AMERICAN UNIVERSITY OF BEIRUT

THE LEBANESE ELECTRICITY CRISIS

THE ROLE OF NON-STATE ENERGY PROVIDERS

by

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A project
submitted in partial fulfillment of the requirements
for the degree of Master of Arts
to the Center for Arab and Middle Eastern Studies
of the Faculty of Arts and Sciences
at the American University of Beirut

Beirut, Lebanon
December 2021

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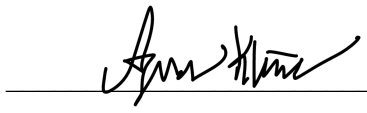

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ABSTRACT
OF THE PROJECT OF

Agnes Tingstrøm Klinken for Master of Arts
Major: Middle Eastern Studies

Title: The Lebanese Electricity Crisis: The Role of Non-State Energy Providers

For decades, Lebanon has suffered from daily power outages, as the state utility Électricité du Liban (EDL) only covers 63 per cent of electricity demand. Recently, the situation has deteriorated further. The project employs a case study research design to investigate the political economy of the Lebanese electricity sector, focusing on alternative providers to state electricity. The first part of the project briefly accounts for the current state of the electricity sector and the main factors that have led to the country's electricity deficit. Then, it suggests that the generator sector can be understood through Yiftachel's concept of grey spaces, and it applies elements from Timothy Mitchell's Carbon Democracy framework to explore new and existing actors, the alliances and relationships between them and the struggle to control (backup) electricity supply in four different urban areas in Lebanon. The report will then argue that the dynamics of electricity contribute to the production and reproduction of economic inequalities. Based on these findings, the project includes the concept of hybridity to discuss how the division between public and private in Lebanon is best understood. The study is based on secondary sources, and more robust findings thus call for further research and data-collection.

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ABBREVIATIONS

EDL: Electricité du Liban

EDJ: Electricité de Jbeil

EDZ: Electricité de Zahlé

UN: United Nations

UNDP: United Nations Development Programme

PLO: Palestine Liberation Organization

CHAPTER 1

INTRODUCTION

"The electricity went" ("raht al-kahraba") is a frequently used expression in Lebanon (Francis & Perry, 2020), as the small Mediterranean country has suffered from daily electricity outages for decades (Ahmad 2021, 1). At the time of writing, the state utility Électricité du Liban's (EDL) dire budget situation, fuel shortages and the country´s dwindling foreign currency reserves have led to considerably increased periods of power outages, with some households receiving only a few hours of daily state provided electricity (BBC 2021).[1] The inability of the state to provide reliable electricity has led to the re-organization of electricity flows where informal and privately owned diesel generator owners have stepped in to cover the periods without power from the state. These owners, despite formal recognition, represent a prominent new actor in the electricity sector (Abi Ghanem, 2018).

The deficit of state provided electricity is not only a challenge for people in their everyday lives, as they do not have a basic demand met, it is also increasing the inequality between high- and low-income households, and the system of private generators is entangled in patronage systems and corrupt practices while contributing to both climate and health problems (Abi Ghanem 2018; Ahmad et al. 2020, 6-7; Verdeil 2016). Electricity shortages were among the many popular grievances reflected in the 2019 October revolution (Ahmad et al. 2020, 6).

Indeed, the darkness of Lebanon at night has become one of the many visible signs of the current state of the country. Considering the Lebanese state as "weak",

[1] This project is written in Summer 2021

"failed" or on the brink of "failure", is not new; However, it has recently been emphasized frequently by journalists, experts and politicians, due to the several overlapping crises the country is facing (Al Jazeera 2021; Alistair 2021; Chloe 2020; Francis & Perry, 2020; Moubayed 2018). These crises include what may be one of the severest depressions since the 1850's (World Bank 2021), and, undeniably, Lebanon's electricity sector has been a major contributing factor (Ahmad et al. 2020, 7).

Therefore, this project will investigate how the transformation of the electricity sector since 1990's has created new actors and power relationships and altered existing ones. If the state has "failed", what is then organizing the electricity flows at different levels of responsibility? I will ask the following research question:

"*How has Lebanon's deficit of power supply created, altered and reproduced new and existing actors, relationships and power configurations, and how is the public-private division between these actors best understood?*

The project report will unravel the alternative providers to state electricity that have emerged in response to the power deficit, and the role they play. It will argue that the political-economic dynamics of electricity in Lebanon has created its own kind of alliances and politics in relation to this specific sector. The project proposes that the back-up generator sector can be considered as something in between the spheres of informal and formal, and that the energy. Relationships among generator owners, private concessions holders, EDL and municipalities have led to blurred lines between public and private entities, challenging conventional conceptions of public-private divisions that assume clear lines between what is state and what is non-state. Studying the electricity sector therefore allows us to generate insights about how power, politics

and unevenness operate in Lebanon - in the context of a state that is often reduced to being weak or failed.

1.1 Literature Review

This section will provide a brief review of literature which I find relevant to this project. The project seeks to shed light on electricity through a state-centered perspective. The state perspective is relevant when analyzing Lebanon's electricity sector, as electricity provision is nationalized, and the state-owned utility EDL is mandated with the responsibility for generation, transmission and distribution (International Monetary Fund 2019, 2). However, EDL's inability to meet this mandate has meant that non-state actors increasingly have stepped in and fulfilled part of these responsibilities. Moreover, the provision of electricity is closely linked to the functioning of the state and to the country's political economy (Verdeil 2016). This is evident when looking at the inefficiencies of state-provided electricity services, and at how EDL has contributed to more than half of Lebanon's state debt (Ahmad et al. 2020, 7).

Literature on states and international security often characterizes Lebanon, like many other countries in the Global South, as a "weak" state (Atzili 2010). This characterization builds on the classical Weberian definition of the nation-state as a human community that successfully posits sovereignty through "the monopoly of legitimate physical violence within a particular territory" (Weber 2009, 78). The Weberian understanding of institutional well-functioning furthermore considers the ability of state institutions to interfere into society and is linked to the functioning of bureaucracy, taxation and provision of public goods (Atzili 2010; Mann 1984). Another related and dominant narrative is the Westphalian approach which holds that a "strong"

state posits sovereignty over its own territorial borders and is capable of eradicating non-state actors and preventing foreign interference (Newman 2019, 423). The conception of state weakness is linked to these perspectives, as it refers to states in which the governments have limited capacity to control public order, borders and maintain viable public institutions or services. State failure, then, covers that the government, if existing, is incapable of upholding public services, institutions and central control over its territory (ibid, 422).

Atzili (2010) holds that Lebanon does not live up to Weberian ideals and thus characterizes as weak. The country does not meet the standards of a Weberian nation-state, as the state never managed to monopolize the legitimate use of violence after its independence or to establish a centralized taxation system. The country's bureaucracy is furthermore characterized by sectarianism, and power is concentrated among a few families. Transnational organizations like the Palestine Liberation Organization (PLO) in the 1970's and 1980's and Hezbollah since 1982 have used this state weakness to pursue their own agendas. Furthermore, the state has been unable to provide public goods, such as electricity and water, despite a longstanding reconstruction program and the buildup of vast public debt (ibid).

The limitation of these approaches to the state is, however, that they build on a clear divide between state and non-state actors, in which non-state actors are directly opposed to state entities. The understanding of state power and non-state actors as mutually exclusive is, however, misleading when seeking to understand societal actors and state building in Lebanon. Recent literature on Lebanon has sought to propose an alternative to the weak state discourse and the fixed binary between public and private. Sara Fregonese (2012) argues that the separation of state and non-state actors in

Lebanon should be analyzed as a result of complex relationships and blurred practices among them, rather than being explained by lack of sovereignty. Therefore, she applies the concept of hybridity to explain moments of physical violence in Beirut. In this view, distinctions between accepted binaries, such as state/non-state and legitimate/illegitimate are blurred (ibid). In line with this approach, Waleed Hazbun (2016) employs the concept of hybrid sovereignty and argues that sovereignty in Lebanon is constituted by several state- and non-state actors by "security assemblages".

Yet, the public/private can also be looked at through the lens of everyday life and times of non-conflict. Mona Fawaz and Agnès Deboulet (2011) hold that the relationship between state and non-state is also shaped by urban processes and discourses about the right to the city. Both Fregonese (2012) and Éric Verdeil (2016) consider the city's physical structures as co-constitutive of the blurring of practices between state and non-state, and Verdeil argues that the city's physical and geographical frame is reproducing social and political hierarchies and shaping inequality. Joanne Randa Nucho (2016) furthermore takes her starting point in the everyday and highlights how infrastructure helps create and reproduce sectarianism.

This project seeks to build on these studies that move beyond the fixed realms of public and private to explore the politics of infrastructure in Lebanon. Rather than looking at international dynamics or at times of conflict and violence, it focuses on the mundane and the everyday state and will, thus, look at electricity, and the lack of it, in times of non-conflict. The paper aims at understanding how electricity creates its own form of politics and produces and reproduces complex power and social relationships among multiple state and non-state actors, hence, contributing to understand the functioning of the Lebanese state.

1.2 Aims & Objectives

The project aims to analyze how the transformation of the electricity sector post 1990's has given rise to new actors and relationships between different energy and non-energy actors in Lebanon, and how these dynamics have led to the reinforcement of already existing class divisions. By studying relationships and alliances between different actors in the energy sector, the project may open the way for insights into the multiple facets of electricity. While Lebanon's electricity deficit has a direct impact on the everyday life and economies of households and businesses, its impact transcends the materiality of power cuts in themselves. The resource vulnerability has created its own kind of politics that reflect the way in which governance operates in Lebanon. Whereas the scope of this study is limited, and the topic needs further research to make robust conclusions, the paper aims to establish an approach for understanding the role a specific infrastructure plays in politics and power dynamics. By focusing on generator owners and the two private concession holders Electricité de Zahlé (EDZ) and Electricité de Jbeil (EDJ), the project seeks to shed light on the division – or interconnectedness - between state and non-state actors, and to discuss whether conventional understandings of the division between public and private are useful when seeking to understand Lebanon.

1.3 Structure

The paper approaches the study of actors, relationships and power dynamics, and how they relate to the interplay between state and non-state forces, through an analysis of the provision of electricity, a public good in a Weberian perspective. The

project will first account for the use of theory and its methodology. Thereafter, it will proceed to the analysis, which accounts briefly for the main dynamics of the Lebanese electricity crisis, and then proceed to analyze the way in which the private generator networks' position may be understood. Then, elements of Timothy Mitchell's Carbon Democracy framework will be followed in order to investigate the alliances and relationships which alternative providers of state electricity have established to enable their businesses. The paper will look at the establishment of local small-scale monopolies in four areas in Lebanon, two areas where generator owners provide back-up power and two areas where private companies with historical concessions eliminated the existence of small-scale private generators. The last section of the analysis will look at how the electricity sector may have contributed to produce and reproduce economic inequalities in Lebanon. Chapter 4 will draw on the analysis about different electricity actors and relationships and discuss the public/private relationship in Lebanon. Lastly, a conclusion will summarize the main points of the project.

CHAPTER 2

METHODOLOGY AND THEORY

2.1 Theoretical framework

To understand how electricity reflect the Lebanese state and the interplay between state and non-state actors, the paper employs elements of Timothy Mitchell's work on Carbon Democracy. The Carbon Democracy framework can shed light on the emergence of new actors and the relationships between private and non-private actors that enable the businesses of alternative electricity providers. These findings can thus contribute to the paper's discussion of how the Lebanese state may be understood. By further including Yiftachel's notion of "grey spaces", it seeks to draw the focus on how the division between legal and illegal is connected to the binaries of state and non-state.

Mitchell's notion of Carbon Democracy constitutes a framework for analyzing how power relations and carbon politics operate. The framework explores the material networks along which oil flows and proposes comparisons with the movement of coal to derive differences in solidarity, market power and collective action between coal- and oil-based economies (Mitchell 2011). Furthermore, the framework seeks to follow "a set of connections" between carbons fuels, different energy actors and certain kinds of democratic and undemocratic politics (ibid, 252-253)**.** Mitchell proposes the framework as an alternative to the resource curse theory which states that oil-rich countries tend to be less democratic, and which is often applied to explain low levels of democracy in Middle Eastern and other oil-rich countries. Thus, instead of focusing on the income generated from oil as done by the resource curse theory, the Carbon Democracy framework aims at following the processes prior to revenue generation as well as the processes of power and organization arising from them (Mitchell 2009).

While Lebanon is not a resource rich country, concepts from the Carbon Democracy framework is useful for this project, as it can be adopted in order to unravel the role of actors, politics and power relationships associated with – or created by – the dynamics of electricity provision. Mitchell's notion of "power from within the energy system" (ibid 2011, 12) can be used to shed light on the power constellations arising directly from the electricity grid by focusing on the grid's physical geography and those in control of it. Mitchell furthermore looks at relationships formed with actors outside of the electricity grid and analyzes how energy firms historically built cartels in order to control oil prices through making alliances with actors outside the energy circuit that had control over the territories in which the oil flows crossed by. Similarly, this paper will look at how generator owners and private companies have established links to external actors to enable their operations. These alliances work to create small-scale, local monopolies and gain control over electricity provision. To further understand the position of generator networks, Yiftachel's (2009) notion of grey spaces is applied. Grey spaces cover sectors and practices, common in urban areas, that are neither completely formal and fully integrated nor informal in a way that it should be demolished. The spaces are usually considered temporary solutions to for example lacking services (ibid).

Lastly, the project will employ the concept of hybridity as a lens for analyzing public-private relations as expressed by the dynamics of the electricity sector. The concept proposes an alternative to a fixed division between formal and informal by means of analyzing the interconnectedness between different actors and entities. These links and interconnections between state and non-state entities constitute hybridity (Fregonese 2012). The concept of hybridity goes well with the Carbon Democracy

framework, and the combination of the two can be used to learn about power relationships that have overlapping jurisdictions of service between state and private actors, like generator owners, concession holders, municipalities and other governmental actors.

Through this theoretical framework, the project uses infrastructure to examine governance and organization in Lebanon. Understanding the functioning of the Lebanese state is important at a time where Lebanon is facing several overlapping crises, including a political crisis and a financial collapse. The Lebanese electricity crisis is closely related to the country's high levels of state debt, and knowledge about dynamics of electricity can therefore provide insights into the broader challenges the country is facing. By shedding light on the incapability of the state to provide a public good, the project seeks to set out a framework for how generate information about the peculiarities of the Lebanese state and grey space actors. This project provides initial findings, and further research would require additional and updated data. The approach, may, however, open for a way to approach studies of other places in the Global South where practices of infrastructure cannot be explained within the dichotomy between state and non-state.

2.2 Methodology

The paper will employ a case study research design in order to answer the research question. Through a case study, the project will be able to investigate "a contemporary phenomenon within its real-life context when the boundaries between the phenomenon and the context are not clearly evident" (Bryman 2016, 69)**.** Studying the Lebanese electricity sector is relevant, as it is affecting both the daily life of residents and

operations of businesses[2] while mirroring the country's much broader political and economic conditions. The realities of the electricity sector have contributed to both state debt, pollution and the recreation of economic inequalities and other divisions. In order to understand the dynamics and trajectory of generator networks and private concession holders in a non-privatized state driven sector, a case study research design is therefore useful. While electricity outages are not a unique problem to Lebanon, this research design is employed to study electricity politics and state reconfiguration in Lebanon, and the findings are thus context-specific.

The geographical area of the case study is limited to the capital of Beirut and two other smaller urban areas in Lebanon, as the alternative electricity providers are operating mainly in relatively populated spaces. It will include case studies on Hazmieh, Borj Hammoud, Jbeil and Zahleh. These four areas are all spaces in which non-state actors take part in electricity generation despite EDL's formal monopoly on generation. Yet, the organization of businesses in these areas look very different. In Hazmieh and Borj Hammoud informal generators are widespread, though, their operations and relations to costumers are relatively more regulated in Borj Hammoud. Jbeil and Zahleh, by contrast, are historical concession areas in which private generators are eradicated, and formal private companies now generate their own back-up power in addition to distributing EDL electricity. Following Mitchell's framework, the paper will look at how energy actors in these areas constructed relationships and alliances with actors outside of the energy circuit to enable their businesses.

The project is based on secondary sources, mainly academic articles, reports from international institutions and organizations, such as the United Nations (UN) and

[2] Lately, many businesses even had to shut down temporary or permanently due to lacking or expensive electricity.

the World Bank, and newspaper articles. The latter are used to provide information about the current economic crisis, fuel shortages and decreased electricity supply, since the state of electricity has changed since the publication of most academic work on the topic. The empirical data is mainly based on Ahmad et al. (2020), Gabillet (2010), Verdeil (2016) and Verdeil (2019). The project is therefore not using its own data collection or field work. This is a disadvantage of the paper, since field work could provide updated information to shed light on the current situation and in general make the findings more robust. However, the paper aims to use the available information at hand to develop a method that can contribute to a better understanding of the Lebanese electricity sector and to the discussion of the relation between state and non-state rather than reaching hard and fast conclusions.

While recognizing the pre-war institutional roots for the current electricity institutions (Abu Rish 2019), the project will focus on the post-war period, from the 1990's until present (summer 2021), as the electricity vulnerability in this period altered the sector, and the generator arrangements emerged in their current forms. In addition, EDJ started to replace private generators in Jbeil in 2005 while EDZ started electricity generation in 2015 (Verdeil 2019). The dynamics of the electricity sector, especially the private providers of electricity and the social and power relationships that it gives rise to constitute the object of analysis. Thus, while acknowledging the limited scope of the paper, studying infrastructure is used to learn more about how the state functions in Lebanon.

CHAPTER 3

ANALYSIS

Having set out the paper´s methodology and its theoretical framework, this chapter aims to investigate the transformation of the Lebanese energy sector since 1990's and the power configurations that have emerged due to the power deficit. First, the chapter will briefly account for the current state of the Lebanese electricity crisis and the main issues behind the electricity deficit. Thereafter, it will proceed to analyze the role of the generator owners which constitute a new and prominent private actor that provides an alternative to state electricity. It will then look at the electricity relationships, alliances and struggles for control that have characterized both the establishment of the informal generator owners as well as two formal concession companies in four different urban areas (Hazmieh, Borj Hammoud, Jbeil and Zahleh). Lastly, it will look upon how these energy configurations produce and reproduce class divisions in the country.

In line with Timothy Mitchell's Carbon Democracy framework, this will be done by following the processes prior to revenue generation in which new actors and relationships emerge as well as the processes of power and organization arising from them. It will investigate the networks among important energy and non-energy actors and analyze a "set of connections" that has been established between carbon fuels, different energy actors and certain forms of "democratic and undemocratic politics" (Mitchell 2009). While it will employ the concept of power stemming from "inside the energy system", the monopolistic nature of generator companies will be understood through analogy with Mitchell's historization of how oil monopolies were established

by making alliances with actors *outside* the energy circuit that had territorial control over the distinct areas.

3.1 Context of the Lebanese Electricity Crisis

Lebanon, like many countries in the global south, suffers from daily power outages. Even before the onset of economic crisis in the fall of 2019, figures show that the state utility EDL in 2008 only covered 63 per cent of electricity demand (Ahmad et al. 2020). The demand unmet by EDL had been increasing from 22 per cent 2008 to 37 per cent in 2018 (Ahmad 2021). Recently, the situation has further deteriorated significantly with households receiving only up to a few hours of EDL electricity a day (BBC 2021). In response to the growing electricity deficit, the use of privately-owned diesel generators is today widespread, though, the current deterioration of EDL supply and fuel shortages have put the generators under pressure too and made them unable to fully cover the periods without state electricity (Chehayeb 2021; Qiblawi 2021).

EDL was established by the Lebanese government in 1964, and it was assigned responsibility for generation, transmission and distribution of electricity (International Monetary Fund 2019; Abu Rish 2004). Electricity from EDL is sold at an average tariff of 9 cents/kWh which is far under the cost of generating it (cost recovery), and more than half of its costs are not recovered. In addition, the company suffers from technical losses due to poor infrastructure and 20 % non-technical losses which partly reflect corruption in the sector. Moreover, only 66 % of electricity bills were collected in 2017 (Ahmad et al. 2020, 10). The budget deficit is covered by treasury transfers, meaning that the state provides indirect subsidies on electricity (Ahmad 2021, 2; Verdeil 2018). In 2017, the cash transfer amounted to $1.3 billion dollar which is about one third of

EDL´s budgetary needs (Ahmad 2021, 2). This practice has drained the Lebanese state budget, and losses by EDL today account for more than half of Lebanon's public debt which is among the highest in the world relative to population (Ahmad et al. 2020).

The roots of Lebanon's electricity deficit are often explained by the war's destructive effects on infrastructure and the Israeli air raids (Ahmad 2021, 2; Verdeil 2016, 155). While infrastructure indeed has been demolished during periods of conflict, Ziad Abu Rish has argued that the structural problems underpinning the electricity sector stem from its origins in a range of private enterprises, and that the civil war therefore altered, rather than created, a structural problem (Abu Rish 2014; Abu Rish et al. 2019a). While the damage on infrastructure during times of conflict is well-known, many of Lebanon's inhabitants today consider the perpetuation of the electricity crisis, decades after the end of the civil war, as symptomatic of deep-rooted corruption and bureaucratic theft (Abu Rish 2004; Nucho 2016, 15).

Aspects of corruption within the sector include that EDL's administration staff earn exceptionally high salaries and have obtained their jobs through connections to politicians (Abdelnour 2003). Another very costly practice is that EDL, steered by political elites, has been distributing free electricity to their constituents to increase their voter base (Stel & Naudé 2016). Further tens of thousands of people get free electricity by illegally connecting to the grid. Many of those enjoy political protection (Abdelnour 2003). Connecting illegally to the grid can be conceived as a kind of power form of "within the energy system" (Mitchell 2011), often exercised by marginalized inhabitants in remote areas. However, the practice is usually dependent on political and sectarian support (Verdeil 2016). It is a way to exercise power to achieve free electricity which, nonetheless, only is successful in a local and temporary context characterized by

politics and sectarianism, rather than a struggle with the broader structural deficiencies and inequalities within the energy system.

3.2 The Generator Sector as a Grey Space

Due to the electricity deficit, and despite its formal responsibility for electricity generation, EDL is today only one player among a range of electricity providers in Lebanon. The following paragraphs will shed light on the most prominent new energy actor, the generator businesses, and employ Yiftachel's concept of grey spaces as a lens to how they may be understood.

The informal, small-scale generator businesses started to establish themselves after the outset of the civil war in 1990 and spread further after 2006, when Beirut also started to have electricity outages (Verdeil 2016, 155). According to UNDP, 66% of Lebanon's households relied in 2017 in some way on diesel generators (UNDP CEDRO 2018). Typically, the arrangements entail that each household is paying for a subscription to a generator owned by a local sponsor who then delivers low voltage power when the state electricity is off (Nucho 2016, 2). Paying two electricity bills, one for EDL and one for a local generator owner, is today a normalized practice for most of the country's residents (ibid; Abi Ghanem 2018). Following, electricity flows have been reorganized around these alternative energy systems that act as equal players with EDL when the national grid supply cuts (ibid).

The generator grids are generally comparable to other informal services in other urban areas of the Global South, however, they diverge by not proving a place-specific service that is only present in low-income or marginalized areas. Periods of electricity cuts are the reality all over the country (though the duration is unevenly distributed),

and generator grids are thus to be found in all urban areas disregarding class[3]. Another distinct aspect of the privatized grids is that they coexist with the main electricity grid, using some of its infrastructure such as poles and neutral lines (Verdeil 2016, 171-172).

There is no doubt that the generator businesses have emerged a service provider in line with the state, however, they remain illegal by law and their reputation is generally not positive. The businesses are commonly referred to as generator "mafias" (ibid, 169). This may refer to the nature of the profits, as the companies generally avoid taxes and state regulation, and to reported abuses against both clients and competitors. There are various examples of how the generator companies have defended their businesses by violent means (ibid). However, describing the generator businesses as mafias can also be misleading. The businesses are somewhat regulated by the state and generally accepted, as will be elaborated on in the following.

Yiftachel's concept of "grey spaces" covers businesses that can neither be understood as formal nor informal (Yiftachel 2009). While the generator businesses are not registered for and thus informal (Abi Ghanem 2018; Ahmad 2021; Ahmad et al. 2020), they are widely accepted. For example, despite that generator owners break EDL's formal monopoly on electricity generation, the Ministry of Power and Water publishes guides of prices for generator services, and the Ministry of Economy and Trade committed in 2018 to take actions against private generator owners that did not comply to those prices (MOET 2018). Thus, they seem not to characterize as plainly informal, but rather something in between formal and informal, as conceptualized by the concept of grey spaces. Such grey spaces are, according to Yiftachel, temporary, but tolerated at the same time (ibid). Similarly, the generator sector has never been formally

[3] While generators are to be found in all socio-economic urban areas, the uneven electricity distribution and the regressive effects of pricing contribute to inequality, which is analyzed further later in the chapter.

recognized by the state, but it has also never been suppressed by it; The generators owners are not abiding to the law, but still not considered "black market" in a way that they must be eliminated. However, while the private generators are considered a "temporary" solution by the state that still officially intend to provide 24/7 electricity, the generators and their grids are no longer temporary and superficial, but rather deeply embedded in the practices of electricity provision in Lebanon (Nucho 2016).

3.3 Energy Relationships and the Establishment of Local Monopolies

Having made the case for portraying the generator sector in terms of a grey space, home to companies that perform state-like practices when EDL electricity is absent, the following paragraphs seeks to follow Mitchell's framework and analyze the "set of relations" between energy actors, local authorities and other actors that have enabled or disabled the operations of this kind of business. As mentioned above, the section will focus on four urban areas that have established different kind of energy relationships, Hazmieh, Borj Hammoud, Jbeil and Zahleh, and analyze how private companies have established themselves as local monopolies in these areas. When looking at Jbeil and Zahleh, it will include two private concession holders that, like the generator business, provide alternatives to state electricity.

Concession holders in Lebanon have, in opposition to the generator sector, legal concession agreements and are, in theory, regulated by EDL (Ahmad 2021). These concessions go back to the French mandate and grant the private companies the right to distribute electricity. While other historical concessions holders have gradually been taken over by the state, a few remains today (Verdeil 2019, 256). Yet, EDJ in Jbeil and EDZ in Zahleh are distinct, as they have not just kept their licenses, they are also

claiming the right to generate their own electricity (ibid). First, the section will look at how the operations of private generators were enabled in Hazmieh and Borj Hammoud and then it will proceed to analyze how these in turn were disabled in Jbeil and Zahleh.

In the middle-class Beirut suburb Hazmieh, which has about 30,000 inhabitants, the generator owners have operated their businesses supported by the municipality (Verdeil 2016, 169). The municipality took a laissez faire approach open for bribes and corruption, which, compared to other districts in the city, led to higher prices of generator subscriptions prior to the state regulation of tariffs (ibid). The possibility of successful voter pressure to regulate the electricity sector is low, which is a common problem in Lebanon, since most inhabitants are relatively new in the area and therefore are not registered in the municipality's voting lists (ibid). Following Mitchell's analysis of politics of coal and oil, the generator owners in this area were enabled to operate through an alliance with an external actor that has the territorial control in the catchment area.

In other urban areas, the relationship between generator owners and municipalities looks different. In the town of Borj Hammoud right outside of Beirut with around 100,000 inhabitants, the municipality has played strong and more interventionist role than that of Hazmieh (Gabillet 2010). After the spread of private, expensive generators, the municipality managed to re-take control over the grid and to regulate the pricing set by generator owners already in 2010, before the Ministry of Economy and Trade stepped in to control prices in 2018 (Verdeil 2016, 169-70). The regulation of tariffs was based on the Ministry of Energy's monthly suggested tariffs, which they started to publish in 2010 giving the municipalities the option to enforce this pricing. Since this was a voluntary option, not all municipal governments imposed it (as

seen in the case of Hazmieh), however, the municipality of Borj Hammoud was one of the pioneers in using the suggested prices in negotiations with generator companies (ibid). The municipality used its control over the grid to make this arrangement possible, as the price negotiation with the generator owners also involved negotiating their use of public poles and the location of generators in public spaces. Decisions over prices were made public through a local Armenian TV channel (ibid).

Hence, the municipality in Borj Hammoud succeeded in regulating the relation between grey space companies and their consumers by means of its territorial power as well as power over the electricity grid (power from within the energy system). At the same time, the generator owners managed through negotiations with the municipality to establish an alliance with the local territorial power that enabled them to maintain their monopolistic status and to operate through using parts of the formal grid.

The touristic town of Jbeil (also known as Byblos) provides another example of municipality interference, however, driven by an interventionist major through granting the monopoly to a local concession holder (Gabillet 2010). The town has about 40,000 inhabitants and is one of the areas in Lebanon in which a private company holds a concession, thus, the company EDJ (Karhaba Jbeil in Arabic) has the right to replace EDL as an electricity supplier (Verdeil 2019, 256). Previously, a range of informal generator businesses operated in the area until a major elected in 2005 sought to beautify the city by removing the generators. He pressured the operators of generators to withdraw their electricity from the market by blocking their use of the poles that belonged to the municipality, exercising territorial power and power from within the electricity system. Replacing the generators, he aimed at making EDJ the sole electricity provider, with responsibility for generating back-up power. In turn, the company was

required to keep the cost of electricity low and prevent reinstallations of generators (Verdeil 2016, 169). Even though the alternative back-up grid by 2019 was, technically speaking, separate to that used to distribute EDL electricity, it shared the same workforce and some of its physical wires were even rebundled into the formal grid (Verdeil 2019, 256). In other words, there were blurred lines between operations of the private backup service and the state-provided electricity.

The case of Jbeil therefore differs from that of Hazmieh and Borj Hammoud because of the existence of a formal alternative to EDL. The municipality and EDJ made an alliance which benefitted both actor's goals; The numerous of private generators were eradicated and thereafter replaced by a single private company that now operated as a local monopoly.

Lastly, this section will look at Zahleh, a middle-class town in the Beqaa governate, which (until recently) provided 24/7 electricity for its residents and, like Jbeil, therefore eliminated the private generator networks selling back-up power. EDZ (or Karhaba Zahleh in Arabic) was established in 1923 and is today one of the most prominent concession holders (Ahmad et al. 2020, 18). Before 2014, the electricity provision in Zahleh was similar to many Lebanese urban areas with daily electricity cuts and a rapid increase in private generator networks. The level of state electricity in the Beqaa region was, and still is, inferior to that in Beirut and many coastal cities. The generator networks expanded up till around 120 generators operated by 50-60 owners who subdivided the area among them. In that way, they were able to take advantage of people's dependance on their services and generate high revenues by increasing prices or cutting provision under a flat fixed tariff (ibid, 20).

Yet, in 2014, EDZ, backed by the municipality, made a deal with the UK based company Aggreko to install a diesel-based electricity generation which today supplies EDZ with electricity during EDL outages. Thus, EDZ was transformed from distributing state electricity to also generating back-up power, justified by its historical concession, and the combination of power from the Aggreko plant and EDL electricity enabled EDZ to provide 24/7 medium voltage electricity to those in its concession area (ibid, 22; Verdeil 2019, 258). However, to enable the implementation of the new power generation plant, EDZ employed a strategy of making the right alliances with key players of the community and different political parties during 2013-2014 (Ahmad et al. 2020, 28-29). First of all, EDZ was successful in gaining support among the local community. Already prior to the change, the costumers were satisfied with EDZ and therefore trusted its promise to provide 24/7 electricity. Also, the residents' goal of getting reliable electricity provision fitted EDZ's goal to generate revenue through a monopolistic position, and this alignment of goals enabled the agreement. EDZ was moreover successful in making alliances with local NGO's, churches and schools, further consolidating relationships to key actors, while gaining good-will from the community (ibid, 30). The goodwill from the community has furthermore been essential for EDZ to negotiate new contracts and to gain approval from parliamentarians. Lastly, EDZ's management tackled the previous generator owners by making compensation agreements. This was done by either promising to pay monthly salaries for those who used to live from generator businesses or by hiring them as EDZ employees (ibid, 31-32).

Thus, a combination of the historical existence of the concession and the strategy of building alliances with different actors, the community, organizations,

politicians and generator owners, made EDZ able to establish itself as a local electricity monopoly. The reform has been favorable for the residents within the concession area who received a better and more reliable service. However, the EDZ model has many disadvantages. First, the generation is like the small-scale generators based on fossil fuels and thus damaging for health and CO2-emissions. Second, like EDJ, EDZ acts as a private monopoly, enabling it to control prices. Third, EDZ is based on a rent-generating profit model that re-sells EDL electricity at higher rates, basing its profits on indirect subsidies from the state, contributing to state debt (ibid). Lastly, another main limitation, which is evident at the time of writing, is that EDZ, like EDJ, is dependent on EDL electricity. Due to the current decreased electricity provision from EDL, the area has not been able to uphold its promise of 24/7 electricity and is facing power outages like the rest of the country (Sewell, 2021). The ongoing economic crisis furthermore questions the legitimacy of the EDZ model.

Looking at Hazmieh, Borj Hammoud, Jbeil and Zahleh and their different energy alliances, the process of building local monopolies within Lebanon's electricity sector largely fit Mitchell's historization of how energy firms established cartels in order to control oil prices through alliances to actors controlling the areas through which oil flowed (Mitchell 2009). The monopoly building in Lebanon is facilitated through specific energy alliances. In Hazmieh, the owners of generators were permitted to operate freely through an alliance with the municipality, a local territorial power, while the municipality in Borj Hammoud also enabled (and regulated) the operations of generator owners. In Hazmieh, the lack of municipality involvement gave the generators free rein which led to higher generator tariffs, while in Borj Hammoud, the municipality

exercised a combination of territorial power and control over the energy grid, on which private generators were dependent, to regulate the “grey” sector.

On the contrary, in Jbeil and Zahleh, the municipalities pursued other interests and hindered the widespread, small-scale generator. In the case of Jbeil, the major took an interventionalist approach and like the municipality of Borj Hammoud used its power over the formal grid and public spaces. This enabled Jbeil to eradicate the generator businesses and establish an alliance with the private firm EDJ that in turn became a single private provider of back-up electricity. In the case of Zahleh, EDZ was, endorsed by the local municipality, driving the process through establishing the right connections to key actors while securing support from the residents.

In the struggle to control electricity provision in the areas mentioned above, there are examples of the use of power from within the energy system, e.g., when the municipality in Jbeil denied generator owners access to the public poles. However, the building of alliances and relationships to key actors, especially actors “outside” the energy grid, has been particulary evident in the establishment of private electricity monopolies. In the case of small-scale private generators, their possibilities to operate seem dependent on the local territorial power which in two cases enabled their businesses and in two cases eradicated them. While this section has focused on two areas with informal generator owners and two where these businesses were replaced by private concession companies, the first model is, nevertheless, the most common in Lebanon, and around 66 % of the country’s residents rely on generators to provide back-up power. Therefore, further research could include fieldwork on the private generator networks, especially after the current economic crisis that began in 2019.

The following section will seek to analyze how electricity provision in Lebanon, both formal and back-up provision, contribute to the creation and recreation of class division in the country.

3.4 (Re)production of Class

Sectarian discourses often frame discussions about electricity in Lebanon. However, these narratives remove focus from the class dimensions of the Lebanese electricity crisis (Verdeil 2016). Yet, the electricity supply in Lebanon is marked by strong inequalities. These inequalities are especially caused by, first, an uneven geography of access, second, due to the indirect subsidies that disproportionately benefit richer costumers and, third, because households that suffer from longer and more frequent power outages carry a bigger financial burden of generators fees. Thus, the energy configuration reproduces the country's already existing class divisions.

The uneven geographical access to electricity is evident when looking at how areas like Beirut and Mount Lebanon, generally the wealthiest in the country, are favored over other parts of the country. Even the capital's suburbs live with very different conditions of electricity (Verdeil 2016, 160-63). That the capital's residents are able to meet a higher share of their electricity demand on behalf of the rest of the country has both political and economic explanations. For EDL, favoring Beirut guarantees its income, since the capital's electricity clients consume the highest share of electricity while the area has limited amounts of electricity theft and non-payment. The economic implication of prioritizing the supply in Beirut is that it protects the country's main economic sectors that are placed in the capital. Technical factors do also

contribute to the already uneven geography of supply, due to lack of investment in infrastructure in the poorer suburbs resulting in an underdeveloped electricity grid (ibid)

This inequality between richer and poorer costumers is reinforced by the indirect subsidy system that was implemented in 1996 and which has not been updated since, despite the steep increase in fuel prices on the international market. EDL's economic deficit is covered by treasury transfers, and thereby, larger electricity consumers, often already unevenly accommodated due to their geographic location, are provided indirect government aid - the larger consumer, the more aid from the state budget (Verdeil 2018).

Lastly, inhabitants of already poorer areas are increasingly forced to bear the financial burden of buying low-quality electricity from the privatized, non-subsidized and expensive generator businesses (Akkaya et al. 2009). In addition to the increased financial burden from generators, these residents do not only live with less access to electricity provision from the state, they also have to live with the higher health consequences from the generators (Abi Ghanem 2018, 37).

Even though electricity theft often happen in lower-income areas, these residents do furthermore not constitute the biggest financial burden for EDL. According to the Head of the Higher Privatization Committee in 2009, a larger amount of lost revenue for EDL was accounted for by a few, but big, fraudulent costumers than that of the amount of many small costumers connecting to the grid illegally (Verdeil 2016, 163). On several levels, it is therefore clear that the material realities of power supply in Lebanon produce and reproduce social classes in the country, as both supply and subsidies benefit already richer costumers, leaving the rest even more dependent on expensive alternatives to state electricity with regressive outcomes. In addition to socio-

economic division, electricity also contributes to other divides in the country, such as sectarian and regional divides. Scholars such as Nucho (2016) has written about infrastructure and sectarianist identities.

3.5 Sub-Conclusion

This chapter has looked at the processes prior to electricity revenue generation, including the new actors, relationships and networks that have emerged due to the lack of electricity in Lebanon. The role of the generator sector is understood as something in between the legal and illegal as a "grey space" which is informal by law but still regulated by state and municipalities. Examples from four different urban areas furthermore show that private profit-oriented monopolies have established themselves through alliances to external actors. The four cases have illustrated the power of municipalities on which private companies, both formal and greyscale, have been dependent to operate, and in two cases had their businesses shut down. It is furthermore clear that the material realities of power supply in Lebanon enable certain kinds of politics which reproduce social classes in the country, since both supply and indirect subsidies have regressive outcomes. Conceiving energy infrastructure as an active contributing factor to the creation of inequalities in the country implies that energy infrastructure is understood as closely linked to the creation of politics and political hierarchies, as put forward by Mitchell.

Access to electricity is often considered a public good to be secured by the state in the post-colonial context, however, in Lebanon where the state provider is incapable of meeting electricity demand, private generators have materialized, and concession companies have transformed from distributers to generators of electricity. These

alternative electricity generation businesses therefore provide a service similar to that of the state in form of back-up electricity. The multiple energy actors and sources of power in Lebanon prompts the next chapter's discussion of how the division between state and non-state is best understood.

CHAPTER 4

DISCUSSION

As examined in the literature review, Weberian and Westphalian understandings of a state are based on a clear distinction between public and private, and a "strong" state is considered one which can secure public goods for its citizens and eliminate illegitimate non-state actors. In Lebanon, the is not providing sufficient electricity (amongst other services) and, thus, "week" in the perception of the strong state discourse. However, analyzing Lebanon as a weak state does not open for any understanding of who, then, in the absence of the state, organizes energy flows and the implications of this organization. Since several new energy actors have emerged and already existing actors have been altered due to the power deficit, this chapter seeks to discuss whether the different energy providers may be understood better through the concept of hybridity which proposes an alternative to a fixed division between formal and informal. Applying hybridity is done by means of tracing the interconnectedness between different actors and entities (Fregonese 2012).

While EDL undoubtedly is a state-owned utility which most households across the country subscribe to, paying for a second subscription to a privatized generator network is normalized and taken for granted, despite the sector's lack of formal recognition. As argued in the analysis, the generator sector cannot be understood as downright illegal. Its existence is widely accepted, and no one is attempting to eradicate the generators' existence, except for the few historical concession areas where generator businesses were replaced by legal, however private, firms. Subsequently, the grey space back-up generator services are operating as providers on an equal level to the state.

This, however, does not only imply that new non-state actors are performing state-like practices. Examining the new businesses and their operations shows that state and non-state actors are indeed interconnected when it comes to electricity provision. The practices of the privately-owned generator companies are, as shown in the analysis, only possible due to the relationships and alliances that they have established with state actors. The monopolistic behavior of generator owners in Hazmieh and Borj Hammoud was, for example, made possible by alliances with the municipalities that controlled the territory in which they sought to establish their business. Similarly, the private firms in Jbeil and Zahleh established their businesses with backing from the municipalities and through relations to key actors on both state and non-state levels as well as through political and sectarian networks, illustrating the interplay between multiple forces. In other words, private firms' engagement in the provision of infrastructure depends on alliances and relationships to actors on multiple levels, including state level actors.

The blurring of the distinction between state and non-state is further evident when considering the physical use of energy infrastructures. As demonstrated earlier in Chapter 3, there are several examples of how EDL and the non-recognized generator networks are using elements of the same electricity grid to provide their services. Another example of interconnectedness in relation to the materiality of energy infrastructure is seen in Zahleh and Jbeil where EDZ and EDJ are reselling EDL electricity. EDZ, for example, is a legal private actor that has been valued by its customers, however, its business model is based on generating rents on electricity produced by the state utility. Yet, the dependency of EDZ and EDJ is a challenge now where the EDL supply has dwindled. Nevertheless, these examples illustrate the

interplay between private and public realms and in particular the dependency of private energy actors on state level authorities.

However, the public may also be dependent on the private actors. First, closing the private companies would require drastic reforms of EDL and the elimination of corruption and losses, which despite several attempts at reform have not been achieved so far. Second, there are rumors of politicians being involved in the generator business (Verdeil 2016, 171-72), and there are various politicians, like in Hazmieh, that benefit from bribes and other forms of corruption related to their practices. Several politicians are furthermore benefitting from free EDL electricity or benefit indirectly from the distribution of free electricity to their constituents, additionally making status quo in their interest (Abdelnnour 2003).

The mainstream state-centred perspectives may, however, argue that what matters is that the Lebanese state and its institutions have not been strong enough to secure a public good – as is evident at the time of writing where Lebanon's residents are left with very limited hours of daily electricity - by enforcing collection of bills, eliminating theft, eradicating corruption, replacing informal energy businesses and eventually even implementing long-term sustainable solutions to energy provision. While the project as such agrees with these concerns, it nevertheless proposes an alternative way to analyze the state, because analyzing the state as something clearly distinct from the private realm and as a sole possible provider of public goods, removes the possibilities to understand the dynamics of grey scale sectors and of how the provision of public goods works in reality. The energy sector in Lebanon is characterized by entities that have overlapping jurisdictions of services which are negotiated between multiple actors. Furthermore, in a country where sectarianism,

politics and geographical spaces are closely intertwined, the weak state approach seems insufficient, as it reduces illegitimate non-state actors to something that should be eliminated. Rather, understanding the processes and negotiations related to these actors and to the construction of inequality is a way through which politics in Lebanon may be understood.

Thus, the projects holds that the practices of both state- and non-state actors in the Lebanese electricity sector, and the interconnectedness between them, constitute hybridity. The informal generator owners and the formal but private concessions holders are today performing state-like practices, thus blurring the division between public and private. The physical geography and environment are furthermore shaping the practices of energy provision and its wider implications. Therefore, looking at the interplay between different actors, both formal, informal and grey space, may open for understanding of how the state coexists with non-state groups. In sum, it allows us to better understand how different domains of control and power work in Lebanon, and how class cleavages are created and recreated.

CHAPTER 5

CONCLUSION

To sum up, this project has sought to make a case for adapting Timothy Mitchell's Carbon Democracy framework to analyze the alteration of the Lebanese energy sector since the 1990's. It has also made use of Sara Fregonese's understanding of hybridity to discuss how the division between public and private in Lebanon is best understood when looking at this specific sector, as well as why a standard Weberian view of the Lebanese 'state' as weak has to be adjusted to accommodate the case studies set out above.

In line with Mitchell, the project has looked at the actors, relationships and networks that have emerged in relation to energy, and it has argued that the dynamics of electricity has created its own kinds of alliances, politics and hierarchies. The paper has focused on the alternatives to state electricity that have appeared and analyzed the "set of relations" that have either enabled or disabled their operations. In addition, the private generator sector has been conceived as a "grey space", and the analysis has indicated that dynamics of electricity contribute to the creation and recreation of class divisions in the country, suggesting that infrastructure is conceived as something that not just statically reflects politics, but which is closely related to the creation of political and power configurations. Indeed, the dynamics of the multiple electricity actors may also contribute to other divides, especially sectarian divides, which further study could shed light on. Lastly, the project found that the division between the relationships among multiple both public and private electricity actors are blurred and constituted by interconnectedness rather than distinction, and thus possibly constitute hybridity.

The topic, however, needs further research and fieldwork to make more robust and up-to-date conclusions. Further research may additionally build on Mitchell's framework of how energy flows produce collective actors in terms of workers, consumers and owners, and how these collective actors integrate with a state which is already disintegrated. Due to the economic crisis, discussions about reform of the electricity sector are topical, and building on this paper, questions about the possibilities of a centralized electricity producer in contemporary Lebanon, or of the fruitfulness of additional decentralization, call for further research. While reform discussions are necessarily technical, further research would benefit from an approach that does not disentangle the technical from the political dimensions, as reforming the electricity sector would ultimately produce effects on the state. Applying a historical institutionalist approach may be used to connect the Carbon Democracy framework to study what state effects the electricity sector generates.

While writing this project, the electricity provision in Lebanon has deteriorated, making the generator sector unable to cover the entire periods without state electricity and leading to power outages in the concessions areas of EDJ and EDZ. The electricity crisis is a main contributor to the country's economic deficit, whereas the economic crisis and the shortage of foreign currency have further decreased electricity supply. Unemployment and poverty rates have increased, and diesel prices have gone up, making it even more difficult and at times impossible for low-income households to access electricity.

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