

---

Nineteenth meeting of the Council  
Abu Dhabi, 3 November 2020

## **Progress Report of the Director-General on the Implementation of the Work Programme and Budget for 2020-2021**

### **Note by the Secretariat**

Pursuant to Article X.F.4 of the Statute of IRENA and Assembly decision A/3/DC/12, the Council shall consider and submit to the Assembly annual reports concerning the activities of the Agency.

In light of the rescheduling of the 19<sup>th</sup> Council meeting, the Chair-designate of the nineteenth Council meeting, invited the Director-General to outline of the activities undertaken to implement the outputs of the tenth Assembly and to present a consolidated report on the implementation of the Agency's Work Programme and Budget<sup>1</sup>.

The Progress Report of the Director-General on the Implementation of the Work Programme and Budget for 2020-2021 was circulated to the IRENA Membership on 25 June 2020. Under the leadership of the Chair-designate of the nineteenth Council meeting, the Progress Report was presented to the Membership during two virtual meetings held on 2 July 2020 which allowed for the convenient participation of representatives located in the Eastern Hemisphere (11:00-12:30 GST) and in the Western Hemisphere (17:00-18:30 GST).

The nineteenth Council may wish to take note of this Progress Report of the Director-General on the Implementation of the Work Programme and Budget for 2020-2021.

---

<sup>1</sup> [ST/EN/2020/O/17200](#) Note by the Chair-designate Convening the Nineteenth IRENA Council Meeting

# Progress Report of the Director-General on the Implementation of the Work Programme and Budget for 2020-2021

25 June 2020



## Table of Contents

Table of Contents .....	2
Introduction.....	3
Progress to Date.....	6
Looking ahead .....	24
Upcoming IRENA dates in 2020-2021 .....	24
Effective functioning of the organisation .....	25
Enabling delivery and increasing institutional impact .....	25
Overview of progress.....	27
Resource overview.....	30
Budget performance .....	30
Voluntary contributions .....	35
Work Programme 2020-2021 Biennium .....	36
References .....	48

## Introduction

This Progress Report provides an account of the progress IRENA has made in the implementation of the Work Programme and Budget for 2020 and 2021.<sup>1</sup> In this first reporting document of the 2020-2021 biennium, the Secretariat has developed a revised structure aimed at highlighting key developments, sampling IRENA's work so far in 2020, and drawing out the interlinkages across IRENA's broad work programme.

This report establishes a baseline for the expected outputs for the year, highlights progress made since January 2020, and provides an outlook of planned activities for the remainder of the year. 2020 was embarked upon with an expectation for it to be a beginning of the 'decade of action' for the achievement of the Sustainable Development Goals by 2030, as well as enhancing decarbonisation ambitions ahead of COP26.

Yet, at the time of publication, the global community is grappling with the implications of the COVID-19 pandemic. The full impact of COVID-19, both in terms of severity and duration, remains to be seen. The pandemic threatens global supply chains for many sectors, including those for renewable energy. However, the long-term planning and positive momentum that exists in the energy transformation means that the existing renewables and energy transitions trends are likely to continue. As countries respond to the crisis, it is essential that the stimulus and recovery measures are coherent with the long-term objectives set out in the 2030 Agenda for Sustainable Development and the Paris Agreement on Climate Change. IRENA's report on the post-COVID recovery analyses the impacts of the pandemic and outlines holistic options for recovery based on scaling up energy transition technologies.

The COVID-19 pandemic has raised awareness of the interlinkages between energy, health, and pollution. The recovery of natural environments as economies have slowed during lockdowns, as can be seen in clear urban skylines, transparent waterways and clean beaches, provides a glimpse of how a decarbonised economy can look different to the norm we have become accustomed to. Moving forward, the connections between clean energy, health and welfare should be highlighted to raise awareness on the role renewables play in increasing resilience to infectious diseases such as COVID-19.

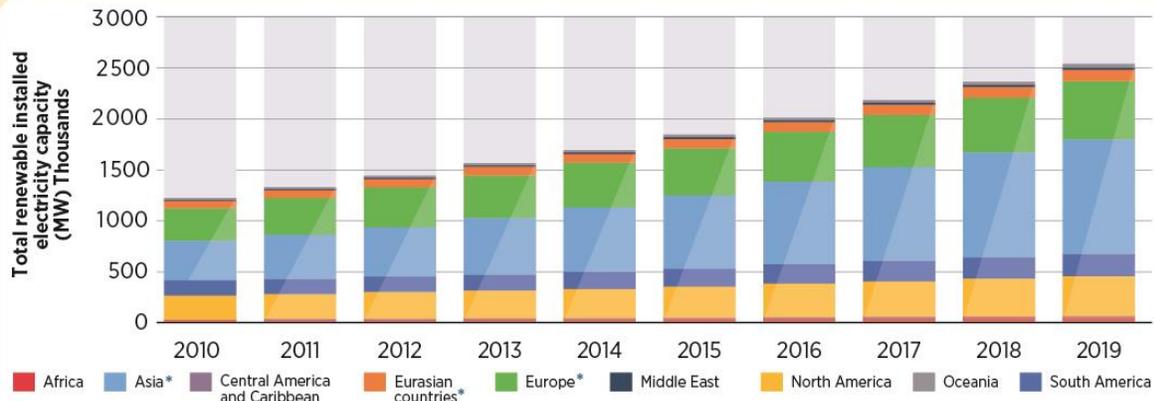
The methods of IRENA's engagement activities have been, and will continue to be, affected by the pandemic. Across the globe, participants in the energy transitions will need to adapt their working practices to maintain momentum, despite ongoing uncertainty. IRENA is adjusting to new ways of working and, importantly, continues to implement its Work Programme, engage with its Members and partners, and promote the energy transitions at this particularly critical moment in time.

---

<sup>1</sup> [Work Programme and Budget for 2020-2021](#), 11 January 2020

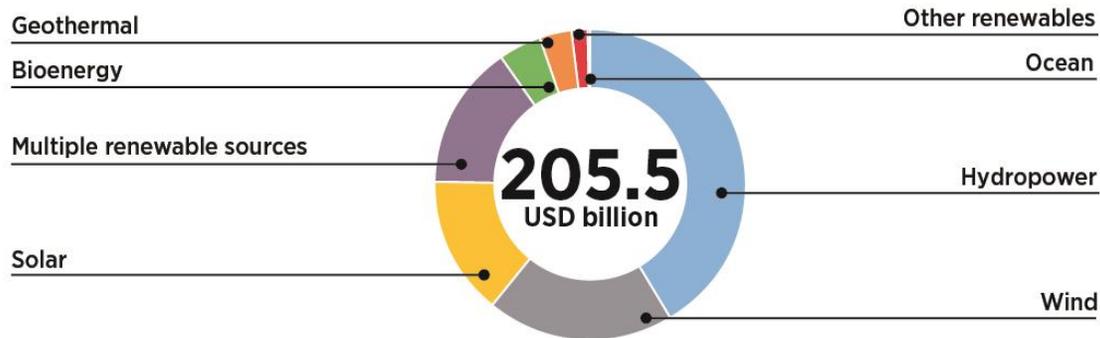
# Progress at a glance

Installed capacity for renewable power is growing around the world.



\* Except Eurasian countries.  
Note: Eurasian countries include Armenia, Azerbaijan, Georgia, the Russian Federation and Turkey.

## Cumulative public investment transactions, 2007-2017



### Energy access is increasing

- a step towards fulfilling Sustainable Development Goal (SDG) 7.



**411 million**

more people gained electricity access by 2018

(compared to 2010)

**7 AFFORDABLE AND CLEAN ENERGY**

As costs come down, **more can be deployed for less.**



### PowerGen Costs

(2010-2019)



Solar PV **82%**  
CSP **47%**

Onshore wind **39%**  
Offshore wind **29%**

A renewable-based energy system would

- Keep global warming **below 2°C\***
- Boost **jobs, GDP and people's welfare**

**100 million**  
energy jobs by 2050

**42 million** in renewables  
**21 million** in energy efficiency  
**14.5 million** in power grids & energy

\* In line with climate goals set out in the Paris Agreement

Global GDP  
**98**  
USD trillion

Global welfare  
**13.5%**

# IRENA in 2020

IRENA employs a talented and diverse workforce

**74** posts filled with **45+** nationalities

stationed in Abu Dhabi, Bonn and New York

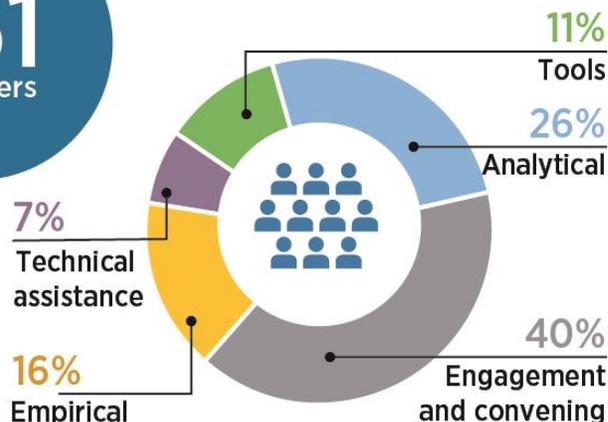
including

**47%** women

**5** loaned or seconded officers

**161**  
Members

Work Programme 2020-2021 outputs: **54**



**83%**  
in progress or completed



over **7600** applications received for 41 vacancies

**25** e-books including 19 on **interactive screens** at 10th IRENA Assembly

**15** publications released this year to date, including:

- *Renewable Capacity Statistics*
- *Global Renewables Outlook*
- *Renewable Power Generation Costs*

Key findings translated:



**26** webinars

- +14 Assembly side-events
- +8 ADSW side-events
- +8 other events (worldwide)
- +2 staff retreats (Abu Dhabi and Bonn)

Attracting wide media coverage:  
over **7000** articles published across **123** countries

Reports translated by Member State institutions:

ZH	» 6 completed » 1 ongoing	中文
JA	» 7 completed » 2 ongoing	日本語
RU	» 6 completed	Русский

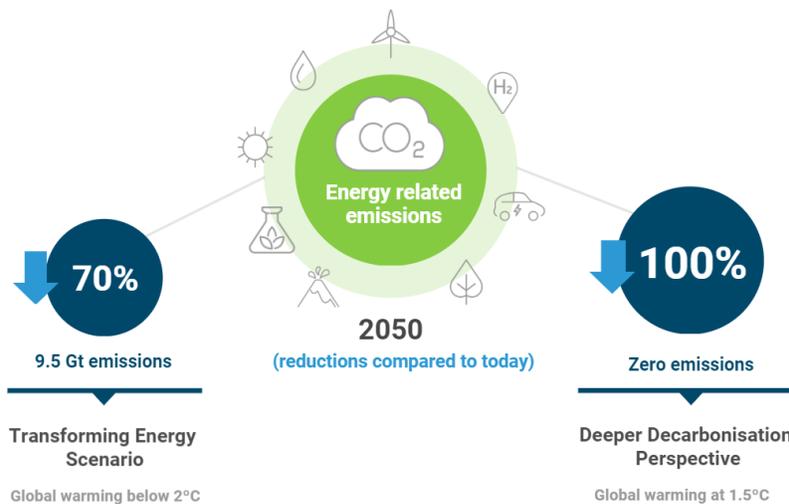
## Progress to Date

Amidst the unanticipated global challenges of 2020, IRENA has adapted to ensure that the Agency continues to deliver the Work Programme and maintain momentum in the promotion of renewables and the energy transformation. This chapter looks back at some of the highlights of IRENA's 2020 work so far across the breadth of the Agency's Work Programme and role "*as a centre of excellence for knowledge and innovation, a global voice for renewable energy, a network hub for all stakeholders, and a source of advice and support for countries*"<sup>2</sup>.

IRENA's **Global Renewables Outlook: Energy transformation 2050** (April, 2020b)<sup>3</sup> introduces comprehensive analysis to present a vision of the paths available to creating a sustainable future energy system, including specific key actions needed for power, transport, industry and buildings. It examines the ongoing energy transformation compared to the investments and technologies required for the energy sector to meet the commitments of the Paris Agreement. The *Global Renewables Outlook* (GRO), building on the 2019 publication *Global Energy Transformation: A Roadmap to 2050*, considers three scenarios: (1) the Planned Energy Scenario is the primary reference case based on governments' current energy plans, targets and policies; (2) the Transforming Energy Scenario describes an ambitious yet realistic pathway to keep global temperatures below 2°C and on the way towards 1.5°C this century; and (3) the Deeper Decarbonisation Perspective provides additional options to reduce energy and process-related emissions to zero in 2050-60. The GRO offers IRENA's closest examination to date of the needs and impacts of the energy transformation at global and regional levels, in both energy and socio-economic terms. If global commitments are to be met, significant mobilisation of investments and acceleration of pace is needed compared to current plans.

- Over 750 article mentions across 35 countries
- Over 27,767 views
- Over 12,960 downloads

Figure 1: Energy-related emissions reductions necessary to keep global warming below 2°C and 1.5°C under IRENA's Transforming Energy Scenario and Deeper Decarbonisation Perspective respectively



Source: IRENA (2020b)

<sup>2</sup> [Medium-term Strategy 2018-2022](#), 13 January 2018

<sup>3</sup> Available here: [www.irena.org/publications/2020/Apr/Global-Renewables-Outlook-2020](http://www.irena.org/publications/2020/Apr/Global-Renewables-Outlook-2020). Development of the report is supported by the Government of Germany

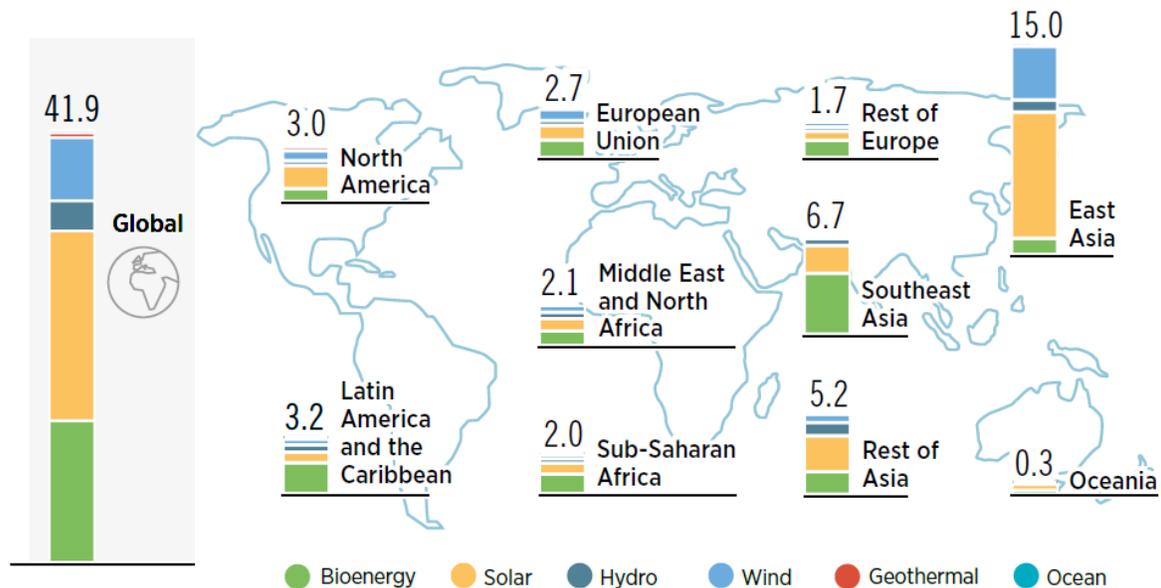
The GRO offers a timely exploration of how energy transformations can enable low-carbon development and support employment. Low-carbon infrastructure offers sustainable, stable assets for investment. GRO shows that keeping global warming “well below 2°C” by 2050, in line with the Paris Agreement, under the Transforming Energy Scenario offers a 2.5% higher GDP growth than expected under current plans, and the additional costs would be significantly outweighed by benefits of at least USD 50 trillion by 2050, with returns of three to eight dollars for every dollar spent. Accelerating action avoids additional costs of climate change impacts and stranded assets. Employment gains can be realised in the overall energy sector, with gains exceeding losses in every region by 2050.

*“Recently the International Renewable Energy Agency released data showing that transforming energy systems could boost global GDP by \$98 trillion by 2050, delivering 2.4% more GDP growth than current plans. Boosting investments in renewable energy alone would add 42 million jobs globally, create health care savings eight times the cost of the investment, and prevent a future crisis.”*

António Guterres, Secretary General of the United Nations  
New York Times<sup>4</sup>

The total number of jobs in renewables could increase from around 12 million in 2017 to 26 million in 2050 (under current plans) or, under the Transforming Energy Scenario, 42 million out of a total of 100 million jobs in the energy sector (Figure 2). The scenarios outlined offer sustainable, climate-safe foundations for the stable, long-term growth that will be essential for the global recovery and which, in addition to economic development, offers citizens cleaner living conditions and improved welfare.<sup>4</sup>

Figure 2: Renewable energy jobs in 2050 under the Transforming Energy Scenario, by region (in millions)



Source: IRENA (2020b)

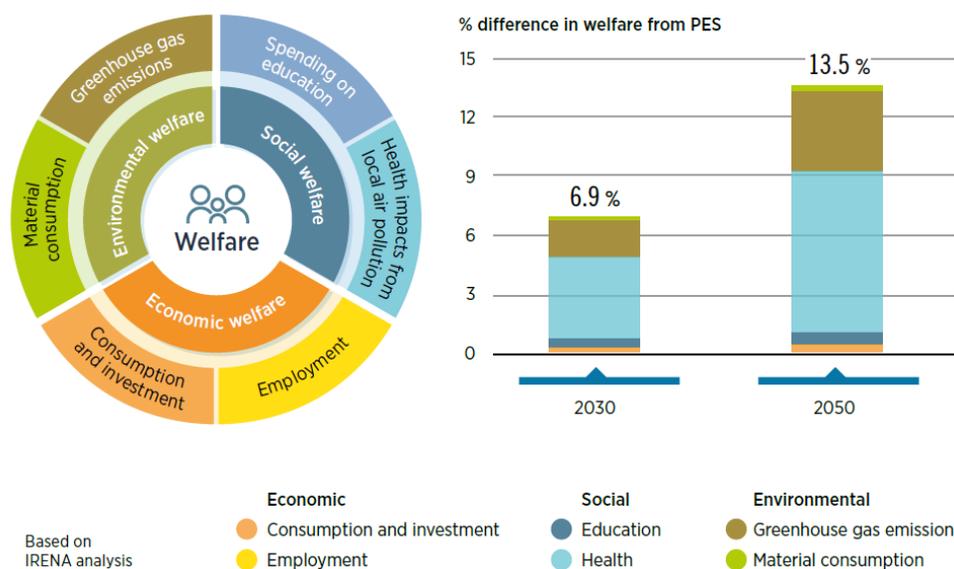
Different regions must follow different paths to energy sustainability. The GRO presents detailed analysis on a regional basis, considering the local characteristics, challenges and opportunities of decarbonisation for ten regions around the world, including regional socio-economic implications of the energy transformation.

<sup>4</sup> The GRO findings on GDP and jobs were highlighted by the UN Secretary-General in his Op-Ed in the New York Times, *A Time to Save the Sick and Rescue the Planet*, 28 April 2020, [www.nytimes.com/2020/04/28/opinion/coronavirus-climate-antonio-guterres.html](https://www.nytimes.com/2020/04/28/opinion/coronavirus-climate-antonio-guterres.html)

IRENA's analysis of the energy transition in *Measuring the Socio-economics of Transition: Focus on Jobs* (February, 2020d)<sup>5</sup> shows that the impacts will be varied, but, when accompanied by appropriate policies, adverse job effects can be avoided. Underlying socio-economic structures (*e.g.*, existing supply chains or fossil-fuel dependence) will affect how different regions fare in the energy transformation. Therefore, understanding socio-economic impacts and potential policy misalignments is essential to ensure that multiple objectives can be met, such as economic growth and employment, energy security, energy access and mitigating and adapting to climate change. Cross-cutting and coherent policy-making is therefore needed to ensure the benefits of a just transition are delivered.

At the 10<sup>th</sup> Assembly, IRENA launched the *Sustainable Energy Jobs Platform*<sup>6</sup> to explore the linkages between Sustainable Development Goals 7 (affordable and clean energy) and 8 (work and economic growth). The website is intended as a vehicle for stimulating a cross-disciplinary dialogue among stakeholders concerned with energy and employment objectives; sharing of best practices, experiences and quality data in support of well-informed policymaking; exploring suitable policies and solutions; strengthening capacity building; and enhancing advocacy and communications.

Figure 3: Global welfare gains under the Transforming Energy Scenario in 2030 and 2050



Source: IRENA (2020b)

IRENA's *Renewable Power Generation Costs in 2019 Report* (June, 2020j)<sup>7</sup> highlights the ongoing cost reductions for renewable power generation technologies and their increasing competitiveness. This comprehensive update of the cost evolution in 2019, and outlook to 2021 (solar photovoltaics - PV, concentrating solar power - CSP, and onshore wind) and 2023 (offshore wind), draws on IRENA's extensive database of renewable project costs and auction and data results (17,000 and 11,000 projects respectively) to give a detailed overview of recent cost changes and their drivers. Renewable electricity costs have fallen sharply over the past decade, driven by improving technologies, economies of scale, increasingly competitive supply chains and growing developer experience. The levelised cost of electricity (LCOE) of utility-scale solar PV has fallen 82% since 2010, followed by CSP at 47%, onshore wind at 39% and offshore wind at 29% (Figure 4).

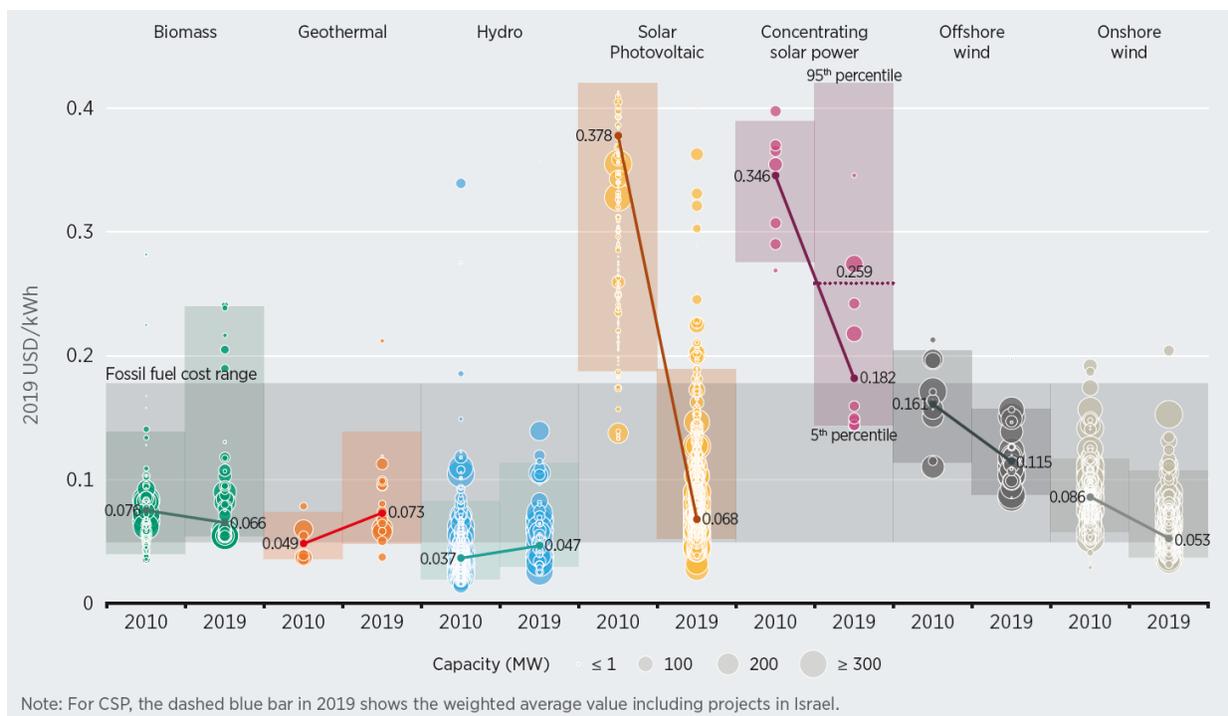
<sup>5</sup> Available here: [www.irena.org/publications/2020/Feb/Measuring-the-socioeconomics-of-transition-Focus-on-jobs](http://www.irena.org/publications/2020/Feb/Measuring-the-socioeconomics-of-transition-Focus-on-jobs)

<sup>6</sup> [www.scjplatform.org](http://www.scjplatform.org)

<sup>7</sup> Available here: [www.irena.org/publications/2020/Jun/Renewable-Power-Costs-in-2019](http://www.irena.org/publications/2020/Jun/Renewable-Power-Costs-in-2019)

Solar and wind cost reductions show no sign of abating. Recent auctions and power purchase agreements (PPAs) indicate solar PV prices could average USD 0.039/kWh for projects commissioned in 2021, down 42% compared to 2019 and more than one-fifth less than the cheapest fossil-fuel competitor, namely coal-fired plants. Onshore wind prices could fall to USD 0.043/kWh by 2021, down 18% from 2019. Offshore wind and CSP projects, meanwhile, are set for a step change, with their global average auction prices set to fall 29% and 59% from 2019 values, respectively, to USD 0.082/kWh for 2023 and USD 0.075/kWh for 2021. As a result of these anticipated cost declines, retiring next year the least competitive 500 GW of existing coal-fired plants and replacing them with solar PV and onshore wind would reduce system generation costs – and potentially also the costs passed on to consumers – by between USD 12 billion and USD 23 billion per year, depending on coal prices. Replacing these 774 coal plants would yield a stimulus worth USD 940 billion over and above the past year’s solar PV and onshore wind deployment, or 1% of global GDP.

Figure 4: Global weighted average levelised cost of electricity from utility-scale renewable power generation technologies, 2010 and 2019



Source: IRENA (2020j)

Ensuring universal access to affordable, reliable, sustainable and modern energy services is a vital element of the just transition. The 2020 edition of the *Tracking SDG 7: Energy Progress Report* (May, 2020)<sup>8</sup> finds that while promising progress has been made in recent years toward Sustainable Development Goal (SDG) 7 on universal access (Figure 5), the COVID-19 crisis now risks derailing progress unless efforts are stepped up considerably. Enhanced co-operation is vital and, in this context, the 2020 report introduces the tracking of a new indicator, 7.A.1, on international financial flows to developing countries in support of clean and renewable energy. IRENA’s data show that international public flows reached USD 21.4 billion in 2017, double the level in 2010. Yet only 12% of such financial flows reached the least-developed countries, which may also face the greatest challenges in achieving SDG targets. Published annually by the Custodian Agencies of SDG 7 on

<sup>8</sup> Available here: <https://www.irena.org/publications/2020/May/Tracking-SDG7-The-Energy-Progress-Report-2020>. More information on tracking SDG 7 is available on the website: <https://trackingsdg7.esmap.org/>. This work was supported by the International Bank for Reconstruction and Development

energy – alongside IRENA, the International Energy Agency (IEA), United Nations Statistics Division (UNSD), World Bank, and World Health Organization (WHO) - the report serves to guide international co-operation and policy-making to achieve universal, sustainable energy access by 2030. IRENA chaired the preparations for the 2020 edition of the report, which was launched at a virtual event on 4 June hosted by the Group of Friends of Sustainable Energy at the UN. Ministers of the Group’s co-chairs (Ethiopia, Denmark, Pakistan, Norway) opened the meeting and the Director-General of IRENA made keynote remarks to introduce the work of the SDG 7 Custodians on the 2020 report.

Figure 5: Key findings of the Tracking SDG 7: Energy Progress Report for 2020



## Renewable energy and health

**Universal access to affordable and reliable energy** is a development imperative and essential for achieving several SDGs. Energy access plays a critical role in the functioning and quality of healthcare facilities and service delivery. Hundreds of millions of people are served by health facilities without electricity access; a recent study concluded that almost 60% of 121,000 healthcare facilities analysed in 46 low- and middle-income countries have unreliable power<sup>9</sup>. The challenge is most pronounced in sub-Saharan Africa, and the ongoing COVID-19 pandemic has increased the urgency of addressing these issues.

Off-grid renewables can provide clean, reliable and cost-effective electricity to rural health centres otherwise lacking access or faced with unreliable supply.

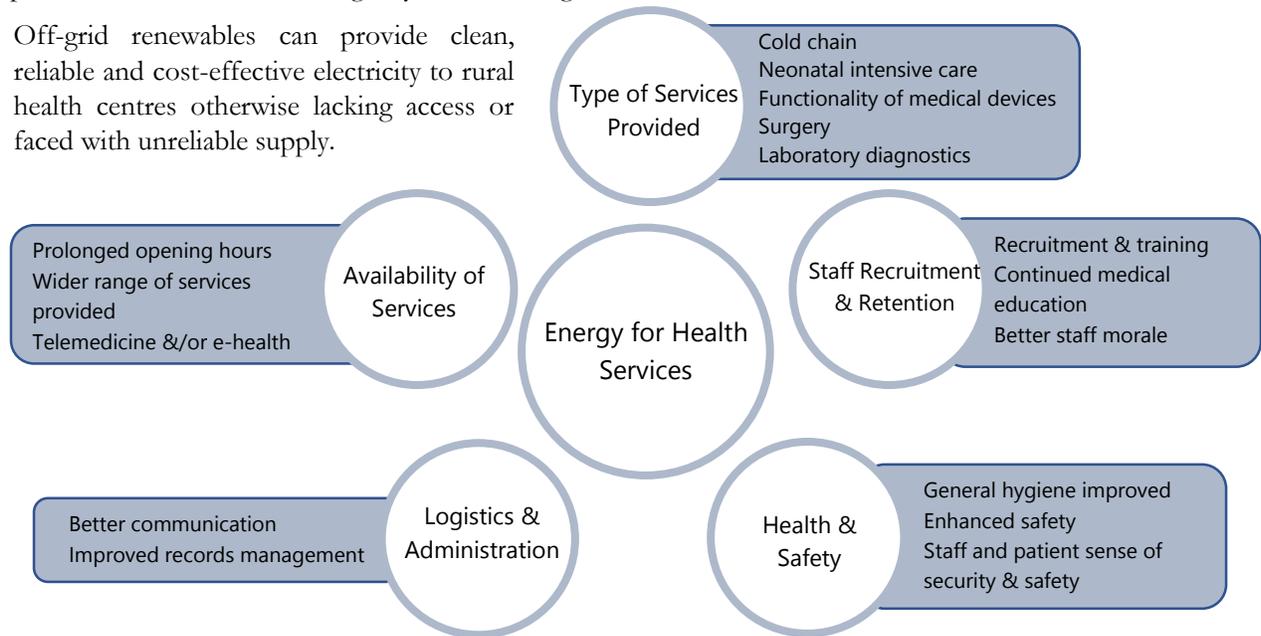


Figure 6: Energy for Health Services. Source: Adapted from a World Health Organization (WHO) presentation given at the 3<sup>rd</sup> International Off-grid Renewable Energy Conference and Exhibition, IOREC 2016, in Nairobi, Kenya.

**IRENA has partnered with the Government of Burkina Faso and the SELCO Foundation to conduct an assessment for electrification of rural health facilities based on decentralised renewable energy solutions<sup>10</sup>.** A 'blueprint' technical design (with cost estimates) will be developed for primary health facilities to be constructed with the solutions integrating building design, energy efficiency, medical appliance use and communication technology.

The assessment will also identify potential implementation challenges, enabling policy and regulatory considerations and institutional structures for supervision and management of such systems. Recommendations will be provided for efficient utilisation of public funds (particularly for O&M expenses), delivery models and the co-operation framework between relevant actors. The assessment can be used by the government and development partners as a roadmap for electrification of rural healthcare facilities in the country.

IRENA, in co-operation with the African Union and other technical partners, intends to expand this work to additional countries as part of Africa's response to the COVID-19 pandemic. More information on **IRENA and the African Union's joint response to the COVID-19 pandemic** is available on the IRENA website.<sup>11</sup>

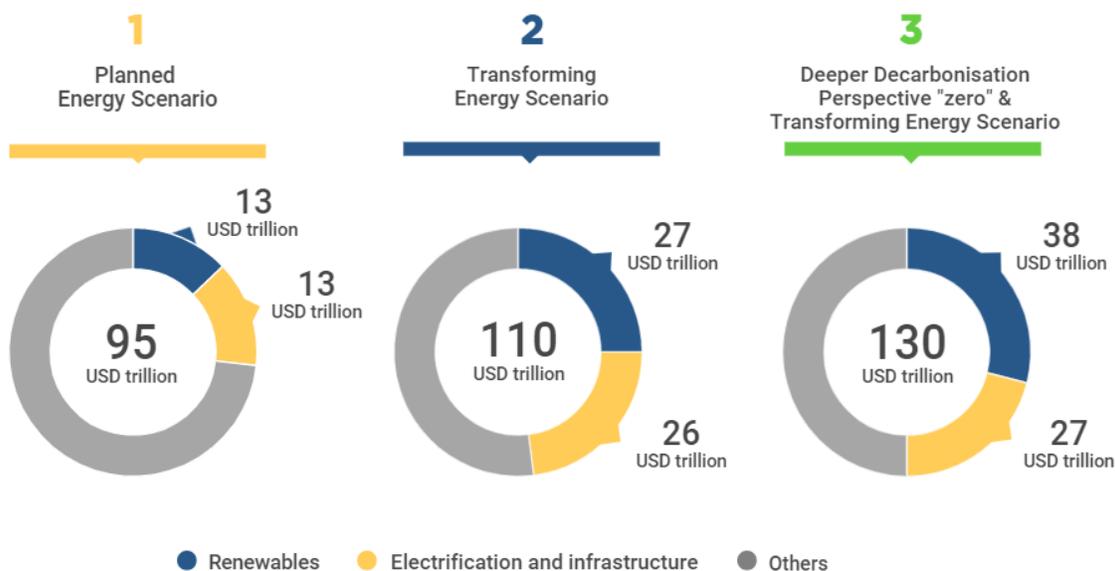
<sup>9</sup> Cronk and Bartram (2018)

<sup>10</sup> This work is supported by voluntary contributions from the Government of the Walloon Region of Belgium

<sup>11</sup> Available at: [www.irena.org/newsroom/pressreleases/2020/Apr/African-Union-and-IRENA-to-Advance-Renewables-in-Response-to-Covid19](http://www.irena.org/newsroom/pressreleases/2020/Apr/African-Union-and-IRENA-to-Advance-Renewables-in-Response-to-Covid19)

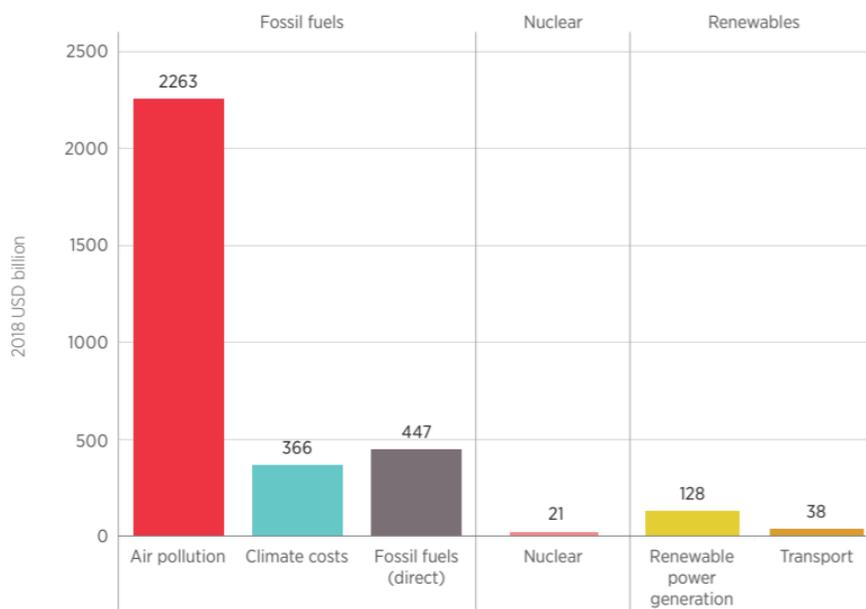
The GRO emphasises that an immense shift is needed in the allocation of financial capital to drive the world's transitions to a low-carbon economy. To shed light on this issue, IRENA has published a series of short briefs on **Renewable Energy Finance**, examining **green bonds**, **institutional capital** and **sovereign guarantees**, as methods to mobilise finance to support renewable energy deployment and recommendations to scale-up investments. Building on these analyses, IRENA plans to publish further reports on institutional capital and the *Global Landscape of Renewable Finance* report later this year.

Figure 7: Cumulative energy sector investments 2016-2050



Source: IRENA (2020b)

Figure 8: Total energy subsidies by fuel/source and the climate and health costs, 2017



Source: IRENA (2020k)

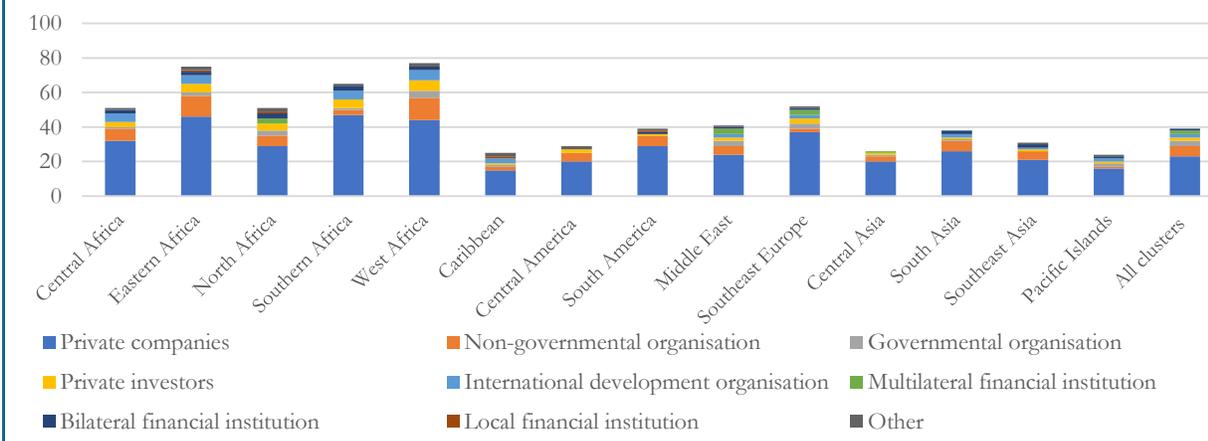
The urgent need to shift investments is further supported by the analysis presented in the IRENA staff technical paper *Energy subsidies: Evolution in the global energy transformation to 2050*.<sup>12</sup> Despite the prevalence of subsidies throughout the energy system, the sector lacks any systematically applied, standardised definition of what subsidies are. A methodology is proposed and used to estimate total worldwide subsidies to fossil fuels, renewable power generation and biofuels, and total energy subsidies. It shows that a pathway to achieve global warming of less than 2°C by 2050 does not require energy sector subsidies to increase but, conversely, fall. IRENA’s analysis continues to support institutions in understanding the financial risks of investing in assets vulnerable to the impacts of climate change and/or not consistent with a climate-safe pathway. For example, the Bank of England recently used IRENA’s analysis alongside other sources in setting the framework to test the business models of the financial system to the risks of climate change<sup>13</sup>.

IRENA is continuing to facilitate the deployment of renewable energy projects via its online platforms. This includes efforts to translate the information in the *IRENA Global Atlas* to close the gap between resource maps and on-the-ground project development. For example, IRENA's Site Assessment Service is currently providing direct support, at the request of the Government of Mozambique, in screening ten solar PV and wind sites with a prospective installed capacity of around 300 MW.

### In Focus: Climate Investment Platform

In March 2020, IRENA called for interested parties to register their interest in the *Climate Investment Platform*.<sup>14</sup> IRENA and partners, SEforAll and UNDP, in collaboration with the Green Climate Fund, launched the platform to scale up investment in renewable energy projects in developing countries within 14 regional clusters. So far **over 140 projects** and **over 260 potential partners** have registered their interest. IRENA is preparing a series of regional Investment Forums to connect registered projects and financial partners, as well as to support policy-makers in developing strong enabling environments for investments in renewable energy. The details of future events will be shared in due course. The Director-General provided an update on IRENA’s efforts to operationalise the platform in a virtual briefing organised by the Friends of Sustainable Energy Group in New York in May and positive feedback was received.

Figure 9: Registered Climate Investment Platform partners by type and regional cluster



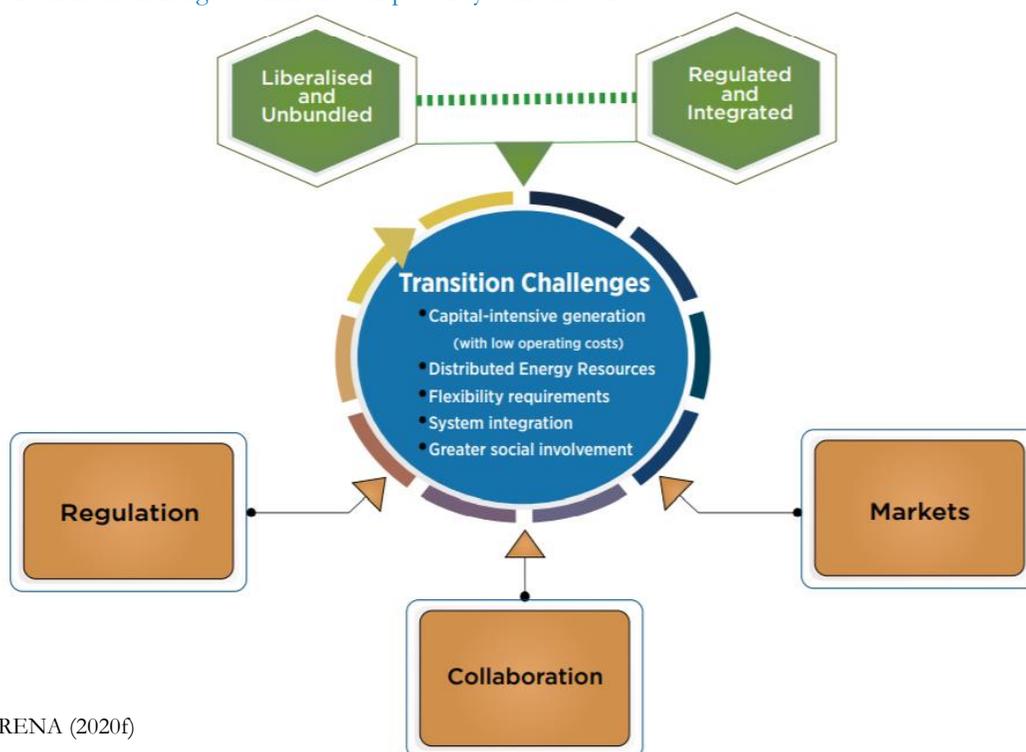
<sup>12</sup> Available at: [www.irena.org/publications/2020/Apr/Energy-Subsidies-2020](http://www.irena.org/publications/2020/Apr/Energy-Subsidies-2020)

<sup>13</sup> Bank of England (2019) Discussion Paper: The 2021 biennial exploratory scenario on the financial risks from climate change.

<sup>14</sup> Supported by the Governments of Denmark, Germany as part of the German Government International Climate Initiative, and UNDP

What is clear is that the energy transformation requires a fundamentally different system that utilises technological developments and is sustainable, clean and inclusive. IRENA's *Power system organisational structures for the renewable energy era* (January, 2020f)<sup>15</sup> report examines this shift for the electricity system; IRENA proposes a 'dual market' framework building on experiences to optimise the power system structure by supporting both capital-intensive renewable power plants and flexible resources.

Figure 10: Transition challenges common to all power system structures



Source: IRENA (2020f)

IRENA continues to disseminate studies of best practice and updates in the energy sector. Updating preliminary findings from 2019, *Renewable energy auctions: Status and trends beyond price*<sup>16</sup> outlines the latest information on auctions and findings from 2017-2018 experiences. Among other things, the report recognises that auction design, in combination with financial, industrial, labour and educational policies, can contribute to fulfilling broader socio-economic aims. This is particularly pertinent given the post-pandemic measures that are currently being designed.

Increasing grid flexibility continues to be a key area of interest for countries and grid operators. IRENA's *Electricity Storage Valuation Framework* (March, 2020a)<sup>17</sup> provides an approach to properly recognise, value and compensate storage as a key enabler for renewable energy deployment, and proposes a methodology to adjust policies and regulations to account for its benefits. An IRENA webinar to present the Framework, featuring the World Bank's Energy Storage Partnership coordinator, gathered over 2,000 registered participants, demonstrating the relevance of innovative regulatory solutions alongside technological developments in facilitating energy transitions. The report was also presented in a webinar hosted by the World Bank, building on the ongoing collaboration between IRENA and the World Bank, which includes the Energy Storage Partnership as a key conduit for cooperation between the two institutions.

<sup>15</sup> Available at: [www.irena.org/publications/2020/Jan/IRENA-Power-system-structures](http://www.irena.org/publications/2020/Jan/IRENA-Power-system-structures)

<sup>16</sup> Available at: [www.irena.org/publications/2019/Dec/Renewable-energy-auctions-Status-and-trends-beyond-price](http://www.irena.org/publications/2019/Dec/Renewable-energy-auctions-Status-and-trends-beyond-price)

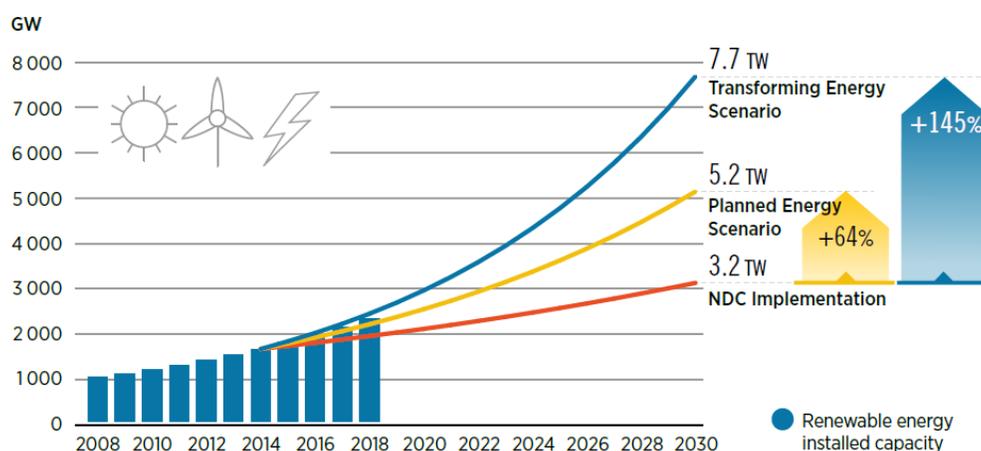
<sup>17</sup> Available at: [www.irena.org/publications/2020/Mar/Electricity-Storage-Valuation-Framework-2020](http://www.irena.org/publications/2020/Mar/Electricity-Storage-Valuation-Framework-2020)

## In focus: Aligning short-term actions with long-term strategies

The pandemic has caused unmeasurable human suffering and a significant economic downturn. Governments are acting to simultaneously address immediate needs while setting in motion stimulus measures to support long-term recovery. Placing the energy transition at the centre of global and national recovery plans will help overcome the current economic downturn *and* tackle the climate crisis. In this regard, Nationally Determined Contributions<sup>18</sup> (NDCs) can play a significant and positive role in orientating these responses.

IRENA is channelling its efforts to support countries in realising the untapped potential of renewable energy in their NDCs<sup>19</sup>, engaging with **over 35 countries** concerning the energy components of their NDCs at the time of publication. IRENA is collaborating with organisations that share the goal of supporting NDC implementation and enhancement, including through the NDC Partnership's Climate Action Enhancement Package (CAEP) and the UNDP's Climate Promise.

Figure 13: Renewable energy installed capacity in different scenarios (Source: IRENA, 2019)



To deliver on the Paris Agreement, it is important that NDCs reflect the levels of investment needed and the wide-ranging benefits that could result from the energy transformation. However, renewable energy targets in current NDCs are often less ambitious than targets countries have established in their national energy plans and strategies, as well as current global deployment trends. There is therefore considerable scope for countries to enhance their NDCs, which could strengthen the impact of NDCs and send a strong signal to investors.

IRENA's NDC enhancement and implementation support is substantially contributing to national efforts by:

- Strengthening coordination at the national level, namely between environment and energy sectors;
- Identifying and developing robust, ambitious, and quantifiable renewable energy targets;
- Recommending enabling policy and regulatory frameworks to encourage and facilitate renewable energy deployment, and attract public and private investments;
- Identifying investment opportunities by developing project pipelines in alignment with development policies, national strategies, and long-term decarbonisation objectives;
- Enhancing transparency by providing technical input to improve data collection systems and analysis, designing robust Measurement, Reporting and Verification systems, and building national capacities.

<sup>18</sup> Supported by the Government of Walloon Region of Belgium

<sup>19</sup> Supported by the Governments of Denmark, Germany as part of the German Government International Climate Initiative (IKI), Norway, and Walloon Region of Belgium, NDC Partnership and UNDP

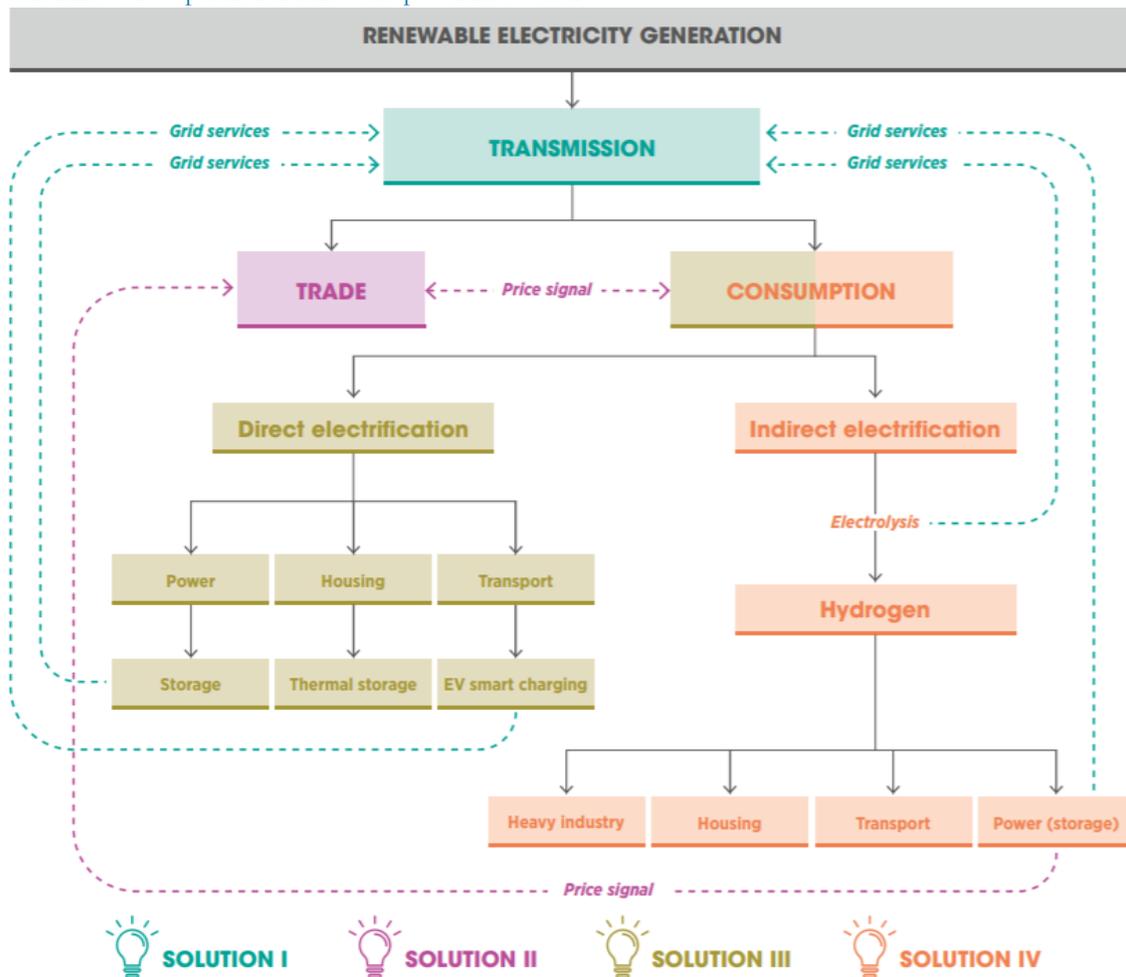
## Integrating high shares of variable renewable power

Integrating high shares of variable sources of renewable electricity such as wind and solar PV is a concern for many policy-makers. Sweden, for example, requested IRENA to evaluate innovative options to support their strategy towards a 100% renewable power sector by 2040. IRENA, with the support of the Swedish Energy Agency (Energimyndigheten), developed the study “*Innovative solutions for 100% renewable power in Sweden*”<sup>20</sup> It presents four innovative solutions for a renewables-based power system, which tackle different challenges in the power system value chain:

- I - Providing **innovative ancillary services** from both conventional and variable renewable energy sources;
- II - Gaining power system flexibility from the **Pan-European market**;
- III - Ensuring system-friendly integration of **distributed energy resources**;
- IV - End-use decarbonisation via **renewable-based electrification**.

The proposed innovative solutions have applicability in other countries, and the study highlights pilot projects that could be replicated elsewhere.

Figure 11: Innovative options for renewable power in Sweden



Source: IRENA (2020c)

<sup>20</sup> Supported by the Government of Sweden. Available at: [www.irena.org/publications/2020/Jan/Innovative-solutions-for-100-percent-renewable-power-in-Sweden](http://www.irena.org/publications/2020/Jan/Innovative-solutions-for-100-percent-renewable-power-in-Sweden)

## Changing ways of working in the face of COVID-19

IRENA has been exploring new ways of advancing programmatic activities and engaging with its Members during this challenging time. The pandemic's impacts have been global and infiltrated all aspects of our societies and economies, including renewable energy. IRENA and its partners, such as the Coalition for Action, have been vocal in showing how transforming the energy system can support a sustainable, resilient and equitable recovery.

### IRENA Coalition for Action call in response to COVID-19

On 28 April 2020, over 100 leading renewables and energy transitions players who are members of the IRENA Coalition for Action issued a joint statement laying out concrete actions that governments can take to ensure the economic recovery from COVID-19 aligns with global climate and sustainability objectives.

"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", said Coalition member Ignacio Galán, CEO of Iberdrola.

In the joint statement, Coalition members urge policymakers to leverage renewable energy's potential to support essential services in the immediate fight against COVID-19 and to further 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, and skills and training for workers transitioning to the renewable energy sector.

"For a just recovery, existing economic activities and local capabilities must be fully leveraged to maximise the socio-economic benefits of renewables", stated IRENA Director-General Francesco La Camera.

Table 1: Actions for a sustainable economic recovery

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

Source: IRENA Coalition for Action, 2020<sup>21</sup>

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 of the Coalition. To learn more about the Coalition for Action, see [coalition.irena.org](https://coalition.irena.org).

<sup>21</sup> [www.irena.org/newsroom/articles/2020/Apr/IRENAs-Coalition-for-Action-calls-for-Green-Recovery-Based-on-Renewables](https://www.irena.org/newsroom/articles/2020/Apr/IRENAs-Coalition-for-Action-calls-for-Green-Recovery-Based-on-Renewables)

The Agency's resilience has supported its continuing role in fostering **international co-operation**. IRENA continues to forge strategic partnerships that can help advance the Agency's programmatic priorities and accelerate impact on the ground. IRENA already has a wide range of partners, with over 45 Memoranda of Understanding in place and nine signed this year. Emergencies such as the COVID-19 pandemic that have wide-ranging impacts for all communities highlight the importance of a holistic perspective and collaborative approaches.



IRENA continues to contribute its expertise to support discussions on the energy transformation between global leaders. IRENA has been called to contribute to several global and regional dialogues. The Director-General joined the Petersberg Climate Dialogue in addition to several dialogues with politicians on the impacts of COVID-19 and the economic recovery. He contributed to several other discussions on clean energy, including those organised by the Danish Ministry of Climate, Energy and Utilities and the IEA; the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) and the World Resources Institute (WRI); the Ministry of Energy of the Russian Federation and the Institute for Energy and Finance; Switzerland and Bahrain; the Atlantic Council; the Coalition for Action; the Global Solar Council; and, Goldman Sachs, among many others.

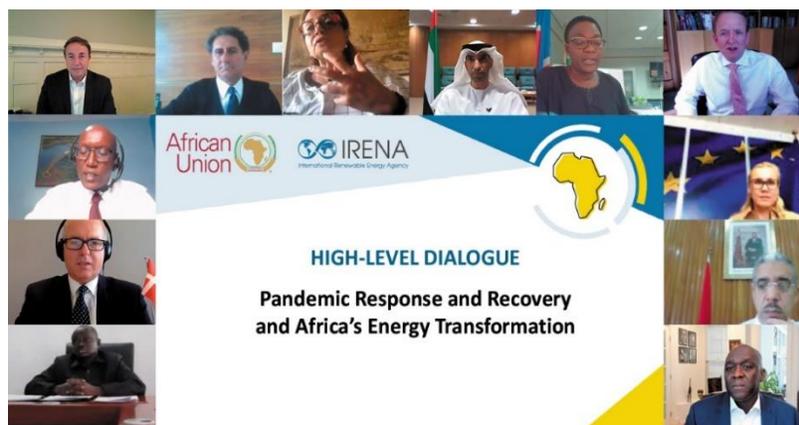
The IRENA Permanent Representation network aims to inform Permanent Representatives accredited to the Agency about IRENA's activities and renewable energy developments in general. In this context, at the Tenth Session of the IRENA Assembly, the United Arab Emirates (UAE) in partnership with IRENA, proposed to invite Permanent Representatives to IRENA and the broader diplomatic community to take part in **Renewables Talk for Permanent Representatives** starting in 2020. On 13 May, IRENA and the UAE co-hosted the first webinar of the Renewables Talk for Permanent Representatives.



The Agency is also increasingly engaging with Members and partners through its Observer Office to the United Nations (UN) in New York as it seeks to strengthen the visibility and recognition of its work in the multilateral setting including by providing regular inputs to UN bodies and processes. The Agency is a lead or key partner in several Climate Action Summit initiatives and has been moving forward their implementation over the past months working closely with our Members and stakeholders. These initiatives include chiefly the accelerating energy transition in SIDS initiative – for which the SIDS LHI serves as an implementing framework – the Climate Investment Platform, the Coalition for Sustainable Energy Access, as well as other initiatives such as the Cool Coalition, and the Decarbonizing Shipping – Getting to Zero Coalition. IRENA also actively participates in the SDG 7 Technical Advisory Group (TAG), which met at the Agency’s headquarters in January 2020. The TAG is a multi-stakeholder network of experts convened by the UN Department of Economic and Social Affairs (UNDESA) in support of the High-Level Political Forum, and which prepares a series of Policy Briefs on SDG 7 and its interlinkages with other SDGs that were launched on 4 June.



Further to the announcement by the African Union Commission (AUC) and IRENA to work closer to address Africa's pandemic response, the two parties virtually convened a high-level dialogue on ***Pandemic Response and Recovery and Africa’s Energy Transformation*** on 20 May, with participation of ministers from across the continent, as well as representatives from African institutions and development partners.<sup>22</sup> Participants discussed Africa's needs in responding to the COVID-19 crisis and the role of the energy transformation, particularly in the context of Africa's Agenda 2063 goals.



<sup>22</sup> Press release: <https://www.irena.org/newsroom/pressreleases/2020/May/Energy-Transition-at-the-Heart-of-Africas-COVID-19-Response-say-High-Level-Dialogue-Participants>

## Collaborative Frameworks

Pursuant to discussions at the 10<sup>th</sup> Assembly and following the request of Members to advance knowledge creation and facilitate collaboration on different topics, the Secretariat organised a series of virtual meetings. These discussions were dedicated to advancing work in hydropower, the geopolitics of the energy transformation, green hydrogen, ocean energy/offshore renewables, and integration of high shares of variable renewable energy.

Hydropower is the largest source of renewable electricity in the world, supplying around 17% of the world's electricity. The ***Collaborative Framework on Hydropower*** provides a platform for co-operation for IRENA's global Membership to identify priority areas, concrete actions and foster international collaboration to understand the role of hydropower in the energy transition and ensure its widespread future deployment. The platform aims to advance areas relevant to hydropower including financing, flexibility, resilience and sustainability. In a first kick-off event on 10 June that convened over 88 participants, over 30 participating countries from around the world asked to actively use the new platform.<sup>23</sup>

The ***Collaborative Framework on Geopolitics of Energy Transformation*** virtual meeting on 16 June, facilitated by Germany and the UAE, was the second dedicated Collaborative Frameworks Member discussion.<sup>24</sup> Over 70 participants from 38 countries and the European Union gathered to exchange insights on the geopolitical implications of the energy transformation and the future of IRENA's related work. Participants at the meeting agreed to create a dedicated group within IRENA to set the substantive agenda for the coming two years and guide the work of the IRENA Secretariat. The Director-General welcomed the agreed way forward, including that future analysis will be steered by an inclusive and diverse body of Members and States in Accession with a strong interest in the topic.

Over 70 participants from 33 countries joined the virtual meeting on the ***Collaborative Framework on Green Hydrogen*** on 18 June.<sup>25</sup> Green hydrogen was broadly recognised as an important means for the integration of energy markets, flexibility and end use sectors. "Hydrogen is enjoying increasing political and business momentum," said IRENA's Director-General Francesco La Camera during the first meeting of the new Framework. Members shared their vision on developing an effective and viable global hydrogen supply chain. Countries agreed to reconvene in September.

Forthcoming Collaborative Frameworks are planned on ocean energy/offshore renewables (planned for 25 June) and on high shares of renewables in energy systems (planned for 1 July). The latter builds on the work over the past year and on the *Workshop on Innovative Solutions for Achieving 100% Renewable Power Systems by Mid-century*<sup>26</sup> in Uruguay in 2019 and a dedicated session on the margins of the 10<sup>th</sup> Assembly on *Enhancing Dialogue among Countries with High Shares of Renewables in their Energy Systems*.

---

<sup>23</sup> <https://www.irena.org/events/2020/Jun/IRENA-Members-value-hydropower-in-new-collaborative-framework>

<sup>24</sup> <https://www.irena.org/events/2020/Jun/Members-Advance-IRENA-work-on-the-Geopolitics-of-the-Energy-Transformation>

<sup>25</sup> Available at: <https://www.irena.org/events/2020/Jun/Green-Hydrogen-takes-Centre-Stage-at-Members-Knowledge-Hub>

<sup>26</sup> <https://www.irena.org/events/2019/Jul/Workshop-on-Innovative-solutions-for-achieving-100pc-renewable-power-systems-by-mid-century>

IRENA has also continued to engage with countries directly by holding virtual meetings to discuss topics and themes including NDC support, and knowledge-sharing and capacity building.<sup>27</sup> This included a capacity building webinar on bioenergy hosted by IRENA on 28 May. The webinar was a follow-up to the Renewable Readiness Assessment (RRA) for the Kingdom of Bhutan (2019c)<sup>28</sup> and was attended by officials and experts from the Department of Renewable Energy, under the Ministry of Economic Affairs, to discuss and explore potential bioenergy opportunities for Bhutan.

Several events have been hosted virtually, successfully bringing together participants from around the world at a time when travel was not possible, highlighting the possibilities for future virtual events in increasing inclusiveness and reducing carbon emissions. These include:

- ***Renewables for refugee settlements: Sustainable energy access in humanitarian situations***, hosted with UNHRC on 28 April convened over 500 participants.
- On 2 June, IRENA and the Alliance of Small Island States (AOSIS) organised a high-level dialogue to reflect on SIDS energy transformation as part of these countries' response to the current global pandemic and post-COVID-19 recovery.
- Whilst global issues such as the COVID-19 pandemic impact all, the distributional effects across geographies, societies and generations are varied. IRENA has convened several virtual meetings to gather a variety of views in this regard. On 8 June, IRENA, in collaboration with the SDG 7 Youth Constituency of the UN Major Group for Children and Youth (UNMGCY), hosted the first IRENA Youth Talk on the ***Impact of COVID-19 on the renewable energy sector: a youth perspective*** in which young representatives showcased success stories and discussed impacts of the current pandemic on the clean energy transitions, with a focus on younger generations. IRENA also contributed to events considering the impacts of COVID-19 on renewables in India, the European Green Deal and gender, reflecting the breadth of expertise across the Agency.
- IRENA continues to support countries in their long-term energy planning through a wide range of on the ground activities such as regional training workshops and energy system modelling that allows for system-wide policy assessments. IRENA aims to build institutional capacity in partner countries for countries to lead the preparation of their long-term energy plans. For example, this includes a regional workshop held in January to launch the report on ***Power-sector planning in Arab Countries: Incorporating variable renewables***, which builds on input from a previous regional workshop held with the League of Arab States and the Regional Center for Renewable Energy and Energy Efficiency, with additional support from the Islamic Development Bank.<sup>29</sup> ***The Second International Forum on Long-term Energy Scenarios (LTES) for the Clean Energy Transition*** was hosted virtually on 26 March.<sup>30</sup> Twenty-six global experts from governments, technical institutions, academia and the private sector exchanged experience and good practices in using and developing long-term energy scenarios to support policy-making and planning for the clean energy transition. The Forum was viewed by over 625 attendees from 83 different countries.
- ***IRENA FlexTool – Assessing power system flexibility to integrate a higher share of renewables*** provided an overview of the Agency's work on power system flexibility and introduced the IRENA FlexTool to ca. 1000 participants. A series of half-day regional training sessions on the IRENA FlexTool commenced on 19 May with Latin America, followed by training for the ASEAN region on 2 June. A third virtual training will be hosted for MENA at the end of June.

---

<sup>27</sup> Antigua and Barbuda, Bhutan, Ecuador, El Salvador, Eswatini, Gabon, Gambia, Dominican Republic, Jordan, Lebanon, Nicaragua, Niger, Nigeria, Panama, South Africa, Uruguay, Zimbabwe

<sup>28</sup> Available here: <https://www.irena.org/publications/2019/Dec/Renewables-Readiness-Assessment-Kingdom-of-Bhutan>

<sup>29</sup> Available here: [www.irena.org/publications/2020/Jan/Arab-VRE-planning](http://www.irena.org/publications/2020/Jan/Arab-VRE-planning)

<sup>30</sup> Supported by the Government of Denmark

- Over 400 participants registered to view both the *Innovations for 100% renewable power: a systematic approach* and *Unlocking demand-side flexibility to transform power systems* webinars, showing IRENA's continuing contribution to this area.
- As part of the “IRENA's Insights” webinars series, the Agency jointly with Ocean Energy Europe hosted the webinar *Oceans powering the energy transition: Progress through innovative business models and revenue support* on 12 May. Around 600 participants from around the world joined to discuss the role of oceans as a sustainable resource supporting the global energy transition. The event received a 96% positive satisfaction rating, with 70% of participants finding the webinar 'very' or 'extremely' helpful.
- As part of IRENA's project *Energy Solutions for Cities of the Future*<sup>31</sup>, IRENA convened three webinars to disseminate best practices, options and tools to facilitate the integration of low-temperature renewable energy sources, such as low-enthalpy geothermal energy and solar thermal, into district energy systems. The webinars each attracted over 100 participants.
- Other virtual meetings and webinars that have been hosted include:
  - *Where is renewable energy innovation heading? – What patents data can tell us*
  - *Electric Vehicles: how smartly should we charge them?*
  - *Wind and Solar PV – what we need by 2050*
  - *Planning for the renewable future: improving the use and development of long-term energy scenarios*
  - *Grid Stability with High Share of Renewables - Transforming Small Island Power Systems*
  - *COVID-19 and Renewables: Impact on the Energy System (joint with the Council of European Energy Regulators (CEER))* – which hosted almost 1,000 participants, 80% of whom found the webinar 'very' or 'extremely' helpful.
- All webinars from the “IRENA's Insights” series are recorded and available on the IRENA website.<sup>32</sup>

## Guidelines for collaboration with the private sector

IRENA's Medium-Term Strategy (MTS) acknowledges the private sector's central role in accelerating the development and deployment of renewable energy, particularly in the context of mobilising investments for the financing of renewable energy projects. MTS stipulated that the Agency would develop a transparent set of criteria to facilitate access to private sector resources and expertise to support its mission and goals. As a result, IRENA is developing guidelines to facilitate conduct of cooperation activities with the private sector to IRENA's benefit, while maintaining a principled approach that manages risks and ensures IRENA's impartiality, integrity and independence.

The guidelines will ensure that the Agency engages in cooperation activities with private sector entities in a structured and transparent manner, consistent with the programmatic and strategic priorities defined by Members. Several principles will guide such engagement:

- No exclusivity or unfair advantage will be conferred to any private sector entity;
- Collaborations will advance IRENA's mission, goals and work programme;
- IRENA resources will be used cost-efficiently;
- Private sector entities will be engaged following conduct of a due diligence process. Prospective partners must meet the eligibility criteria established in the guidance;
- Cooperation shall be subject to the conclusion of a formal agreement;

<sup>31</sup> This project is part of the German Government International Climate Initiative (IKI). The Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) support this initiative based on a decision adopted by the German Bundestag

<sup>32</sup> Available here: [www.irena.org/renewables/Knowledge-Gateway/webinars/2020/Jan/IRENA-insights](http://www.irena.org/renewables/Knowledge-Gateway/webinars/2020/Jan/IRENA-insights)

- IRENA's name and logo will be protected. Use of IRENA's name and logo for commercial purposes shall be prohibited.
- No commercial relationship shall be established or shall result from the cooperation activities;
- Confidentiality of IRENA's information and activities and IRENA's intellectual property rights will be protected; and
- Cooperation shall be conducted in a transparent manner. Collaborations shall be made publicly available on IRENA's website.

The guidelines will be made available on IRENA's website in July 2020.

## Looking ahead

IRENA has ambitious plans for the coming months to deliver on its mandate to promote renewables in a particularly challenging year. Whilst some activities have been postponed or rearranged due to COVID-19, IRENA is adapting, where possible, to deliver its outputs and continue the momentum towards a sustainable energy future. This chapter provides a summary of planned IRENA activities in the second half of 2020.

The year 2020 remains crucial for energy transitions – perhaps even more so as governments around the world respond to the current crisis. Concerted efforts are being made to advance the preparation for on-the-ground activities, most notably the CIP and Investment Forums. IRENA also continues to work closely with countries via virtual exchanges and through our partners and local networks to assist countries to develop and implement their NDCs.

### Upcoming IRENA dates in 2020-2021

Selected IRENA publications and events expected in the months ahead are shown below. Given the current period of uncertainty, whilst planned they remain subject to change. Updates to scheduled activities will be posted on IRENA's website as applicable.

Figure 14: Selected IRENA publications (P) and major events (E) (including virtual) from June 2020 to January 2021

Planning & Policy	Statistics & Analysis	Innovation & Tech	Topical Analysis	Institutional
IOREC (E, date TBC)	Renewable Energy Statistics (P)	IRENA Innovation Week (E, date TBC)	The post-COVID recovery (P)	IRENA 19th & 20th Council (E, 3-4 Nov)
Policy Day (E, date TBC)	Renewable Energy & Jobs Annual Review (P)			IRENA 11th Assembly (E, 16-17 Jan) & Annual Report 2020-21 (P)
	NDCs & energy targets (P)			

IRENA's third Innovation Week will virtually convene leading policy-makers, innovators, developers and investors from across IRENA's diverse global Membership to explore how systemic innovative solutions can support increasingly renewable-powered electrification of end-use sectors. Invited participants will explore the challenges and showcase emerging solutions from around the world.

IRENA's annual Policy Day provides a forum for renewable energy policy dialogue, where countries and stakeholders can share experiences and best practices for deploying renewable energy solutions efficiently and with maximum benefits. IRENA is currently planning to deliver this event later in 2020.

The Membership was notified in April that the 19<sup>th</sup> Meeting of the IRENA Council, originally planned for June 2020, has been postponed to November 2020, to be held adjacent to the 20<sup>th</sup> Meeting of the IRENA Council. This is currently planned as an in-person meeting, subject to the prevailing COVID-19 situation. The Council meetings would be preceded by one set of meetings of the Administration and Finance Committee (AFC) and the Programme and Strategy Committee (PSC). Plenary programmatic discussions, side events and programmatic days would be planned around the Council and the Committee meetings.

## Effective functioning of the organisation

To deliver the Agency's mandate, IRENA relies on the contributions and support of its Members, co-operation with a wide range of experts and institutions, and the commitment of its talented staff. This chapter summarises IRENA's key institutional and strategic activities in 2020.

### Enabling delivery and increasing institutional impact

As organisations around the world are adapting to the implications of the COVID-19 pandemic, IRENA has been looking to new ways of implementing its Work Programme whilst ensuring the safety and wellbeing of its staff and partners. Over the previous months, IRENA staff from all three duty stations have been continuing to deliver the Agency's objectives whilst working from home. Integral to this success has been the work of IRENA's information and communications technology (ICT) teams who have ensured the technical capability to continue working to the highest standard. Virtual meetings and collaborative ICT platforms have become the norm and provide new opportunities going forward to increase IRENA's inclusiveness.

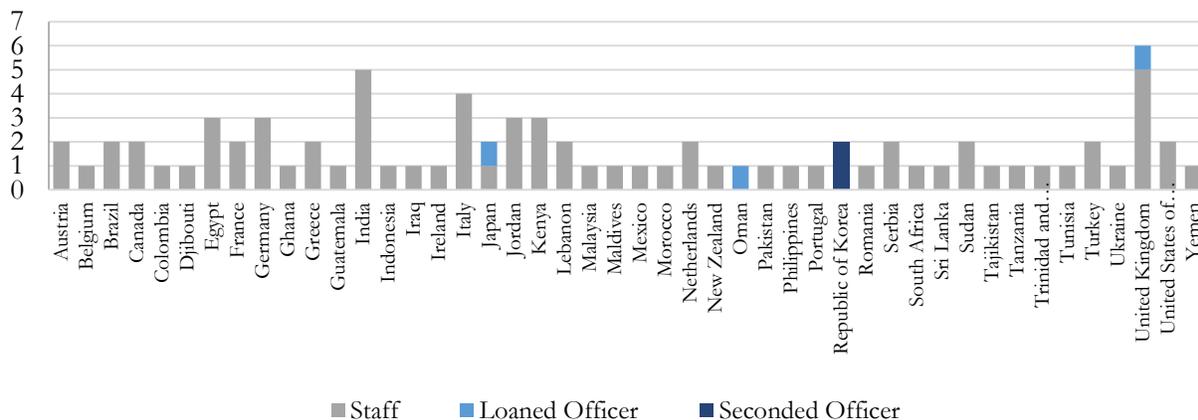
At the beginning of the year, the Agency achieved a significant milestone as the IRENA Innovation and Technology Centre (IITC) moved to a new office location in Bonn. The official opening was planned for March but postponed due to the pandemic.

Attracting, developing and retaining highly qualified staff is key to the Agency's success. In this respect, IRENA has stepped up its outreach efforts to attract talent from all over the world, including tapping into Members' expertise, and through the mechanisms provided by the decision of the Second Session of the IRENA Assembly (A/2/DC/5) such as secondment and loan arrangements and Junior Professional Officer Programme.

Figure 15: Staff status and gender distribution



Figure 16: Geographical distribution of staff (core posts, loaned personnel and seconded officers)



IRENA continues to strengthen its communication and outreach activities to increase the Agency’s impact. Since the beginning of 2020, IRENA has been referenced in over 7,000 media articles in 40 languages across 123 countries. The number of visitors to IRENA’s website grew significantly since the beginning of this year with an increase of 50% compared to the same period in 2019, almost reaching the mark of half a million users. Relatedly, IRENA’s website saw an increase in views of 45% compared to last year. IRENA has explored new formats like digital stories to encourage user interaction and increase return visitor rates to establish the Agency’s website as a reliable knowledge hub for renewables. IRENA has also continued to implement its strategy to target and deploy social media for global events, reports, and news.

Over 7,000 media article references

1.6 million webpage views

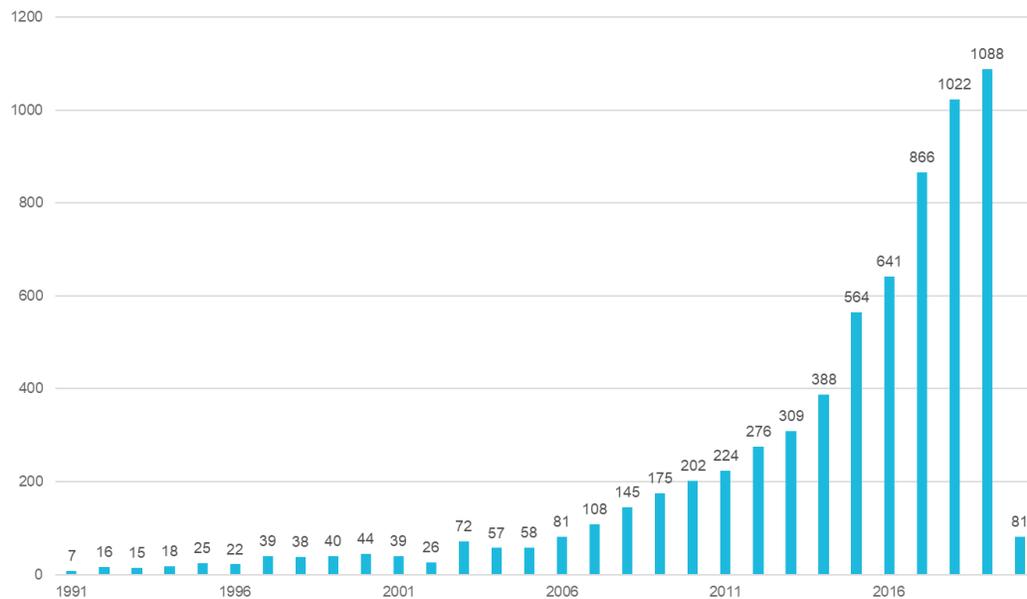
84,000 Twitter followers

### Academic impact

As part of the Agency's drive to strengthen and embed monitoring and evaluation of programme impact, IRENA commissioned a **review of its impact in the academic sphere within the context of energy transitions**.

The reach of IRENA’s publications is global, with over 130 citations by major research institutions around the world. The Agency's most-cited publications were on themes of the energy transition, optimisation of power systems and worldwide renewable energy policies. These themes are aligned with the top three themes identified when analysing all academic publications in the last 30 years using keywords related to the energy transition, highlighting the relevance of IRENA’s publications and the focus of the Medium-Term Strategy (MTS) on the transformation of the global energy system to the broader academic field. The findings from this analysis will feed into IRENA's mid-term external evaluation, which is mandated by the MTS.

Figure 17: Number of academic energy transition publications per year. A significant increase is seen since 2015 when the Paris Agreement and Agenda 2030 were adopted.



Source: ITOP.PARTNER Study contracted by IRENA, 2020

## Overview of progress

For the first time, the Agency's senior management has prepared an internal Directive that sets out the framework for delivery of the Work Programme and Budget 2020-21. The Directive sets out the responsibilities of all Directors in the implementation of the programmatic outputs, expectations to uphold IRENA's core values of efficiency, competency and integrity, and to promote a harmonious environment based on mutual respect that empowers staff, fosters creativity and promotes a culture of learning. It is envisaged that the Directive will be updated annually to reflect progress on the implementation of the Work Programme and set out new and refined responsibilities.

There is a total of 54 Work Programme outputs for the 2020-2021 biennium, which are spread across the four strategic objectives or pillars identified in the Medium-Term Strategy (MTS): a centre of excellence for knowledge and innovation; a global voice of renewable energy; a network hub for all stakeholders; and a source of advice and support for countries (Figures 18 and 19). Of these total outputs, 7% are complete and 76% in progress.

Figure 18: IRENA's strategic objectives of the Work Programme and Budget for 2020-21

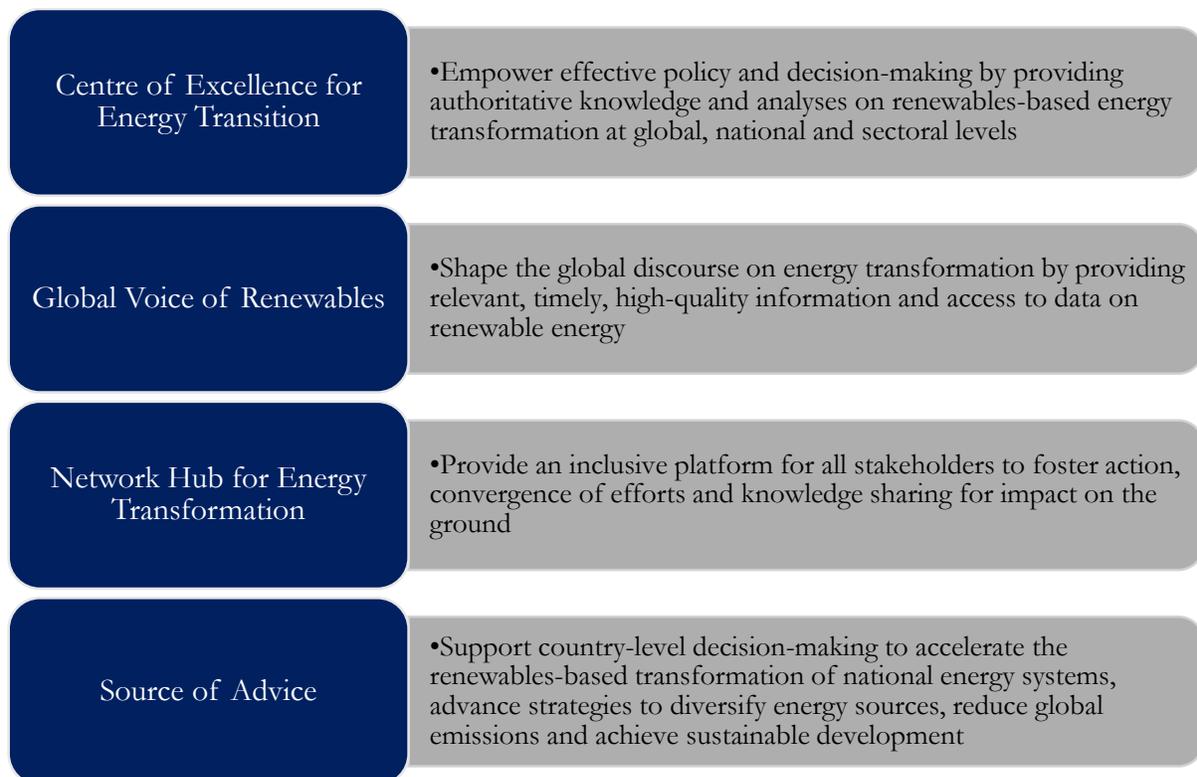
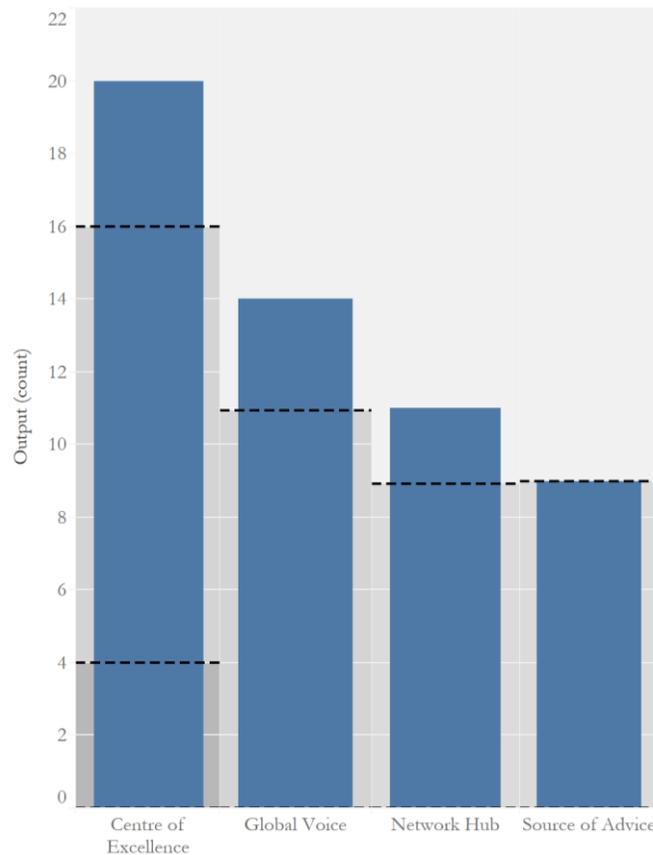
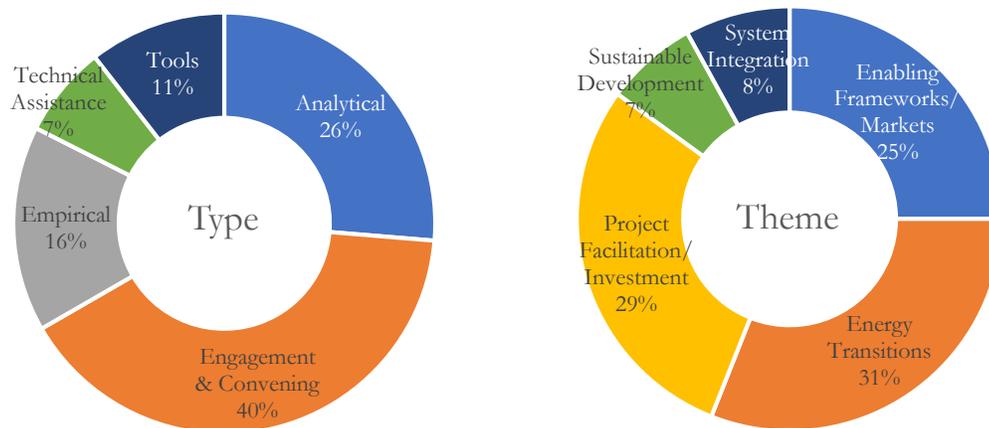


Figure 19: IRENA Work Programme 2020-21 outputs (blue) and outputs completed (dark grey) or in progress (light grey)



The wide range of activities demonstrates the breadth of IRENA’s mandate. Of the Agency’s outward-facing activities (which does not include activities relating to the management of the Agency itself), the majority can be classified as engagement and convening activities (*e.g.* country and regional engagement), followed by analytical (*e.g.* Global Renewables Outlook, analytical briefs) and empirical work (*e.g.* statistics, Global Atlas), and then tools (*e.g.* Renewable Readiness Assessments, FlexTool) and technical assistance (*e.g.* long-term planning, project facilitation). By topic, the majority of outputs are affiliated with enabling frameworks and the energy transition, followed by project facilitation/investment, sustainable development and system integration.

Figure 20: IRENA outward-facing activities by activity type and theme

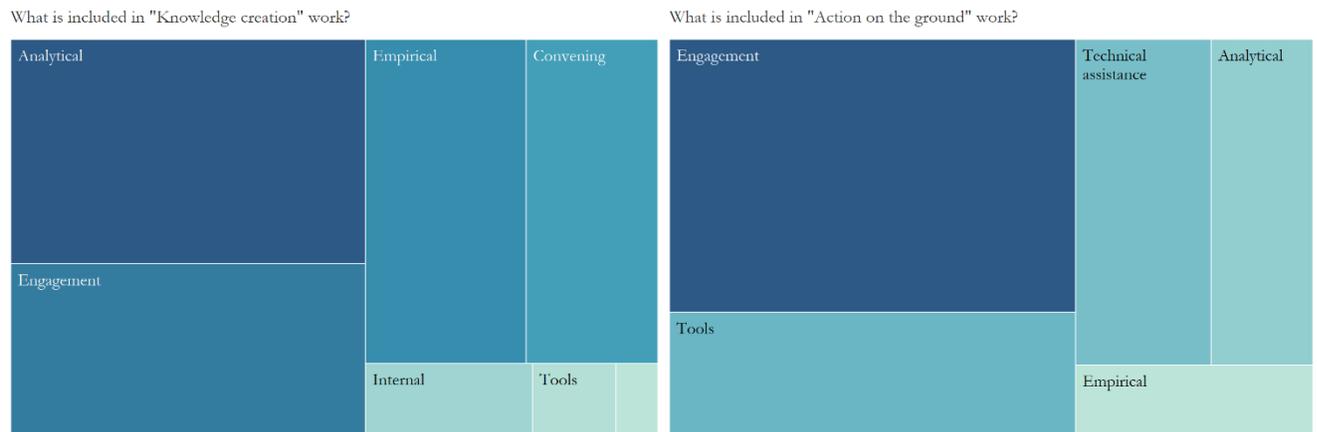


For the purpose of this analysis, IRENA’s outward-facing activities have been grouped according to the following themes:

- Enabling frameworks: improving frameworks such as policy, regulation and markets to enable renewables deployment;
- Energy transitions: global and regional energy transitions and global energy discourse;
- Project facilitation/investment: support to facilitate the implementation of renewable projects;
- Sustainable development: activities aligned with SDG 7 or cross-sectoral, sustainable agenda; and
- System integration: technical-level transition-related activities.

IRENA’s outward-facing work can broadly be characterised into knowledge creation (45% of IRENA outputs) and action on the ground (31% of IRENA outputs, the majority of which is capacity building) with the rest related to institutional matters. Over 85% of *action on the ground* outputs are supported wholly or in part by voluntary contributions, compared to 30% of the *knowledge creation* work.

Figure 21: Knowledge creation and action on the ground by activity type



## Resource overview

This chapter presents details of the core budget and voluntary contributions applicable to this Work Programme.

### Budget performance

Table 2: 2020-2021 Biennium Budget Utilisation by funding source (in USD thousands, as of 1 June 2020)

	2020-2021 Biennium Budget	Utilisation as of 1 June 2020	
		Commitment and Expenses	Proportion of 2020- 2021 Biennium Budget
<b>Assessed Contributions (Core Budget)</b>	<b>44,461</b>	<b>17,074</b>	<b>38%</b>
<b>Core Non-Assessed UAE Contribution:</b>			
UAE Support	5,000	512	10%
Governing Body Meetings	3,200	111	3%
IT Infrastructure Support	920	196	21%
<i>Subtotal</i>	<i>9,120</i>	<i>819</i>	<i>9%</i>
<b>Core Non-Assessed Germany</b>			
Innovation and Technology Centre	10,890	4,234	39%
<i>Subtotal</i>	<i>10,890</i>	<i>4,234</i>	<i>39%</i>
<b>Core Non-Assessed Other Contributions</b>			
Core Non-Assessed Other	1,704	106	6%
<i>Subtotal</i>	<i>1,704</i>	<i>106</i>	<i>6%</i>
<b>Total Core Non-Assessed</b>	<b>21,714</b>	<b>5,159</b>	<b>24%</b>
<b>Total</b>	<b>66,175</b>	<b>22,233</b>	<b>34%</b>

Figure 22: Received and outstanding assessed contributions for 2019 core budget (in USD millions, as of 1 June 2020)

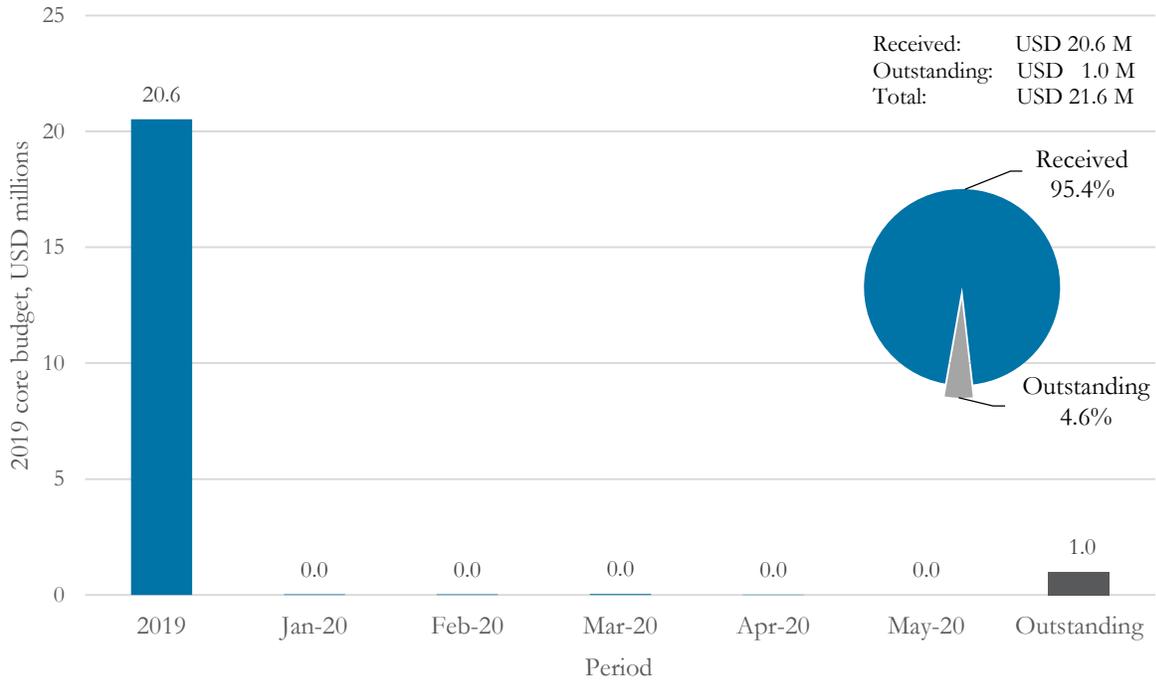


Figure 23: Received and outstanding assessed contributions for 2020 core budget (in USD millions, as of 1 June 2020)

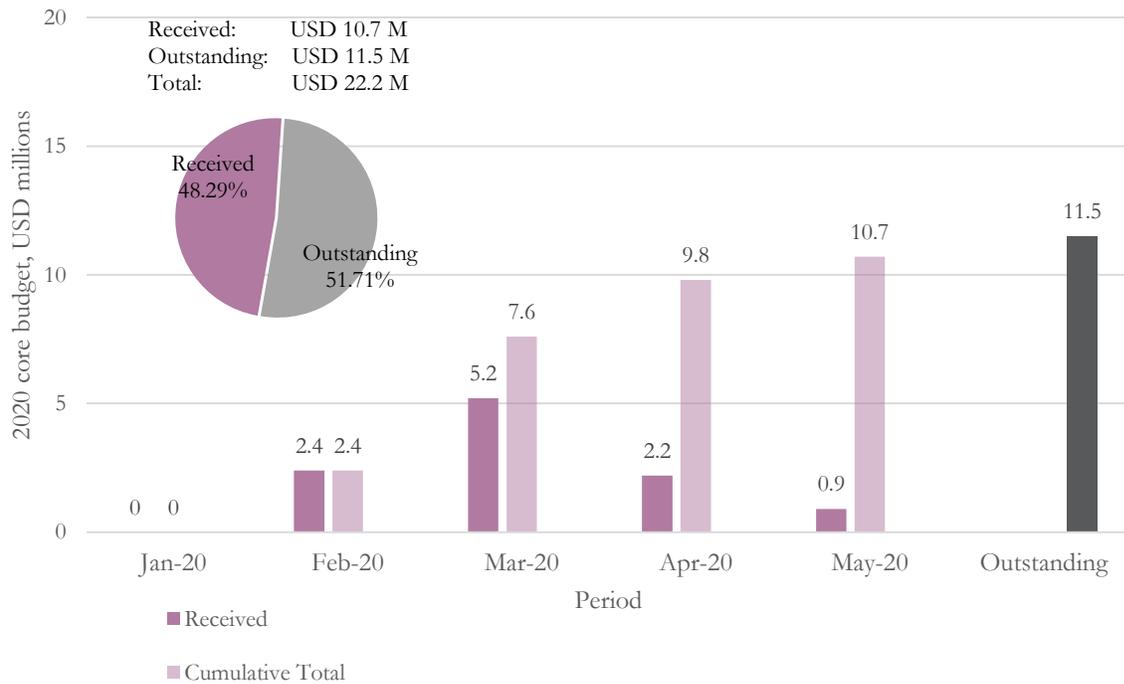


Figure 24: Number of Members with received and outstanding contributions to the 2019 core budget (as of 1 June 2020)

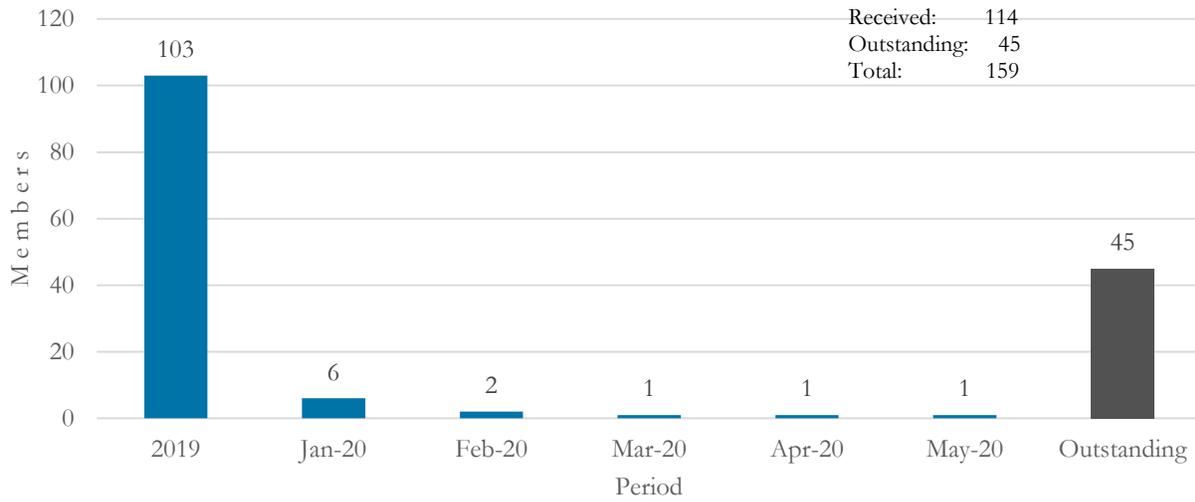


Figure 25: Number of Members with received and outstanding contributions to the 2020 core budget (as of 1 June 2020)

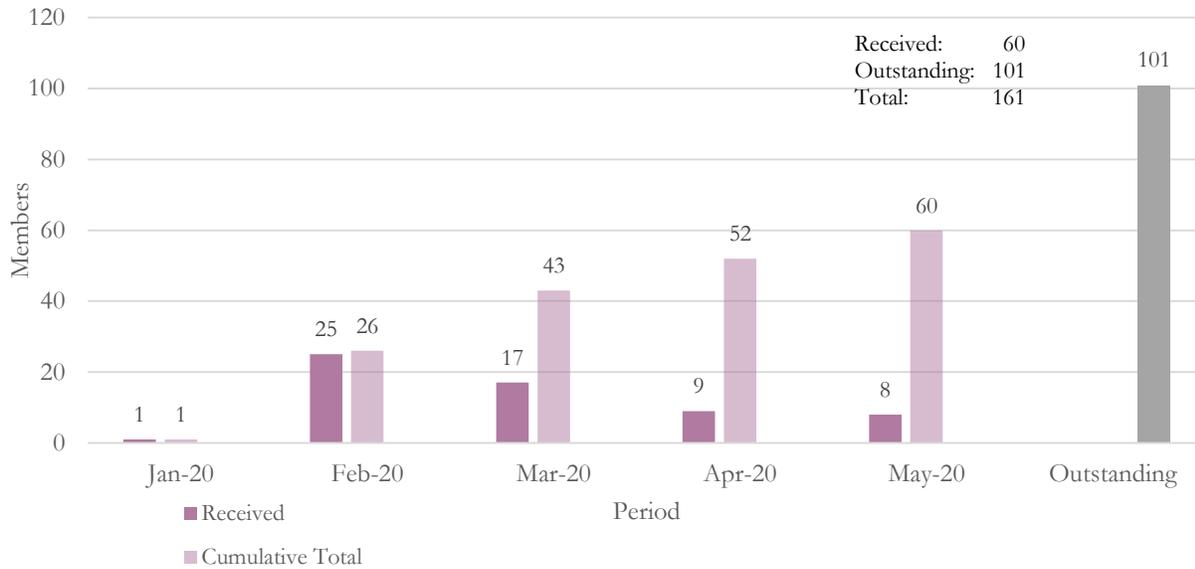


Table 3: 2020 Budgeted voluntary contributions (in USD, as of 1 June 2020)

<i>Core Non-Assessed Contributions</i>		
<i>Budgeted Voluntary Contributions</i>		
	2020	
	Committed	Received
<b>GERMANY</b>		
IRENA Innovation and Technology Centre	5,445,000	5,445,000
<b>United Arab Emirates (UAE)</b>		
UAE Support	2,500,000	1,250,000
Governing Body Meetings	1,600,000	1,600,000
IT Infrastructure Support	460,000	460,000
<b>Subtotal UAE Contributions</b>	<b>4,560,000</b>	<b>3,310,000</b>
<b>Total Budgeted Voluntary Contributions</b>	<b>10,005,000</b>	<b>8,755,000</b>

Table 4: 2020 Other voluntary contributions (in USD, as of 1 June 2020)

<i>Other Voluntary Contributions</i>		
	2020	
Donor/Project	Committed	Received
European Commission	550,791	409,389
Germany (International Climate Initiative)	3,271,153	-
Japan	450,455	450,455
King Abdullah Petroleum Studies and Research Center	200,000	-
NDC Partnership Climate Action Enhancement Package (CAEP)	600,000	-
Norway	4,332,756	-
United Nations Development Programme (UNDP)	2,200,000	-
Walloon Region of Belgium	2,207,506	-
<b>Total Other Voluntary Contributions</b>	<b>13,812,661</b>	<b>859,844</b>

Table 5: Multi-year voluntary contributions (in USD, as of 1 June 2020)

<i>Multi-Year Voluntary Contributions*</i>			
Donor/Project	Multi-Year Commitments	Received prior to 2020	Received during 2020
Denmark	13,457,822	6,355,549	-
<b>Total Multi-Year Voluntary Contributions</b>	<b>13,457,822</b>	<b>6,355,549</b>	<b>-</b>

\*Contributions pledged during 2018-19 and partially due to be received in 2020

Table 6: Fund for Developing Countries Representatives (in USD, as of 1 June 2020)

<i>Fund for Developing Countries Representatives</i>		
Donor	2020	
	Committed	Received
United Arab Emirates (UAE)	100,000	100,000
<b>Total FDCR</b>	<b>100,000</b>	<b>100,000</b>

The **Fund for Developing Country Representatives (FDCR)**, which was established by the Second Session of the IRENA Assembly, facilitates the participation of representatives of developing countries in IRENA meetings. Since its establishment, FDCR has been instrumental in ensuring a high level of inclusiveness, ownership, and transparency in the decision-making processes and activities of the Agency. The Fund supported the participation of representatives of Least Developed Countries (LDCs) and Small Island Developing States (SIDS) in all IRENA's governing body meetings, including: Assembly, Council, and Committees.

## Voluntary contributions

Table 7: Voluntary contributions in active implementation during 2020-2021 biennium (including carry-over activities from the previous biennium)

Donor	Contribution Topic
Denmark (2019-2021)	Long-term Planning
Denmark (2019-2023)	SIDS Lighthouses Initiative 2.0
European Commission (2019)	CESEC REmap
European Commission (Horizon 2030) (2020-2021)	Tracking Energy Innovation Impacts Framework
Germany, BMWi (2019)	Global Renewables Outlook (2020 edition).
Germany, International Climate Initiative (2015-2023)	SIDS Lighthouses
Germany, International Climate Initiative (2017-2019)	Cities - Energy Solutions for Cities of the Future
International Bank for Reconstruction and Development (2019)	IRENA Contribution to 2019 SDG 7 Tracking Report
Islamic Development Bank (IsDB) (2019)	Pan Arab Clean Energy Initiative
Japan MAFF (2019-2020)	Biomass Strategy for Sustainable Bioenergy Production
Japan METI (2019-2020)	Various projects
NDP Partnership (2020-2021)	NDC Partnership Climate Action Enhancement Package (CAEP)
Norway (2018-2019)	Various projects
Norway (2020-2021)	Various projects
Saudi Arabia, KAPSARC (2020)	G20 reports
Sweden (2018)	Innovative solutions
United Arab Emirates	IRENA/Abu Dhabi Fund for Development (ADFD) Project Facility
United Kingdom of Great Britain and Northern Ireland (2019)	Impact Innovation
UNDP (2020-2021)	Climate Promise
Walloon Region of Belgium (2017-2020)	Various projects

## Work Programme 2020-2021 Biennium

This chapter presents a full matrix detailing the progress of Work Programme activities.

<b>I. Centre of Excellence for Energy Transition</b>		
Core assessed and core non-assessed resources (in USD thousands): 13,394		
<i>Objective: Empower effective policy and decision-making by providing authoritative knowledge and analyses on renewables-based energy transformation at global, national and sectoral levels.</i>		
<b>Outputs</b>	<b>Status</b>	<b>Description</b>
Annual statistics: renewable capacity, renewable energy, off-grid	In progress	“Renewable Capacity Statistics” published (March 2020). ( <a href="#">Click here</a> )
Jobs Annual Review (annual)	In progress	2020 edition in preparation.
Annual update on power generation costs	Completed	“Renewable Power Generation Costs in 2019” (June 2020). ( <a href="#">Click here</a> )
Annual update on patents and standards		
Global Atlas data updates on renewable potentials	In progress	Updating the renewable resource maps from data providers (member states, international institutions and private sectors).
IRENA/IEA Policies and Measures Database	In progress	Update for Africa and Asia under development.
The Energy Progress Report: Tracking SDG7 <sup>33</sup> (annual, jointly with IEA, WB, WHO and UN)	Completed (2020 edition)	<p>“Tracking SDG 7: Energy Progress Report 2020” published May 2020. (<a href="#">Click here</a>)</p> <p>SDG 7 Policy Briefs:</p> <ul style="list-style-type: none"> <li>• Advancing Implementation of SDG 7 in Support of the 2030 Agenda (June 2020). (<a href="#">Click here</a>)</li> <li>• Advancing SDG 7 in Least Developed Countries. (June 2020). (<a href="#">Click here</a>)</li> </ul>
Global Energy Transformation (annual editions) <sup>34</sup>	Completed (2020 edition)	“Global Renewables Outlook: Energy Transformation 2050” (April 2020). ( <a href="#">Click here</a> )
Measuring the Socio-Economic Footprint report		
Innovation Landscape: Renewable Electricity in End-use report.		
Global Landscape: Renewable Energy Finance report	In progress	
3rd Innovation Week		

<sup>33</sup> Supported by the International Bank for Reconstruction and Development

<sup>34</sup> Supported by the Government of Germany (BMW)

ASEAN 2050 energy transition outlook <sup>35</sup>	In progress	Data collection and information ongoing; Engaging with ASEAN Centre for Energy to align with the Asian Energy Outlook (AEO).
Central America 2050 energy transition outlook <sup>36</sup>	In progress	Costa Rica workshop postponed due to COVID-19.
Impact of Innovation on Energy Transition <sup>37</sup>	In progress	
Human resources and workforce planning strategy	In progress	96 Recruitment Actions: 32 completed, 25 on hold due to COVID-19, 39 Active.
Performance management	Completed	Online Performance Management System (e-PAR) launched.
Refinement of Staff Rules and updated HR Manual	In progress	Staff Rules under review.
System for engagement of academia, researchers and the private sector	In progress	Development of guidelines for private sector engagement to be released in July 2020. Academic review conducted. Results are helping IRENA to improve our presence with academia.
Training and staff development strategy	In progress	Performance Management training held in AD, postponed in Bonn due to COVID-19. Ongoing online LinkedIn training. 70 licenses shared on a rotational basis with staff.

<b>II. Global Voice of Renewables</b>		
Core assessed and core non-assessed resources (in USD thousands): 11,011		
<i>Objective: Shape the global discourse on energy transformation by providing relevant, timely, high-quality information and access to data on renewable energy.</i>		
<b>Outputs</b>	<b>Status</b>	<b>Description</b>
Power Market Design for the Energy Transition report	In progress	
Market Analysis: Africa	In progress	
Ecosystems for Sustainable Livelihoods report	In progress	
Policies at the Time of Transition: Transport (with IEA and REN21) report		
Leveraging Local Capabilities (selected technologies) report	In progress	

<sup>35</sup> Supported by the Government of Denmark

<sup>36</sup> Supported by the Government of Norway

<sup>37</sup> Supported by the European Commission, under Horizon 2030 programme

6th and 7th Global Policy Day	In progress	6th Global Policy Day postponed, to now take place adjacent to 19th Meeting of the IRENA Council.
Toolbox for long-term planning: methodologies and best practice	In progress	Development of visualisation dashboard of long-term modelling results for Africa. <sup>38</sup>  “Power sector planning in Arab countries: Incorporating variable renewables” <sup>39</sup> (Jan 2020). ( <a href="#">Click here</a> )
Grid codes for variable renewable energy (VRE) report		
Value of storage in national energy systems report and toolkit	In progress	Electricity Storage Valuation Framework and toolkit. ( <a href="#">Click here</a> )
Global assessment of geothermal energy		
Gender and Renewable Energy report	In progress	Wind energy: A gender perspective ( <a href="#">Click here</a> )
NDCs and Renewable Energy Targets <sup>40</sup>	In progress	Database of Renewable Energy Targets completed. Analysis in progress.
Geopolitics of the Energy Transition	In progress	Virtual meeting with Members on the way forward on 16 June 2020.
Analytical briefs, guidelines and working papers on topical issues (bio-energy, hydrogen, hydropower, off-shore wind, power-to-X, standards, VRE integration, auctions, fiscal policies, target design, distributed generation, cities, renewable options for buildings, market-based mechanisms, access and electrification planning)	In progress	<p>Briefs published:</p> <ul style="list-style-type: none"> <li>• “Renewable energy finance brief on sovereign guarantees” (Jan. 2020). (<a href="#">Click here</a>)</li> <li>• “Renewable energy finance brief on institutional investors” (Jan. 2020). (<a href="#">Click here</a>)</li> <li>• “Renewable energy finance brief on green bonds” (Jan. 2020). (<a href="#">Click here</a>)</li> <li>• Energy subsidies: Evolution in the global energy transformation to 2050 (<a href="#">Click here</a>)</li> </ul> <p>Reports published:</p> <ul style="list-style-type: none"> <li>• “Innovative solutions for 100% renewable power in Sweden”<sup>41</sup> (Jan. 2020). (<a href="#">Click here</a>).</li> <li>• Renewable energy auctions: Status and trends beyond price (<a href="#">Click here</a>)</li> </ul> <p>Reports soon to be published:</p>

<sup>38</sup> Supported by the Government of the Walloon Region of Belgium

<sup>39</sup> Supported by the Islamic Development Bank (IsDB)

<sup>40</sup> Supported by the Government of the Walloon Region of Belgium

<sup>41</sup> Supported by the Government of Sweden

		<ul style="list-style-type: none"> <li>• “100% Renewable Energy” (final review process).</li> <li>• “Cities”<sup>42</sup> (responding to review comments)</li> <li>• Auctions case studies. Countries to date include Colombia, Japan and Malaysia<sup>43</sup></li> <li>• “Renewable Energy Policies in a Time of Transition: Heating and Cooling”<sup>44</sup></li> </ul>
--	--	---

<b>III. Network Hub</b>		
Core assessed and core non-assessed resources (in USD thousands): 11,037		
<i>Objective: Provide an inclusive platform for all stakeholders to foster action, convergence of efforts and knowledge sharing for impact on the ground.</i>		
<b>Outputs</b>	<b>Status</b>	<b>Description</b>
IRENA Forums in regions and sub-regions		
SIDS Lighthouses Initiative <sup>45</sup>	In progress	<p>Initiative coordination:</p> <ul style="list-style-type: none"> <li>• Three new partners joined the initiative: Pacific Community, Pacific Power Association and Sur Futuro Foundation.</li> <li>• Country profiles updated and uploaded on the SIDS Lighthouse Initiative (LHI) <a href="#">website</a> and shared with SIDS.</li> <li>• Progress of SIDS LHI and the Enhanced SIDS Climate Package presented at the Alliance of Small Island States (AOSIS) Placencia Forum. (Apr. 2020) (<a href="#">Click here</a>)</li> <li>• Co-hosted <i>SIDS High-Level Dialogue - Accelerating Energy Transition in Small Island Developing States to Stimulate Post-Pandemic Recovery</i>. with the AOSIS (June 2020). (<a href="#">Click here</a>)</li> <li>• Developing indicators to track progress of SIDS LHI Member States along SIDS LHI Priority Areas.</li> </ul> <p>Country-level work:</p> <ul style="list-style-type: none"> <li>• Joint mission with UNDP on Energy and Blue Economy to Sao Tome Principe (Mar. 2020)</li> </ul>

<sup>42</sup> Supported by the Government of Germany as part of the German Government International Climate Initiative

<sup>43</sup> Supported by the Government of Japan

<sup>44</sup> Supported by the Government of Japan

<sup>45</sup> Supported by Governments of Denmark, Germany as part of the German Government International Climate Initiative, NDP Partnership and UNDP.

		<ul style="list-style-type: none"> <li>• Renewable energy project concept notes for Sao Tome and Principe to be submitted for funding development.</li> <li>• <u>Climate Promise</u> energy-related activities in SIDS (<a href="#">Click here</a>).</li> <li>• Supporting CAEP country-level activities in the AIS, Caribbean and Pacific SIDS.</li> <li>• Development of 100% renewable energy and transport roadmap for Antigua and Barbuda ongoing.</li> </ul>
Global Geothermal Alliance	In progress	<p>New partner joined GGA: Serbian Geothermal Association. Total 46 Members<sup>46</sup>, 40 Partners<sup>47</sup>.</p> <p>GGA website developed into a knowledge sharing platform.</p> <p>Update of Africa, Europe, and Latin America and Caribbean regional profiles topics on International training centres and Geothermal resource assessment methodologies.</p> <p>Three webinars organised on “Integration of low-temperature renewable energy source in district heating and cooling networks”<sup>48</sup>. (<a href="#">Click here</a>)</p> <p>“Guidebook for enabling the integration of low-temperature renewable energy sources into district heating and cooling networks” (under external review)<sup>49</sup>.</p> <p>Report “Assessment of geothermal development for electricity and direct use in East Africa Rift region” under development (external review completed)<sup>50</sup></p>

<sup>46</sup> Argentina, Bolivia, Burundi, Chile, Colombia, Comoros, Costa Rica, Djibouti, Ecuador, Egypt, El Salvador, Ethiopia, Fiji, France, Germany, Guatemala, Honduras, Iceland, India, Indonesia, Italy, Japan, Kenya, Kingdom of the Netherlands, Malaysia, Mexico, New Zealand, Nicaragua, Pakistan, Papua New Guinea, Peru, Philippines, Poland, Portugal, Romania, Saint Vincent & the Grenadines, Solomon Islands, Switzerland, Tonga, Turkey, Uganda, United Republic of Tanzania, United States of America, Vanuatu, Zambia, Zimbabwe

<sup>47</sup> African Development Bank, African Union Commission, AGH University of Science and Technology (Poland), Andean Geothermal Center of Excellence (Chile), Asian Infrastructure Investment Bank (AIIB), Association GeoEnergy Celle e.V. (Germany), Canadian Geothermal Energy Association, Caribbean Electric Utility Services Corporation (CARILEC), Centro Mexicano de Innovación en Energía Geotérmica (CeMIEGeo), Chinese Renewable Energy Industries Association (CREIA), Eastern African Power Pool, Energy Institute Hrvoje Požar (Croatia), European Geothermal Energy Council, Geothermal Canada, GEODEEP - Geothermal Cluster for Heat and Power (France), Geothermal Power Plants Investors Association (Turkey), Geothermal Resources Council (USA), Geothermal Training Programme in Iceland (GRO GTP), Iceland GeoSurvey, Iceland Geothermal Cluster Initiative, Inter-American Development Bank, International Geothermal Association, International Renewable Energy Agency, Islamic Development Bank, Macedonian Geothermal Association, National Energy Authority (Iceland), New Partnership for Africa’s Development, Nordic Development Fund, Organization of American States, Organisation of Eastern Caribbean States, Pacific Community, Regional Center for Renewable Energy and Energy Efficiency, Serbian Geological Society, Serbian Geothermal Association, Southern Africa Power Pool, United Nations Environment Programme (UN Environment), United Nations Industrial Development Organization (UNIDO), United States Energy Association (USA), University of Geneva, World Bank.

<sup>48</sup> Supported by the Government of Germany as part of the German Government International Climate Initiative

<sup>49</sup> Supported by the Government of Germany as part of the German Government International Climate Initiative

<sup>50</sup> Supported by the Government of Japan

5th International Off-grid Renewable Energy Conference		Options under review, given COVID 19 situation.
Implementation of regional action agendas and clean energy corridors <sup>51</sup> in Central Asia, Latin America, Middle-east and North Africa, South Asia, South East Asia Southeast Europe and Sub-Saharan Africa	In progress	<p>Implementation initiated of the “Regional Capacity-Building Programme on Long-Term Planning for Central Africa” in partnership with the Central Africa Power Pool.<sup>52</sup></p> <p>Regional training in planning on the “Economics of Power Systems Planning and Operation” in West Africa.</p> <p>Under the PACE initiative, interim reports produced including outcomes of the first stage of the zoning project.<sup>53</sup></p> <p>Development of a regional parliamentary strategy in the ECOWAS region, including a regional parliamentary meeting.</p> <p>Co-organisation of a High-Level Dialogue with the Africa Union on the pandemic response and Africa’s energy transformation. (May 2020). (<a href="#">Click here</a>).</p>
Partnerships to promote deployment of decentralized renewable energy solutions <sup>54</sup>	In progress	WHO-led Global Health and Energy Platform for Action (HEPA) operational.
Assessment of renewable energy in agri-food chains <sup>55</sup>	In progress	
Country-specific assessments for electrification of rural health centres <sup>56</sup>	In progress	<p>Partnered with the Government of Burkina Faso and the SELCO Foundation to conduct an assessment for electrification of rural health facilities.</p> <p>Assessments underway with Approach and work plan adapted due to COVID-19.</p>
Collaborative engagement with international organisations, multilateral institutions and initiatives	In progress	<p>9 MoUs have been signed as of 30 May 2020 with:</p> <ul style="list-style-type: none"> <li>• European Bank for Reconstruction and Development</li> <li>• International Energy Forum</li> <li>• United Nations Economic and Social Commission for Asia and the Pacific</li> <li>• East African Centre of Excellence for Renewable Energy and Energy Efficiency</li> <li>• Cassa Depositi e Prestiti</li> </ul>

<sup>51</sup> Supported by the Islamic Development Bank (IsDB) and the Government of Norway

<sup>52</sup> Supported by the Government of the Walloon Region of Belgium

<sup>53</sup> Supported by the Government of Norway

<sup>54</sup> Supported by the Government of the Walloon Region of Belgium

<sup>55</sup> Supported by the Government of the Walloon Region of Belgium

<sup>56</sup> Supported by the Government of the Walloon Region of Belgium

		<ul style="list-style-type: none"> <li>• United Nations Human Settlements Programme</li> <li>• United Arab Emirates Ministry of Energy and Industry</li> <li>• Department of Energy of Abu Dhabi</li> <li>• Abu Dhabi Global Market</li> </ul> <p>Other cooperative arrangements include:</p> <ul style="list-style-type: none"> <li>• Input to G20 in cooperation with King Abdullah Petroleum Studies and Research Center (KAPSARC), Saudi Arabia under the G20 Presidency<sup>57</sup></li> <li>• Co-organisation of a High-Level Dialogue with the Africa Union on the pandemic response and Africa’s energy transformation. (May 2020). (<a href="#">Click here</a>)</li> <li>• Collaboration with Africa Centre for Sustainable Development at the Africa Energy Indaba 2020, Cape Town, South Africa (Mar. 2020)<sup>58</sup> (<a href="#">Click here</a>)</li> </ul>
Coalition for Action	In progress	<p>Reports/briefs and events under preparation:</p> <ul style="list-style-type: none"> <li>• Country papers of the Coalition Business and Investors Group (Algeria, Colombia, Jordan and Tunisia)</li> </ul> <p>Reports/Briefs published and events held:</p> <ul style="list-style-type: none"> <li>• Public-Private Dialogue at the 10<sup>th</sup> IRENA pre-Assembly, including launch of Coalition for Action white paper “Towards 100% Renewables: Utilities in Transition” (Jan 2020). (<a href="#">Click here</a>)</li> <li>• IRENA Coalition for Action Members Webinar: COVID-19 and Beyond. (April 2020). (<a href="#">Click here</a>)</li> <li>• IRENA Coalition for Action Members Call to Action in Response to COVID-19: Renewable Energy is Key Part of the Solution (April 2020) (<a href="#">Click here</a>).</li> </ul>
Long-Term Energy scenarios campaign and network <sup>59</sup>	In progress	<p>LTES Campaign extended for the third year.</p> <p>International Dialogue on Global Best Practices for Strategic Long-Term Energy Planning (January 2020). (Click <a href="#">here</a> for event information, and <a href="#">here</a> for proceedings).</p> <p>Second International Forum on Long-term Energy Scenarios (LTES) for the Clean Energy</p>

<sup>57</sup> Supported by the Government of Saudi Arabia, KAPSARC

<sup>58</sup> Supported by UNDP

<sup>59</sup> Supported by the Government of Denmark.

		Transition (March 2020) (Click <a href="#">here</a> for event information, and <a href="#">here</a> for live videos of event)
--	--	---

<b>IV. Source of Advice</b>		
Core assessed and core non-assessed resources (in USD thousands): USD 5,569		
<i>Objective: Support country-level decision-making to accelerate the renewables-based transformation of national energy systems, advance strategies to diversify energy sources, reduce global emissions and achieve sustainable development.</i>		
<b>Outputs</b>	<b>Status</b>	<b>Description</b>
CIP implementation <sup>60</sup> : Project Navigator and Sustainable Energy Marketplace	In progress	Climate Investment Platform launched at 10 <sup>th</sup> IRENA Assembly (Jan. 2020). (Click <a href="#">here</a> for webpage). Over 260 potential partners and over 140 projects as of 1 June.  180 projects sourced to date through the platform. Initiated transfer of Marketplace projects to the CIP.
Project site assessments and feasibility assessments <sup>61</sup>	In progress	Site assessment website designed and content uploaded.  10 solar PV and wind site assessments conducted for Mozambique.
IRENA/ADFD Project Facility implementation <sup>62</sup>	In progress	Facility facilitated soft loans of USD 104.54 million from ADFD for 8 projects in 7 <sup>th</sup> cycle (Jan 2020). ( <a href="#">Click here</a> )  Report “Advancing Renewables in Developing Countries” published. ( <a href="#">Click here</a> )
Renewable readiness assessments (RRA) and REmap	In progress	Central and South Eastern Europe/South East Europe REmap summary report finalised <sup>63</sup> . To be released in June 2020.  New requests received from the following countries: <ul style="list-style-type: none"><li>• Indonesia (REmap)</li><li>• Malaysia (REmap)</li><li>• Paraguay (RRA)</li></ul> In progress: <ul style="list-style-type: none"><li>• Burkina Faso (RRA)</li><li>• Botswana (RRA)</li></ul>
Long-term planning for energy transition <sup>64</sup>	In progress	Report on the prospects of the power system in Eastern and Southern Africa (analysed with SPLAT) in finalisation.

<sup>60</sup> Supported by the Governments of Denmark, Germany as part of the German Government International Climate Initiative, and UNDP

<sup>61</sup> Supported by the Government of the Walloon Region of Belgium

<sup>62</sup> Supported by the Government of the United Arab Emirates

<sup>63</sup> Supported by the European Commission

<sup>64</sup> Supported by the Governments of Denmark and the Walloon Region of Belgium

		Engagement and knowledge dissemination: <ul style="list-style-type: none"> <li>Hosted fifth Roundtable Discussion on Strategic Energy Planning in Abu Dhabi in January 2020 (<a href="#">Click here</a> for more information).</li> </ul>
Flex-tool and grid integration support <sup>65</sup>	In progress	Latin America: Power systems operators from 13 countries gathered for online training on IRENA FlexTool (May 2020) ( <a href="#">Click here</a> ).
Socio-economic footprint at the country level (five countries)	In progress	Indonesia country brief: early draft in progress.
Energy transition in NDCs: development and implementation <sup>66</sup>	In progress	IRENA is supporting 26 countries through NDC Partnership's Climate Action Enhancement Package (CAEP) and is engaging with over 30 countries under UNDP's Climate Promise. ( <a href="#">Click here</a> for related article).
Entrepreneurship Facility <sup>67</sup>	In progress	First technical committee meeting of SADC Entrepreneurship Facility held to select entrepreneurs for the first cohort of training and mentorship.

<b>ADDITIONAL DIRECTIVE OUTPUTS</b>		
<b>Network Hub for Energy Transformation</b>		
<b>Outputs</b>	<b>Status</b>	<b>Description</b>
Support for climate efforts <sup>68</sup>	In progress	<p>Focal point for Energy Track within the UNFCCC Marrakesh Partnership for Global Climate Action. IRENA/UNFCCC op-ed</p> <p>Member of NDC Partnership.</p> <p>Participation in the UK-led COP26 preparation activities.</p> <p>Participation in climate initiatives:</p> <ul style="list-style-type: none"> <li>Accelerating energy transition in SIDS initiative, for which the SIDS LHI serves as an implementing framework,</li> <li>The Climate Investment Platform (CIP),</li> <li>The Coalition for Sustainable Energy Access,</li> <li>The Cool Coalition,</li> <li>The Decarbonizing Shipping – Getting to Zero Coalition,</li> </ul>

<sup>65</sup> Supported by the Governments of Norway and NDP Partnership

<sup>66</sup> Supported by Government of the Walloon Region of Belgium, NDP Partnership and UNDP

<sup>67</sup> Supported by Government of the Walloon Region of Belgium

<sup>68</sup> Supported by the Government of Denmark and Government of the Walloon Region of Belgium.

		<ul style="list-style-type: none"> <li>• The Three Percent Club for Energy Efficiency, and</li> <li>• The initiative towards Cleaner Electricity in Latin America and the Caribbean.</li> </ul>
<b>Enabling IRENA delivery</b>		
<b>Outputs</b>	<b>Status</b>	<b>Description</b>
Upgrades and enhancements to the IRENA website, platforms, and projects.	In progress	CIP website launched. ( <a href="http://www.irena.org/irenaforcip">www.irena.org/irenaforcip</a> ) Website upgrade. ERP quarterly upgrade. MS Teams implemented (inter Agency).
Efficient budget services	In progress	Internal monthly reporting and administration of core and voluntary contributions.
Delivery of efficient financial services	In progress	Audited IRENA and IRENA SPF 2019 Annual Financial Statements completed.
Support to the Provident Fund operations	In progress	Annual meeting of members conducted 22 Jan 2020. Management Board met on 13 March 2020 to review performance.
Efficient procurement services	In progress	Procurement opportunities continue to be posted on IRENA's website <a href="http://www.irena.org">www.irena.org</a> and on United Nations Global Market <a href="http://www.ungm.org">www.ungm.org</a> as well as and disseminated to the vendors registered with IRENA database ( <a href="https://www.irena.org/procurement">https://www.irena.org/procurement</a> ).
Effective general and travel services	In progress	Health and Safety program enhanced to address COVID-19 pandemic measures.
<b>Strategic Management</b>		
<b>Outputs</b>		
Comprehensive communication and outreach strategy	In progress	Publications 2020 strategy developed, and communications and outreach strategies aligned. Comms supports provided to publication releases, webinars, press releases, website updated etc.
Governance Support Office	In progress	Published Report of the 10 <sup>th</sup> Session of the IRENA Assembly. ( <a href="#">Click here</a> ) Organization of virtual meetings, including a Renewables Talk for Permanent Representatives ( <a href="#">click here</a> ), a High-Level Dialogue on Pandemic Response and Recovery and Africa's Energy Transformation ( <a href="#">click here</a> ), an SIDS High-Level Dialogue: Accelerating Energy Transition in Small Island Developing States to Stimulate Post-

		<p>Pandemic Recovery (<a href="#">click here</a>), the IRENA Youth Talk (<a href="#">click here</a>) and the IRENA Legislators Dialogue.</p> <p>Additional virtual meetings are being held in June on the collaborative frameworks for geopolitics, green hydrogen, hydropower, and ocean energy/offshore wind.</p> <p>Engagement continued with candidate countries to expedite ratification process by 11<sup>th</sup> Assembly.</p> <p>Preparations underway for an Observers' strategy to be presented at IRENA's 19<sup>th</sup> Council.</p>
New York Liaison Office	In progress	<p>Implementation of MOU with UN-OHRLLS: UN- OHRLLS joined SIDS Lighthouse Initiative and agreement developed on joint activities to support energy transition in LDCs and LLDCs.</p> <p>Update provided to New York Community on CIP progress during 13 May 2020 briefing.</p> <p>Update provided to Energy Transition Coalition on implementation of SIDS Energy Transition Deliverable as part of SIDS Climate Action Summit Package – 2 April 2020</p> <p>Inputs provided to 2020 preparations for HLPF and ECOSOC on the theme “Accelerated action and transformative pathways: realizing the decade of action and delivery for sustainable development”. (<a href="#">Click here</a>)</p>
Legal Office	In progress	<p>Guidelines on designation of IRENA Emissaries have been finalised. The Emissaries will facilitate and promote the Agency work at national, regional and international level.</p> <p>Guidelines on cooperation with the private sector are being finalised.</p> <p>Legal review of commercial contracts, MoUs and cooperation agreements concluded in the programmatic areas, providing legal advice on IRENA's privileges and immunities and the interpretation and application of IRENA's Statute, regulations, rules and policies, reviewing and facilitating preparation of administrative regulations, policies, strategies and contracts etc. donor, event and vendor contracts, MOUs, publications etc.</p>
Events Unit	In progress	<p>Events and Missions database for internal and external communication maintained.</p> <p>Delivery of six non-virtual and 11 virtual events.</p>
Diversification of resource base	In progress	<p>Donor kit in development.</p> <p>New contributions concluded in 2020:</p>

		<ul style="list-style-type: none"> <li>• European Commission (Innovation)</li> <li>• Germany, International Climate Initiative (SIDS Lighthouses)</li> <li>• Japan, METI (Various projects)</li> <li>• Saudi Arabia, KAPSARC (G20)</li> <li>• UNDP (Climate Promise)</li> <li>• Walloon region of Belgium (Various projects)</li> <li>• NDP Partnership (CAEP)</li> </ul>
Monitoring and evaluation system	In progress	<p>External evaluation process ongoing, an RFP was issued, closed on 6 June. Internal data collection and document preparations underway.</p> <p>Work programme implementation database developed to monitor progress in the implementation of the DG's Directive and Work Programme.</p>
Programmatic reports to the Council and Assembly	In progress	<p>Progress report on implementation of the Work Programme, in a revitalised format, sent to Membership (Jun. 2020).</p>
Strategic outreach	In progress	<p>DG held bilateral discussions with 50 entities (including regional bodies, non-governmental organisations and the private sector) and 29 governments.</p> <p>Active outreach by DDG and Directors to Members, IOs, multilateral and regional entities and other stakeholders.</p>

## References

- Cronk, R. and Bartram, J. (2018), *Environmental conditions in health care facilities in low- and middle-income countries: Coverage and inequalities*, International Journal of Hygiene and Environmental Health. 221(3):409-422. DOI: 10.1016/j.ijheh.2018.01.004
- IEA, IRENA, UNSD, World Bank, WHO (2020), *Tracking SDG 7: The Energy Progress Report*. World Bank, Washington DC. Available here: [www.irena.org/publications/2020/May/Tracking-SDG7-The-Energy-Progress-Report-2020](http://www.irena.org/publications/2020/May/Tracking-SDG7-The-Energy-Progress-Report-2020)
- IRENA (2019a), *NDCs in 2020: Advancing renewables in the power sector and beyond*, IRENA, Abu Dhabi. Available here: [www.irena.org/publications/2019/Dec/NDCs-in-2020](http://www.irena.org/publications/2019/Dec/NDCs-in-2020)
- IRENA (2019b) *Renewable energy auctions: Status and trends beyond price*, IRENA, Abu Dhabi. Available here: [www.irena.org/publications/2019/Dec/Renewable-energy-auctions-Status-and-trends-beyond-price](http://www.irena.org/publications/2019/Dec/Renewable-energy-auctions-Status-and-trends-beyond-price)
- IRENA (2019c) *Renewable Readiness Assessment (RA) for the Kingdom of Bhutan*, IRENA, Abu Dhabi. Available here: [www.irena.org/publications/2019/Dec/Renewables-Readiness-Assessment-Kingdom-of-Bhutan](http://www.irena.org/publications/2019/Dec/Renewables-Readiness-Assessment-Kingdom-of-Bhutan)
- IRENA (2020a) *Electricity Storage Valuation Framework*, IRENA, Abu Dhabi. Available here: [www.irena.org/publications/2020/Mar/Electricity-Storage-Valuation-Framework-2020](http://www.irena.org/publications/2020/Mar/Electricity-Storage-Valuation-Framework-2020)
- IRENA (2020b), *Global Renewables Outlook: Energy transformation 2050*, IRENA, Abu Dhabi. Available here: [www.irena.org/publications/2020/Apr/Global-Renewables-Outlook-2020](http://www.irena.org/publications/2020/Apr/Global-Renewables-Outlook-2020).
- IRENA (2020c) *Innovative solutions for 100% renewable power in Sweden*, IRENA, Abu Dhabi. Available here: [www.irena.org/publications/2020/Jan/Innovative-solutions-for-100-percent-renewable-power-in-Sweden](http://www.irena.org/publications/2020/Jan/Innovative-solutions-for-100-percent-renewable-power-in-Sweden)
- IRENA (2020d) *Measuring the Socio-economics of Transition: Focus on Jobs*, IRENA, Abu Dhabi. Available here: [www.irena.org/publications/2020/Feb/Measuring-the-socioeconomics-of-transition-Focus-on-jobs](http://www.irena.org/publications/2020/Feb/Measuring-the-socioeconomics-of-transition-Focus-on-jobs)
- IRENA (2020e) *Power sector planning in Arab countries: Incorporating variable renewables*, IRENA, Abu Dhabi. Available here: [www.irena.org/publications/2020/Jan/Arab-VRE-planning](http://www.irena.org/publications/2020/Jan/Arab-VRE-planning)
- IRENA (2020f) *Power system organisational structures for the renewable energy era* (January, 2020f), IRENA, Abu Dhabi. Available here: [www.irena.org/publications/2020/Jan/IRENA-Power-system-structures](http://www.irena.org/publications/2020/Jan/IRENA-Power-system-structures)
- IRENA (2020g) *Renewable Energy Finance: Green Bonds*, IRENA, Abu Dhabi. Available here: [www.irena.org/publications/2020/Jan/RE-finance-Green-bonds](http://www.irena.org/publications/2020/Jan/RE-finance-Green-bonds)
- IRENA (2020h) *Renewable Energy Finance: Institutional capital*, IRENA, Abu Dhabi. Available here: [www.irena.org/publications/2020/Jan/RE-finance-Institutional-capital](http://www.irena.org/publications/2020/Jan/RE-finance-Institutional-capital)
- IRENA (2020i) *Renewable Energy Finance: Sovereign guarantees*, IRENA, Abu Dhabi. Available here: [www.irena.org/publications/2020/Jan/RE-finance-Sovereign-Guarantees](http://www.irena.org/publications/2020/Jan/RE-finance-Sovereign-Guarantees)
- IRENA (2020j) *Renewable Power Generation Costs in 2019 Report*, IRENA, Abu Dhabi. Available here: [www.irena.org/publications/2020/Jun/Renewable-Power-Costs-in-2019](http://www.irena.org/publications/2020/Jun/Renewable-Power-Costs-in-2019)
- IRENA (2020k) Staff technical paper: Taylor, M. (2020) *Energy subsidies: Evolution in the global energy transformation to 2050*, IRENA, Abu Dhabi. Available here: [www.irena.org/publications/2020/Apr/Energy-Subsidies-2020](http://www.irena.org/publications/2020/Apr/Energy-Subsidies-2020)