Executive Summary
The looming prospect of a complete blackout in Lebanon is rare for a middle-income country. It is in this dire context that electricity sector reforms become indispensable. Chief among these reforms is the creation of an electricity regulatory authority (ERA), an independent institution tasked with regulating the sector, particularly the supervision of contracts for electricity production and distribution with private companies. In this brief, however, we argue that the present-day financial, economic, and social crises risk plunging the creation of an ERA into a ‘political economy trap’. A hastily created ERA, established just to please the international community, can be subjected to an elusive elite-level arrangement that will likely undermine its independence and value as an impartial regulator. The institution would be held hostage to the same mechanisms of rent generation and distribution among elites that have undermined the effectiveness of many other existing regulatory authorities. That way, an ERA would ‘trap’ citizens and the international community in what would be little more than a continuation of the status quo in a more palatable institutional arrangement. Consequently, we recommend that policymakers push for the establishment of an independent ERA as part of a vision for the entire governance of the electricity sector.
Introduction

The looming prospect of a complete blackout in Lebanon is rare for a middle-income country. A symptom of a dysfunctional system of sectarian governance, 30 years of mismanagement in the electricity sector have had a severe economic and macro-fiscal impact that contributed to Lebanon’s current financial crisis. The high cost of service, coupled with a highly subsidized tariff, demanded ballooning treasury transfers to sustain the operation of the state-owned utility Elettricité du Liban (EDL). While EDL’s annual financial losses amounted to $150 million in 1996, they reached $1.4 billion in 2018 and made up about 40% of Lebanon’s entire debt stock in 2016. While such levels of spending would have been more than enough to build a modern energy infrastructure and asset base, service provision is among the worst in the world, just ahead of Haiti, Nigeria, and Yemen.

It is in this dire context that policy experts, international partners, and development agencies have repeatedly called for power sector reforms. Chief among these reforms is the creation of an electricity regulatory authority (ERA), an independent institution tasked with regulating the sector, particularly the supervision of contracts for electricity production and distribution with private companies. Establishing an electricity regulator has been at the center of the debate on electricity reforms in Lebanon for a long time. As early as 2002, Lebanon’s parliament passed Law 462, which stipulated the legal and institutional framework for an ERA. With an ERA still absent, the delay in creating it has been cited by scholars and experts as a contributing factor to Lebanon’s dysfunctional electricity sector. Moreover, the creation of an ERA is seen by major development agencies, such as the World Bank and the International Renewable Energy Agency, as a priority to address the electricity sector’s failings and spur private investment.

The creation of an ERA is an important goal that Lebanon must achieve to form a sustainable, efficient, and liberal electricity market. Its objective would be to facilitate a competitive market environment that encourages private sector investment and protects consumers by regulating prices. An ERA would reduce uncertainty for investors by: 1) clarifying the degree of regulatory discretion the authority will have, 2) making its composition transparent, and 3) demonstrating the process it will follow in taking decisions. Such reliable regulation would allow investors to anticipate tariffs, and thereby project profits and revenues for a given quality and scope of services. The creation of an ERA, independent of political elites, would constitute a key element of power sector reform and an important milestone on the path to energy security.

In this brief, we argue that the present-day financial, economic, and social crises risk plunging the creation of an ERA into a ‘political economy trap.’ A

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hastily created ERA, established just to please the international community, can be subjected to an elusive elite-level arrangement that will likely undermine its independence and value as an impartial regulator. The institution would be held hostage to the same mechanisms of rent generation and distribution among elites that have undermined the effectiveness of many other existing regulatory authorities. That way, an ERA would ‘trap’ citizens and the international community in what would be little more than a continuation of the status quo in a more palatable institutional arrangement. Consequently, we recommend that policymakers push for the establishment of an independent ERA as part of a vision for the entire governance of the electricity sector.

To support these claims, this brief first discusses the core functions of an electricity regulator. Second, we examine how Lebanon’s current context impacts these functions. We go on to dissect the political economy constraints that impede the formation of an independent ERA. In doing so, we review some international experiences in dealing with electricity reform in challenging economic and political contexts such as the Lebanese one. Finally, the brief proposes guidelines of how progress in the electricity sector can be achieved until an independent ERA is created.

What is the role of an electricity regulator?

An ERA would be a governmental institution affiliated with the Ministry of Electricity and Water that consists of a board of independent experts, tasked with the supervision of contracts and concessions to the private sector for the production and distribution of electricity. Generally, the primary rationale for creating an ERA is to signal a government’s long-term commitment towards ensuring a competitive and sustainable electricity sector market. Consequently, the core function of an ERA is to balance the interests of concerned stakeholders, and generally revolves around the protection of both consumers and investors. Consumers would be protected against the overpricing of firms with substantial market power, while investors would be shielded from arbitrary government actions.

The standard model of power sector reforms

ERAs were part of a policy mix of the market-oriented power sector reforms of the 1990s, pursued by international development institutions, which promoted competition, privatization, and liberalization of electricity sector services. Their primary functions include the calculation and periodic review of the electricity tariff, strategic planning (by estimating and forecasting demand and capacity requirements), the facilitation of private sector investment, and the protection of consumers from overpricing (figure 1). These objectives

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are not necessarily given the same weight, as the role of an ERA largely depends on important contextual factors, such as a country’s energy priorities, level of market liberalization, buy-in of political elites and the government and institutional independence and capacity.

These functions have been part of the standard model of power sector reforms implemented in many countries since the 1990s. The mandate of an ERA is not static, but changes with technological advancements and changes in ideational environments, such as the shift towards sustainable energy production. Once a country manages to establish an ERA that can effectively assume its core functions in a solid institutional setup—which includes aspects like the availability of data, experts, and sophisticated demand estimation methods—these regulatory authorities can pursue other objectives over time. Today, established ERAs tend to assume an important role in the promotion of sustainable energy generation and policies to maximize the share of renewable energy in the energy mix of a country. Moreover, ERAs can play an important role in facilitating citizen engagement and individual contributions to the electricity grid (for example, via solar panels) in distributed energy models.

Figure 1
Core and emerging objectives of an electricity regulatory authority

<table>
<thead>
<tr>
<th>Core Objectives</th>
<th>Emerging Objectives</th>
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<tbody>
<tr>
<td>Determine electricity tariff based on transparent methodologies</td>
<td>Promote sustainable power generation and policies</td>
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<tr>
<td>Ensure cost effectiveness through least-cost dispatching</td>
<td>Maximize share of renewable energy</td>
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<tr>
<td>Ensure system reliability by estimating demand and capacity growth</td>
<td>Leverage big data to produce accurate sector analytics</td>
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<tr>
<td>Facilitate private sector investments</td>
<td>Endorse citizen engagement, such as by supporting distributed energy models</td>
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<tr>
<td>Protect consumers, especially vulnerable groups</td>
<td>Encourage energy efficiency and guide demand-side management</td>
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How to ensure the independence of an ERA?

In order to ensure the independence of an ERA, three conditions should be met. First, the individual members should be free of connections to firms that are affected in any way by the decisions the ERA takes, which could lead to a conflict of interest. Second, it should be independent of the tenure of politicians, and not be subjugated to the discretionary power of political authorities. Third, an ERA should have safeguards to guarantee its autonomy, such as earmarked funding, secure tenure for the regulators, and exemption from civil service salary rules.

Measures of independence, however, need to be reconciled with measures to ensure that the regulator is accountable for its actions and does not stray from its mandate, engage in corrupt practices, or become inefficient. The overall framework of a regulator needs to strike a balance between the discretion entrusted in it and the need for certainty and stability in regulatory decisions. Some institutional measures designed to assure accountability of the regulator include:

- mandating rigorous transparency, including open decision-making and publication of decisions,
- providing an effective appeal mechanism to contest the agency’s decisions,
- subjecting the regulator’s conduct and efficiency to external auditors, and
- permitting removal from office in case of proven misconduct or incapacity.

Electricity regulators in practice: Variable degrees of success

Existing evidence suggests that, if implemented correctly, the standard model of the 1990s can serve as a sound guide for reforms. However, there is also substantial evidence that points to the potential costs of incomplete or bad implementation, including the creation of a weak regulator (or regulatory framework). In their influential report, ‘Rethinking Power Sector Reforms,’ Foster and Anshul write that for many countries the 1990s standard model was incompatible with the way their economies were organized and/or faced political challenges in implementation. Notably, the authors find that poorer countries with more limited coverage and high losses in energy distribution are less likely to be successful in implementing the reforms.

While the relevant development literature points to the independence of the regulator as a best practice, there is a growing realization that achieving full independence may be a difficult policy goal in many contexts due to several factors, including incompatibility with established legal, cultural, and political norms. Therefore, in practice, ERAs have had variable degrees of success. The development literature is full of examples where, in contexts with a complex political economy, the establishment of a weak ERA has
not resulted in the desired positive impact. For example, some countries in sub-Saharan Africa still suffer from poor services and infrastructure, as well as insufficient access, despite having established an ERA. On the other hand, there are examples of substantial progress achieved in the absence of a regulatory authority, albeit with the presence of strong sector governance and the buy-in of major political elites. Morocco, for example, selectively introduced reforms while retaining a dual model of a strong state-owned utility, on the one hand, and private sector involvement in the form of long-term lease/concessions that were backed by the King himself, on the other. During this period, Morocco achieved several milestones, including becoming a regional leader in the development of renewable energy through the Noor 1 project, the largest solar thermal power plant in the world. Morocco only established its regulatory agency in 2016, years after it embarked on pursuing power sector reforms.

Would an ERA leave the ministry without influence?
The ministry will retain responsibility for essential functions, even when much of the technocratic work of regulation is entrusted to an independent regulatory agency. In fact, the ministry would benefit, as it will be able to concentrate its resources on its core tasks that are political in nature. Such tasks involve planning public investment in infrastructure, policy regarding public-private partnerships, and the restructuring of the sector. Because such tasks are complex and of national importance, they will benefit from increased attention from the ministry's administration.

Examining the role of an independent electricity regulator in Lebanon’s present-day context
Achieving the above objectives is supremely important if Lebanon wants to reduce the power sector’s financial losses and move towards a modern and sustainable energy model. The sequencing and timing of the reforms needed to achieve these objectives, however, will determine their success. Reflecting on the current context in Lebanon, the relevant regulatory objectives can be distilled down to three main issues: (1) tariff correction, (2) power supply expansion, and (3) private sector participation.

The first two issues, tariff correction and power supply expansion, are interconnected in the government plan of 2019, which links the adjustment of tariffs to the increase in EDL power supply. By doing so, the plan seeks to meet two goals simultaneously, that is, reducing transfers to EDL to cover its large deficits while keeping tariff adjustments low to mitigate the adverse effects of rising prices on citizens. To illustrate the magnitude of this task, the average tariff paid in May 2021 is around 135 LBP per kWh (equivalent

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to around 1 US$ cent). With the cost of one kWh generated by EDL ranging between 11 and 18 US$ cent, the current tariff is less than 10 percent of the total cost of service.

In practice, only an independent ERA, free from political pressures, would be able to realize such a significant tariff adjustment progressively and fairly. The challenge, however, is that developing such a tariff methodology requires data to forecast electricity demand and supply, accurate revenue estimates, and national statistics on income, poverty rates, and energy consumption patterns. Unfortunately, such data is not currently available, and will unlikely be available anytime soon. Even if it was, the present-day polarization in Lebanon’s public administration does not guarantee that other administrations will cooperate with a new ERA.¹⁶

An empowered ERA would mark an important paradigm shift by pressing public administrations to collaborate and provide data. In the short-term, however, these issues dilute the value of an ERA to adjust tariffs. Tariff adjustments would have to be made based on established least-cost methodologies that are widely accepted and benefit from existing studies on the real cost of services.¹⁷ There are at least two recent least-cost studies produced for Lebanon, both of which call for renewable energy to be given priority by highlighting its increasingly competitive options for deployment.¹⁸ These studies can be readily benchmarked and verified, and ultimately save much-needed time in regulating the sector.

As for private sector participation, one of the consequences of the current economic crisis is a lack of appetite among private investors to get involved in providing public services. This notably affects the electricity sector as bills are collected in Lebanese lira based on deflated prices. Extensive private sector participation will unlikely materialize soon enough to address Lebanon’s short-term needs. Yet, even though there would be little left to regulate in the short-term, an ERA would send an important signal to the private sector that Lebanon’s electricity market would be competitive in the future.

Moreover, as the country resorts to increased power rationing, new models of power generation based on renewable energy could emerge, as in the case of Yemen,¹⁹ Yemen’s power production, like Lebanon’s, was traditionally reliant on fossil fuels, but the ongoing civil war both disrupted fuel supplies and significantly damaged the electricity grid. In response, small enterprises started to import solar panels, mostly for private use to cover basic needs. Over time, solar panels became an important source of energy production, imported by larger companies on more competitive terms. While still insufficient to cover the needs of the economy and society, solar energy helped improve Yemen’s power supply.


¹⁸ The two least-cost studies are a study conducted by the World Bank and Electricité de France, and a study by Strategy&, the Lebanese Foundation for Renewable Energy, and the Issam Fares Institute. While the first study is still in progress, the latter is available by contacting the authors.

Electricity regulation and the ‘political economy trap’

The set of political economy challenges that inhibit electricity sector reform are complex. One of the main challenges relates to the role of EDL as a mechanism for rent generation and distribution. Through numerous contracts, employment opportunities, and political favors to connected firms and individuals, EDL has played an important role in the power sharing arrangement among political elites. Privatization supervised by an independent regulator would therefore introduce uncertainties as to how sector rents would be generated and distributed.

When Lebanon’s lawmakers first introduced privatization reforms in the early 2000s, they did so partly as an attempt to meet the financing conditions of the Paris donor conferences. One of these reforms was Law 462/2002, which regulates, among others, the privatization of electricity production and distribution. The law stipulates that licenses and permits for such activities are granted to companies that meet the conditions specified by the ‘National Regulator for the Electricity Sector Organization,’ in an attempt to ensure fairness and competition in the sector. However, Law 462/2002 has never been fully implemented, and the ERA never established.

Without an ERA, it is the Minister of Energy and Water (and informally their political party) who effectively exercises authority over the sector, acting simultaneously as the key policymaker, supervisor of implementation, and regulator (primarily in issuing licenses and sector planning). The legal vehicle for the minister to play all these roles already exists under the pretext of ‘temporary measures’ until an ERA is established. In 2014, the parliament passed Law 288/2014 giving the Ministry of Energy and Water and the Ministry of Finance the authority to license power plants to entities other than EDL for a two-year period. In the continued absence of an ERA, the parliament approved Law 54 in 2015, which extends the duration of Law 288/2014 until April 2018. Following this pattern, other extensions are likely to be granted in the future, when it becomes necessary to issue new licenses or contracts.

An independent regulator would diminish the power of the incumbent minister to exercise discretion over future contracts and the resulting rents. This potentially reshuffles the rents generated from the energy sector among a wider set of elites at the expense of the party controlling the ministry. The repercussions of such changes are inherently difficult to forecast, and thereby threaten existing clientelist relationships between political and business elites. Occasional calls against further privatization show that elites perceive such changes as a real threat.

A newly appointed regulatory institution, then, risks to fall prey to the same mechanisms of elite capture that plague many other government institutions. This is in line with much of the development literature, which highlights a
high risk of ‘regulatory capture’ in countries with weak public sectors like Lebanon. From the banking sector, one of origins of the current financial crisis, to telecom, where the mismatch between service and tariff is the highest in the world, regulatory bodies in Lebanon have failed in performing their primary role of protecting the public’s interests.

In many cases, the very process of appointing members to such authorities has been a political exercise in its own right, where elites nominate candidates who are close affiliates. The Council of Development and Reconstruction (CDR), another ‘independent’ institution tasked with the planning and execution of public infrastructure projects, serves as a salient example. As recent evidence shows, CDR board members, many politically connected themselves, enable connected firms to receive significantly larger contracts and prevent unconnected firms from having equal chances when applying for contracts.

Such evidence suggests that Lebanon’s elites are unlikely to leave the makeup of an ERA up to chance (or technical expertise, for that matter). Such institutions come to life to solve problems of resource allocation. As rents from both the public and private sectors have dwindled due to Lebanon’s financial and economic crises, the pressure on elites to undermine the independence of a future ERA is only set to increase. Designed with insufficient oversight, such an authority risks becoming a ‘political economy trap,’ by serving as yet another mechanism for rent distribution.

Conclusion and policy implications
An independent electricity regulatory authority must be formed as soon as possible. It is only with an ERA, and a government that restrains itself from exerting influence in the sector based on short-term political pressures, that the broader goals for the electricity sector can be realized. Therefore, it is of utmost importance for local actors and the international community to seize the opportunity the present-day crises offer and maximize pressure on elites to create and implement an ERA based on legislation that satisfies international standards.

Yet, the risks of elite capture dissuade us away from making progress on energy sector reform entirely contingent on the establishment of an ERA. An ERA will, by itself, not produce the electricity that is needed to mitigate the adverse effects of power shortages for Lebanon’s population and economy. So, how can reforms in the power sector be implemented in the short term? The answer to this question has tended to focus on technical solutions, which, in Lebanon’s case, would be comparatively easy to implement. Instead, we argue that achieving short-term relief requires the creative navigation of the political economy constraints discussed above. We see two guidelines that can help doing so.


First, political factions need to formulate a clear vision for the future design of the energy sector. This vision needs to be part of a new and broader political settlement—that also takes into account the reform of other institutions and sectors—in which elites understand how the costs and benefits of an independent ERA will be distributed, thus enabling policies for the sector to be coherent over time. Without such a vision that enjoys the backing of major political elites, even well-implemented technical interventions risk being ineffective, as unfavorable changes in the political regime can render them meaningless.

Second, in order to ensure the buy-in of elites, national and international stakeholders need to facilitate the building of coalitions, starting from the local level. In the current set-up of sectarian governance, progress in the energy sector requires coalitions that involve all concerned stakeholders, including municipalities. Electricité de Zahle (EDZ) and Electricité de Jbeil (EDJ) are interesting examples of how coalitions in challenging environments can facilitate solutions that may not be optimal in terms of efficiency and sustainability, but can significantly improve economic outcomes.27 The models of EDZ and EDJ have many drawbacks that limit their applicability in other parts of the country. Yet, these coalitions managed to improve incentives for the concession-holder to deliver and bill electricity, thereby curbing both technical and non-technical losses in the distribution of electricity to about 5%, compared to a national average estimated at 40%.28

There can be no doubt that Lebanon needs an independent electricity regulator if it ever wants sustainable electricity provision at competitive costs. What we argue in this brief is that, in the current situation, the fixation on the establishment of an ERA as a precondition for electricity sector reform and international assistance can be a ‘political economy trap.’ Stepping into this trap does not help in either providing the needed short-term mitigation measures nor in ensuring the long-term sustainability of the sector. In the past, elites could get away with piecemeal and partial reforms as a bargaining chip for international financial support,29 which eventually served to perpetuate a regime of clientelism and extractive rent-seeking. The introduction of an ERA must evade this trap and avoid implicitly supporting elites in their unwavering efforts to uphold their extractive regime.