



## Report

### **Fourteenth session of the Committee on Energy Beirut, 20–22 June 2023**

#### **Summary**

The Committee on Energy of the Economic and Social Commission for Western Asia (ESCWA) held its fourteenth session in Beirut from 20 to 22 June 2023.

The session agenda covered several priority topics, including follow-up on the implementation of recommendations made by the Committee on Energy at its thirteenth session held online on 20 and 21 September 2021, and progress in implementing energy-related activities under the ESCWA programme plan between the thirteenth and fourteenth Committee sessions. The session also included discussions on key issues related to sustainable energy, extractive industries, the role of minerals and critical raw materials in support of the energy transition in the Arab region, the possibility of using hydrogen as an engine for sustainable development, and the role of blockchain in the sustainable energy transition in the Arab region. As part of its proceedings, the Committee on Energy held a joint meeting with the Committee on Water Resources on 20 June 2023.

The present report summarises the key interventions and discussions at the session, and sets out the recommendations made by the Committee.

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## **Introduction**

1. The Committee on Energy of the Economic and Social Commission for Western Asia (ESCWA) held its fourteenth session in Beirut from 20 to 22 June 2023, pursuant to ESCWA resolution [204 \(XVIII\)](#) of 25 May 1995 on the establishment of a Committee on Energy in the Economic and Social Commission for Western Asia, which was adopted by the Economic and Social Council of the United Nations in resolution [1995/25](#) of 24 July 1995.
2. The following sections set out the key recommendations adopted by the Committee at its fourteenth session.

### **I. Recommendations by the Committee on Energy at its fourteenth session**

3. The Committee issued the following recommendations at its fourteenth session, some addressed to member States and others to the ESCWA secretariat.

#### **A. Recommendations to member States**

(a) Welcome progress in implementing the recommendations made by the Committee on Energy at its thirteenth session, and the activities conducted by the ESCWA secretariat between the thirteenth and fourteenth sessions of the Committee;

(b) Accelerate the implementation of countries' national ambitions regarding renewable energy, energy efficiency and climate neutrality, in line with the objectives of the 2015 Paris Agreement, so as to transform national energy systems and economies in a sustainable manner and respect social and environmental safeguards, while leveraging the benefits of increased cooperation within the region and with other regions;

(c) Promote investments across the entire value chain of the critical minerals sector; promote research, development and technological innovation; introduce environmental and social sustainability standards; invest in capacity-building and training, and build partnerships and strengthen regional cooperation to enable a just and inclusive energy transition;

(d) Formulate strategies on low-carbon hydrogen, renewable and non-renewable energy resources, and financial strengths and/or access to financing sources; promote research, education and innovation; and establish local low-carbon hydrogen demand initiatives;

(e) Continue efforts to integrate energy-related Sustainable Development Goals (SDGs), targets and indicators into national and sectoral development plans by adopting an integrated approach, and monitor progress in their implementation;

(f) Inform the ESCWA secretariat, whenever possible, of members States' efforts in the field of energy, especially efforts related to the implementation of the energy-related SDGs, so as to monitor progress achieved in their implementation.

#### **B. Recommendations to the ESCWA secretariat**

(a) Continue evaluating priority areas for a just and inclusive energy transition in the Arab region, including achieving optimal use of local energy resources in a sustainable manner, integrating the circular carbon economy approach into development plans, and developing policies that encourage electric transport;

(b) Support member States in assessing progress made on the energy-related SDG 7 and other relevant Goals, especially Arab least developed countries (LDCs), conflict-affected countries, countries most

vulnerable to climate change, and countries subject to unilateral coercive economic measures; and identify priority areas for regional action in the coming years;

(c) Provide support for the development of an integrated road map to maximize the use of critical minerals, with the aim of accelerating the energy transition, localizing technology and strengthening the local component, by adopting an approach that takes into account the various impacts of the mining sector and recycling possibilities;

(d) Build the capacity of member States; publish case studies on the renewable energy-water-environment nexus, and disseminate the experiences of countries that have succeeded in implementing this nexus;

(e) Provide technical support on overcoming potential obstacles to the production, storage, transport and marketing of hydrogen; assess opportunities for cooperation among Arab countries in this field, and build the capacity of member States on hydrogen;

(f) Continue evaluating emerging digital technologies, including blockchain technology and artificial intelligence, in the energy sector;

(g) Continue coordinating with other United Nations organizations, the League of Arab States, and regional organizations on the Pan-Arab Electricity Market, and on regional and international electrical interconnection projects;

(h) Strengthen coordination on climate action, with the support of the ESCWA Committee on Energy and the Committee on Water Resources, and within the framework of the Arab Centre for Climate Change Policy and the League of Arab States; support common Arab positions in global climate change negotiations; and build the capacity of member States in mobilizing climate finance.

## **II. Topics of discussion**

### **A. Joint meeting with the Committee on Water Resources on the theme “Advancing the climate change agenda in the water and energy sectors”**

4. With reference to document [E/ESCWA/C.3/2023/CRP.1-E/ESCWA/C.4/2023/CRP.1](#), the Committee on Energy held a joint meeting with the Committee on Water Resources on the theme “Advancing the climate change agenda in the water and energy sectors”. The representative of the ESCWA secretariat made a presentation in which he emphasized that climate change had become the overarching concern of the energy and water sectors. He summarized the main areas of ESCWA work aimed at supporting member States in strengthening their resilience to climate change by adopting measures to adapt to and mitigate its effects, within the framework of the ESCWA Arab Centre for Climate Change Policies, with a focus on climate action in the water and energy sectors.

5. He stressed the importance of mainstreaming climate considerations across sectors, and the necessity of using scientific assessments to guide water and energy policies. He also discussed climate finance, stating that ESCWA and its partners sought to bridge gaps in financing climate action by increasing knowledge and building the capacity of member States. He reviewed the main outcomes of the climate negotiations held at the twenty-seventh session of the Conference of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC), and set out recommendations to strengthen efforts to adapt to and mitigate the effects of climate change, especially in view of preparations for two major events in the region, namely the second Middle East and North Africa Climate Week (Riyadh, 8–12 October 2023), and the twenty-eighth session of the Conference of the Parties to UNFCCC (Dubai, United Arab Emirates, 30 November–12 December 2023).

6. In the ensuing discussion, members of the Committee on Energy and of the Committee on Water Resources stressed the importance of scientific research in formulating evidence-based policies. They commended ESCWA-led efforts to advance regional climate change projections, basin-level assessments, and climate change vulnerability analyses. They noted the effects of extreme weather events and rising sea levels on the worsening challenges facing the water and energy sectors in the region. They also expressed their concern about the effects of sand and dust storms in many Arab countries, and the need to build capacity to tackle their effects, praising ESCWA efforts to strengthen cognitive and technical capacities through the Arab Climate Outlook Forum that was attended by Arab meteorological agencies. They highlighted the importance of technology transfer to mitigate and adapt to the effects of climate change in the water and energy sectors, and the need to localize technological solutions. Several members of the two committees stressed the need to adapt to climate change in the energy sector, not just mitigate its effects, given that extreme climate events negatively affected energy infrastructure. They also indicated the need for accredited national and subnational entities to facilitate access to and mobilize climate finance for the implementation of adaptation and mitigation projects financed by the Green Climate Fund and other financial mechanisms.

7. The representative of Mauritania stressed the importance of establishing and supporting local industries for renewable energy technologies used in the water sector, and the importance of studying the environmental impacts of the equipment on which these technologies depend, such as batteries, for example. The representative of the Syrian Arab Republic called for a focus on the adoption and use of control technologies to remotely control the quantities of water pumped through renewable energy systems. He said that although there were many laws and regulations to regulate the water sector, pumping water using renewable energy posed a challenge. The representative of Tunisia highlighted the water-energy nexus, as reducing water pumping and consumption, controlling irrigation operations, and using modern technologies would in turn decrease energy consumption. Given the depletion of water resources in Jordan, its representative noted that it was better to use renewable energy to transport water from the source to population centres and desalinate it, rather than using it for agricultural irrigation. He mentioned the Water Diplomacy Center in Jordan, which aimed to build negotiation capacity. Representatives of member States unanimously agreed on the valuable role played by ESCWA in building the capacity of member States, in preparing case studies on the renewable energy-water-environment nexus, and in transferring the experiences of countries that had succeeded in implementing that nexus.

**B. Implementation of activities under the ESCWA programme plan, of technical cooperation activities, and of recommendations made by the Committee on Energy at its thirteenth session to the ESCWA secretariat**  
(Agenda item 4)

8. With reference to document [E/ESCWA/C.3/2023/3](#), the Committee reviewed the activities implemented in the field of energy, which centred on building national capacity, disseminating knowledge, implementing projects funded by the United Nations Development Account and international organizations, preparing studies and technical reports, and providing technical support to member States in various sustainable energy areas. The representative of the ESCWA secretariat summarized the activities organized by ESCWA within the framework of transition programmes to sustainable energy systems in the Arab region, of a project to improve access to renewable energy in the Arab region, of an energy efficiency programme, of an expert group on extractive industries, and of technical cooperation activities. She also reviewed reports, studies and technical bulletins issued by ESCWA on energy, on collaboration between the ESCWA Energy Section, the Water Resources Section and the Food and Environment Policies Section on the energy-water-food nexus, on collaboration and partnership-building with regional and international organizations in relevant fields, on the organization of and participation in events at the national, regional and global levels, and on capacity-building programmes for member States. She presented ESCWA contributions to intergovernmental meetings, expert group meetings, seminars, workshops, and the e-learning course prepared and launched by ESCWA as part of a project to improve access to renewable energy in the Arab region, and within the framework of the Regional Initiative to Promote Small-Scale Renewable Energy Applications in Rural Areas of the Arab Region (REGEND).

9. Participants took note of the regional and international activities conducted by the Committee on Energy, and expressed their appreciation for its efforts, the quality of its knowledge products and the events it organized, and their desire to strengthen collaboration with it in the future. The representative of Jordan highlighted REGEND success stories in the region and in his country, especially in terms of its integrated approach and focus on the energy-water-food nexus, and commended the diligent follow-up of the initiative so as to ensure the sustainability of all implemented activities and systems. The representative of Lebanon expressed his interest in learning about success stories from member States in the fields of electricity, renewable energy, energy efficiency and hydrogen, stressing the importance of disseminating and distributing knowledge products published by ESCWA to relevant ministries.

10. Representatives of member States made presentations on progress at the national level in implementing the recommendations made by the Committee at its thirteenth session to ESCWA Member States. The representative of Egypt discussed successes in overcoming the energy deficit in his country following intensified efforts since 2014, projects that had been and were being implemented, and efforts to connect with Jordan, Libya, Saudi Arabia and the Sudan. The representative of Kuwait presented her country's work on the circular carbon economy, a renewable energies programme, a green and blue hydrogen strategy, and the energy efficiency programme. The representative of Algeria presented the activities related to the recommendations that had been implemented in his country, and noted the adoption of a new investment law to improve the investment environment and strengthen economic diversification in the country. The representative of the State of Palestine presented a variety of achievements that had been accomplished in the past two years in the areas of interconnectivity, renewable energy, energy efficiency, financing programmes, and accurate data collection. The representative of Mauritania indicated a list of projects that had been implemented in his country in the fields of energy generation, solar energy projects (large and small capacity), wind and hydrogen, expressing his country's need for technical support through training workshops to build national and governmental capacities on the environmental impacts of renewable energy projects. The presentations were uploaded onto the website of the [fourteenth session](#) of the Committee on Energy.

11. The representative of the ESCWA secretariat reviewed the technical cooperation programme and how to benefit from it, and presented examples of success stories achieved by some member States under it. The representative of the ESCWA secretariat welcomed the request of Mauritania, and expressed ESCWA's readiness to provide support. She said that ESCWA was working tirelessly to disseminate REGEND by mobilizing resources to implement new projects in Arab countries. She urged member States to increase their response rate to emails sent from the Energy Section's email address, so as to further improve collaboration and strengthen activity participation.

### **C. Role of minerals and critical raw materials in support of the energy transition in the Arab region** (Agenda item 5)

12. With reference to document [E/ESCWA/C.3/2023/4](#), the representative of the ESCWA secretariat reviewed supply and demand for minerals and critical raw materials, and their role in supporting an inclusive and just energy transition in the Arab region. He highlighted the challenges related to data and geographical sourcing of resources, and the need for long-term planning. He presented a set of recommendations aimed at adopting a strategy and transition plans, endorsing a circular carbon economy framework, addressing environmental and social concerns, increasing investment in the sector in collaboration with the private sector, supporting research and development, building capacity, and training employees to improve understanding and enhance skills.

13. Representatives of member States underscored the challenges facing the Arab region owing to limited technology and mineral resources, which had led to reliance on imports instead of local manufacturing. The representative of Egypt said that his country would add 3,800 megawatts of wind and solar energy through projects led by the New and Renewable Energy Authority and the private sector during the period 2023–2025. He noted the expected change in the minerals map, as demand for old minerals decreased and demand for new

minerals increased, especially in the production of green hydrogen, which would be reflected in the energy transition in Arab countries. He stressed the importance of cooperation between Arab countries to develop a local concept of energy transition, and the importance of regional organizations, such as ESCWA, in evaluating the capacity of Arab countries in the exchange of experiences and integration, so as to improve the local component.

14. The representatives of Mauritania and Egypt said that, given the rapidly increasing demand for minerals, especially those necessary for renewable energy and batteries, Arab countries must work to localize manufacturing, create a regional market, exchange information, and develop a joint strategy for critical raw materials.

15. The representative of the ESCWA secretariat reviewed previous collaboration with the International Renewable Energy Agency on assessing the potential for renewable energy manufacturing in Jordan, Lebanon and the United Arab Emirates, which had resulted in a study that included recommendations and action plans to support and encourage the development of local manufacturing of renewable energy components, and of potential regional links that could be adopted and worked on within the framework of extractive industries. In conclusion, the participants unanimously agreed on the importance of inclusive transition and cooperation between Arab countries, with an emphasis on adopting a systems-based approach and recycling renewable energy equipment.

#### **D. Potential hydrogen developments in the Arab region** (Agenda item 6)

16. With reference to document [E/ESCWA/C.3/2023/5](#), the representative of the ESCWA secretariat reviewed the potential development of hydrogen in the Arab region. She gave an overview of the role of hydrogen in diversifying the energy mix, and highlighted different use cases for clean hydrogen and its links to the SDGs. She also noted the various challenges and technical barriers, such as restrictions on financing and investment, technological constraints, infrastructure deficits, high transport costs, limitations of water use, a lack of skills and capabilities, and an absence of legal and regulatory frameworks. She presented the opportunities that the hydrogen sector offered Arab countries to achieve economic diversification, generate electricity from low-cost renewable energy, expand capacity in the field of seawater desalination, and mobilize investments directed towards carbon capture, use and storage and infrastructure development. She reviewed recommendations aimed at accelerating the development of low-carbon hydrogen at the local and global levels, notably establishing appropriate legal and regulatory frameworks to stimulate local and international investors, enhancing Arab regional cooperation in the field of the Arab electricity market, renewable energies and hydrogen, and exploring flexibility measures, including interconnecting the regional network and assessing obstacles that could arise from the trade of potential new low-carbon fuels and materials with other countries and regions.

17. The representative of Egypt highlighted the pioneering production of green hydrogen using hydropower during the 1960s in his country, which was later stopped owing to a preference for natural gas due to its cost. The representative of Morocco discussed a study launched in his country to prepare a strategic vision on developing the hydrogen sector, which would include production, transport, storage, and legal and legislative frameworks, with a focus on consistency between all national strategies and on capacity-building and research, in collaboration with the Research Institute for Solar Energy and New Energies. He said that producing hydrogen through renewable energy would drive his country to accelerate its transition in the field of renewable energies. The representative of Mauritania indicated his country's potential to produce green hydrogen, given the enormous opportunities in the solar energy sector. He said that a new hydrogen law would be issued soon. The representative of Jordan reviewed a study on developing the hydrogen sector strategy from 2023 to 2030, in 2040, and in 2050, which would be issued in the third quarter of 2023. Its adoption would lead to a review of all energy legislation in the country. He emphasized the challenges of adopting clean hydrogen, including certification, adherence to international standards, high costs and transport issues that limited trade potential and hindered the use of renewable energy sources. The representatives of the State of Palestine and Yemen enquired about the quantities of water required and the costs involved in producing hydrogen. The

representative of Kuwait said that her country's hydrogen strategy was currently under development, based on pillars contained in a 2021 white paper entitled "Towards a hydrogen strategy for Kuwait".

18. The representative of the ESCWA secretariat said that ESCWA could collaborate with research centres in Gulf Cooperation Council (GCC) countries, Algeria and Morocco to organize a capacity-building workshop for member States. Participants stressed the important role of clean hydrogen in energy security, trade and economic diversification in the Arab region, as the region could play a strategic and pivotal role in supporting energy security in Europe and worldwide. They also highlighted the importance of an integrated approach covering the entire value chain, emphasizing that implementing strategies required updating renewable energy targets, developing laws and regulations on harmonization, and promoting research collaboration with universities to enhance clean hydrogen capabilities. They called on ESCWA to formulate strategies on low-carbon hydrogen, renewable and non-renewable energy resources, financial strengths and/or access to financing sources, to promote research, education and innovation, and to implement local initiatives on low-carbon hydrogen demand.

#### **E. Role of blockchain in the sustainable energy transition in the Arab region** (Agenda item 7)

19. With reference to document [E/ESCWA/C.3/2023/6](#), the representative of the ESCWA secretariat reviewed blockchain technology and its role in supporting the energy transition in the Arab region. He highlighted the main challenges and opportunities of the technology, and the results of an ESCWA expert group meeting on the role of blockchain in the Arab region's transition to sustainable energy. He also presented promising use cases from around the world that benefitted from the technology to accelerate the transition to sustainable energy, and a set of strategic pillars and recommendations at the policy level to ensure that blockchain, as an emerging technology, supported the energy transition in the Arab region. He said that ESCWA would soon complete a report on the topic, which would address in more detail the challenges, opportunities and recommendations aimed at accelerating implementation.

20. The representative of Iraq discussed his country's experience in using blockchain technology for a short period, owing to a lack of knowledge and experience with it, and requested more information on using the technology outside contracts and on managing the electricity network. The representatives of Kuwait, Mauritania and Morocco enquired about the use of technology in European cross-border energy markets, about privacy risks arising from data storage and use, and whether blockchain is a software or hardware solution.

21. The representative of the ESCWA secretariat said that blockchain technology could enhance the efficiency of electrical network management through the use of smart contracts to complete operations and transactions, such as determining the location and time of electricity distribution. However, regulatory uncertainty and a lack of common standards represented a major obstacle to the cross-border use of blockchain, especially in the energy sector. He noted that electrical utilities were currently assessing the technology, and that while it was a software tool, it relied on secure devices (such as Internet of Things devices) to ensure the validity of handled and stored data. He noted that there were various types of blockchain, including public and private, each with different trade-offs in terms of data privacy, speed, cost and transparency. He stressed that it was vital for the choice of blockchain to be appropriate for each case to maximize benefits.

#### **F. Round-table discussion: progress towards energy-related Sustainable Development Goals** (Agenda item 8)

22. With reference to document [E/ESCWA/C.3/2023/7](#), the representative of the secretariat launched the discussion, indicating the extent of progress towards achieving the energy-related SDGs in the Arab region according to Goal 7 indicators, such as the proportion of population with access to electricity, the proportion of population with primary reliance on clean fuels and technology, and the renewable energy share in the total final energy consumption. He noted that urgent efforts were necessary to accelerate progress. The use rates of renewable energy in the Arab region were still lower than in other regions. Moreover, the gap between urban



and rural areas in access to modern energy services was significant, especially in Arab LDCs and conflict-affected countries. As for energy efficiency, he said that adopted policies had not yet yielded the desired results, despite progress by some Arab countries. He presented policy recommendations, which included increasing public investment in access to clean energy and energy efficiency; enhancing interlinkages with other SDGs; strengthening multi-stakeholder partnerships and promoting coordinated action by Governments; mitigating energy security risks by enhancing energy efficiency measures and accelerating the deployment of renewable energy; implementing targeted subsidies, technical assistance and capacity-building; restructuring energy pricing systems; and adopting integrated policies to mitigate negative impacts and to benefit from innovation and digital technology, so as to enhance access to modern energy services.

23. The representative of Kuwait reviewed the new technologies that were being adopted in her country to achieve the SDGs by 2030 and beyond, including carbon capture and storage, renewable energy, and green hydrogen production facilities. She said that Kuwait was also working to increase gas consumption in cogeneration plants (including blending up to 20 per cent of hydrogen with current technology and up to 40 per cent in the future); replacing boilers with combined cycle gas turbines (with the aim of reaching 60 per cent combustion efficiency); and using reverse osmosis technology to reduce energy needs in the water desalination process. As for power generation, she said that 15 per cent of the country's electricity would come from renewable energy sources by 2035, with the Shagaya renewable energy plant, for example, generating 4,300 megawatts from solar photovoltaic systems by 2027 and 200 megawatts of concentrated solar power by 2028. A share of the electricity produced from renewable energy sources at these plants would also be used to produce green hydrogen as part of the hydrogen strategy of Kuwait. She also noted that to increase energy efficiency in the country, new building codes had been developed to provide minimum requirements for energy-efficient design in government and commercial buildings. Smart meters and other incentives were being offered to encourage consumers to reduce their energy consumption.

24. The representative of the State of Palestine said that access to energy had reached 100 per cent, but that energy security in the country constituted a problem that could be solved by adopting portable energy solutions, especially in the Gaza Strip, through financing from a renewable fund; and by integrating renewable energy systems connected to batteries, especially for pumping water for irrigation. He noted that the country had 200 megawatts of renewable energy, mostly photovoltaic, which represented about 4 per cent of consumption. Regarding the SDGs, he said that by 2030, 20 per cent of energy consumption would come from renewable energies and 18 per cent from cumulative improvements in energy efficiency. He added that the power station in Gaza currently operated on diesel, but there were plans to convert it to natural gas. The process of converting waste into energy had also been legislated, with 45 megawatts of electricity now being produced in northern Gaza. Within the framework of the renewable energy sector, he presented a project to install solar photovoltaic systems in schools, where 500 out of 8,000 systems had already been installed. Women's cooperatives were being trained in green jobs and technologies to ensure that the energy transition was fair and inclusive. Within the energy efficiency sector, he presented a pilot project that had included renovating 14 homes in Gaza through thermal insulation and replacing old appliances, which had resulted in a total energy cost saving of 35 per cent. He stressed that the success of that experience could be repeated in refugee camps if the necessary funding was available. He highlighted the country's role as a pioneer in the solar water heater sector, as about 60 per cent of homes in the country had been thus equipped and more would be equipped based on ongoing studies.

25. The representative of Jordan reviewed his country's ambition to become a green energy centre through regional electrical interconnection. He said that the share of energy from renewable sources in Jordan had grown from 1 per cent in 2014 to 27 per cent today, with a total of 2.6 gigawatts. He noted country plans to review and raise renewable energy 2050 targets, and to modernize grids to accommodate those higher shares. With more than 99 per cent of Jordanian households securing access to electricity in the previous years, the Ministry of Energy and Mineral Resources announced that "rural fils" residential consumption fees would be directed to installing solar systems for families in need, so as to bridge the energy access gap. He said that water scarcity in Jordan was a major concern: a committee had been formed to follow up and address the issue, and strategies for water desalination had been developed. All projects would be evaluated based on their impact on the environment. Moreover, dams would be built to store energy through pumping. He indicated the

establishment of the Renewable Energy and Energy Efficiency Fund, which used revolving funds and provided guarantees, technical assistance and soft loans, with a focus on supporting poor families. He added that a sustainable hydrogen strategy would be published in the third quarter of 2023.

26. The representative of Algeria noted the efforts made in his country to develop generation capacity and transmission and distribution infrastructure. Generation capacity had reached 25 gigawatts in 2023, resulting in an electricity access rate exceeding 99 per cent. Various public gas distribution programmes had also enabled access to approximately 7 million households, allowing the gas flow rate to be raised to 65 per cent. With regard to diversifying the energy mix, he said that Algeria was planning, in the short and medium term, to implement a renewable energy development programme aimed at achieving a total capacity of 15,000 megawatts by 2030; the first phase had been launched by generating 1,000 megawatts. In a second phase, the Sonelgaz complex was assigned to implement the renewable energy programme, given that Sonelgaz had recently launched a national and international tender to establish 15 solar-powered electricity generation plants with a total capacity of 2,000 megawatts. Through the programme, the country also sought to reach 30 per cent of renewable energies in the energy mix by 2030. At the level of energy efficiency, he presented a number of measures from the national energy efficiency programme, including ensuring the thermal insulation of homes and the service sector, enhancing energy efficiency in the industrial sector, mainstreaming the use of energy labels, developing the solar water heating sector, mainstreaming the use of energy-saving bulbs, and promoting the use of electric cars. The programme aimed to achieve 10 per cent energy efficiency gains by 2030 compared with 2020 consumption rates.

27. The representative of the Syrian Arab Republic said that while the share of electricity access had reached approximately 99 per cent before the war, with a generation capacity equal to 7,500 megawatts, the country was currently suffering from power outages for 20 hours a day owing to the distribution network being severely damaged and a drop in generation capacity to 2,200 megawatts. In the field of energy efficiency, he said that the Ministry of Electricity, through the National Energy Research Centre, had prepared a study to forecast the demand for primary energy in the country until 2030, which had found that electricity demand would reach about 43 million tons of oil equivalent, of which about 17 million tons of oil equivalent were needed by the Ministry of Electricity in 2030. If renewable energies and energy efficiency programmes were adopted and rationalized, demand would decrease by 2030 to reach about 34 million tons of oil equivalent. He also stressed the importance of research, investment and technology development in the field of clean fuels, renewable energy and energy efficiency, which required international cooperation.

28. The representative of Iraq said that his country was currently implementing an energy plan covering the period 2018-2030, and a study of collaboration with the private sector in view of increasing demand for energy since 2018 following a rise in living standards. He noted that tariffs on solar panels had been reduced by 99 per cent since 2021, leading to significant growth in the photovoltaic sector. Regarding the solar water heaters sector, he said that they could be used for cooling, and that studies were ongoing in Iraq on the subject, but solar heaters were not suitable for all regions of the country owing to the climate and very high temperatures in Iraq, especially in the summer. He highlighted the significant damage to the country's energy infrastructure between 2014 and 2017, where reconstruction was still ongoing, but with electricity coverage only available for approximately 18 hours a day. He reviewed the approval of the country's recent renewable energy law, which would regulate renewable energy generation and connection to the grid, and the 2045 energy strategy, prepared with support from the World Bank, which aimed at generating 40 per cent of energy from renewable sources by 2045. As for interconnection, he presented current Iraqi initiatives and plans with Iran and Turkey, 150 megawatts with Jordan whose capacity would be increased in the coming months, and 1 gigawatt with Saudi Arabia. Iraq was also connected to GCC countries through a link with Kuwait, from where 500 megawatts of electricity would be imported. He said that despite these interconnections, his country still suffered from energy shortages. In terms of energy efficiency, he noted that cooling for buildings and appliances was a priority, as many decisions issued by the Ministry of Energy and building codes and standards for green buildings had already been updated, and the Ministry of Planning was working to align standards in Iraq with international standards.

29. The representative of Egypt reviewed his country's ability to generate energy. He said that a third of thermal generation was over 20 years old, and that there was a need to develop current capabilities and install new ones. His country was seeking to replace 15 gigawatts of coal-fired plants with renewable energy plants, but that required developing the network's capacity. He also noted that work was underway to launch a new strategy on green and low-carbon hydrogen production in the coming weeks. He stressed that his country aspired to becoming a leader in green hydrogen exports to the European Union, and in the production of hydrogen derivatives to fuel ships through the Suez Canal; and that such new industry could create 100,000 job opportunities. He said that his country was also working to develop the nuclear energy sector by adding a capacity of 4,800 megawatts in the coming years. With regard to project development, in the past, the Government had implemented most of the projects, but they would now be operated by the private sector, in addition to offering new auctions that would result in more competitive projects. Egypt was working with the World Bank to prepare that strategy, and the total price of the latest Siemens project had reached \$600,000 per megawatt after negotiations, with financing from a German bank. He added that thermal plants would not be developed after 2030, and that new plants would be limited to renewable energy projects exclusively through the private sector. He said that the expected auction prices per kilowatt-hour for solar photovoltaic would be approximately 2 cents, and 2.4 cents for wind energy. He emphasized that any Egyptian citizen could generate electricity through their own renewable energy system, and export electricity to the grid through the net-metering system, as there were currently about 200 megawatts of small-scale renewable energy installed in Egypt.

30. The representative of Morocco explained his country's national energy strategy, which was based on five directives: ensuring a diversified energy mix that adopted reliable and competitive technological options, mobilizing national energy resources through increasing growth of renewable energies, making energy efficiency a national priority, and promoting regional integration and social development. He said that the share of renewable energy had reached 40 per cent of total installed capacity in March 2023, and that the strategy's objective was to reach 52 per cent by 2030. He noted projects and initiatives that offered important investment opportunities, such as providing industrial areas with clean electricity and supplying water desalination plants with renewable energy production units. He presented a set of legislative reforms to accelerate the development of renewable energy and to strengthen the sector's governance by establishing a clear and simple institutional framework. At the level of energy efficiency, he reviewed the relevant programmes and ways to strengthen their regulatory framework, in addition to complementary measures to support incentives, provide training, build capacity, and support research and development activities in the field of renewable and new energies. He concluded by referring to the regional integration of markets and electrical networks, indicating a current electrical interconnection between Morocco and Spain and between Algeria and Morocco, an electrical interconnection project between Morocco and Portugal, a project to enhance electrical interconnection with Spain by a third line, and to promote sustainable electricity exchange between Morocco and European countries (France, Germany, Portugal and Spain).

31. The representative of Mauritania noted the activities that his country was implementing, including establishing a special development fund to support the electrification of rural areas, developing a subsidiary of the Mauritanian Electricity Company specialized in rural electrification, and forming the General Delegation for National Solidarity and the Fight against Exclusion, which implemented rural electrification projects with small hybrid grids in the country's regions. A hybrid mini-grid promotion agency had also been established, in collaboration with the United Nations Development Programme, to electrify 200 villages in isolated areas. He also noted the expansion of the national grid to connect many cities, electrify more villages and towns, and electrify agricultural production areas. He reviewed the generation capacity of renewable energy, whose total capacity had reached about 200 megawatts, an increase in the electricity access rate during the past three years to 11 per cent, and an increase in the share of renewable energy in the energy mix to 38 per cent. He added that the country had recently signed a memorandum of understanding with partners in Egypt, Germany and the United Arab Emirates to develop a 10-gigawatt green hydrogen project with an annual capacity of 8 million tons of green hydrogen and its derivatives, with the first phase set to be completed by 2028. He also presented the national electrification strategy that aimed to achieve universal access to electricity by 2030 by liberalizing the electricity sector and opening it to the private sector; and by implementing a huge structural project that

included building a high-voltage line and two solar power stations, and connecting with Mali under the Desert to Power initiative.

32. The representative of Yemen said that the number of electricity sector beneficiaries amounted to 65 per cent of the total population, but that the total installed capacity connected to the national grid, which constituted about 1.5 gigawatts, was barely sufficient to cover 40 per cent of the population's electricity demand. The electricity access rate was 85 per cent in cities and 23 per cent in rural areas. He noted that owing to the war in Yemen, the destruction of its electricity systems, and the high price of oil derivatives, the Yemeni people had resorted to purchasing small solar photovoltaic systems. The total capacity installed in cities ranged between 400 and 531 megawatts, and 100 to 150 megawatts in rural areas. He added that Yemenis were replacing energy-consuming bulbs with economical LED bulbs to reduce consumption.

**G. Proposed programme plan for 2024 in the field of energy in the light  
of regional priorities for the period 2021–2025**  
(Agenda item 9)

33. With reference to document [E/ESCWA/C.3/2023/8](#), the representative of the ESCWA secretariat presented the proposed programme plan for 2024 in the field of energy in the light of regional priorities for the period 2021–2025. She reviewed the contents of the plan, highlighting the challenges facing the Arab region, such as the widening gap in accessing energy, with a significant disparity between urban and rural areas; the absence or ineffectiveness of energy resources and demand-side management; heavy dependence on fossil fuels; volatile energy prices and high subsidies; underutilization of renewable energy resources; slow progress towards reducing energy intensity and improving energy efficiency; weak economic diversification, social investment and long-term planning; worsening environmental degradation, carbon footprint and ambient air pollution; political instability and conflict; a lack of accessible financing mechanisms; and inadequate climate mainstreaming.

34. She presented the proposed work programme for 2024 in the field of energy aimed at alleviating those challenges. She said that the programme included assisting member States in accelerating the adoption of the circular carbon economy and integrating the principles of the circular economy and green economy; preparing policy briefs, energy reports and technical material on issues related to natural resource management for sustainable development and to climate change; strengthening capacity-building in the field of small-scale renewable energy applications in rural areas through the ESCWA e-learning portal; continuing to provide technical assistance and support to regional multi-stakeholder platforms, initiatives and strategies; continuing to study issues related to sustainable energy management, optimal use of natural resources, and opportunities in promising sectors at the national and regional levels; contributing to advancing climate action; establishing a regional platform to consider the impacts of renewable energy on biodiversity; continuing coordination with other United Nations organizations, the League of Arab States and regional organizations; providing technical services to the ESCWA Committee on Energy and its expert group on extractive industries, and supporting the Working Group on Transforming the Extractive Industries for Sustainable Development; providing technical services to the Arab Ministerial Council for Electricity, the Committee of Electricity Experts, and the Committee of Renewable Energy and Energy Efficiency Experts; ensuring the sustainability of REGEND; convening ad hoc expert group meetings on water, energy, food security and climate change; and organizing capacity-building seminars and workshops on energy, water, food security and climate change.

35. The representative of the Syrian Arab Republic said that he had taken note of the energy transition processes, with a focus on hydrogen, carbon and energy efficiency. However, he highlighted the lack of focus on the issues of carbon capture and the electrification of the transport sector. In response to that observation, the representative of the ESCWA secretariat said that the issue of carbon capture was part of the carbon framework and of the process for its use and storage. As for the electrification of the transport sector, she said that it was possible for the Committee to adopt a recommendation on the subject at the conclusion of its work.

## **H. Date and venue of the fifteenth session of the Committee on Energy**

(Agenda item 10)

36. The Committee on Energy will hold its fifteenth session in Beirut in 2025, unless another member State requests to host it. The exact date will be determined at a later stage.

### **I. Other matters**

(Agenda item 11)

37. No issues were raised under this item.

## **III. Adoption of the recommendations made by the Committee on Energy at its fourteenth session**

(Agenda item 12)

38. At its closing meeting, the Committee on Energy adopted the recommendations made at its fourteenth session, as set out in chapter I of the present report.

## **IV. Organization of the session**

### **A. Date and venue**

39. The Committee on Energy held its fourteenth session in Beirut from 20 to 22 June 2023.

### **B. Opening**

40. The representative of Algeria, which chaired the thirteenth session of the Committee, Mr. Nabil Sellami, Sub-Director of Prospective Studies at the Ministry of Energy and Mines, opened the session with a statement in which he praised the constructive role of ESCWA in supporting sustainable development efforts during an exceptional time and in changing circumstances, given that the global energy landscape was rapidly developing in many social, economic, technological and geopolitical areas.

41. Ms. Carol Chouchani Cherfane, Leader of the ESCWA Climate Change and Natural Resource Sustainability Cluster and Director of the ESCWA Arab Centre for Climate Change Policies, made a statement on behalf of the ESCWA secretariat, in which she welcomed participants. She said that the international community was focused on ensuring a just and inclusive energy transition to accelerate the achievement of the SDGs, and was striving towards a low-emission future by the end of the century. Those objectives posed a challenge for the Arab region, which suffered from energy fragility and the negative impacts of climate change, including heat waves, sandstorms, fresh water scarcity, and food insecurity. She stressed the role of ESCWA in encouraging strategic thinking in areas where the region could pursue innovative methods to enhance cooperation between countries through sustainable development and climate change agendas, and the role of ESCWA in finding solutions to pursue more sustainable paths.

### **C. Attendance**

42. The session was attended by representatives from 12 ESCWA member States, in addition to Djibouti as an observer. Annex I to the present report sets out the list of participants.

### **D. Election of officers**

43. Rule 18 of the ESCWA Rules of Procedure states: Member States shall chair the sessions of the subsidiary bodies of the Commission on a rotating basis, in the Arabic alphabetical order employed by the United Nations. In accordance with this rule, the representative of the Syrian Arab Republic assumed the Chair

of the fourteenth session of the Committee on Energy, and the representatives of Algeria and the Sudan assumed the positions of Vice-Chair. The representative of Iraq was appointed Rapporteur.

#### **E. Adoption of the agenda and organization of work**

44. At its first meeting, the Committee on Energy adopted the agenda of its fourteenth session as set out in document [E/ESCWA/C.3/2023/L.1](#), and the organization of work as set out in document [E/ESCWA/C.3/2023/L.2](#).

#### **F. Documents**

45. The list of documents presented to the Committee on Energy at its fourteenth session is set out in annex II to the present report.

## Annex I

### List of participants

#### A. ESCWA member States

##### Algeria

Mr. Nabil Sellami  
Sub-Director of Prospective Studies  
Ministry of Energy and Mines

##### Egypt

Mr. Ahmed Mohamed Abdel Hamid Mohina  
Head of Strategic Planning, Performance Follow-up, and International Cooperation at the Ministry of Electricity and Renewable Energy

##### Iraq

Mr. Laith Rashid Shaker  
Manager of Regulation  
Department  
Planning & Studies Office  
Ministry of Electricity

##### Jordan

Mr. Hassan Soud Ahmad Alheyari  
Assistant Secretary-General for Energy Affairs  
Ministry of Energy and Mineral Resources

##### Kuwait

Ms. Maha Hussein al-Asousi  
Acting Undersecretary  
Ministry of Electricity, Water and Renewable Energy

Ms. Sanaa Ali Nafel al-Gharib  
Director of Engineering and Environment  
Programs Department  
Ministry of Electricity, Water and Renewable Energy

Ms. Asmaa Sabah al-Salal  
Senior Industrial Engineer Specialist  
Department of Engineering and Environmental Programs  
Ministry of Electricity, Water and Renewable Energy

##### Lebanon

Mr. Pierre el-Khoury  
General Director and President of the Board  
The Lebanese Center for Energy Conservation (LCEC)  
Ministry of Electricity and Water

##### Mauritania

Mr. El Yass Cheikhna  
In Charge of a Mission in the Minister's Office  
Ministry of Petroleum, Minerals and Energy

##### Morocco

Mr. Mohammad Lisser  
Head of Energy Efficiency Promotion  
Ministry of Energy Transition and Sustainable Development

##### State of Palestine

Mr. Nedal Aburub  
(representing Mr. Ayman Ismail)  
Research, Studies and Exploration Manager  
Palestinian Energy and Natural Resources Authority

##### Sudan

Ms. Sarah Idris Hassan Ahmed  
Chargé d'Affaires  
Embassy of Sudan in Lebanon

##### Syrian Arab Republic

Mr. Adham Ballan  
Assistant Minister  
Ministry of Electricity

##### Yemen

Mr. Abdulhakim Fadhel Mohammed Abd  
Assistant Deputy  
Ministry of Electricity and Energy

Mr. Mohamed Hamid Saeed Al-Shaabi  
General Manager of Renewable Energy  
Ministry of Electricity and Energy

## **B. Observers**

### Djibouti

Mr. Abbas Aden Atteyeh  
Technical Advisor  
Ministry of Energy In-Charge of Natural Resources



## Annex II

### List of documents

Title	Item	Symbol
Provisional agenda and annotations	3	E/ESCWA/C.3/2023/L.1
Organization of work	3	E/ESCWA/C.3/2023/L.2
Implementation of activities under the ESCWA programme plan, of technical cooperation activities, and of recommendations made by the Committee on Energy at its thirteenth session to the ESCWA secretariat	4	E/ESCWA/C.3/2023/3
Role of minerals and critical raw materials in support of the energy transition in the Arab region	5	E/ESCWA/C.3/2023/4
Potential hydrogen developments in the Arab region	6	E/ESCWA/C.3/2023/5
Role of blockchain in the sustainable energy transition in the Arab region	7	E/ESCWA/C.3/2023/6
Round-table discussion: progress towards energy-related Sustainable Development Goals	8	E/ESCWA/C.4/2023/7
Proposed programme plan for 2024 in the field of energy in the light of regional priorities for the period 2021–2025	9	E/ESCWA/C.4/2023/8
Advancing the climate change agenda in the water and energy sectors		E/ESCWA/C.3/2023/CRP.1 E/ESCWA/C.4/2023/CRP.1
List of documents		E/ESCWA/C.3/2023/INF.1