



SDG7 Energy Compact of the Republic of Lebanon

A next Decade Action Agenda to advance SDG7 on sustainable energy for all, in line with the goals of the Paris Agreement on Climate Change

SECTION 1: AMBITION

1.1. Ambitions to achieve SDG7 by 2030. [Please select all that apply, and make sure to state the baseline of each target]

(Member States targets could be based on their NDCs, energy policies, national five-year plans etc. targets for companies/organizations could be based on their corporate strategy)

<input checked="" type="checkbox"/> 7.1. By 2030, ensure universal access to affordable, reliable and modern energy services.	<p>Target(s): To develop government strategies and initiatives, at the national and local levels, to promote a cleaner economy and to promote the use of clean fuels and technology among the population. In this regard, Lebanon, conditionally commits, to phasing out the distributed private diesel generators and replacing them by a 500 MW capacity of decentralized rooftop solar applications.</p> <p>Time frame: By 2030</p> <p>Context for the ambition(s): Lebanon has a 100% energy access rate; however, there is still a need to increase the share of the population with primary reliance on clean fuels and technology. Moreover, the public sector utility, EDL, has not been able to satisfy national electricity demand alone, and as a result, 23% of electricity is generated by decentralized diesel private generators.</p>
<input checked="" type="checkbox"/> 7.2. By 2030, increase substantially the share of renewable energy in the global energy mix.	<p>Target(s): Lebanon commits to generate 30% of its power demand (i.e. electricity demand) and 16.5% of its heat demand (in the building sector) from renewable energy sources in 2030, compared to a combined share of 20% in 2015.</p> <p>Time frame: By 2030</p> <p>Context for the ambition(s): Lebanon currently relies on gasoline, fuel oil and gas oil, which are 100% imported. Energy security concerns, combined the need to support sustainable economic growth, have driven a clean energy diversification strategy. Lebanon’s commitment to scaling-up the use of renewable energy technologies is fortified by ongoing updates to its renewable energy targets. To date, total installed renewable energy power capacity amounts to 350 megawatts (MW), including 286 MW from hydropower sources, 7 MW from landfill and 56.37 MW from solar power. Therefore, additional measures are required to achieve the above-mentioned targets by 2030, as defined in the REmap case included in IRENA’s Renewable Energy Outlook, published in 2021 https://irena.org/publications/2020/Jun/Renewable-Energy-Outlook-Lebanon</p>
<input checked="" type="checkbox"/> 7.3. By 2030, double the global rate of improvement in energy efficiency.	<p>Target(s): To achieve a 10% reduction in power demand in 2030 through energy-efficiency.</p> <p>Time frame: By 2030.</p> <p>Context for the ambition(s): The NEEAP 2010–2015, followed by the NEEAP 2016–2020, have acted as the governing framework for the deployment of renewable efficiency measures in Lebanon. Energy losses in the transmission and distribution network reach 16.5% despite recent efforts by the Ministry, EDL and the distribution service providers (DSP) to rehabilitate the underdeveloped grid. Moreover, hydroelectricity plants, with a total installed capacity of 286 MW, are facing reduced efficiency and production losses of around 30–40%, because of their old age and lack of proper maintenance.</p>
<input checked="" type="checkbox"/> 7.a. By 2030, enhance international cooperation to facilitate access to clean energy research and technology, including renewable energy, energy efficiency and advanced and cleaner fossil-fuel technology, and promote investment in energy infrastructure and clean energy technology.	<p>Target (s): To strengthen collaboration with partners to promote exchanges of experience and to promote technical and financial support for the achievement of objectives. This will include capacity building, technology transfer and financial support.</p> <p>Time frame: By 2030</p> <p>Context for the ambition(s): Given the various challenges facing Lebanon, it will require international support to achieve its objectives and would benefit from exchanges with all the relevant partners already present in Lebanon and beyond to promote the much needed energy transition.</p>

7.b. By 2030, expand infrastructure and upgrade technology for supplying modern and sustainable energy services for all in developing countries, in particular least developed countries, small island developing States, and land-locked developing countries, in accordance with their respective programs of support.

Target(s): To upgrade and develop the power sector infrastructure to overcome grid challenges and the technical limitations to the integration of renewable energy in the grid. This will include conducting grid impact assessment, reinforcing long-term planning, conducting dynamic stability studies, introducing certifications schemes, and to increase investments in the power sector infrastructure in general, and the transmission infrastructure in particular.

To assist in overcoming the technical limitations to the integration of renewable energy in the grid and reinforce long-term planning to match the expected high levels of renewable energy penetration in 2030, including grid reinforcement. Moreover, dynamic stability studies are needed to overcome grid challenges

Time frame: By 2030

Context for the ambition(s): Economic development and the natural population growth combined with the increase of population due to the inflow of Syrian refugees have pushed its existing power infrastructure to the limit. An increasingly renewable-based system would mean reliable domestic power services, sufficient to match growing demand and consistent with global climate goals. The Lebanese electricity sector has suffered since the mid-1990s, primarily due to a lack of investment that has led to the sharp deterioration of the sector's infrastructure. Investments in the power sector infrastructure could be a game changer to Lebanon's shift to renewables.

1.2. Other ambitions in support of SDG7 by 2030 and net-zero emissions by 2050. [Please describe below e.g., coal phase out or reforming fossil fuel subsidies etc.]

Target(s):

Time frame:

Context for the ambition(s):

SECTION 2: ACTIONS TO ACHIEVE THE AMBITION

2.1. Please add at least one key action for each of the elaborated ambition(s) from section 1. [Please add rows as needed].

Description of action (improve access to modern energy services)	Start and end date
<p>The aim is to mobilize the necessary funding to achieve the goal of developing 500 MW capacity of decentralized rooftop solar applications to phase-out the distributed private diesel generators, and to promote distributed RE applications in all end-use sectors, including the heating and cooling.</p> <p>Some of the projects identified include:</p> <ul style="list-style-type: none"> - Adopt legislation to promote distributed renewable electricity - Set enabling tools for the installation of heating and cooling - Increase the financial capacities of the existing incentives and facilities that have proven to be very successful in promoting distributed PV markets, in addition to SWH market, including: the National Energy Efficiency and Renewable Energy Action (NEEREA), the Lebanon Energy Efficiency and Renewable Energy Facility (LEEREFF) and the Green Economy Financing Facility (GEFF). 	<p>2022 - 2023 <i>To adopt the required legislation to promote distributed electricity.</i></p> <p>2023 – 2030 <i>To deploy 500 MW of solar rooftop capacities, provided funding is available.</i></p>
<p>Description of action (improve energy efficiency)</p> <ul style="list-style-type: none"> - Develop an action plan to conduct maintenance activities for old power generation plants with low efficiency, and provide funding for its implementation - Develop an action plan to address the technical losses of the transmission and distribution grids and to rehabilitate the underdeveloped grid, and provide funding for its implementation - Increase investments for the deployment of smart grids and smart meters - Conduct awareness campaigns to change consumer behavior in all sectors - Adopt a national certification scheme for the design and installation of renewable energy equipment - Adopt minimum-quality-specific technical requirements and standards for different applications, including household PV/industries/solar pumping/solar street lighting/community-led solar systems/micro grid systems 	<p>2022 – 2023 <i>Through its convening power, IRENA will facilitate Lebanon's engagement with the relevant organizations and partners to develop the required action plans and their implementation.</i></p> <p>2023 – 2030</p>

	<i>To implement the required action plans, deploy smart grids and smart meters provided funding is available.</i>
<p>Description of action (Increase the share of Renewable Energies in Lebanon's energy mix)</p> <ul style="list-style-type: none"> - Adopt a new and consistent legal framework for the renewable energy sector to address the existence of several laws governing renewable energy deployment - Establish an independent electricity regulatory authority - Strengthen human resources through capacity building activities at the institutional level to improve the renewable energy policymaking process, thereby, allowing the development of an enabling policy and regulatory framework to de-risk the sector and attract private investments - Adopt IRENA's Open Solar Contracts – which provide the necessary contractual templates required for the bidding process, including the PPAs for solar projects https://opensolarcontracts.org/ - Develop a new administrative framework and re-evaluate the tariffs of the existing framework governing hydropower concessions - Increase the financial flows from the private sector and international donors and investors in support of renewable energy project development - Build capacities within the local commercial banks to enhance private sector investments in renewable energy projects - bundling of smaller-size renewable energy projects to achieve the required scale, thus reducing transaction costs while bolstering financial institutions confidence in projects and decreasing risks - Conduct maintenance and/or refurbishment activities of existing hydropower plants to increase the share of hydropower in the electricity mix 	<p>2022-2023 To adopt the required legal, policy and regulatory reforms</p> <p>2023 – 2030 <i>To implement all the actions provided funding is available.</i></p>

SECTION 3: OUTCOMES	
3.1. Please add at least one measurable and time-based outcome for each of the actions from section 2. <i>[Please add rows as needed].</i>	
<ul style="list-style-type: none"> - Result 1: A 10% reduction in power demand in 2030 through energy-efficiency - Result 2: Rate of losses on electricity networks: less than 15% - Result 3: Rate of losses in the hydropower sector: less than 10% - Result 4: The share of renewable energy in the energy mix: 30% of its power demand (i.e. electricity demand) and 16.5% of its heat demand (in the building sector) 	<p>2030</p> <p>2030</p> <p>2030</p>

SECTION 4: REQUIRED RESOURCES AND SUPPORT	
4.1. Please specify required finance and investments for each of the actions in section 2.	
<ul style="list-style-type: none"> - Achieving the targets of 30% of its power demand (i.e. electricity demand) and 16.5% of its heat demand (in the building sector), by 2030, will require additional investments of USD 2.2 Billion, according to the Remap analysis, included in the Outlook report https://irena.org/publications/2020/Jun/Renewable-Energy-Outlook-Lebanon. These costs do not include the infrastructure upgrades required to achieve the above-mentioned targets, as this will need further analysis. 	
4.2. [For countries only] In case support is required for the actions in section 2, please select from below and describe the required support and specify for which action.	
<i>[Examples of support for Member States could include: Access to low-cost affordable debt through strategic de-risking instruments, capacity building in data collection; development of integrated energy plans and energy transition pathways; technical assistance, etc.]</i>	
<input checked="" type="checkbox"/> Financing <input type="checkbox"/> In-Kind contribution	<ul style="list-style-type: none"> - Mobilize donors and other investors to mobilize the necessary funding for the physical implementation of the various projects - Develop the required legal, policy and regulatory frameworks - Develop the required action plans <p>Description</p>

<input checked="" type="checkbox"/> Technical Support	<i>Lebanon needs to address the barriers found in the policy, regulatory, technology, infrastructure and financing mechanisms to attract investments. Technical support would be required to remove these barriers.</i>
<input type="checkbox"/> Other/Please specify	<i>Description</i>

SECTION 5: IMPACT

5.1. Countries planned for implementation including number of people potentially impacted.

Lebanon. More than 6 million.

5.2. Alignment with the 2030 Agenda for Sustainable Development – Please describe how **each** of the actions from section 2 impact advancing the SDGs by 2030.

[up to 500 words, please upload supporting strategy documents as needed]

Access to reliable, cost-effective, and environmentally sustainable energy through renewable energy technologies can have a multiplier effect on development, such as reduced health impacts, improved livelihoods, poverty reduction, job creation, gender equality, and improved access to water and food. These cross-cutting impacts of renewable energy are central to efforts to achieve the United Nations Sustainable Development Goals. In addition, accelerating the deployment of renewable energy will fuel economic growth, create new employment opportunities, improve human well-being, and contribute to a climate-friendly future. Advances in renewable energy technologies and increasing cost competitiveness have strengthened the case for renewable energy and opened new opportunities for countries to transform their energy systems. The benefits of renewable energy development go beyond cost competitiveness. Increased deployment can meet the energy needs of a growing population, spur development and improve welfare, while reducing greenhouse gas emissions and increasing natural resource productivity. In this regard, Lebanon is currently preparing a National Sustainable Development Strategy, which clearly highlights the commitment of the country, at the highest level, to advancing the SDGs by 2030.

5.3. Alignment with Paris Agreement and net-zero by 2050 - Please describe how **each** of the actions from section 2 align with the Paris Agreement and national NDCs (if applicable) and support the net-zero emissions by 2050.

[up to 500 words, please upload supporting strategy documents as needed]

Fossil fuel combustion is a source of greenhouse gases contributing to global warming and climate change. These actions also cause local air pollution, with sulfur dioxide, nitric oxide, and microparticles being among the main pollutants. These pollutants can have adverse effects on human health, but they can also reduce agricultural yields, devastate forests and fisheries (acid rain) and damage buildings and infrastructure. The majority of the adverse effects, however, are on human health. Unlike fossil fuels, renewable energy technologies offer the opportunity to move away from carbon-intensive systems and lead countries toward meeting climate goals and achieve carbon neutrality and net-zero by 2050. Within this framework, Lebanon is determined to embark on a long-term low-emission and climate resilient development trajectory to ensure a sustainable future for its population, despite its current challenging national circumstances. Implementing this energy pact and promoting renewable energy will therefore contribute to achieving the climate goals.

SECTION 6: MONITORING AND REPORTING

6.1. Please describe how you intend to track the progress of the proposed outcomes in section 3. Please also describe if you intend to use other existing reporting frameworks to track progress on the proposed outcomes.

The Ministry of Electricity and Water (MEW) with the support of the Lebanese Center for Energy Conservation (LCEC)

SECTION 7: GUIDING PRINCIPLES CHECKLIST

Please use the checklist below to validate that the proposed Energy Compact is aligned with the guiding principles.

I. Stepping up ambition and accelerating action - Increase contribution of and accelerate the implementation of the SDG7 targets in support of the 2030 Agenda for Sustainable Development for Paris Agreement

I.1. Does the Energy Compact strengthen and/or add a target, commitment, policy, action related to SDG7 and its linkages to the other SDGs that results in a higher cumulative impact compared to existing frameworks?

Yes No

I.2. Does the Energy Compact increase the geographical and/or sectoral coverage of SDG7 related efforts? Yes No

I.3. Does the Energy Compact consider inclusion of key priority issues towards achieving SDG7 by 2030 and the net-zero emission goal of the Paris Agreement by 2050 - as defined by latest global analysis and data including the outcome of the Technical Working Groups? Yes No

II. Alignment with the 2030 agenda on Sustainable Development Goals – Ensure coherence and alignment with SDG implementation plans and strategies by 2030 as well as national development plans and priorities.

II.1. Has the Energy Compact considered enabling actions of SDG7 to reach the other sustainable development goals by 2030? Yes No

II.2. Does the Energy Compact align with national, sectoral, and/or sub-national sustainable development strategies/plans, including SDG implementation plans/roadmaps? Yes No

II.3. Has the Energy Compact considered a timeframe in line with the Decade of Action? Yes No

III. Alignment with Paris Agreement and net-zero by 2050 - Ensure coherence and alignment with the Nationally Determined Contributions, long term net zero emission strategies.

III.1. Has the Energy Compact considered a timeframe in line with the net-zero goal of the Paris Agreement by 2050? Yes No

III.2. Has the Energy Compact considered energy-related targets and information in the updated/enhanced NDCs? Yes No

III.3. Has the Energy Compact considered alignment with reaching the net-zero emissions goal set by many countries by 2050? Yes No

IV. Leaving no one behind, strengthening inclusion, interlinkages, and synergies - Enabling the achievement of SDGs and just transition by reflecting interlinkages with other SDGs.

IV.1. Does the Energy Compact include socio-economic impacts of measures being considered? Yes No

IV.2. Does the Energy Compact identify steps towards an inclusive, just energy transition? Yes No

IV.3. Does the Energy Compact consider measures that address the needs of the most vulnerable groups (e.g. those impacted the most by energy transitions, lack of energy access)? Yes No

V. Feasibility and Robustness - Commitments and measures are technically sound, feasible, and verifiable based a set of objectives with specific performance indicators, baselines, targets and data sources as needed.

V.1. Is the information included in the Energy Compact based on updated quality data and sectoral assessments, with clear and transparent methodologies related to the proposed measures? Yes No

V.2. Has the Energy Compact considered inclusion of a set of SMART (specific, measurable, achievable, resource-based and time based) objectives? Yes No

V.3. Has the Energy Compact considered issues related to means of implementation to ensure feasibility of measures proposed (e.g. cost and financing strategy, technical assistant needs and partnerships, policy and regulatory gaps, data and technology)? Yes No

SECTION 8: ENERGY COMPACT GENERAL INFORMATION

8.1. Title/name of the Energy Compact

Lebanon Energy Compact

8.2. Lead entity name (for joint Energy Compacts please list all parties and include, in parenthesis, its entity type, using entity type from below)

Republic of Lebanon, International Renewable Energy Agency (IRENA)

8.3. Lead entity type

Government

Local/Regional Government

Multilateral body /Intergovernmental Organization

Non-Governmental Organization (NGO)

Civil Society organization/Youth

Academic Institution /Scientific Community

Private Sector

Philanthropic Organization

Other relevant actor

8.4. Contact Information

Dr. Joseph El Assad, Advisor to the Minister of Energy and Water (MEW)

8.5. Please select the geographical coverage of the Energy Compact

Africa Asia and Pacific Europe Latin America and Caribbean North America West Asia Global

8.6. Please select the Energy Compact thematic focus area(s)

Energy Access Energy Transition Enabling SDGs through inclusive just Energy Transitions Innovation, Technology and Data Finance and Investment.

SECTION 9: ADDITIONAL INFORMATION (IF REQUIRED)

Please provide additional website link(s) on your Energy Compact, which may contain relevant key documents, photos, short video clips etc.