IRENA QUARTERLY
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ALIGNING POST-COVID RECOVERY WITH RESILIENCE

Photograph: Shutterstock

Renewable energy forms a crucial component of stimulus measures in the wake of the pandemic.

Financial Times environment and clean energy correspondent Leslie Hook held an **FT Digital Dialogues** webinar on 24 June with Francesco La Camera. Among the IRENA Director-General's comments:

- **The COVID-19 pandemic could mark the decisive moment in a profound, ongoing transformation of energy systems.**
- **Unlike after the 2008 financial crisis, the world today faces simultaneous health and economic crises. Yet financial systems are healthier than in 2008 and should not now be undermined with bad investments.**
- **An accelerated energy transition calls for increased investment from both the public sector and private capital. Governments must put policies in place to leverage private investments.**
- **Transforming the energy sector will create a wide range of new jobs, many requiring different skill sets and training.**
- **The pandemic has reinforced the value of international collaboration and the implementation of concrete global programmes.**

Cost-competitive renewable power bolsters recovery plans

As the world grapples with the crisis set off by the COVID-19 pandemic, cost-competitive renewable power generation could form the backbone of stimulus measures, as well as keep the world on track to cut future carbon dioxide (CO_2) emissions to safe levels. Renewables offer a unique opportunity to align short-term economic policy action with medium- and long-term energy and climate goals.

While new renewable capacity additions could fall slightly in 2020, the relative share of renewables could rise as a slump in electricity demand prompts coal-fired plants to close earlier. Increasing competitiveness, the ability to rapidly scale, and job creation potential make renewable energy extremely attractive as countries evaluate their economic stimulus options post-COVID-19. Renewables can be an attractive part of the package for economic recovery, providing a large stimulus, as well as accelerating the energy transition and climate sustainability progress.

Electricity costs from renewables have fallen sharply over the past decade, driven by improving technologies, economies of scale, increasingly competitive supply chains and growing developer experience. As a result, renewable power generation technologies have become the least-cost option for new capacity in almost all parts of the world.

In 2019, 56% of the new renewable capacity added had lower power costs than the cheapest new coal plants. Renewable power generation technologies are also increasingly undercutting existing fossil fuel-fired power plants, including the dirtiest coal-fired options, without financial support.

"The case for new and much of the existing coal power generation, is both environmentally and economically unjustifiable," said Francesco La Camera, Director-General of the International Renewable Energy Agency (IRENA). "Renewable energy is increasingly the cheapest source of new electricity, offering tremendous potential to stimulate the global economy and get people back to work. Renewable investments are stable, cost-effective, and attractive offering consistent and predictable returns while delivering benefits to the wider economy."

The latest cost data from IRENA's Renewable Cost Database show that the global weighted-average levelised cost of electricity (LCOE) of utility-scale solar photovoltaics (PV) fell 82% between 2010 and 2019, while that of concentrating solar power (CSP) fell 47%, onshore wind 39% and offshore wind 29% (see figure). Auction and Power Purchase Agreement (PPA) data show these declines are set to continue into 2021 and beyond.

Over half of new renewable capacity shows lower costs than the cheapest new coal plants

Photograph: Shutterstock

Renewables can drive an enduring post-COVID recovery

Next year, auction and power purchase agreement pricing data suggest most new utility-scale solar PV and onshore wind power projects, at USD 0.039 per kilowatt-hour (/kWh) and USD 0.043/kWh respectively, will cost less to build than operating an increasing share of existing coal-fired plants. Indeed, up to 1 200 gigawatts (GW) of existing coal capacity could cost more to operate than the cost of new utility-scale solar PV and 850 GW more than new onshore wind, according to IRENA's latest cost findings.

The cost difference will only increase as clean, renewable power technologies continue to improve and costs fall.

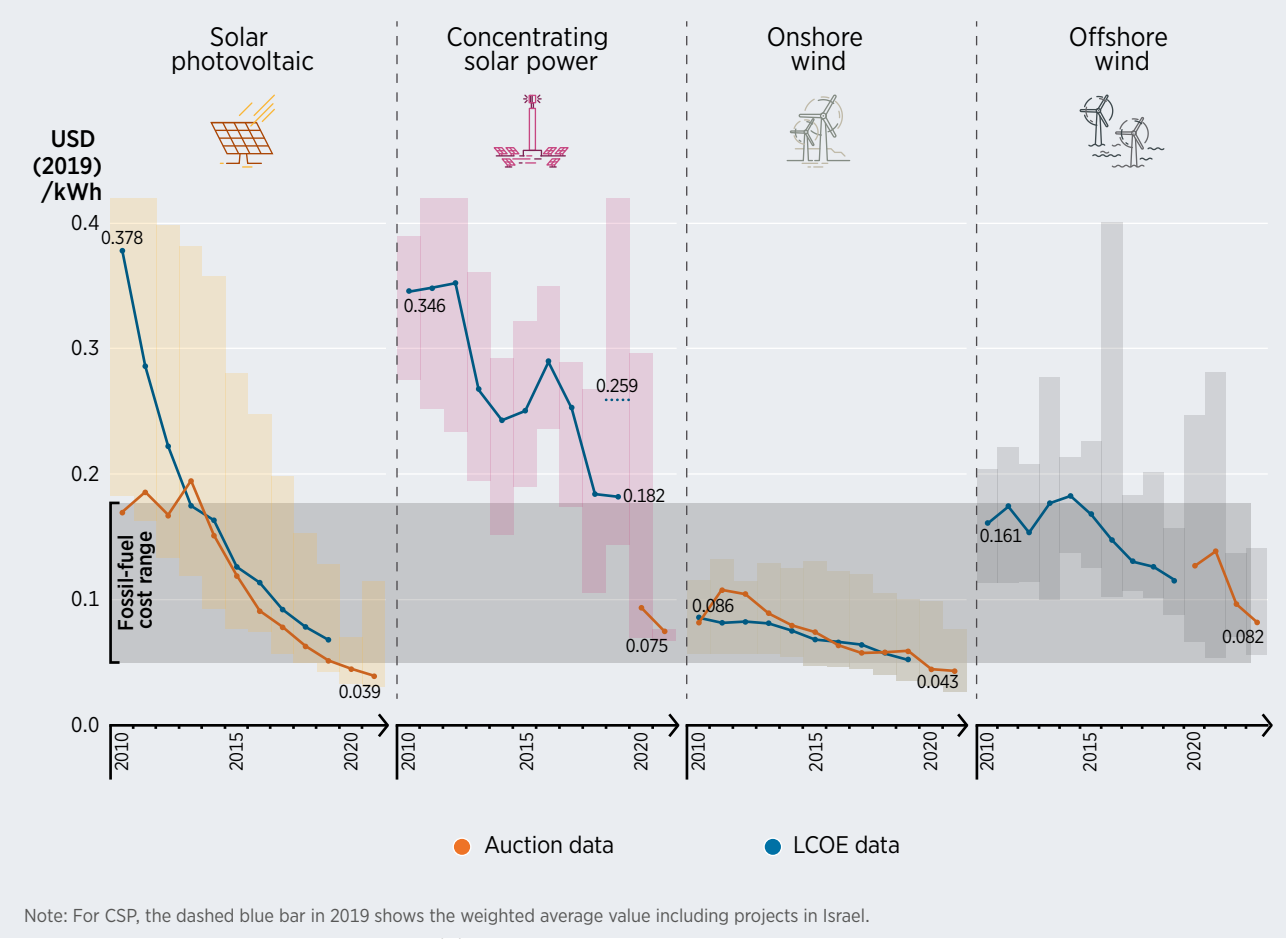
Declining generation costs have also boosted the investment value from renewables. In 2010, 88 GW of renewable power was added at an estimated investment cost of USD 210 billion, deployment had doubled by 2019, but investment needs had increased by less than a fifth.

Cost effectiveness means that countries can afford to be ambitious about renewable energy, as they put together large-scale stimulus measures. Renewables must be the backbone of national efforts to restart economies in the wake of the COVID-19 outbreak.

"The global recovery strategy must be based on a green strategy," La Camera says."

For more on falling energy costs, see
Renewable power generation costs in 2019

Falling electricity costs from solar and wind technologies



Note: For CSP, the dashed blue bar in 2019 shows the weighted average value including projects in Israel.

Note: The thick lines represent the global weighted average LCOE, or auction values, by year. The grey bands that vary by year are cost/price range for the 5th and 95th percentiles of projects.. For the LCOE data, the real WACC is 7.5% for OECD countries and China, and 10% for the rest of the world. The band that crosses the entire chart represents the fossil fuel-fired power generation cost range.

COVID-19 intensifies urgency of global sustainable energy development

The past decade saw major progress on ramping up sustainable energy in developing countries. However, the current COVID-19 health and economic crisis raises concerns about a widening gap between the world's rich and poor.

In 2015, all United Nations Member States agreed to build a better world by 2030 through 17 specific Sustainable Development Goals (SDGs). The energy goal, SDG 7, calls for extending access to affordable, reliable, sustainable and modern energy for everyone.

The number of people without access to electricity fell from an estimated 1.2 billion globally in 2010 to 789 million in 2018. Renewable energy solutions have been instrumental, with more than 136 million people receiving basic electricity services via off-grid renewables by 2018.

> The number of people without electricity access has fallen below 800 million

The latest edition of *Tracking SDG 7: The Energy Progress Report* shows that renewable energy consumption has grown faster than total energy consumption (+2.5% vs. +1.8% in 2017), continuing the trend started in 2011. Still, unless efforts are stepped up significantly, an estimated 620 million people would remain without access to electricity in 2030 – a number that could become even higher with the impact of the COVID-19 pandemic.

The report's latest edition introduces tracking for a new indicator, 7.A.1, on international financial flows to developing countries in support of clean and renewable energy. Total international public flows reached USD 21.4 billion in 2017, double the level in 2010. Yet only 12% of such financial flows reached the world's least developed countries (LDCs), which face the greatest challenges in achieving SDG targets.

Along with tracking SDG 7, the report identifies the best practices, policies, measures and scenarios to accelerate further progress, simultaneously pursue other SDGs, and ensure broad socio-economic development in line with a resilient recovery.

With holistic approaches, targeted policies and international support, substantial gains could be made to improve the lives of millions of people. COVID-19 stimulus and recovery measures provide a unique opportunity to accelerate the energy transition driven by renewables while leaving no one behind.

Key Findings of the Tracking SDG 7: Energy Progress Report for 2020

2010		Latest Data
1.2 billion people without access to electricity		789 million people without access to electricity (2018)
3 billion people without access to clean cooking		2.8 billion people without access to clean cooking (2018)
16.3% share of total final energy consumption from renewables		17.3% share of total final energy consumption from renewables (2017)
5.9 MJ/USD primary energy intensity		5.0 MJ/USD primary energy intensity (2017)
10.1 USD billion international financial flows to developing countries in support of clean energy		21.4 USD billion international financial flows to developing countries in support of clean energy (2017)

IRENA tracks SDG 7 jointly with the International Energy Agency (IEA), the United Nations Statistics Division (UNSD), the World Bank, and the World Health Organization (WHO). IRENA chaired the preparatory process for the 2020 edition.
See: **Tracking SDG 7: The Energy Progress Report**

Mulitlateral risk mitigation plugs gaps in sovereign guarantees

In renewable energy, as in other sectors, certain countries are seen as presenting higher than usual investment risks. Vast natural resource potential may exist, and independent power producers (IPPs) may see promising opportunities. Yet such projects can rarely move forward without the assurance of smooth, predictable investment and operating conditions.

National governments are often best placed to provide such assurances. Through a sovereign guarantee, a government essentially promises to cover risks – or costs incurred – due to unexpected policy shifts.

Such risks typically include:

- Non-payment by the off-taker (insofar as it is a state-owned enterprise),
- Any other obligation of the utility as stated in the power purchase agreement (PPA),
- Unilateral changes in the tax treatment,
- The termination clauses,
- Currency inconvertibility and currency transfer restrictions.

Sovereign guarantees have helped emerging and developing countries make decisive steps on energy including renewable power. However, IPPs have found governments increasingly reluctant to offer such commitments.

Arbitration rulings over sovereign guarantees have not always gone well for governments. Guarantee terms – or the subsequent arbitration awards – can add to national debt. But without this key instrument, plans can suffer delays, lenders can ask for higher risk premiums, and projects can fail to reach financial closure.

Power producers seek new sources for insurance in "risky" markets

To alleviate concerns on both sides, other risk-mitigation mechanisms have emerged. In some countries, the government will issue a "letter of comfort", worded less firmly than a guarantee but sufficient to reassure the project owner. Some guarantee clauses, especially over power purchase agreement (PPA), termination can be replaced by commercial clauses. The "Put and Call Option Agreement", for instance, allows project developers to sell their assets if the initial contract is not honoured.

The most efficient solution, however, may be for a bilateral or multilateral institution – the likes of World Bank Group or regional development banks – to issue insurance policies on project risks. While the Multilateral Investment Guarantee Agency (MIGA), part of the World Bank Group, was traditionally the first port of call, the Asian Development Bank (ADB) and African Development Bank (AfDB) have also issued Partial Risk Guarantees, or "PRGs", for renewable energy projects. Multilateral insurers like the African Trade Insurance Agency (ATI) and the Islamic Corporation for the Insurance of Investment and Export Credit (ICIEC – a subsidiary of the Islamic Development Bank) have also become active regarding renewables.

European development finance institutions, backed by the European Commission, aim to launch vast guarantee capacity for renewables in Africa.

Instead of collateral, the multilateral bank or insurer can ask for a "no objection", based on prior agreements between the country and the institution. Key risks covered include off-taker insolvency and late payments that compromise project liquidity and debt servicing. Specialised private insurers and export credit agencies can cover other risk types. Participation by a major financial institution helps to mobilise additional private capital.

Fundamentally, governments still need to achieve good reputations and build their credibility. Where risks are more *perceived* than real, the release of timely, audited financial statements can boost investor confidence, as can openness about how the off-taker – typically the national power utility – behaves with suppliers.

Setting tariffs to reflect real system costs – while it may be unpalatable to consumers – also works well from the IPP or investor perspective.

Fundamental systemic issues, like transmission losses, theft of electricity, inefficient distribution companies and poor alignment between demand and supply, can also derail investment hopes.In the long run, some national power sectors will need a complete overhaul.

But growing regional co-operation could help to strengthen investor confidence.

Where the national grid is part of a regional power pool, IPPs can sell power abroad. Africa, for example, appears primed for growth in cross-border electricity trade.

For more, see: **Renewable energy finance: Sovereign guarantees**

Coalition for Action calls for a green recovery

Over 100 prominent companies and organisations in the renewable energy sector have issued a joint statement laying out concrete actions that governments can take to ensure that the economic recovery from COVID-19 aligns with global climate and sustainability objectives.

The statement issued via the IRENA Coalition for Action urges policy makers to leverage renewable energy's potential to support essential services in the immediate fight against COVID-19 and to commit to a green economic recovery. Governments now have a historic opportunity to build more resilient economies by attaching green conditions to sector bailout packages and investing in low-carbon infrastructure, research and innovation, as well as training for workers moving into the renewable energy sector.

"A green recovery is essential as we emerge from the COVID-19 crisis. The world will benefit economically, environmentally and socially by focusing on clean energy," says Coalition member Ignacio Galan, CEO of Iberdrola.

The 28 April statement identified various key actions to achieve these aims:

Immediate actions	Revisit deadlines for renewable energy projects that face contractual obligations for near-term delivery
	Designate the renewable energy industry and related infrastructure as a critical and essential sector
	Affirm and extend policies for renewable energy solutions, both centralised and decentralised
Actions for sustained economic recovery	Prioritise renewable energy in any stimulus measures and commit to phasing out support for fossil fuels
	Provide public financial support to safeguard the industry and mobilise private investment in renewable energy
	Enhance the role of renewable energy in industrial policies
	Revise labour and education policies to foster a just transition and help workers make the shift into renewable energy jobs
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	Strengthen international co-operation and action to accelerate renewable energy deployment in line with global climate and sustainability objectives

The Coalition for Action brings together leading renewable energy players from around the world with the common goal of advancing the uptake of renewable energy. IRENA acts as the Secretariat for the Coalition.

To learn more, see the Coalition for Action web pages: **coalition.irena.org**

MEMBER BULLETIN

Regional and country engagement boosts renewables in Africa

Since 2000, Africa has achieved rapid economic growth and improving social conditions. Endowed with substantial renewable energy resources, African countries can now adopt innovative, sustainable technologies to meet their growing energy needs in a way that lifts people out of poverty and aligns with global climate goals.

In the wake of the COVID-19 pandemic, African countries must also take account of the need for clean sustainable energy solutions as part of crisis response measures.

The continent could meet nearly a quarter of its energy needs from indigenous and clean renewable energy sources by 2030 and increase the share of renewables in its total energy mix to as much as two-thirds by 2050.

Some 600 million people - almost 60% of Sub-Saharan Africa's and nearly half of the continent's population – still lack access to electricity, more than anywhere else in the world. Decentralised renewable energy, however, can support healthier and more prosperous communities, in addition to mitigating climate change and helping to preserve the environment and natural resources.

The International Renewable Energy Agency (IRENA) has pursued strategic, results-oriented partnerships with African organisations and development partners since its inception in 2011.

IRENA has started working with global financial institutions and other key partners through the framework of the **Climate Investment Platform**, which aims to translate targets into concrete investments on the ground. Sub-regional Investment Forums will help African decision makers lay the groundwork for more ambitious uptake of renewables and support developers in preparing bankable projects.

Recent online discussions hosted by the African Union Commission and IRENA detailed a comprehensive **continent-wide recovery plan**, which which aims to let countries across Africa respond to the COVID-19 crisis with one voice.

Through regional Clean Energy Corridor intiatives, IRENA helps to strengthen key policy, regulatory, technical and financial frameworks. Zoning maps developed for all the countries of the Eastern Africa and Southern African power pools indicate aggregate economic potential of up to 3 834 gigawatts (GW) for wind, 15 334 GW for solar photovoltaic (PV) and 5 282 GW for concentrating solar power (CSP). In West Africa, suitable areas for grid-connected and off-grid solar and wind projects have been identified. Additionally, the financial prefeasibility of 111 solar PV and wind project sites across 10 African countries has been conducted.

Since 2017, the African Union has recommended the integration of IRENA's Clean Energy Corridor initiatives into national renewable energy and climate change agendas. While the West Africa Clean Energy Corridor was endorsed by the Heads of State of the region in 2017 and annexed to the Economic Community of West African States (ECOWAS) Treaty, the Africa Clean Energy Corridor was adopted by the Energy Ministers of the relevant regions in 2014.

Economic stimulus measures adopted this year will have a long- term impact on climate change. High-level political commitment, local leadership and guidance, along with strong ownership by all involved are essential for success.

For more information, see: **IRENA's regional page on Africa**

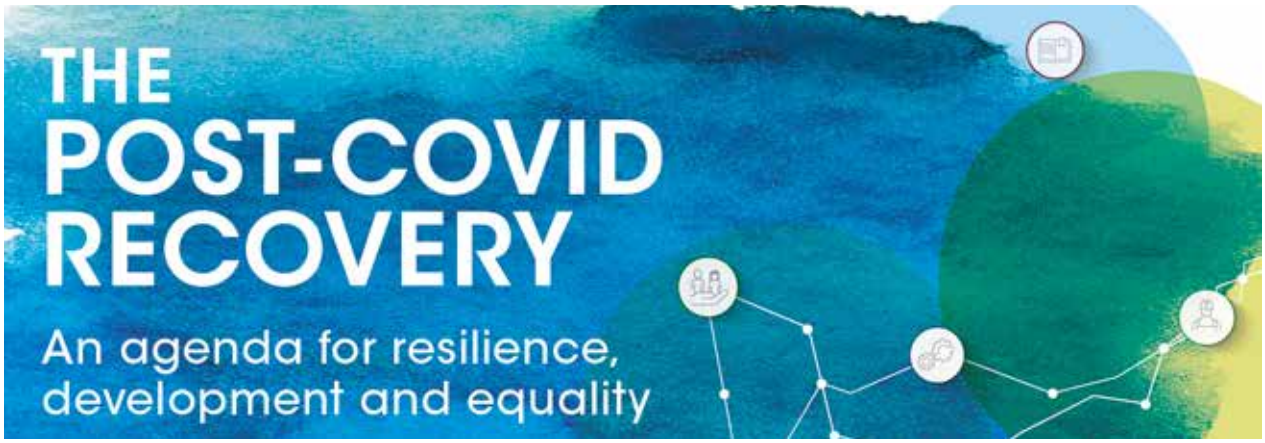
Recent publications

Global Renewables Outlook: Energy transformation 2050

This flagship report outlines the investments and technologies needed to decarbonise the energy system in line with the Paris Agreement. It further highlights climate-safe investment options until 2050, the policy framework needed for the transition and the challenges faced by different regions.

Renewable Capacity Statistics 2020

This report presents renewable power generation capacity statistics for the past decade (2010-2019) in trilingual tables. For most countries and technologies, the data reflects the capacity installed and connected at the end of the calendar year.



Rapid short-term economic stimulus measures can align effectively with medium- and long-term energy decarbonisation, sustainable development and climate goals. Every million dollars invested in renewables creates three times more jobs than it would in fossil fuels.

www.irena.org/publications

About IRENA

The International Renewable Energy Agency (IRENA) serves as the principal platform for international co-operation, a centre of excellence, a repository of policy, technology, resource and financial knowledge, and a driver of action on the ground to advance the transformation of the global energy system. An intergovernmental organisation established in 2011, IRENA promotes the widespread adoption and sustainable use of all forms of renewable energy, including bioenergy, geothermal, hydropower, ocean, solar and wind energy, in the pursuit of sustainable development, energy access, energy security and low-carbon economic growth and prosperity.

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