

Good Governance and the Legal Framework in the Lebanese Renewable Energy Sector

**by the Konrad Adenauer Stiftung Rule of Law Programme Middle East and
North Africa in cooperation with the Observatory of Civil Service and Good
Governance at Saint Joseph University**

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Investing in renewable energy from natural resources such as the sun, air, water, etc. has made its way to the agenda of many countries around the world, including oil countries, because of its significant positive economic and environmental effects.

Lebanon has been suffering from the problem of regularly and significantly securing electricity since the end of the war in 1990. The Treasury incurred very high costs by borrowing to provide electricity from fuel, which caused a financial drain that cost Lebanon about 45 billion US dollars, i.e., 45% of the public debt.

The renewable energy sector in Lebanon poses a major challenge in light of the economic crisis and its repercussions. Many Lebanese have resorted to benefiting from this energy, especially solar energy, in the absence of the necessary legislation. As a result, we are before a *fait accompli* that must be regulated, in addition to setting rules and conditions required to invest in it and maintain public safety.

A subcommittee of the Parliamentary Public Works, Transportation, Energy and Water Committee is studying the draft law contained in Decree No. 9000 of 04/06/2022, which aims to regulate the production of distributed renewable energy and connecting it to the public grid.

Renewable energy and energy conservation, effectiveness and efficiency constitute a viable alternative to traditional dirty energy. The Ministry of Energy and Water has set a practical goal, producing 30% of renewable energy from the total electricity production in Lebanon in 2030. This goal can be achieved provided the necessary legislation is passed, the required reforms are adhered to in several fields, and investment is made in the sector.

For any legal framework to regulate the sector, one of its goals must be to help poor families and individuals and those with limited income, by controlling investment and trade conditions in terms of considering the difficult economic conditions of these people and preventing corruption.

Lebanon must adopt a clear policy that qualifies it to join the family of renewable energy producing countries, which includes 65 countries working on the development of the sector, including Costa Rica, the only country in the world whose production of renewable energy reaches 100% of public electric production, with all the resulting economic, environmental and health benefits.

This roadmap was prepared based on a symposium¹ organized by the Observatory of Public Service and Good Governance at Saint Joseph University of Beirut with the aim of developing economic and environmental governance, in partnership with Konrad Adenauer Stiftung Rule of Law Programme Middle East and North Africa.

¹ Held on 04/10/2022, it was inaugurated by Professor Salim Daccache s.j., Rector of Saint Joseph University of Beirut, Mr. Philipp Bremer, Director of the Konrad Adenauer Stiftung Rule of Law Programme Middle East and North Africa, Professor Pascal Monin, Director of the Observatory of Public Service and Good Governance, MP Sajih Attieh, Head of the Parliamentary Public Works and Energy Committee and Mr. Aref Yassine, Engineer, President of the Federation of Lebanese Engineers and President of the Order of Engineers and Architects – Beirut.

The symposium included an introductory remote intervention by Mr. Pierre Khoury, Engineer and President and General Director of the Lebanese Center for Energy Conservation, and two discussion panels: the first panel, entitled “The Challenges of the Energy Sector Between Reality and Law”, was moderated by Ms. Diana Al Kaissy, an expert in energy governance and the director of the Civil Communication Department at the International Republican Institute. Ms. Carol Ayat, an energy finance expert and consultant with the Issam Fares Foundation, Dr. Hassan Harajli, CEDRO Project Manager and UNDP Energy Advisor, and Ms. Christina Abi Haidar, an attorney and legal expert in energy, environment and governance issues participated in the panel. The second panel, entitled “Solutions and Future Prospects” was moderated by Ms. Laury Haytayan, an expert in the field of energy. Mr. Aref Yassine, Engineer, President of the Federation of Lebanese Engineers and President of the Order of Engineers and Architects – Beirut, Prof. Joseph Al-Assad, Adviser to the Lebanese Center for Energy Conservation, and Mr. Ali Berro, a lawyer and legal expert in the field of energy participated in the panel.

First: The challenges of the renewable energy sector

Lebanon is currently suffering from a catastrophic electricity situation, with about 50% of the Lebanese people deprived of electricity, while the majority receive it insufficiently.

Private generators provide a large part of the need at a high financial cost for the Lebanese, and with negative environmental and health effects.

The lack of power has a direct impact on the economic situation, as it is impossible to achieve economic recovery without electricity. The International Monetary Fund and similar international bodies and donor countries require the reform of the electricity sector before approving the required support programs.

Many found the solution in renewable energy, whose sector has witnessed a great development since 2010. Between 2010 and 2020, Lebanon witnessed the production of about 100 megawatts from renewable energy.

In 2021, production reached about 100 megawatts.

Estimates indicate that the production in 2022 will be of around 250 megawatts, meaning that the general production over 12 years will be of around 450 megawatts, which is equivalent to the production of a small power plant.

Between 2010 and 2020, the number of projects operating on the solar energy system in Lebanon reached 2,500. In 2022, the number rose to 25,000 projects; a tenfold increase from the previous figure.

This was achieved through individual initiatives, in the absence of any legislation or regulation of the sector.

The volume of investments in the sector amounted to about 300 million dollars.

“450 megawatts” is a large number that constitutes a strategic situation in the production of renewable energy.

Lebanon, like other countries, is facing many challenges in terms of the development of this sector and investments in it, and in terms of the absence of the required legal legislation.

1. The reality

Chaos prevails in the sector, with many Lebanese people turning to solar energy to secure their electricity needs, sometimes without taking into account the provision of the required specifications and quality standards. The installation of power generation equipment is carried out by professional technicians and electricians, often without engineers. The logic of trade and profit prevails over specialized technical work, causing great chaos.

The attempt to produce renewable energy from air has also encountered obstacles.

a. Renewable energy produced from the sun

Lebanon enjoys approximately 300 sunny days a year, which qualifies it for a large production of renewable energy.

Lebanon was preceded by many neighboring countries in this field, including Egypt, which established large solar farms, and offered to export its production to several countries.

Chaos prevails in Lebanon in the import and installation of equipment needed to produce renewable energy, without respecting the necessary technical specifications. As a result, there is a danger to the safety of users, in addition to squandering the funds of institutions and people in many cases.

As for the mechanism for obtaining a “facilitation letter” for the production of renewable energy, it includes submitting an application to the Lebanese Center for Energy Conservation, which is submitted to the Minister of Energy and Water, who transmits it to the Ministry of Interior. The person concerned shall be notified of the approval or rejection of his request from the Internal Security Forces station in the area in which he resides.

This mechanism lacks direct inspection and verification of compliance with the technical and required standards and specifications. The role of the Center is limited to ensuring the existence of the minimum required technical specifications.

b. Renewable energy produced from air

In 2012, the Issam Fares Foundation conducted experiments on the production of energy from air, which included the coast and the mountains; as a result, it was found that the rate of air speed is ideal for energy production.

However, the politicization of the matter in the areas of partnership, the selection of appropriate sites, organization, etc. hampered the project, after acquisitions in Jbeil and Akkar.

Several projects were implemented in Lebanon to produce renewable energy from the air, including two projects based on public-private partnerships under the supervision of the Ministry of Energy and Water in 2018 and 2021 in Akkar with a capacity of 25 megawatts. Exceptional licenses issued by the Council of Ministers were granted to investors who secured the necessary funding from the European Investment Bank. The Lebanese Center for Energy Conservation, managed by the engineer Mr. Pierre Khoury, prepared the two contracts between the two mentioned sectors, taking into account environmental and technical standards.

Today, after the economic crisis, it is assumed that such projects will be financed within the framework of a program with the International Monetary Fund.

Both parts of the renewable energy projects achieve clear financial feasibility, especially with the significant rise in oil prices.

The cost per kilowatt of renewable energy is estimated between 7-8 cents for individual projects, and 5 cents for large projects. The price of a kilowatt produced by Electricité du Liban (EDL) rises to 28-30 cents, while owners of private generators sell it for between 38-40 cents.

2. The legal framework

Law No. 462/2002 defines the course of regulating the electricity sector. It also regulates the draft law on distributed renewable energy in the new sector.

a. Law No. 462

Issued in 2002, Law No. 462 regulating the electricity sector constitutes a general framework for regulating the sector.

Although it came as a response to a wide international demand and a local need, it has not been implemented to this day.

The law was approved 20 years ago together with other laws, most notably the Aviation Regulation Law, the Telecommunications Law, and Environmental Law No. 444, etc.

Over the past years, political interventions have obstructed the appointment of the regulatory authority for the electricity sector, as stipulated in the law, by amending Article 7 of said law, and transferring powers to the Council of Ministers.

Today, the appointment of the commission has become a vital need for the reform and the regulation of the sector, and one of the main demands of the International Monetary Fund, the World Bank and donor agencies.

Law No. 462 stipulates a partnership with the private sector in a regular and transparent manner, to contribute to the production and distribution processes.

According to Law No. 462, EDL will be transformed into a public company, owning 51% of the shares, while the private sector owns the remaining 49% of the shares.

By merging the various powers and limiting them to one body, the law did not fully take into account the principles of governance. For instance, the regulatory authority is in charge of regulating the sector and setting policies. However, it also launches tenders and contracts with companies that will produce electricity. This makes it a regulator and a buyer at the same time.

The law did not address renewable energy except in one article, which gives people the right to produce up to 1.5 megawatts of electricity for private use, without obtaining a permit or license.

Also, it did not address production and distribution.

Accordingly, the law needs a set of complementary laws, most notably a law on distributed renewable energy, and one on energy conservation.

The required amendments shall also be made. Among the amendments under discussion is the authority to conduct tenders. This power is given to the Ministry of Energy and Water based on the provisions of the Public Procurement Law, while the regulatory authority is responsible for granting permits and licenses to the private sector. Consequently, the appointment of the members of the authority became a mandatory condition for the application of this law.

b. The Distributed Renewable Energy Draft Law

The draft law was elaborated as a result of great efforts over 3 years through the support provided by the European Bank for Reconstruction and Development. The Lebanese Center for Energy Conservation, together with the Ministry of Energy and Water and EDL contributed to its elaboration.

The Council of Ministers approved the draft law on March 23, 2022 after it was initially withdrawn from it, and fundamental amendments were made to it, most notably the establishment of what can be described as an “intermediary” between the investor and the investment through the licenses awarded for production.

Even though the draft law stimulates the private sector to invest, depriving it of production, transportation and sale will hinder investments.

The project was referred to the Parliament, and despite the comments thereon, it is considered a legal framework that regulates the production process, constitutes a quantum leap for the regulation of the sector, and sets the sector's basic rules.

A subcommittee emanating from the Public Works, Transportation, Energy and Water Committee is responsible for studying the project, with the assistance of experts and stakeholders, including the Order of Engineers and Architects.

(1.) Scope of the Law

The draft law, in its current form, provides, inter alia:

- Generating 1.5 megawatts of energy without permission.
- Generating between 1.5 and 10 megawatts of energy based on permission given by the regulatory authority.
- Generating more than 10 megawatts of energy based on the licensing system and energy purchase contracts between the regulatory authority and the private sector.
 - This applies to the production of distributed renewable energy, which benefits from the various arrangements of the net metering system.
In light of the current situation, surplus production from renewable energy is wasted.
 - EDL connects the energy producers who have obtained permission in accordance with the provisions of Law 462/2002 to the public network, and gives them approval to store the produced energy, according to the technical capacities, and the capabilities of the public network at the connection site, after ensuring that the renewable energy systems are in conformity with the technical specifications required by EDL. The institution may not fail to connect, except for cases related to technical matters.
 - The possibility of selling energy to the private sector directly if the production is less than 10 megawatts, and through a contract with the EDL, according to which it is sold to this sector after paying a “transit fee” if the production exceeds 10 megawatts.

This assumes the existence of a minimum level of production that allows the public network to be stable.

(2.) Importance of the Law

The adoption of the law achieves a qualitative leap in the production of clean, low-cost energy, and achieves several things:

- Provides the necessary legislative framework for the development of renewable energy projects throughout Lebanon. It allows large investments, especially at the level of municipalities and local authorities.
- It is an essential step in the strategy of the Ministry of Energy and Water to combat climate change. The development of the renewable energy sector in the production of electricity is a cornerstone of the Lebanese government's policy to establish sustainable development.
- Provides energy security away from fluctuations and instability.

c. The Energy Conservation Draft Law

It is considered complementary to the Distributed Renewable Energy Draft Law, based on the fact that energy efficiency is a priority before production.

(1.) Course of the Draft Law

Preparation of the Energy Conservation Draft Law started in 2008, and it was referred to the Parliament in 2022.

It aims to enhance energy efficiency based on Lebanon's needs to rationalize energy consumption, and to fulfill international commitments given in terms of reducing emissions and improving energy efficiency.

The law imposes mandatory standards related to energy efficiency in buildings in terms of materials used in construction, and the use of energy-saving equipment, etc. It stipulates other mandatory matters, imposes penalties on violators, and requires conducting an energy audit for the pre-construction and post-construction phases.

On the other hand, it provided for tax exemptions in the event of the use of energy-saving equipment.

It also singled out a special chapter to energy efficiency in the industrial sector.

(2.) The National Strategy for Energy Efficiency

The Lebanese Center for Energy Conservation has been working on energy efficiency and conservation for many years. It also developed a national strategy for energy efficiency, part of which was implemented before the economic crisis that afflicted Lebanon.

Moreover, it organized national awareness campaigns. Regulations and standards for energy consumption in buildings and some electrical equipment were defined before the stage of setting the legal framework began through the draft law that defines a mandatory framework for this strategy. Therefore, there are programs that need to be implemented at the level of different sectors (industrial, touristic, etc.).

Second: Future Prospects

1. Future expectations

Investing in the renewable energy sector can bring many positives. Most notably:

a. Increasing electricity production and reducing costs

By regulating the use, it is possible to produce between 800 and 1,000 megawatts and save about 400 million dollars annually. This investment can be recouped within two years.

b. Improving the environmental situation

The use of clean energy is reflected in a decrease in the pollution caused by power plants operating on fuel and private engines dispersed in cities and villages.

A study conducted by Saint Joseph University in February 2022 showed that air pollution, as a result of the increase in the number of private generators, has dramatically increased.

In addition, improving the quality of fuel currently used in electricity production plants leads to a reduction in air emissions.

c. Energy security

Lebanon experienced many obstacles and problems in importing diesel fuel and securing it for individuals in the summer of 2021 as a result of the effects of the economic crisis and the gradual lifting of fuel subsidies, which could be repeated because of the multiplicity of factors that control imports. Therefore, energy security is achieved to a large extent with renewable energy projects.

2. Reform recommendations

It is necessary to complete a number of measures aimed at regulating the renewable energy sector and promoting investments in it, in order to achieve necessary reforms and save Lebanon from the exorbitant electric bill.

a. Establishing the rule of law

Things will be straightened out without it, for legislation alone is not sufficient. A good example of this is the Electricity Sector Regulatory Law of 2002; 20 years have passed since the law was approved, yet it remains unimplemented to this day.

In parallel, economic-financial-security stability must be provided to attract investments to the distributed renewable energy sector.

b. Availability of political will

Lebanon has suffered a lot as a result of the absence of the political decision required to reform the electricity sector. As a result, the public treasury incurred \$45 billion to provide electricity without effective investments in production. The fear is that political exploitation and private and factional interests will lead to wasting the opportunity available today through

the regulation of the renewable energy sector. Therefore, what is required is a comprehensive political will that facilitates the legal and procedural tracks for investment in this sector and removes political influences and personal interests.

c. Accelerating the implementation of renewable energy projects

In 2019, the Ministry of Energy and Water prepared, with the assistance of the International Renewable Energy Agency, a scientific study that aspires that in 2030, 30% of the energy produced in Lebanon will be renewable. The electricity plan set by the Ministry in 2022 was in line with this study and its objectives. And if the plan is respected, Lebanon will produce, in 2030, about 4,500 megawatts from electricity production systems from renewable energy, which will achieve an estimated saving of about one billion dollars annually. The value of investments in the sector until 2030 is estimated at \$6 billion, which necessitates establishing the necessary legal environment to attract the required financing. It is imperative to expedite the adoption of legislation and executive steps that lead to achieving the declared goal.

d. Appointing the authority regulating the management of the electricity sector

This reform measure stipulated in Law 462/2002 should be approved without delay, and without any modification in the authority's powers, especially since it is one of the most prominent demands of the international community and the International Monetary Fund to help Lebanon restore its economic recovery.

Political forces justified that the delay in implementing the aforementioned law was because it had to be amended. However, 20 years later, it has neither been amended nor implemented.

e. Developing a national energy strategy

The strategy must define the required policies in the electricity sector, especially in terms of rationalizing production through renewable energy and gas. Today, there is an opportunity to develop a strategy based on the integration of renewable energy sources and natural gas sources, especially after the demarcation of the southern maritime borders for the extraction of gas and oil.

As for the basis of the strategy, it will be the approval of the distributed renewable energy and energy conservation laws, together with sector governance.

It is imperative for the regulatory authority, companies and activists in the sector to participate in the development of the strategy so that it is comprehensive and obtains the approval of those concerned.

f. Adopting the necessary accompanying laws

The most important accompanying law is a law that allows the use of state public property in renewable energy production projects, through either an allocation, a lease or an ownership contract. This would provide the facilitations that are necessary for the investment, and provide guarantees and stability to the investing parties.

g. Reforming the EDL situation

This should be made on several levels:

1. Reconsidering the structure of the institution, by turning the collapse into an opportunity based on developing the current administrative structure, and creating an administrative unit in it and another in the Ministry of Energy and Water to handle renewable energy management, with the aim of motivating investors and reducing investment risks.

The institution is also facing the risk of losing qualified human expertise as a result of the effects of the economic crisis. It is imperative to preserve it.

2. Restoring EDL's fiscal balance by removing encroachments, raising the tariff price, and reinforcing collection.

3. Reforming the public network by removing encroachments and reducing technical waste, which achieves the required energy exchange.

h. Strengthening the role of the Order of Engineers and Architect

The Order's role is pivotal in keeping pace with what is happening in the renewable energy sector. The Order actively participated in the meetings of the parliamentary sub-committee emanating from the Public Works, Transport, Energy and Water Committee, in charge of studying the draft law contained in Decree No. 9000 of 06/04/2022 which aims to regulate the production of distributed renewable energy and connecting it to the public grid.

The role deals with 3 axes:

1. What the laws and regulations permit, through the presence of a representative of the Order in the Higher Council for Urban Planning, and the participation of its representatives in the meetings of the relevant parliamentary committees, especially the Works and Energy Committee. The Order presents its views and approaches in both positions.

2. Ensuring public safety by law. This safety cannot be achieved without assigning a role to the Order of Engineers and Architects in securing the necessary technical conditions, which leads to addressing the prevailing chaos, distortion, and environmental and visual pollution that occurs. Among the suggestions is the need for an engineer to effectively consent the submitted request for the production of renewable energy, and to consult him to detect and examine the extent to which the project owner adheres to the required specifications.

3. Developing the skills and expertise of engineers through trainings and workshops in cooperation with international bodies. The Order already has a training center.

The Order is working to set standards and specifications required for energy production equipment to put them at the disposal of the concerned authorities, and then present them to the public.

Training should also include specialized professionals working in the sector.

i. Giving a role to other relevant authorities

By relevant authorities we mean – suggestions from two different domains are to be given:

1. Specifications and experiments: Giving a role to the "LIBNOR" institution in terms of specifications, and the Industrial Research Institute in terms of experiments that are conducted for equipment and goods before entering Lebanon.

A compulsory character should be given to adherence to the standards by issuing them through legal texts such as decrees.

2. The procedural aspect: Municipalities have a fundamental and pivotal role. Since the municipality is an executive local authority, the Municipal Law of 1977 allows it to intervene to ensure public safety and impose certain standards and specifications.

j. Committing to environmental standards

This must be achieved on two levels:

1. International and legal commitment: It is not possible to adopt renewable energy without adhering to environmental standards, especially since Lebanon made, through the Paris Agreement, a commitment to reduce carbon dioxide emissions by 31%.

Reducing technical and non-technical waste on the EDL public network, relying more on gas in the EDL's plants, and achieving 30% of renewable energy production in 2030 will help achieve this commitment.

2. Endorsing environmental solutions: environmental solutions must be sought for the equipment used after their expiration date, such as batteries and inverters, due to their disastrous environmental effects.

k. Transparency

It is a fundamental requirement to attract investors in a sector where financial activity is estimated at billions of dollars. This contributes to achieving trust and providing competition, thus reducing prices for consumers.

Speed is also an important factor in this matter, as investors cannot wait many years to complete projects. The mechanism must be clear, without red tape, bureaucracy and corruption.

l. Raising awareness and establishing a culture of renewable energy

The solution begins with the citizen and society, who have the main role in finding effective and required solutions.

Awareness through traditional and modern media, seminars and organized campaigns plays a role in promoting the culture of energy conservation, efficiency and the adoption of renewable energy.

A change in the behavior of the Lebanese must be reached, especially since it is no longer possible for EDL to adopt an electricity tariff that is lower than the cost.

The recommendations constitute a viable roadmap for action. The moral remains good management and the adoption of policies based on the rules of good governance.

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