

## Summary of the Ministerial Thematic Forums for the High-level Dialogue on Energy: 21-25 June 2021

The High-level Dialogue on Energy (HLDE), scheduled to take place in September 2021, will be the first global gathering on energy under the auspices of the UN General Assembly since the UN Conference on New and Renewable Sources of Energy in 1981. The Dialogue, which the UN Secretary-General will convene at the summit level, seeks to promote implementation of the energy-related goals and targets of the 2030 Agenda for Sustainable Development and its Sustainable Development Goals (SDGs) and the Paris Agreement on climate change, as well as to accelerate ambition towards the achievement of SDG 7 (affordable and clean energy).

The Ministerial Thematic Forums for the HLDE launched reports prepared by Technical Working Groups, each with detailed recommendations for action needed, on five thematic topics also explored during the week by multi-stakeholder dialogues and ministerial sessions:

- energy access;
- innovation, technology and data;
- energy transition;
- enabling SDGs through inclusive, just energy transitions; and
- finance and investment.

These reports, and the week’s discussions, will form the backbone of a global roadmap for achieving SDG 7 by 2030, and net-zero emissions by 2050, to be submitted to the HLDE on 20 September 2021.

The Forums also showcased over two dozen “energy compacts” submitted or “previewed” by actors at all levels, setting actions and commitments they will undertake to help achieve SDG 7 and net-zero emissions. The compacts are intended to inspire a steady stream of such commitments between now and the HLDE. Taken together, the UN hopes that these compacts will demonstrate sufficient new will and commitment to prompt new waves of action to bridge the large gap that exists between the current reality and the aspirations in the SDG 7 targets.

The meeting was convened virtually due to the COVID-19 pandemic and met 4-5 hours a day from 21-25 June 2021. Nearly 1,500 participants, including 50 Ministers and 20 executive or deputy executive heads of UN agencies or other international organizations, as well as representatives of local, regional, or national governments, the private sector, and civil society, registered to participate.

## A Brief History of the High-level Dialogue on Energy

UN General Assembly resolution 74/225 invited the UN Secretary-General, with the support of the relevant UN system entities, to convene a high-level dialogue in 2021 to promote implementation of the energy-related goals and targets of the 2030 Agenda for Sustainable Development in support of implementation of the UN Decade of Sustainable Energy for All (2014-2024), including the Global Plan of Action for the Decade and the High-level Political Forum on Sustainable Development (HLPF).

The Under-Secretary-General for Economic and Social Affairs, Liu Zhenmin, is serving as the HLDE Secretary-General. The UN Department of Economic and Social Affairs (UNDESA), through the Division for Sustainable Development Goals, is serving as the Secretariat for the Dialogue and is engaging the UN-Energy Secretariat in preparations. The UN-Energy Co-Chairs—Achim Steiner, Administrator of the UN Development Programme (UNDP),

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and Damilola Ogunbiyi, Special Representative of the Secretary-General for Sustainable Energy for All (SEforALL)—are serving as Dialogue Co-Chairs.

The High-level Dialogue will be structured around five overarching themes, each of which is supported by a multi-stakeholder Technical Working Group. These Groups have produced Thematic Reports containing substantive recommendations on issues related to their themes: energy access; energy transition; enabling the SDGs through inclusive, just energy transitions; innovation, technology and data; and finance and investment. The Groups are each supported by three or four UN agencies (“co-leads”), a number of national governments serving as “Global Theme Champions,” and numerous experts who participated in a series of three meetings for each Group. In preparing these reports, the Groups aimed to contribute towards an action-oriented SDG 7 roadmap to 2030 in support of the 2030 Agenda and the Paris Agreement on climate change.

The work of the Technical Working Groups fed into the Ministerial Thematic Forums, which were intended to provide insights on priority issues under the five themes and inputs into the Dialogue itself. The Dialogue will seek to bring together world leaders from Member States and other stakeholders at the highest possible level from all regions and sectors.

Additional outcomes expected from the Dialogue include voluntary commitments from Member States and other stakeholders in the form of “energy compacts.” These compacts will identify key outcomes, milestones, and implementation timelines, with clear tracking frameworks towards 2030.

It is expected that the Dialogue outcomes will inform forthcoming intergovernmental processes, including the Decade of Action to deliver the SDGs, the HLPF, and the Glasgow Climate Change Conference, as well as follow-up actions from the Global Sustainable Transport Conference, the UN Ocean Conference, the UN Biodiversity Conference, and the Food Systems Summit.

### Report of the Meeting

On Monday, 21 June 2021, Matthew Bishop, Brookings Institution, opened the Ministerial Thematic Forums for the HLDE as master of ceremonies and introduced special guest Mihsakwan James Harper, Sturgeon Lake Cree Nation, Treaty 8 Territory, Canada, who related the week’s themes to Cree traditional teachings and concepts.

**Opening Remarks by the High-level Dialogue on Energy Leadership:** UN Secretary-General António Guterres said the world is “running far behind in the race against time” to achieve SDG 7 by 2030, and the goal of net-zero emissions by 2050. Noting faster progress is needed, Guterres called on every country, city, financial institution, and company to raise ambition and submit “energy compacts.”

HLDE Secretary-General Liu explained that the week’s five Thematic Forums would produce two outcomes: a summary to inform a political roadmap for concrete actions toward achieving clean and affordable energy for all by 2030 and net-zero emissions by 2050 and a series of energy compacts.

HLDE Co-Chair Steiner said the world “stands on the cusp of a historic tipping point,” a clean energy revolution that will radically reshape our economies and societies, “but how fast and how fairly it happens is really up to us.”

HLDE Co-Chair Ogunbiyi stressed the importance of the energy compacts, noting that as many as 25 would be shared this week and encouraging all to announce them as soon as possible.

**Energy Compact Showcase:** Bishop introduced videos of Per Hegggenes, CEO, IKEA Foundation, and Ashvin Dayal, Rockefeller Foundation, announcing their joint energy compact involving USD 1 billion over 10 years to bring distributed renewable energy access to one billion people in Asia, Africa, and Latin America, and, in the process, eliminate about one billion tons of carbon emissions.

### Ministerial Thematic Forum on Energy Access

This Forum was held on Monday, 21 June, with a set of multi-stakeholder dialogues followed by a ministerial segment.

**Multi-Stakeholder Dialogues: Achieving Universal Access to Clean Cooking Solution:** This dialogue opened with two calls for action. Paul Mbuthi, Ministry of Energy, Kenya, said there is still high dependence on solid biomass cooking, with environmental and health consequences. He called for urgent action to accelerate the transition to clean cooking. Frank van der Vleuten, Ministry of Foreign Affairs, the Netherlands, identified principles for action, including: strengthening opportunities for marginalized people; addressing clean cooking in national plans and policies and integrating clean cooking into health and gender policies; providing financial support for transition; increasing consumer awareness; incentivizing innovation; and monitoring progress.

The first panel, moderated by Marcel Alers, UNDP, addressed creating enabling conditions, with panelists calling for:

- school courses in how to develop need- and culture-based methodologies;
- concrete international assistance to help governments formulate actionable plans and compacts that include clean cooking;
- a viable, robust, fully inclusive, and sustainable clean cooking industry;
- cooperation between health, energy, and other sectors; and
- making gender a key part of agreements and financing.

The second panel, moderated by Yabei Zhang, World Bank, dealt with creating markets for innovative solutions and focused on, *inter alia*:

- innovative or non-market solutions for affordability, such as waiving taxes or subsidizing clean cooking and household energy;
- improving livelihoods through clean cooking value chains;
- capacity building and support for local manufacturing; and
- research on transition technologies, including use of hemp or crop wastes for the ultra-poor.

Closing the session, dialogue Co-Chair Perks Clemency Ligoya, Permanent Representative of Malawi to the UN, noted the Fifth UN Conference on Least Developed Countries (LDCs) in January 2022 will consider a 10-year plan of action prioritizing energy access. Co-Chair Fareed Alasaly, Saudi Arabia, noted USD 150 billion is needed annually to achieve SDG 7 and called for increasing public and private investment and support for capacity building.

**Achieving Universal Access to Electricity:** This dialogue was opened by the two co-chairs, Zhu Guangchao, State Grid Corporation of China, and Carla Montesi, European Commission. Zhu described China’s “Power for All” project, which he said contributed greatly to the end of energy poverty in China. Montesi highlighted Europe’s Green Deal.

In the panel on decentralized energy systems, moderated by Dana Resankova, World Bank, speakers identified the main challenges faced in this sector, including:

- access to finance;
- access to innovation on the business model side;
- lack of a conducive policy environment;
- remoteness; and
- lack of security.

Noting that the world is not on track to achieve universal access by 2030, they emphasized the need for better fiscal allocation and targeted financial tools that can support both large and small providers and an integrated approach.

One participant noted that the public sector must play the lead role in achieving decentralized energy access while leveraging greater private sector involvement. He called for more schemes to incentivize companies to serve customers too poor or too remote to be served by large suppliers.

In the panel on sharing knowledge and good practices, moderated by Kikuchi Nobuyuki, Ministry of Foreign Affairs, Japan, panelists called for increased use of digital tools, such as the internet and social media, to share information in real time, focusing on supply and demand data.

On how global, regional, and local institutions and networks can support knowledge-sharing, participants identified their role in supporting the implementation of international-level decisions at the local level and developing country-specific energy action plans. One participant noted that many utilities have massive amounts of commercial data and said the academic community can help analyze this data for the benefit of access and planning.

The third panel on “advancing electricity access leaving no one behind,” moderated by Heidi Schroderus-Fox, UN Office of the High Representative for the Least Developed Countries, Landlocked Developing Countries and Small Island Developing States (UN OHRLLS), discussed how to ensure energy access for the poorest and most marginalized communities, such as displaced populations. Panelists pointed out that displaced populations, such as refugees and internally displaced persons, are often not recognized when addressing energy access, as these populations are usually isolated or illegally in the host countries. Speakers also called for empowering host communities and countries to include these displaced populations in current and future energy action plans in order to ensure no one is left behind.

**Ministerial Segment:** Ogunbiyi opened the ministerial segment.

**On Our Vision, Our Future: Special Remarks from Youth Advocates:** Mohamed Alhaj, Founder and Director, Clean Energy 4 Africa, noted three action areas on energy access to address war and conflict, crime, and resilience to pandemics: youth empowerment for change; commitment to action for 2030; and major funding increases for deployment of clean energy technologies.

**Opening Remarks by Global Champions:** Zachary Ayieko, Ministry of Energy, speaking on behalf of Charles Keter, Cabinet Secretary for Energy, Kenya, noted three strategies to achieve his country’s national targets of universal electricity and clean cooking access by 2030: the national electrification strategy; the national energy efficiency and conservation strategy; and the bioenergy strategy.

Frans Timmermans, Vice-President, European Commission, said: Africa is the richest continent in sustainable energy potential; clean energy is cheaper than ever and more competitive than fossil fuels; and Europe stands ready to bring investments and technologies.

Jianhua Zhang, Director, National Energy Administration, China, highlighted lessons China has learned in its internal energy development efforts, including: consideration of local conditions; provision of financial support for better access; and alignment of priorities between government and state-owned enterprises.

Eiichiro Washio, State Minister for Foreign Affairs, Japan, said 800 million people lack adequate access to energy and called for listening to people on the ground. He highlighted the need to combine different energy sources depending on national circumstances.

Kitty van der Heijden, Ministry of Foreign Affairs, the Netherlands, said the world knows the cost of inaction and called for energy access for the poorest and hardest hit and fragile societies. She noted the Netherlands’ call to action to make clean cooking part of action on energy access.

Anatoly Yanovsky, Ministry of Energy, Russian Federation, called for balance between addressing climate change and providing energy and, noting that the world will not forgo fossil fuels in the near future, called for making it as efficient as possible using natural gas, the cleanest fossil fuel.

Khalid Abuleif, Ministry of Energy, Saudi Arabia, noted his country has adopted the Circular Carbon Economy initiative endorsed by the G20 Riyadh summit in November 2020, emphasizing its role in achieving SDG 7 both within Saudi Arabia and internationally.

**Official Launch of Technical Working Group 1 Report:** The report of the Technical Working Group on Energy Access was officially launched by the Group’s three co-leads: UNDP, UN OHRLLS, and the World Bank.

During a panel discussion moderated by Bishop, Steiner summarized the report, highlighting the need to put people at the center of discussions on energy systems and powering economies. He said the report outlines access to clean cooking must increase from 66% to 100% by 2030 and access to electricity must increase from 82% in 2019 to 94% by 2025 and aim for 100% by 2030.

Fekitamoeloa Katoa ‘Utoikamanu, UN Under-Secretary-General and High Representative, UN OHRLLS, stressed that available financing remains significantly below what is required to achieve universal access to energy in the LDCs and noted that the report calls for 50% of the annual global financing goal to go towards clean cooking and electricity access in LDCs.

Pablo Fajnzylber, World Bank, emphasized that energy access must be more equitable and inclusive, energy access must not be an isolated issue, and a bolder approach is required to accelerate clean energy access for cooking.

**Fireside Chat:** During a “fireside chat” with Bishop, Kate Brandt, Google, presented Google’s “24/7 carbon-free energy by 2030” goal, which she stressed goes beyond an “emit and compensate” model to an “absolute zero” model. She called on governments, cities, corporations, and other organizations to join Google in a coalition and set similar goals to make full decarbonization of the grid a reality globally. As part of decarbonizing the grid, she announced Google’s commitment to:

- scale up purchasing of clean energy to match their hourly electricity consumption on every grid where they operate;
- catalyze the development and commercialization of new technologies such as green hydrogen, long duration energy storage, and advanced geothermal; and
- create tools, partnerships and coalitions needed to achieve the goal.



**Remarks from Ministers and Global Leaders:** Janine Alm Ericson, State Secretary, Ministry of Foreign Affairs, Sweden, outlined Sweden's efforts to achieve SDG 7, including by participating in the Power Africa initiative, which focuses on increasing electricity access from renewable energy sources and energy efficiency in sub-Saharan Africa, and aims to mobilize USD 1 billion over 10 years.

**Leadership Discussion:** Bishop moderated the final panel discussion with civil society leaders, asking them their priorities. Dymphna van der Lans, CEO, Clean Cooking Alliance, noted there is now encouraging momentum from developed and developing countries on clean cooking.

Reema Nanavaty, Director, Self-Employed Women's Organization, said women are ready to act to increase access to energy and clean cooking because this will bring multiple benefits to livelihoods, income, health, and education. She requested direct investment and sustained predictable support.

Jacqueline Kimeu, Coordinator, Alliance of Civil Society Organisations for Clean Energy Access, highlighted the need for innovative financing mechanisms, including public subsidies for both supply and demand. She called for needs-based, bottom-up policy frameworks and planning, with inclusion of local communities, and cooperation with all sectors to achieve SDG 7.

Chibunna Ogbonna, Student Energy, said young people are key stakeholders for 2030 and described the Global Youth Energy Outlook and global youth dialogues to increase knowledge on energy access and on-the-ground impacts, aiming to ensure that young people are fully represented on all issues surrounding energy access.

Closing the discussion, Bishop underscored that providing sustainable energy access is about driving development without exacerbating the planetary crisis.

### **Ministerial Thematic Forum on Innovation, Technology and Data**

This Forum was held on Tuesday, 22 June, with a set of multi-stakeholder dialogues followed by a ministerial segment.

**Multi-Stakeholder Dialogues: Data Systems for Sustainable Energy:** Riku Huttunen, Ministry of Economic Affairs and Employment, Finland, opened this dialogue by highlighting that technology and digitalization can pave the way for future clean energy solutions. He also stressed the need for reliable data for policymaking in sectors such as transport and buildings.

The dialogue featured two moderated panels. In the panel on "digitalization's role in leading the transformation," moderator Alois Mhlanga, UN Industrial Development Organization (UNIDO), challenged speakers to identify immediate actions that are necessary, discuss how the skills gap in digitalization can be addressed, and suggest how to enhance the dialogue among stakeholders at all levels.

Several speakers discussed the role of understanding country context when identifying best practices and addressing gaps. They also highlighted the need for training on data science, with suggestions of using summer job campaigns and connecting all schools to the internet to enhance data literacy.

Speakers highlighted the need to engage women and academia in addressing this issue. One speaker suggested bringing together conventional and unconventional players to discuss the data they each need to better inform our decisions about energy reliability.

In the panel on "better data for low carbon energy," moderated by Leonardo Souza, UN Statistics Division, speakers highlighted the need for indicators that are fit for purpose. One speaker noted examples from Finland where energy data is presented as open data, leading to the creation of new solutions.

On cooking and lighting fuels in households, which contribute half of all black carbon, one speaker highlighted the need for data on which stoves work well in order to deliver clean, robust, and user-friendly cooking stoves and lighting options. She said current approaches to collecting survey data do not provide the information needed.

Speakers highlighted the value of digital skills and data science, with one adding that we need to engage the right people with the right skills in the right place.

In closing remarks at the end of the dialogue session, Helena Sarén, Smart Energy Business, Finland, noted that efforts to scale up risky innovations will require accurate, timely, and reliable data. She stressed the need to address cyber security for the energy sector, given that it is one of the most cyber-attacked industries.

**Energy Innovation and Technology I:** Minoru Takada, UNDESA, opened this dialogue. In the panel on innovation and technology in the food sector, moderated by Zitouni Ould-Dada, Deputy Director, Food and Agriculture Organization of the UN (FAO), panelists noted that food systems probably use 30% of energy and produce 30% of greenhouse gas emissions. They also noted: data and statistics gaps; an upcoming research report on advancing renewable energy use in the food sector; and examples of solar energy for irrigation, drying, processing, and cold storage.

They called for:

- reducing food loss in the South;
- grants and other assistance to farmers for adopting and scaling innovative technologies;
- global financial institutions to develop innovative financing models; and
- awareness-building on the advantages of innovative technologies.

On overcoming challenges, panelists called for: holistic use of renewable energy, in combination with other methods; and a sustainable food production sector, meaning energy efficiency, irrigation efficiency, and sustainable crops.

On technological contributions, panelists said:

- thermal backup for solar is sustainable and 20% more efficient than chemical batteries;
- precooling increases food life, reducing waste;
- statistics help investors and development partners see opportunities; and
- primary data-gathering informs technological solutions and financial investments.

Panelists also highlighted partnerships between sectors, such as agriculture and energy ministries.

On competition between food and biofuels, panelists called for:

- solar to help address food security;
- producing energy with agricultural and animal waste; and
- eliminating unsustainable biofuel use.

A second panel on innovation and technology in urban sectors moderated by Vincent Kitio, UN Human Settlements Programme (UN-Habitat), called for:

- governments to bring political will to drive financing that will drive technology, even if it means trade-offs in resource use;
- cities to think holistically, not putting public service sectors in silos;

- wide stakeholder engagement in city action plan processes;
- prioritized investments aligned with the criteria for meeting targets;
- green digital technologies to reduce waste;
- strategic city plans for transitioning to electric vehicles when price parity is reached with traditional vehicles in 5-10 years;
- electrifying and retrofitting buildings *en masse* using city resources and loans, which will also bring social and livelihood benefits;
- awareness-raising on city plans and their financing to reduce risk perceptions;
- planning holistically using everyone's expertise and ideas, building consensus, and following through; and
- setting ambitious goals and embracing community advocates.

**Energy Innovation and Technology II:** This dialogue was moderated by Tareq Emtairah, UNIDO. He highlighted the need to catalyze international cooperation and collaboration to accelerate the rate of development and deployment of clean technologies.

Speakers highlighted the importance of a value chain decarbonization approach, stressing the need to be mindful and responsible for all actions arising from their activities, both up and downstream, such as their energy sources and emissions from raw material use. Noting that demand for clean energy technologies, such as green hydrogen, will come mainly from emerging economies but the supply and innovation is happening somewhere else, specifically in developed nations, they called for collaborative platforms breaking down the supply chains in granular detail, to prevent everyone from holding onto their intellectual property and thereby slowing down the progress of innovation.

Participants also noted the role of governments in using public procurement processes to create demand signals and stimulate demand for low-carbon products. Echoing the call for international cooperation, one speaker identified the example of Toyota allowing royalty-free use of some of their patents.

Speakers emphasized the role of hydrogen in the clean industrial transformation and identified other technologies, including carbon capture, utilization, and storage as well as small modular reactors for nuclear energy. One speaker remarked on the role of the Clean Energy Ministerial, noting that members have launched new workstreams, including an Industrial Deep Decarbonization Initiative, which aims to stimulate global demand for low-carbon industrial materials. Another speaker called for collective efforts in innovation and financing to help make nuclear energy more resilient, robust, and competitive, and to make its role larger and more sustainable.

Noting that innovation efforts will generate technological competition and high-intensity politics, and noting that overcoming past crises required international cooperation, speakers called for platforms and alliances to pre-empt and avoid "ugly competition."

Concluding the dialogue, Oleg Zhdaneev, Russian Energy Agency, speaking on behalf of the Global Champions for the technology, innovation, and data theme, highlighted that inclusivity, collaboration, and making technologies available should be the driving motivation for everyone.

**Ministerial Segment:** San Rahi, Sid Lee, opened the ministerial segment.

**Our Vision, Our Future: Special Remarks from a Youth Advocate:** Vijjasena Sugiono, Chair, US National Student Energy Consortium, called on participants to tap the true potential of his "digitally-savvy generation" to work on energy innovation,

digitalization, and mobilizing advocacy for sustainable energy. He called for engaging educational institutions in seeking technology and digitalization solutions, and engaging social influencers to advocate for sustainable energy.

**Opening Remarks by Global Champions:** Mika Lintilä, Minister for Economic Affairs, Finland, said his country seeks to increase the share of renewable energy in its power mix and be climate neutral by 2035. He stressed the importance of gender equality as a key for developing and deploying innovative energy technologies.

Mohammed Ghazali, Secretary-General, Department of Energy and Mines, Morocco, said his country has continually sought to raise its ambition on energy development and efficiency, with the aim of raising the share of renewables to more than 52% by 2030. He described projects in green hydrogen and biomass, modernization of the grid, and the creation of green energy industrial parks.

PMK Soonarane, on behalf of Georges Pierre Lesjongard, Minister of Energy and Public Utilities, Mauritius, said his country will submit a compact at the HLDE on its commitment to phase out coal use and reach 60% renewables use by 2030. He asked for assistance in modeling what technologies and projects would enable Mauritius to reach these goals.

**Official Launch of Technical Working Group 4 Report:** The report of the Technical Working Group on Innovation, Technology and Data was officially launched by representatives of the Group's three co-lead organizations, UN-Habitat, UNIDO, and the FAO. Rahi introduced a video highlighting key points and recommendations of the Report and noted its call for a system overhaul to meet the 2030 and 2050 targets.

Maimunah Mohd Sharif, Executive Director, UN-Habitat, called for greater cooperation and collaboration, as well as promotion of innovation in policy and planning, technology, business models, and finance. She summarized the recommendations of the Report, saying UN-Habitat seeks to play a key role in supporting cities to localize the SDGs and decarbonize, and in conducting voluntary local reviews of progress.

Li Yong, Director General, UNIDO, noted the challenge of accelerating the pace and scale of clean energy technology development and deployment, given that some technologies still do not exist, such as for clean electrification and heat. He added that some existing technologies, such as those using hydrogen, still await demonstration and commercialization. He called for national policies to unlock investment in proven technologies, such as renewable energy, and address the needs of the end-use sectors.

Ismahane Elouafi, FAO, said innovation is critical for ending poverty and hunger, noting very little innovation or scaling up of innovation at the level of smallholder farmers because it is too costly. She noted many inputs that could multiply farmers' productivity two or three times, such as irrigation systems and seeds, are more expensive in the South than in the North, citing issues with infrastructure and the distance from manufacturing. She called for investigating ways the global economy can make these available at acceptable costs.

**Energy Compact Showcases:** Shirley Rodrigues, Deputy Mayor of London, and Member, C40 Board, outlined multiple initiatives undertaken by the London Mayor and announced that the C40 Cities Climate Leadership Group will help accelerate the energy transition by delivering the targets in their climate action plans. She called on national governments to recognize cities' contribution to energy decarbonization, deliver sustainable energy systems, and provide access to affordable energy.

Arantxa Tapia, Minister for Economic Development, Sustainability and the Environment, Basque Country, Spain, discussed the Basque Green Deal and outlined Basque commitments to, *inter alia*, develop sustainable local markets for hydrogen power and create citizens' cooperatives for photovoltaic technology.

Arvind Bodhankar, Ultratech Cement, announced commitments to: double energy productivity from 2010 levels by 2035; increase green energy use to 34% by 2024; and reduce both its carbon footprint by 27% below 2017 levels by 2032 and scope 2 (indirect) greenhouse gas emissions by 69% within the same timeframe.

RBM Tripathy, President, Operations, JK Cement, announced commitments to achieve by 2030: increasing their green power mix to 75%, from the 2021 level of 25%; reducing net carbon emissions by 21% below 2020 levels; and reducing groundwater dependency through increasing water productivity fivefold.

**Remarks from Ministers and Global Leaders:** Noting that the Maldives depends entirely on imported fossil fuels to meet its energy needs, Aminath Shauna, Minister of Environment, Climate Change and Technology, highlighted the government's policy to transition urgently from diesel to solar energy, which will require foreign investment and capital, reliable data, and innovative technologies.

Raymond Ghajar, Minister of Energy and Water, Lebanon, highlighted that the country's main challenges for energy transition are access to reliable data and information for making informed decisions that have long-term positive effects towards higher sustainability levels and ensuring services are provided to citizens in reliable, efficient, and cost-effective ways.

Ith Praing, Permanent Secretary of State, Ministry of Mines and Energy, Cambodia, said over the past two decades, the country has achieved a village electrification rate of 97.4% and household electrification rate of 81%. He said Cambodia will take advantage of innovations to introduce smart grids and upgrade their electrification in order to connect the remaining 2.6% and close the energy access gap.

Salvador Handal, Executive Secretary, National Energy Council, El Salvador, said the country is working on energy action plans to increase its use of clean energy sources, including green hydrogen, concentrated solar thermal power, waste to energy, and sustainable mobility.

**Leadership Conversation:** Lee moderated this panel. Angela Wilkinson, Secretary-General and CEO, World Energy Council, said innovation and cooperation remain the keys to success and highlighted the need to "clap with three hands," incorporating the public and private sectors as well as people in communities. She said the future of energy is demand-driven, customer-centric, climate neutral, abundant, and requires thinking about behaviors and behavior change.

Feng An, Founder and Executive Director, Innovation Center for Energy and Transportation, noted the ongoing rapid transition to e-mobility. He said although electric vehicles are currently more expensive than traditional internal combustion vehicles, studies imply that price parity will be achieved in the next few years and cautioned cities and governments not to get locked into fossil fuel technologies.

Robert Stoner, MIT Energy Initiative and Director, Tata Center for Technology and Design, said data acquired through the digitalization process can be used in the design of energy systems to make them more affordable and sustainable. He also highlighted the need to integrate off-grid technologies more thoughtfully into the overall electricity system.

Kayla Choi, Student Energy, stressed that companies and national governments will not be successful in large-scale dissemination of clean energy technologies without gaining the trust of locals before asking them to integrate clean energy technologies into their lives.

Speakers also emphasized prioritizing collaboration over competition.

### **Ministerial Thematic Forum on Energy Transition**

This Forum was held on Wednesday, 23 June, with a set of multi-stakeholder dialogues followed by a ministerial segment.

**Multi-Stakeholder Dialogues: Scaling Up Renewable Energy:** This dialogue opened with a review by Indu Shekhar Chaturvedi, Ministry of New and Renewable Energy, India, of his country's growing use of decentralized renewable energy applications.

Jürgen Zattler, Federal Ministry for Economic Cooperation and Development, Germany, said developed countries need to provide capacity, expertise, and financial support, while partner countries need to support the energy transition by reforming their policies to promote the use of renewables.

During a panel on "Harnessing renewable energy potentials worldwide for socio-economic resilience and equity," moderated by Elizabeth Press, International Renewable Energy Agency (IRENA), speakers highlighted governments' role in driving the energy transition, from ensuring that infrastructure is resilient to innovation and change to ensuring that government planning is transparent in order to facilitate private sector decisions that align with government priorities.

A panelist also highlighted the need to eliminate fossil fuel subsidies while instituting transition periods for countries that are reliant on subsidies. Another speaker said we need to be sure to "convert fossil jobs to green jobs."

Storage solutions, as well as solarizing the agriculture sector, were highlighted as areas for further consideration. The opportunity to engage cities, including through their public procurement policies, was noted.

During a panel on "Capacity building to accelerate renewable energy deployment in industry and transport," moderated by Ulrike Lehr, IRENA, speakers discussed the value of quality information in order to adjust policies.

The need for cross-sectoral collaboration was raised, with one speaker noting that bans on vehicles that use fossil fuels are discussed without parallel conversations about how to ensure 100% renewable electricity sources for electric vehicles. Truck transport was highlighted as another area for new technology.

**Technology Solutions and Innovation on Renewable Energy and Energy Efficiency:** This dialogue was opened by the two co-chairs Francisco Javier López, Ministry of Energy, Chile, and Kate Hughes, Department for Business, Energy and Industrial Strategy, UK. López said Chile achieved its goal of generating 20% of its electricity from non-conventional renewable energy sources five years earlier than the target date and now aims to double their commitment within this decade. Hughes said clean energy technologies must be cost-competitive, create new jobs, and be viable around the world in different settings, countries, and communities.

The panel on "opportunities and challenges for the acceleration of energy efficiency expansion" was moderated by Gabriela Prata Dias, Head, Copenhagen Centre on Energy Efficiency, who noted that energy efficiency is lagging behind in the energy transition and called for ways to quicken the pace.



Speakers highlighted that energy efficiency must remain on top of the global agenda, not only because of climate change, but also because of co-benefits such as job creation, cost-savings for consumers, and increased competitiveness.

Speakers identified challenges to improving energy efficiency, including lack of financing, lock-in to outdated technology, export of obsolete technologies to developing countries, and unfavorable comparison between the capital costs of acquiring new technologies and the operational costs of installed technologies. They called for instituting a programmatic approach to energy efficiency, engaging with the private sector, and building more assembly plants in developing countries to enhance affordability and availability of clean energy technologies.

The panel on “emerging technologies for a sustainable energy future: offshore wind and green hydrogen” was moderated by Scott Foster, UN Economic Commission for Europe, who enumerated key requirements for the development of new technologies: a proper supporting policy framework; existing technical infrastructure that would accommodate these new technologies; a market designed structurally in a way that welcomes them; and real prices for greenhouse gas emissions.

Speakers highlighted the role of offshore wind and hydrogen in enabling the energy transition and considered case studies on investing in these technologies. Participants discussed the costs and opportunities, highlighting the need for policy instruments specifically targeting these technologies and, in the case of offshore wind, the need to engage all maritime stakeholders such as the shipping, fishing, and defense sectors.

On the state of the energy transition, speakers said electrification based on renewables is necessary and that for places where electrification is difficult, such as steel and long-range transport, hydrogen will be crucial. One speaker highlighted that green hydrogen must comply with certain requirements, such as environmental additionality.

#### **Partnership and Cooperation for the Energy Transition:**

Opening this dialogue, Co-Chair Martin Hermann, representing Asser Berling, Ministry for Climate, Energy and Utilities, Denmark, called for all bright minds to produce ideas for limiting global warming. Co-Chair Goddy Jedy Agba, Federal Minister of State for Power, Nigeria, called for an equitable, inclusive, and just transition to achieve country-specific clean energy alongside energy access.

Michael Williamson, UN Economic and Social Commission for Asia and the Pacific (ESCAP), moderated a panel addressing “Coal to clean: energy transition strategies to match short-term actions with long-term objectives.” Panelists called for:

- accelerating already-existing solutions;
- focusing on the private sector for implementation;
- eliminating coal use globally by 2040;
- making renewables 70% of energy production by 2030 and almost 100% by 2050;
- creating policy frameworks that account for changing costs;
- building support for a green energy sector in developing countries through developing other sectors such as a green transport sector that includes e-vehicles;
- setting long-term targets;
- providing a broad framework addressing all issues, including the concerns of those negatively affected by the transition, in order to reduce resistance; and
- international financing for decommissioning coal plants and recommissioning them for other purposes.

Mark Radka, UN Environment Programme (UNEP), moderated a panel on “International cooperation and regional integration to advance the energy transition,” noting that the energy transition must occur faster than ever and requires international cooperation on policy, technology, and finance.

Panelists called for:

- cooperation at all levels;
- recognizing youth efforts and expertise in advocacy, entrepreneurship, and negotiation;
- focus on utilities and energy firms;
- eliminating fossil fuel subsidies;
- setting a global price for carbon, including a global carbon price floor for 2030;
- balancing decentralized decision-making with a state’s regulatory functions;
- a global framework, including carbon pricing, that brings resources from developed countries to developing countries; and
- guidance on cyber-security provided by governments.

In concluding the dialogue, Co-Chair Laura Martín Murillo, Director, Just Transition Institute, Spain, called for social protection policies, including for those affected by mine and power plant closures. Co-Chair Kabir Yusuf, Federal Ministry of Environment, Nigeria, called for prioritizing a just and equitable transition now, given climate disasters and the COVID-19 pandemic, with recognition of country-specific circumstances and realistic timelines.

**Ministerial Segment:** HLDE Co-Chair Steiner opened the ministerial segment by observing that momentum toward transitioning to sustainable energy has been building but “we still have far to go.” He stressed that achieving the transition means not only increasing the supply of sustainable energy but also managing demand, increasing efficiency, rethinking how we design energy systems and, above all, putting people at the center of the transition, to ensure it is fair and helps build green and just societies.

**Our Vision, Our Future: Special Remarks from a Youth Advocate:** John Leo Algo, Living Laudato Si’ Philippines, declared that the energy transition from fossil fuels to renewable energy “is not an option, but an inevitability that should not be delayed any further.”

**Opening Remarks by Global Champions:** Dan Jørgensen, Minister for Climate, Energy and Utilities, Denmark, discussed his country’s transition to green energy and commitment to: stop oil and gas extraction and go 100% renewable by 2050; build the world’s first two “energy islands” and export wind-generated power to the rest of Europe; support energy transition in 16 countries through bilateral cooperation; and provide increased aid to accelerate universal access to electricity and clean cooking in sub-Saharan Africa.

Mohammad Mahmood Abubakar, Federal Minister of Environment, Nigeria, reiterated his country’s commitment to reach net-zero emissions but stressed the principle of common but differentiated responsibilities and the need to take national circumstances into account. He previewed a national compact for an energy transition plan with a detailed roadmap for meeting the 2030 and 2050 targets.

Diego Mesa Puyo, Minister of Mines and Energy, Colombia, stressed his country’s commitment to carbon neutrality by 2050, “if not sooner,” and outlined Colombia’s recent changes in legislation and regulatory frameworks, tax cuts for renewable equipment, and promotion of large-scale wind and solar power projects. He said Colombia would submit a compact on green hydrogen to the HLDE.

Bento Albuquerque, Minister of Mines and Energy, Brazil, outlined his government's efforts in renewable energy and providing off-grid power to Amazonian communities. He said his country will submit compacts on biofuels and green hydrogen to the HLDE. Albuquerque added that the Brazilian Government has encouraged industry to adopt carbon neutrality commitments.

Gerd Müller, Federal Minister for Economic Cooperation and Development, Germany, noted his country's commitment to become carbon neutral by 2045. He previewed a compact to help developing countries in the use of decentralized energy and innovative technologies.

Anne-Marie Trevelyan, Minister of State for Business, Energy and Clean Growth, UK, called for international cooperation to not only transition to green energy, but also to expand electricity grids and get power to those not connected to grids. She noted that the UK and India will jointly launch a "green grids" initiative at the 26th meeting of the Conference of the Parties to the UN Framework Convention on Climate Change (UNFCCC COP 26).

Raj Kumar Singh, Minister of State (Power, New & Renewable Energy), India, outlined Indian accomplishments and leadership in the energy revolution. He noted India's founding of the International Solar Alliance to facilitate universal access to renewable energy, and invited all countries to join.

Francisco Javier López Díaz, Ministry of Energy, Chile, highlighted Chile's: inclusive national energy policy that emphasizes renewables; commitment to carbon neutrality by 2050; energy efficiency law; and national green hydrogen strategy. He said Chile will submit three compacts to the HLDE: one on doubling Chile's energy efficiency levels, and two involving regional cooperation on green hydrogen.

**Official Launch of Technical Working Group 2 Report:** Elise Labott, *Foreign Policy*, moderated the launch of the Technical Working Group Report on Energy Transition with the Group's three co-leads. She presented a video summarizing its recommendations.

Francisco La Camera, Director General, IRENA, said transition must be accomplished in the shortest possible time but the emerging energy system has deep implications for economies and society, so the task is to increase its benefits and minimize its negative implications. He cautioned that the inequality gap could widen and relatively few countries are making progress. La Camera called for supporting the most vulnerable countries without delay.

Inger Andersen, Executive Director, UNEP, said energy poverty is unacceptable and support is required to connect the unconnected with green energy. She called for increasing efficiency in designing new buildings and retrofitting existing buildings to reduce the energy burden. Andersen noted that significantly raising energy efficiency can reduce emissions quickly and cost-effectively.

Armida Salsiah Alisjahbana, Executive Secretary, ESCAP, advocated trading renewable energy surpluses through cross-border power grids, saying this can foster decarbonization, increase access to more affordable energy, enhance energy systems' resilience to extreme risks, and foster green development and jobs. She called for ending fossil fuel subsidies.

**Fireside Chat:** During a "fireside chat" with Randall Lane, *Forbes*, Francesco Starace, CEO, ENEL, highlighted that his company is closing all its coal plants by 2029 and putting EUR 200 billion into its global network for clean energy. He advocated improving efficiency by changing wasteful habits and electrifying and digitalizing all power systems. Starace observed that new

technologies must be researched with detachment; if a new technology does not materially improve in 3-5 years, it just distracts effort, time, and money away from others that could work.

**Energy Compact Showcases:** This segment was moderated by Alexander Trepelkov, UNDESA. La Camera previewed the Green Hydrogen Energy Compact that IRENA is forming in collaboration with Denmark, Chile, Germany, the Netherlands, the World Economic Forum, and the UN High-Level Champions for Climate Change, which will be a catalogue of individual and joint commitments from governments on green hydrogen. He invited participants to join in creating an ambitious collection of energy compacts.

David Lecoque, CEO, Alliance for Rural Electrification (ARE), announced commitments to enable the private sector to achieve the following by 2030: delivering sustainable electricity of tier 3 or above to at least 500 million additional people; catalyzing the creation of at least five million green jobs; and avoiding one billion tons of CO2 emissions. He said ARE is reaching out to partners in the public, private, and philanthropic sectors to join the compact.

Alejandra Bernal Guzmán, Ministry of Mines and Energy, Colombia, announced that Colombia, Chile, and the Dominican Republic, with the support of the Inter-American Development Bank, is presenting a compact involving the Renewable Energy for Latin America and the Caribbean Initiative, which sets a regional target of at least 70% renewable energy share in the power mix. She called on other Latin America and Caribbean countries to join the compact.

Trepelkov announced that UNDESA is developing an online registration platform for energy compacts, which will be launched later in the summer.

**Remarks from Ministers and Global Leaders:** Udaya Prabath Gammanipila, Minister of Energy, Sri Lanka, outlined his country's plans to green their energy system through two major initiatives, developing green hydrogen for domestic use and for export, and large-scale reforestation to increase their carbon capture capability and develop biofuels.

Seong-ho Lee, Ministry of Foreign Affairs, Republic of Korea, highlighted his country's 2050 target for carbon neutrality, and efforts in pursuit of this, including hosting the P4G (Partnering for Green Growth and the Global Goals 2030) Summit in May 2021.

Darío Martínez, Secretary of Energy, Argentina, stated his country's commitment to comply with the 2030 Agenda and Paris Agreement by developing mechanisms and public policies that promote the full use of natural gas and renewable energy.

Rafael Mariano Grossi, Director General, International Atomic Energy Agency (IAEA), stressed that nuclear energy must go beyond providing electricity to also contribute to heating and hydrogen production. He said the question about whether renewables or nuclear is the energy source of the future is a false dichotomy, emphasizing that "both are the future."

**Leadership Conversation:** Trepelkov moderated this panel. Tasneem Essop, Executive Director, Climate Action Network, said that to ensure justice the following must be done: put addressing poverty and inequality front and center in plans for energy transition, especially in developing countries; ensure that all voices are represented at the decision-making and implementation stages, especially those that will be impacted by the energy transition; and promote international collaboration and global solidarity, especially regarding technology-sharing and ensuring financial support.



Edwin Huizing, Executive Director, Humanistic Institute of Development Cooperation, stressed that the transition will not automatically bring justice to those left behind but requires a shift in societal values. He called for: a larger role for civil society, particularly deprived groups; multi-stakeholder partnerships for transition, such as support for female entrepreneurs; and political will to create equal opportunity in the global South.

Amit Sinha, Mahindra Group, listed actions required to address potential risks: implementation planning to tackle cyber-security issues; recycling policies for lithium, cobalt, and lead; and prevention of risk to investors in legacy energies for migrating to new ones.

Helen Watts, Student Energy, called on the international community to: create an enabling environment for youth engagement in policy creation; ensure access to education and training in competencies to respond to ongoing global changes; and fund youth participation to sustain solutions in the long term.

**Closing:** Closing the ministerial segment, Trepelkov highlighted three takeaways: we must capitalize on the existing strong momentum for energy transition to achieve SDG 7; this means further scaling-up renewables, green investment, jobs, and empowerment of people and countries; and only through joint efforts and partnerships can we achieve the scale needed.

### **Ministerial Thematic Forum on Enabling SDGs through Inclusive, Just Energy Transitions**

This Forum was held on Thursday, 24 June, with a set of multi-stakeholder dialogues followed by a ministerial segment.

**Multi-Stakeholder Dialogues: Empowering People: Accelerating SDG 7 Achievement in Support of Human Health, Gender Equality, and Education:** This dialogue was opened by Reagan Moses, Ministry of Environment, Nauru, who highlighted the role of clean energy in ensuring health and food security.

The panel on energy and health was moderated by Maria Neira, World Health Organization (WHO), who stressed that the discussion about energy and health is about saving lives, noting that energy equals health, and health requires clean and reliable energy.

Speakers pointed out that lack of energy access causes bad health outcomes arising from, *inter alia*, indoor air pollution from unsafe cooking methods, and ill-equipped healthcare centers.

Speakers called for consideration of the needs of the urban poor living in informal communities who have no access to modern healthcare facilities, stressing that access and quality of energy are linked to good health and wellbeing. They also remarked that lack of access to energy should be viewed not just as a problem, but as an investment opportunity to build resilient and sustainable healthcare systems that are reliant on clean energy sources.

The panel on energy and gender was moderated by Seemin Qayum, UN Women, who emphasized that gender-responsive policies and programmes are an inherent element of a just energy transition. Noting that the energy sector is male dominated in most parts of the world, speakers highlighted the need to make women in the sector more visible and to increase their role and expand their networks through, for instance, education and networking events.

Speakers noted the need for quality jobs for women in the energy sector, and for women to have a seat at the decision-making table at all levels. Underlining that women need to move from being energy consumers alone to energy producers, they stressed that women can reach remote markets and inspire confidence in consumers, thereby

complementing private sector operators by helping them enter new markets.

The panel on energy and education was moderated by Jon-Hans Coetzer, UN Institute for Training and Research (UNITAR), who invited speakers to discuss the role of both formal and vocational education in delivering SDG 7.

Speakers underlined that access to energy is needed for quality education, and access to education is necessary to promote energy access. They highlighted that education systems are breeding grounds for the development of new technologies and knowledge required for the energy transition, and called for increased investment in education. Speakers further noted that academic institutions carry out research and innovation, but industry takes the innovation to the commercialization and market penetration stages, and called for partnerships between industry and educational institutions.

Speakers highlighted that energy access is about children's rights, as energy poverty threatens children's ability to thrive rather than just survive. They further called for, as part of the energy transition, empowering youth and training them as future leaders and drivers of the transition.

Concluding the dialogue, Nawal Al-Hosany, Permanent Representative of the United Arab Emirates (UAE) to IRENA, remarked that ensuring a just transition that supports human health, gender equality, and education requires willingness to embrace innovation on a much wider scale, as well as financing.

**Enhancing Prosperity: Accelerating SDG 7 Achievement in Support of Just, Inclusive Societies:** The Co-Chairs opened this dialogue. Jorge Rivera Staff, National Secretary of Energy, Panama, said resistance to the energy transition can be lessened if it impacts society positively, with a justice dimension. Anna Hjartardóttir, Ministry for Foreign Affairs, Iceland, noted Iceland's progress as a Global Champion benefitting from geothermal energy.

Moustapha Kamal Gueye, International Labour Organization (ILO), moderated a panel on energy and jobs. Panelists called for:

- focusing on small businesses and social protection schemes;
- governments to identify trends in skills needed and create accessible training;
- international organizations to identify needed skills and support countries;
- investigating existing assets and infrastructure within local and national contexts;
- a consensus approach and alignment of policies to make energy equitable for all;
- sustainable management plans addressing all interests and goals;
- market policies on adequate employment, facilitating labor mobility where needed;
- public investment strategies supporting regional development and diversification;
- industrial policy supporting viable supply chains with tools including capacity building and access to credit;
- financing for small businesses for job creation;
- collective political will for a rapid, urgent transition;
- active labor market policies and skills agendas; and
- reducing bureaucratic barriers to transition.

Myrlyn Van Voore, Head, Secretariat of the International Resource Panel, moderated a panel on promoting the diversification and framework of a circular economy. Panelists said:

- the current "resource management" approach is a failure;
- banks are promoting a circular economy;

- diesel and coal include negative externalities and are not economical investments; and
- carbon can be recycled into food for algae-based food ingredients, turning cost into profit.

They also noted:

- the Intergovernmental Panel on Climate Change's reliance on carbon sinks for decarbonization and the competitive advantage of some fossil-fuel producing companies in storing and utilizing carbon through carbon capture, utilization, and storage; and
- success in using internal resources for on-site decarbonization through biogas, hydropower, and wind and solar power, enabling a company to work off grid.

They called for:

- concessional financing for the most vulnerable countries and those in conflict;
- a global framework supporting scaling-up of technologies; and
- mechanisms for cost-sharing to mitigate negative impacts on fossil fuel producers.

Anna Kruij, UN Global Compact, moderated a panel on the private sector and entrepreneurship. Panelists called for:

- ground truthing and other data collection on energy needs to mitigate risk and encourage private sector investment;
- philanthropic organizations to take on acceptable risk;
- experimental investments, allowing some attempts at innovative clean energy products to fail, as this is natural to sector development;
- governments to promote green energy through contributions such as tariff reductions;
- extreme risk tolerance for some investments;
- simplifying bureaucratic processes; and
- data to determine correct modes of financing and improve access to financing;

**Protecting the Planet: Integrated Planning and Cross-sectoral Coordination for Sustainable Development:** Miguel Figueroa, Ministry of Energy, Honduras, opened this dialogue, highlighting the need to strengthen urban resilience and to find greener and smarter energy solutions.

During a panel on "Pathways towards net zero emissions," moderator Roula Majdalani, UN Economic and Social Commission for Western Asia (ESCWA), noted that incentives to promote the energy transition need to be just, inclusive, and truly leave no one behind, with implications for capacity building. Several speakers discussed the role that cross-sectoral data analysis could play along with systematic approaches to addressing climate change in combination with other sectors and objectives.

One speaker noted that climate finance has a role to play in fostering multi-stakeholder partnerships. The role of finance in de-risking and incentivizing investments was also noted. A speaker said "net-zero" is an interpretation of how to achieve the real target of the Paris Agreement: limiting warming to 1.5°C. One speaker said different pathways are needed for different countries and the best pathways will be based on scenarios that account for a country's energy portfolio.

On "Water, food, ecological systems and biodiversity: Role of renewable energies," moderator Radia Sedaoui, ESCWA, highlighted that energy is the driver for other SDGs. Speakers highlighted the need to involve stakeholders in implementation and decision making. Several speakers said developing criteria for sustainability of renewable energy sources will help both industry

and consumers. Cross-sectoral indicators were also proposed, along with the identification of sustainability criteria for biomaterials.

During a panel on "Sustainable cities and communities," moderated by David Koranyi, UNDESA, speakers called for: connecting climate action with discussions about social equity; increasing access to finance for renewables; and engaging other ministries in COP 26. Speakers highlighted engaging cities and regions, including local zero-carbon movements, will help raise the ambition of nationally determined contributions (NDCs) under the Paris Agreement on climate change and national commitments to achieve net-zero emissions. Speakers also emphasized bringing women and youth into decision making. The value of a stable grid was also mentioned. One speaker noted the challenges that exist at the beginning of the project cycle, as communities design interventions, and discussed efforts to provide support for writing proposals.

**Ministerial Segment:** Kandeh Yumkella, CEO, The Energy Nexus Network (TENN), opened the ministerial segment.

**Our Vision, Our Future: Special Remarks from a Youth Advocate:** Kervelle Baird, SDG 7 Youth Constituency, declared that "failure is not an option," and "ambition is paramount" if the SDGs are to be realized over the next 8.5 years.

**Opening Remarks by Global Champions:** Roberto Ordóñez Wolfovich, Minister of Energy, Honduras, said his country is committed to developing energy compacts involving local governments, the private sector, civil society, and development partners and will present these to the HLDE. He added that it is developing a national energy access policy and specific energy access plans for the education and health sectors.

Gudlaugur Thór Thórdarson, Minister for Foreign Affairs and International Development Cooperation, Iceland, stressed three points concerning the Forum's theme:

- the importance of sustainable energy in making the food system more sustainable, noting Iceland is working with the World Bank and SEforALL to promote solutions in developing countries;
- sustainable energy as key to realizing a circular economy; and
- the gender dimension of sustainable energy requires more attention.

He promised Iceland would submit an "ambitious" compact to the HLDE.

Rennier Gadabu, Minister for Climate Change, Nauru, noted clear links between fighting climate change and achieving the SDGs, calling for a safe and reliable source of sustainable energy. He previewed Nauru's compact to achieve 50% electricity generation from renewable sources by 2023, and achieving 20% electrification of the vehicle fleet and 30% energy efficiency improvement by 2030.

Abdullah Bin Mohammed Belhaif Al Nuaimi, Minister of Climate Change and Environment, UAE, noted the UAE's quest to diversify its energy mix to achieve 50% clean energy by 2050. He underscored the UAE's leadership on the issue of energy and food systems, noting that it co-hosted the high-level dialogue on the topic and also joined the agriculture innovation initiative at the recent Climate Leadership Summit in Washington, DC.

João Galamba, Deputy Minister and Secretary of State for Energy, Portugal, said his country was a pioneer in setting the goal of climate neutrality by 2050, and has a goal of 80% renewables in power generation by 2030. He also noted that Portugal has had a national strategy on green hydrogen since 2020, announcing a green hydrogen compact would be submitted to the HLDE.

Jorge Rivera Staff, National Secretary of Energy, Panama, noted various national initiatives in support of the SDGs and the energy transition and its goal to phase out fossil fuels in power generation by 2023. He said his country will submit a compact portfolio containing 40 energy compacts from diverse national actors.

Kadri Simson, Energy Commissioner, European Commission, said the European Union is addressing the impacts of the energy transition through various programmes including: a recovery and resilience facility created post-COVID, channeling at least 37% of its spending into climate-related investment; and a just transition mechanism to support those most affected by the transition, which will provide EUR 17.5 billion to EU coal- and carbon-intensive regions in transition.

#### **Official Launch of Technical Working Group 3 Report:**

Yumkella moderated the launch of the Technical Working Group Report on Enabling SDGs through Inclusive, Just Energy Transitions with the Group's three co-leads. He presented a video summarizing the report's recommendations.

Liu Zhenmin, UN Under-Secretary-General for Economic and Social Affairs, highlighted that the report outlines benefits from energy transition but recognizes potential trade-offs with other SDGs. He stressed the need to ensure benefit-sharing by everyone and design science-based plans to maximize co-benefits and minimize tradeoffs. He said that without inclusivity progress will be uneven across SDGs and called for an integrated plan in every country.

Rola Dashti, Executive Secretary, ESCWA, said conflict and instability undermine action for a just and inclusive energy transition. She cited:

- insufficient political and institutional commitment;
- inadequate integrated policies supporting green ecosystems and mainstreaming strategies;
- lack of enforceable regulations or positive incentives;
- insufficient funding for entrepreneurship;
- distrust in renewable technologies;
- lack of technical skills;
- the need to enhance international collaboration in technology and innovation; and
- an increasing, unsustainable demand for natural resources.

Tedros Adhanom Ghebreyesus, Director-General, WHO, said one billion people are still served by healthcare facilities with no access to electricity. He said the report recommends maximizing the energy transition, including for public health, jobs, food, youth empowerment, and gender equality. He called for making 2021 a "year of energy action."

**Fireside Chat:** During a "fireside chat" with Yumkella, Omran Hamad Al-Kuwari, CEO, Qatar Foundation International, highlighted non-profits' role in bridging innovation gaps between government-funded research and private sector scaling of innovations and in bringing academia, government, and the private sector together to address "wicked problems." On whether fossil fuel-producing countries are fearful of a green transition, Al-Kuwari noted the Middle East is more affected by climate change than many other regions, from both temperature and sea level rise. He differentiated the current energy transition from historical ones as it is purposive, addressing climate change rather than just improving efficiency. He called for young people to find an expertise to address climate change and create a multidisciplinary approach around that.

**Energy Compact Showcases:** Svante Myrick, Mayor, City of Ithaca, New York, US, presented the Finger Lakes Climate Compact featuring a "community choice aggregation program" to procure renewable energy with the goal of 100% affordable renewables for electricity by 2030.

Saying that his organization represented the off-grid solar industry, Patrick Tonui, Global Off-Grid Lighting Association, announced that their energy compact would improve the lives of one billion people by 2030, by delivering improved electricity access through the deployment of the latest innovations in distributed solar technology, efficient appliances, and decentralized business models.

Ivan Vera, on behalf of the Global Sustainable Water and Energy Solutions Network, announced that as of June 2021, three Network members have made voluntary commitments for a compact:

- Itaipí Binacional, a hydroelectric power producer, commits to invest USD 5 million in capacity development for energy access, energy efficiency, and renewable energy; and USD 200 million to strengthen electrical transmission and distribution, consequently improving reliability, efficiency, and electricity access in Paraguay;
- The Guatemalan sugar association ASAZGU, and Spanish water company Canal de Isabel II each commit to expanding its electricity generation to cover 100% of its own electricity demand with 100% clean renewable sources by 2030;
- ASAZGUA additionally commits to: meet at least 30% of Guatemala's dry months' electricity demand through renewable energy; increase ethanol production for transportation by 20%; and develop new bioenergy from biological residues; and
- Canal de Isabel II additionally commits to increase its energy efficiency by 6.8% by 2025 and to invest more than EUR 80 million over the next 10 years to meet its energy commitments.

**Remarks from Ministers and Global Leaders:** Eng Seleshi Bekele, Minister of Water, Irrigation and Energy, Ethiopia, said his country generates most of its energy from renewable sources, mainly hydro. Noting that the bulk of national energy consumption is still from biomass, he said they are working to increase current national generation capacity from about 4.5 to 18 gigawatts through private sector participation and diversification of the energy mix by 2030.

Eamon Ryan, Minister for the Environment, Climate and Communications, Ireland, expressed his country's commitment to diplomacy to make the required leap to protect the environment and create new opportunities and new energy systems cooperatively rather than competitively.

Javier Papa, Energy Secretariat, Argentina, said his country's future energy matrix aligns with its "5+1" policy objectives, namely: inclusion, dynamism, stability, federalism, sovereignty, and sustainability. He stressed that international cooperation and financial support is needed now more than ever for achievement of the SDGs through the acceleration of an inclusive and just energy transition.

**Leadership Conversation:** Yumkella moderated this panel. Hans Olav Ibrek, Special Envoy for Climate and Security, Norway, called the key message for the HLDE to mobilize the necessary political leadership. He called for a focus on implementation, saying the world knows what to do and the technologies are available, and on innovating for new technologies and solutions.

Sheila Oparaocha, ENERGIA, emphasized there can be no energy transition without gender equality. She called for affordable



energy access to address women's time poverty, such as through targeted subsidies and flexible payment schemes, and ensuring that young women are aware of career opportunities in the energy sector.

Kristina Skierka, CEO, Power for All, urged use of the private sector to help achieve energy access goals, ensuring private sector voices are at the table. She called for energy equity through targeted subsidies and distributed energy systems and energy compacts setting targets.

Miguel Stilwell de Andrade, CEO, Energias de Portugal (EDP), emphasized the need to work with local communities on the transition from coal to renewables and energy access efforts, saying renewable energy will become increasingly more competitive.

Shakti Ramkumar, Youth Advocate, Student Energy, called for tangible commitments to fund youth-led work and leveling the playing field for youth access into the sector. She announced her organization's commitment to raise USD 150 million by 2030 to directly fund and support the launch of 10,000 youth-led clean energy projects around the world.

**Closing:** Yumkella highlighted seven key messages from the day:

- energy pathways must be integrated into the solutions for achieving all SDGs;
- whatever energy strategy is chosen, social equity and inclusiveness is central;
- universal energy access is paramount for energy transitions in all countries;
- the gender dimension must be integrated into any strategy developed;
- we need systemic approaches, not quick fixes;
- we need to monitor progress; and
- multi-stakeholder partnerships and greater collaboration are crucial.

### **Ministerial Thematic Forum on Finance and Investment**

This Forum was held on Friday, 25 June, with a set of multi-stakeholder dialogues followed by a ministerial segment.

**Multi-Stakeholder Dialogues: *Leaving No One Behind:***

***Inclusive and Sustainable Recovery:*** The dialogue opened with remarks from the Co-Chairs. Sarah Ashour, Permanent Mission of Saudi Arabia to the UN, called for financing mechanisms to advance energy access projects, saying they should: include all options, all technologies, and all fuels that can help achieve SDG 7; align with the Paris Agreement; and allow countries to pursue sustainable development. Nicola Bazzani, Ministry of Foreign Affairs and International Cooperation, Italy, called for lower-cost capital with greater availability and said Italy, as G20 Chair, is pursuing consensus among G20 countries to accelerate shifting global financial flows towards the energy transition.

The panel on "Advancing SDG 7 through sustainable COVID-19 recoveries" was moderated by Jean-Paul Adam, UN Economic Commission for Africa (ECA), who highlighted the world's dual race towards net zero emissions and towards 100% energy access, asking how to mobilize finance to achieve these goals. Speakers urged targeted strategic policies for low-carbon development, with one speaker identifying her country's efforts toward: a green growth and climate resilience strategy; a green fund to attract climate finance; aligning national priorities with the SDGs; and sectoral investment plans.

Speakers called for:

- appropriate regulatory and institutional frameworks to attract clean energy investment;

- resources for those who need it most, including small business;
- increased engagement with youth from traditionally marginalized communities and impoverished backgrounds; and
- innovative options, such as flexible payments.

Speakers also stressed applying the right kind of capital to the right kind of problem, highlighting grants and concessional debts for the initial stage, to build markets before graduation to commercial capital.

The panel on "Investment in clean energy technologies" was moderated by Tim Gould, International Energy Agency (IEA), who said scaling up investment in clean energy technologies is imperative, noting the need for tripling clean energy investment within this decade.

Speakers noted the critical role of blended finance in de-risking clean energy projects, saying it should be directed towards mini-grids and new and innovative technologies. They outlined challenges to scaling up clean energy investment, including transmission and distribution systems based on fossil fuels and lack of legislation in countries, noting that policy instruments risk being overturned with a change in government. They identified that investors need predictable policies, transparency, and attractive rates of return.

One speaker said countries need to apply development finance in more effective ways, shifting from direct funding of projects to leveraging larger pools of private capital by reducing risk, supporting project preparation, conducting feasibility studies, and structuring transactions.

Closing the dialogue, Laurien Berkvens, Ministry of Foreign Affairs, the Netherlands, called for increased financing for energy access for people in remote areas, and for addressing market barriers and creating incentives using blended finance.

***Financing the Global Climate and Energy Goals:*** Co-Chair Sardar Mohazzam, Managing Director, National Energy Efficiency and Conservation Authority, Pakistan, opened the dialogue, highlighting Pakistan's commitment to reduce emissions by 60% by 2030.

Alan Miller, on behalf of UNDP, moderated a panel on "Financing for adaptation." Panelists said:

- some countries depend on fossil fuel taxes in their national budget;
- fossil fuel taxes should be shifted to financing clean energy infrastructure;
- the private sector currently supplies 2% of clean energy funding;
- adaptation financing must increase sevenfold by 2030; and
- only one fifth of climate financing goes to resilience.

They called for:

- conducting climate screening of projects and climate risk assessments for portfolios;
- governments to be enablers through policies, structures, regulation, tax schemes, and service provision, requiring no upfront investment and/or incentives;
- public actors to consider the "system value" of investments for adaptation and stimulate innovation; and
- piloting new financing instruments such as reimbursable grants.

Manuel Baritaud, European Investment Bank (EIB), moderated a panel on "Accelerating sustainable finance through international cooperation and capacity building." He noted that sustainable finance is not going to where it is urgently needed.

Panelists called for:

- global carbon pricing to price externalities, raise project funding, and catalyze private sector changes;

- urgent developed country commitments to vulnerable countries;
- new financial products, such as green bonds;
- new ways to de-risk project funding;
- “strategic follower-ship” rather than “reinventing the wheel” for greater impact;
- shared criteria to identify projects for sustainable financing;
- integrating climate risk and sustainable development within financial frameworks;
- capacity building for identifying risks; and
- private actors using taxpayer money to stop pushing risk onto governments.

Marcel Alers, UNDP, moderated a panel on “Setting a global carbon price,” calling it a critical policy instrument.

Panelists noted that industries in jurisdictions imposing carbon prices have a competitive disadvantage.

Panelists called for:

- considering the successful model of developing a market for waste;
- standardized units of carbon and a mechanism to buy, sell, or trade it;
- dialogue among all countries toward creating a global carbon pricing system;
- a global carbon price floor;
- carbon price border adjustments;
- reframing priorities to ensure political buy-in from those below the poverty line;
- piloting carbon pricing in certain sectors;
- incorporating the “social cost of carbon” in broader regulations;
- calculating a baseline on energy poverty before policymaking;
- removing the “negative carbon tax” of fossil fuel subsidies;
- tailoring a carbon pricing strategy to local considerations and particular sectors; and
- introducing social protection measures.

Co-Chair Rodriguez closed by saying COVID-19 shows wealth agglomeration is not a solution; rather, funds must improve the quality of life for all.

**Ministerial Segment:** Hubert Danso, CEO and Chair, Africa Investor, opened the ministerial segment.

**Our Vision, Our Future: Special Remarks from a Youth Advocate:** Cathy Yitong Li, COY16, called for involving youth directly in finance, innovation, and investment in the energy transition because it involves their future: “You can do nothing about us without us.”

**Opening Remarks by Global Champions:** Antonio Almonte, Minister of Energy and Mines, Dominican Republic, said his country will commit to achieve by 2030: 99% energy access; a 30% increase in renewables’ share of power generation; and an increase energy efficiency by 30%. He said the Dominican Republic will also promote the Technical Assistance Programme for Sustainable Energy in the Caribbean and advocate on issues facing small island developing states in realizing the SDG 7 targets.

Roberto Cingolani, Ecological Transition Minister, Italy, called for using COVID-19 recovery efforts to accelerate the shift of global financial flows to the transition to sustainable energy and climate neutrality, with emphasis on deployment of energy systems using renewables, increasing efficiency, and promoting innovative technologies while avoiding investments in carbon-intensive industries.

Hammad Azhar, Federal Minister for Energy, Power Division, Pakistan, discussed his country’s goal for 60% renewable energy by

2030, including solar, wind, and hydrogen; institutionalizing energy efficiency and conservation across the economy; and developing the electric vehicle market. Noting a current gap of USD 700-900 billion annually in the investment needed globally to achieve SDG 7, he called for 2021 to be the year “we join hands” for a sustainable future through equitable financing.

Yoka Brandt, Permanent Representative of the Netherlands to the UN, noted the world faces a steep financing gap in both scale and scope, with the current annual level of investment in clean energy needing to triple by 2030 to get the world on the road to net zero emissions by 2050. She said shifting investments away from fossil fuels requires eliminating fossil fuel subsidies, introducing carbon taxation, increasing transparency in energy sector financing, and the right enabling environment.

Khalid Abuleif, Ministry of Energy, Saudi Arabia, stressed the guiding principle of energy transition should be doing no harm to either economies or people. He noted that every country is different in its endowments, development levels, and aspirations, and that global agreements must respect all three pillars of sustainable development. He suggested that while carbon pricing and taxes and subsidy reform might seem rational in some jurisdictions, their global application has serious implications. He stressed the lack of “one size fits all” policy solutions, saying investments must address all energy sources, not just renewables and energy efficiency but also emissions.

**Official Launch of Technical Working Group 5 Report:** Danso moderated the launch of the Technical Working Group Report on Finance and Investment with the Group’s four co-leads. He presented a video summarizing the report’s recommendations.

Werner Hoyer, President, EIB, stressed the importance of a taxonomy for green financing and a broad market open to all issues.

Vera Songwe, Executive Secretary, ECA, said capacity in Africa needs doubling by 2030 and quintupling by 2050, with the private sector playing an important role. She stressed: green investment; alignment with the Paris Agreement, SDG 7, and net-zero goals; public-private cooperation; and a robust project pipeline to attract private capital.

Mary Warlick, IEA, noted although investment has risen since 2020 it still lags in emerging economies. She called for deploying existing clean energies and investing in new technology innovation, and for catalyzing private capital through international public financing. She said IEA is working to remove bottlenecks in various countries.

Stephanie von Friedeburg, International Finance Corporation (IFC), highlighted the “audacious goal” of providing energy access for all in a green, sustainable way and called for substantial increase in private sector participation, in four areas:

- aligning all ongoing and new projects with the Paris Agreement;
- increasing renewables, battery storage, and off-grid solutions;
- de-risking, blended finance, and long-term financing for viable projects; and
- greening the financial sector, including local banks.

She added that alignment with each country’s NDC is critical for just transition.

**Fireside Chat:** In a “fireside chat” Danso conducted with James Mwangi, Group Managing Director and Group CEO, Equity Group Holdings Plc, Mwangi said business must be in the forefront of healing the environment because of its massive capital. He highlighted his company’s collaboration with leading energy companies to ensure access to clean energy devices,

highlighting international assessments of its achievement of social and environmental governance standards. He called for a “Marshall Plan for Africa” for building Africa back better, more resilient, and more inclusive after COVID-19. He said the resources of business can strengthen the world’s fight against climate change if business adopts that common purpose and a “purpose first” approach.

**Energy Compact Showcases:** Matthew Jordan-Tank, European Bank for Reconstruction and Development (EBRD), announced a compact regarding its existing Green Cities programme, whereby it will complete a minimum of 50 Green City Action Plans and invest around EUR 1.9 billion by the end of 2023 in areas such as “smart cities” technologies and increased energy efficiency in buildings, transport, water, and waste management.

Meredith Adler, Executive Director, and Kabir Nadkarni, Climate Finance Advisor, Student Energy, jointly announced a compact to raise USD 150 million toward upskilling, mentoring, and directly financing 10,000 youth-led clean energy projects by 2030.

Surdeep Singh, Chairman and Managing Director, NPTC Ltd., India’s largest power utility, announced his company’s compact to install 60 GW of cumulative renewable energy capacity and cut net energy intensity by 10% from 2012 levels by 2032. He added that NPTC will also join at least two international alliances and groups to facilitate clean energy research and promote sustainability in the energy value chain by 2025.

Mark Carrato, US Agency for International Development (USAID), said USAID’s Power Africa Partnership is developing a compact to mobilize USD 300 million to electrify 20,000 health clinics in Africa by 2030.

**Remarks from Ministers and Global Leaders:** Teresa Ribera, Minister for the Ecological Transition and the Demographic Challenge, Spain, observed that the energy transition is key to fulfilling the Paris Agreement, but must consider the distributional impacts and social dimension.

Charles Obichang, Minister of Public Infrastructure and Industries, Palau, said his country intends to heed the call for an energy compact. He explained his country, currently heavily dependent on imported fuel, is looking to become 100% fossil-fuel free and is exploring solar, wind, and ocean thermal energy conversion. He observed, however, that as a small island developing state, Palau cannot hope to achieve those goals “without significant help from our friends.”

Noting the impacts of recent conflict on the power sector and its role in water supply, agriculture, and health, Nidal Karmousha, Ministry of Electricity, Syria, called for external aid to help Syria address what needs to be done in the power sector to provide humanitarian services to all Syrians.

Yannick Glemarec, Executive Director, Green Climate Fund (GCF), noted that the IEA estimates annual clean energy investment must exceed USD 4 trillion by 2030, three times more than its most recent five-year average. He said the GCF is helping developing countries scale up renewables by removing barriers in: energy generation from renewable sources; efficient and reliable energy transmission, distribution, and storage; and access to clean energy. He noted the GCF has invested USD 2.5 billion in energy generation and access in 49 developing countries and will continue investing in renewables and energy efficiency.

**Leadership Conversation:** Danso moderated this conversation, noting that USD 1 trillion is needed to put the world “back on track,” requiring concerted policy interventions, public finance, and the private sector.

Hela Cheikhrouhou, Chair and CEO, Nithio, warned that the large development finance institutions are too conservative because they must protect their balance sheets. She called on them to scale up funding, and recognize that no commercial investment has zero risk.

Wiebe Boer, CEO, All On, Shell, described his work on the ground helping entrepreneurs raise start-up financing, such as for providing mini-grids and solar home systems for low-income households, with small grants and help in understanding their innovation and how to get it to market. They can later seek larger sources of funding and growth capital to scale up.

Cristina Duarte, UN Under-Secretary-General and Special Adviser on Africa, cautioned not to place value on Africa only as a carbon sink but to address climate adaptation and energy as two sides of the same coin, saying Africa needs to industrialize and find its own path in the energy transition. She noted that producing power at commercial scale requires a long process of procurement and implementation, so a mix of grid, mini-grid, and off-grid solutions is most feasible. She urged the private sector to learn to take risks in this sector.

Oluwadabira Abiola-Awe, Youth Advocate, Student Energy, said young people are ambitious and driven but need finance and investment to bridge the gap between their motivation and action and unlock the solutions the world needs.

### **Grand Closing**

Trepelkov moderated the Grand Closing of the Forums on Friday, 25 June, which featured remarks by the two HLDE Co-Chairs and the HLDE Secretary-General. HLDE Co-Chair Steiner said the week made clear that the energy revolution has begun, but it remains to be seen how fast and fair it will be. He urged everyone not to allow the opportunity to properly shape that future to slip away.

HLDE Co-Chair Ogunbiyi detailed the many energy compacts announced or previewed during the week and called for more before the HLDE, offering her team’s help in preparing those compacts.

HLDE Secretary-General Liu said the five Thematic Reports launched over the week “have shown us where we must go” and provide clear recommendations and targets for the HLDE to consider, while the energy compacts announced have demonstrated “new levels of action and commitment to delivering the sustainable energy goals.” He called for all parties to demonstrate the political will to deliver clean, sustainable, and affordable energy for all by 2030.

Trepelkov declared that the Forums demonstrated significant progress in preparation for the HLDE but cautioned that much more remains to be done. He urged everyone to step up the pace of SDG 7 implementation. He closed the meeting at 11:43 am EDT (GMT-4).

### **A Brief Analysis of the Ministerial Thematic Forums**

Welcome to 2030. Globally, we have achieved Sustainable Development Goal 7 (SDG 7), ensuring access to affordable, reliable, sustainable, and modern energy for all, and we are well on our way to becoming carbon-neutral by 2050. Everyone, including the poorest and most vulnerable, has access to electricity and clean cooking, and most people rely on clean energy rather than fossil fuels.

No, this is not utopia. It is the vision of the High-level Dialogue on Energy (HLDE) to be convened by the UN Secretary-General on 20 September 2021, the first high-level attempt to tackle energy issues under the auspices of the UN General Assembly in 40 years.



The virtual Ministerial Thematic Forums sought to chart the path towards this 2030 world and its joint goals of making progress towards carbon neutrality as well as ensuring a just, equitable, and inclusive energy transition. The Forums echoed with calls for international cooperation and collaboration to ensure that “no one is left behind” on the path to a clean-energy reliant, carbon-neutral future.

This analysis will review these calls for international cooperation in light of the global realities of differing political interests and the nature of the technological innovation space where competition and secrecy are inevitable, and consider the role that these Ministerial Forums have in bringing the world closer to achieving the 2030 vision.

### ***Leaving No One Behind***

The key purpose of the Thematic Forums was to mobilize action and build momentum towards achieving the SDG energy targets by 2030 and carbon neutrality by 2050. The Forums left no doubt as to the urgent need for action, considering 2030 is a mere nine years away and a recent report by the International Energy Agency (IEA) concluded that if we continue at our current pace, only 92% of the global population will have electricity access by 2030, with about 660 million people left behind.

Clearly there is a lot to do to “leave no one behind,” a call frequently repeated by participants. There is general agreement that we require an energy transition—moving from a fossil fuel-based to a clean energy-based energy sector—and many participants noted developing countries, in particular, have the opportunity to “leapfrog” traditional fossil fuel-based technologies and move straight to clean technologies. There was a lot of discussion about how this can be realized, and participants urged international cooperation and increased investment flows to developing countries both to increase access but also to achieve the transition.

### ***Collaboration before Competition***

One question that emerged from these discussions is how international cooperation and collaboration can be achieved, given that countries, particularly the private sector within countries, are essentially competing against each other in the technology innovation space.

International cooperation and collaboration can be manifested in different ways, such as financing and capacity building, but one major way is to ensure the availability and affordability of clean energy technologies. Competition is a major driver of innovation, as the IEA points out in its July 2020 Special Report on Clean Energy Innovation. However, participants noted what one called “ugly competition,” a situation where innovators refuse to share the data and knowledge needed to speed up innovation and make products market-ready. Some countries, such as the US and China, and even the European Union, are competing to become technology market leaders and there is a worry among some governments, the NGO community, and others that this competition will overshadow the obvious need for collaboration. There were, therefore, repeated calls during the week for “collaboration before competition,” with innovators urged to keep the goal of the clean energy transition in mind, with the ultimate goal of protecting the environment for all.

Additionally, there is the issue of the affordability of these technologies. Developing countries are being encouraged to bypass traditional inefficient technologies, which they can barely afford as it is, and move straight to newer and more expensive clean technologies. Much investment has gone into the development of

these technologies, and there is a natural desire to recoup these investments and make a profit. So how can countries ensure that these technologies are affordable to those who need them the most?

This question remains unanswered, but it must be resolved to ensure a just transition. Some have suggested that it could come down to states following the model of COVID-19 vaccine distribution: governments purchasing supplies from their own companies to put into official development assistance and distribute to their preferred recipients. Others, however, have pointed out the difference in cost involved, as many energy technologies can be significantly more expensive than vaccines, and although these technologies are a crucial aspect of the energy transition we want, they are also not life-saving vaccines during a global public health emergency.

### ***Compact and Creative Energy Compacts***

One of the main expectations from the Thematic Forums was the announcement of meaningful energy compacts to build momentum towards achieving the goals of universal energy access by 2030 and carbon neutrality by 2050. This might be seen as a way of pursuing the international “cooperation” necessary to achieve targets in an era when attempting to negotiate a legally binding global agreement would take too long and political will for such an agreement is lacking.

Indeed, many energy compacts were announced during the Forums, which is a strong signal to the market about global determination to address energy access and achieve a clean energy transition. It can also be one way to motivate, or put peer pressure on, other countries and entities to make their own commitments. However, the quality of the compacts varied widely. Some were new commitments with specific clean energy targets and/or financial pledges.

But others were simply repackaged commitments—existing commitments presented as energy compacts. Nevertheless, these commitments demonstrate ongoing work on the energy transition and their public announcement at the Forums may motivate greater ambition and hold these countries/companies accountable for fulfilling their commitments.

There was also a third category—statements highlighting the importance of the energy transition and committing to it, whether by increasing the share of their renewable energy or developing sustainable energy markets, but without stating any specific targets or pledges.

Although all commitments to transition to clean energy are more than welcome, as one youth delegate noted, what is most needed are specific targets so that intended actions can be collectively assessed and measured against the goals of achieving universal access and carbon neutrality as well as to spur the ambition of others.

### ***The Road to Achieving SDG 7***

The next step on the road to achieving SDG 7 is the HLDE itself, scheduled for September 2021. The Dialogue is expected to produce two main outcomes: a global roadmap for concrete actions needed to achieve SDG 7; and more energy compacts setting out voluntary commitments and actions. The roadmap will be informed by the preparatory work done by the Technical Working Groups and the Ministerial Thematic Forums. As HLDE Secretary-General Liu said during the closing plenary, the Technical Working Group reports submitted to the Forums “have shown us where we must go” and these Thematic Forums and the energy compacts announced during

the week have demonstrated “new levels of action and commitment to delivering the sustainable energy goals.”

While the patchwork of energy compacts announced at the Thematic Forums is insufficient to achieve SDG 7 or fully bridge the large gap in investment identified by the IEA, it is hoped that they will motivate other countries, companies, and organizations to step up and make their own commitments during the HLDE. The importance of this cannot be overstated because in many ways, as this week demonstrated, SDG 7 can be considered the lynchpin to achieving the 2030 Agenda and most of the SDGs. Eradicating poverty and hunger, improving access to health, education, and sanitation, as well as achieving the climate and environmental goals rely on widespread access to clean energy.

Consequently, if the HLDE results in a clear roadmap and an extensive and ambitious set of compacts, then it may prove enough to inspire hope that even if the 2030 targets cannot be reached, the world can at least make notable progress and come close.

### Upcoming Meetings

**Global High-Level Forum on Energy Transition: Science and Raising Ambition Towards COP 26:** The Forum was created by the IRENA Assembly as a platform where governments, intergovernmental entities, academia, private companies and their associations, trade unions, NGOs and other concerned entities can discuss international cooperation and collective action to: lead the global discourse on energy transition; promote common initiatives to accelerate energy transition worldwide; share experiences and follow up on important global events such as the HLDE and COP 26; and guide future research and analysis to promote solutions for a sustainable energy system. This special virtual first session will discuss the relationship between science and raising ambition in the light of the ongoing processes and explore actions to accelerate a just, inclusive, and systemic energy transition. **date:** 30 June 2021 **location:** virtual **www:** <https://www.irena.org/events/2021/Jun/Global-High-Level-Forum-on-Energy-Transition>

**Vienna Energy Forum (VEF) 2021:** Convening under the theme “Where Action Meets Ambition,” the first virtual VEF is intended to spur action by bringing together government representatives, stakeholders, and experts to discuss key topics that advance sustainable development in the energy domain and contribute to global climate action. VEF 2021 will include Youth Say on 5 July 2021. **dates:** 5-7 July 2021 **location:** virtual **www:** <https://www.viennaenergyforum.org/vienna-energy-forum/>

**High-level Political Forum on Sustainable Development (HLPF) 2021:** The UN Economic and Social Council (ECOSOC) will convene the 2021 session of the HLPF under the theme “Sustainable and resilient recovery from the COVID-19 pandemic that promotes the economic, social and environmental dimensions of sustainable development.” Following the first five days, the HLPF’s three-day ministerial segment takes place jointly with ECOSOC’s high-level segment. **dates:** 6-15 July 2021 **location:** virtual **www:** <https://sustainabledevelopment.un.org/hlpf/2021>

**High-level Dialogue on Energy (HLDE):** The UN Secretary-General will convene a high-level dialogue on energy under the auspices of the UN General Assembly to promote the implementation of the energy-related goals and targets of the 2030 Agenda for Sustainable Development, and to raise ambition and

accelerate action towards the achievement of the SDG 7 energy targets. **date:** 20 September 2021 **location:** UN Headquarters, New York **www:** <https://www.un.org/en/conferences/energy2021>

**Glasgow Climate Change Conference (UNFCCC COP 26):** COP 26, the 16th meeting of the COP serving as the Meeting of the Parties to the Kyoto Protocol (CMP 16), and the third meeting of the COP serving as the Meeting of the Parties to the Paris Agreement (CMA 3) are expected to convene one year after the conference was postponed due to COVID-19. **dates:** 1-12 November 2021 **location:** Glasgow, Scotland, UK **www:** <https://unfccc.int/>

For additional meetings, see <https://sdg.iisd.org/>

### Glossary

COP	Conference of the Parties
ECA	UN Economic Commission for Africa
EIB	European Investment Bank
ESCAP	UN Economic and Social Commission for Asia and the Pacific
ESCWA	UN Economic and Social Commission for Western Asia
FAO	Food and Agriculture Organization of the UN
HLDE	High-level Dialogue on Energy
HLPF	High-level Political Forum on Sustainable Development
IEA	International Energy Agency
IRENA	International Renewable Energy Agency
LDCs	Least developed countries
NDCs	Nationally determined contributions
SDGs	Sustainable Development Goals
SEforAll	Sustainable Energy for All
UAE	United Arab Emirates
UNDESA	UN Department of Economic and Social Affairs
UNDP	UN Development Programme
UNEP	UN Environment Programme
UN-Habitat	UN Human Settlements Programme
UNIDO	UN Industrial Development Organization
UN OHRLLS	High Representative for the Least Developed Countries, Landlocked Developing Countries and Small Island Developing States
WHO	World Health Organization