

Twenty-fifth meeting of the Council
Abu Dhabi, 23-24 May 2023

**Progress Report of the Director-General
on the Implementation of the
Work Programme and Budget for 2022-2023**

TABLE OF CONTENTS

PROGRESS TOWARDS A NET-ZERO WORLD	9
Harnessing technology and innovation	15
Solutions for regions	16
Investments for a sustainable future	18
International cooperation and partnerships	22
Collaborative Frameworks	25
Targeted Climate Action	27
Communications and Outreach – Amplifying Impact	32
Website	32
Articles	32
Social media	32
E-mailers and videos	33
LOOKING AHEAD	33
Save the Date	34
EFFECTIVE FUNCTIONING OF THE ORGANISATION	35
Budget	35
Finance	36
Information and Communication Technology (ICT)	36
Human Resources	36
Procurement	39
General Services and Travel	39
IMPLEMENTATION PROGRESS OVERVIEW	39
Resource overview	40
Biennial budget overview	40
IRENA Donors (2022-2023)	46
WORK PROGRAMME 2022-2023 – IMPLEMENTATION MATRIX	48

FIGURES

Figure 1: Total primary energy supply by energy carrier group, 2020-2050 under the 1.5°C Scenario	10
Figure 2: Renewable share of annual power capacity expansion.....	13
Figure 3: Annual global investment in renewable energy, energy efficiency and other.....	15
Figure 4: CIP project support cycle.....	19
Figure 5: Energy Transition Accelerator Financing (ETAF) Platform.....	20
Figure 6: ETAF Eligibility Criteria.....	21
Figure 7: ETAF Application Process	21
Figure 8: IRENA's engagement.....	28
Figure 9: IRENA's Social Media Statistics	33
Figure 10: Staff Status as of 31 March 2023.....	37
Figure 11: Employee Profile Statistics	37
Figure 12: Geographical Distribution (core and project posts), as of 31 March 2023	38
Figure 13: Received and outstanding assessed contributions for 2022 core budget	43
Figure 14: Received and outstanding assessed contributions for 2023 core budget	44
Figure 15: Number of Members with received and outstanding contributions to the	45
Figure 16: Number of Members with received and outstanding contributions to the	45

TABLES

Table 1: Tracking progress of key energy system components to achieve the 1.5°C scenario	10
Table 2: Renewable generation capacity by region.....	14
Table 3: Number of projects supported by region.....	19
Table 4: Climate Investment Platform	19
Table 5: List of Collaborative Frameworks and their respective Co-facilitators	26
Table 6: Tentative list of IRENA Events, 2023.....	34
Table 7: Selected upcoming publications, 2023.....	35
Table 8: Project Posts by Level as of 31 March 2023	38
Table 9: Loaned Personnel as of 31 March 2023.....	38
Table 10: Seconded Officers (Voluntary Contributions) as of 31 March 2023	39
Table 11: IRENA's Strategic Objectives	40
Table 12: 2022-2023 Biennium Budget Utilisation by funding source (in USD Thousands)	40

IRENA AT A GLANCE



DIRECTOR-GENERAL

Francesco La Camera has been Director-General since 4 April 2019



DEPUTY DIRECTOR-GENERAL

Gauri Singh has been Deputy Director-General since 8 January 2020

YEAR OF ESTABLISHMENT



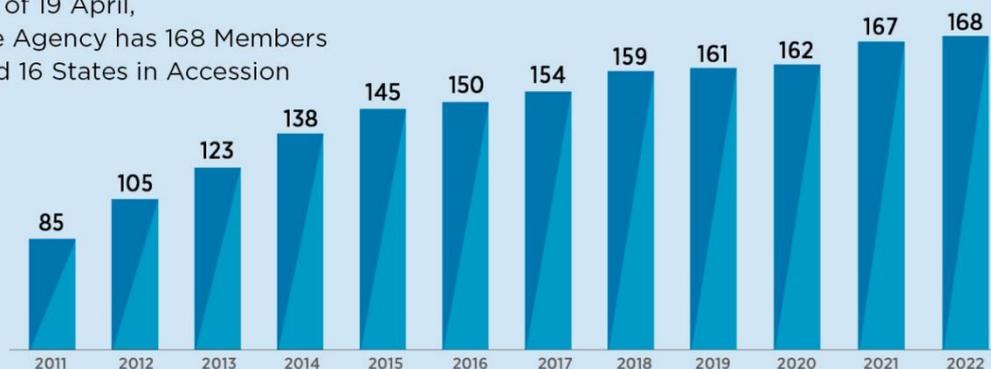
OFFICES



In addition to its Headquarters in Abu Dhabi, IRENA has an office in Bonn, and a UN liaison office in New York.

IRENA MEMBERSHIP

As of 19 April, the Agency has 168 Members and 16 States in Accession



13TH ASSEMBLY BUREAU



President: India

Vice-Presidents:



Belgium



Indonesia



St Vincent & the Grenadines



Zimbabwe

COUNCIL

21 Members

25th Council

Chair: TBC

Vice-Chair: TBC

26th Council

Chair: TBC

Vice-Chair: TBC

2 Committees

Administration & Finance



Chair: Maldives



Vice-Chair: Germany

Programme & Strategy



Chair: USA



Vice-Chair: Algeria

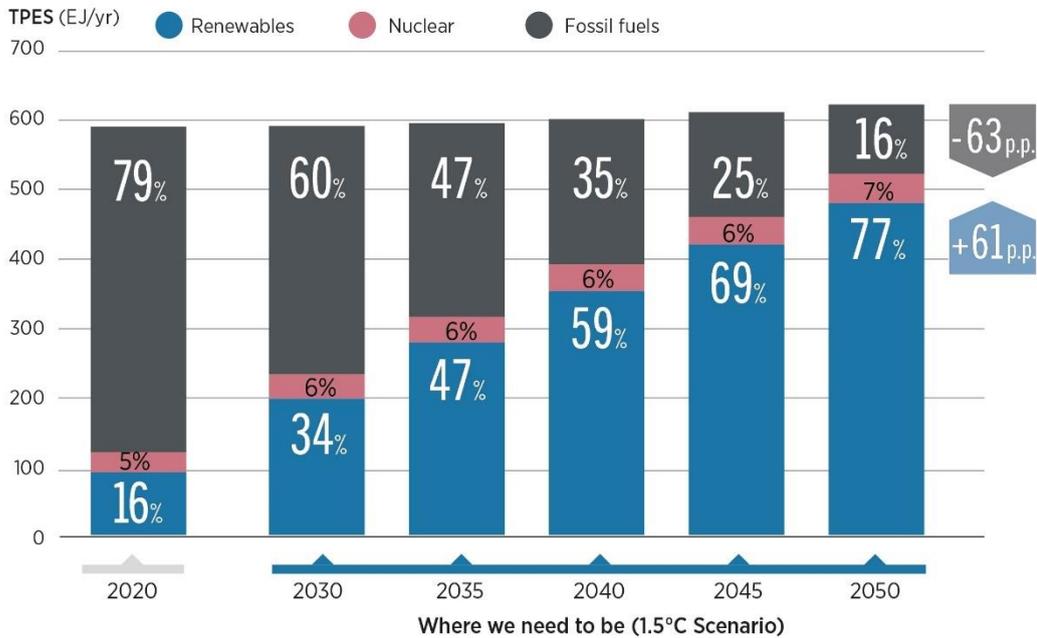
ENERGY TRANSITION AT A GLANCE

A roadmap to 2050 – tracking progress of key energy system components to achieve the 1.5C target

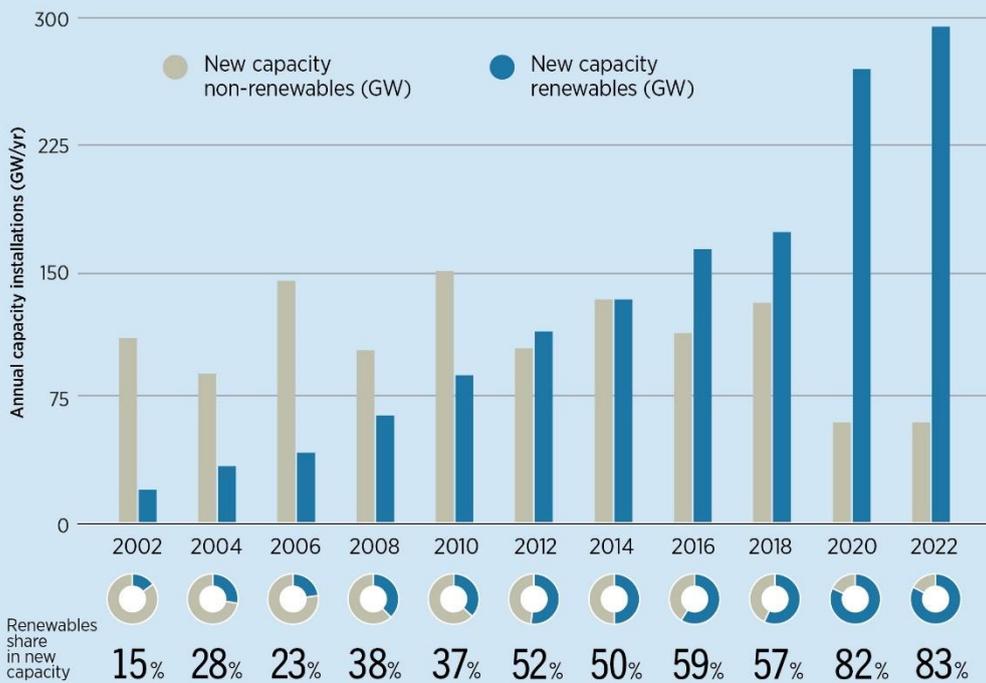
Indicators		Recent years	2030	2050	Progress (Off / on track)
RENEWABLES	ELECTRIFICATION WITH RENEWABLES				
	Share of renewables in electricity generation	28%	67%	91%	On track
	Renewable power capacity additions	295 GW/yr	975 GW/yr	1066 GW/yr	On track
	Annual solar PV additions	191 GW/yr	551 GW/yr	615 GW/yr	On track
	Annual wind energy additions	75 GW/yr	329 GW/yr	335 GW/yr	On track
	Investment needs for RE generation	486 USD billion/yr	1300 USD billion/yr	1382 USD billion/yr	On track
	Investment needs for power grids and flexibility	274 USD billion/yr	548 USD billion/yr	790 USD billion/yr	On track
	DIRECT RENEWABLES IN END-USES AND DISTRICT HEAT				
	Share of renewables in final energy consumption	19%	34%	83%	On track
	Solar thermal collector area	746 million m ² /yr	1700 million m ² /yr	3700 million m ² /yr	On track
	Modern use of bioenergy (direct use)	1.5 EJ	44 EJ	56 EJ	On track
	Geothermal consumption (direct use)	0.4 EJ	1.3 EJ	2.2 EJ	On track
Renewables based district heat generation	0.9 EJ	4.3 EJ	12 EJ	On track	
Investment needs for renewables end uses and district heat	13 USD billion/yr	269 USD billion/yr	216 USD billion/yr	On track	
ENERGY EFFICIENCY	Energy intensity improvement rate	0.6 %/yr	3.5 %/yr	2.9 %/yr	On track
	Investment needs for energy conservation and efficiency	295 USD billion/yr	1772 USD billion/yr	1493 USD billion/yr	On track
ELECTRIFICATION	Share of direct electricity in final energy consumption	22%	29%	51%	On track
	Passenger electric cars on the road	10.5 million	355 million	2180 million	On track
	Investment needs for charging infrastructure of EV's and EV adoption support	30 USD billion/yr	141 USD billion/yr	364 USD billion/yr	On track
	Investment needs for heat pumps	64 USD billion/yr	266 USD billion/yr	258 USD billion/yr	On track
HYDROGEN	Clean hydrogen production	0.7 Mt/yr	21.4 Mt/yr	518 Mt/yr	On track
	Electrolyser capacity	0.5 GW	233 GW	5722 GW	On track
	Investment needs for clean hydrogen and derivatives infrastructure	1.1 USD billion/yr	80 USD billion/yr	170 USD billion/yr	On track
	Clean hydrogen consumption - industry	0.04 EJ	2.4 EJ	40 EJ	On track
CCS AND BECCS	CCS/CCU to abate emissions in industry	0.01 GtCO ₂ captured/yr	1.0 GtCO ₂ captured/yr	3.0 GtCO ₂ captured/yr	On track
	BECCS and others to abate emissions in industry	0.002 GtCO ₂ captured/yr	0.7 GtCO ₂ captured/yr	1.0 GtCO ₂ captured/yr	On track
	Investment needs for carbon removal and infrastructure	6.4 USD billion/yr	18 USD billion/yr	107 USD billion/yr	On track

ENERGY TRANSITION AT A GLANCE

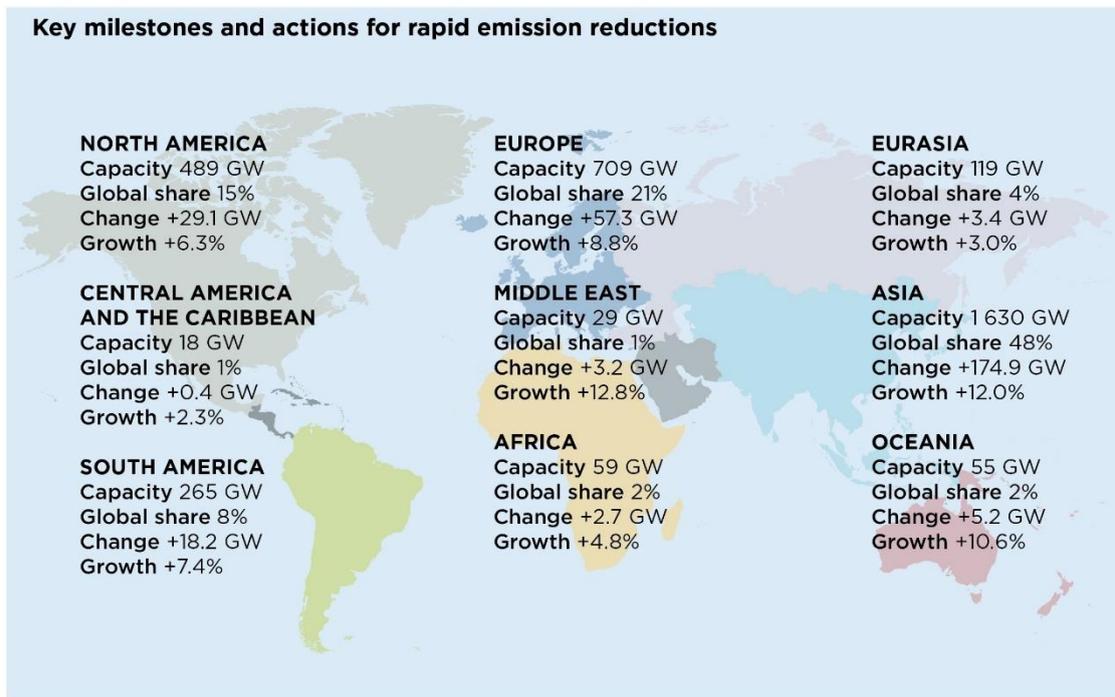
Total investment by technological avenue from 2023 to 2050



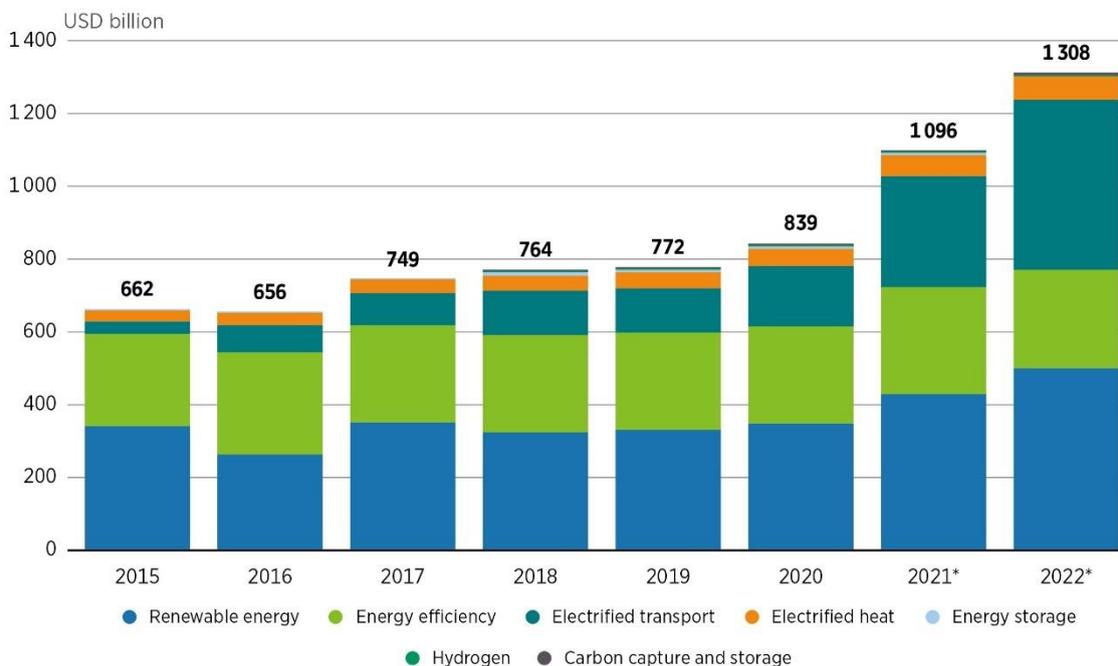
Renewable share of annual power capacity expansion



ENERGY TRANSITION AT A GLANCE



Annual global investment in renewable energy, energy efficiency and other transition-related technologies, 2015-2022.



SECRETARIAT AT A GLANCE



21
publications

- World Energy Transitions Outlook 2023 Preview
- Global landscape of renewable energy finance 2023



2
publications  

were translated into:



5 355
applications received
for 19 vacancies



53 events organised/
co-organised by IRENA

16 virtual events + **37** hybrid events

IRENA employs a talented
and diverse workforce

180 posts filled



Senior Team
Gender Balance



72 nationalities

stationed in Abu Dhabi, Bonn and New York,
47% are women and 53% are men.

11 loaned
or seconded officers



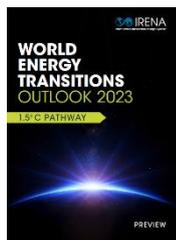
Media coverage:

19 200 in
media articles

42 across
languages

138
countries

Progress towards a net-zero world



IRENA continues the implementation of the Work Programme and Budget for the biennium 2022-2023. This report covers the programmatic activities the Agency has undertaken since January 2023.

The executive summary of IRENA's flagship **World Energy Transitions Outlook (WETO)**¹ report was released at the Berlin Energy Transition Dialogue (BETD) on 30 March 2023. IRENA's Director-General participated in the event, discussed the preview of findings, and emphasised a message of urgency. The report highlights that there is no time for a new energy system to evolve gradually and that the world simply cannot continue with incremental changes, if we are to achieve the necessary reductions in carbon emissions to meet climate goals. Among other things, deploying 1000 GW of renewables to the global energy system is essential to stay on a 1.5-degree pathway. Most recently, the G7 communique cited WETO to urge rapid action. The G7 member countries also agreed on a collective increase of 150 GW of offshore wind and 1 TW of Solar PV by 2030, in line with IRENA's 1.5-degree pathway.

The WETO preview also shows that cumulative investments between now and 2030 need to total USD 44 trillion, with energy transition technologies representing 80% of the investment, or USD 35 trillion (Figure 1). In addition, electrification and efficiency are key transition drivers, enabled by renewable energy, clean hydrogen, and sustainable biomass (Table 1). The preview of WETO 2023 provides an overview of the progress achieved in developing and implementing these technological avenues, showing that the scale and extent of the change achieved to-date fall far short of what is required to stay on the 1.5°C pathway. Most of the progress so far has been made in the power sector, where advances in technology, policy and innovation have taken the world a long way. Yet, current energy structures were designed to support fossil fuels and must be redesigned to support renewable energy systems. Therefore, the emphasis must shift from supply to demand, toward overcoming the structural obstacles that impede progress.

The report outlines three priority pillars – physical infrastructure; policy and regulatory enablers; and a well-skilled workforce that must be addressed simultaneously, requiring significant investment and a new paradigm for international co-operation in which all actors can engage in the transition and play an optimal role. The full report is expected to be released later in June 2023.



WETO
2023



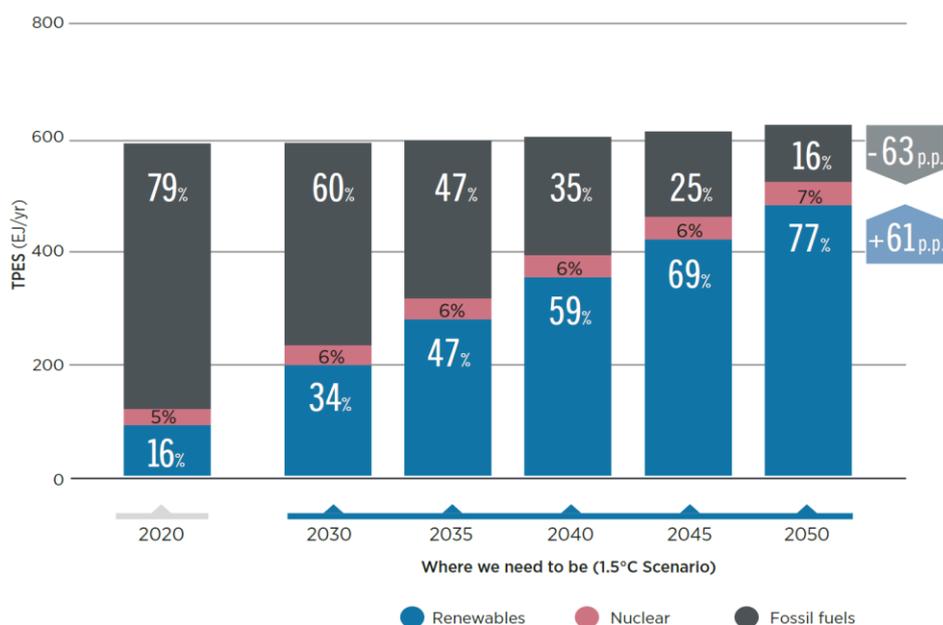
“Energy security, climate change, and inequalities are variables of the same equation.

Solutions should focus on clean energy demand and building the necessary physical, legal, and institutional infrastructure to support its rapid deployment.”

Francesco La Camera, IRENA Director-General

¹ Available [here](#).

Figure 1: Total primary energy supply by energy carrier group, 2020-2050 under the 1.5°C Scenario



Note: Renewables include bioenergy, geothermal, hydropower, ocean, solar and wind in all forms (electricity and synthetic fuels). Fossil fuels include coal, oil and natural gas; p.p. = percentage points.

Source: IRENA, *World Energy Transitions Outlook*, 2023

This year’s **Berlin Energy Transition Dialogue (BETD)**² was organised on 28-29 March. At the Dialogue, the IRENA Director-General set the scene at a high-level panel **Global Energy Transition - Translating Ambition Into Action**. This session discussed several key levers to globally accelerate and sustain the energy transition: decarbonizing industry, electrifying sectors, allocating space for renewable-energy production, harnessing supply chains, designing a sustainable industrial strategy, providing adequate financing, and extending transnational infrastructure from electricity grids, green-hydrogen pipelines, and shipping routes.



Table 1: Tracking progress of key energy system components to achieve the 1.5°C scenario

² More information available [here](#).

Indicators	Recent years	2030 ¹⁾	2050 ¹⁾	Progress 00% / on track
ELECTRIFICATION WITH RENEWABLES				
Share of renewables in electricity generation	28% ²⁾	67%	91%	
Renewable power capacity additions	295 GW ³⁾	975 GW	1 066 GW	
Annual solar PV additions	191 GW ⁴⁾	551 GW	615 GW	
Annual wind energy additions	75 GW ⁵⁾	329 GW	335 GW	
Investment needs for RE generation	486 USD billion ⁶⁾	1 300 USD billion	1 382 USD billion	
Investment needs for power grids and flexibility	274 USD billion ⁷⁾	548 USD billion	790 USD billion	
DIRECT RENEWABLES IN END-USES AND DISTRICT HEAT				
Share of renewables in final energy consumption	19% ⁸⁾	34%	83%	
Solar thermal collector area	746 million m ² ⁹⁾	1 700 million m ²	3 700 million m ²	
Modern use of bioenergy (direct use)	1.5 EJ ¹⁰⁾	44 EJ	56 EJ	
Geothermal consumption (direct use)	0.4 EJ ¹¹⁾	1.3 EJ	2.2 EJ	
Renewables based district heat generation	0.9 EJ ¹²⁾	4.3 EJ	12 EJ	
Investment needs for renewables end uses and district heat	13 USD billion ¹³⁾	269 USD billion	216 USD billion	

RENEWABLES

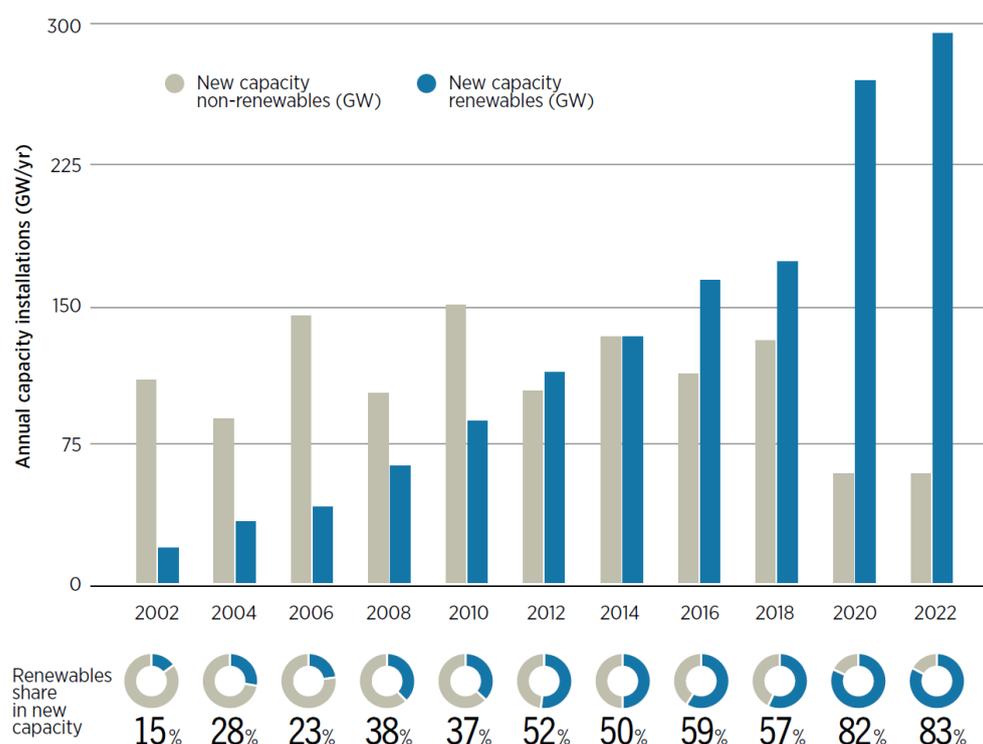
► continued

	Indicators	Recent years	2030 ^D	2050 ^D	Progress (Off / on track)
ENERGY EFFICIENCY	Energy intensity improvement rate	0.6 %yr ¹⁶	3.5 %yr	2.9 %yr	
	Investment needs for energy conservation and efficiency ²⁰	295 USD billion/yr ¹⁵	1772 USD billion/yr	1493 USD billion/yr	
ELECTRIFICATION	Share of direct electricity in final energy consumption	22 % ¹⁹	29 %	51 %	
	Passenger electric cars on the road	10.5 million ¹⁷	355 million	2 180 million	
	Investment needs for charging infrastructure of EV's and EV adoption support	30 USD billion/yr ¹⁸	141 USD billion/yr	364 USD billion/yr	
	Investment needs for heat pumps	64 USD billion/yr ¹⁹	266 USD billion/yr	258 USD billion/yr	
HYDROGEN	Clean hydrogen production	H ₂ 0.7 Mtpa ²⁰	H ₂ 21.4 Mtpa	H ₂ 518 Mtpa	
	Electrolyser capacity	0.5 GW ²¹	233 GW	5 722 GW	
	Investment needs for clean hydrogen and derivatives infrastructure ³⁰	1.1 USD billion/yr ²²	80 USD billion/yr	170 USD billion/yr	
	Clean hydrogen consumption - industry ³⁰	0.04 EJ ²³	2.4 EJ	40 EJ	
CCS AND BECCS	CCS/CCU to abate emissions in industry ²⁴	0.01 GtCO ₂ captured/yr	1.0 GtCO ₂ captured/yr	3.0 GtCO ₂ captured/yr	
	BECCS and others to abate emissions in industry ²⁵	0.002 GtCO ₂ captured/yr	0.7 GtCO ₂ captured/yr	1.0 GtCO ₂ captured/yr	
	Investment needs for carbon removal and infrastructure ²⁶	6.4 USD billion/yr	18 USD billion/yr	107 USD billion/yr	

Source: IRENA, *World Energy Transitions Outlook*, 2023

The latest edition of the **Renewable Capacity Statistics 2023**³ report comes as a statement to the world that renewables are the de-facto energy choice for new power generation, despite the devastating recent global crises in geopolitical shocks rippling through the energy sector. According to the analysis, by the end of 2022 more than 295 gigawatts (GW) of renewables were added - more than in 2021 - while staying well above the long-term trend (Figure 2). Specifically, the total renewable generation capacity reached 3,372 GW, which is a 9.6% increase compared to the year before, and accounting for 40% of global installed power capacity. Asia accounted for 60% of new capacity in 2022, increasing its renewable capacity by 174.9 GW to reach 1.63 TW (48% of the global total). A huge part of this increase occurred in China (+141 GW). Capacity in Europe and North America expanded by 57.3 GW (+8.8%) and 29.1 GW (+6.3%) respectively. Africa continued to expand steadily with an increase of 2.7 GW (+4.8%), slightly less than in 2021. Oceania continued its double-digit growth with an expansion of 5.2 GW (+10.6%), largely due to expansion in Australia, and South America continued an upward trend, with a capacity expansion of 18.2 GW (+7.4%). The Middle East also recorded its highest expansion on record, with 3.2 GW of new capacity commissioned in 2022 (+12.8%). (Table 2). In terms of capacity and production, the expansion of wind and solar jointly accounted for 88% of all net renewable additions in 2021, whereas hydropower remained the highest source of renewable energy for electricity generation globally.

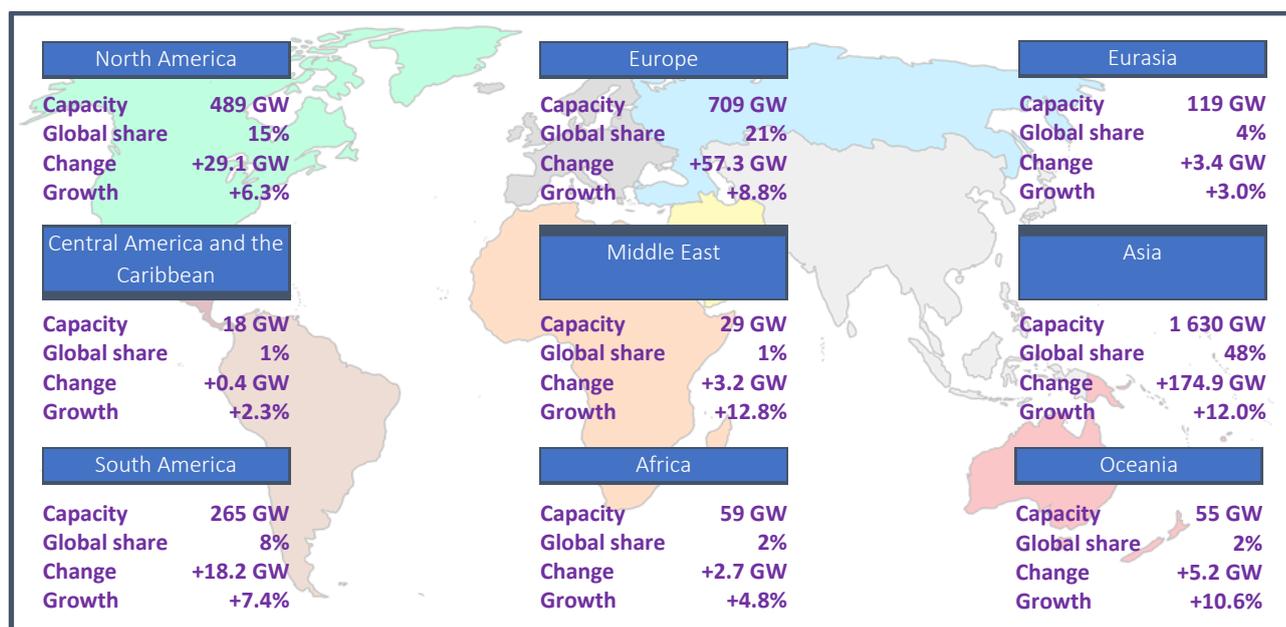
Figure 2: Renewable share of annual power capacity expansion



Source: IRENA, *World Energy Transitions Outlook 2023*, 2023

³ Available [here](#).

Table 2: Renewable generation capacity by region



Source: IRENA, *Renewable Capacity Statistics 2023*, 2023

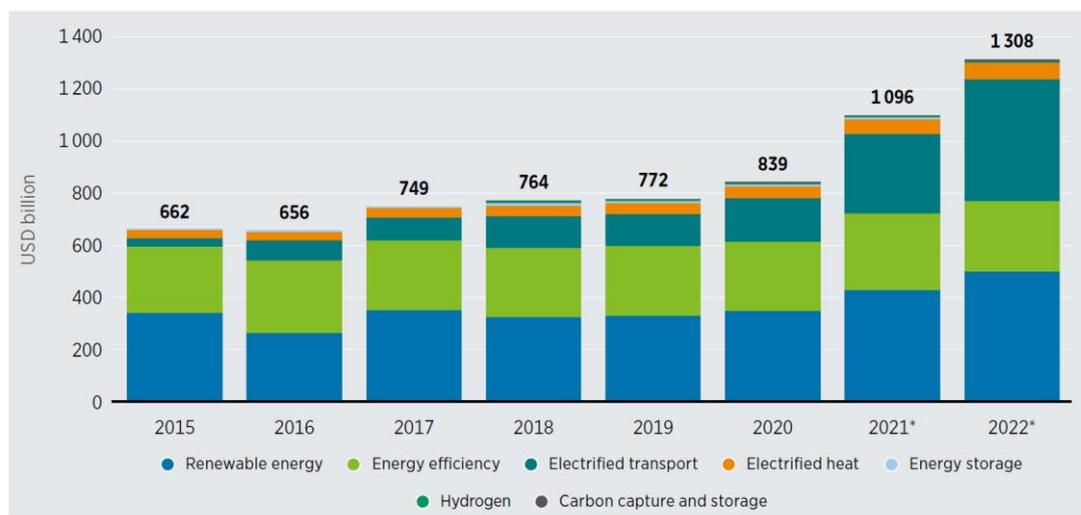
The **Global landscape of renewable energy finance 2023**⁴ report, the third edition of the biannual joint report by IRENA and Climate Policy Initiative, analyses renewable energy investment trends by technology, sector, region, source of finance and financial instrument in the period 2013-20, with preliminary analysis for 2021-22. According to the report, global investment in renewable energy reached a record high at USD 0.5 trillion in 2022, whereas global investments in energy transition technologies reached USD 1.3 trillion, a record high (Figure 3). Yet, the current pace of investment is not sufficient to put the world on track towards meeting climate or socio-economic development goals. The analysis identifies financing gaps to support informed policy making for the deployment of renewables at the scale needed to accelerate the energy transition. Accordingly, to achieve the 1.5°C goal, it is imperative to divest USD 0.7 trillion per year from fossil fuels to energy-transition-related technologies and reform lending practices to developing countries seeking to deploy renewables. In addition, the report stresses the need for a much stronger role for public financing and for stronger North-South collaboration to substantially increase financial flows, and outlines policy instruments.



Global Energy
Finance 2023

⁴ Available [here](#).

Figure 3: Annual global investment in renewable energy, energy efficiency and other transition-related technologies, 2015-2022



Notes: Renewable energy investments for 2021 and 2022 represent preliminary estimates based on data from Bloomberg New Energy Finance (BNEF). As BNEF has limited coverage of large hydropower investments, these were estimated at USD 7 billion per year, the annual average investment in 2019 and 2020. Energy efficiency data are from IEA (2022a). These values are in constant 2019 dollars, while all other values are at current prices and exchange rates. Due to the lack of more granular data, the units could not be harmonised across the databases. For this reason, these numbers are presented together for indicative purposes only and should not be used to make comparisons between data sources. Data for other energy transition technologies come from BNEF (2023a).

Based on: IEA (2022a) and BNEF (2023a).

Source: IRENA, *Global landscape of renewable energy finance 2023*, 2023

The COVID-19 pandemic highlighted the importance of well-functioning and well-equipped health systems, among others. In several corners of the world though the lack of access to electricity – so fundamental to the provision of health services – remains evasive. Indeed, this critical aspect of essential health care has remained almost invisible in the decades-long push to improve health service delivery and health outcomes. The **Energizing health: accelerating electricity access in health-care facilities**⁵ report – prepared jointly with the World Health Organization, Sustainable Energy for All, and the World Bank – maps out electricity access in low- and middle-income countries worldwide. The report shows that at least one billion people globally are served by health facilities that lack reliable access to electricity and provides recommendations on how to accelerate health facility electrification, while transitioning to clean, sustainable energy systems.

IRENA's analysis has shown that a more comprehensive and ambitious energy transition will lead to improved socio-economic outcomes. With over 270 million inhabitants and more than 17,500 islands, Indonesia is the fourth most populous country in the world and the largest economy in Southeast Asia that relies on fossil fuels. The **Socio-economic footprint of the energy transition: Indonesia**⁶ report shows that under the 1.5°C Scenario, Indonesia is expected to experience 0.5% higher GDP, 2.6% more economy-wide jobs and 8.1% higher social welfare than in the Planned Energy Scenario over the 2021-2050 period. Moreover, in the renewable energy sector, the energy transition could boost employment substantially, from around 0.6 million currently to around 2 million by 2030 and 2.5 million by 2050 under 1.5°C Scenario. To reap the benefits of the energy transition, a holistic and just transition policy framework must be implemented.

Harnessing technology and innovation

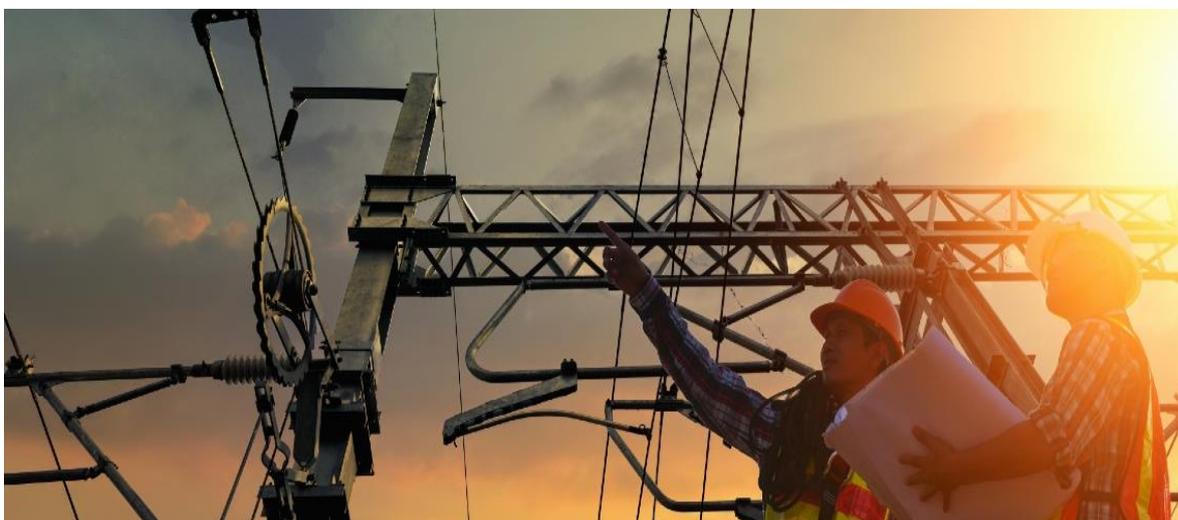
⁵ Available [here](#).

⁶ Available [here](#).

It is increasingly recognised that hydrogen and its derivatives, both low carbon and renewable, are key elements in transitioning away from fossil fuels and decarbonising hard-to-abate sectors. However, the development of a new trade in hydrogen requires the setting up of certification that also abides by environmental, social and governance standards. The **Creating a global hydrogen market: Certification to enable trade**⁷ report, prepared by IRENA and the Rocky Mountain Institute (RMI), provides an assessment of existing certification systems globally, identifying gaps that could hinder the development of hydrogen trade. Furthermore, the report is a contribution to the work on the G7 Hydrogen Action Pact, supporting the creation of regulatory frameworks for low-carbon and renewable hydrogen and its derivatives.

WETO 2022 highlighted the crucial role hydropower will play in achieving the 1.5°C goal as well as increasing power, flexibility, and reliable support for power systems. IRENA's **The changing role of hydropower: Challenges and opportunities**⁸ report provides a snapshot of the status of hydropower and lays out a vision of how to maximise and realise its potential. Produced in the context of IRENA's Collaborative Framework on Hydropower, the report stresses the need to substantially increase the hydropower's deployment pace will need to achieve this, especially considering the projected increase in clean electricity demand.

Geothermal energy's contribution to the energy transition is equally important. To ensure countries can harness its potential, IRENA's **Global geothermal market and technology assessment**⁹ report provides an overview of developments in the geothermal sector and an analysis on the parameters that are likely to shape the market and the technologies that can help scale up its use. The report concludes that in the coming years the accelerated deployment of geothermal energy will be driven by advancements in geothermal technologies, cross-industry collaborations between geothermal and related sectors, as well as the rising deployment of geothermal for heating and cooling applications. It also includes recommendations on how to grow the geothermal market, exploit the potential of geothermal energy and further expand its integration within global energy systems.



Solutions for regions

⁷ Available [here](#).

⁸ Available [here](#).

⁹ Available [here](#).

IRENA's Long-term Energy Scenarios (LTES) Network¹⁰ explores how governments develop and use LTES to navigate the clean energy transition. The LTES Network maintains its strategic and outreach activities through constant communication and the creation of thematic advisory groups to enhance engagement on technical topics. A critical factor in realizing national and global net-zero targets is putting in place long-term energy scenarios (LTES). IRENA's **Long-term energy scenarios and low-emission development strategies: Stocktaking and alignment**¹¹ report examines twenty-four LTES and thirty-six long-term low [greenhouse gas] emission development strategies (LT-LEDS) from 45 countries. It focuses on the institutional and governance framework in which LTES and scenario-based LT-LEDS publications are developed; and the coverage of energy transition elements assessed in them. The report includes guidelines for developing effective LTES and scenario-based LT-LEDS.

Furthermore, the **Scenarios for the energy transition: Experience and good practices in Africa**¹² report provides a summary of the presentations and discussions that transpired at the webinar series entitled **Long-Term Energy Scenarios (LTES) for Developing National Energy Transition Plans in Africa**¹³ convened in 2021 and 2022. The report presents key findings and recommendations that are broadly relevant to African countries, as well as to stakeholders attempting to improve their planning processes across the world.

IRENA's support to the development of the **Continental Power Systems Master Plan (CMP)** continues apace. The CMP covers three main pillars: future demand assessment, capacity expansion planning, and network planning. IRENA's support consists of targeted training workshops on the second pillar. Four weeks of in-person training, supplemented by 2 virtual training and weekly support sessions provided by IRENA over the past months, enabled the CMP modelling team to develop the long-term power sector scenarios towards 2040. At the Kigali training held on 13-17 March 2023 - the final in-person training - the modelling team scrutinized the sensitivity of the models and discussed the key insights from the modelling results for the future African interconnectivity and infrastructure needs for the CMP. The post-training survey revealed participants' satisfaction with the high-quality training provided by IRENA.



In this context, IRENA released the **Planning and prospects for renewable power: North Africa**¹⁴ report, which is part of IRENA's series on planning and prospects for renewable energy, focusing on renewable electricity generation in African power pools.¹⁵ The report presents various scenarios for power system expansion in North Africa through 2040, including through hydrogen production and interconnections within and outside the region. It also includes avenues to diversify electricity generation mixes and reduce fossil fuel

¹⁰ More information available [here](#).

¹¹ Available [here](#).

¹² Available [here](#).

¹³ More information available [here](#).

¹⁴ Available [here](#).

¹⁵ Reports have been previously published for [Eastern and Southern Africa](#) (2021) and [West Africa](#) (2018).

reliance in this timeframe. Based on the analysis, the large-scale roll-out of variable renewable electricity generation from solar and wind power would be a cost-efficient way to achieve this.

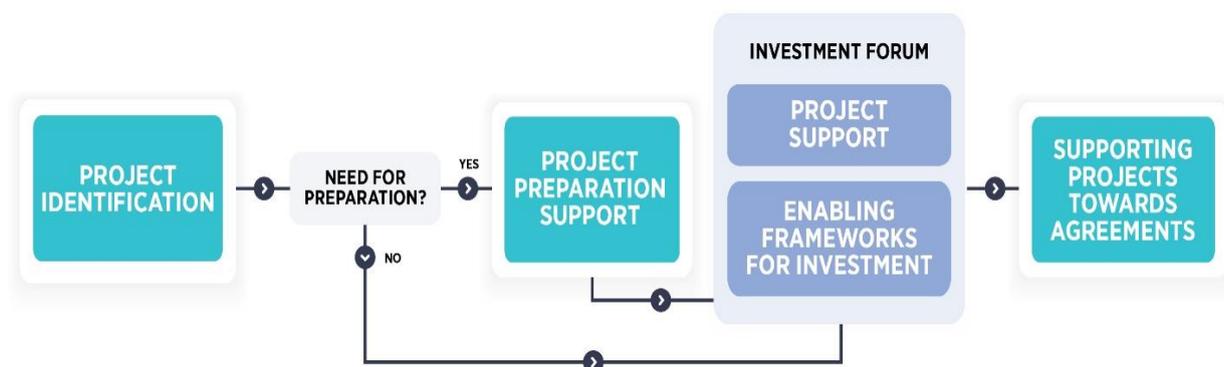
Pacific SIDS are particularly vulnerable to the impacts of climate change and remain heavily dependent on fossil fuel imports to meet energy needs. Understanding energy consumption through an energy audit is the first step to an efficient energy management process and provides the basis for informed decision making. On 27 February - 3 March 2023, IRENA, through the SIDS LHI and in collaboration with SPC, the Pacific Centre for Renewable Energy and Energy Efficiency (PCREEE) and the Ministry of Public Works, Transport and Meteorological Services of Fiji, organised a **Pacific Regional Capacity Building Programme on Energy Management and Energy Audit**. The five-day training served to strengthen the capacity of entry level officers in the Pacific SIDS Energy Divisions, Power Utilities and other relevant sectors to conduct energy audits to better understand and manage energy consumption. The event was attended by 31 participants from 14 Pacific SIDS.



Investments for a sustainable future

IRENA supports the acceleration of renewable energy deployment through the **Climate Investment Platform (CIP)** with a unique service offering available to Members. The Platform acts as a bridge between renewable energy projects and actors seeking to contribute to renewable energy project development through finance, technical assistance, and research, amongst others. Once projects qualify for support under the CIP, IRENA provides technical assistance to develop comprehensive Project Information Documents (PIDs) that verify, summarise, and detail all the relevant information necessary to attract financing. Projects are then introduced to financial partners by presenting relevant PIDs. A project and a financier are considered matched once IRENA's introduction leads to both parties agreeing to explore the option of providing funding to the project (Figure 4).

Figure 4: CIP project support cycle



Now in its third year, 393 projects have been sourced on the CIP, with 175 projects eligible for support. Of the 393 projects, 153 are from sub-Saharan Africa, 60 are from South America, 28 are from MENA, 30 are from Southeast Asia, 37 are from South Asia, 14 are from Southeast Europe, 9 are from Central Asia, and 16 are from SIDS (Table 3). The remaining projects are based in other locations. In total, 53 projects are currently actively supported, out of which 34 projects are supported with PIDs, while 28 projects are at the matchmaking stage and 9 projects have already been matched to potential financiers (Table 4).

Table 3: Number of projects supported by region

Region	# of Total projects	# of Projects supported
Central Asia	9	-
MENA	28	2
South America	60	2
South Asia	37	8
Southeast Asia	30	13
Southeast Europe	14	2
SIDS	16	5
Sub-Saharan Africa	153	21
Other	46	-
Total	393	53

Table 4: Climate Investment Platform

Number of MW Supported (53 projects)	990
Number of MW Gained Financiers Interest (10 projects)	358
Number of MW Financial Closed (3 Projects)	42.6
Total Cost of Financial Closed Projects	USD 52.6 million
Technology Type Most Matched	Solar
Minimum Project Size Matched	3.5
Maximum Project Size Matched	117
Region with Most Matches	Sub-Saharan Africa
Cumulative Financial Value of Projects Matched	USD 742.61 million

The **Energy Transition Accelerator Financing (ETAF) Platform**, an initiative led by IRENA, was established to mobilize capital from global financial institutions such as multilateral development banks, development financial institutions (DFIs), and the corporate sector. The primary objective is to expedite the implementation of renewable energy projects and accelerate the energy transition in developing countries (Figure 5). The platform has set key targets. These include mobilizing an initial USD 1 billion in soft pledges for project investment by 2023 and expanding to USD 5 billion by 2030. The platform also aims to facilitate investments supporting a minimum of 1.5 GW of renewable energy technologies by 2024, increasing to at least 5 GW by 2030. This will be achieved through backing renewable-supportive infrastructure, including electricity transmission services and storage.

Figure 5: Energy Transition Accelerator Financing (ETAF) Platform



Recent developments include the United Arab Emirates pledging USD 400 million in anchor funding for the ETAF at COP26 through the Abu Dhabi Fund for Development (ADFD). The Asian Infrastructure Investment Bank (USD 300 million), Masdar (USD 200 million), and Swiss Re (risk advisory, de-risking strategies, and insurance solutions) joined ADFD as funding partners by signing ETAF Cooperation Agreements (CAs) during COP27 in Sharm El Sheikh, Egypt. Additionally, the OPEC Fund for International Development signed a Heads of Terms at the IRENA Assembly in January 2023 to join the ETAF, providing lending support for investment projects and technical assistance grant financing for project preparation.

Over 25 project proposals have been submitted to the ETAF Platform; among those, three solar PV projects in Uzbekistan for a total of 897MW have already benefitted from ETAF partners' financial support. These projects will produce enough electricity to power more than 1 million homes and 5 million inhabitants, while displacing more than 1 million tons of CO₂ emissions each year. The projects are expected to begin operations in 2024.

Currently, ETAF is accepting eligible renewable energy project submissions through its online platform, following an official Call for Projects launched at COP 27. IRENA is working together with the founding partners of ETAF to create and put into action the ETAF Charter. This document outlines the governance framework for partner collaboration, highlighting the roles and responsibilities of all partners, including IRENA, which serves as the ETAF Secretariat. The first Founding Partners meeting took place in March 2023, while the second one took place during the first half of April 2023, with the ETAF Charter currently under discussion and review among partners.

Within the ETAF structure, IRENA acts as the Secretariat and manages the ETAF platform from project sourcing to financial close. As part of its responsibilities, IRENA undertakes outreach activities, identifying prospective projects and partners, training and assisting project proponents for their submittals, and performing the technical management and maintenance of the online platform. IRENA also screens the proposed projects, guaranteeing that all needed information is present, scoring the projects as per the established eligibility agreed upon partners and the Secretariat, and ensuring that these are aligned with the United Nations Sustainable Development Goals as well as National Determined Contributions of the respective countries (Figure 6). All projects must have a positive impact on the renewable energy transition, as well as on the reduction of greenhouse gases, while contributing to the host country’s infrastructure development and social wellbeing. The eligible projects are presented to the partners on a recurring basis. To improve the bankability of selected projects, IRENA provides technical advisory support at the request of the proponent. If needed, the Secretariat also collaborates with the ETAF partners during the financial analysis and structuring of the submitted projects (Figure 7).

Figure 6: ETAF Eligibility Criteria

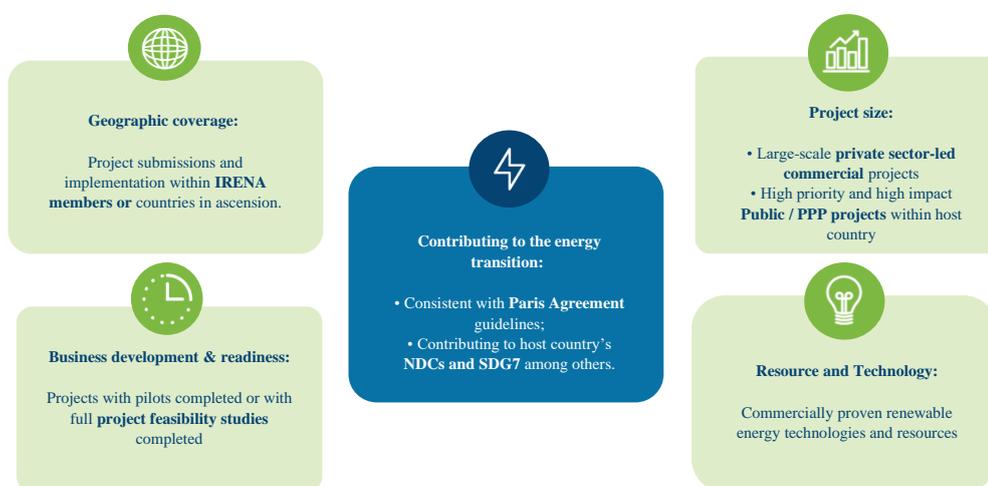


Figure 7: ETAF Application Process



IRENA’s Technical Advisory Support to Project Proponents & Structuring to Project Submittal to

International cooperation and partnerships

The 13th session of the **IRENA Assembly**¹⁶ was held in-person from 14 to 15 January 2023 under the theme “World Energy Transition – The Global Stocktake”, bringing together Heads of State/Government, Ministers, and energy decision-makers, as well as multilateral organisations, global stakeholders, and private actors. The Assembly served to bring together global leaders and energy decision-makers to take stock of operational plans and policies and highlight the concerted action undertaken to implement the energy transition across countries, regions, and the world. Overall, there were over 2,000 registered participants to the Assembly, including 85 Heads of State or Government and Ministers, along with delegates from 147 countries and the European Union and representatives from 250 organisations.



13 Assembly



The Official Opening on 14 January 2023 marked also the celebration of the 3rd World Energy Transition Day. The Opening featured a **High-level Plenary Meeting on the World Energy Transition – The Global Stocktake**, aligned with the Assembly theme. The high-level plenary meeting set the scene for the Assembly’s deliberations and considered the role of energy transitions in the context of the Global Stocktake to be concluded at COP28 in Dubai, UAE. In preparation for COP28, it reflected on the key priorities of the energy transition, in diverse geographical and sectoral settings. IRENA’s WETO sets out a pathway aligned with a 1.5°C future that can help guide the Global Stocktake, and the Agency is supporting the process by providing the best available science as well as a venue for dialogue and a framework for action.

¹⁶ More information available [here](#).



On the Pre-Assembly Day on 13 January and during the Assembly, IRENA organised several Ministerial and High-level Meetings, focusing on critical and pertinent energy transition were held on 13 and 14 January 2022 as well. This year's SIDS Ministerial meeting focused on **Climate Pledges to Action: Amplifying Energy Transition for Sustainable Development in SIDS** and provided a status update on the implementation of the SIDS Lighthouses Initiative towards the achievement of the S.A.M.O.A Pathway, Paris Agreement and SDGs and an opportunity to share insights in the lead up to COP28.

The **High-Level meeting on the Energy Compact on Renewable Energy for the United Nations Peacekeeping** discussed the alignment of climate and development objectives related to the greening of peacekeeping operations and the development priorities of host communities. At the **Decarbonising Shipping: The role of ports in addressing supply, demand and trade of renewable-based fuels** meeting, Members exchanged knowledge on strategies to decarbonise the shipping sector. The **Ministerial Dialogue on Regional Energy Transition Outlooks: Southeast Asia Energy Transitions** considered strategies to scale up the renewable energy uptake in Southeast Asia, to support the region's ambitions to achieve sustainable growth and prosperity. De-risking supply and improving the environmental and social sustainability of supply chains was the focus of the **Ministerial Dialogue on Critical materials for the Renewables-Centred Energy Transition: How to jointly harness opportunities**. Lastly, the **Ministerial Dialogue on Energy Transition Accelerator Financing (ETAF) Platform** focused on approaches to reduce barriers to investment growth in renewable energy, reduce project risk and raise capital.

Like every year, IRENA organised several stakeholder engagement events, facilitating the exchange of perspectives on the energy transition from parliamentarians, youth and the private sector. The 2023 edition of the **IRENA's Legislators Forum** was held on 13 January under the theme "Ensuring a more sustainable energy transition through international co-operation – National Strategies on Green Hydrogen". The focus of the meeting was on the role of green hydrogen strategies in fostering early adoption of policies to support supply and demand of green hydrogen, including local and regional co-ordination as well as international cooperation.

Convened under the theme “Towards Just and Inclusive Energy Transitions: Social Dialogue, Skills, and Decent Jobs for all”, the 2023 **IRENA Public-Private Dialogue** ¹⁷ gathered representatives from governments, labour unions and the private sector to share their perspectives and discuss what a just energy transition means in practice. The Dialogue suggested decisive actions from governments to lead the system transformation, with people at its core, and stressed the need for long-term commitment, adequate financing and application of the just transition principles. At the meeting, participants had the opportunity to hear the preliminary findings from a Just Transition Brief, identify further possible areas of cooperation as well as outline key challenges and concrete actions to address them.

 **IRENA's Youth Forum** convened for the fourth time under the theme “Empowering Youth to Lead an Equitable Energy Transition for a Sustainable Future”. The Forum offered a platform to youth representatives to provide their perspective to the global energy discourse in terms of energy policy and financing mechanisms supporting youth-led solutions and capacity building.

The Assembly also featured thematic meetings and side events on issues of great relevance and importance to the Membership. For example, in the context of the African Continental Power Systems Master Plan, IRENA organised an event on ***Establishing a continent-wide planning process*** to explore the current and future link of the CMP initiative with national planning processes and highlight the importance of building robust and nationally owned processes for designing long-term energy scenarios as means to meet national and pan-African energy milestones.

Along similar lines, IRENA's ***Renewable Energy Roadmaps for Latin America: Perspectives and way forward*** event served to present the respective REmap study's objectives, scope and expected outcomes, as well as to delve into the overall insights and lessons learned from the development of the Central America and South America reports.

In recognition of the issues growing importance, IRENA convened the ***Advancing renewables-based clean cooking solutions*** meeting to discuss opportunities, challenges, and solutions to accelerate the adoption of renewables-based clean cooking solutions in contribution to SDG 7. Together with partners, IRENA is also organizing a virtual knowledge exchange series in April 2023 focused on each renewables-based solutions, including bioethanol, electric cooking and biodigesters.

In addition, IRENA held an event on ***Solar Photovoltaic (PV): A Gender Perspective*** to discuss main findings of the respective report¹⁸ released in 2022 on the role of women in the solar PV sector, while broadening the conversation on best measures and practices to “engender” the overall energy sector. This event also featured discussions on best practices that can be replicated to ensure an energy transformation that is rapid, inclusive and leaves no one behind.

The **Global Geothermal Alliance (GGA)** held its annual meeting on 15 January at the IRENA Assembly. It gathered several ministers and senior government officials from the GGA Member States, and representatives of the GGA partner institutions. At the meeting IRENA shared updates about the latest geothermal activities undertaken in the framework of the Alliance, and the efforts to promote the deployment of geothermal energy in the end use sectors, among others. Members and partners also reflected on the activities of the Alliance and exchanged views on the strategic approach for the coming years, based on the results of a recent review carried out in consultation with the constituency. They also provided updates on their geothermal related activities.

¹⁷ More information available [here](#).

¹⁸ Available [here](#).

The eleventh **Renewables Talk for IRENA Permanent Representatives**¹⁹ was jointly organised by IRENA and the European Union Delegation to the UAE, in partnership with the Permanent Representation of UAE to IRENA and held on 12 April. The theme was “The European Green Deal: challenges, opportunities, and best practices in reaching renewable energy targets”, and Members had the opportunity to have for in-depth exchanges on challenges, opportunities and best practices that the transition towards clean and renewable energy systems can bring to a country, a region and the entire world.



In fall 2022, IRENA and the International Solar Alliance (ISA) took up the role of Secretariat in the new **Clean Energy Ministerial (CEM) Initiative on Transforming Solar Supply Chains**. Currently, Australia and the United States of America serve as co-chairs of the initiative. The initiative has three workstreams, namely on (1) Diversification; (2) Innovation; and (3) Standards and transparency. IRENA coordinates the work of workstreams 2 and 3, whereas ISA supports workstream 3. On the eve of the IRENA Assembly, IRENA hosted a high-level workshop on *Envisioning a future with a resilient and diverse global solar supply chain* at its HQ. The meeting promoted engagement and

dialogue among policy makers and industry to seize shared opportunities and strengthen solar industry supply chains globally. Key considerations informed the work of the Initiative and served as input into related discussions at the IRENA Assembly.

A second stakeholder workshop was held virtually on 27-28 February, bringing together governments and industry counterparts to discuss opportunities and challenges for the diversification of solar energy manufacturing chains. The workshop highlighted unique regional characteristics or circumstances and mapped global similarities of establishing solar manufacturing industries.

On 20-23 March, Brazil hosted the 2023 **CEM Senior Officials' Meeting**²⁰ in Rio. The meeting provided an opportunity to strengthen and energise the CEM community; identify and advance practical actions to help achieve CEM's mission, the CEM 3.0 strategy; and mobilise countries to bring their boldest ambitions to the 14th Clean Energy Ministerial in India, to ensure its success. At the meeting, Members discussed the draft Workplan of the Initiative and IRENA presented its proposals on deliverables under the two workstreams it supports. IRENA also participated in several side events.

Collaborative Frameworks

IRENA's **Collaborative Frameworks**²¹ (Table 5) are strong evidence of the Agency's commitment to enhancing Member engagement and ownership of the programmatic output, while enabling peer-to-peer collaboration and exchange of national experiences, challenges, and respective solutions.

¹⁹ More information available [here](#).

²⁰ More information available [here](#).

²¹ More information available [here](#).

Table 5: List of Collaborative Frameworks and their respective Co-facilitators

Collaborative Framework on Critical Materials for the Energy Transition	 
Collaborative Framework on Enhancing Dialogue on High Shares of Renewables in Energy Systems	 
Collaborative Framework on the Geopolitics of Energy Transformation	 
Collaborative Framework on Green Hydrogen	 
Collaborative Framework on Hydropower	 
Collaborative Framework on Just and Inclusive Energy Transition	 
Collaborative Framework on Ocean Energy/Offshore Renewables	  
Collaborative Framework on Project Facilitation to Support on-the- ground Energy Transition	 

The **Collaborative Framework on Enhancing Dialogue on High Shares of Renewables in Energy Systems** will be organised on 22 May. The meeting will promote an open dialogue and sharing of experiences on cross-sectoral alignment on renewable energy solutions in support of SDGs, with emphasis on the water, agri-food, and health nexus. The meeting will deep dive into different aspects of productive use of energy in agri-food sector including technology options, policy and regulations, delivery and business model and financing.

The **Collaborative Framework on the Geopolitics of Energy Transformation (CF-GET)** will hold a joint meeting with the Collaborative Framework on Critical Materials, tentatively envisioned 11 May. The meeting will serve to present the results from a planned survey of Members and non-Member experts on critical materials, including geopolitical aspects; a preview of findings from the upcoming report on the Geopolitics of Critical Materials, to be released end of May; highlights from the EV Battery Materials report; or a preview of findings from a joint report with the World Bank on sustainable materials supply chains in southern Africa.

On 23 May 2022, a meeting of the **Collaborative Framework on Green Hydrogen (CFGH)** was held. In May 2022, G7 Members launched the **Hydrogen Action Pact (G7-HAP)**, committing to accelerate the development of low-carbon and renewable hydrogen, and other Power-to-X value chains, domestically and at global scale.²² IRENA has developed recommendations on how to bring the G7-HAP into action. This year's CFGH sessions will build upon the G7-HAP and contribute to fulfil the G7-HAP recommendations.²³ To provide a complete picture of the current status quo, two sessions will be held; one on the demand and the other on the supply side and how developing countries can benefit from the evolving hydrogen value chains. The outcomes of both meetings will feed into the COP28 discussions in Dubai. The first meeting will be convened on 26 April.

The next meeting of the **Collaborative Framework on Hydropower** will be convened on 3 May. It will serve to discuss the results of the thematic scope survey shared with the Membership and help define the Framework's scope and workplan for the biennium. The meeting will also allow the co-facilitators to present their national current hydropower landscapes, including challenges, solutions and priorities.

The **Collaborative Framework on Just and Inclusive Energy Transition** held its third meeting on 27 March²⁴, focusing on workforce development priorities in the context of just and inclusive energy transitions. The virtual dialogue sought to facilitate peer-to-peer exchanges among IRENA Members and relevant stakeholders on skilling, education, and inclusion to build the workforce of tomorrow and will also inform IRENA's future work in this space.

The **Collaborative Framework on Ocean Energy/Offshore Renewables** is scheduled for 4 May. The sixth meeting of the Framework will focus on the presentation of the IRENA-Ocean Energy Europe Brief entitled **Scaling Up Investment for Ocean Energy Technologies** and will solicit a second round of feedback and opinions for IRENA-Global Wind Energy Council Brief entitled **Enabling Frameworks for Offshore Wind Scaleup: innovation in permitting**. There will also be a discussion to promote knowledge exchange on floating offshore wind developments as well as approaches to implement offshore renewable strategies.

The **Collaborative Framework on Project Facilitation to Support on-the-ground Energy Transition** will take place on 17 May. The meeting will discuss the details of the implementation modalities and how to operationalize the Investment Lab concept through innovative business models and financing mechanisms within the framework of IRENA's CIP and ETAF platforms. Examples of successful projects that have benefited from the CIP's project facilitation services will be presented to serve as a pilot for similar projects.

The **Collaborative Framework on Oil and Gas Sectors and the Energy Transition** is currently under development. In this context, IRENA is having a series of consultations with fossil fuel companies to shape the content and potential areas of work under the framework.

Targeted Climate Action

IRENA's Members are increasingly reaching out to the Agency with requests to receive targeted support for climate action to enhance their NDCs and support implementation. In response to this, IRENA is currently engaging and supporting 83 countries in terms of NDC enhancement and implementation across all continents. This is equivalent to 2 billion people and covers an equivalent of total energy related greenhouse gas emission of 4 billion tonnes of carbon dioxide equivalent²⁵. Currently, IRENA's NDC enhancement and implementation support includes 167 work-packages to support the needs of IRENA Members, who are the Parties to the 2015 Paris Agreement, in enhancing and implementing their energy transition plans while

²² [G7 Climate, Energy and Environment Ministers' Communiqué](#)

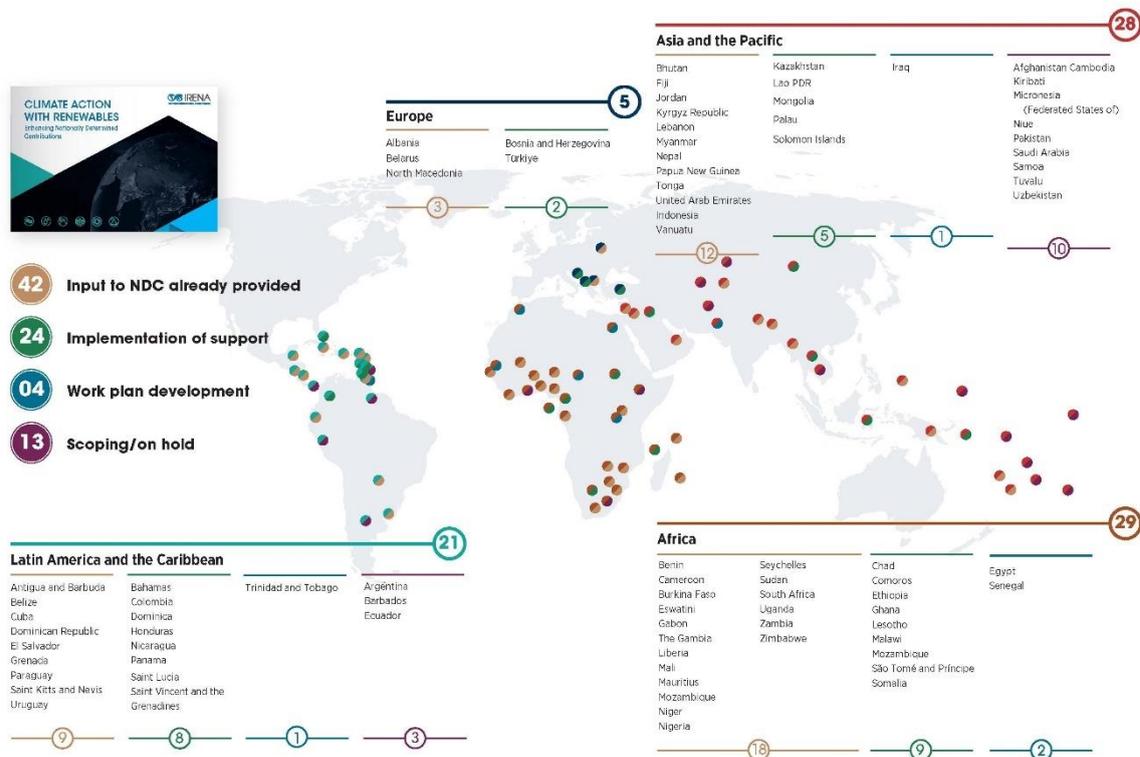
²³ These are Pillar 01: Align efforts on standards and certification; Pillar 02: Collaborate internationally and share lessons from early implementation; Pillar 03: Balance focus on supply with demand creation; and Pillar 04: Conduct outreach to civil society and industry stakeholders.

²⁴ More information available [here](#).

²⁵ Data retrieved from World Resources Institute Climate Watch Historical Data Location: World. Sectors/Subsectors: Energy. Gases: All GHG. Calculation: Total. Show data by Countries.

reflecting these climate action commitments in NDC submissions (Figure 5). IRENA’s contribution to long-term strategies includes six work packages, of which four exist within the NDC Support umbrella.

Figure 8: IRENA's engagement



IRENA continues to support the achievement of the Breakthrough Agenda goals by contributing to the **Breakthrough Agenda 2023** report that will build on the analysis in the 2022 report. The 2023 edition of the report will provide an overview of progress in each sector against the objectives of the Breakthrough Agenda Goal; an assessment of the state of collaboration and progress since the publication of the 2022 edition; make the case for strengthened additional international collaborative action in accelerating progress towards those goals; and make detailed recommendations on where and how to strengthen international collaborative action. It will present updates to the power, hydrogen, steel, transport, and agriculture sectors, and provide new assessments of the buildings and cement sectors.

In Focus:
IRENA supports COP28

The 28th session of the Conference of the Parties (COP28) to the UNFCCC is scheduled to take place in Dubai, UAE from 30 November to 12 December 2023. Under the Presidency of the UAE, COP28 presents a unique opportunity to advance a positive, action-orientated energy agenda, placing accelerated energy transitions at the centre of the climate discourse. IRENA is already in discussions with the COP28 President on how to build on the narrative from COP27 and highlight energy transitions in the MENA region. Particularly, IRENA is supporting the COP28 Presidency in the process of the UNFCCC First Global Stocktake, which will conclude at COP28 in 2023. The Global Stocktake intends to increase the ambition of actions and support for collectively addressing climate change by understanding the status of the

transition and how to accelerate the transition to align with a 1.5°C pathway. IRENA will support the UAE in convening global and regional meetings to showcase how the energy transition can support the Global Stocktake process and achieve the Paris Agreement goals.

IRENA has also developed targeted initiatives in line with the UAE's vision for COP28 and its outcomes, and under the established focus areas of adaptation, mitigation and finance, amongst others. These initiatives will leverage IRENA's wide-ranging and cross-cutting analyses, supporting a holistic approach to the achievement of intended outcomes and accelerating the global energy transformation.

Mitigation and Climate Finance

Energy Transition Accelerator Financing (ETAF) Platform

The ETAF Platform, led by IRENA, focuses on accelerating the global energy transition, especially in developing countries. This initiative aims to mobilise capital from sources such as multilateral development banks, development financial institutions, and the corporate sector to speed up the implementation of renewable energy projects and support renewable-supportive infrastructure, such as electricity transmission, distribution, and storage solutions. At COP28, the ETAF Platform aims to demonstrate its achievements and progress by highlighting the combined social and environmental impact of the projects and emphasising collaborative efforts. Several events are also planned to review partner-funded projects, welcome new partners to the Platform, analyse the ETAF business model, explore potential next steps, and share first-hand developer experiences with ETAF and the support received from partners.

Private Sector Engagement

Alliance for Industry Decarbonization

The Alliance for Industry Decarbonization (AFID) is a global initiative that aims to accelerate net-zero ambitions and the decarbonization of industrial value chains in pursuit of the Paris Agreement climate goals. IRENA coordinates and facilitates the activities of the Alliance and offers technical expertise and knowledge to enhance understanding of renewables-based solutions and their adoption by industry, with a view to contributing to country-specific net-zero goals. The AFID's members and eco-system knowledge partners, consisting of private and public companies, organisations and stakeholders operating in energy-intensive sectors, commit to collaborate toward the common vision of a green future.

IRENA is working to strengthen the Alliance further by leveraging its vast experience in hosting similar platforms and bringing in existing partnerships under the umbrella of the AFID, in support of a holistic approach to multi-stakeholder collaboration. IRENA intends to work with the UAE, industry, and partners to set ambitious aspirational targets and decarbonization actions at COP28 for increasing the use of renewable energy in industry, as part of the sector's pathway to 2030.

The AFID convened a working meeting at the margins of the thirteenth session of the IRENA Assembly, in which members discussed the implementation strategy, action plans and twenty joint initiatives, resulting in a clear work plan for the year with a focus on concrete solutions on the road to COP28. Six working groups meet monthly to develop these joint initiatives, focused on six pillars: renewables; bioenergy with carbon capture utilisation and storage (BECCUS); green hydrogen; heat process optimisation and integration; human capital; and finance.

Five high-level dialogues and decarbonization sessions are planned on the road to COP28, during global industry and climate events including the Hanover Fair in April, World Utility Congress in May, and IRENA Innovation Week in September. Six thematic events based on each of the pillars as well as a workshop on industry decarbonization are planned to take place during COP28, to show tangible results achieved by the members and through the joint initiatives. Additionally, a high-level CEO roundtable meeting is planned at the UAE Pavilion to communicate members' achievements and commitments towards quantified decarbonization targets.

Global Renewables Alliance

The Global Renewables Alliance (GRA) is a collaboration of leading renewable energy industries that aims to accelerate the global transition to a sustainable energy future. The newly established Alliance brings together leading industry players that form a unified voice for increased ambition and uptake of renewable energy. Its founding members are Global Wind Energy Council (GWEC), Long Duration Energy Storage Council (LDES), Green Hydrogen Organisation (GH2), the International Hydropower Association (IHA), the International Geothermal Association (IGA), and the Global Solar Council (GSC). Launched at COP27, the GRA promotes advocacy, education, and international cooperation and its primary aim is to accelerate the global energy transition by promoting renewable energy as a cornerstone of sustainable development and economic growth, particularly in the global South. The GRA helps countries to overcome challenges to the energy transition and increase the representation of renewables in areas dominated by fossil fuels through the collective strength of its member technologies.

IRENA is collaborating closely with the GRA, and discussions are underway to strengthen cooperation on a number of areas for joint action, including by leveraging the Coalition for Action. The partnership between IRENA and GRA will facilitate international cooperation by bringing together organisations representing the global industrial associations of sustainable energy producers and the leading global intergovernmental Agency for energy transformation. It will provide a new avenue for collaboration between the private and public sectors and will enable the partners to leverage the collective strength and influence of its members to advocate for policies and practices that support the pathway to Net Zero. By doing so, the initiative can help countries meet their climate targets and accelerate the adoption of renewable energy, contributing to the global effort to combat climate change.

Adaptation and Climate Resilience

Empowering Lives and Livelihoods – Renewables for climate action

Given the need for stronger international collaboration in climate financing to developing countries, the ‘Empowering Lives and Livelihoods’ initiative is a funding facility that brings together governments, foundations, trusts, philanthropists, and the private sector, among other stakeholders, to commit USD 1 billion for programmatic support to LDCs and SIDS, to enable and enrich lives and livelihoods through renewable energy solutions. Pledges to the Facility will be invested in various initiatives and enterprises specialising in climate-smart innovation, research and development activities and pursuing practical and actionable solutions to strengthen agri-food and health value chains powered by renewables. Recognising the crucial role of women along these value chains, this Facility also presents an opportunity to achieve greater gender and social equity in both the agri-food and health sectors.

IRENA, in partnership with the Permanent Mission of the UAE to IRENA co-hosted the Women in Diplomacy event ‘Empowering Lives and Livelihoods – Renewables for Adaptation’ at the margins of the thirteenth session of the IRENA Assembly. The event served as a curtain raiser for this initiative and engaged the UAE High-Level Climate Champion in raising support and awareness amongst governments, particularly women leaders, diplomats and multi-sectoral champions to be an integral part of the initiative. A second event to highlight the initiative was held on 20 February 2023, at the side lines of the Spanish International Conference on Renewable Energy (SPIREC). The event emphasised the significance of strengthening agri-food and health value chains through renewable energy interventions. A moderated panel highlighted the need for robust policies, regulations, and financial frameworks that are better suited to scale up deployment of renewable energy in agri-food and health sectors.

IRENA is simultaneously conducting assessment studies, based on Member requests, to gain a deeper understanding of suitable renewable energy solutions and cost estimations to help develop the initiative at a programmatic level. Currently, IRENA is at various stages of engagement with 12 countries²⁶. IRENA is also engaging with major philanthropy institutions such as the Bezos Earth Fund, Ikea Foundation and

²⁶ Burkina Faso, Sao Tome and Principe, Mali, Mozambique, and Zimbabwe for health; Uganda, Rwanda, Guinea, Malawi, Dominica, Nepal, and Mauritania for agri-food; and Zimbabwe for both health and agri-food.

Rockefeller Foundation, amongst others; with multilateral banks such as African Development Bank and Islamic Development Bank; and with impact investors and implementation organisations/companies that leverage private sector capital to finance enterprises and initiatives on the ground. An event is planned on 24 April 2023 in New York to bring key philanthropists, impact investors, and Permanent Representatives to the United Nations representing some IRENA Members to further highlight and commit to the initiative.

Youth and Education

Youth in Climate-Energy Innovation

IRENA's engagement at COP28 will place a special focus on Youth to amplify the voice of renewables from the perspective of the New Generation of Decision-makers and ensure avenues for their active participation as a fundamental pillar of the energy transition. The 'IRENA Renewables Accelerator Programme for Youth' and 'IRENA Youth Award' are two interlinked initiatives that aim to harness youth potential, mobilise youth action, and serve as a global showcase for youth-led innovation and solutions in the climate and sustainable energy sectors. They will contribute to building renewable energy skills and capacities of youth while providing mechanisms to support and fund youth innovations.

IRENA will also leverage existing initiatives, including the 'IRENA Youth Talk', to strengthen youth-led action, innovation, entrepreneurship and advocacy for SDG7. This includes targeted in-person events for and by youth during the Youth Energy Forum at the World Utilities Congress (8-10 May – Abu Dhabi), the IRENA Innovation Week (25-28 September – Bonn) as well as at the Local (LCOY), Regional (RCOY) and global Conference of Youth (COY). In view of further supporting youth-led solutions, IRENA will also actively contribute to the UN Global Climate Awards initiative led by the UNFCCC Secretariat to highlight and promote youth high impact and inclusive climate action. Moreover, IRENA envisions to organise at least one targeted in-person event for youth during each of the Regional Climate Weeks and contribute to outputs such as technical and non-technical reports, outcome documents, and a wide range of communication materials targeted at youth.

Teaching for Net Zero Campaign: Educating the Educators on Renewable Energy

The Teaching for Net-Zero Campaign aims to educate the educators for a renewable energy future. The Campaign will be led by IRENA and the UAE in collaboration with members of the Energy Transition Education Network (ETEN). ETEN, which was launched at COP27, is a multistakeholder partnership that brings together leading players in both energy and sustainability education such as UNESCO, Teach for All, and the Institute of Electrical and Electronics Engineers (IEEE). ETEN's key areas of focus include curriculum development, capacity building and exchanging good practices.

The Campaign aims to reach 20,000 educator champions from around the world in the lead up to COP28 using a training-of-trainers approach. A virtual training programme will be launched in the summer of 2023 where IRENA aims to train up to 2000 teachers, providing them with a "net-zero teacher" certificate. These teachers will also be requested to share their learning with at least 10 other educators within their schools or networks. 20,000 empowered educators teaching 50 students each has the potential to reach as many as 1,000,000 students.

Several activities will run under this Campaign on the road to and during COP28, including in the areas of curriculum development, capacity building, and empowerment and awareness raising. In parallel, IRENA is also actively engaged in the broader UNESCO Greening Education Partnership, including as a co-coordinator of the pillar on Greening Curriculum. This presents an opportunity to bring this content to a broader audience as well as to shape and contribute to the programme of the planned Education Pavilion at COP28.

Energy Transition Hub at COP28

The IRENA Pavilion at COP28 is envisioned as an Energy Transition Hub that leverages the Agency's global reach and active multi-sectoral engagement to promote renewables-based energy transitions as a solution to climate change. Recognising the crucial role of stakeholders in enhancing the climate-energy dialogue, the Energy Transition Hub will build on IRENA's inclusive approach and bring together a range

of partners, including thought leaders, youth influencers and global personalities who are active and articulate in the field, in a variety of novel and interactive formats. Together, the Hub will tell the story of IRENA and its work in support of the Membership, highlighting our shared endeavour to ensure just and inclusive energy transitions that leave no one behind.

Communications and Outreach – Amplifying Impact

IRENA continues to strengthen its communication and outreach activities. Since the beginning of 2023, IRENA has been referenced in over 19,200 media articles in 42 languages across 138 countries, representing a 40% increase compared to the same period in 2022.

During this time, key IRENA reports were launched. For example, IRENA's **Renewable Capacity Statistics 2023** report was disseminated through a press release in nine languages. In its first two weeks, the report was mentioned 817 times in 25 languages across 67 countries, representing an 11% increase in mentions seen in the first two weeks from launch. The report has been referenced by a wide range of top-tier outlets, including AFP, Daily Mail, Reuters and Time.

Global media outreach also accompanied the launch of the Agency's preview of the **World Energy Transitions Outlook** and **Global Landscape of Renewable Energy Finance 2023** report.

Website

The number of visitors to the IRENA website reached half a million. Overall, www.irena.org has generated 1.5 million pageviews. Continuity of new formats like interactive visual stories encourages user interaction and helps to establish the website as a reliable hub of knowledge on energy transition.

The peak days in this period were marked by major events, such as the 2023 IRENA Assembly, and flagship publication launches. For example, content related to the **Global landscape of renewable energy finance 2023** report attracted over 22,000 pageviews in under two months since publication, and almost 6,500 report downloads. The report's press release was the most read IRENA press release so far with 5,350 views, on par with the press release on the record growth in renewable capacity. The digital story, combining finance and investment content from the Global finance report and the World Energy Transitions Outlook 2023 executive summary, was read over 1,100 times in only the first two weeks post publication.

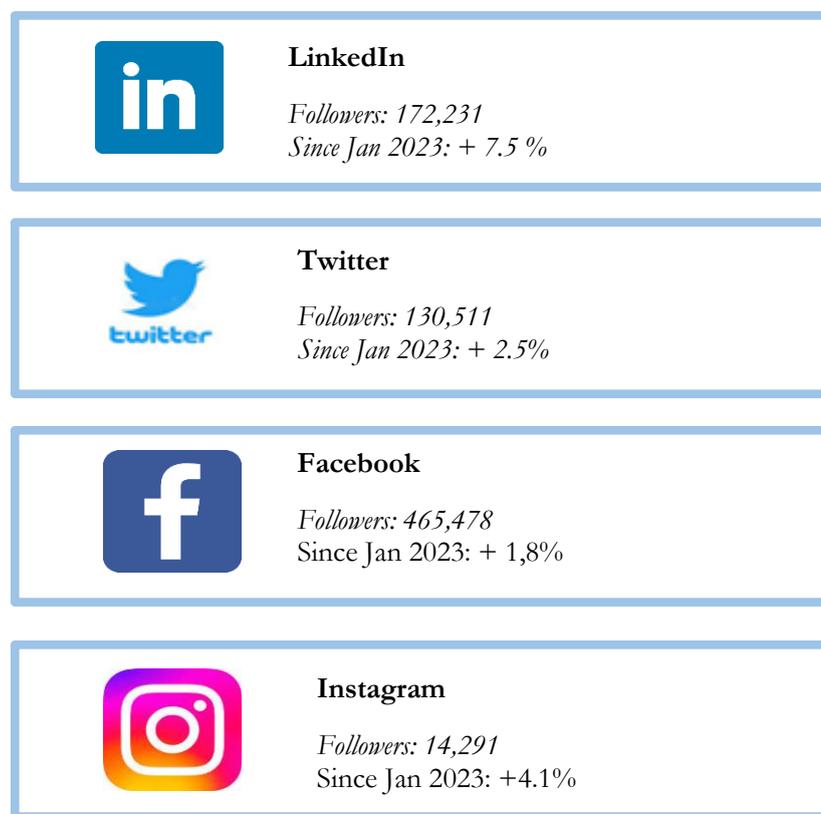
Articles

In the first quarter of 2023, IRENA communications placed a stronger emphasis on storytelling, with three human impact stories published on the website.

Social media

In terms of social media presence, IRENA has reached 172,231 LinkedIn followers, up from 160,259 followers in January 2023, an increase of 7.5%. Furthermore, IRENA's Twitter account has now 130,511 followers, up from 127,366 followers in January 2023 - an increase of 2.5%. It is worth highlighting that, after two consecutive years of decrease in Facebook followers, 2023 so far saw an 1.8% increase from 457,412 to 465,478 followers. Instagram has 4.1% of increase in followers, reaching 14,291 as of reporting period. As such, LinkedIn remains IRENA's fastest-growing social media platform (Figure 9).

Figure 9: IRENA's Social Media Statistics



E-mailers and videos

Dedicated mailing campaigns provide targeted information on IRENA press releases, publications, and events to a pool of 80,116 stakeholders, including Member focal points, by 10 April 2023. Between 1 January and 10 April 2023, IRENA sent a total of 21 mailers (four dedicated to 13 Assembly; six press releases; nine job alerts; and two invitations). The best performer was the mass emails on WETO 2023 Preview, generating the highest open and click rates²⁷ of 43% and 21.5% respectively.

A new video series the “Monthly Minute” has also been launched. The videos are produced in-house and showcase IRENA activities for each month. Additionally, more video footage has been introduced to highlight the Director-General’s activities, particularly site visits, during international missions.

Looking ahead

This section provides a snapshot of some of IRENA’s upcoming activities.

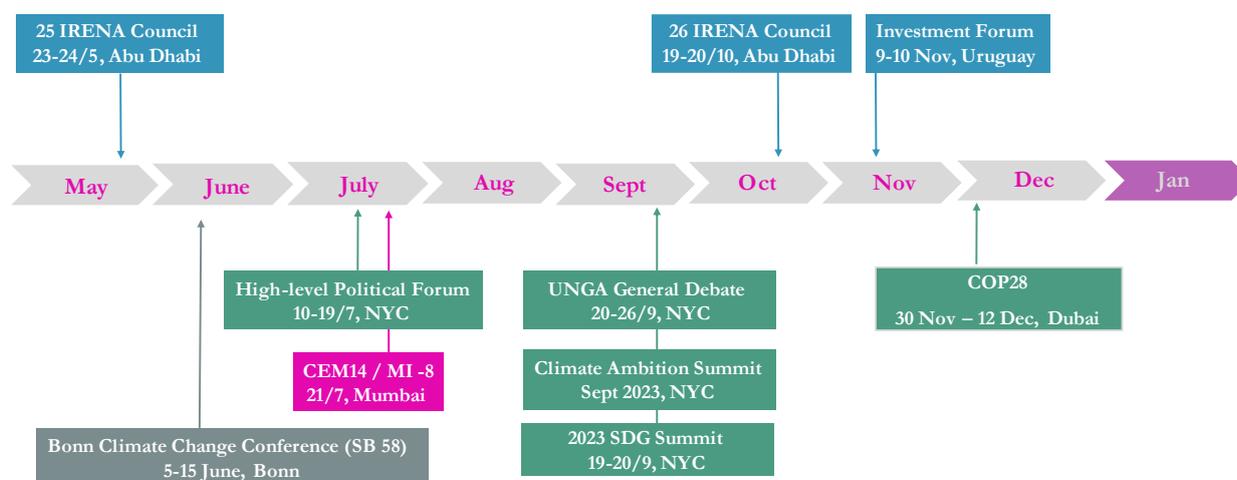
IRENA’s **Innovation Week** will convene this year on 25-28 September in Bonn, Germany. Discussions will focus on decarbonising hard-to-abate and end-use sectors via direct and indirect electrification, supported by insights from IRENA’s in-depth analyses. The Week will also include opportunities to network with a diverse group of experts, industry leaders and decision makers from IRENA’s Members.

²⁷ Benchmarks: average open rate 28%; average click rate 4%.

IRENA’s first ever **Investment Forum in Latin America** will be convened in Uruguay on 9-10 November 2023. The inaugural Latin America Investment Forum is expected to attract high-level government officials, financial institutions, and private sector companies from the region and around the world and provide a platform to accelerate investments in Latin American renewable energy projects.

Save the Date

Upcoming Key Dates 2023



Selected upcoming IRENA events and publications

Table 6: Tentative list of IRENA Events, 2023

Date	Event name
23-24 May	25 th IRENA Council
30 May-1 June	IRENA-Caribbean Cooperation for Fostering Energy Transition
19-22 July	CEM14 (Goa)
25-27 Sept	Innovation Week
19-20 Oct	26 th IRENA Council
9-10 Nov	Latin American Investment Forum in Uruguay
30 Nov-12 Dec	COP28

Table 7: Selected upcoming publications, 2023

Date	Provisional Report Title
April-2023	Socio-economic footprint of the energy transition: ASEAN
April-2023	Socio-economic footprint of the energy transition: Egypt
May-2023	Geopolitics of the Energy Transformation: Critical materials
May-2023	Towards a circular steel industry
Q2-2023	Sustainable supply chain in Southern Africa
Jun-2023	Tracking SDG7
Jun-2023	Renewable power generation costs 2022
Jun-2023	World Energy Transitions Outlook 2023
Jul-2023	Renewable energy statistics 2023
Jul-2023	Geopolitics of the Energy Transformation: Indicators and trends
Jul-2023	Renewable Readiness Assessment: Honduras
Sept-2023	Renewable Energy and Jobs: Annual Review 2023
Dec-2023	Off-grid renewable energy statistics 2023
Q4-2023	Renewables-based clean cooking
Q4-2023	Renewable Readiness Assessment: Somalia

Effective functioning of the organisation

To deliver on the Agency's mandate, IRENA relies on the contributions and support of its Members, cooperation 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 to date.

The Administration and Management Services Division supports efficient implementation of the Work Programme and facilitates effective use of the Agency's resources. IRENA continues to innovate in its processes and practices to remain responsive to the dynamic nature of its programmatic work.

In this regard, the regular enhancement of the ERP system and other online tools continue to facilitate timely and streamlined support to programme implementation.

Budget

The Budget Section provides strategic advice to the senior leadership team and programme managers on planning, administration and management of IRENA's financial resources. The support to the Agency also includes management of IRENA's budget preparation and reporting processes, and administration of core and voluntary contributions through budgeting and control services, forecast information and preparation of financial reports for management, governing bodies and donors.

Finance

The Finance Section continues to provide a critical role in the overall functioning of the Agency and is responsible for managing the financial resources and preparation of Annual Financial Statements, ensuring full compliance with IRENA's Rules and Regulation and International Accounting standards.

The Section also manages the day-to-day financial operations, including payment processing, payroll, investments and contributions. In addition, it ensures accuracy, timeliness and compliance in financial transactions. Finance endeavours to continue to seek improvements and increase efficiencies in its processes whilst maintaining internal controls and mitigating potential risks.

Information and Communication Technology (ICT)

ICT continues to serve as a strategic enabler and tool for the Agency in the implementation of its Work Programme by providing state-of-the-art IT services and solutions to IRENA business units. ICT is regularly maintaining and consolidating its IT capabilities through initiatives for infrastructure modernisation (in HQ as well as in Bonn and New York Offices, cloud and on premise), operational excellence (IT governance, cost optimisation, proactive maintenance, regular monitoring) and internal capacity building (trainings, technology workshops).

As per the IT strategy that is closely aligned with the IRENA Medium-term Strategy, ICT is strengthening its role as:

- Driver of digital transformation towards higher institutional effectiveness and efficiency through the maintenance and enhancement of the Executive dashboard, ERP and other online tools for collaboration and knowledge sharing. For example, a new ERP recruitment module was implemented to enhance the candidate's experience while submitting to the vacancy announcements.
- Enabler of the development of value-added business capabilities on renewable energy through the maintenance and enhancement of the IRENA website and web platforms on renewable energy. New IRENA website was launched including several enhancements on the design, structure, and visitor's experience, as well as its underlying infrastructure.
- Pillar of the organisational resilience and compliance through the implementation of the cybersecurity management framework and the business resilience plan. For example, a new information security awareness training was launched to all staff.

Human Resources

During the biennium, the work of Human Resources spanned administrative, operational, and strategic activities. Significant effort was placed on aligning human resource policies and processes more closely with the Agency's strategic and programmatic objectives, including additional personnel sourcing and building organisational capabilities that are needed to achieve the Agency's operational objectives with the right combination of skills, knowledge, competencies, and expertise, while promoting geographical, cultural, and gender diversity. Human resources practices, rules, and procedures have continued to be refined and updated to ensure effective and efficient responsiveness to the emerging and evolving needs and challenges of the Agency while safeguarding its core values and principles. 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 by tapping into Members' expertise, and through the mechanisms provided by the decision of the Assembly at its second session (A/2/DC/5) such as loan and secondment arrangements.

During the period from 1 January 2023, 19 vacancies (core and project, including Interns and Associate Professionals) were announced and over 5,355 applications were received. Out of 93 core posts, 87 are filled or under recruitment (74 filled and 13 under active recruitment) and six are vacant. The 74 staff in core posts

are from 48 nationalities out of which 45% are women and 55% are men. There are also 130 project posts that are currently filled or under recruitment (106 filled and 24 under active recruitment). Combined core and project posts amount to a total of 180 staff (Figure 10 and Table 8), who come from 72 nationalities with 47% women and 53% men (Figures 11 and 12). There are also seven loaned officers and four seconded officers (Tables 9 and 10).

Figure 10: Staff Status as of 31 March 2023

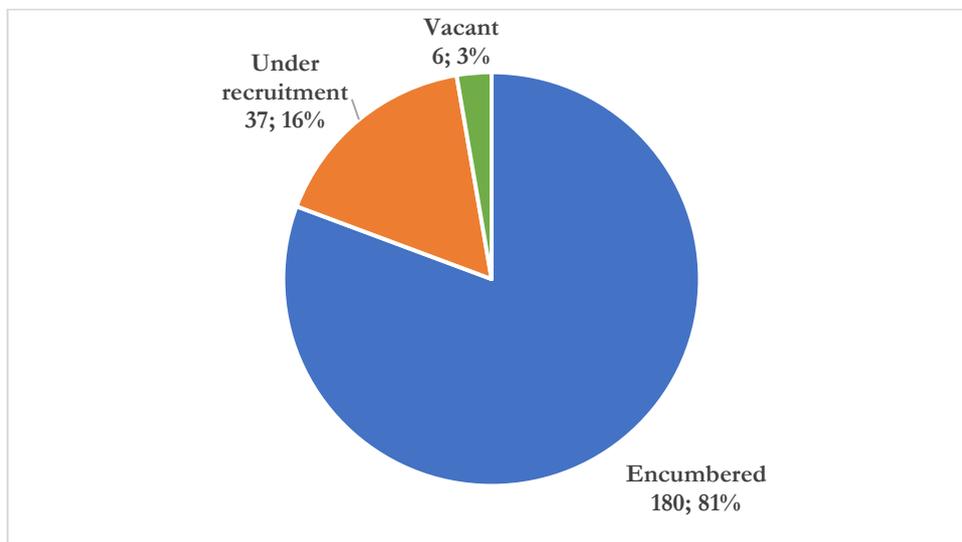
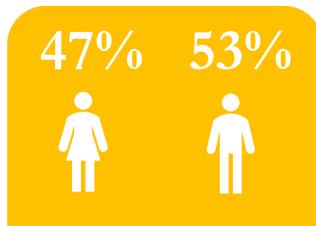


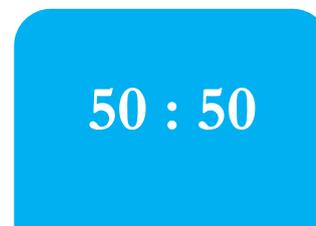
Figure 11: Employee Profile Statistics



**Nationalities
at IRENA**



**Staff gender
balance**



**Senior Team
gender balance**

Table 10: Seconded Officers (Voluntary Contributions) as of 31 March 2023

Division	Title	Seconded from
CEP	Programme Officer	Republic of Korea
ODG	Senior Advisor to the Director-General	Italy
IITC	Analyst – Renewable Energy Scenarios and Roadmaps	Denmark
IITC	Associate Programme Officer	Germany

Procurement

The Agency has continued to implement its administration of cost-effective procurement process for goods, services, and other related requests. To ensure transparency, fairness, openness, and competitiveness of the procurement process bidding opportunities, the Request for Proposals (RFP) or Invitation to Bid (ITB) are mostly posted on IRENA's website and disseminated to the vendors registered with IRENA's vendors' database. In addition, high value and complex procurement opportunities are also uploaded and advertised on the United Nations Global Market (UNGM) portal, to maximise competition and include international vendors.

The quarterly and Master Procurement Plan continues to be updated through an automated portal on ERP. As of 31 March 2023, more than 367 procurement contracts and agreements for goods and services have been awarded totalling USD 5.3 million. Furthermore, as of 31 March 2023, the number of vendors registered in Procurement Section database has increased within the last three years also to reach almost 400 vendors from various countries worldwide.

General Services and Travel

Travel support and services were provided to staff, delegates and participants in conferences and workshops. From 1 January to 31 March 2023, the Agency facilitated and booked 793 travel services and 38 workshops. The section continues to provide facility management services for IRENA Headquarters and staff. This is an important function, which contributes to a healthy and productive work environment, while delivering continuous day-to-day services for staff. As part of these ongoing services, General Services continues to explore further enhancement measures for Health and Safety to provide an even better work environment for staff.

Implementation Progress Overview

There are a total of 64 Work Programme outputs for the 2022-2023 biennium, spreading across the four strategic objectives or pillars identified in the current Medium-term Strategy: 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 (Table 11). At the twenty-third meeting of the Council, Members requested more granular reporting on the status of implementation of activities under each output and detailed information on whether they are funded by core assessments or voluntary contributions.

The assessment on progress is undertaken based on the average progress on delivering the activities. Based on the overview of progress today, the pace of implementation corresponds to the mid-cycle, and there is no issue of concern or obstacle that needs to be brought to the attention of Members.

Table 11: IRENA's Strategic Objectives

Centre of Excellence for Energy Transition	Global Voice of Renewables	Network Hub for Energy Transformation	Source of Advice
Empower effective policy and decision-making by providing authoritative knowledge and analysis on renewables-based energy transformation at global, national, and sectoral levels.	Shape the global discourse on energy transformation by providing relevant, timely, high-quality information and access to data on renewable energy.	Provide an inclusive platform for all stakeholders to foster action, the convergence of efforts and knowledge sharing for impact on the ground.	Support country-level decision-making to accelerate the renewables-based transformation of their energy systems, advance strategies to decrease global emissions and achieve sustainable development.

Resource overview

This section presents details of the core budget and voluntary contributions applicable to the Work Programme and Budget for 2022-2023.

Biennial budget overview

Table 12: 2022-2023 Biennium Budget Utilisation by funding source (in USD Thousands)

	2022-2023 Biennium Budget	Utilisation as of 31 Mar 2023	
		Commitment and Expenses	Proportion of 2022-2023 Biennium Budget
Assessed Contributions (Core Budget)	44,778	38,230	85%
Core Non-Assessed UAE			
UAE Support	5,000	3,399	68%
Governing Body Meetings	3,200	2,984	93%
IT Infrastructure Support	920	861	94%
Subtotal	9,120	7,243	79%
Core Non-Assessed Germany			
Innovation and Technology Centre	10,890	7,734	71%
Subtotal	10,890	7,734	71%
Total Core Non-Assessed	20,010	14,978	75%
Grand Total	64,788	53,208	82%

In addition to Core Non-assessed contributions, UAE and Germany provide annual in-Kind contributions of approximately USD 5 million and USD 1,8 million respectively.

Core Non-Assessed Contributions*as of 31 March 2023, in USD***Budgeted Voluntary Contributions**

	2022-2023	
	Committed	Received
Germany		
IRENA Innovation and Technology Centre	10,890,000	5,445,000
United Arab Emirates (UAE)		
UAE Support	5,000,000	3,750,000
Governing Body Meetings	3,200,000	3,200,000
IT Infrastructure Support	920,000	920,000
Subtotal UAE Contributions	9,120,000	7,870,000
Total Budgeted Voluntary Contributions	20,010,000	13,315,000

Other Voluntary Contributions*as of 31 March 2023, in USD*

Donor/Project	2022-2023	
	Committed	Received
Germany	1,775,205	1,240,229
Japan	1,278,551	1,278,551
Luxembourg	16,060	16,060
Norway	1,888,969	1,888,969
Republic of Korea	624,473	624,473
United Arab Emirates (UAE)	3,513,729	3,433,729
United Kingdom of Great Britain and Northern Ireland	247,525	-
United Nations Office for Project Services (UNOPS)	250,000	250,000
Total	9,594,512	8,732,011

Multi-Year Voluntary Contribution*as of 31 March 2023, in USD*

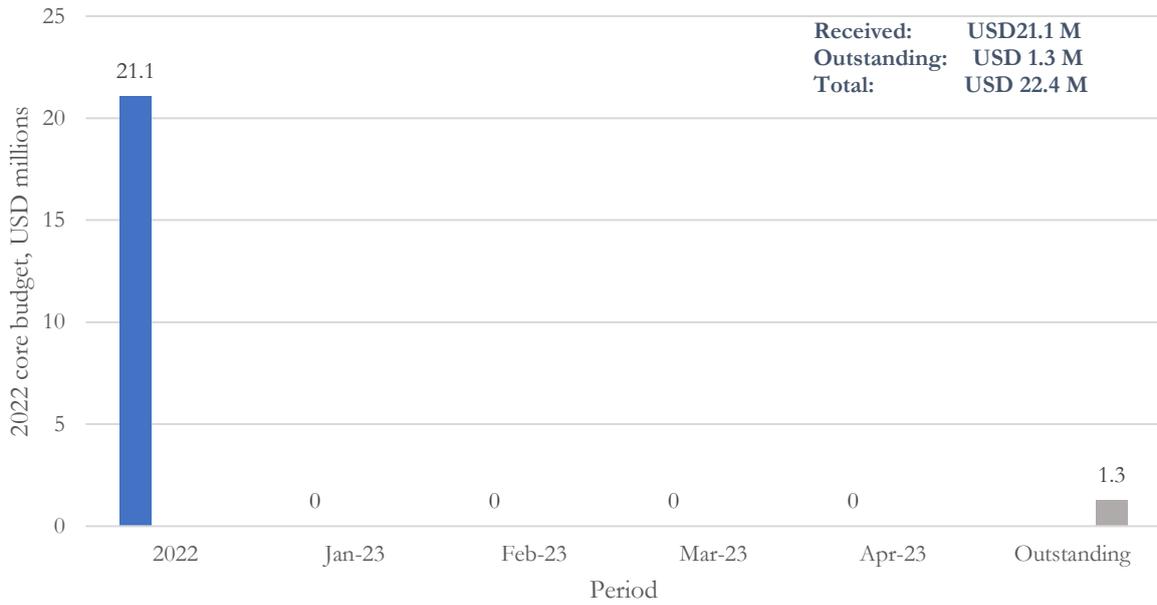
Donor/Project	Multi-Year Commitments	Received prior to 2022	Received during 2022-2023
Canada	385,712	-	385,712
Denmark*	7,535,164	5,764,034	1,771,130
European Commission	9,229,315	-	3,294,752
Germany (International Climate Initiative)*	6,796,311	5,693,564	-
Germany (Physikalisch-Technische Bundesanstalt (PTB)/BMZ)	564,667	-	280,899
Government of the Walloon Region, Belgium	3,110,491	-	1,003,009
Kingdom of the Netherlands	800,320	-	200,080
United Nations Development Programme (UNDP)	6,265,000	1,433,715	486,000
Total	34,686,980	12,891,313	7,421,582

*Contributions pledged and partially received prior to 2022

Fund for Developing Countries Representatives*as of 31 March 2023, in USD*

Donor	2022-2023	
	Committed	Received
Flanders Region of Belgium	12,533	12,533
United Arab Emirates (UAE)	100,000	100,000
Total	112,533	112,533

Figure 13: Received and outstanding assessed contributions for 2022 core budget
(in USD millions, as of 11 April 2023)



Received: USD 21.1 M
 Outstanding: USD 1.3 M
 Total: USD 22.4 M

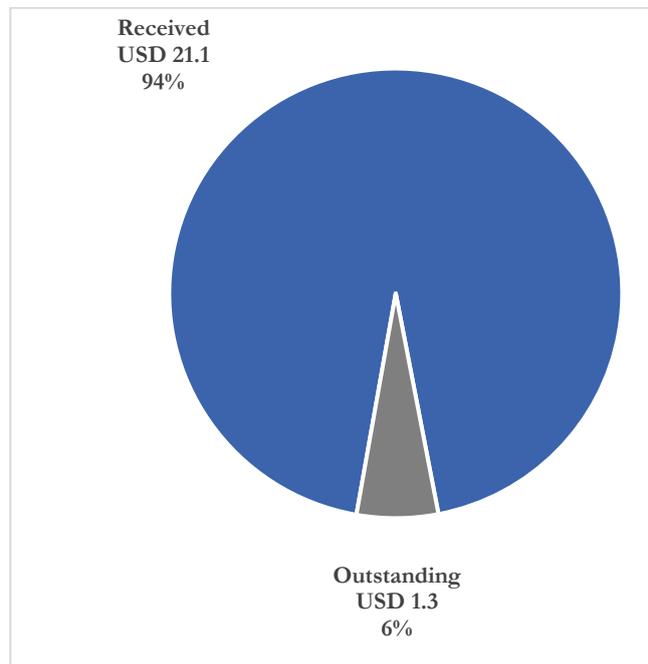


Figure 14: Received and outstanding assessed contributions for 2023 core budget (in USD millions, as of 11 April 2023)

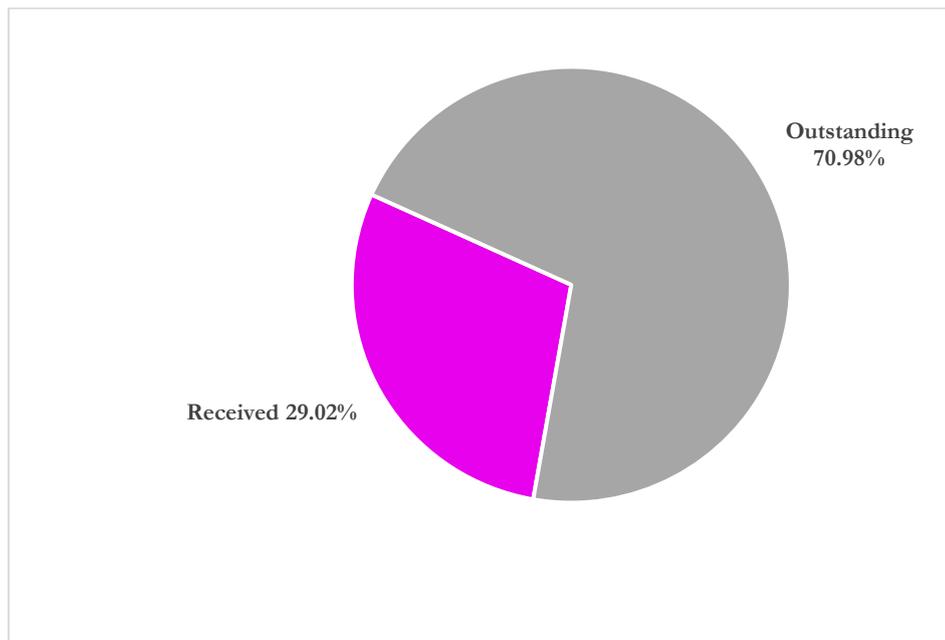
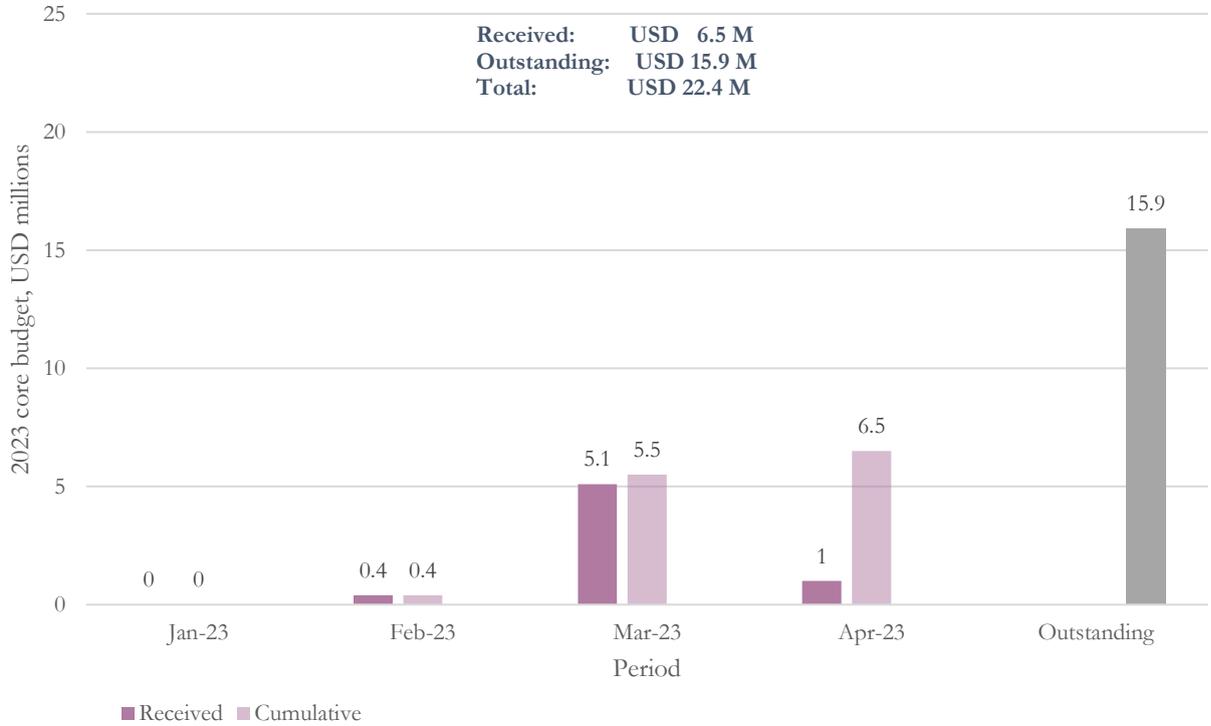


Figure 15: Number of Members with received and outstanding contributions to the 2022 core budget (11 April 2023)

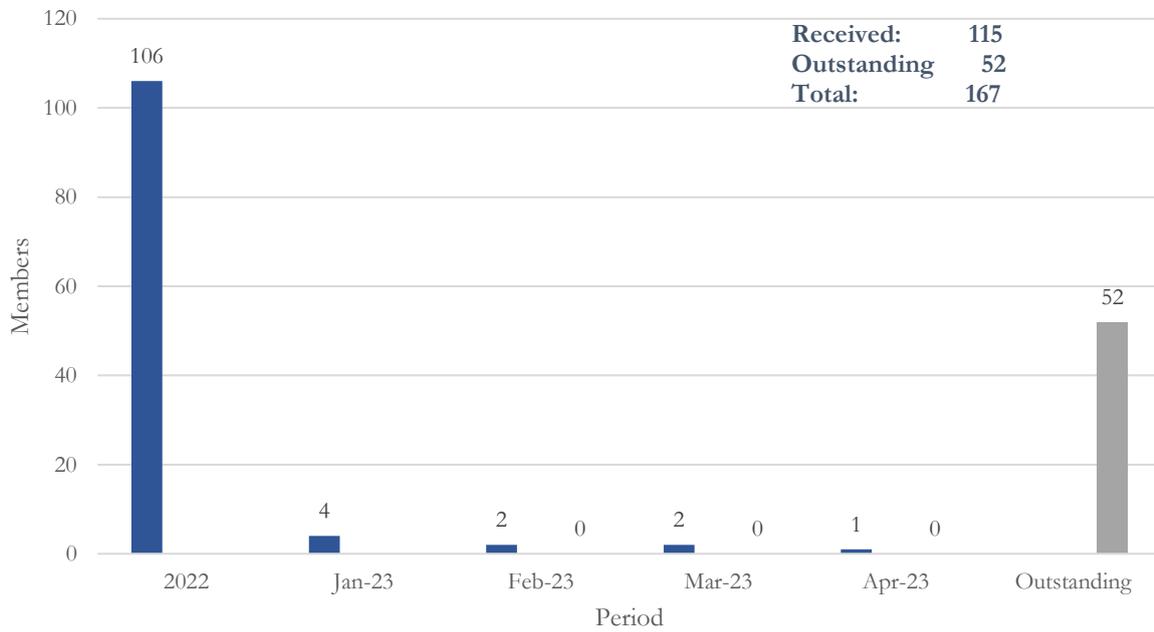


Figure 16: Number of Members with received and outstanding contributions to the 2023 core budget (11 April 2023)



IRENA Donors (2022-2023)

	Canada Ministry of Natural Resources	Global Initiative for Transitioning Remote Communities to Renewable Energy
	Denmark Ministry of Foreign Affairs	Long-term Planning SIDS Lighthouses Initiative 2.0
	European Commission DG ENER	EU Remap: In-depth analysis of renewable energy technology opportunities to support regional cooperation in national energy and climate plans.
	DG ENER	Innovation to foster the renewable energy transition.
	DG NEAR	Conditions and obstacles for the development and integration of renewable energy sources in the Eastern Partner countries.
	DG INTPA	Regional Energy Transition Outlooks in Africa and Latin America and Caribbean.
	Flanders Region of Belgium	Fund for Developing Country Representatives (FDCR)
	Germany Federal Ministry of Economics and Technology (BMWK)	World Energy Transitions Outlook, Long-term Energy Scenarios, Green Hydrogen
	Federal Foreign Office	Geopolitics of Hydrogen Economy
	International Climate Initiative	SIDS Lighthouses
	Physikalisch-Technische Bundesanstalt (PTB)	Quality Infrastructure for Green Hydrogen
	GIZ	Senegal's clean energy transition
	Japan Ministry of Agriculture, Forestry and Fisheries (MAFF)	Development of Circular Economy with Bioenergy and Co-products

	Ministry of Economy, Trade and Industry (METI)	Various Projects
	Luxembourg	Various projects
	Kingdom of the Netherlands Ministry of Foreign Affairs	Geopolitics of the Energy Transition
	Norway Ministry of Foreign Affairs	Various Projects
	Republic of Korea	Seconded official
	Government of the Walloon Region, Belgium	Deployment of renewable energy and decentralised renewable energy with a focus on Francophone Africa.
	United Arab Emirates	UAE FlexTool and various projects
	United Kingdom of Great Britain and Northern Ireland Department for Business, Energy & Industrial Strategy	COP26 activities under the Glasgow Breakthrough Agenda & loaned personnel.
	United Nations Office for Project Services (UNOPS)	Climate Vulnerable Forum
	United Nations Development Programme (UNDP)	UNDP Climate Promise

As directed by its Membership, IRENA continues to diversify its resource base by seeking extra-budgetary support. In the 2022-23 biennium, IRENA received to date a total of USD 10,677,265 through voluntary contributions, with an additional USD 4,044,851 to be received before year end.

Work Programme 2022-2023 – Implementation Matrix

This section presents a full matrix detailing the progress of Work Programme activities by output and by pillar, resourced by both core and voluntary contributions.

The asterisk (*) indicates that the delivery of the programmatic output is financially supported by one or more voluntary contributions. If there is not an asterisk, then the delivery of the programmatic activity is exclusively covered by the core non-assessed and/or core assessed contributions.

At the twenty-third meeting of the Council, Members requested more nuanced information in the implementation matrix section in the form of a traffic light system. In response, the IRENA Secretariat is introducing a speedometer in the ‘Status’ column with four traffic lights (and an arrow that would resolve possible issues, if printed black and white) indicating:

- Red for an activity stalled long-term or will be abandoned,
- Orange for when progress is lagging, but we are confident we will deliver within the programmatic cycle,
- Green for when it is on track or has not started yet and
- Blue for when it is completed.

The legend below outlines some of the risk factors/reasons why progress for an activity might be lagging or stalling, but the list is not exhaustive.

Risk Factors	
External Risks	<ul style="list-style-type: none"> • Project affected by difficulties in engagement/commitment of stakeholders.
	<ul style="list-style-type: none"> • Commitments affected due to changes of government and/or political priorities.
	<ul style="list-style-type: none"> • Lack of access to data.
	<ul style="list-style-type: none"> • Limited capacity of local partners impedes progress and results.
	<ul style="list-style-type: none"> • Catastrophic events (e.g. natural hazards and disasters, pandemics etc.) affect operations and schedules.
Internal Risks	<ul style="list-style-type: none"> • Key IRENA staff working on the activity has left.
	<ul style="list-style-type: none"> • Shifting priorities in the course of the year.

I. Centre of Excellence for Energy Transition

Core assessed and core non-assessed resources (in USD thousands): 14,108. Outputs supported by additional voluntary contributions are footnoted.

Objective: Empower effective policy and decision-making by providing authoritative knowledge and analyses on renewables-based energy transformation at global, national and sectoral levels.

Outputs	Status	Description
World Energy Transitions Outlook (annual editions) * ²⁸		▪ “World Energy Transitions Outlook 2022” (March 2022) [Click here] .
		▪ “World Energy Transitions Outlook 2023”.
Regional Energy Transitions Outlooks (selected regions in Africa, Europe, Latin America) *		▪ “Renewable Energy Roadmap for Central America” report (March 2022). ²⁹ [Click here] .
		▪ “Renewable Energy Outlook for ASEAN: Towards a regional energy transition” report (September, 2022). ³⁰ [Click here] .
		▪ “Renewable Energy Roadmap for South America” report. ³¹
		▪ “Renewable Energy Roadmap for EU” report ³²
Innovation Landscape for the Energy Transition		▪ “Smart Electrification with Renewables: Driving the Transformation of Energy Services” report (February 2022) [Click here] . ³³
		▪ Brief on 100% RE power systems: Divisional review has recommended re-scoping & re-titling. Progress delayed due to resource limitation.
Geopolitics of the Energy Transformation: biennial report on trends *		▪ “Geopolitics of Energy Transformation: Indicators and Trends” report. ³⁴
Global Landscape: Renewable Energy Finance report		▪ “Global Landscape of Renewable Energy Finance 2023” report (February 2023) [Click here] .
		▪ Launch of the Global Landscape of Renewable Energy Finance 2023 (February 2023) [Click here] .
		▪ Global Landscape of Renewable Energy Finance 2023 webinar (March 2023) [Click here] .
Renewable Energy Capacity and Generation (annual update)		▪ “Renewable Capacity Statistics 2023” report (March 2023) [Click here] .
		▪ Downloadable query tools update 2023- [Click here] .
		▪ Interactive dashboards update 2023 [Click here] .

²⁸ Supported by the Government of Germany.

²⁹ Supported by the Government of Norway.

³⁰ Supported by the Government of Denmark.

³¹ Supported by the Government of Norway.

³² Supported by the European Commission.

³³ See related webinar [here](#).

³⁴ Supported by the Government of Norway.

		▪ IRENASTAT online database update 2023 [Click here] .
		▪ “Renewable energy statistics 2022” report (July 2022) [Click here] .
		▪ Energy profiles update 2023 (September 2023) [Click here] .
		▪ “Off-grid renewable energy statistics 2022” (December 2022) [Click here] .
		▪ Annual data update for SDG 7 (indicators 7.a.1 and 7.b.1/12.a.1). (March 2023) [Click here] .
		▪ International Energy Statistics (InterEnerStat) Task Team on the revision of Standard International Energy Product Classification (SIEC).
Power Generation Costs (annual update)		▪ “Renewable Power Generation Costs in 2021” report (July 2022) [Click here] .
		▪ “Renewable Power Generation Costs in 2022” report.
		▪ “Financing Costs: A survey and review of Project Level WACC” report.
		▪ G20 “Low-cost financing for the energy transition” report (2023).
Costs and Performance of End-use Technologies – selected insights		▪ “Renewable solutions in end-uses: Heat pump costs and markets” (November 2022) [Click here] .
Annual Jobs Review (annual update)		▪ “Renewable Energy and Jobs 2022” report (September 2022) [Click here] .
		▪ “Renewable Energy and Jobs 2023” report.
Patents and Standards database INSPIRE (annual update)		▪ Updated tool [Click here] .
		▪ “Innovation Trends in Electrolysers for Hydrogen Production” (May 2022). ³⁵ [Click here] .
		▪ “Grid Codes for Renewable Power Systems” report (April 2022) [Click here] .
		▪ “Renewable Technology Innovation Indicators: Mapping progress in costs, patents and standards” report (March 2022). [Click here] .
		▪ International Forum for Quality Infrastructure within India's Solar PV Sector (March 2023) [Click here] .
Global Atlas updates on renewable potentials		▪ Improving functionalities of the IRENA Global Atlas for Renewable Energy platform.
		▪ Maintaining the operation of the Global Atlas for Renewable Energy platform by upgrading Geoserver and backend.
		▪ Annual update of the renewable energy resource datasets from data providers (Members, international institutions)

³⁵ See webinar [here](#).

		and private sectors – WCMC-UNEP , ORNI , WRI , NOVELTIS , ANU , FAO , and MeteoTest).
		▪ Bioenergy Simulator. ³⁶ [Click here for news article. Click here for simulator]. ³⁷
		▪ Maintaining the operation of the Bioenergy simulator platform by upgrading the backend.
		▪ Revamping of the Bioenergy simulator platform – updating of the datasets, improving the methodology, and upgrading the user interface.
		▪ Webinars on the Global Atlas for Renewable Energy <ul style="list-style-type: none"> ➤ Open-Source Geospatial Solutions for Energy Access organised by the World Resource Institute (April 2022, 40 participants) [Click here]. ➤ Energy System Modelling for the Energy Transition organised by the SDG 7 Youth Constituency (September 2022, 25 participants) [Click here].
SDG 7 Tracking Report (2022 and 2023 editions) * ³⁸		▪ “Tracking SDG 7: The Energy Progress Report” (2022) report. (June 2022) [Click here].
		▪ “Tracking SDG 7: The Energy Progress Report” (2023) report
Innovation Week		Innovation Engagements and Networks during the reporting period include: <ul style="list-style-type: none"> ▪ Innovation Day: Canada March 2022 (March 2022) [Click here].
		Support to Mission Innovation (MI) and Clean Energy Ministerial (CEM). In 2022 and 2023, it included: <ul style="list-style-type: none"> • MI: Support by providing inputs into action plans and policies to Missions on Power, Hydrogen, Net-zero industry, Cities, Biorefineries and Shipping.
		▪ MI: Member of the Technical Advisory Group; and member of the MI Secretariat and designing and developing inputs to the MI Insights Module.
		▪ MI Signed a new MI-IRENA MoU in GCEAF in Pittsburgh [Click here]. <ul style="list-style-type: none"> ➤ Job Creation and Gender Balance in the Energy Transition: Priority Actions and Perspectives. ➤ Pathways for Rapid Decarbonization of Power Systems. ➤ The Breakthrough Agenda Report 2022: Accelerating Sectoral Transitions through Stronger International Collaboration. ➤ LTES Campaign Global dialogue on long-term transition pathways for road transport ➤ Facilitating and Accelerating PtX-Market Ramp-up. ➤ Accelerating technology-based carbon removals: BECCS and DAC. ➤ Innovation cooperation: global approaches to

³⁶ Supported by the Government of Norway.

³⁷ Supported by the Government of Norway.

³⁸ Supported by the International Bank for Reconstruction and Development.

		enhancing national policies and measuring progress.
		▪ Active participation in CEM/MI Senior Official Meeting in Rio de Janeiro, Brazil [Click here].
		▪ CEM: Leading Long-Term Energy Scenario Initiative, knowledge partner to Transforming Solar Supply Chains Initiative and the Clean Energy Marine Hubs initiative. ³⁹
		▪ Support to Glasgow Breakthrough Agenda – The Breakthrough Agenda Report 2022. ⁴⁰ (September 2022) [Click here].
		▪ Support to Glasgow Breakthrough Agenda - The Breakthrough Agenda Report 2023 (drafting: hydrogen and power, contributing to steel, cement and road transport)
		▪ Support for Global Offshore Wind Alliance (GOWA) meeting with countries (March 2022).
Human resources and workforce planning strategy		▪ 14 new staff appointments and internal movements and one new Associate Professional.
		▪ Reclassification and comprehensive review of all Terms of Reference.
		▪ Directives on Remote Work, Performance Management, Recruitment, and Individual Consultants.

II. Global Voice of Renewables

Core assessed and core non-assessed resources (in USD thousands): 9,773. Outputs supported by additional voluntary contributions are footnoted.

Objective: Shape the global discourse on energy transformation by providing relevant, timely, high-quality information and access to data on renewable energy.

Outputs	Status	Description
Socio-economic Analyses at country level* (reports and country briefs) ⁴¹		▪ “Socio-economic Footprint of the Energy Transition: Japan” report (September 2022) [Click here].
		▪ “Socio-economic Footprint of the Energy Transition: Indonesia” report (January 2023) [Click here].
		▪ “Socio-economic Footprint of the Energy Transition: ASEAN” report.
		▪ “Socio-economic Footprint of the Energy Transition: Egypt” report.

³⁹Supported by Government of Denmark and Government of Germany

⁴⁰ Supported by the Government of the United Kingdom.

⁴¹ Supported by Government of Denmark and Government of Japan.

		▪ “Socio-economic Footprint of the Energy Transition: South Africa” report.
Leveraging Local Capabilities (selected technologies)		▪ “Leveraging Local Capacity for Small Scale Hydropower” report.
		▪ “Leveraging Local Capacity for CSP” report.
Ecosystems for Sustainable Livelihoods*		▪ “Fostering Livelihoods with Decentralised Renewable Energy: An Ecosystems Approach” report (January 2022) [Click here] .
Decentralised Renewable Energy Solutions* ⁴² (policies for mini-grids; solutions for clean cooking)		▪ “Policies and Regulations for Renewable Energy Mini-grids” report.
		▪ “Public Financing Instruments for Universal Energy Access” report.
		▪ IRENA’S West Africa Electrification Platform: Assessment of the potential for battery storage to provide affordable electricity access through solar PV mini grids in West Africa (Burkina-Faso, Senegal, Nigeria, Mali) [Click here] .
Renewable Energy Policies in the Power Sector (decentralised generation; high-risk environments)		▪ “Renewable Energy Auctions: design in higher risk contexts” report.
		▪ “Green Hydrogen Auctions”.
		▪ “Renewable Energy Auctions: Southeast Asia” report (December 2022) [Click here] .
Power Market Design for the Energy Transition Report		▪ “Re-organising Power Systems for the Transition” report (June 2022) [Click here] .
Renewable Energy Education and Skills*		▪ “Education for the Energy Transition” report in collaboration with UNESCO.
		▪ Initiative on Educating the Educators including “Renewable Energy Toolkit for Teachers” ⁴³ .
		▪ Workshop bringing together global education partners and stakeholders held in Abu Dhabi to form a new Energy Transition Education Network (July 2022) ⁴⁴ .
		▪ Energy Transition Education Network launched at COP27 (November 2022) [Click here] .
		▪ E-learning platform with online self-study courses on key renewable energy topics. ⁴⁵
Renewable Energy Policies for Cities: localising end-use value chains		▪ “Renewable Energy Policies in Cities: Enabling Local Benefits” report.
Climate Policy: renewable energy and NDCs *		▪ “NDCs and Renewable Energy Targets in 2021” report (January 2022) [Click here] .

⁴² Supported by the Government of Walloon region, Belgium.

⁴³ Supported by Government of the United Arab Emirates.

⁴⁴ Supported by Government of the United Arab Emirates.

⁴⁵ Supported by Government of Norway.

		<ul style="list-style-type: none"> ▪ “Renewable Energy Targets in 2022: A Guide to Design” report⁴⁶ (November 2022) [Click here].
		<ul style="list-style-type: none"> ▪ “Renewable energy targets in small island developing states” technical paper (November 2022) [Click here].
Climate Change Adaptation: methodology and country analyses *		<ul style="list-style-type: none"> ▪ “Renewable Energy in Adaptation: Methods and Metrics” report.
Geopolitics of the Energy Transformation: deep dive on a selected topic *		<ul style="list-style-type: none"> ▪ “Geopolitics of Energy Transformation: Critical Materials Supply Chains” report⁴⁷
Gender and Renewable Energy report: tracking global progress		<ul style="list-style-type: none"> ▪ “Solar PV: A Gender Perspective” report. (September 2022) [Click here].
		<ul style="list-style-type: none"> ▪ “Gender and Renewable Energy Report: Tracking Global Progress” 2023.
Energy Transition for End-uses (transport and industry decarbonization)		<ul style="list-style-type: none"> ▪ Innovation Day: Canada March 2022, with focus on Road Freight and Decarbonisation of Iron & Steel sectors (March 2022) [Click here]⁴⁸.
		<ul style="list-style-type: none"> ▪ “Bioenergy for the Transition: Ensuring Sustainability and Overcoming Barriers” report (August 2022) [Click here].
		<ul style="list-style-type: none"> ▪ “Innovation Outlook: Renewable Ammonia” report (May 2022) [Click here].
		<ul style="list-style-type: none"> ▪ G20 “Towards a circular steel industry” report (2023).
		<ul style="list-style-type: none"> ▪ Partnership Agreement between IRENA and the International Chamber of Shipping.
		<ul style="list-style-type: none"> ▪ Collaboration agreement with UN Global Compact as knowledge partners of the Just Transition Maritime Task Force.
		<ul style="list-style-type: none"> ▪ Bioenergy workshop held in Sao Paulo Brazil: Sustainable Bioenergy Pathways in South America - Fostering investment in the bioenergy sector
End-use Decarbonisation: guides for policy-making (procurement; heating and cooling; transport; green hydrogen) *		<ul style="list-style-type: none"> ▪ “Green hydrogen for industry: A guide to policy making”⁴⁹ report (March 2022) [Click here].
		<ul style="list-style-type: none"> ▪ “Renewable energy policies for decarbonisation of transport” report.
		<ul style="list-style-type: none"> ▪ “Creating a global hydrogen market: Certification to enable trade” report (January 2023) [Click here].
Greening the Gas System *		<ul style="list-style-type: none"> ▪ Accelerating hydrogen deployment in the G7: recommendations for the Hydrogen Action Pact (November 2022) [Click here]⁵⁰.

⁴⁶ Supported by Government of the Walloon Region, Belgium.

⁴⁷ Supported by the Government of Netherlands and the Government of Norway.

⁴⁸ More information available [here](#).

⁴⁹ Supported by the Government of Japan.

⁵⁰ Supported by the Government of Germany.

Energy Transition and Critical Materials *		▪ “Critical Materials For The Energy Transition: Lithium” brief (January 2022) [Click here].
		▪ “Critical Materials for The Energy Transition: Rare Earth” brief (May 2022). ⁵¹ [Click here].
		▪ “Critical Materials for the Energy Transition: EV Batteries” report
		▪ Ministerial Dialogue at 13th Assembly: ‘Critical Materials for the Renewables-Centred Energy Transition: How to Jointly Harness Opportunities’ (Jan 2023).
End of Life and Circular Economy * (storage and batteries; solar PV panels)		▪ “End-of-Life Management of Solar Photovoltaic and Storage Batteries in the Energy Transition” report.
Corporate Sourcing of Renewable Energy *		▪ Activities planned to start in 2023.
Comprehensive Global Communication Strategy with accessible and multilingual content and information *		▪ Comprehensive Global Communication Strategy for 2022 was successfully implemented, including the second phase of strategic media partnership and social media campaign.
		▪ Press release translations, international media outreach and communications amplified reach of key publications such as “Renewable Capacity Statistics 2023”, “Global Landscape of Renewable Energy Finance” and the preview of the “World Energy Transitions Outlook 2023”.
		▪ Press release translations, international media outreach and communications amplified reach of key publications such as “WETO 2022”. ⁵² and the “Geopolitics of the Energy Transformation: The Hydrogen Factor” ⁵³
		▪ Press release translations, international media outreach and communications amplified reach of key publications such as “Renewable Energy Capacity Statistics 2023”.
		▪ Strategic communications support around key, global high-level events, including the IRENA Assembly, EXPO2020, ADSW, BETD, HLPF, G20 and COP27.
		▪ Issued 14 IRENA reports [Click here] and an additional 7 specialised publications.
		▪ 2 IRENA reports translated and issued (in French and Japanese).
		▪ Four IRENA technical papers released in 2022 [Click here].
		▪ IRENA publications featured on knowledge sharing platforms and in electronic libraries/stores, including Apple store, Scribd, Refinitiv, Amazon and others.

⁵¹ See webinar [here](#).

⁵² Supported by the Government of Germany.

⁵³ Supported by the Government of Germany.

		<ul style="list-style-type: none"> ▪ Maintain regular strategic publication output, with predictable flagship reports, timely thematic studies, and other specialised releases.
		<ul style="list-style-type: none"> ▪ Continued application of the Agency’s digital-first communication approach, with printing limited to key publications and/or peripherals.
		<ul style="list-style-type: none"> ▪ Issued “IRENA standard abbreviations” document to ensure harmonisation across the Agency’s published materials.
		<ul style="list-style-type: none"> ▪ Issued “IRENA guidelines for editors” to provide rules and guidance for editorial consultants working with the Agency.
		<ul style="list-style-type: none"> ▪ Issued “IRENA guidelines for designers” to provide rules and guidance for design consultants working with the Agency.
		<ul style="list-style-type: none"> ▪ Hosted introductory briefing with new IRENA staff to highlight key procedures and stages in IRENA publishing and quality control processes.
		<ul style="list-style-type: none"> ▪ Completed trial of potential software solutions to ensure greater efficiency, security and transparency in IRENA peer review processes for publications and issued official assessment/ recommendation.
		<ul style="list-style-type: none"> ▪ Ongoing communication support provided in relation to publication releases, webinars, press releases, digital stories, short videos, website updates etc.
		<ul style="list-style-type: none"> ▪ IRENA Insights webinar series in 2022 [Click here]. <ul style="list-style-type: none"> ➤ <i>Reaching Zero with Renewables: Capturing Carbon</i> ➤ <i>Sector Coupling in Facilitating the Integration of Variable Renewable Energy in Cities</i> ➤ <i>Pathways to Decarbonise the Shipping Sector by 2050</i> ➤ <i>INSPIRE: IRENA’s Platform on Patent Data and International Standards for Renewables</i> ➤ <i>Geopolitics of the Energy Transformation: The Hydrogen Factor</i> ➤ <i>Smart Electrification with Renewables: Driving the Transformation of Energy Services</i> ➤ <i>Innovation trends in electrolysers for hydrogen production</i> ➤ <i>Innovation Outlook - Renewable Ammonia</i> ➤ <i>Grid Codes for Renewable Powered Systems</i> ➤ <i>Renewable Energy Roadmap for Central America: Towards a Regional Energy Transition</i> ➤ <i>Grid Codes for Renewable Powered Systems</i> ➤ <i>Global Hydrogen Trade to Meet thr 1.5C Climate Goal</i> ➤ <i>Renewable Power Generation Cost Report 2021</i> ➤ <i>Powering Agri-Food Value Chains with Geothermal Heat: A Guidebook for Policymakers</i>

	<ul style="list-style-type: none"> ➤ <i>Renewable Energy: Jobs along the supply chain</i> ➤ <i>Solar PV: A Gender Perspective</i>
	<ul style="list-style-type: none"> ▪ Webinar series: Critical Materials for the Energy Transition [Click here] <ul style="list-style-type: none"> ➤ <i>Rare Earth Elements</i> ➤ <i>Deep-Sea Mining Technology</i> ➤ <i>Do We Have a Lithium Supply Problem?</i>
	<ul style="list-style-type: none"> ▪ Policy Talks 2022 webinar series [Click here] <ul style="list-style-type: none"> ➤ <i>Enabling Green Hydrogen: Industrial Policy, Certification Systems, and Inclusiveness</i> (March 2022) [Click here] ➤ <i>Reaping the socioeconomic benefits of the energy transition - building a comprehensive policy framework</i> (January 2022) [Click here] ➤ <i>Restructuring the power system for the energy transition</i> (June 2022) [Click here] ➤ <i>Sustainable bioenergy for the energy transition</i> (June 2022) [Click here]
	<ul style="list-style-type: none"> ▪ Events and workshops <ul style="list-style-type: none"> ➤ <i>REN21 RENdez-vous Africa: What Could an African Green Deal Look Like?</i> (February 2022) ➤ <i>UNDP Regional Bureau for Africa Energy Workshop</i> (March 2022) ➤ <i>RENAC Training Seminar</i> (March 2022) ➤ <i>MENA Climate Week</i> (March 2022) ➤ <i>Meetings of the UN Interdepartmental Task Force on African Affairs</i> (April and June 2022) ➤ <i>MENA Europe Future Energy Dialogue</i> (June 2022) ➤ <i>Africa Climate Week</i> (August 2022) ➤ <i>Africa-EU Energy Partnership Forum</i> (September 2022) ▪ Online content <ul style="list-style-type: none"> ➤ <i>Social media campaign with AfDB</i> ➤ <i>Social media videos</i> ➤ <i>Blog posts</i>
	<ul style="list-style-type: none"> ▪ Dissemination of the “Renewable Energy Roadmap for Central America” report (March 2022) [Click here]. <ul style="list-style-type: none"> ➤ <i>Renewable Energies in Latin America and the Caribbean: Towards a Regional Energy Transition</i> (June 2022) ➤ <i>Insights Webinar (“Renewable Energy Roadmap for Central America: Towards a Regional Energy Transition”)</i> (June 2022) ➤ <i>COREN 2022 - El Salvador (“Las energías renovables como impulsoras en la electrificación de los sectores de uso final”)</i> (August 2022) ➤ <i>IRENA invited to present the study at the CDMER Meeting Nr. 96 (August 2022) - Consejo Director del Mercado Eléctrico Regional de América Central</i> ➤ <i>CIER 57th Annual Meeting – Paraguay (“Hojas de Ruta de Energía Renovables de Centroamérica y Suramérica”)</i> (November 2022)

		<ul style="list-style-type: none"> ➤ RRA Honduras – Honduras, IITC/REmap division to present "Renewable Energy Roadmap for Central America: Towards a Regional Energy Transition" and Honduras country case (December 2022) ➤ IRENA invited to present in the OLADE Energy Week 2022 in Panama City, IITC/REmap division to present "Renewable Energy Roadmap for Central and South America" (December 2022) ➤ IRENA presented in the Clean Energy Ministerial, Senior Officials Meeting Session: Strengthening International Cooperation and Regional Collaboration to support Latin America's Energy Transition (March 2023)
		<ul style="list-style-type: none"> ▪ Dissemination of the "Geopolitics of the Energy Transformation" report (January 2022).⁵⁴ [Click here] ➤ Launch of "Geopolitics of Energy Transformation: The Hydrogen Factor" report during the twelfth session of the IRENA Assembly (January 2022) [Click here]. ➤ "Hydrogen Economy Hints at New Global Power Dynamics" (January 2022). ➤ IRENA Insights webinar: <i>Geopolitics of the Energy Transformation: The Hydrogen Factor</i> (March 2022) [Click here]. ➤ Presentation by IRENA's Director-General in March 2022 at an in-person event co-hosted by the Governments of Germany, Norway, and the UAE, as well as separate presentations requested by the Governments of Chile, Italy, the United Kingdom, and United States of America. ➤ Presentations for non-Member organisations, including the African Union Development Bank, the Africa Renewable Energy Initiative, the Clingendael Institute, the 2022 Financial Times Hydrogen Summit, the German Institute for International and Security Affairs, the GIZ Hydrogen Diplomacy Initiative, the Spanish Energy Club, and the United Nations Global Compact in Poland. ➤ Podcasts including with the Columbia SIPA and Reuters/Aramco.
Regional Communication Strategies		<ul style="list-style-type: none"> ▪ Creation of content targeted at regional markets, including newsroom articles, human impact stories, videos, regional media outreach and DG interviews with local, regional, and international press.
		<ul style="list-style-type: none"> ▪ Strategic communications support around key regional events such as MENACW, Africa Climate Week, and IRENA's first Investment Forum for Southeast Asia.⁵⁵
Promotion and use of digital knowledge products and information *		<ul style="list-style-type: none"> ▪ Ongoing placement of IRENA e-books on selected e-stores.
		<ul style="list-style-type: none"> ▪ 8 interactive stories developed and published.

⁵⁴ Supported by the Government of Norway.

⁵⁵ Supported by the Government of Denmark.

		▪ 2 digital reports based on flagship publications developed and pending publication.
		▪ Technical papers section under the Education component of the website implemented.
		▪ New upgraded irena.org website successfully launched on 25 October 2022.

III. Network Hub

Core assessed and core non-assessed resources (in USD thousands): 8,336. Outputs supported by additional voluntary contributions are footnoted.

Objective: Provide an inclusive platform for all stakeholders to foster action, convergence of efforts and knowledge sharing for impact on the ground.

Outputs	Status	Description
IRENA Investment Forums *		▪ G20 Energy Transitions Investment Forum Pre Event in collaboration with B20 2 nd Partners in Energy Transition Meeting in Jakarta, Indonesia (Southeast Asia region) (July 2022) [Click here]. ⁵⁶
		▪ G20 Energy Transitions Investment Forum in Bali, Indonesia (Southeast Asia region) (September 2022) [Click here]. ⁵⁷
		▪ West Africa Investment Forum ⁵⁸ Nigeria [Postponed].
		▪ Latin America Investment Forum, Uruguay (9-10 November 2023).
		▪ Caribbean Investment round table, Barbados (30 May - 1 June).
Regional Action Agendas and Clean Energy Corridors		Africa ▪ “Mano River Union Renewable Energy Market Analysis” report.
		▪ Side event, <i>Energy Transition for Africa</i> , during TICAD8. ⁵⁹ (August 2022) [Click here].
		▪ Capacity Building on <i>Long-Term Energy Planning in the Republic of Cameroon</i> . ⁶⁰ : <ul style="list-style-type: none"> ➢ Fourth training course (March 2022) [Click here]. ➢ Final consultation workshop (November 2022) [Click here].
		▪ WACEC: Regional capacity building workshop on Design and Negotiation of Bankable Power Purchase Agreements in West Africa, organised with ECREEE, ERERA, WAPP and GIZ (September 2022) [Click here].

⁵⁶ Supported by the Government of Denmark.

⁵⁷ Supported by the Government of Denmark.

⁵⁸ Supported by Government of the Walloon Region, Belgium.

⁵⁹ Supported by the Government of Japan.

⁶⁰ Supported by the Government of Denmark.

	<ul style="list-style-type: none"> WACEC: Regional Capacity Building for Open Solar Contracts in West African Countries (November 2022) [Click here].
	<ul style="list-style-type: none"> Chad Renewable Readiness Assessment: Kickoff event (October 2022).
	<ul style="list-style-type: none"> Renewable Energy Roadmap for Nigeria – Final engagement workshop with national stakeholders (December 2022).
	<ul style="list-style-type: none"> Expert Consultation Workshop, Somalia RRA (April 2023).
	<p>Asia</p> <ul style="list-style-type: none"> Launch of the Malaysia Energy Transition Outlook⁶¹ (March 2023) [Click here].
	<ul style="list-style-type: none"> India Energy Week and Asian Energy Ministerial Roundtable (February 2023).
	<ul style="list-style-type: none"> Ministerial Dialogue on Regional Energy Transition Outlooks: Southeast Asia Energy Transition during 13th Session of the IRENA Assembly (January 2023).
	<ul style="list-style-type: none"> Launch of the Kyrgyz Republic Renewable Readiness Assessment (December 2022) [Click here].
	<ul style="list-style-type: none"> Event on <i>Socioeconomic footprint of the energy transition: Egypt and Southeast Asia</i> at COP27 (November 2022) [Click here].
	<ul style="list-style-type: none"> Event on <i>Renewable Energy Transitions in the ASEAN Region</i> at COP27 (November 2022) [Click here].
	<ul style="list-style-type: none"> The 2nd Singapore – IRENA High-Level Forum (October 2022) [Click here].
	<ul style="list-style-type: none"> Launch of the Indonesia Energy Transition Outlook report in Jakarta, Indonesia⁶² (October 2022) [Click here].
	<ul style="list-style-type: none"> The 40th ASEAN Ministers on Energy Meeting (AMEM) including the 6th AMEM-IRENA Dialogue (September 2022).
	<ul style="list-style-type: none"> G20 Energy Transition Working Group Webinar on <i>Expanding Solar, Wind, and Ocean Energy Solution</i> (June 2022) [Click here].
	<ul style="list-style-type: none"> G20 Energy Transition Working Group Webinar on <i>Accelerating Green Hydrogen Technologies and Energy Storage for the Energy Transitions</i> (June 2022) [Click here].
	<ul style="list-style-type: none"> “Renewable Energy for Agriculture: Insights from Southeast Asia, A focus on heating and cooling needs” report (June 2022) [Click here].
	<ul style="list-style-type: none"> The 40th ASEAN Senior Officials Meeting on Energy (SOME) (June 2022).⁶³

⁶¹ Supported by the Government of Denmark.

⁶² Supported by the Government of Denmark.

⁶³ Supported by the Government of Denmark.

	<ul style="list-style-type: none"> ▪ The 29th ASEAN Renewable Energy Subsector Network (RE-SSN) Meeting (May 2022).
	<ul style="list-style-type: none"> ▪ ASEAN-IRENA Consultation Workshop (May 2022) [Click here].⁶⁴
	<ul style="list-style-type: none"> ▪ <i>Capacity Building for Renewable Energy Targets</i> in the Kyrgyz republic (March 2022) [Click here].
	<ul style="list-style-type: none"> ▪ “Scaling Up Biomass for the Energy Transition: Untapped Opportunities in Southeast” report (February 2022)⁶⁵ [Click here].
	<ul style="list-style-type: none"> ▪ “Renewable Energy Outlook for ASEAN: Towards a Regional Energy Transition” report (September 2022)⁶⁶ [Click here].
	<ul style="list-style-type: none"> ▪ <i>Renewable Readiness Assessment for the Kyrgyz Republic</i>: Validation Workshop (February 2022) [Click here].
	<p>Latin America and Caribbean</p> <ul style="list-style-type: none"> ▪ Renewable Energy Roadmaps for Latin America: Perspectives and way forward during the 13th Session of the IRENA Assembly (January 2023).
	<ul style="list-style-type: none"> ▪ <i>Honduras Renewable Readiness Assessment</i>: Validation workshop event (March 2023).
	<ul style="list-style-type: none"> ▪ Clean Energy Ministerial, Senior Officials Meeting, side-event: <i>Strengthening International Cooperation and Regional Collaboration to Support Latin America’s Energy Transition</i>. (March 2023)
	<ul style="list-style-type: none"> ▪ Hybrid webinar: <i>Sustainable Bioenergy pathways in Latin America</i> (March 2023)
	<ul style="list-style-type: none"> ▪ Virtual Webinar: <i>Agricultural Residue potential in South America</i> (February 2023)
	<ul style="list-style-type: none"> ▪ Green Hydrogen Capacity Building Program in El Salvador. (January 2023)
	<ul style="list-style-type: none"> ▪ <i>Honduras Renewable Readiness Assessment: Consultation Workshop</i> (December 2022).
	<ul style="list-style-type: none"> ▪ <i>Honduras Renewable Readiness Assessment</i>: Kickoff event (September 2022).
	<ul style="list-style-type: none"> ▪ Virtual event: <i>Regional Energy Congress for Central America</i> (COREN). Hosting of Renewable Energy Day (August 2022).

⁶⁴ Supported by the Government of Denmark.

⁶⁵ Supported by the Government of Japan.

⁶⁶ Supported by the Government of Denmark and the Government of Japan.

	<ul style="list-style-type: none"> Side event on <i>Renewable Energy to Accelerate Regional Climate Action and Build momentum towards Net- Zero across the LAC Region</i> during the 2022 Latin America and Caribbean Climate Week (July 2022).
	<ul style="list-style-type: none"> RELAC Initiative: Virtual event: <i>REmap Central America Showcase</i> (June 2022).
	<ul style="list-style-type: none"> Itatipú Binacional Water and Energy Hybrid event (June 2022).
	<ul style="list-style-type: none"> Hybrid webinar for <i>Renewable Energy and Energy Efficiency in Paraguay</i>, co-organised with WEC and the Vice Minister of Energy and Mines of Paraguay (March 2022).
	<ul style="list-style-type: none"> <i>Firm Capacity for RE Projects using PPAs in Central America: Stakeholder Consultation Workshop and Questionnaire</i> (February 2022) [Click here].
	<ul style="list-style-type: none"> Webinar on <i>Accelerating the Energy Transition in Colombia: Renewable Energy Auctions</i>, co-organised with USAID (February 2022). [Click here].
	<p>Middle East and North Africa</p> <ul style="list-style-type: none"> <i>Open Solar Contracts Capacity Building Workshop: Iraq</i>, co-organised with UNDP & UK Embassy, (June 2022).
	<ul style="list-style-type: none"> <i>MENA Europe Future Energy Dialogue meeting</i>, co-hosted with the Federal Government of Germany and Jordanian Ministry of Energy and Mineral Resources (June 2022) [Click here].
	<ul style="list-style-type: none"> <i>A Dialogue Between EU and Gulf Cooperation Council on a Regulatory Framework to Develop Green Hydrogen Supply, Demand and Trade</i>, co-organised with the European Union, (April 2022) [Click here].
	<ul style="list-style-type: none"> MENA Climate Week 2022 organised workshop in partnership with UNDP: <i>Catalysing Concerted Action on the Ground towards Achieving the Global Energy Transition and a side event: Renewable Energy Driving Climate Action towards Net-zero in 2050 across the MENA Region</i> (March 2022) [Click here].
	<ul style="list-style-type: none"> A two-day <i>Energy Transition Workshop in Iraq: Best Practices & Scoping</i>, co-organised with the United Nations Development Programme a (March 2022).
	<ul style="list-style-type: none"> <i>Consultative workshop on IRENA's North African Power Pool modelling</i>, organised in partnership with League of Arab States and the African Union, within the framework of the ongoing work on the African Continental Master Plan (March 2022) [Click here].
	<ul style="list-style-type: none"> Virtual regional capacity building workshop: <i>Renewable Energy Targets setting in Arab Countries</i> (February 2022).

		<ul style="list-style-type: none"> Virtual sub-regional (North Africa) capacity building workshop: <i>Improving Resource Assessment Practice in the North Africa: A Solution to Streamline Early-Stage Solar and Wind Market Planning</i> (February 2022).
		<ul style="list-style-type: none"> A workshop on <i>Enabling Measures</i>, co-organised with the World Economic Forum (January 2022) [Click here].
		<p>Southeast Europe</p> <ul style="list-style-type: none"> Regional Workshop “Design and Financing of district heating and cooling systems and projects in South East Europe” (April 2023).
		<ul style="list-style-type: none"> Regional capacity building workshop on <i>Sustainable Use of Biomass</i>, organised with Energy Community Secretariat (November 2022).
		<ul style="list-style-type: none"> Regional capacity building workshop on <i>Long Term Energy Scenarios</i>, organised with IAEA (November 2022).
		<ul style="list-style-type: none"> EU Sustainable Energy Week 2022: <i>The Potential of Renewable Gases to support the Energy Transition and Guarantee Security of Supply</i>, joint event with Centre on Regulation in Europe and Florence School of Regulation (September 2022) [Click here].
		<ul style="list-style-type: none"> A workshop on <i>Hydropower as a key factor in improving energy efficiency and promoting renewable energy</i>, co-organised with the Ministry of Energy of Kyrgyz Republic and State Standardization Committee of Republic of Belarus.
		<ul style="list-style-type: none"> <i>Renewable Readiness Assessment for Bosnia and Herzegovina: Validation Workshop</i> (April 2022) [Click here]⁶⁷
Energy Compacts & Collaborative Frameworks Implementation *		<ul style="list-style-type: none"> IRENA-FAO Energy Compact on ‘Energising Agri-food Systems with Renewable Energy’.
		<ul style="list-style-type: none"> Multilateral Energy Compact on ‘Renewable energy for peacekeeping’.
		<ul style="list-style-type: none"> Event on <i>Renewable Energy Opportunities in UN Peacekeeping Settings</i>, co-organised event with UN-DOS and United Arab Emirates, held during SEforALL Forum 2022 (May 2022) [Click here].
		<ul style="list-style-type: none"> Multilateral compact for ‘Health Facility Electrification’.
		<ul style="list-style-type: none"> IRENA-GGA-IGA Energy Compact on ‘Scaling up geothermal heating and cooling globally’.
		<ul style="list-style-type: none"> IRENA-AOSIS Energy Compact on ‘Islands Energy Transition towards a 1.5-degree world’ - operationalised through the SIDS Lighthouses Initiative.
		<ul style="list-style-type: none"> NDC analysis for SIDS.

⁶⁷ Supported by the Government of Norway.

		Collaborative Frameworks: ▪ Establishment of a new Collaborative Framework on Critical Materials for the Energy Transition (March 2022) [Click here] .
		▪ Collaborative Framework on the Geopolitics of Energy Transformation: 5 th meeting (April 2022) [Click here] .
		▪ Collaborative Framework on Project Facilitation to Support Energy Transition 1 st meeting (May 2022) [Click here] .
		▪ Collaborative Framework on Hydropower: 4 th meeting (June, 2022) [Click here] .
		▪ Collaborative Framework on Enhancing Dialogue on High Shares of Renewables in Energy Systems: 4 th meeting (June 2022) [Click here] .
		▪ Collaborative Framework Critical Materials: Working Group ‘De-risking Critical Materials and Minerals Supply’ (June 2022) [Click here] .
		▪ Collaborative Framework Critical Materials: Working Group ‘Observatory for Critical Materials and Minerals’ (July 2022) [Click here] .
		Collaborative Framework Critical Materials: Working Group ‘ESG and Mining’ (September 2022) [Click here] .
		▪ Collaborative Framework on Enhancing Dialogue on High Shares of Renewables in Energy Systems: 5 th meeting (October 2022).
		▪ Collaborative Framework on Green Hydrogen: 6 th meeting (October 2022) [Click here] .
		▪ Collaborative Framework on Enhancing Dialogue on High Shares of Renewables in Energy Systems: 5 th meeting (October 2022).
		▪ International Conference on Hydropower, co-organised with the Government of Switzerland (October 2022).
		▪ Collaborative Framework on Ocean Energy/Offshore Renewables: 5 th meeting (November 2022) [Click here] .
		▪ Collaborative Framework on the Geopolitics of Energy Transformation: 6 th meeting (November 2022) [Click here] .
		▪ Collaborative Framework on Hydropower: 5 th meeting (December, 2022) [Click here] .
		▪ Collaborative Framework on Just and Inclusive Energy Transition (March 2023) [Click here] .
		▪ Collaborative Framework on the Geopolitics of Energy Transformation (May 2023).
		▪ Collaborative Framework on Enhancing Dialogue on High Shares of Renewables in Energy Systems: 6 th meeting (May 2023).

		▪ Collaborative Framework on Hydropower (May 2023)
		▪ “The changing role of hydropower: Challenges and opportunities” report (February 2023) [Click here].
		▪ Collaborative Framework on Green Hydrogen (April 2023).
		▪ Collaborative Framework on Ocean Energy/Offshore Renewables (May 2023).
		▪ Scaling up Investments in Ocean Energy Technologies (March 2023) [Click here].
		▪ Collaborative Framework on Project Facilitation to Support on-the-ground Energy Transition (May 2023).
		▪ Support on a technical and organisational level to the planning efforts for the establishment of an intergovernmental Global Offshore Wind Alliance (GOWA) in collaboration with international stakeholders including the government of Denmark and GWEC.
Off-Grid Renewable Energy Solutions: Agri-food systems*, health*, clean cooking		▪ Assessment of Decentralised Renewable Energy (DRE) Solutions for Powering the Agri-food Sector in Malawi. Inception mission to country (March 2023).
		▪ Assessment of Decentralised Renewable Energy (DRE) Solutions for Powering the Agri-food Sector in Guinea. Inception mission to country (March 2023).
		▪ Assessment of Decentralised Renewable Energy (DRE) Solutions for Health Care in Mali. Kick-off meeting (February 2023).
		▪ Assessment of Decentralised Renewable Energy (DRE) Solutions for Powering Health care in Mozambique. Kick-off meeting (February 2023).
		▪ Decentralised Renewable Energy Solutions for Remote and Isolated Communities, dialogue held during the 13 th Session of the IRENA Assembly (January 2023).
		▪ Launched the Beyond Food Partnership, a new joint initiative with the Government of the United Arab Emirates (March) [Click here].
		▪ IRENA-WRI webinar on <i>Scaling-up solar irrigation: Lessons from policies and programmes</i> (February 2022) [Click here].
		▪ <i>Renewable Energy for Agri-food Systems: Scaling Investments towards Climate Action and 2030 Agenda</i> event during COP27, Egypt (November 2022) [Click here].
		Publications: ▪ IRENA's input to joint publication of “Global Health Assessment” report with clear picture of status of healthcare electrification and requirements ⁶⁸

⁶⁸ Supported by the Government of the Walloon Region, Belgium.

		<ul style="list-style-type: none"> ▪ Electrification with Renewables: Enhancing Healthcare Delivery in Burkina Faso report⁶⁹ (October 2022) [Click here].
		<ul style="list-style-type: none"> ▪ Decentralised Solar Electricity for Agri-food Value Chains in the Hindu Kush Himalaya Region⁷⁰ (September 2022) [Click here].
		<ul style="list-style-type: none"> ▪ Report for technical recommendations, including design, of decentralised RE to electrify health centres Mali and Sao Tome & Principe⁷¹.
6th International Off-grid Renewable Energy Conference (IOREC) *		<ul style="list-style-type: none"> ▪ 6th edition of IOREC in Nigeria (November 2022).⁷² [Postponed].
SIDS Lighthouses Initiative* ⁷³		<ul style="list-style-type: none"> ▪ Workplan development and implementation with CCCCC/CCREEE and SIDS DOCK.
		<ul style="list-style-type: none"> ▪ Updating the knowledge base in SIDS: Cost data collection and cost-benchmarking tool development.
		<ul style="list-style-type: none"> ▪ Implementation and capacity building, as well as completion of Quicksans for Belize⁷⁴, Barbados and Grenada.
		<p>Initiative coordination⁷⁵:</p> <ul style="list-style-type: none"> ▪ Five new partners joined the initiative: Curaçao, Dominica, The Netherlands, Caribbean Climate Smart Accelerator (CCSA) and University of Malta. Total: 40 SIDS⁷⁶ and 36 development partners.⁷⁷

⁶⁹ Supported by the Government of the Walloon Region, Belgium.

⁷⁰ Supported by the Government of the Walloon Region, Belgium.

⁷¹ Supported by the Government of the Walloon Region, Belgium.

⁷² Supported by the Government of the Walloon Region, Belgium.

⁷³ Supported by the Government of Denmark and Germany, as part of the German Government International Climate Initiative (IKI). The Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) supports this initiative based on a decision adopted by the German Bundestag.

⁷⁴ Supported by the Government of Denmark.

⁷⁵ Supported by the Government of Denmark and Germany, as part of the German Government International Climate Initiative (IKI). The Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) supports this initiative based on a decision adopted by the German Bundestag.

⁷⁶ Antigua & Barbuda, Aruba, Bahamas, Barbados, Belize, British Virgin Islands, Cabo Verde, Comoros, Cook Islands, Cuba, Curaçao, Dominica, Dominican Republic, Fiji, Grenada, Guyana, Kiribati, Maldives, Marshall Islands, Mauritius, Micronesia (Federated States of), Montserrat, Nauru, New Caledonia, Niue, Palau, Papua New Guinea, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Samoa, Sao Tome and Principe, Seychelles, Singapore, Solomon Islands, Tonga, Trinidad and Tobago, Turks and Caicos, Tuvalu, Vanuatu.

⁷⁷ Denmark, France, Germany, Italy, Japan, New Zealand, Norway, The Netherlands, United Arab Emirates, United States of America, Association of the Overseas Countries and Territories of the European Union, Caribbean Climate-Smart Accelerator (CCSA), Caribbean Electric Utility Services Corporation, CARILEC, Clean Energy Solutions Center, Clinton Climate Initiative, ENEL, European Union, Greening the Islands, Island Innovation, Islands and Small States Institute (ISSI), Indian Ocean Commission, International Renewable Energy Agency, Organisation of Eastern Caribbean States, Pacific Islands Development Forum, Pacific Community (SPC), Pacific Power Association, Rocky Mountain Institute - Carbon War Room, Solar Head of State, Sustainable Energy for All, Sur Futuro Foundation, United Nations Development Programme, United Nations Office of the High Representative for the Least Developed Countries, Landlocked Developing Countries and Small Island Developing States (UNOHRLLS), University of Delaware, University of Malta, World Bank.

		Events⁷⁸: <ul style="list-style-type: none"> ▪ Solomon Islands Renewable Readiness Assessment – Expert Workshop (March 2023).
		<ul style="list-style-type: none"> ▪ Pacific Regional Capacity Building on Energy Management and Energy Audits (February 2023).
		<ul style="list-style-type: none"> ▪ Virtual Training Workshop on Climate Financing for Small Island Developing States – in cooperation with the Ministry of the Environment of Japan and the Green Climate Fund (February 2023).
		<ul style="list-style-type: none"> ▪ SIDS Ministerial – Climate Pledges to Action: Amplifying Energy Transition for Sustainable Development in SIDS during the 13th Session of the IRENA Assembly (January 2023) [Click here].
		<ul style="list-style-type: none"> ▪ Capacity Building on PPA for Caribbean SIDS, St. Vincent and the Grenadines. (November 2022) [Click here].
		<ul style="list-style-type: none"> ▪ Solomon Islands RRA: Stakeholder consultations. (November 2022).
		<ul style="list-style-type: none"> ▪ Event on <i>Closing the Gap: Securing Lives, Creating Livelihoods in Small Islands Developing States</i>, held during COP27 in Egypt. (November 2022) [Click here].
		<ul style="list-style-type: none"> ▪ Capacity Building Initiative on <i>Design of Bankable Power Purchase Agreements (PPAs) in the Atlantic, Indian Ocean and South China Sea (AIS) Small Island Developing States (SIDS)</i> (September 2022).
		<ul style="list-style-type: none"> ▪ A two-day event on <i>Energy Management and Energy Audits in Small Island Developing States</i> (June 2022) [Click here].
		<ul style="list-style-type: none"> ▪ Technical webinar support series : <i>Grenada Capacity Building Programme for Energy Management & Energy Audits</i> (April 2022) [Click here]; (May 2022) [Click here]; (June 2022).
		<ul style="list-style-type: none"> ▪ Capacity Building on Climate Investment and Financial Flows in the Energy Sector in the Seychelles. (April 2022) [Click here].
		<ul style="list-style-type: none"> ▪ <i>Training Workshop on Climate Financing for Small Island Developing States</i> – co-organized with the Ministry of the Environment of Japan & Green Climate Fund (March 2022) [Click here].
		<ul style="list-style-type: none"> ▪ Technical webinar series on <i>Accelerating the development of Ocean Thermal Energy Conversion (OTEC) in SIDS</i> (February 2022) [Click here].
		Publications⁷⁹ <ul style="list-style-type: none"> ▪ Annual Progress Report: SIDS Lighthouses Initiative – Progress and way forward (August 2022) [Click here].

⁷⁸ Supported by the Government of Denmark and Germany.

⁷⁹ Supported by the Government of Denmark and Germany, as part of the German Government International Climate Initiative (IKI). The Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) supports this initiative based on a decision adopted by the German Bundestag.

		<p>Digital Story⁸⁰</p> <ul style="list-style-type: none"> Short Videos Showcasing Human Impacts of Energy Transition Efforts in Small Island Developing States.
Global Geothermal Alliance (GGA)*		<p>Facilitation and coordination of the GGA⁸¹:</p> <ul style="list-style-type: none"> Growing GGA constituency. New GGA Member State: Panama. Total 51 Countries⁸² and 54 Partners⁸³.
		<p>GGA website developed into a knowledge sharing platform:</p> <ul style="list-style-type: none"> Updated geothermal profiles: Africa [Click here], Europe [Click here], Asia [Click here], Latin America and Caribbean [Click here], North America [Click here].
		<ul style="list-style-type: none"> Updated GGA Brochure [Click here].
		<ul style="list-style-type: none"> Themes on International Training Centres [Click here] and Geothermal Resource Assessment Methodologies. [Click here].

⁸⁰ Supported by the Government of Denmark and Germany, as part of the German Government International Climate Initiative (IKI). The Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) supports this initiative based on a decision adopted by the German Bundestag.

⁸¹ Supported by the Government of Japan.

⁸² 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, Montserrat, New Zealand, Nicaragua, Pakistan, Panama, Papua New Guinea, Peru, Philippines, Poland, Portugal, Romania, Saint Vincent & the Grenadines, Solomon Islands, Spain, Switzerland, Tonga, Türkiye, Uganda, United Kingdom, United Republic of Tanzania, United States of America, Uruguay, Vanuatu, Zambia, Zimbabwe.

⁸³ 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), Atlantic Council, Australian Geothermal Association, Canadian Geothermal Energy Association, Bulgarian Association on Geothermal Energy, Caribbean Electric Utility Services Corporation (CARILEC), Centro Mexicano de Innovación en Energía Geotérmica (CeMIEGeo), Chilean Geothermal Council, Chinese Renewable Energy Industries Association (CREIA), Chinese Renewable Energy Engineering Institute, Colombian Geothermal Association, Eastern African Power Pool, Ecuadorian Geothermal Association, Energy Institute Hrvoje Požar (Croatia), European Geothermal Energy Council, Geothermal Canada, GEODEEP - Geothermal Cluster for Heat and Power(France), Geoscience Ireland, Geothermal Energy Advancement Association, Geothermal Power Plants Investors Association (Türkiye), Geothermal Rising (USA), Geothermal Training Programme in Iceland (GRO GTP), Iceland GeoSurvey, Iceland Geothermal Cluster Initiative, Iceland School of Energy, Inter-American Development Bank, International Geothermal Association, International Renewable Energy Agency, Islamic Development Bank, Macedonian Geothermal Association, Mexican 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, Peruvian Renewable Energy Association, Regional Center for Renewable Energy and Energy Efficiency, Renewable Energy and Energy Efficiency Women's Network, 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, Women in Geothermal, World Bank.

		<p>Revised geothermal heating and cooling targets for the GGA:</p> <ul style="list-style-type: none"> IRENA and the International Geothermal Association in support of the Global Geothermal Alliance aims to raise ambition on an existing goal of the GGA – to achieve more than two-fold growth in geothermal heating by 2030 through the joint submission of the IRENA -GGA – IGA Energy Compact “Scaling up geothermal heating and cooling globally” [Click here].
		<ul style="list-style-type: none"> Development of a strategic and forward- looking implementation plan for the GGA.
		<p>Publications:</p> <ul style="list-style-type: none"> “Powering Agri-Food Value Chains with Geothermal Heat – A guidebook for policy makers” report (June 2022) [Click here].
		<ul style="list-style-type: none"> “Global Geothermal Market and Technology assessment” report (February 2023) [Click here].
		<ul style="list-style-type: none"> “Strategic Heating and Cooling Plan for Mongolia” report.
		<p>Events</p> <ul style="list-style-type: none"> Validation Workshop on the <i>Development of a Strategic Heating Plan for Mongolia</i> (March 2023) [Click here].
		<ul style="list-style-type: none"> Global Geothermal Alliance Annual Meeting, held during 13th Session of the IRENA Assembly (January 2023)
		<ul style="list-style-type: none"> 2nd High-Level Conference of the Global Geothermal Alliance – <i>Geothermal: Driving the Energy Transition for Fostering Sustainable Development & Climate Action</i> (September 2022) [Click here].
		<ul style="list-style-type: none"> <i>Powering Agri-food Value Chains with Geothermal Heat to Enhance Food Security and Climate Action – Africa</i>, Training, Djibouti (November 2022).
		<ul style="list-style-type: none"> <i>Geothermal as an Integral Energy Solution in SIDS – Workshop</i>, El Salvador (September 2022) [Click here].
		<ul style="list-style-type: none"> <i>Powering agri-food value chains with Geothermal Heat – Latin America Workshop</i>, El Salvador (September 2022) [Click here].
		<ul style="list-style-type: none"> <i>Powering agri-food value chains with Geothermal Heat – Africa Capacity Building Webinar</i> (July 2022) [Click here].
		<ul style="list-style-type: none"> <i>Powering agri-food value chains with Geothermal Heat – Global Capacity Building Webinar</i> (June 2022) [Click here].
		<ul style="list-style-type: none"> In collaboration with Mongolian Ministry of Energy, hosted capacity building events on <i>Integrating Renewable Energy Solutions in Mongolia’s District Heating Systems</i>: <ul style="list-style-type: none"> ➤ <i>Strategic Heating and Cooling Planning</i> (May 2022) [Click here]. ➤ <i>Enabling Framework Conditions and Addressing Technical Barriers</i> (June 2022) [Click here].

Long-term Energy Scenarios initiative and network ^{*84}		Membership and partnerships : <ul style="list-style-type: none"> ▪ Growing membership, with 27 country members and 13 technical partners. Currently in conversations with India, Egypt, Spain, and USA to join the LTES Network.
		<ul style="list-style-type: none"> ▪ Bilateral discussions with technical partners on long-term collaboration, mainly with the following: <ul style="list-style-type: none"> ➢ UNFCCC to continue strengthening the link between long-term energy scenarios and the climate community. ➢ World Energy Council to co-design or co-brand events to support the workstream on participatory and consultation processes for developing long-term energy scenarios for the clean energy transition. ➢ Joint Research Centre (JRC) European Commission, to create a collaborative agreement to address scientific challenges in achieving climate neutrality through accelerated clean energy solutions that includes, among other aspects, knowledge exchanges on Long-Term Energy Scenarios. ➢ GET.transform/GIZ on long-term scenarios and planning in the Global South.
		<ul style="list-style-type: none"> ▪ Workplan survey conducted with members and partners to formulate May 2023-April 2024 working plan.
		Events : Webinar series on <i>Long-Term Energy Scenarios (LTES) For Developing National Energy Transition Plans In Africa</i> (January 2022) [Click here].
		<ul style="list-style-type: none"> ▪ Side event at the Berlin Energy Transition Dialogue 2022 on <i>Insights from Net-zero LTES for National Energy Planning</i> (March 2022) [Click here].
		<ul style="list-style-type: none"> ▪ Side event at the International Energy Workshop 2022 on <i>Participatory Processes in Long-term Energy Scenario Development</i> (May 2022).

⁸⁴ Supported by the Governments of Denmark and Germany.

		<ul style="list-style-type: none"> ▪ Side events at the CEM/MI (September 2022) [Click here]. <ul style="list-style-type: none"> ➤ <i>Job Creation and Gender Balance in the Energy Transition: Priority Actions and Perspectives.</i> ➤ <i>Pathways for Rapid Decarbonization of Power Systems.</i> ➤ <i>The Breakthrough Agenda Report 2022: Accelerating Sectoral Transitions through Stronger International Collaboration.</i> ➤ <i>LTES Campaign Global dialogue on long-term transition pathways for road transport</i> ➤ <i>Facilitating and Accelerating PtX-Market Ramp-up.</i> ➤ <i>Accelerating technology-based carbon removals: BECCS and DAC.</i> ➤ <i>Innovation cooperation: global approaches to enhancing national policies and measuring progress.</i>
		<ul style="list-style-type: none"> ▪ 4th International Forum on Long-Term Energy Scenarios (December 2022). [Click here].
		<ul style="list-style-type: none"> ▪ Side event at 13th IRENA Assembly. <i>National frameworks for scenario development towards net-zero target-setting</i> (January 2023). [Click here].
		<ul style="list-style-type: none"> ▪ Side event at Senior Official’s Meeting Clean Energy Ministerial “<i>Accelerating the Clean Energy Transition: Insights from the Long-Term Energy Scenario (LTES) Initiative</i>” (March 2023). [Click here].
		<ul style="list-style-type: none"> ▪ Asia webinar series on <i>Long-Term Energy Scenarios (LTES) for the clean energy transition</i> (at planning state, to be launched in Q3 2023).
		<p>Publications and analysis :</p> <ul style="list-style-type: none"> ▪ National Energy Transition Planning dashboard update (March 2022) [Click here].
		<ul style="list-style-type: none"> ▪ “Scenarios for the energy transition – Experience and good practices in Latin America and the Caribbean” report (July 2022) [Click here].
		<ul style="list-style-type: none"> ▪ “Scenarios for the energy transition – Experience and good practices in Africa” report (January 2023) [Click here].
		<ul style="list-style-type: none"> ▪ “Long-term energy scenarios and low-emission development strategies: Stocktaking and alignment” report (January 2023) (with UNFCCC). [Click here].
		<ul style="list-style-type: none"> ▪ Participatory processes for developing long-term energy scenarios in governments.
Peer-to-Peer Network “Energy Transition Connect”		<ul style="list-style-type: none"> ▪ Support provided by an ETC expert towards development of Strategic Heating Plan for Mongolia under GGA.
		<ul style="list-style-type: none"> ▪ Support provided by an ETC expert towards development of a guidebook of firm capacity for variable renewable energy in Central America.
Coalition for Action		<p>Reports/briefs published, and events held:</p> <ul style="list-style-type: none"> ▪ Public-Private Dialogue at the 12th IRENA pre-Assembly on circular economy and end-of-life management of renewables (January 2022) [Click here].

		<ul style="list-style-type: none"> Coalition Annual Strategy Meeting (January 2022).
		<ul style="list-style-type: none"> Coalition for Action “Decarbonising End-Use Sectors: Green hydrogen certification” brief (March 2022) [Click here].
		<ul style="list-style-type: none"> Coalition for Action country papers for Coalition Business and Investors Group: the Philippines (March 2022) [Click here].
		<p>Reports/briefs and events:</p> <ul style="list-style-type: none"> Coalition for Action regional/country papers of the Coalition Business and Investors Group: West Africa and Argentina and associated bilateral meetings with government representatives.
		<ul style="list-style-type: none"> Coalition for Action white papers on “Community energy benefits” and a “Community energy checklist for governments.”
		<ul style="list-style-type: none"> Coalition for Action white paper on “Towards 100% renewable energy: Opportunities and challenges of sector coupling” [Click here].
		<ul style="list-style-type: none"> Coalition for Action brief on “Comparative review of 100% renewable energy scenarios”.
		<ul style="list-style-type: none"> Coalition for Action white paper on ““Boosting social support and public acceptance for a sustainable energy transformation”.
		<ul style="list-style-type: none"> Coalition for Action brief on “Finding Common Ground for a Just and Renewable Energy Future: Labour and employers’ perspectives on a just transition.”
		<ul style="list-style-type: none"> Coalition for Action series of webinars: labour perspectives, employers’ perspectives and a joint discussion on a just transition convening Coalition members, labour unions and selected governments.
		<ul style="list-style-type: none"> Coalition for Action white paper on “Best practices in integrating renewables into agriculture” and associated webinar with stakeholders.
		<ul style="list-style-type: none"> Coalition for Action white paper on “Making green hydrogen economically viable: opportunities, challenges and key recommendations” and associated webinar with stakeholders.
		<ul style="list-style-type: none"> Coalition for Action white paper on “Green hydrogen and decarbonisation: Creating socioeconomic benefits”.
		<ul style="list-style-type: none"> IRENA Report on “The Role of Citizens in the Energy Transition”.
Resilient Remote Communities ^{*85}		<ul style="list-style-type: none"> Decentralised Renewable Energy Solutions for Remote and Isolated Communities during 13th Session of the IRENA Assembly (January 2023).

⁸⁵ Supported by the Government of Canada.

		<ul style="list-style-type: none"> ▪ Guidebook for implementation of decentralised RE in isolated remote communities..
		<ul style="list-style-type: none"> ▪ <i>Transitioning remote communities to renewables</i> event during COP27, Egypt (November 2022).
Youth Forum		<ul style="list-style-type: none"> ▪ Third IRENA Youth Forum during the 12th Assembly to showcase youth-led solutions to accelerate the energy transition and achieve climate objectives (January 2022) [Click here].
		<ul style="list-style-type: none"> ▪ Launch of the IRENA Global Council on Enabling Youth Action for SDG 7 to drive forward youth-led action on energy access and the transition to a renewable energy future (February 2022) [Click here].
		<ul style="list-style-type: none"> ▪ Fourth IRENA Youth Forum during the 13th Assembly to discuss about empowering youth to lead an equitable energy transition for a sustainable future (January 2023) [Click here].
		<ul style="list-style-type: none"> ▪ 2022/2023 edition of the IRENA Student Trainee Programme to support Governing Body Meetings.
		<p>Development of Italy-IRENA Action for Climate Toolkit (I ACT), in cooperation with UNICEF and SDG 7 Youth Constituency that includes workshop plans, presentations and background materials that youth leaders can use to deliver peer trainings within their schools, communities and constituencies. Training of peer educators from around 50 countries held April/May 2023.⁸⁶</p>
		<ul style="list-style-type: none"> ▪ Launch of the IRENA Renewables Accelerator Programme for Youth (May 2023).
	Youth Talk	
		<ul style="list-style-type: none"> ▪ Career guide for young people to determine skill requirements to pursue a professional career in sustainable energy sectors.
		<ul style="list-style-type: none"> ▪ Virtual training workshop for youth on Energy System Modelling for the Energy Transition (September 2022) [Click here].
		<ul style="list-style-type: none"> ▪ Eighth edition of the IRENA Youth Talk “Promoting a Just Energy Transition powered by Youth innovation” to be held at the Youth Energy Forum during the World Utilities Congress (May 2023).
		<ul style="list-style-type: none"> ▪ IRENA Youth Workshop “Accelerating Energy Transition through Peer-to-Peer Education” to be held at the Youth Energy Forum during the World Utilities Congress (May 2023).
		<ul style="list-style-type: none"> ▪ IRENA-IEEE Townhall “Climate and Sustainability Processes and Engagement of Young Professionals in a Global Setting” (April 2023).
		<ul style="list-style-type: none"> ▪ Ninth edition of the IRENA Youth Talk organised in cooperation with the Arab Youth Center as part of the Youth4Capacity initiative during UNFCCC Bonn

⁸⁶ Supported by the Government of Italy.

		Conference (June 2023).
Legislators Forum		▪ Seventh IRENA Legislators Forum during the 12 th Assembly to discuss parliamentary and regulatory actions to shift the energy transition from commitments to implementation in the Decade of Action (January 2022) [Click here] .
		▪ IRENA Legislators Dialogue “G20: from Commitment to Action”, held during G20 Energy Week (August 2022) [Click here] .
		▪ IRENA Legislators Dialogue “Multi-Actor Partnerships for Renewable Energy” held at COP27 (Nov 2022) [Click here] .
		▪ Eighth IRENA Legislators Forum during the 13 th Assembly to discuss about national strategies on green hydrogen aiming at ensuring a more sustainable energy transition through international co-operation (January 2023) [Click here] .
		▪ Review for Parliamentarians issue n.14.
IRENA Student Leaders Programme		▪ 10-week virtual training for university students consisting of lectures and research assignments. Over 200 trainees from around the world took part in the Spring 2022 Cohort.

IV. Source of Advice

Core assessed and core non-assessed resources (in USD thousands): USD 7,146. Outputs supported by additional voluntary contributions are footnoted.

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.

Outputs	Status	Description
Renewable Readiness Assessments *		▪ RRA of Burkina Faso. ⁸⁷
		▪ RRA of Bosnia and Herzegovina ⁸⁸
		▪ RRA Solomon Islands ⁸⁹
		▪ RRA of Chad ⁹⁰
		▪ RRA of Somalia.

⁸⁷ Supported by the Government of the Walloon Region, Belgium.

⁸⁸ Supported by the Government of Norway.

⁸⁹ Supported by the Government of Denmark.

⁹⁰ Supported by the Government of the Walloon Region, Belgium.

		▪ RRA of the Kyrgyz Republic (December 2022) [Click here].
Energy Transition Outlooks* (country level)		▪ Indonesia Energy Transition Outlook report ⁹¹ (October 2022) [Click here].
		▪ Malaysia Energy Transition Outlook report ⁹² (March 2023) [Click here].
		▪ Renewable Energy Roadmap for Nigeria* (January 2023) [Click here].
Policy Framework for Energy Transition (PFET) modules		▪ PFET Targets, with capacity building workshops done in the Arab region and Kyrgyzstan.
Renewable Energy Statistics collection and use * ⁹³		▪ Bioenergy survey for monitoring SDGs and NDCs: Ethiopia [phase 1 completed, phase 2 ongoing].
		▪ Bioenergy survey for monitoring SDGs and NDCs – Ghana.
		▪ Bioenergy survey for monitoring SDGs and NDCs – Kazakhstan.
		▪ Bioenergy survey for monitoring SDGs and NDCs – Lesotho.
		▪ Energy surveys for NDC implementation roadmaps – El Salvador.
		▪ Energy surveys for NDC implementation roadmaps – Saint Lucia.
		▪ Energy surveys for NDC implementation roadmaps – Sudan
		▪ Energy surveys for NDC implementation roadmaps – Tonga.
		▪ Data collection support for socioeconomic analysis - Antigua and Barbuda
		▪ Data collection support for socioeconomic analysis – Tonga.
		▪ Integration of energy data into NDC MRV System - Ecuador.
	Renewable Energy Policies for Cities ⁹⁴	
		▪ SolarCity simulator. for San Salvador, El Salvador [Click here].
		▪ SolarCity simulator for Bamako, Mali [Click here].
		▪ SolarCity simulator for Sao Tome, Sao Tome and Principe [Click here].
		▪ SolarCity simulator for Khartoum, Sudan [Click here].
		▪ SolarCity simulator for Sahinbey, Türkiye [Click here].
		▪ SolarCity simulator. for Charlestown, Saint Kitts and Nevis [Click here].
		▪ SolarCity simulator for Basseterre, Saint Kitts and Nevis [Click here].

⁹¹ Supported by the Government of Denmark.

⁹² Supported by the Government of Denmark.

⁹³ Supported by the Government of Norway, Denmark and NDC Partnership.

⁹⁴ Supported by the Government of Japan and Denmark.

		<ul style="list-style-type: none"> ▪ Capacity building on rooftop solar PV potential and the use of the SolarCity simulator <ul style="list-style-type: none"> ➤ Workshop for Mauritius high level government representatives (February 2022, 32 participants). ➤ 2nd NDC Investment Forum under the Caribbean NDC Finance Initiative (July 2022, over 100 participants). ➤ Webinar series on <i>Open-Source Geospatial Solutions for Energy Access</i> organised by the World Resource Institute (April 2022, 40 participants). ➤ Workshop on <i>Project Financing and Design of Bankable (PPA) in AIS and SIDS</i> (Aug 2022) ➤ Webinar on Energy System Modelling for the Energy Transition (September 2022, 25 participants) [Click here] ➤ Workshop on <i>Project Financing and Design of Bankable (PPA) in the Caribbeans</i> (Nov 2022, 35 participants). ➤ Workshop for Saint Kitts and Nevis high level government representatives (January 2023, 19 participants) [Click here]. ➤ Workshop for Sudan high level government representatives (February 2023, 29 participants).
Renewable Energy Education and Skills *		<ul style="list-style-type: none"> ▪ Support provided to the Ministry of Education, UAE on how to integrate renewable energy into the national education curriculum.⁹⁵
		<ul style="list-style-type: none"> ▪ Development of Italy-IRENA Action for Climate Toolkit (I ACT), in cooperation with UNICEF and SDG 7 Youth Constituency that includes workshop plans, presentations and background materials that youth leaders can use to deliver peer trainings within their schools, communities and constituencies. Training of peer educators from around 50 countries held April/May 2023.⁹⁶
Cross-sectoral assessments for decentralised renewable solutions *		<ul style="list-style-type: none"> ▪ Assessment of DRE solutions for fishing sector in Mauritania.
		<ul style="list-style-type: none"> ▪ Assessment of DRE solutions for Agri-food sector in Zimbabwe.
		<ul style="list-style-type: none"> ▪ Assessment of DRE solutions for powering health care in Zimbabwe.
		<ul style="list-style-type: none"> ▪ Assessment of DRE solutions for Agri-food sector in Nepal.
		<ul style="list-style-type: none"> ▪ Assessment of DRE solutions for Agri-food sector in Dominica.
African Continental Power Systems		<ul style="list-style-type: none"> ▪ Support provided to the development, kick- off and timely finalization of six support studies: Green hydrogen, battery energy storage system, hydro reservoir and pump storage plants, geothermal power plants, wind power, solar power.

⁹⁵ Supported by the Government of the United Arab Emirates.

⁹⁶ Supported by the Government of Italy.

Master Plan (CMP) * ⁹⁷		<ul style="list-style-type: none"> ▪ The CMP training programme developed together with AUDA-NEPAD team.
		<ul style="list-style-type: none"> ▪ Continental Africa SPLAT-MESSAGE model completed and undergoing testing.
		<ul style="list-style-type: none"> ▪ Training session #1, one week training sessions with the CMP modelling team in Addis. [Click here].
		<ul style="list-style-type: none"> ▪ Training session #2, one week training sessions with the CMP modelling team in Cairo. [Click here].
		<ul style="list-style-type: none"> ▪ Training session #3, one week training sessions with the CMP modelling team in Bonn. [Click here].
		<ul style="list-style-type: none"> ▪ Training session #4, one week training sessions with the CMP modelling team in Kigali. [Click here].
		<ul style="list-style-type: none"> ▪ Side event during 13th Session of the IRENA Assembly (January 2023) to sensitize the CMP initiative and highlight importance of locally owned processes for designing long-term energy scenarios to achieve energy transition.
		<ul style="list-style-type: none"> ▪ Report launched at the 13th Assembly: Planning and prospects for renewable power: North Africa [Click here].
		<ul style="list-style-type: none"> ▪ Model supply region (resource zoning for modelling) report.
		<ul style="list-style-type: none"> ▪ Cooperation framework around energy planning hub with GIZ.
		<ul style="list-style-type: none"> ▪ Cameroon national masterplan development support programme [Click here].⁹⁸
		<ul style="list-style-type: none"> ▪ Development of a capacity building programme for Senegal, with GIZ. <ul style="list-style-type: none"> • Kick-off event [Click here].
		<ul style="list-style-type: none"> ▪ Regional modelling analysis & planning support programme for CAPP countries [Phase 2].⁹⁹ <ul style="list-style-type: none"> ➤ Programme development with stakeholders ➤ Kick off meeting (Sep 2022) ➤ First training (Oct 2022) ➤ Second training (Nov 2022)
		<ul style="list-style-type: none"> ▪ Regional Modelling Analysis & Planning Support Programme for CAPP countries [Phase 1 completed] [Click here].
Climate Action Innovation and Technology: mitigation, adaptation and NDC implementation *		<p>Publications and analysis:</p> <ul style="list-style-type: none"> ▪ Technology and Infrastructure briefs on mitigation analysis in SIDS and LDCs (i.e., Antigua and Barbuda, Saint Kitts and Nevis, Sao Tome and Principe, El Salvador, The Gambia).
		<ul style="list-style-type: none"> ▪ Technology and Infrastructure brief on Power System Resilience for Climate Adaptation.
		<ul style="list-style-type: none"> ▪ Technology and Infrastructure report on “Synthesis of past IRENA grid assessment studies for SIDS”.

⁹⁷ Supported by the Government of Denmark and the Government of Walloon, Belgium, the European Commission and GIZ.

⁹⁸ Supported by the Government of Denmark.

⁹⁹ Supported by the Government of the Walloon Region, Belgium.

	<ul style="list-style-type: none"> Technology and Infrastructure report on “Grid Integration Assessment for the Republic of Mozambique”¹⁰⁰
	<p>Technical assistance and capacity building:</p> <ul style="list-style-type: none"> Technology and Infrastructure toolkit including mitigation analysis, transport sector decarbonization.
	<ul style="list-style-type: none"> Technical assistance for NDC implementation (Sao Tome and Principe, Antigua and Barbuda, Bosnia and Herzegovina, Belarus, Seychelles) and LT-LEDS development support (Kazakhstan and Mongolia).
	<ul style="list-style-type: none"> Capacity building for NDC implementation (Caribbean SIDS, Southeast Asia, Southern Africa).
	<ul style="list-style-type: none"> Grid Assessment and Modelling capacity building workshop(s) in Sub-Saharan Africa.¹⁰¹
	<ul style="list-style-type: none"> Grid Assessment and Modelling technical assistance and capacity building for SIDS (Seychelles)
	<ul style="list-style-type: none"> Implementation of Quicksans activities in SIDS.¹⁰²
	<ul style="list-style-type: none"> Support at a technical and organisational level with planning efforts, to establish an intergovernmental Global Offshore Wind Alliance (GOWA), in collaboration with international stakeholders. 14 member countries joined the Alliance including Australia, Belgium, Colombia, Denmark, Germany, Ireland, Japan, Portugal, Saint Lucia, Spain, the Netherlands, Norway, the UK, and the US.
	<p>Events</p> <ul style="list-style-type: none"> Contribution to the Bonn Climate Change Conference for the Ocean and Climate Change Dialogue (June 2022) [Click here].
	<ul style="list-style-type: none"> Global Offshore Wind Alliance COP27 launch event “Offshore Wind as a Key Solution to the Climate and Energy Security Crises” [Click here].
	<ul style="list-style-type: none"> Global Offshore Wind Alliance High Level Event at IRENA Assembly [Click here].
	<ul style="list-style-type: none"> Kick-off meeting of the Global Offshore Wind Alliance (GOWA) [Click here]
	<ul style="list-style-type: none"> Global Offshore Wind Alliance High Level Event at European Sustainability Energy Week (EUSEW).
	<ul style="list-style-type: none"> Support to other COP27 events and activities. [Click here].
	<ul style="list-style-type: none"> Climate Action webinars in preparation for COP27 and COP28.

¹⁰⁰ Supported by the Government of Norway.

¹⁰¹ Supported by the Government of the Walloon Region, Belgium.

¹⁰² Supported by the Government of Denmark.

		<ul style="list-style-type: none"> ▪ “IRENA’s Energy Transition Support to Strengthen Climate Action: Insight to Impact 2022” report (November 2022) [Click here].
		<ul style="list-style-type: none"> ▪ “The Breakthrough Agenda Report 2022: Accelerating Sector Transitions through Stronger International Cooperation” report (September 2022) [Click here].
		<ul style="list-style-type: none"> ▪ “The Breakthrough Agenda Report 2023” report.
		<ul style="list-style-type: none"> ▪ IRENA is engaging with 83 countries on NDC enhancement and NDC implementation through direct country request and institutional partners.¹⁰³ <ul style="list-style-type: none"> ➢ Scoping/on hold (13) ➢ Work plan development (04) ➢ Implementation of Support (24) ➢ Input to NDC already provided (42) ▪ Climate action support provided to Albania, Antigua and Barbuda, Belarus, Belize, Benin, Bhutan, Burkina Faso, Cameroon, Cuba, Dominican Republic, El Salvador, Eswatini, Fiji, Gabon, Grenada, Indonesia, Jordan, Kyrgyz Republic, Lebanon, Liberia, Mali, Mauritius, Mozambique, Myanmar, Nepal, Nicaragua, Niger, Nigeria, North Macedonia, Papua New Guinea, Paraguay, Saint Kitts and Nevis, Seychelles, South Africa, The Gambia, Tonga, Uganda, United Arab Emirates, Uruguay, Vanuatu, Zambia, Zimbabwe, in reviewing mitigation and adaptation targets set by countries towards the enhancement of their NDC. ▪ Climate action support on-going to Bahamas, Bosnia and Herzegovina, Chad, Colombia, Comoros, Dominica, Ethiopia, Ghana, Honduras, Kazakhstan, Lao PDR, Lesotho, Mongolia, Palau, Panama, Guinea, Malawi, Somalia, Saint Lucia, Saint Vincent and Grenadines, Sao Tome and Principe, Solomon Islands, Sudan, Türkiye, towards the implementation of their NDC. ▪ Climate action support under preparations to Afghanistan, Argentina, Barbados, Cambodia, Ecuador, Egypt, Kiribati, Micronesia, Niue, Samoa, Tuvalu, Saudi Arabia, Pakistan, Trinidad and Tobago, Iraq, Senegal, and Uzbekistan towards the implementation of their NDC.
		<ul style="list-style-type: none"> ▪ IRENA’s contribution to LTS support includes 6 work packages which exist within the LTS development and review in the following countries Ecuador, Kazakhstan, The Gambia, Jordan, and Mongolia.
		<p>Events</p> <ul style="list-style-type: none"> ▪ Support to Latin America and Caribbean Climate Week (July 2020) [Click here].
		<ul style="list-style-type: none"> ▪ Support to Africa Climate Week (Aug-Sept 2022) [Click here].
Climate Investment Platform		<p>CIP coordination</p> <ul style="list-style-type: none"> ▪ 393 partners engaged.

¹⁰³ Supported by NDC CAEP and United Nations Development Programme.

implementation: 14 clusters * ¹⁰⁴		▪ 374 projects registered.
		▪ 175 projects eligible for support.
		▪ 53 projects with the Project Information Documents (PIDs) or Project Information Sheet (PIS) actively supported
		▪ 36 projects that received technical assistance in the form of completed PIDs.
		▪ 9 projects matched to financing partners.
		Other deliverables: ▪ Development of online platform (CRM) to semi-automate the work of the CIP.
Energy Transition Accelerator Financing Platform * (ETAF) ¹⁰⁵		ETAF coordination ▪ USD 400m commitment announced by UAE through ADFD ▪ USD 200m commitment announced by Masdar ▪ USD 300m commitment announced by AIIB ▪ De-risking products commitment announced by Swiss Re. ▪ First Founding Partners meeting held in March 2013 ▪ Second Founding Partners meeting held in April 2023 ▪ The ETAF Charter (Governance document) is currently being discussed and agreed with the partners. ▪ Three solar PV projects (Uzbekistan, total of 897MW) have benefitted from ETAF partners' financial support
		Project Pipeline ▪ 20 project proposals have been submitted on the ETAF Platform. ▪ First set of projects to be presented to partners for funding consideration in April, 2023
Risk Mitigation Facility *		▪ Concept note developed.
		▪ Procurement of consultant services for the Market Assessment.
		▪ Conducted market assessments for affordable financing of DRE solutions to power Agri-food sector in Rwanda and Uganda.
Facilitation and development of a pipeline of projects *		▪ Engagement with UN Agencies, MDBs and other stakeholders to further develop a project pipeline.
Project site assessments and feasibility assessments. ¹⁰⁶		▪ Project site assessment for 12 solar PV, parabolic trough collector, and onshore wind sites earmarked for project development in El Salvador.

¹⁰⁴ Supported by UNDP and the Governments of Denmark (SIDS), Norway; and Germany as 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.

¹⁰⁵ Supported by the Government of Norway and the Abu Dhabi Fund for Development.

¹⁰⁶ Supported by the Government of the Walloon Region, Belgium.

		<ul style="list-style-type: none"> Project site assessment for 9 solar PV, parabolic trough collector, and onshore wind sites earmarked for project development in Mali.
		<ul style="list-style-type: none"> RE potential assessment for 3 countries (Colombia, Mali, and El Salvador).
		<ul style="list-style-type: none"> Extended the project site assessment service to include concentrated solar power (CSP) technologies – parabolic trough collector (PTC), central receiver system (CRS), and linear Fresnel reflector (LFR)
		<ul style="list-style-type: none"> Development of training material on concentrated solar power (CSP) technologies – parabolic trough collector (PTC), central receiver system (CRS), and linear Fresnel reflector (LFR).
		<ul style="list-style-type: none"> Capacity building for: <ul style="list-style-type: none"> ➤ Arab states on resource potential assessment and zoning analysis (February 2022, 29 participants). ➤ African countries on renewable potential assessment, workshop organised by Commonwealth, AfDB, and Chatham House (July 2022, 60 participants). ➤ Mozambique on generation profiles, workshop on grid integration analysis (July 2022). ➤ Mozambique on Wind Power organised by Global Wind Energy Council (October 2022, 33 participants).

ADDITIONAL OUTPUTS		
Strategic Management		
Outputs	Status	Description
Governance Support Office		In-person engagement with Members to discuss and exchange views on enhancing strategic collaboration through the coordination of over 70 high-level Members' visits to the IRENA HQ (Heads of States, Ministers of Foreign Affairs, Ministers of Energy, Special Envoys for Climate Change, etc.).
		<ul style="list-style-type: none"> Engagement and outreach with States in accession and non-Members to enhancing the benefits of becoming an IRENA Member as well as expediting ratification and accession process.
		<ul style="list-style-type: none"> In-person engagement with IGOs, Academia and Private Sectors representatives to discuss and exchange views on enhancing strategic collaboration.
		<p>Governing Body meetings:</p> <ul style="list-style-type: none"> Organisation and conduct of the 12th session of the IRENA Assembly for peer-to-peer engagement among Members and Stakeholders (January 2022) [Click here].
		<ul style="list-style-type: none"> Summary Report of the 12th session of the IRENA Assembly [Click here].

		<ul style="list-style-type: none"> 23rd Council meetings, including the meetings of the Administration and Finance Committee (AFC) and the Programme and Strategy Committee (PSC) [Click here].
		<ul style="list-style-type: none"> Summary Report of the 23rd Council meeting [Click here].
		<ul style="list-style-type: none"> 24th Council meetings, including the meetings of the Administration and Finance Committee (AFC) and the Programme and Strategy Committee (PSC) [Click here].
		<ul style="list-style-type: none"> Organisation and conduct of the 13th session of the IRENA Assembly for peer-to-peer engagement among Members and Stakeholders (January 2023) [Click here].
		<ul style="list-style-type: none"> 25th Council meetings, including the meetings of the Administration and Finance Committee (AFC) and the Programme and Strategy Committee (PSC) (May 2023).
		<p>High-Level Meetings:</p> <ul style="list-style-type: none"> Second edition of the Global High-Level Forum on Energy Transition.
		<p>Permanent Representatives:</p> <ul style="list-style-type: none"> Engagement and outreach with PRs of IRENA and other heads of missions to enhance their role as direct on-the-ground liaison with IRENA, resulting in over 26 ceremonies for the Presentation of Credential Letters and in an increased number (66) of accredited Permanent Representatives.
		<ul style="list-style-type: none"> Seventh edition of the Renewables Talk for Permanent Representatives to launch the Clean Cooking Platform with a view to fostering cooperation and coordinated action in promoting the deployment of clean cooking solutions. (March 2022) [Click here].
		<ul style="list-style-type: none"> Eighth edition of the Renewables Talk for IRENA Permanent Representatives hosted by the Embassy of Switzerland to the UAE aiming at fostering discussion about delivering transformative change to coastal communities and island territories through the innovative power of renewables (April 2022) [Click here].
		<ul style="list-style-type: none"> Ninth edition of the Renewables Talk for IRENA Permanent Representatives hosted by the Embassy of Malta to the UAE (November 2022) [Click here].
		<ul style="list-style-type: none"> Tenth edition of the Renewables Talk for IRENA Permanent Representatives hosted by the Permanent Mission of UAE to IRENA (December 2022) [Click here].
		<ul style="list-style-type: none"> Eleventh edition of the Renewables Talk for IRENA Permanent Representatives hosted by the Delegation of the European Union to UAE (April 2023) [Click here].
New York Liaison Office		<ul style="list-style-type: none"> Facilitation of participation of the UN high-level stakeholders at the twelfth session of the IRENA Assembly.
		<ul style="list-style-type: none"> Provision of technical inputs to the UN-Energy Plan of Action.

	<ul style="list-style-type: none"> Preparation of the inputs to the thematic review of the 2022 UN High-level Political Forum on Sustainable Development [Click here].
	<ul style="list-style-type: none"> Preparation of the official side event of the High-Level Political Forum on Sustainable Development on Beyond the Talk: Financing Renewable Energy to Fuel the SDGs (July 2022) [Click here].
	<ul style="list-style-type: none"> Coordination of IRENA participation in the 2022 UN High-level Political Forum on Sustainable Development, including side events.
	<ul style="list-style-type: none"> Outreach to selected UN bodies and New York based Permanent Missions on the launch of the World Energy Transitions Outlook 2022.
	<ul style="list-style-type: none"> Engagement with the New York based Permanent Missions to the UN with the purpose of strengthening IRENA voice at the UN level.
	<ul style="list-style-type: none"> Engagement with the UN system based in New York for the purpose of exploring opportunities to work closely on the ground.
	<ul style="list-style-type: none"> Support to preparation of the “Tracking SDG 7: The Energy Progress 2022” Report.
	<ul style="list-style-type: none"> Preparation of the inputs to the UN-Energy Annual Report.
	<ul style="list-style-type: none"> Coordination of IRENA inputs to the UN Interdepartmental Taskforce on African Affairs (IDTFAA) with the focus on energy financing, technology and innovation, planning.
	<ul style="list-style-type: none"> IRENA inputs to 2022 ECOSOC Forum on Financing for Development.
	<ul style="list-style-type: none"> Preparation of the concept of engagement with the United Nations Resident Coordinator System.
	<ul style="list-style-type: none"> Participation in the Global South-South Development Expo 2022 and showcasing of IRENA products to the Global South in support to energy transition and achievement of SDGs.
	<ul style="list-style-type: none"> Coordination of IRENA participation in the 2022 UN High-Level Week.
	<ul style="list-style-type: none"> Finalisation of and support to the launch of the joint UNOHRLLS-IRENA report “Scaling up Renewables in LLDCs”.
	<ul style="list-style-type: none"> Statements delivery and discussions on the related aspects of the work of the Second Committee of the 77th General Assembly.
	<ul style="list-style-type: none"> Engagement with the New York based Permanent Missions in light of the General Assembly Resolution “Ensuring access to affordable, reliable, sustainable and modern energy for all”; preparation and dissemination of the inputs to the Resolution.
	<ul style="list-style-type: none"> Preparation of IRENA inputs and facilitation of IRENA participation at the LDC5 conference.
	<ul style="list-style-type: none"> Facilitation of participation of the UN high-level stakeholders at the 13th session of the IRENA Assembly.

Legal Office		The Legal Office has been providing legal advice and guidance in relation to all the areas of activity of the Agency. More than 100 requests for assistance have been processed by the end of the first quarter of 2023 covering, among others, institutional and governance matters; preparation of and advise on the preparation of internal issuances, guidelines and directives; administrative matters and others related to human resources (HR); commercial contracts; collaborative arrangements, agreements and strategic partnerships; communications; and publications matters, as further described below.
		Institutional and governance matters: The Legal Office has provided legal support for: (i) the conduct of the 13 th session of the Assembly; and (ii) the preparation of the 25 th Council. This included facilitating the work of the Credentials Committee in the context of the Assembly session; reviewing the credentials of the Permanent Representatives designated by the Members; supporting individual Members in their submission of the credentials; and reviewing from a legal perspective the relevant documentation submitted to IRENA's governing bodies. The Legal Office has also provided legal support as needed in connection to proposals and queries submitted by the Members to IRENA's Council.
		Internal legal framework: The Legal Office has been providing ongoing legal support to various units with respect to the interpretation and review of the internal issuances, guidelines, and directives.
		Administrative and HR matters: The Legal Office has been closely involved in advising on several HR matters, including but not limited to the review of secondment arrangements agreed with other entities and international organisations.
		Cooperation arrangements and commercial contracts: More than 10 requests have been processed concerning conclusion of cooperation arrangements, including MoUs, partnership agreements, cooperation agreements, voluntary contributions, etc. Several commercial agreements and contracts have been reviewed in addition to the legal support provided to the Contract Review Committee and in relation to other requests for assistance submitted by the Procurement office. With respect to the above, the Legal Office has also been supporting various teams in the negotiations of complex agreements and contracts, including those relevant for the IRENA's platforms, such as ETAF.
		Communications and ICT: The Legal Office has been closely involved in providing legal support on matters relating to the fraudulent use of IRENA's name and logo. The Legal Office has also been closely involved in the review of the Terms of Use of IRENA's website in consultation with the Communications colleagues.

		Publications: The Legal Office has been providing advice on matters related to the use of IRENA's intellectual property, use of IRENA's name and logo, disclaimers, etc.
		Other matters: The Legal Office has been providing ongoing legal support on the integration of various third-party data into the Global Atlas for Renewable Energy and has been supporting other teams with respect to various other initiatives.
Events Unit		<ul style="list-style-type: none"> Events and Missions database for internal and external communication maintained.
		<ul style="list-style-type: none"> Organised 53 events since January 2023, of which 16 were virtual and 37 were hybrid.
		<ul style="list-style-type: none"> Student Leaders Programme, part of Growth@IRENA programme : Around 400 IRENA Alumina students were reached out to be engaged during IRENA's Youth events at Abu Dhabi Sustainability Week 2023
		<ul style="list-style-type: none"> Outreach activities with the UAE, including COP 28 World Government Summit, Abu Dhabi Sustainability Week (ADSW)/ The World Future Energy Summit (WFES), Abu Dhabi Global Markets (ADGM), Abu Dhabi Creative Hub, Dubai Cares, Dubai Electricity & Water Authority (DEWA) Innovation Centre and Arab Youth Council.
		<ul style="list-style-type: none"> Continue to maintain the Fund for Developing Country Representatives (FDCR) and supported the participation of 77 eligible LDC and SIDS Members to attend the 13th IRENA Assembly and related meetings.
Diversification of resource base		<p>Contributions concluded in 2022-23:</p> <ul style="list-style-type: none"> Walloon, Government of Belgium (Various projects, focus on French speaking Africa). Belgium (FDCR) European Commission (RETOs, Innovation) Germany BMWK (G7 support on Hydrogen, WETO and LTS) Germany, GIZ (Senegal) Japan METI (Various projects) Japan MAFF (Circular economy with bioenergy) Luxembourg (Various projects) Republic of Korea (seconded official) Netherlands (Geopolitics) Norway (Various projects, extension with additional funds) UNDP (Climate Promise) United Kingdom, BEIS (Breakthrough Agenda) UNOPS (CVF)
Monitoring and evaluation system		<ul style="list-style-type: none"> Development of IRENA's Theory of Change.
		<ul style="list-style-type: none"> Internal coordination to improve and enhance IRENA's M&E system.

Programmatic reports to the Council and Assembly		23rd meeting of the IRENA Council: <ul style="list-style-type: none"> “Progress Report of the Director-General on the Implementation of the Work Programme and Budget for 2022-2023” [Click here].
		<ul style="list-style-type: none"> Draft Framework for the Medium-term Strategy 2023-2027 [Click here].
		24th meeting of the IRENA Council: <ul style="list-style-type: none"> “Annual Report of the Director-General on the Implementation of the Work Programme and Budget for 2022-2023” [Click here].
		<ul style="list-style-type: none"> Draft Medium-term Strategy 2023-2027 – Report of the Director-General [Click here].
		<ul style="list-style-type: none"> Since January 2022, IRENA Director-General attended 237 events and held 334 bilaterals with representatives from different entities (including regional bodies, non-governmental organisations and the sector as well as XX Governments.)
		<ul style="list-style-type: none"> Active outreach by IRENA Deputy Director-General and Director to Members, intergovernmental organisations, multilateral and regional entities and other stakeholders.
		13th session of the IRENA Assembly: <ul style="list-style-type: none"> “Annual Report of the Director-General on the Implementation of the Work Programme and Budget for 2022-2023”.
		<ul style="list-style-type: none"> Medium-term Strategy 2023- 2027.
		25th meeting of the IRENA Council: <ul style="list-style-type: none"> “Annual Report of the Director-General on the Implementation of the Work Programme and Budget for 2022-2023”.
		<ul style="list-style-type: none"> Draft Framework for the Work Programme and Budget 2024-2025.

Enabling IRENA delivery		
Outputs	Status	Description
Upgrades and enhancements to the IRENA website, platforms, and other IT systems.		<ul style="list-style-type: none"> CIP. back-end processing tool.
		<ul style="list-style-type: none"> ETAF platform enhancements.
		<ul style="list-style-type: none"> Country Engagement Platform.
		<ul style="list-style-type: none"> New IRENA Intranet launched.
		<ul style="list-style-type: none"> Website upgrade - new website launched.

		
		<ul style="list-style-type: none"> ▪ Enhancements in ERP reporting and other modules (HR, Budget, Finance).
		<ul style="list-style-type: none"> ▪ Executive dashboard and other Dashboards enhancements [Staff accounts, Procurement and Ethics dashboard completed, others under development].
		<ul style="list-style-type: none"> ▪ New ERP Recruitment module implemented.
		<ul style="list-style-type: none"> ▪ Continuous support to hybrid and virtual events including collaborative framework meetings.
Efficient budget services		<ul style="list-style-type: none"> ▪ Support across the Agency and to external clients in administration of core funds and voluntary contributions, internal reporting, as well as reporting to donors and governing bodies.
		<ul style="list-style-type: none"> ▪ Budget Section supported development and rollout of internal Executive budget dashboard, and its maintenance.
Delivery of efficient financial services		<ul style="list-style-type: none"> ▪ IRENA and IRENA SPF 2021 Audited Annual Financial Statements submitted to Assembly.
		<ul style="list-style-type: none"> ▪ Provision of full financial services to the Agency.
Support to the Provident Fund operations		<ul style="list-style-type: none"> ▪ Annual meeting of members conducted on 22 March 2022.
		<ul style="list-style-type: none"> ▪ Annual meeting of members conducted on 30 March 2023.
		<ul style="list-style-type: none"> ▪ PF Management Board holds quarterly meetings to review Provident Fund performance.
Efficient procurement services		<ul style="list-style-type: none"> ▪ Maintain open, fair, transparent, and competitive procurement bidding process in line with relevant regulations and policies.
		<ul style="list-style-type: none"> ▪ Develop a process of procurement operation through establishment of 28 Long-Term Agreements LTA to allow for an effective and efficient response and implementation of work programme.
		<ul style="list-style-type: none"> ▪ Automate the annual and quarterly procurement plan continues to be maintained and updated throughout the year.
Effective general and travel services		<ul style="list-style-type: none"> ▪ Administration support, enhancement of Facility Management and other services.
		<ul style="list-style-type: none"> ▪ Health and Safety program continues to take further measures to enhance the work environment.
		<ul style="list-style-type: none"> ▪ Travel Logistic services 793 travel services and 38 workshops worldwide, for the period of 1 January to 31 March 2023.