

# New solutions proposed for renewable energy scaleup

The report, titled “Innovation Landscape for a Renewable-Powered Future: solutions to integrate variable renewables”, has been issued by the International Renewable Energy Agency (IRENA), which is a global intergovernmental organisation that supports countries in their transition to a sustainable energy future.

The important role for renewables in meeting global energy needs is demonstrated through country-by-country case studies. The analysis looks at synergies between various innovative solutions relating to business models, market design, new technologies and methods of operation. These approaches, when appropriately joined-up, are able to lower costs and they enable countries to operate in a more flexible way.

Those nations at the cutting edge of the energy transformation are generating over one-third of their energy needs from variable renewables, such as solar and wind power. In addition, there are examples of countries doing so in a cost-effective way.

While the technology is progressing, what is necessary to achieve the carbon-reduction requirements is effective scaleup of renewables. The report indicates that this is taking place, but more emphasis is required in relation to such innovation trends as digitalization, decentralization and electrification of the end-use sectors.

Such technologies also provide a boost for a range of technology providers, especially startups. This is not only within the European Union, but also for exporting green technologies to other parts of the world. This includes innovators in relation to distributed energy resources (DERs) such as rooftop solar PV installations, micro wind turbines,

battery energy storage systems, plug-in electric vehicles and smart home appliances.

The region of the world best placed for this paradigm shift is the European Union, where current variable renewable energy sources account for around 15 percent of the annual electricity supply to member states.

Commenting on the report and the implications for the European Union, IRENA Director-General Adnan Z. Amin stated: “The region’s success shows us that innovation is creating an energy transformation that is technically feasible and economically attractive. Innovation is the engine powering the energy transition and the global pace of innovation is accelerating.”

He adds that: “IRENA’s new report will provide a clear, navigable and comprehensive guide on innovations being piloted around the world, aiming to support informed decision-making by all countries to deploy low-cost renewables and accelerate the global energy transition further.”

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