IRENA
INNOVATION WEEK
solutions for a renewable-powered future

IRENA
International Renewable Energy Agency

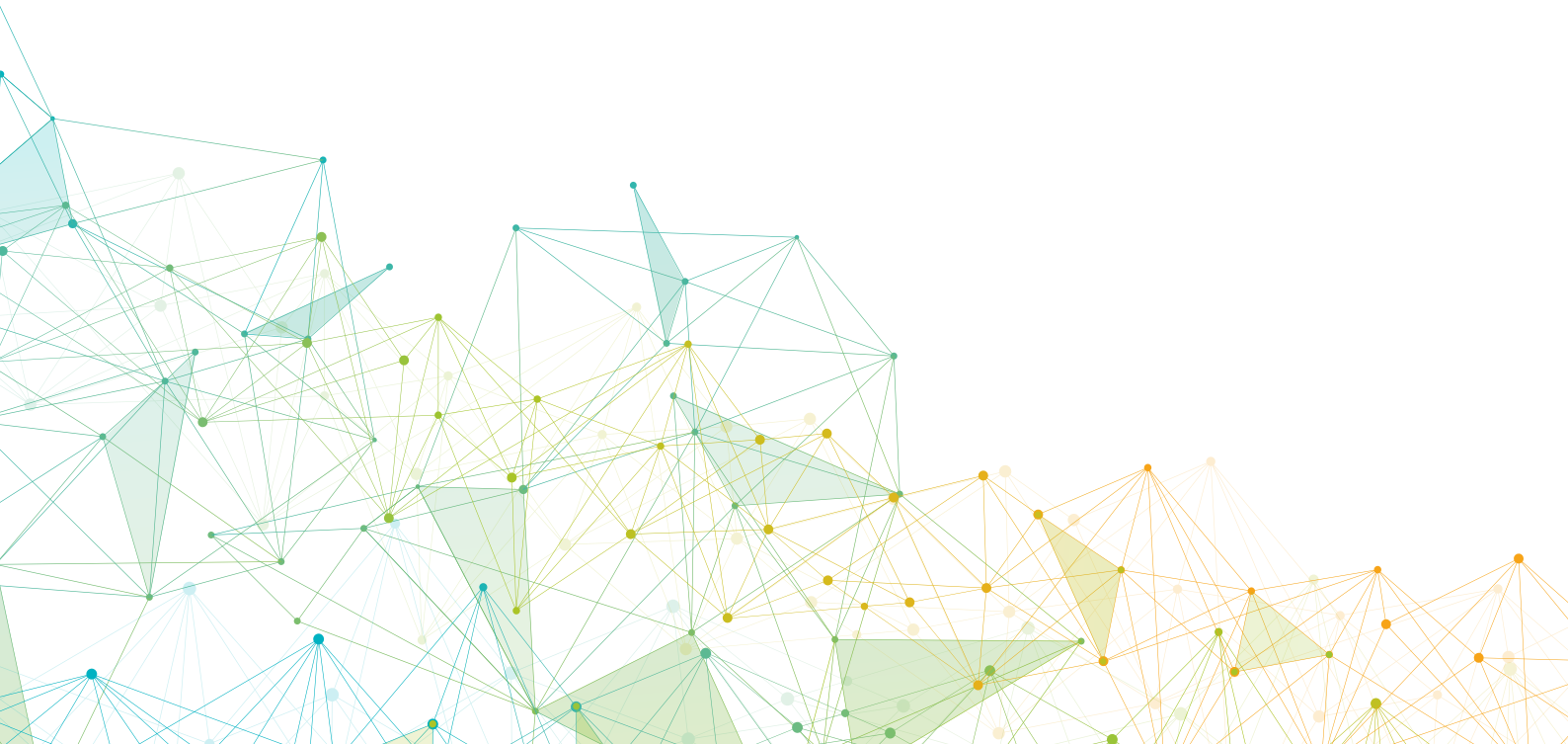
DIGITALISATION AND DECENTRALISATION TRACK

BROADENING ENERGY ACCESS THROUGH INNOVATION

Session overview

"For broadening energy access through innovation, it ought to be embedded in the communities it targets – innovation is only as good as its impact," said Habiba Ali (Founder and CEO, SOSAI Renewable Energies). In the pursuit of universal access to energy, the emergence of major digital and physical innovations, technological advancements and market-driven financing instruments is disrupting markets. Using solar panels, smart phones, and the internet, empowered consumers in low-income countries are now leapfrogging into an information-based digital economy that is growing significantly faster than the global economy – creating opportunities for growth and job creation while addressing climate change.

This session discussed how to support the development, deployment and dissemination of a broad range of innovative energy access solutions and evaluated their relevance in the context of the global energy transformation. The session was moderated by **Vimal Mahendru (IEC Ambassador, International Electrotechnical Commission and President, Legrand-India)** and comprised an introductory presentation by **Minoru Takada (Energy Team Leader, UN Department of Economic and Social Affairs (DESA))** followed by a panel discussion.



Presentation:
Universal energy access for the achievement of Sustainable Development Goals

Minoru Takada (Energy Team Leader, UN DESA) presented on the United Nations' Sustainable Development Goal 7 (Ensure access to affordable, reliable, sustainable and modern energy for all). He discussed the need for universal access to energy, increased energy efficiency and the increased use of renewable energy through new economic and job opportunities to create more sustainable and inclusive communities and resilience to environmental challenges such as climate change. He emphasised the need to increase public and private investments in energy and to promote regulatory frameworks and innovative business models to successfully transform the world's energy systems.

Panel discussion

In addition to the presenters, the panel included:

- Habiba Ali, Founder and CEO, SOSAI Renewable Energies
- Julie Cammell, Programme Manager, Global Off-Grid Lighting Association (GOGLA)
- Jan Cloin, Project Manager, GET.invest
- Bubacar Diallo, Founder and CEO, Benoo Energies
- Martin Healy, Renewable Energy Advisor, US State Department
- Matthieu Mounier, Head of Microgrid, Schneider Electric
- Shelmith Theuri, Investment Officer, SunFunder
- Marcus Wiemann, Executive Director, Alliance for Rural Electrification

Highlights from the discussion:

- **Innovative solutions create opportunities for growth and job creation while addressing climate change.** Technological innovations can encourage a wider use of decentralised power solutions beyond lighting and phone charging services. Following the advent of the industrial internet that merges big data and cloud-based analytics with brick-and-mortar equipment, pioneering players are developing low-cost energy systems at the household or community scale with business models that include product, process and distribution innovations. Innovation can improve community governance and organisational behaviour and foster the uptake of renewable energy solutions.
- **Decentralised power options are lowering energy costs for communities.** In many regions decentralised options offer lower costs than extending the grid into remote locations. Islands and isolated communities can benefit from off-grid and small-scale renewable applications, such as solar lanterns, solar home systems and solar-powered mini-grids. In areas with significant farming activity, farmers can produce biogas from manure and agricultural residues. Other options include hybrid systems and small hydropower, depending on costs, local geography and resource availability.

- **Market perspective.** Innovation can reduce the typical market barriers that small independent power producers face when entering a service territory. To provide the right mix of private capital, technology and expertise, scaled-up partnerships between public and private players need to offer both a stable policy environment and a combination of relevant market-driven incentives. Innovation is needed to create better regulated and more transparent markets and to adapt pricing practices to adequately consider the cost of externalities.
- **Innovation is only as good as the impact it makes, and the impact must be sustainable.** Innovative solutions that broaden energy access ought to be embedded in the communities they target. It must be ensured that the local population is able to adapt to innovative solutions. Instead of focusing too much on technology, people's best interest must be at the centre of innovation.

In conclusion, Vimal Mahendru asked each speaker to give one top-level recommendation which could make maximum impact on broadening of universal energy access. In response, the speakers made following comments:

- Do not work in silos,
- Focus on productive use of electricity as a priority (to enable people earn),
- Promote local (or localized) solutions, keeping local environment in mind,
- Ensure product quality is reliable,
- Make the solutions affordable,
- Do it on scale,
- Best ideas need to be scaled (not every idea),
- It is all about people (keep people at the centre of any solution that you seek, not technology),
- Look across technologies for ideas and synergies (telecommunications, direct current, refrigeration…),
- Take a long-term view, but work at local level,
- Have a vision,
- Be human (it is about people),
- Work with enthusiasm and urgency (there is momentum, enthusiasm and people on our side) – leverage it.

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