

Team member
Stijn RenneboogPhone
+32 (0)466 90 04 01Email
stijn.renneboog@eurovent.euDate
2020-05-18

IRENA maps the path to energy transformation by 2050

Much more investment in decarbonisation needed in EU with focus on energy efficiency

The report from the International Renewable Energy Agency (IRENA) shows a growing gap between rhetoric and action in decarbonising the economy. Although the uptake of renewables in the EU is accelerating, progress on energy efficiency – especially in buildings – is too slow. The EU stands the most to gain from the energy transition but a much higher level of funding in building renovation and the deployment of energy efficiency technologies is needed to reach the 2050 targets. The solution lies at the nexus of the European Green Deal and the COVID-19 recovery plan.

Global Renewables Outlook

IRENA's 'Global Renewables Outlook: Energy transformation 2050' report shows the path to a successful clean energy transition. Globally and in the EU, efforts need to be significantly scaled up.

Global progress

Current emission reduction efforts are insufficient to stay within the limits defined in the Paris Agreement. Current trends set the planet on track for a temperature increase of more than 3°C.

Energy efficiency and renewable energy are the two key solutions to enable the global energy transformation. Together they offer more than 90% of the mitigation measures needed.

Renewables

Renewables will be taken up at a high pace in the EU as they are becoming cheaper than fossil fuels. The EU would reach renewable shares in energy consumption compatible with decarbonisation goals.

Energy efficiency

Progress on energy efficiency is off track in the EU. The report recommends much more focus on energy efficiency standards and the deployment of energy efficiency technologies. Of all mitigation measures, energy efficiency would require the most yearly investment until 2050.

Building sector

Buildings are the largest consumer of energy in the EU and have the most potential for emissions reductions. Most buildings would need to be net-zero energy, combining efficiency and renewables.

The EU needs massive mobilisation to retrofit, refurbish and renovate buildings. Besides stricter efficiency standards for new appliances, the replacement of old appliances needs more attention.

Heat pumps

The report calls for much more action in the deployment of heat pumps replacing conventional heating systems. The number of heat pumps installed by 2050 would need to increase 10-fold.

It recommends promoting public awareness about the advantages of heat pumps and create special lines of finance to project developers that can disseminate the technology.

Investment

To achieve the decarbonisation targets, 323bn USD would have to be invested yearly in the EU in the clean energy transition, mostly on energy efficiency. Current investment falls short of this target.

The investments would have to be a mix of private and public funding. Public subsidies for renewables and energy efficiency would have to be significantly scaled up.

Growth and jobs in the EU

The EU stands most to gain from the clean energy transition. It would result in 7,4% more GDP and boost the competitiveness of European businesses. The transition would result in 2,4% more jobs, but require the reskilling of workers, with major demand for technicians, and construction and factory workers.

Levelling the decarbonisation playing field

No region alone can be successful in abating greenhouse gases to sufficiently low levels. The EU could incentivise other regions and level the playing field through a carbon border adjustment mechanism.

Digitalisation

The report identifies digitalisation and the Internet of Things as key enablers to amplify the energy transformation, although challenges need to be overcome before widespread implementation is possible. The biggest challenges are the reliability of the technology, data privacy and cybersecurity.

Circular economy

Certain sectors of the economy, such as the steel and aluminium industries, generate carbon emissions which are difficult to abate. Resource efficiency can reduce the impact of these industries.

Greater attention needs to be given to lifecycle and circular economy analyses, exploring strategies for recycling, reuse, repair, remanufacturing, materials efficiency, and materials substitution.

The link to the European Green Deal and COVID-19 recovery plan

The European Green Deal has set the global benchmark for green ambition and its various policy measures focus on the right areas of action. However, its ambition will have to be matched by the level of resources committed to its implementation.

The COVID-19 recovery plan is the perfect opportunity to boost the clean energy transition and provide the required investments in renewables and energy efficiency. Massive investment in building renovation would generate growth and jobs while boosting decarbonisation.

Recommended Actions

The European HVACR industry stands to gain from the global energy transition, provided it manages to adapt to the changes in the labour market, the digital transformation and the focus on the circular economy.

Members are advised to follow closely the development and implementation of the COVID-19 recovery plan, the European Green Deal and its related policy measures. In the near term, circular product design and digitalisation are key topics to be explored and prepared.

Related documents and links

All related documents and articles can be found in the respective sections in the right sidebar.

- GEN – 1113.01 – IRENA Global Renewables Outlook - Energy transformation 2050