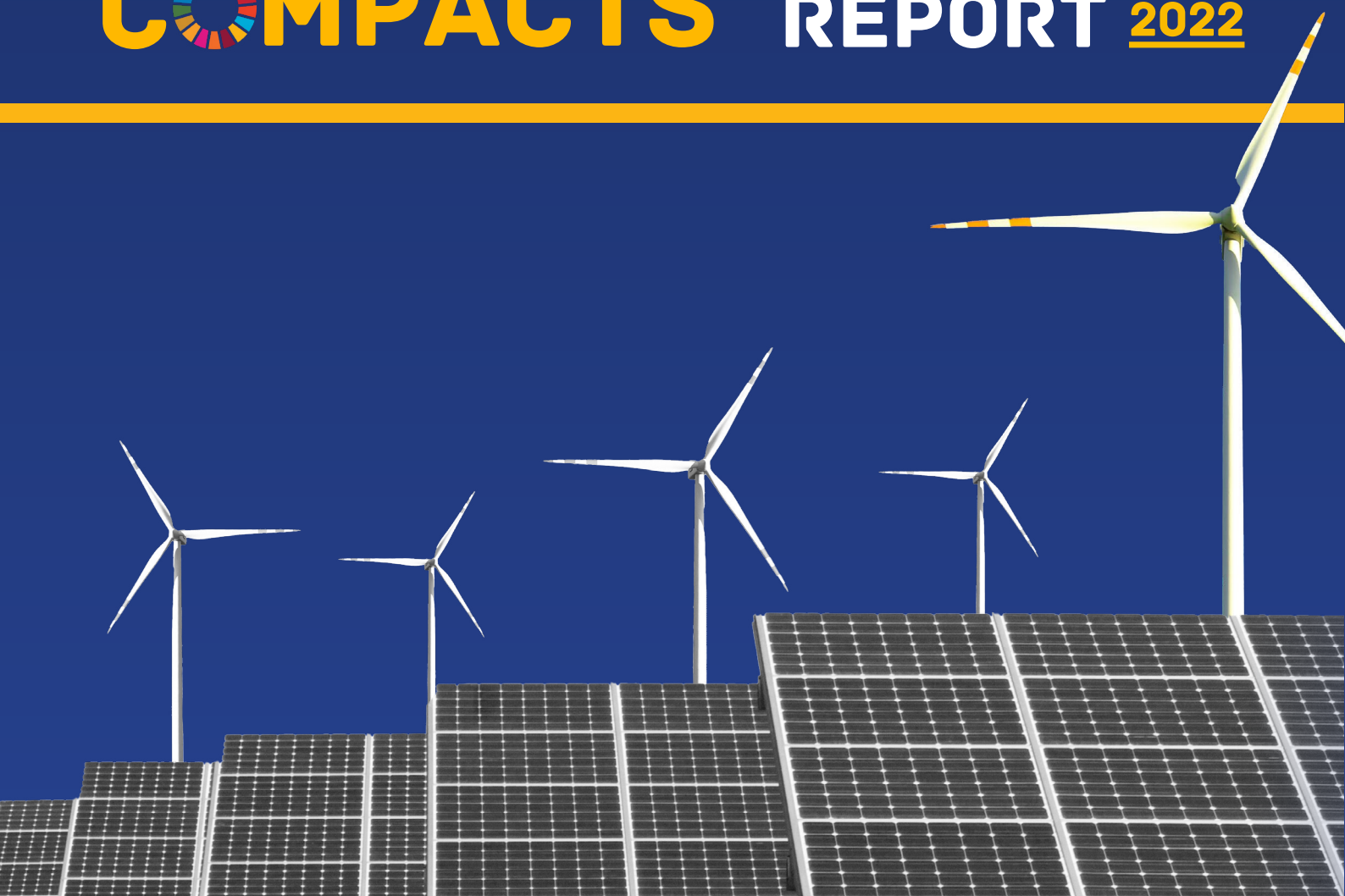
ENERGY COMPACTS | United Nations | UN ENERGY

ENERGY COMPACTS ANNUAL PROGRESS REPORT 2022



EXECUTIVE SUMMARY

Energy Compacts are voluntary commitments of action, with specific targets and timelines to drive progress on achieving SDG7 by 2030. Launched in 2021, the Energy Compacts were a part of the UN High-Level Dialogue on Energy process which resulted in the Global Roadmap for Accelerated SDG7 Action. They are a key vehicle for translating the Roadmap into concrete actions and partnerships. Open to Member States, regional/local governments, private sector companies, NGOs and other organizations, more than 200 Energy Compacts were presented to UN-Energy. Over 180 of them were found to be in line with the UN-Energy principles, and have joined the Compact community since its launch in 2021. Together, the Compact proponents have made ambitious commitments including:

- governments and private sector to mobilize over USD 600 billion to enable action on SDG7;
- governments to provide and improve electricity access for over 800 million people (SDG7.1.1);
- catalytic partnerships to encourage action to provide and improve access to clean cooking for over 2.5 billion people (SDG7.1.2);
- private sector to install as much as 750 GW of clean energy capacity and governments 660 GW (SDG7.2);
- governments to save over 6,000 GW of energy through energy efficiency actions (SDG7.3) by 2030.

A year on from the launch of the Compacts, the Energy Compact Action Network (ECAN), a multi-stakeholder mechanism led by UN-Energy, has brought together the Energy Compact community, identifying the opportunities for various partners of the community to work together to achieve the commitments they have made in a more efficient and timely manner. In addition to this, UN-Energy, through the Energy Compact Action Network, also monitors progress on individual and multi-party Compacts, to identify levers of success as well as opportunities for collaboration and support, and to recognize gaps that require additional action from existing and new Compact proponents.

In the first year since its launch, the Compact community has already invested USD 46 billion towards Compact commitments, provided enhanced electricity access to 6 million people and improved access to clean cooking for 14 million people. Based on the progress reported by 94 Energy Compact proponents, 88 GW of renewable energy capacity has been installed and 2,450 GWh of energy has been saved through energy efficiency measures in the 2021-22 reporting period.

Further, the progress made on the Energy Compacts has also contributed to a number of other Sustainable Development Goals, most notably to SDG13, with 400 million tons of CO2e emissions being averted; to SDG6, with an additional 300,000 people accessing clean, safe drinking water; and to SDG4, with 70,700 new students attending schools through Compact-related actions in the last year.

However, 2021-22 has been a difficult year globally with a number of challenges that have directly and indirectly impacted the global energy markets, as well as having a range of other developmental impacts. The COVID-19 pandemic and the ongoing conflict in Ukraine are the most notable; however, they have also given rise to a series of ripple effects including a food and financial system crisis that most affects the world's most vulnerable and is exacerbated by energy poverty. Based on the responses received from the Energy Compact community, the repercussions of the conflict in Ukraine have affected, or are expected to affect, the pace and scale of SDG7 actions of 70% of Compact proponents. The key challenges reported have related to rising operational costs of renewable energy and energy efficiency interventions and disrupted investment flows. Although the ongoing energy crisis has seen an increase in the use of fossil fuels to address energy supply deficits, the Compact community is optimistic that this will be short-lived and that the long-term effect of the energy crisis will be renewed focus towards a green transition where energy systems are more localized and resilient to international shocks, and consist of a much greater share of renewable energy.

ENERGY COMPACTS

2021-2022 PROGRESS

Energy Compacts are voluntary and specific commitments of action towards SDG7 launched in September 2021. In August 2022, the first annual progress review was conducted across the Compact community to track progress. 94 Compacts reported their progress for the year 2021-22. A summary of the reported progress in presented below.

USD 46 BILLION
invested towards Compact commitments in 2021-22

6 MILLION
people provided with enhanced electricity access

14 MILLION
people provided with access to clean cooking

88 GW
of renewable energy capacity installed

2,450 GWh
of energy saved through energy efficiency measures

415,000
green jobs provided

49%
of all Compacts are seen to be directly contributing to gender progress

PROGRESS ON OTHER SDGs AS REPORTED

SDG3:
1,500 mother-baby pairs benefited from electrified health facilities

SDG4:
70,700 new students attending schools

SDG6:
300,000 people provided access to clean, safe drinking water

SDG13:
130,000 EV charging stations
400 million tons of CO2e emissions averted

01 | ENERGY COMPACTS AS AN AGENT OF ACTION

1.1 GLOBAL CONTEXT

During the last decade, the number of people without access to electricity dropped from 1.2 billion in 2010 to 733 million in 2020 (IEA et al. 2022). However, the progress made is unequal across regions. Under current and planned policies, an estimated 670 - 764 million people would still lack access to electricity in 2030, most of them in sub-Saharan Africa. Similarly, based on current progress, one third of the global population is expected to still lack access to clean cooking in 2030, with 23 countries, all in Africa or Asia, accounting for 80% of the clean cooking challenge (IEA et al. 2022).

Furthermore, by 2050, global electricity demand is expected to increase by 57% (BloombergNEF 2018), from a combination of population growth and the economic development of low and middle-income countries. To meet the Paris Agreement target of not exceeding a global rise of 1.5°C above pre-industrial temperatures, this increased energy demand needs to be met by clean, renewable energy such as solar, hydro and wind energy. Renewable energy has seen unprecedented growth over the last decade, reaching around 17.7% in 2019 (IEA et al. 2022). This needs to be coupled with energy intensity improvements; however, improvements in this metric are not keeping up with required targets. The annual energy intensity improvement will need to average 3.2% until 2030 to meet the stated goals, but progress between 2010 and 2019 only averaged 1.1% (IEA et al. 2022).

In this energy context, burdened further by the reversal of progress brought on by the current global energy crisis, there is a need for commitments to specific actions, not just to long-term goals, and to working together to utilize the competitive advantages of various stakeholders to accelerate the pace of action. The Energy Compact Action Network (ECAN) was launched in May 2022 to bring together offers of support and requests for support on SDG7 from all stakeholders across different areas of the energy spectrum – such as energy access, efficiency and technology – creating opportunities for collaboration between stakeholders seeking similar outcomes while acting on their competitive advantages. Additionally, the Action Network brings together a variety of voluntary commitments, actions, initiatives and partnerships towards SDG7 in a transparent manner, so that their progress and lessons learned can be shared.

This inaugural year of driving action through the Energy Compacts has advanced against the backdrop of a global energy crisis, with the adverse impacts of the COVID-19 pandemic and the conflict in Ukraine being felt across regions, sectors and technology applications. To meet energy demands, some countries have deepened their dependence on fossil fuels with coal use rising by 7% in the European Union in 2022 (IEA 2022), reversing some of the recent progress made towards SDG7. The prudent management of these crises, balancing both energy security and energy transition goals, is of paramount importance, such that decision makers across the world recognise that actions that are not aligned with the goals of the Paris Agreement are further exacerbating risks to energy security in the medium term. Renewable energy is well poised to be a viable alternative as a sustainable, long-term solution to the recent supply shocks as it tends to lend itself towards local production, helping nations to build energy resilience (Marchant 2022).

1.2 WHAT ARE ENERGY COMPACTS?

WHAT:
Voluntary commitments to advance SDG7 covering energy access and efficiency, clean cooking, a just energy transition, and finance and investment.

WHO:
All stakeholders in the global movements on SDG7 including, but not limited to, governments, international organizations, business, civil society, youth, and academia.

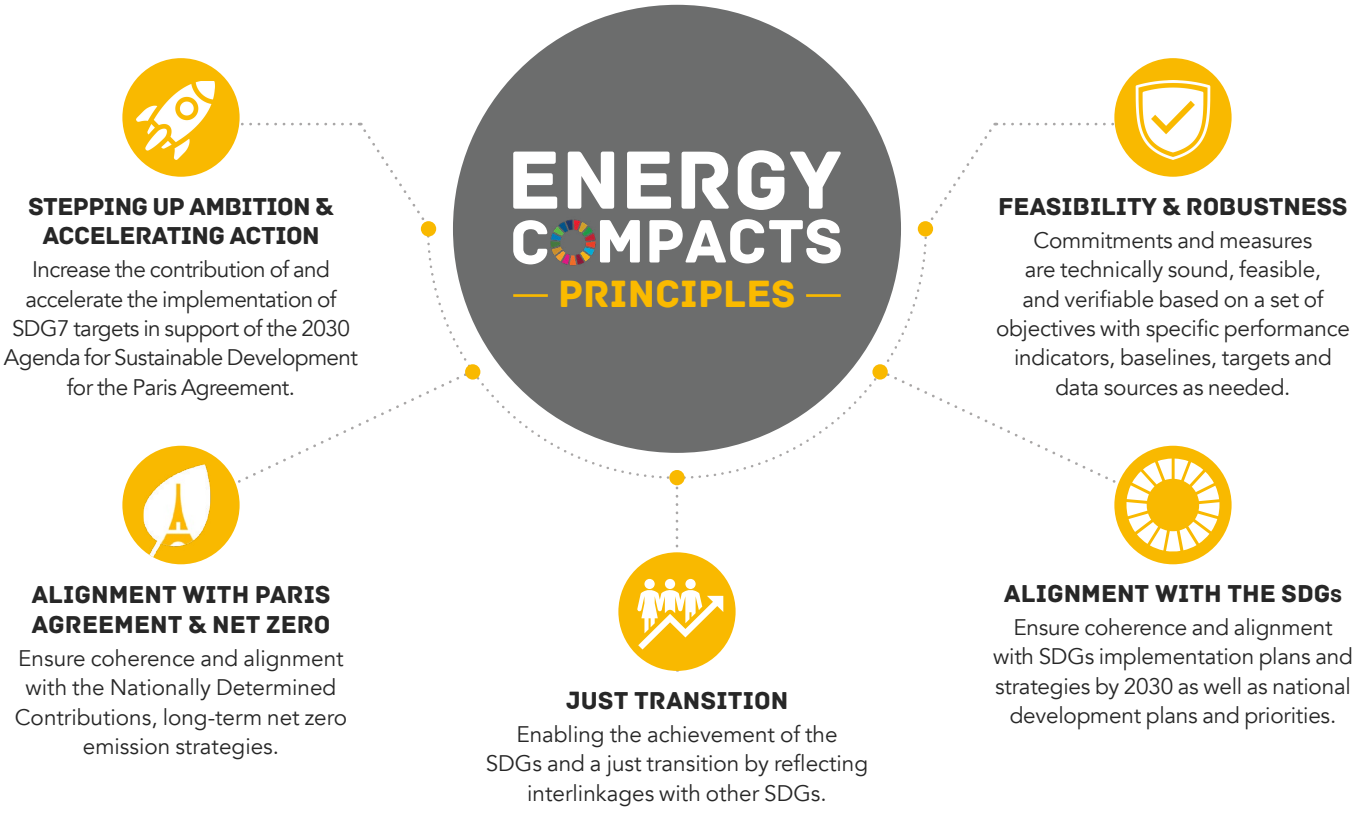
HOW:
Aligning energy commitments with existing commitments such as NDCs and Net Zero Plans covering ambitious actions, policies, finance and investment on SDG7.

WHY:
To provide an inclusive umbrella to support stakeholders and track progress in meeting SDG7 and Net Zero targets.

Energy Compacts are voluntary commitments of action, with specific targets and timelines to drive progress on achieving SDG7 – access to affordable, reliable, sustainable and modern energy access for all. Complementary to the Nationally Determined Contributions (NDC) commitments made to the UNFCCC, Energy Compacts are one of the key outcomes of the 2021 UN High-level Dialogue on Energy (HLDE), aimed at providing a clear set of actions that will help reach the energy targets and goals that stakeholders set for themselves in support of implementing the Global Roadmap for Accelerated SDG7 Action. Open to Member States and non-State actors, such as companies, regional and local governments, and civil society actors, 185 proponents have joined the community since its launch. UN-Energy aims to support the Compact proponents by facilitating partnerships through the Energy Compact Action Network, and making progress on its UN-Energy Pledge (Section 2.1). Throughout the current Decade of Action, UN-Energy will continue to mobilize more Energy Compacts, allow existing Compacts to raise their ambition, track their progress through a simple annual reporting process, and bring together complementary stakeholders to reach shared goals in an accelerated manner.

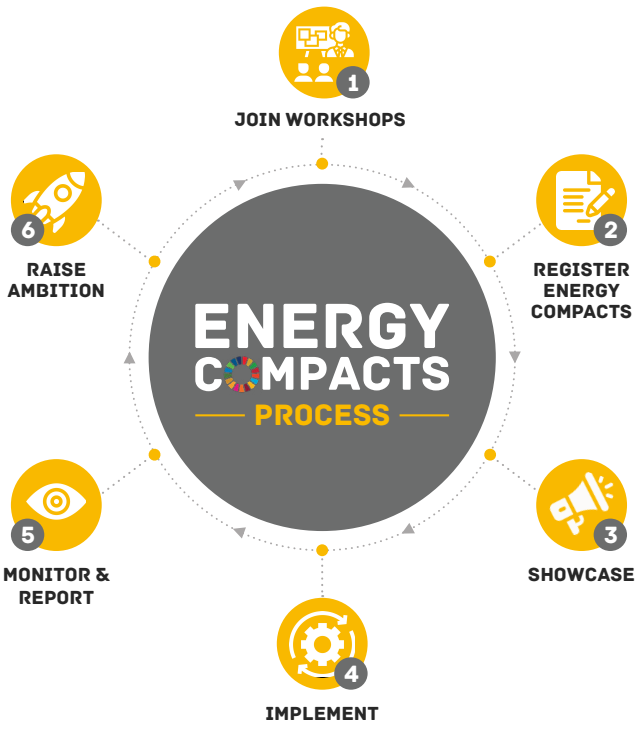
1.3 PRINCIPLES AND PROCESS OF THE COMPACTS

Energy Compacts are designed to be ambitious, action-oriented and measurable commitments to SDG7 in line with the Paris Agreement. These core principles of Energy Compacts mean that they will be effective tools in achieving a sustainable global energy system. Furthermore, by highlighting the interlinkages between SDG7 and the other SDGs, Compacts ensure that access to reliable and sustainable energy for all is advanced in a just and equitable way. This annual reporting process provides a way to track specific performance indicators and targets, encouraging transparency and accountability through the process. Compact proponents are required to give measurable, time-bound targets when submitting their Compacts, as well as establish baseline figures and measures of progress for the monitoring process. The Compact template is designed to facilitate commitments upholding the five UN-Energy principles as described on the following page: stepping up ambition and accelerating action; alignment with Paris Agreement and 2050 Net Zero; just transition; alignment with the SDGs; and feasibility and robustness.



The five key principles of Energy Compacts.

The Energy Compact Action Network community is comprised of all Energy Compact proponents. Workshops are held throughout the year to provide an overview of the concept and process of the Energy Compacts and support interested proponents in developing actions and commitments. Compacts received are then reviewed by UN-Energy to ensure they align with the aforementioned UN-Energy principles. Finalized Compacts are then featured on the UN-Energy website, as well as championed at key forums to showcase leadership and opportunities for collaboration. The Energy Compact Action Network then facilitates collaboration opportunities as well as support for the implementation of the actions that Energy Compact proponents have identified in their Compacts. Every year, proponents are required to share their progress through a simple reporting process. The results of this are aggregated and presented to provide an indicator of progress, as well as a means to ensure transparency. The Energy Compact Action Network can then identify interventions to address the gaps identified through this process.



The process for joining the Compact community.

02 | ENERGY COMPACT ACTION NETWORK

2.1 NEW MOMENTUM: UN-ENERGY PLEDGE AND THE PLAN OF ACTION

As the UN's mechanism for inter-agency collaboration on energy-related issues, UN-Energy plays a critical role in supporting progress on SDG7 and net zero emissions. The High-level Dialogue on Energy in 2021 created considerable momentum, captured in the first-ever Global Roadmap for accelerated SDG7 action in support of the 2030 Agenda for Sustainable Development and the Paris Agreement. UN-Energy has moved forward with two important action agendas in 2022 to operationalize this work and support achievement of the Energy Compacts.

1. The first is the UN-Energy Plan of Action to 2025 which will guide UN-Energy's activities in the upcoming years, providing clarity, focus and expected deliverables to accelerate action worldwide.
2. The second is the UN-Energy Pledge to 2025. In response to the Global Roadmap's call for the UN system to significantly scale up action, UN-Energy presented its commitment in the form of the UN-Energy Pledge.

Taken together, these documents commit the UN system to make rapid strides towards ending energy poverty and advancing the global energy transition as well as to strengthen synergies across the SDGs. UN-Energy, working with all UN system partners and UN Country Teams, commits to helping Member States and their partners to achieve the following aims as they build back better from the COVID-19 pandemic:

THE UN-ENERGY PLEDGE FOR 2025

UN-Energy, working with all UN system partners and UN Country Teams, commits to helping Member States and their partners to attain these milestones to be achieved by 2025 towards SDG7 and net zero emissions, as they build back better from the COVID-19 pandemic.

ACCESS

500 MILLION
more people with electricity access

1 BILLION
more people with access to clean cooking solutions across the world

RESILENCE

30 MILLION
jobs in renewable energy and energy efficiency

RE-DIRECT
fossil fuel subsidies towards clean energy

TRANSITION

100%
increase in modern renewables capacity globally and 100% renewable-based power targets established in 100 countries

3%
annual efficiency improvement in at least 50 countries across the world

FINANCE

DOUBLE
annual clean energy investment globally (relative to the current level)

Raise energy access invesments to **US$40 BILLION/YEAR** of which 50 per cent should be direct to the LDCs

2.2 FUNCTIONS OF THE ACTION NETWORK

Mobilizing strong, inclusive multi-stakeholder partnerships is essential to scale-up efforts at all levels globally. Through the Energy Compact Action Network (ECAN), launched on 4 May 2022, UN-Energy has created a framework to strengthen the momentum brought about by the Energy Compacts, bring new stakeholders aboard, foster coalition-building, and drive a continuous increase in ambition and accelerated action, while catalysing the finance and investment required.

The Energy Compact Action Network creates a marketplace to connect offers of support with requests for support, and provides its members with opportunities to showcase outstanding leadership and innovative practices, while working towards scaling up best practices. It provides a strategic lever to continue to mobilize thousands of multi-stakeholder partners that can drive action deeper and faster, as well as catalysing multi-billion-dollar investments for the benefit of billions of people.

1 MATCHMAKING

Establish the global marketplace to connect offers of support with requests for SDG7 action.

The ECAN brings together offers of support that have been committed through Energy Compacts from the private sector, development partners, donor countries, industry associations and civil society actors to coalesce around the requests for support that have been put forward by developing countries and subnational regions. Through a series of facilitated dialogues, the ECAN will foster multi-party partnerships that will be monitored through pre-established quantifiable progress indicators.

2 BEST PRACTICES

Share lessons learned, results and impacts, and new opportunities regarding the Energy Compacts.

The ECAN, along with Compact proponents, highlights best practices, case studies, examples of actions, policies, business models and market mechanisms that have helped accelerate SDG7 in certain regions or sectors. This structured information sharing is done through an annual convening, through written showcases and web-based tools and exchanges, as well as through twinning exercises between network members and partners.

3 TOPICAL COALITIONS

Improve collaboration, coordination and effectiveness of relevant activities of the network participants.

The ECAN invites, coordinates and enables multi-stakeholder Energy Compact coalitions on under-addressed and high-impact energy issues to support an inclusive energy transition. These coalitions bring together several governments, businesses, development partners and civil society actors on a single topic. Examples include the Green Hydrogen Coalition, the No New Coal Energy Compact, and the 24/7 Carbon Free Energy Compact.

4 TRANSPARENCY & MONITORING

Develop and apply dynamic monitoring frameworks, providing transparency in tracking progress on the Energy Compacts.

The ECAN promotes accountability of the commitments put forth by Energy Compact proponents through a simple, web-based annual reporting process. UN-Energy will seek updates annually on the indicators proponents included in their Compact and showcase progress transparently through the Energy Compact dashboard on the UN-Energy website. In case of limited progress, especially for Member States, the ECAN could be leveraged to provide support.

5 RAISING AMBITION

Mobilize additional Energy Compacts to match the ambition of the Global Roadmap.

The UN-Energy Secretariat works on expanding the breadth and scale of ambitions and commitments made by the members and partners of ECAN. This includes seeking new Energy Compacts to expand coverage of regions and sectors, as well as seeking enhanced commitments to close gaps and ensure that progress on SDG7 is inclusive and leaves no one behind.

03 | ENERGY COMPACT OVERVIEW

3.1 GOVERNMENTS

Since launching in 2021, as many as 185 Energy Compacts have been found to be in line with the UN-Energy principles. Fifty have been from UN Member States, representing around 30% of all UN Member States. Furthermore, there are 14 Compacts from local/regional governments. Due to the varying nature of the challenges individual countries face in meeting SDG7, Member States have identified different elements of SDG7 to prioritize in their Compacts.

3.2 PRIVATE SECTOR

Private sector Compacts are the largest contributing share of Compact commitments by entity type. The commitments put forward by this stakeholder group are diverse in nature and make up one-third of all Compacts (56 in total). Private sector proponents range from large multinational companies to innovative regional start-ups. They span a range of sectors such as energy, digital technology, manufacturing, and even hard-to-abate sectors such as cement and steel.

3.3 CATALYTIC PARTNERSHIPS

The remaining 65 Compacts are from catalytic partnerships comprised of NGOs, civil society organizations, youth groups, philanthropic organizations, intergovernmental organizations, academic institutions, and multi-stakeholder Compacts. This group is critical for enabling action, and ensuring that action on SDG7 is just and equitable, identifying and supporting underserved sectors.

3.4 OVERVIEW OF COMPACT COMMITMENTS TO 2030

SDG 7 AFFORDABLE AND CLEAN ENERGY	GOVERNMENT COMMITMENTS	PRIVATE SECTOR COMMITMENTS	CATALYTIC PARTNERSHIPS (Leveraged outcomes)
FINANCE AND INVESTMENT (USD) access, transition and efficiency	$204 BILLION	$455 BILLION	$1,526 BILLION
ENHANCED ELECTRICITY ACCESS (no. of people)	845 MILLION	1.17 BILLION	2.62 BILLION
ENHANCED CLEAN COOKING ACCESS (no. of people)	33 MILLION	10 THOUSAND	2.71 BILLION
ADDITIONAL CLEAN ENERGY CAPACITY TO BE DEPLOYED (GW)	660 GW	745 GW	4,534 GW
ENERGY SAVINGS TO BE ACHIEVED (GWh)	6,765 GW_H	162 GW_H	>1,000 TW_H

3.5 NEW COMPACTS – WHO HAS JOINED THE FOLD

The Energy Compact mechanism was launched in September 2021 in connection with the first High-Level Dialogue on Energy held under the auspices of the UN General Assembly in over 40 years. Following this event, 170 Compacts were received from a range of stakeholders. Since then, fifteen more proponents have joined the community, as summarized below.

ENTITY	KEY TARGETS
MADAGASCAR Member State	• By 2030, 70% of the population should have sustainable access to modern energy (electricity and lighting). • By 2030, 50% of households should be using improved cooking stoves. • By 2030, 60% of households, businesses and industries, and public infrastructures should adopt electrical and thermal energy efficiency measures.
NEPAL Member State	• By 2030, ensure 15% of the total energy demand is supplied from clean energy sources. • By 2030, ensure 25% of households use electric stoves as their primary mode of cooking. • 90% of all private passenger vehicle sales, including two-wheelers, are of e-vehicles.
RWANDA Member State	• At least 80% of the rural population have access to modern efficient or alternative cleaner fuels and cook stoves technologies. • At least 50% of the urban population use modern efficient cook stoves or cleaner cooking fuels. • Reduce the consumption of wood for charcoal by improving the efficiency of charcoal production and its value chain.
CLEAN COOKING ALLIANCE NGO	• Integrate clean cooking into national and city energy planning and NDCs. • Create favourable and stable policy and fiscal environments to accelerate sustainable clean cooking markets.
REENERGY AFRICA NGO	• Raise at least USD 10 million yearly to finance projects with energy-efficient components and train 1,000 African energy project developers on energy efficiency. • Finance 5,000 clean energy projects in Africa with a minimum cumulative capacity of 100 MW.
INTERNATIONAL ATOMIC ENERGY AGENCY (IAEA) UN/ Intergovernmental Organization	• Train 700 professionals from IAEA Member States in the use of Agency's energy planning tools. • Conduct Integrated Nuclear Infrastructure Reviews with 5 countries. • Collaborate with Member States and other international partners to facilitate R&D on advanced nuclear reactor and fuel cycle technologies.

ENTITY	KEY TARGETS
WORLD METEOROLOGICAL ORGANIZATION CLIMATE ENERGY SERVICES TOOLKIT UN/ Intergovernmental Organization	• By 2024, provide weather water and climate services for the Energy sector to more than 100 countries with a fully developed tool. • By 2030, increase average energy efficiency by 1.2%. • By 2030, provide 2 million new renewable energy related jobs.
WORLD METEOROLOGICAL ORGANIZATION INTEGRATED GLOBAL GREENHOUSE GAS INFORMATION SYSTEM (IG3IS) UN/ Intergovernmental Organization	• Upscale observations-based emission estimates of major greenhouse gases (CO2 and CH4) following WMO methodology. • Assist interested partners in the implementation of the IG3IS methodology, and provide capacity building support. • Include energy sector specific information in the IG3IS guidelines for national and urban contexts.
ACCIONA Private Sector	• By 2030, reduce GHG Scope 1 and 2 emissions by 60% and Scope 3 by 47%. • By 2030, increase renewable capacity to 30 GW. • By 2030, build a public network of 25,000 charging points.
HUSK POWER Private Sector	• Install 5,000 mini-grids that connect 1 million customers, including 500,000 businesses. • Sell 5 million energy efficient appliances. • Install 500 MW of rural commercial and industrial rooftop or ground-mounted solar.
JOHNSON CONTROLS Private Sector	• By 2030, reduce Scope 1 and 2 emissions 55% and Scope 3 emissions 16%. • Enhance global access to clean energy, including devoting 75% of new product R&D to climate-related innovation.
MICROSOFT Private Sector	• Achieve 24/7 carbon free energy. • Drive decarbonization through the procurement of clean energy.
RESQ Private Sector	• By 2025, 60% access to affordable and clean energy in Zimbabwe's rural areas. • By 2025, reduce diesel generator use to 10% of Zimbabweans by providing clean energy alternatives.

ENTITY	KEY TARGETS
SWITCH Private Sector	• Promote energy efficiency across 1,000 households through state of the art mobile application. • Provide solar energy-based power systems to 100,000 persons.
SANTIAGO Multi-stakeholder Compact	• Increase the final use of electricity in the Metropolitan Region through electric public transportation and households' electrification. • Increase the share of solar energy in the Region's electricity generation to at least 44 MWp. • By 2030, transition 100% of the bus fleet to electric.

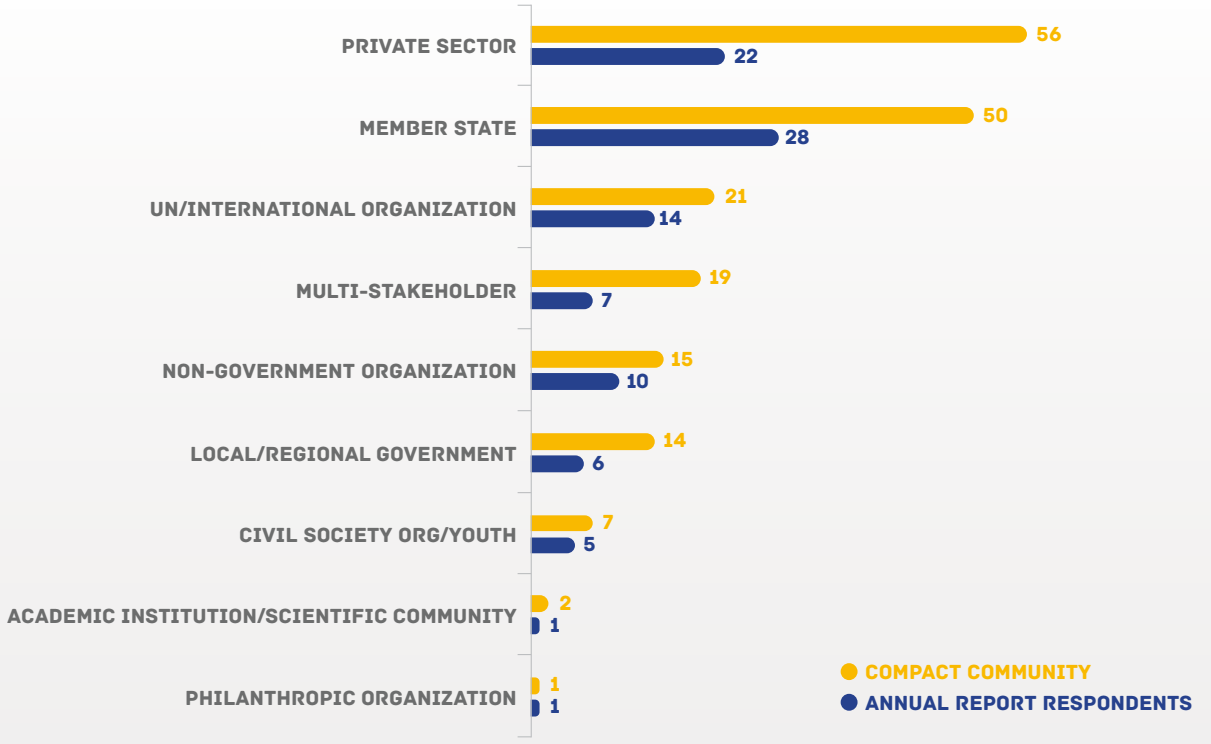
i A summary of the new Energy Compact commitments received since the HLDE.

04 | PROGRESS REVIEW

In August 2022, the Compact community conducted its first annual progress review to track progress made on Compact commitments. This review process was based on a simple online web form including questions aimed at capturing both quantitative and qualitative progress. In total 94 responses were received, 51% of the Compact community. This group was representative of the wider Compact community, in that it was comprised of 36% government submissions, 23% private sector submissions, and 41% catalytic partnerships.

While 43% of respondents had either global actions or actions pertaining to multiple geographic regions, 22% of all responses came from Latin America and the Caribbean, 18% from Asia, 9% from Africa, 6% from Europe, and 2% from Northern America in line with the wider Compact community.

It is important to note that, this being the first year of reporting, a number of Compact proponents were not able to provide responses for the last year (Aug 2021 – Aug 2022). There were a number of reasons for this including that the data only existed in aggregated form over a number of years, their monitoring and reporting cycle did not align with the Energy Compact's cycles, or they had not yet been able to measure the outcomes of their work as they were still in a planning stage. It is expected that a more representative picture of progress for the Compact community will be available in 2023.



A comparison between the Compact community and the annual report responses by Compact entity type.

4.1 PROGRESS ON KEY INDICATORS

SDG7.1.1 – New and improved electricity connections:

Collectively, the Compact community enhanced electricity access for 6 million people in the 2021-22 period. Based on the responses received, this progress was seen to be mainly driven by the private sector and catalytic partnerships. Most of the region-specific progress reported has been in Sub-Saharan Africa. This is very encouraging considering the wide regional disparities in electrification, with 77% of the global unelectrified population living in sub-Saharan Africa (IEA et al. 2022). However, progress needs to be strengthened in future years to reach the 100 million new connections needed per year – 80% in Africa – in order to meet 2030 targets.

SDG7.1.2 – New and improved clean cooking access:

14 million people benefited from enhanced clean cooking access. This was significantly driven by efforts in India where millions of LPG connections were provided to low-income families. Progress was also made in some African countries, both through government efforts and the actions of catalytic partnerships. With only 10 survey respondents reporting progress in clean cooking access, clean cooking continues to need support, particularly in Africa and in South and South-eastern Asia, where clean cooking access rates remain low. As with electricity access and renewable energy generation, private sector engagement could be catalytic in enhancing progress made in clean cooking, where much more action is needed.

SDG7.2 – New installed renewable capacity:

88 GW of renewable energy capacity has been installed by Energy Compact proponents in the last year. This progress has been relatively proportional across the three stakeholder category types (governments, private sector, catalytic partnerships). Across regions, however, progress has not been even, with Central and South Asia representing a third of the progress, and Europe and Latin America and the Caribbean also contributing a significant share. Proponents operating solely in the regions of Oceania and Sub-Saharan Africa reported no progress in this area. This highlights an opportunity to support stakeholders in these regions to transition to modern renewable energy as they also scale up energy access.

SDG7.3 – Energy efficiency savings:

Collectively, the Compact community saved over 2,450 GWh of energy through energy efficiency measures. This is enough energy to power over 700,000 households based on the average worldwide household electricity consumption (Wilson 2022). Noting that only 15 proponents reported progress on this metric, there is considerable potential to continue to reduce demand through scaling action in energy efficiency. Near half of this progress came from private sector companies through digital analytics, AI function in energy's assets, and demand side management. Governments which made progress did so through improved street lighting, promoting efficiency standards across a range of industries, and reviewing their tariff structures.

SDG7 Enabler – Finance commitment:

Almost two thirds of total finance committed by the Compact community (USD 46 billion) came from the private sector, where it was used as investments for renewable or low carbon technologies. Member State finance committed was dominated by Germany, representing 29% of the total investment reported by all respondents. By region, finance from Central Asia, Southern Asia and Northern America made up 15% of all investment reported, totalling USD 7.3 billion. The majority of other finance was deployed by organizations with an international footprint.

	PROGRESS REPORTED IN 2021-22	BENCHMARK FOR ADEQUATE ANNUAL PROGRESS*	TOTAL COMPACT COMMITMENT UNTIL 2030**	KEY TAKEAWAY(S)
ENERGY ACCESS (millions of people)	6	579	4,633	Progress is promising but needs to be sustained and further increased in the years to come to meet 2030 targets.
CLEAN COOKING ACCESS (millions of people)	14	343	2,745	Goal needs to be prioritized in order to meet targets both at scale and in a regionally balanced way.
INSTALLED RENEWABLE ENERGY CAPACITY (millions of people)	88	742	5,940	Strong progress in the year under review; however, more support is required for progress to be more regionally balanced.
ENERGY EFFICIENCY SAVINGS (GWh)	2,458	125,928	1,007,427	Progress has been made but further support towards this goal is required to reduce energy crisis pressures.
FINANCE COMMITTED (USD millions)	46,281	273,341	2,186,730	Good progress, however, more action is required for investment to be more regionally balanced and focused on energy access applications.

* Adequate annual progress is calculated as linear progress over 8 years (12.5%) from 2022 to 2030 to reach goals. This value is based on all 185 Compacts in the Compact community but the reported progress is based on 94 proponents.

** Total Compact commitment is a simple aggregation that does not correct for double reporting across stakeholder categories and as such is indicative only.

*** Coloured icon indicators are set against adequate annual progress as follows: **Red <10 %**, **Yellow 10-15%** and **Green >15%**. This represents the fact that progress will not be linear and is likely to increase in future years.

4.2 PROGRESS ON UN SUSTAINABLE DEVELOPMENT GOALS (SDGs)

The SDGs were set up in 2015 by the United Nations General Assembly as the blueprint to achieve a better and more sustainable future for all. They are an interlinked set of actions that provide direction and guidance on social, economic and environmental sustainable development. As progress is made towards SDG7, it also contributes to other Sustainable Development Goals as energy is the golden thread that links all the SDGs and can be catalytic for progress on other developmental goals. The Energy Compacts have encouraged proponents to consider how their commitments, actions and outcomes align with and enhance other SDGs. In this year's review process, proponents were given an opportunity to reflect on how their progress cut across the other SDGs and provide updates on metrics of progress as summarized below.

The interaction of Compact proponents' progress with other SDGs.
Each bar represents progress of at least 4 but no more than 10 proponents.

1 NO POVERTY

44,000 people benefitted from reduced expenditures on lighting inputs

USD 700,000 saving for those living in poverty

3 GOOD HEALTH AND WELL BEING

200 averted deaths

1,500 mother - baby pairs benefited from electrified health facilities

4 QUALITY EDUCATION

70,700 new students attending schools

1,200 students provided with pico solar lights

6 CLEAN WATER AND SANITATION

300,000 people provided with clean drinking water

1,000s of solar water pumps providing clean water

11 SUSTAINABLE CITIES AND COMMUNITIES

7 new green cities

130,000 EV charging points and 2,000 EVs

270,000 LED street lights

13 CLIMATE ACTION

400 million tonnes of CO_2e averted

620,000 kg of black carbon emissions averted

4.3 PROGRESS ON GENDER EQUALITY

Gender equality, energy access and advancing climate action are inextricably linked, and addressing them together can offer multiple development gains. Women continue to be more vulnerable to the adverse effects of climate change, energy poverty and especially lack of access to clean cooking. In addition, barriers prevent women from benefiting from, contributing to and taking leadership in the clean energy transition on a level playing field with men. The lack of data – as outlined by the SDG7 Technical Advisory Group's 2022 Policy Brief – and the fact that SDG7 is one of only six SDGs with no gender indicator impacts policymakers' capacity to make evidence-based decisions. Additionally, it also affects the efficiency and effectiveness of Energy Compacts, which are supposed to drive commitment to action. As such, establishing a baseline on the status of the Energy Compacts in terms of their gender sensitivity was seen to be of value and has been included as part of the review process for 2022.

The focus on gender began with the Gender and Energy Compact by which over 75 countries and organizations have come together to catalyze action towards gender equality and women's empowerment and accelerate a just, inclusive and sustainable energy transition. During the request to report on the progress on the energy compacts, compact proponents were asked to evaluate their Compact against four gender categories as described to the right. The self-reporting responses are shown on the following page alongside the expert assessment completed by ENERGIA International Network on Gender and Sustainable Energy (ENERGIA), the Global Women's Network for the Energy Transition (GWNET), and the UN Industrial Development Organization (UNIDO). This provides an understanding of how current Compact commitments align with fostering gender equality and women's empowerment, and how the Compact community currently perceives the gender impact of their Compacts.

1. GENDER NEUTRAL

No explicit / intentional mention of gender or women in the Energy Compact.

2. GENDER AWARE

Explicitly / intentionally address a gender issue(s), and mentions differentiated energy needs of women and men in both the context for the ambition(s) and the guiding principles.

3. GENDER RESPONSIVE

Explicitly / intentionally describes gender actions to address the gender issues and needs identified in the context, and specifies related gender targets in the ambition with the related timeframe.

4. GENDER TRANSFORMATIVE

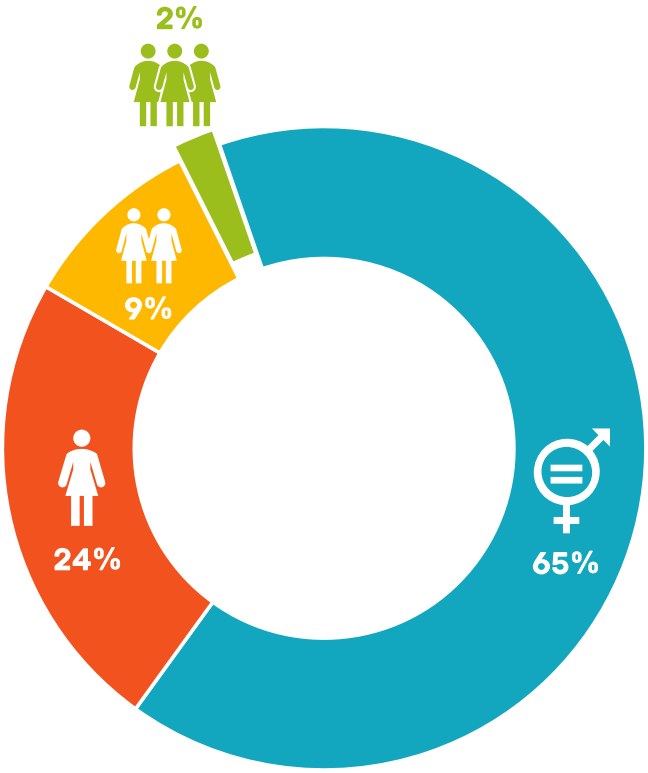
Explicitly / intentionally describes a time-based and measurable gender outcome(s) related to the gender action that contributes to women's strategic interest; allocates required finance and investments for the implementation of the action; and includes gender as an accountability variable to monitor and report on the progress of the gender outcomes.

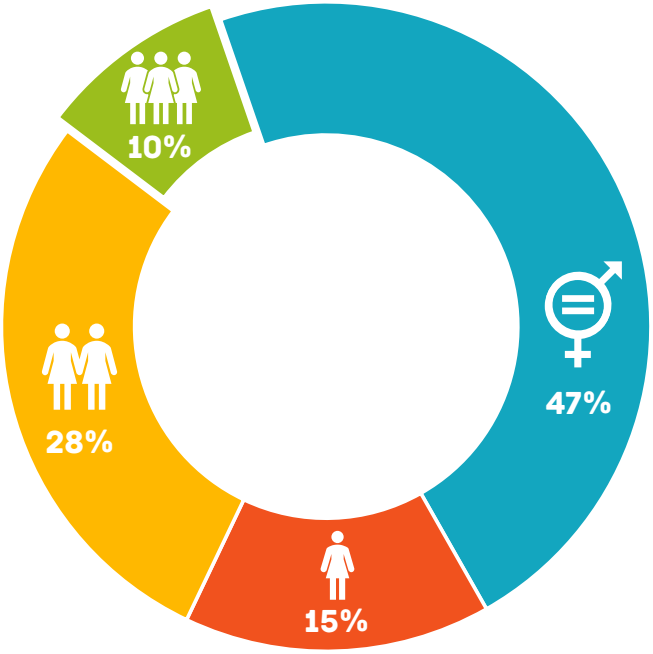
A description of the four gender categories as defined by ENERGIA, GWNET and UNIDO.

COMPACTS BY GENDER CATEGORY AS ASSESSED BY EXPERTS*

GENDER NEUTRAL:	92
GENDER AWARE:	33
GENDER RESPONSIVE:	13
GENDER TRANSFORMATIVE:	3
TOTAL:	**141**

* The experts are ENERGIA, GWNET and UNIDO who lead the Gender and Energy Compact.





COMPACTS BY GENDER CATEGORY AS SELF-ASSESSED

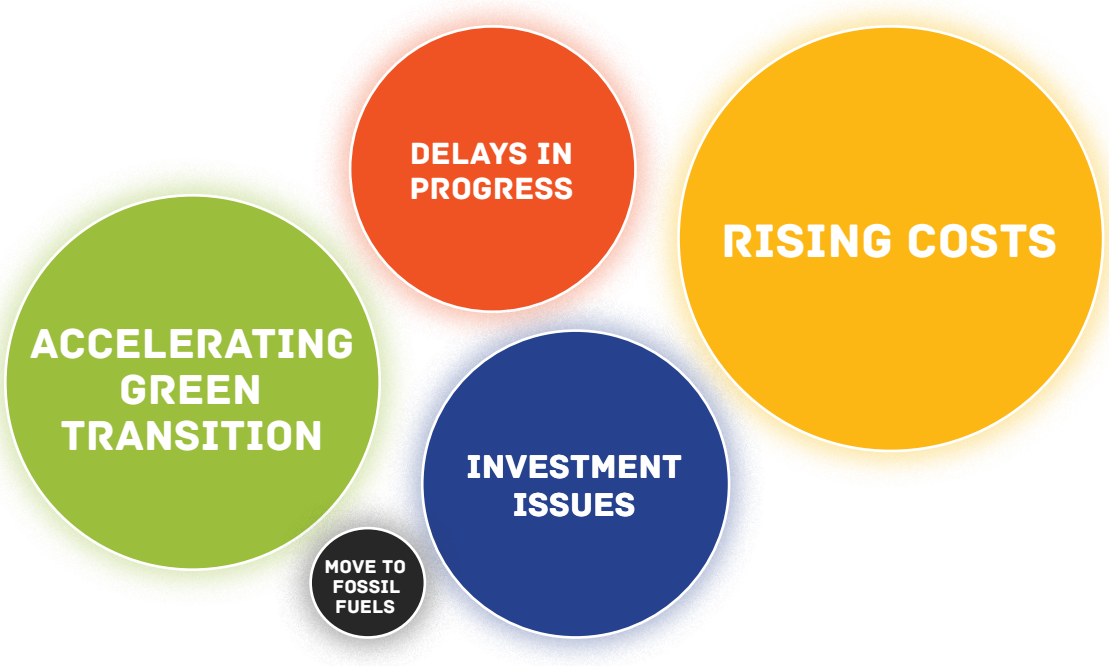
GENDER NEUTRAL:	40
GENDER AWARE:	13
GENDER RESPONSIVE:	24
GENDER TRANSFORMATIVE:	8
TOTAL:	**85**

4.4 IMPACT OF THE ONGOING ENERGY CRISIS

The adverse impacts of COVID-19 on the energy sector have been further exacerbated by the conflict in Ukraine, which has had far-reaching effects on all aspects of the global energy sector – ranging from losing the gains made on energy access to relitigating energy security options in favour of less sustainable fuels. In this year's review, Compact proponents were asked, if and how the energy crisis has affected them. 40% of respondents reported that the energy crisis had affected them, 29% responded that the crisis had not yet affected them but anticipated being affected in some way in the near future, and 20% responded that they did not expect the crisis to affect them.

The most common effects of the energy crisis on Compact proponents were: rising costs of operations especially with activities relating to the use of oil (e.g. transportation distribution); issues with investment flows as a result of investment finances either being diverted to other issues, or investors being hesitant to make new investments at this time; and delays in progress due to uncertainty leading to slower decision making.

A few Compact proponents noted a slight trend towards fossil fuels to meet immediate energy needs but expect this to be a short-term trend. On the whole, despite the challenges that the current energy crisis has posed, many in the Energy Compact community are optimistic about the long-term effect the crisis will have on accelerating green energy transitions as the crisis reaffirms the role of renewable energy in providing a resilient energy future.



The most commonly mentioned effects of the energy crisis by survey respondents. The size of the bubbles corresponds to the frequency of mentions as follows: 'accelerating green transition' = 8 mentions, 'rising costs' = 8 mentions, 'investment issues' = 7 mentions, 'delays in progress' = 5 mentions, and 'move to fossil fuels' = 2 mentions.

05 | SHOWCASING PROGRESS & LEARNINGS

Over the past year, significant strides and progress has been made by various stakeholders in pursuit of commitments in the Energy Compacts. Below are a few highlighted Compacts and the progress achieved as we move forward from Year 1.

RENEWABLES IN LATIN AMERICA AND THE CARIBBEAN (RELAC): REGIONAL LEADERSHIP AND COLLECTIVE ACTION

RELAC

By 2030, **at least 70% of electricity consumption** in Latin America and the Caribbean should come from **renewable sources**.

THE RELAC ENERGY COMPACT CURRENTLY HAS 16 MEMBER COUNTRIES:

- Barbados
- Bolivia
- Chile
- Colombia
- Costa Rica
- Dominican Republic
- Ecuador
- El Salvador
- Guatemala
- Haiti
- Honduras
- Nicaragua
- Panama
- Paraguay
- Peru
- Uruguay

RELAC is a unique regional initiative for climate action in the context of Latin America and the Caribbean (LAC). For the first time, a group of countries in the region has voluntarily agreed to work together to promote renewable energies (RE):

- setting concrete renewable energy goals
- establishing a monitoring mechanism
- agreeing on an operational and governance structure, led by the Ministries of Energy of the member countries, to support countries in achieving their goals.

Reaching the RELAC target by 2030 is a key step in the Latin America and Caribbean region's path to carbon neutrality by mid-century. Looking at the potential climate impact of this commitment, considering a current emission factor of 603 tons of CO2 per GWh of non-renewable electricity generated, and if the share of renewables in 2030 is 70%, the region would save almost 90 million tons of CO2 each year – a 24% reduction in emissions associated with the electricity sector.

Since the commitment made in 2021, RELAC has already come a long way. The Energy Compact,

originally approved by twelve member countries, added four new countries (Barbados, El Salvador, Nicaragua and Panama) and three new partner agencies: Japan International Cooperation Agency (JICA), Global Energy Alliance for People and Planet (GEAPP) and ENEL Foundation.

- From 2019 to 2020 for the current RELAC member countries, the share of renewables increased from 66.5% to 67.7% in terms of electricity generation and from 58.6% to 59.1% for installed capacity. In 2020, member countries added 1,800 MW to their electrical systems, of which 87% or 1,560 MW was renewable.
- For 2020, RELAC increased its share of renewables to 61.3% in electricity generation and 59.9% in installed capacity, from 57.8% and 59.5% in 2019 respectively.
- 70% (11.7 GW) renewables out of a total committed 16.7 GW were added to the regional electricity system in 2020. This represents 85% of the increase in renewable capacity installed.

The RELAC initiative seeks to establish and consolidate a climate action platform that groups together LAC countries and international organizations to accelerate the carbon-neutrality of electricity systems.

RELAC hopes to develop a regional matchmaking platform, which will try to link the demand for resources for renewable energy projects with the supply of financial resources at the international level. Likewise, a prospective regional analysis will be developed in 2022-23 that will allow LAC countries to visualize the viable paths to achieve net-zero emissions around 2050.

INDIA: RENEWABLE ENERGY 2030 – ADVANCING ENERGY ACCESS AS A MILESTONE OF THE ENERGY TRANSITION

> India's commitment to the next Decade of Action is to **advance SDG7** by increasing **renewable energy installed capacity to 450 GW by 2030**.

Several national and subnational programmes have been planned to bring renewable energy installed capacity to 450 GW by 2030: utility-scale solar and wind generation; rooftop solar installations; distributed renewable energy systems such as mini/micro-grids for agriculture, productive livelihood applications and communities; off-grid installations for remote areas; bioenergy and cogeneration plants; small and large hydropower projects; innovative systems such as round-the-clock power and wind-solar hybrid models; and emerging areas such as green hydrogen.

SINCE THE COMMITMENT, INDIA'S ENERGY COMPACT HAS HAD A TRANSFORMATIONAL IMPACT:

- India has installed an additional 13.73 GW of renewable energy capacity in 2021-22. Since then, total capacity has reached 161.28 GW, with 64 GW of projects under implementation and another 28 GW tendered.
- 13.5 million clean cooking LPG connections have been provided under the 'Pradhan Mantri Ujjwala Yojana 2.0' programme to households with women.
- India has surpassed the Production Linked Incentive (PLI) Scheme target for high-efficiency solar modules to create an additional 10,000 MW of integrated solar PV manufacturing capacity by 2025.
- India has achieved 10% average ethanol blending in transport fuel in the country in June 2022.
- India has achieved a 24% reduction in emission intensity of GDP between 2005 and 2016, and committed to reducing emissions intensity of its GDP by 45% from 2005 levels by 2030.
- A total of 111,400 people are currently employed in the wind and solar energy sectors in 2021. Of this, utility-scale and rooftop solar contributes 77% (85,900 people employed), and wind energy contributes the remaining 23% share (25,500 employed).
- The universalization of access to electricity has reduced dependency on traditional fuels. This has led to a reduction of kerosene consumption from 8,920 million liters in 2014-15 to 2,040 million liters in 2020-21, a reduction of more than 77%; and a reduction in CO2 emissions by 17.2 million tons per year.

INDIA'S ENERGY COMPACT IS COMPLEMENTARY TO ACTIONS FOR:

- **SDG7** - Affordable and Clean Energy
- **SDG3** - Good Health and Well-Being
- **SDG8** - Decent Work and Economic Growth
- **SDG9** - Industry, Innovation and Infrastructure
- **SDG10** - Reduced Inequality
- **SDG11** - Sustainable Cities and Communities
- **SDG12** - Responsible Consumption and Production
- **SDG13** - Climate Action
- **SDG17** - Partnerships for the Goals

Through this Energy Compact, India hopes to impact jobs, growth, sustainability and clean energy, and contribute to the larger global hydrogen economy.

STEPPING TOWARDS THE NEXT DECADE OF ACTION: ENEL AND THE CITY OF SANTIAGO COME TOGETHER TO ADVANCE SDG7

Chile's Metropolitan Region, where Santiago, the country's capital, is located, is home to half of the country's inhabitants - approximately 8.2 million people - and is responsible for 19.2% of national greenhouse gas emissions. For a start, electric buses were introduced in the public transportation network in Santiago in late 2022, accounting for 26% of the total fleet[1] aiming[2] to reach 100% by 2030.

Enel Chile and the Government of Santiago joined forces to launch their Energy Compact collaboration in May 2022. Universidad del Desarrollo and the Environmental Department of the Chilean Industry Federation (Sofofa) are also part of this initiative aimed at:

- 100% electric public bus fleet by 2030, averting 150 thousand tons of CO2 emissions annually.
- Increasing final use of electricity in the Metropolitan Region compared to other energy sources, especially in public transportation, EV charging infrastructure and through the removal of wood-burning stoves.
- Increasing the share of PV energy generation in the regional matrix (from the current 29.9%), stimulating the adoption of distributed generation technologies such as solar roofs combined with battery storage. By this means, citizens, private companies and public buildings will be able to become energy prosumers, while avoiding deploying large-scale solar projects on surfaces intended for farming.
- Developing a regional action plan that encompasses public policies to address climate change and can guide the implementation of further initiatives pertaining to the Energy Compact.

[1] https://www.dtpm.cl/index.php/homepage/noticias/713-comunas-de-la-zona-sur-del-gran-santiago-se-alistan-para-recibir-nuevos-buses-electricos

[2] https://www.df.cl/empresas/industria/mas-de-un-cuarto-de-la-flota-del-transporte-publico-de-santiago-se-0

> *This Energy Compact will benefit millions of Santiago residents and help our city move towards the clean energy future that we urgently need to avert further climate disasters. We look forward to working with Enel and the Universidad del Desarrollo in putting these commitments into action.*
>
> **CLAUDIO ORREGO**
> Governor of Santiago

THROUGHOUT 2022, THE PARTNERS HAVE IMPLEMENTED ACTIONS ALLOWING FOR LARGE-SCALE CHANGE:

- 458 EV charging points, up from 136 in the previous year.
- 1,604 stove replacements, which represents a cut of 32 tons of PM2.5 and 2,887.20 tons of CO2. (By the end of 2021, a total of 10,000 replacements had been implemented.)
- 9 corporate PV projects and 2 educational PV projects, equivalent to 0.934 MW.

These developments prove that public-private partnership can strongly move forward efforts to accelerate the implementation of SDG7 by 2030.

CEO Francesco Starace commented, "Enel will contribute in a tangible manner, as an example of how public and private partnerships are crucial in order to take action under the UN's new Energy Compact Action Network, and with a positive impact on the well-being of the citizens of Santiago."

GREEN HYDROGEN CATALOGUE: GREENING THE END-USE SECTORS

Green hydrogen is a critical solution to decarbonize hard-to-abate sectors and accelerate the transition to a net zero society. The Green Hydrogen Catalogue is a platform for international collaboration and dialogue among governments, international organizations and private sector companies involved in the green hydrogen value chain.

MEMBERS IN THE GREEN HYDROGEN CATALOGUE COMPACT:

Governments

- Denmark
- Chile
- Germany
- Namibia
- Colombia
- The Basque Region

Catalytic Partnerships

- EU Commission

Private sector

- Haldor Topsøe
- Iberdrola
- Soladvent
- Fortescue Future Industries
- Green Fuels for Denmark
- BPP
- RWE
- EDP
- Avangrid
- Copenhagen Infrastructure Partners
- Electrochaea
- Green Hydrogen Catapult
- Tata Power
- Acciona Energia

The Catalogue consists of seven governments and 27 private sector companies. Since the Catalogue was launched one year ago, Namibia, Colombia and the private sector company Acciona Energia have joined, **bringing the total commitments to 285.8 GW of new renewable energy capacity by 2030, 134.7 GW of new electrolyzer capacity by 2030 and more than 25 million tons of green hydrogen produced annually by 2030.**

By showcasing ambitious commitments to expand the production of green hydrogen, the Catalogue aims to inspire further action. By asking members to identify key challenges and necessary solutions, the Catalogue also provides unique analysis of the landscape of green hydrogen and proposes concrete policy recommendations.

Movement for Green Hydrogen: The Green Hydrogen Catalogue organizes several key events a year to bring partners together to discuss current challenges to the expansion of green hydrogen as well as opportunities and areas for collaboration.

By creating a space to collaborate and bring together key actors, the Catalogue promotes dialogue and partnership opportunities among key actors. These have included a High-Level Roundtable on Green Hydrogen, a Compact Workshop on Catalyzing Action Towards Green Hydrogen, and an upcoming event entitled Green Hydrogen, Green Future.

The vision for the Green Hydrogen Catalogue is to bring on board more members and grow in reach, to become even more representative of the ambitions for this key solution to the energy transition. The partners, by bringing together their Energy Compacts in this catalogue, aim to highlight the need for urgent and collective action and the leadership of a multitude of stakeholders, continuing through the Decade of Action.

24/7 CARBON-FREE ENERGY: DRIVING GLOBAL GRID DECARBONIZATION

24/7 Carbon-Free Energy (CFE) means that every kilowatt-hour of electricity consumption is met with carbon-free electricity sources at every hour of every day, everywhere.

The urgency of the climate crisis demands bolder action. The 24/7 CFE Compact brings together a global group of companies, policymakers, investors and organizations on a mission to realize a 24/7 CFE future for all. The Energy Compact was launched during the High-Level Dialogue on Energy in September 2021 when the initial founding signatories committed to working toward a carbon-free future for all. Several other partners have since joined, bringing the 24/7 CFE movement to a total of 80 signatories by September 2022.

PRINCIPLES OF 24/7 CFE

- Time-matched procurement: matching hourly electricity consumption with carbon-free electricity generation.
- Local procurement: purchasing clean energy on the local/regional electricity grids where electricity consumption occurs.
- Technology-inclusive: recognizing the need to create zero-carbon electricity systems as quickly as possible.
- Enabling new generation: focusing on delivering additional carbon-free energy to drive the rapid decarbonization of electricity systems.
- Maximizing system impact: addressing the dirtiest hours of electricity consumption when the most fossil fuels are used in generation.

The Compact is an ambitious global effort to accelerate the decarbonization of the world's electricity systems to mitigate climate change and ensure access to clean and affordable electricity for all, in line with SDG7.

GOALS OF 24/7 CFE

- Raising awareness of the importance of decarbonizing electricity grids in order to mitigate climate change and ensure access to clean and affordable energy.
- Growing the signatory base to ensure all stakeholders have a seat at the table.
- Facilitating knowledge sharing and dialogue among signatories to overcome roadblocks and support solutions that will enable the acceleration of the decarbonization of grids.
- Working collaboratively with energy leaders and associations to amplify and complement other initiatives geared toward the realization of a 24/7 CFE future for all.
- Supporting signatories in the development of their own Energy Compacts that outline specific voluntary commitments in support of 24/7 CFE.

The Compact is uniquely placed to facilitate a CFE future for all by bringing together stakeholders from across the energy ecosystem and from around the globe. The number of Compact signatories has significantly increased from 19 to 80 since the launch.

> *"The world is at a crossroads. We can either continue with business as usual or embrace change that leads to a more sustainable and equitable future. This starts with making the important link between energy and climate. The 24/7 Carbon-Free Energy Compact represents a critical partnership across business, countries, cities and others that will propel us closer to our 2030 global energy goals.*
>
> **DAMILOLA OGUNBIYI**
> CEO, SEforALL

24/7 CARBON-FREE ENERGY COMPACT SIGNATORIES

ENERGY ADVISORS:

- 3Degrees
- Buildings Alive
- EnergyUnlocked
- Faradai

INVESTORS AND FINANCIAL ORGANIZATIONS:

- 8RIVERS
- Dcbl
- EG
- Griot International Partners
- Quinbrook Infrastructure Partners
- Stonechair Capital

ENERGY SUPPLIERS:

- acciona
- AES
- BrightNight
- Centrica
- Constellation
- EDP
- Energy Harbor
- Engie
- ENlighten
- Firstlight
- Granular
- Greenko Group
- Lightsource BP
- Orsted
- Statkraft

ASSOCIATIONS:

- African Circular Business Alliance
- Eurelectric
- Nuclear Energy Institute
- WBSCD
- World Nuclear Association

TECHNOLOGY SOLUTIONS PROVIDERS:

- Available Power
- Blok-Z
- Brightmerge
- ClearTrace
- ElectricityMap
- EnergyTag
- EnergyWeb
- Enosi
- ENTRNCE
- Fervo Energy
- FlexiDAO
- GeothermEx
- Gridcognition
- HDF energy
- Kaluza
- Kanin Energy
- Kärnfull Energi
- Level 10 Energy
- LO3 Energy
- Malta
- M-RETS
- NRverse
- nZero
- Our Energy
- Powerledger
- PYXIDR
- RE24 Limited
- Sky Power Global
- Standard Hydrogen corp
- Switch Electric
- Trailstone
- Voltus
- Web3 Renewables
- Wyoming Hyperscale White Box
- X

ACADEMIC AND SCIENTIFIC COMMUNITY:

- Centre for Net Zero

LOCAL, REGIONAL AND NATIONAL GOVERNMENTS:

- City of Des Moines
- City of Ithaca
- City of South Lake Tahoe
- Government of Iceland

NON-GOVERNMENTAL ORGANIZATIONS (NGOS) AND CHARITIES:

- Clean Air Task Force
- Innovea Development Foundation
- Student Energy

SYSTEM OPERATORS:

- EGAT
- Norpdool

ENERGY BUYERS:

- Google
- Iron Mountain
- Johnson Controls
- Microsoft

Signatories of the 24/7 Carbon-Free Energy Compact at time of publishing.
For an updated list please visit the website: https://gocarbonfree247.com/our-partners/

BEEAH GROUP: INNOVATION AT SCALE

The BEEAH Group's work on clean energy solutions through the Sharjah Waste to Energy plant and Waste to Hydrogen plant focuses on building wide-scale clean energy sources by the year 2025.

A FUTURE BUILT ON SUSTAINABILITY AND ALIGNED WITH SDG7: PROGRESS SO FAR

- *Sharjah Waste to Energy plant*: The plant works to process more than 37.5 tons of municipal solid waste per hour, and delivers 30 MW of clean energy to meet the power needs of 28,000 homes. It is set to commence power generation in September 2022.
- *Waste to Hydrogen plant*: The plant processes waste plastics and waste wood to produce green hydrogen. The green hydrogen is used to power up the BEEAH waste trucks and extend mobility in the region.

The Waste to Hydrogen project's purpose is to reduce the carbon footprint of BEEAH's fleet and to extend the hydrogen fuel market in the UAE.

> *The UN Energy Compact embodies BEEAH's commitment to reimagining a sustainable future and vision for quality of life across the MENA region and beyond. By registering BEEAH's Energy Compact, we are able to showcase BEEAH's support to the achievement of the UNSDGs, to drive a circular economy and to realize net-zero emissions.*
>
> **MOHAMMED NAYEEM QURAISHI**
> CEO, BEEAH Energy

Upcoming projects include installing carbon capture plants in UAE to capture the carbon from the Sharjah Waste to Energy plant. Liquified carbon dioxide will be transported and supplied to the vertical forms fast coming up in the UAE, providing solutions to capture the carbon from the waste gases.

BEEAH GROUP AIMS TO:

- Increase clean energy contributions from 25% to 50% while reducing the carbon emissions from power generation by 70% by 2025, aligning with the UAE Energy Strategy and the Dubai Clean Energy Strategy.
- Create a diversity of energy sources.
- Enhance energy sources that contribute to reducing carbon footprint.
- Enhance clean energy and environmental advancement through cooperation.
- Support the clean energy transition in other nation states.

ENERGY AND GENDER: DRIVING SHARED AND INCLUSIVE PROGRESS

> **1.6 million young girls and women die each year** from inhaling poisonous fumes while cooking[3]

WOMEN AND GIRLS ACROSS THE GLOBE CARRY THE BURDEN OF ENERGY POVERTY:

Lack of access to sustainable and affordable clean energy sources has grave consequences for young girls and women, impacting their health, well-being, socio-economic status and environment. Achieving SDG7 is critical for gender equality, in the same way that a gender-inclusive approach to energy is critical for a just and inclusive energy transition.

THERE IS A WAY TO BRIDGE THE GAP:

Pioneering change can be pursued through utilizing the collective power of multiple levels of stakeholder engagement to address barriers that limit gender equality and drive forward integration of gender-transformative approaches into all energy activities.

Over 2021-2022, the Gender and Energy Compact signatories increased to 75 including 9 Champion Countries, with as many as 17 gender equality focused organizations.

UN-ENERGY WITH ITS PARTNERS IS MOVING THE DIAL ON GENDER AND ENERGY:

ENERGIA, the Global Women's Network for the Energy Transition (GWNET), and the United Nations Industrial Development Organization (UNIDO), supported by the Canada, Dominican Republic, Ecuador, Iceland, Kenya, Nepal, Nigeria, Sweden, and United States (Power Africa), formed a coalition to develop a **Gender and Energy Compact** to catalyze action towards gender equality and women's empowerment in order to accelerate a just, inclusive and sustainable energy transition.

THE GENDER AND ENERGY COMPACT IS TACKLING:

- **SDG5** - Gender Equality
- **SDG4** - Quality Education
- **SDG7** - Affordable and Clean Energy
- **SDG8** - Decent Work and Economic Growth
- **SDG13** - Climate Action
- **SDG17** - Partnerships for the Goals

PRINCIPLES OF THE GENDER AND ENERGY COMPACT

- Elimination of energy and time poverty and drudgery of women's work
- Gender-responsive energy
- Building entrepreneurship pathways
- Women in the workforce
- Gender-responsive tools and knowledge

ENERGIA INTERNATIONAL NETWORK ON GENDER & SUSTAINABLE ENERGY · GWNET Global Women's Network for the Energy Transition · UNIDO

GENDER AND ENERGY COMPACT

[3] Warwick, Hugh & Doig, Alison. (2004). Smoke - the Killer in the Kitchen. 10.3362/9781780441382.002.

GENDER AND ENERGY COMPACT SIGNATORIES

CHAMPION COUNTRIES:

- Canada
- Ecuador
- Dominican Republic
- Nepal
- Nigeria (Rural Electrification Agency)
- Kenya
- Iceland
- Sweden
- United States (Power Africa)

COORDINATED BY:

- ENERGIA, International Network on Gender and Sustainable Energy
- GWNET, Global Women's Network for the Energy Transition
- UNIDO, United Nations Industrial Development Organization

ACADEMIA/SCIENTIFIC COMMUNITY:

- Benha University
- Coventry University: Humanitarian Engineering and Energy for Displacement
- Duke University, James E. Rogers Energy Access Project
- GenDev Centre for Research and Innovation
- IISD, International Institute for Sustainable Development
- IIASA, International Institute for Applied Systems Analysis
- MECS, Modern Energy Cooking Services
- REN21
- Smiling Simon Greenbuild Foundation

CIVIL SOCIETY:

- ACCESS, Alliance of Civil Society Organizations for Clean Energy Access
- ECOMAWDI, Environmental Conflict Mediation and Women Development Initiative
- SEWA, Self Employed Women's Association

MULTILATERAL BODIES/ INTERGOVERNMENTAL ORGANIZATIONS:

- African Development Bank Group
- ESCWA, The United Nations Economic and Social Commission for West Asia
- Energy Community
- GGGI, Global Green Growth Institute
- Global Network for Regional Sustainable Energy Centres
- IRENA, International Renewable Energy Agency
- PFAN, Private Financing Advisory Network
- SEforALL, Sustainable Energy for All
- SAWIE, South Asia Women in Energy
- SHINE, Investing in Energy Access for All
- UN Environment Programme
- UNFCCC, United Nations Framework Convention on Climate Change
- UN Women

NON-GOVERNMENTAL ORGANIZATIONS:

- 75inQ
- Associação Lusófona de Energias Renováveis (ALER)
- Asociación Nacional de Energía Solar (ANES)
- Ashden, Climate Solutions in Action
- Clean Cooking Alliance
- Climate Parliament
- CRT Nepal (Centre for Rural Technology Nepal)
- CEEW, Women in Sustainability
- Hivos, people unlimited
- Let There Be Light International
- Mozambique Women in Energy
- Power For All
- Practical Action
- ReEnergy Africa
- SDG7 Youth Constituency, Youth in Sustainable Energy
- Student Energy
- Solar Sister
- The Global Initiative for Economic, Social and Cultural Rights
- World Biogas Association
- SNV
- YAD
- Women in Renewable Energy Association

PRIVATE SECTOR:

- Arabian Cement Company
- Beshay Steel
- Catalyst At Large
- Climate Council
- Himalayan Innovations
- Husk, Powering Possibilities
- InvestinGreen.Energy
- Marida, Technology for People and Planet
- Masdar
- R3iVentures
- Radix Lifespaces
- S2G Energy
- Microgen Renewables Group
- SEE, Sustainable Energy and Environment
- SHAMSO Energy
- Solbox Energia
- Value for Women

Signatories of the Gender and Energy Compact at time of publishing.
For an updated list please visit the website: https://genderenergycompact.org/partners/

IRENA-GWEC OFFSHORE WIND ENERGY COMPACT: ENSURING NO COUNTRY OR REGION IS LEFT BEHIND

> *The IRENA - GWEC Wind Energy Compact is leading the way by committing to 2,000 GW of cumulative global installed wind capacity by mobilizing offshore wind ambitions in every region of the world.*

The Compact involves ***multi-stakeholder action between the public and private sector, which is critical to enabling the energy transition and the rapid ramp-up of renewable energy for net zero compliant transitions.***

HOW IS THE COMPACT ADVANCING SDG7?

21,105 MW of additional offshore wind capacity was connected to the grid globally in 2021 – an unprecedented expansion which was three times the volume of offshore wind installed in 2020. This made 2021 a historic year for offshore wind energy in terms of new installations, and brought worldwide cumulative offshore wind installations to 56 GW by the end of 2021.

GWEC Market Intelligence has now **upgraded its market outlook to 2030 by 16% since registering the Energy Compact**, which means another 45 GW of capacity[4]. This is a significant upgrade from the 270 GW forecasted in 2021 – and much closer to the global target of 380 GW as stated in the IRENA-GWEC Energy Compact.

The 21,105 MW of offshore wind installed in 2022 generated a total estimated 94.9 million person-days of work across an average 25-year project lifetime. Based on a typical FTE of 260 working days per year, this equates to 365,000 total jobs to be created by the newly installed offshore wind worldwide.

The offshore wind sector received financing of USD 32 billion in the first half of 2022, which is a 52% increase in investment from the same period in 2021. This is showing the increasing investor appetite in offshore wind as government ambition around the world grows.

Since signing the Compact, IRENA and GWEC have also joined forces with the Government of Denmark to launch the **Global Offshore Wind Alliance (GOWA)**, an intergovernmental initiative to raise ambition for offshore wind among early-stage and existing offshore wind countries worldwide.

DEVELOPING AN UNTAPPED RESOURCE POTENTIAL

IRENA-GWEC's joint work with governments and industry to enable frameworks and investment in the offshore wind sector will continue to accelerate offshore wind growth in this decade towards the 380 GW of installed cumulative capacity required globally by 2030 to meet a net zero pathway. **The Compact has closed the initial 110 GW capacity gap to reach the 2030 target, and fostered two new initiatives for ambition-raising and technical assistance in offshore wind.**

> *"It has been an astonishing year for the offshore wind sector. Governments across the world are now recognizing the once in a lifetime opportunity that offshore wind represents to deliver secure, affordable and clean energy while fostering industrial development and job creation. Now we need to work to rapidly implement targets and ambitions, while building a healthy and 'fit for growth' global supply chain.*
>
> **BEN BACKWELL**
> CEO, GWEC

[4] https://gwec.net/gwecs-global-offshore-wind-report/

AVANGRID: RECOGNIZING RESPONSIBILITY FOR THE FUTURE

> *Over 2021-22, Avangrid has installed 420 MW of new wind and solar capacity, and currently has close to 800 MWs of onshore wind and solar capacity under construction.*

Avangrid's strategy and sustainability policy fully integrates the United Nations Sustainable Development Goals, especially SDG7 (Affordable and Clean Energy) and SDG13 (Climate Action).

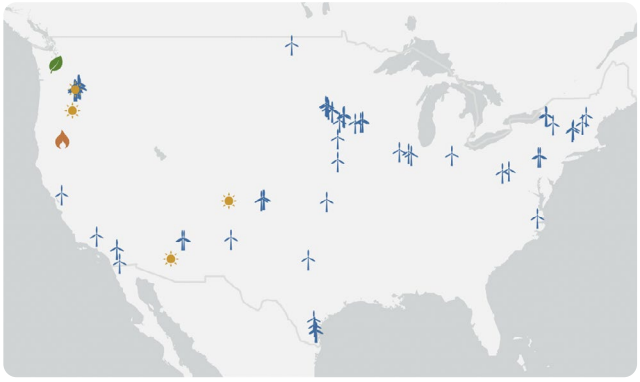
AVANGRID'S ENERGY COMPACT COMMITMENT:

- Achieve a renewable capacity increase to 100%, with 5.6 GW renewables capacity installed by 2025.
- Invest USD 12 billion in power networks for beneficial electrification and resiliency.
- Reduce Avangrid's Scope 1 GHG emissions intensity to 35% by 2025 and to net zero by 2035.
- Install 500 MW of operational green hydrogen electrolyzer capacity by 2030.
- Install an incremental 13,000 recharging stations for electric vehicles by 2025.
- Invest an incremental > USD 145 million in network-based EV infrastructure by 2025.
- Transition 60% of its entire vehicle fleet by 2030 to clean energy alternatives.
- Increase the energy efficiency of Avangrid's facilities.

AVANGRID'S PROGRESS SINCE LAUNCHING THEIR ENERGY COMPACT:

- Avangrid has 8,300 MW of renewables installed capacity, and assets in 22 states in the United States, providing renewable power to 2 million homes.
- In support of Avangrid's commitment to deploy 500 MW electrolyzer capacity by 2030, there is active engagement with stakeholders including the US Department of Energy, technology providers and interested communities to develop Green Hydrogen hub proposals and projects.
- In 2021-22, 420 MW of new wind and solar capacity was installed.
- Investment of USD 117 million was made across New York State to support new EV chargers through the EV Infrastructure Make-Ready Program, with 195 new charging plugs enabled in 2021.

> *"Demand for clean energy solutions represents more than business opportunities; it is a driver of a potentially disruptive shift that requires us to act – right now.*
>
> **JAMES P. TORGERSON**
> CEO, Avangrid



Picture: Avangrid Renewables U.S Operating Assets

06 | WAY FORWARD

Over the last two years, the energy market has experienced extreme price volatility, such as during the Covid-19 pandemic, when demand was reduced and supply contracted; the ensuing surge in demand outpaced supply. The war in Ukraine has further disrupted fossil fuel supplies and the overall market, in which the Russian Federation is the leading exporter of natural gas and the second largest exporter of oil (UN Global Crisis Response Group on Food, Energy and Finance 2022). Rising energy prices may price out many developing countries, with a high level of impact on the most vulnerable citizens in the developing world. Such a situation is already impacting hard-won gains in the provision of access to energy, and progress had already been set back due to the pandemic. This dynamic is compounded by the food and finance crises arising from the war in Ukraine and the pandemic, which have placed significant social and fiscal pressure on countries.

A potential "scramble for fuel", in which only those countries paying the highest price can gain access, would be devastating for a multilateral system based on trust and proportionality. Sky-high prices and growing social discontent are putting many Governments under pressure. However, even short-term energy-related decisions can have important long-term consequences. In this context, the best policies will mix urgency and strategy. Without such policies, there is a risk that some countries, especially those without adequate funding, might, under pressure, set a course for high-emission energy futures. Multilateral action is critical, yet each country and region will need to develop a tailored response, in accordance with current human capacity, infrastructure, access to finance and localized challenges.

RECOMMENDED COURSE OF ACTION FOR ENERGY COMPACT PROPONENTS IN LIGHT OF THE ONGOING ENERGY CRISIS

Adapted from the UN's Global Impact of War In Ukraine: Energy Crisis, August 2022.

SHORT TERM	
Countries, especially developed countries, must manage energy demand	1. **Sustainable heating to reduce energy demand** e.g. improved building insulation, and heat pumps. 2. **Sustainable cooling to reduce energy demand** e.g. cool roofs; price support to low-income consumers to accelerate the uptake of efficient fans, refrigerators and air conditioners; climate-smart, efficient cold chains. 3. **Reduced energy use in mobility** e.g. lowering speed limits, car-sharing, increased use of public and rail transport, avoidance of air travel.

SHORT TERM (CONTINUED)	
Governments must identify and target vulnerable populations to provide solutions for accessing affordable energy	1. **Access:** short-term solutions should be focused on small, modular and decentralized systems, such as solar-powered systems for household use. 2. **Affordability:** publicly funded cash transfers and rebate policies should be provided to low-income households for energy solutions enacted under longer-term frameworks of social protection investments for sustainable development. 3. **Cooking:** cash transfers, pay-as-you-go net metering and incremental mobile payments for liquefied petroleum gas, concentrated on clean cooking needs for low-income households.
MEDIUM TERM	
Governments must identify and address bottlenecks in renewable energy supply to foster clean energy and economic growth and leverage opportunities for a just transition	1. **Lack of access to critical minerals:** scale-up of mining, processing and recycling capacity for critical materials. 2. **Limited manufacturing capacity:** rapid scale-up of capacity for low-carbon steel manufacturing and other vital inputs; the diversification of suppliers; and the increase of local or regional manufacturing capacity. 3. **Limited manufacturing geographical locations:** unlock manufacturing capacity in developing countries, in particular countries where critical minerals are sourced, through directing fiscal support to local solutions and supply chains. 4. **Long timeline for installation of renewable energy solutions:** streamline permit requirements and environmental procedures. 5. **Misalignment in renewable energy labour skills:** governments invest in vocational and workforce training and retraining.
LONG TERM	
Governments must combat energy waste	1. Royalty waivers for gas that would otherwise be flared or leaked. 2. Permitting the cost of anti-flaring and anti-leaking equipment to be deducted from profits to reduce company tax bills. 3. Developing energy grids to create local markets for recovered gas to be sold closer to production sites rather than flared.
Governments must strategize and regulate now, for the policy environment of tomorrow	1. Focus on technology applications that decouple industry from fossil fuels e.g. green hydrogen in industrial applications. 2. Implement new energy performance standards and/or increase the stringency of existing standards to drive the reduction in energy demand and future-proof against additional shocks. 3. Couple tax incentives for lighter and more efficient vehicles with fuel economy standards and blending requirements to promote the use of more environmentally friendly fuels.
Public, private and multilateral finance for the green energy transition must be scaled up	1. Governments: action to leverage private sector engagement e.g. through blended finance mechanisms to de-risk investments; energy transition plans and targets; and the implementation of market transparency. 2. Emerging markets / developing countries: raise financing with guarantees from developed countries to lower borrowing costs. 3. Multilateral development banks and partners: improve coordination and refine the focus of blended finance towards energy projects that address the urgent financing needs associated with the energy crisis.

07 | ACKNOWLEDGEMENTS

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09 | APPENDIX

Since launching in 2021, 185 Energy Compacts have been found to be in line with the UN-Energy principles. Responses for the 2022 Progress Update Survey distributed by UN-Energy was received for 94 of these Compacts. The full list of Compacts are shown below listed alphabetically, by stakeholder category type. Those which a progress update was received for are emboldened.

GOVERNMENTS	PRIVATE SECTOR	CATALYTIC PARTNERSHIPS
Bolivia	**Acciona Energia**	24/7 Carbon-free Energy (24/7 CFE)
Brazil Biofuel	**Adani Green Energy Limited**	**ACCESS Coalition**
Brazil Hydrogen	**Adani Transmission Limited**	African Network for Solar Energy (ANSOLE)
C40 Cities	AES Brazil	**AID Africa**
Chile	Ailesh Power	**Alliance for Rural Electrification (ARE)**
Colombia	Ather Energy	Champion Youth Mainstreaming in Energy Compacts
Denmark	**Avangrid**	City of Ithaca, Town of Ithaca, Cornell, and Ithaca College
Dominican Republic	**BEEAH**	**Clean Cooking Alliance (CCA)**
Ethiopia	**Bharti Airtel Limited**	Clean Hydrogen Mission
Ethiopian Rural Energy and Development and Promotion Center (EREDPC)	**BPP Tech**	Climate Vulnerable Forum (CVF)
Germany	Copenhagen Infrastruture Partners (CIP)	Coalition for Supporting Cities to Deliver Integrated Urban Energy Systems
Germany Green Hydrogen	CPFL Energia	**Cool Coalition**
Honduras (13 Compacts)	**Distributed Renewable Energy Certificates (D-REC) Initiative**	**EarthSpark International**
Iceland	**EDP Energias de Portugal**	**Economic and Social Commission for Asia and the Pacific (ESCAP)**

GOVERNMENTS	PRIVATE SECTOR	CATALYTIC PARTNERSHIPS
India	Electrochaea	**EKOenergy**
India Ministry of Railways	**En+ Group**	**Eletrobras and Brazilian Development Bank (BNDES)**
India, City of Ayodhya	**Enel**	**European Bank for Reconstruction and Development (EBRD)**
India, Indore	Engie	**European Commission (EU)**
India, New Town Kolkata	**Eni S.p.A.**	Future Energy Leaders (FELs) Panama
India, Pimpri Chinchwad Municipal Corporation	Fortescue Future Industries	**Gender and Energy**
India, Rourkela Smart City Limited, Odisha	Google	**Global Association for Off-grid Solar Energy (GOGLA)**
India, Surat Smart City	Graded S.p.A.	Global Bioenergy Partnership (GBEP)
Italy	Haldor Topsøe	**Global Environmental and Climate Conservation Initiative (GECCI)**
Japan	HUSK Power	Global Wind Energy Council (GWEC)
Japan, Shimokawa Town	Hydeal	Green Hydrogen Compact
Japan, Toyama City	Iberdrola	**Health Facility Electrification**
Kenya	InterEnergy Group	Heidelberg Cement Limited and Zuari Cement Limited
Lebanon	ITC Limited	**Innovea Development Foundation**
Local Governments for Sustainability (ICLEI)	**J K Cement**	International Atomic Energy Agency (IAEA)
Madagascar	Johnson Controls	**International Renewable Energy Agency (IRENA)**
Malawi	**JSW Cement**	**International Solar Alliance (ISA)**
Mauritius	JSW Energy	**IRENA and African Renewable Energy Initiative (AREI)**
Nauru	**Kube Energy**	**IRENA and Alliance of Small Island States (AOSIS)**
Nepal	Microsoft Corp	**IRENA and Food and Agriculture Organization (FAO)**
Netherlands	Neoenergia	IRENA and Global Geothermal Alliance (GGA)

GOVERNMENTS	PRIVATE SECTOR	CATALYTIC PARTNERSHIPS
Nigeria	**NTPC, India**	**IRENA and Global Wind Energy Council (GWEC)**
Panama	**nybl.**	IRENA and Sustainable Energy for All (SEforALL)
Panama Biomass and Waste Utilization	Ørsted	**Let There Be Light International**
Panama Biomass Utilization	**Power Ledger**	**MARCOGAZ**
Panama Public Sector Solar Roof Program	Punjab Renewable Energy Systems Private Limited (PRESPL), India	Mexico, Asociación Mexicana de Hidró-geno (Mexico Hydrogen)
Panama Solar Thermal	Raízen	**No New Coal**
Portugal	Rajasthan Renewable Energy Corporation Ltd, India	**Organización Jóvenes y Cambio Climático**
Rwanda	**ReNew Power**	ReEnergy Africa
Sierra Leone SDG7 Cleaner Cooking	ResQ	Renewable Energy for Peacekeeping
Spain, Basque Hydrogen	**RWE Generation SE**	Renewable Energy Policy Network for the 21st Century (REN21)
Spain, Basque Prosumer Energy Communities	Schneider Electric	**Renewable Energy University League of Japan**
United Arab Emirates	Shell	**Renewables in Latin America and the Caribbean (RELAC)**
United Arab Emirates, Department of Energy	Sigma Lithium Corporation, Brazil	**Rockefeller Foundation**
United Kingdom	Switch	**Santiago Energy Compact**
United States of America	Taiyo-Jyuken Ltd.	**Sardinia Electrification**
United States of America, Montgomery County	TAQA (Abu Dhabi National Energy Company)	**SDG7 Youth Constituency**
Zambia	Tata Power	Solar Health Uganda
	TotalEnergies	**Student Energy**
	UltraTech Cement	Sustainable Energy for All (SEforALL)
	Vale	Sustainable Water and Energy Solutions Network (SWES)

GOVERNMENTS	PRIVATE SECTOR	CATALYTIC PARTNERSHIPS
	Zipolopolo Cookstove Solutions	**UN Development Programme (UNDP)**
		UN Habitat
		UN Industrial Development Organization (UNIDO)
		UN Industrial Development Organization (UNIDO) Hydrogen
		UN Kenya and Equity Group
		UN-Energy
		UPAY
		World Bank
		World Meteorological Organization (WMO) Climate Energy Services Toolkit
		World Meteorological Organization (WMO) Integrated Global Greenhouse Gas Information System

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For more information, please visit the UN Energy Compacts website:
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