and elevate efforts of resilience and adaptation

- a. N/A

6- Strengthen collaboration with all stakeholders, including the national governments and non-Party stakeholders;

- a. Lab brought together perspectives from state governments in Brazil and India, UNECE, civil society (World Resources Institute), energy authorities (IEA) and industry (Global Wind Energy Council, Orsted). All were in agreement about the need to improve collaboration and discussion between different stakeholder groups, understand multiple perspectives and achieve solidarity in a shared goal.
- b. The Lab recognised that clean electricity sector now hires more people today than the oil and gas sector – a new milestone which will improve the broad base of support among governments and the general public for a clean transition.
- c. The Lab also encouraged recognition of the energy access challenge, and the need to move discussion beyond mitigation needs to add more renewables capacity, and to include the human aspect of vulnerable communities on the ground.



- 7- Showcase concrete examples of accountability and/or progress tracking (when applicable).**
- a. N/A**

SECTION 2 – STOCKTAKE ON ACTION

Overview of progress and implementation in 2022

[Please summarize the overall political, economic and social developments impacting the implementation (either supporting or challenging) thematic area which are worth highlighting and how these affected the work of the MP stakeholders in carrying out their work. ~ 300 words]

- We are falling short of the renewable energy deployment required to meet the 2030 Breakthrough under current policies – as the IEA noted, we are on-track to achieve 25% wind and solar in the global electricity mix by 2030, when the target is 40%. This indicates a huge magnitude of change around speed, acceptance and policy capability is required.
- There is sufficient investment and capital from the public and private sector in renewable energy projects, though two challenges exist around financing. In the first case, there may not be sufficient bankable projects in the pipeline due to limited land/seabed capacity made available for the private sector to propose projects. In the second case, certain jurisdictions require de-risking for private investment, or a different approach to risk appetite and premiums when it comes to accelerating the energy transition in emerging markets and developing economies.
- There is a huge implementation challenge around permitting and capacity for government agencies to amend legal, regulatory and administrative frameworks to speed up the permitting process for renewable energy projects. This will require prioritisation at the highest (national) levels to ensure top-down coordination of solutions like mandated time limits to complete consenting steps, clearing house mechanisms for legal opposition, allowances of proposals in different zonal areas, etc.
- The energy transition is also bringing new economic opportunities to countries, either through generating trade surpluses through the export of services and products related to renewable energy (e.g. China and solar PV), or through the generation of human capital. Employment in the clean electricity sector has now exceeded that in the oil and gas sector, and this trend will only grow as more manufacturing and supply chain capacity is required for enabling technologies and infrastructure including long-duration storage, electrolysers, critical mineral production and processing, green hydrogen and grids/transmission.

Section 3 – Action during 2023-2025

- To achieve the 2030 Breakthrough of 60% renewable energy in the global electricity mix, including 40% from wind and solar generation, we need to:
 - Continue to bring together multiple stakeholder voices to highlight the urgency around near-term implementation. This is an all-hands-on-deck challenge that will require agreement around the near-term solutions that can accelerate deployment. For instance, achieving consensus between industry, government and civil society on how to speed up permitting processes for renewable energy projects will be necessary to cut down on delays from opposition or legal challenges to projects, if stakeholders agree on the national interest or high prioritisation of renewables buildout.
 - Near-term implementation also requires capacity-building among policymakers, in terms of ensuring sufficient technical know-how and regulatory experience to create investable policy environments in the most efficient way. There is large scope for collaboration between state and non-state actors here, where the latter, especially industry, may be more familiar with bankability requirements and on-the-ground barriers to deployment.
 - Highlighting the investment needs for the enabling environment for renewable energy deployment, including grid and transmission infrastructure (which often takes longer to consent and construct compared to renewable energy projects), grid digitalisation and flexibility, and long-duration storage technologies. This also includes planning and investment for a scaled-up global supply chain for renewable energy, including enhanced manufacturing capacity around critical raw materials and minerals, electrolyzers and batteries.