Any hope for Lebanese to Enjoy 24 Hours of Electricity Ever Again?

BLOMINVEST BANK

Rising with summer heats, periodic blackouts grew into a chronic disease obstructing the daily lives of Lebanon's citizens who suffer, each day, up to 12 hours of power cuts. Diesel generators became the actual remedy to attenuate the continuous failures of the electricity sector in Lebanon. Aside from the economic slowdown, the political status quo and the relatively high cost of living, Lebanese households also encounter two heavy electricity bills opting to lighten up the dark depths of their day-to-day subsistence.

With a poorly operating electricity sector, Lebanon's economic losses became substantial. According to the World Bank and amongst 43 countries, Lebanon ranked second in terms of value lost due to electrical outages. The World Bank revealed that 50.5% of sales in Lebanese companies were lost in 2013 due to power outages.

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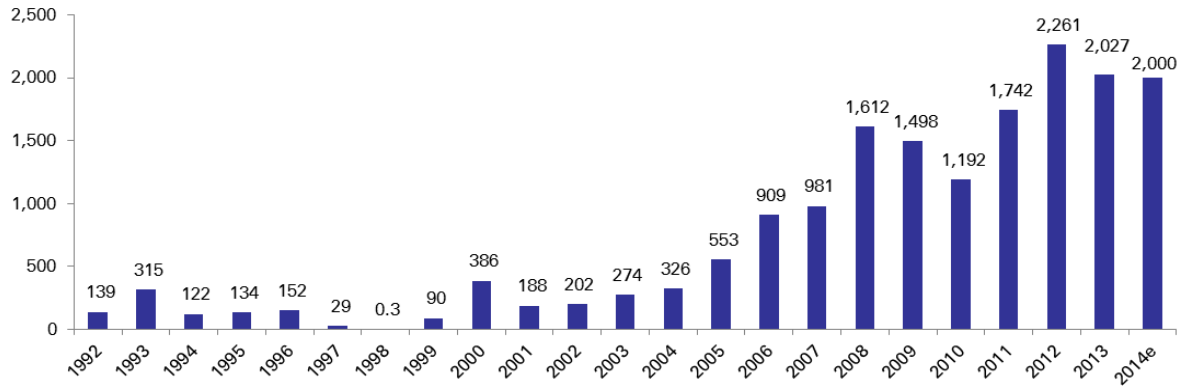
Evolution of Transfers to EDL between 1992 and 2014 (In $M)



Source: BDL, "Electricity in Lebanon: Negative Repercussions on the Economy".

In this context, Mr. Mansour Bteich, General Manager of Fransabank, recently released a study entitled "Electricity in Lebanon: Negative Repercussions on the Economy" discussing the actual state of electrical energy in Lebanon and the possible measures that could be implemented. In five sections, the author tried to cover the evolution of transfers to Electricité du Liban (EDL), their repercussions on the public debt and the national economy, the evolution of EDL's payments and levies and the main reasons behind the accumulating deficit. He finally suggested a 2-year reform plan to clear the electricity impasse that is hitting Lebanon.

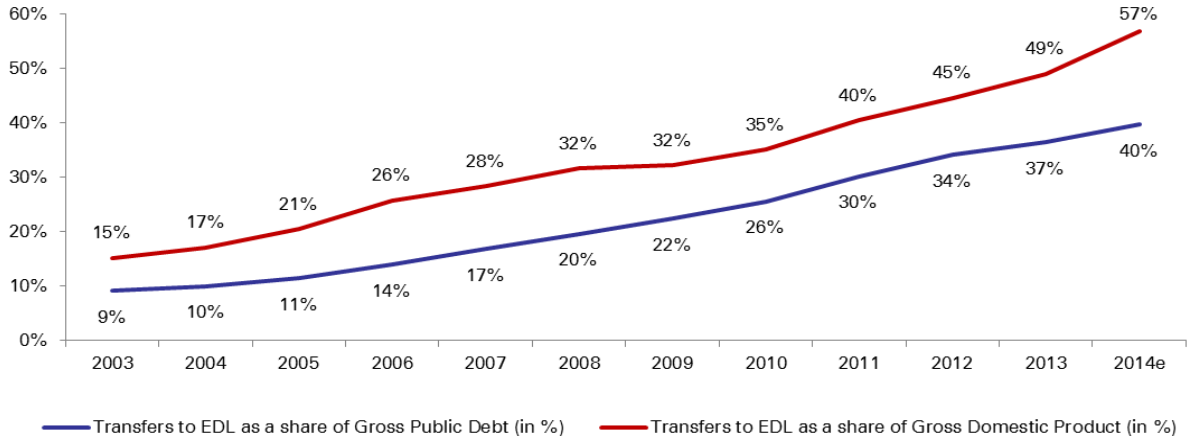
To wrap up the electricity situation over the past period, EDL, Lebanon's state power producer and distributor, started posting structural deficit since 1992 distressing the country's Gross Public Debt (GPD) and national economic performance.

Stepping back in time, the institution used to post surpluses in its yearly balances long before the civil war of 1975. However, EDL accounts turned negative starting 1992 sending deficit near $17.13B or 36% of the Gross Domestic Product[1] (GDP) by the end of 2014. Since EDL is a public utility company, BdL, Lebanon's Central Bank, handled the situation and covered the deficit that was diffused into the country's Treasury accounts. Accordingly, and counting in the $9.9B accruing interests (considering the average interest rate at 7%), the overall cumulative EDL deficit hovered around $27B or 57% of the GDP in the period 1992-2014.

[1] Estimate of the International Monetary Fund (IMF) for Lebanon's 2014 GDP.

In fact, transfers to EDL were relatively low in the first six years of the mentioned period constituting almost 5.2% of the total deficit (excluding the cost of servicing EDL's debt), while more than its half (53.8% of total EDL deficit) was accumulated during the last 5 years.

Transfers to EDL (including the cost of servicing EDL's debt)



Source: World Bank, Central Administration of Statistics (CAS) and "Electricity in Lebanon: Negative Repercussions on the Economy".

Transfers to EDL covering the electricity deficit in Lebanon severely impacted Lebanon's indebtedness and its economic growth. By the end of 2014, the Lebanese gross debt is estimated to settle around $68B or 143% of GDP which means that transfers to EDL (including interests) constitute almost 40% of the GPD. Thus, abolishing those transfers would have resulted in a lower debt of $40.97B or 86.3% of GDP in 2014. In this context, the World Bank stated in a previous report that EDL's deficit has cost the economic growth a total of almost $8B between 1992 and 2014 and $700M in 2014 only (around 1.5% of GDP). This means that 2013's GDP could have reached $54.4B instead of the $47.2B projected by the Central Administration of Statistics (CAS).

Assessing the debt to GDP ratio also gives an accurate indication of the negative impact of EDL's deficit and its substantial economic repercussions on Lebanon. According to the report, resolving the electricity problems would have kept Lebanon's debt-to-GDP ratio at an acceptable level, similar to that of high income countries like Canada and Germany that have respectively posted debt-to-GDP ratios of 89.12% and 78.06% in 2013. It would have also been comparable to the ratios recorded in each of Jordan (87.75%), Hungary (79.23%) and Croatia (59.78%).

For a better understanding of the ailing power supply's profits and losses, Mr. Bteich revealed in his report the impact of fuel prices on both the utility's expenditures and the transfers from BDL. In fact, EDL's expenditures are mostly covered by Treasury transfers as revealed in the company's income statements over the past 3 years, while levies only contributed to a small percentage.

On the expenses front, fuel costs, payments for power transmission and operating costs (of which wages and maintenance costs) constitute the main components of EDL's yearly payments. In fact, EDL's total yearly costs reached $2.46B, $2.92B and $2.63B by the end of 2011, 2012 and 2013, respectively. Fuel purchases remained the main burden on EDL as they formed 73% on average of the company's total payments. This mainly explains the decline witnessed in 2013 in EDL's costs as they were mainly impacted by the international bearish trend in oil prices. Accordingly, the fuel bill decreased by an annual 15.6% to $1.73B by the end of 2013 compared to the 1.9% yearly downtick recorded in 2012.

As for EDL's income, two sources exist: treasury transfers and annual levies from citizens. The former was the main contributor to EDL's resources with a stake of 77.2% in 2013; meanwhile the latter took the remaining share of 22.8%. Thus, the treasury transfers practically equals three quarters of EdL costs while residents' levies barely cover one quarter. It is also worth mentioning that levies are following a declining trend since 2011 despite the increasing number of subscriptions and the expected reforms in the billing system through the 3 service providers[2] (National Electrical Utility Company SAL, Butec Utility Services SAL, KVA SAL). In contrast, total receivables jumped 33% over the past 3 years to nearly reach the $1B mark (with almost 25% owed to the Palestinian refugee camps).

EDL Expenditures and Resources (In $B)

	2011	2012	2013	3-Year Total
Total Yearly Expenditures	**2.46**	**2.92**	**2.63**	**8.00**
Fuel	2.09	2.05	1.73	5.87
Pipelines Transmissions	0.19	0.11	0.14	0.43
Operational Costs of which:	0.20	0.17	0.28	0.65
Wages	0.09	0.10	0.11	0.30
Maintenance costs	0.11	0.07	0.18	0.35
Other payments including those to sup	-0.02	0.58	0.49	1.05
Total Yearly Resources	**2.46**	**2.92**	**2.63**	**8.00**
Annual Levies	0.72	0.66	0.60	1.97
Annual Levies (In % of Total Expenditures)	*29.2%*	*22.5%*	*22.8%*	*24.7%*
Treasury Transfers	1.74	2.26	2.03	6.03
Treasury Transfers (In % of Total Expenditures)	*70.8%*	*77.5%*	*77.2%*	*75.3%*

Source: EDL income statement and "Electricity in Lebanon: Negative Repercussions on the Economy"

Noticeably, Lebanese citizens' electricity bill constitutes almost 4.1% of their incomes in 2013. In details, Lebanese are paying yearly near $600M as electricity bills to EDL and almost $1.2B for private diesel generators' owners. With a yearly income per capita[3] close to $9,928B, the electricity bills paid by Lebanese citizens are almost threefold what they should be, due to their need for diesel generators. This has almost tripled the stake of electricity payments in the annual income from 1.4% (without diesel generators payments) to 4.1% (including diesel generators).

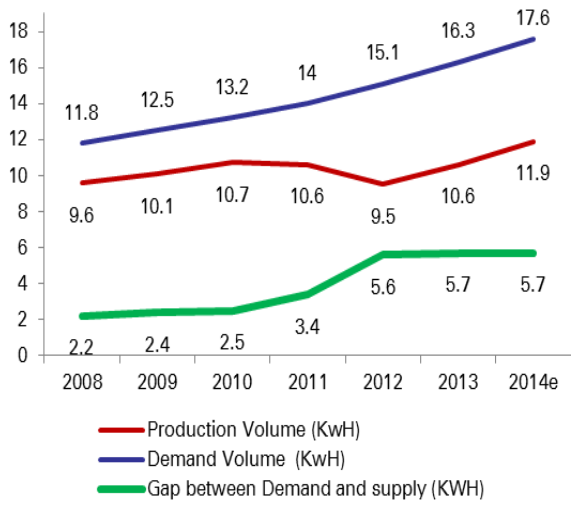
What Are the Main Reasons Standing Behind the Structural Deficit of the Electricity Sector in Lebanon?

First, the cost of power production in Lebanon is expensive reaching $22.73 cent/Kilowatt-Hour (KwH) ($19.73 cent/KwH for production and $3cent/KwH for transportation and distribution). It is worth mentioning here that Lebanon's 7 power plants and the 2 power ships (Fatmagul Sultan and Orhan Bay) have a nominal capacity of 2,275MW, but provide only 60% of their capacity.

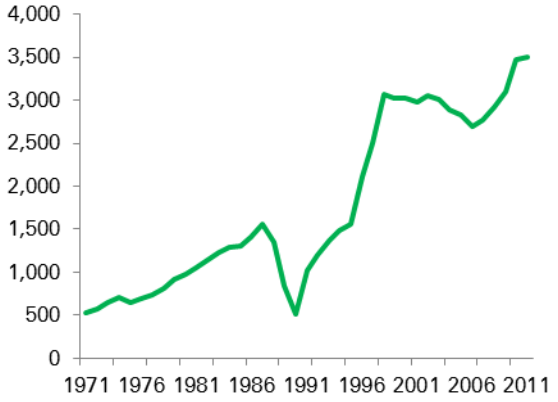
The mismatch between demand and supply of electricity is another reason of the deepening deficit. A pent up demand for electricity characterizes the Lebanese market, outpacing the growth in supply that is still failing to meet the rising consumption needs.

[2] Service providers were assigned with distribution services from stations, securing efficient levying system and creating "the smart meters".
[3] According to the World Bank

The Mismatch between Electricity Demand and Supply



Electric Power Consumption (KwH per capita)



Source: EDL, World Bank and "Electricity in Lebanon: Negative Repercussions on the Economy"

The increasing electricity use per capita is another factor negatively affecting the structural electricity deficit. According to the World Bank, electrical power consumption per capita in 2011 stood at 3,499KwH and was 575.48% higher than that recorded in 1971. Relative to other countries, electricity consumption in Lebanon compared well to countries with higher level of income per capita such as Croatia (3,901KwH) and Chile (3,568KwH). Noticeably, Lebanese consumption of electricity per capita stood above the Middle East & North Africa's level of 2,705KwH. Power consumption per capita in each of Turkey (2,709KwH), Brazil (2,438KwH) and Jordan (2,289KwH) were also lower than Lebanon's level.

Another factor contributing to EdL's structural deficit, is that the company continued to charge a fixed price per user, while being subject to fluctuating oil purchase prices. With a fixed pricing of $24/barrel, EDL was suffocated by the increasing oil prices that went from a yearly average of $16/barrel in 1994 to a yearly average of $95/barrel expected in 2014. In addition, the relatively high production prices were also not taken into consideration. In this context, and given that citizens are subject to a fixed rate disregarding their level of income, their power consumption will be independent of the increase in oil costs, which similarly justify the increasing consumption of electricity per capita amid higher oil prices.

Other reasons for the growing deficit include technical waste, administrative corruption, failure in bills' collection and illegal consumption of electricity (25% of total consumption). The study estimates those costs to reach $1.065B in 2013 and exacerbate by 2018 to touch the $1.5B, if no action is taken especially with the rising number of Syrian refugees.

Reform Plan to Resolve the Electricity Crisis in Lebanon

In light of the continuous power dilemma and the chronic EDL deficit, several actions started in the past 3 years mainly focusing on increasing the availability[4] of electricity production:

- Hiring the power ships Fatmagul Sultan at Zouk plant and Orhan Bay at Jiyeh plant for 3 years (starting October 2013 till September 2016) to boost electricity production in the mentioned plants at a yearly operating cost of $130.8M. The period of usage is most likely to be extended until 2017.

[4] The effectively produced electricity out of the nominal capacity

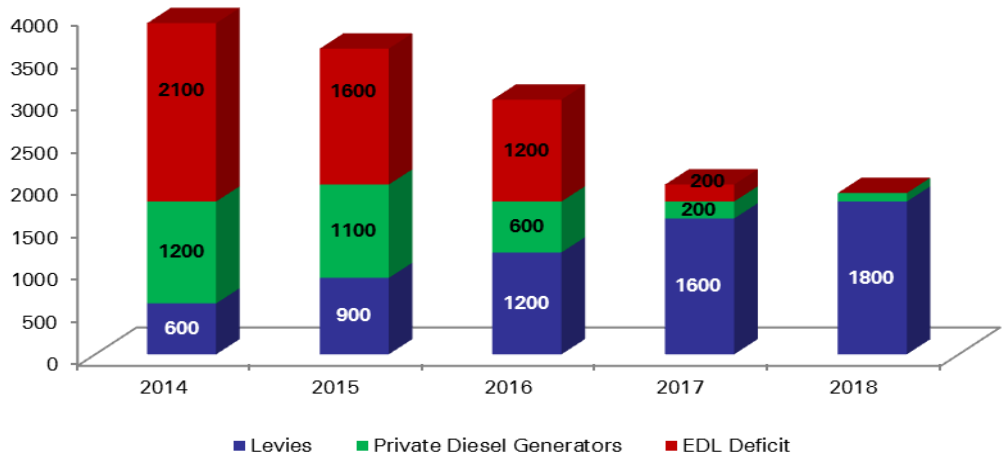
- Establishing 2 additional plants, in May 2013, worth $270M in Zouk and Jiyyeh regions, operating on fuel oil with a nominal capacity of 272MW. The project, which should have been delivered by the end of 2014 (currently suspended due to payment delays by the Lebanese Government to the project's contractors), allows the improvement of electricity supply providing additional 3.5 hours per day at a 25% less production cost than the actual one.

- Using solar energy through solar panels and rehabilitating Zouk and Jiyeh plants as well as Al Litani dam.

- Initiating a $361M second plant in Deir Ammar that can be operational either on fuel, gas or natural gaz.

Besides these reforms, the study suggested possible solutions of which boosting production to 4,100MW by 2020 (of which 400MW renewable solar and wind energy), increasing the official electricity tariffs and improving levies collection through the "smart meters" program that decrease risk of illegal power consumption and increase EDL's resources. Reducing technical waste can be also realized through the modernization of distribution channels. Mr Bteich finally stated that the basket of suggested reforms would tighten the deficit over the coming 3 or 4 years which would be positively reflected on the fiscal position of the Lebanese government. According to the report's analysis, Lebanese residents will almost keep on disbursing the same amount they are paying now but will benefit from 24/24 hour of electricity.

Finally, the graph below reflects the positive outcome of the proposed measures by 2018, if applied:



Source: "Electricity in Lebanon: Negative Repercussions on the Economy"

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