



Electricity reforms are a priority for Lebanon, a country in the midst of an economic crisis, at high risk of default with a debt to GDP ratio surpassing 150%, and a negative outlook credit rating. The power sector is accountable for \$36bn – 40% – of Lebanon’s public debt. The country is seeking a fast-track solution with ambitious targets, but these are unlikely to be met and may compromise the sector’s sustainability and effectiveness.

Lebanon’s electricity sector is characterised by severe electricity supply shortages, elevated subsidies costs, inefficiency and losses, which date back to the 1990s.

It relies upon ageing and inefficient thermal power plants, which operate on expensive and polluting heavy fuel oil and diesel oil, imported from overseas. Peak demand, which is around 3,600 MW, exceeds total available generation capacity by some 1,600 MW, resulting in daily power cuts across the country.

While electricity tariffs have remained the same since the 1990s, fuel prices have increased significantly. As a result, the actual cost of electricity generation, which is \$0.16-0.23 per KWh, far exceeds end-user tariffs, which average \$0.095 per KWh.

Technical and non-technical losses are estimated at 36-40%, and include non-billing, non-collection and illegal grid connections.

## Government pushes forward with reform plan

Until now, a lack of political will and elevated vested interests in the sector have resulted in a complete absence of reforms or permanent additional generation capacity. However, in the current socio-economic climate, the challenges can no longer be ignored. The state-owned electricity utility Electricite du Liban (EDL) runs a fiscal deficit of between \$1.5bn and \$2bn each year, equal to approximately 40% of the country’s accumulated debt – which currently exceeds 150% of GDP. Lebanon is at serious risk of defaulting. This, coupled with surging public protests across the country at government mismanagement and corruption, has made immediate action an imperative for the country’s stability.

Last April the former government unanimously approved an electricity reform plan, which aimed to



put an end to power shortages and reduce the budget deficit by focusing on three pillars: decreasing the technical and non-technical losses; increasing power generation capacity, along with improvements in efficiency and a reduction of fuel costs; and hiking tariffs by early 2020.

The following October, under pressure from protestors demanding the government be replaced, then-prime minister Saad Hariri issued an emergency economic reform package, which included measures to fast-track some components of the electricity sector, with the end goal of delivering uninterrupted electricity supply by the second half of 2020 and balancing the books of the EDL by the end of 2021.

### How feasible is the fast-track package?

Eliminating EDL's sizeable fiscal deficit requires a series of actions, including switching the power plants' fuel source from heavy fuel oil and diesel oil to natural gas, significantly decreasing technical and non-technical losses and improving cost-effective power generation, and eliminating subsidies.

The first hurdle is political. Hariri and his government resigned shortly after the package was announced. President Michel Aoun has stated that it will be carried out regardless. However, while the former government has the legal right to pursue implementation of formerly approved policies as administrative procedures, including some of the electricity reforms, it would not be able to sign any new contracts. The former government will be able to launch a tender for new power plants (a move that was approved by the Council of Ministers a week before the prime minister's resignation), but the contract award and signature will be dependent on the future government.

Even without a government vacuum, these actions are unlikely to be reached in the indicated timeframe.

Integrating natural gas into the fuel mix has been a government policy since 2010, but has been subject to the same delays that have hindered reforms across the sector. Currently, 42% of the existing power plants can be switched to operate on natural gas, in addition to two power barges which would require a few months of re-habilitation to operate on natural gas. The planned generation capacity is expected to run primarily on natural gas.

In June last year the Ministry of Energy and Water took the first step towards building the necessary infrastructure for the supply of liquefied natural gas, launching a tender for a floating storage



regasification unit. The bid closed last July and is pending the contract award. The ministry estimates that the project will be implemented mid-2021, but a more realistic timeframe is at least 2022, if a new government is formed fast to sign the pending contracts.

Achieving cost effective and efficient generation is also difficult to achieve in the given timeline. The electricity reform plan seeks to build new thermal power plants combining both a fast, temporary solution of 1,050 MW, and permanent plants, under the independent power producer model. This will require the attraction of private investment, and debt and equity from local and international finance institutions, which would be challenging in the current economic context. The higher the risk, the higher the cost of the project, and the lower the private sector's interest. The implementation necessitates attaining financial close where all conditions to drawing loans are satisfied and necessary funds are made available.

The government's stated goal of securing uninterrupted electricity supply by the second half of 2020 leaves a very short timeframe for establishing the temporary plants and limits the prospects for attractive potential offers. It would entail fast-tracking the procurement process for the power plants; the invitation to bid, which has yet to launch, would have to close by mid-January next year, and the evaluation process would need to be completed by the end of that month. Not only does the timeframe seem too short, but it may also jeopardise the sustainability and transparency of the procurement process and the procured solution.

Regarding subsidies, the current socio-political context and the complete loss of trust between the citizens and the state renders any attempt to hike electricity tariffs in the given timeframe rather difficult. A daily electricity supply of 21-24 hours will be necessary before a price increase can be considered. Even then, a gradual hike in tariff is more feasible than a full hike from the current \$0.095 per KWh to the estimated \$0.14 envisaged by the reform plan. Moreover, the government will have to sign contracts in US dollars for projects to be bankable, but will be collecting in local currency. Thus, if the Lebanese pound is devalued, which is likely, the cost of electricity as a share of household income will increase, and the government may find itself having to further subsidise electricity.

Significant efforts have been made to reinforce the grid and reduce technical and non-technical losses in recent months. Yet, the EDL currently collects approximately 60% of the billed consumption, and bills for around 55%. A drastic cut in non-technical losses would realistically take longer than estimated, and should be achieved prior to any increase in supply, otherwise risking an increase in



illegal connections leading to a higher true cost of electricity, and a higher burden on the state budget.

In addition to all the above, implementing the electricity reform plan, especially the procurement of temporary solutions for three to five years (which will increase the cost of power generation) will incur substantial investment costs, which have not been communicated by the government. The government may attempt to decrease costs over the first three to five years by purchasing power through a flat, cumulative rate for the entire project, which will span from 20 to 25 years. However, such a measure will inflict high electricity prices on the end-user and reduce the overall competitiveness of the economy throughout that entire period.

While the scale of the economic and financial crisis facing Lebanon demanded an urgent government response, the plan to fast-track much-needed reform is unrealistic. In addition to being unlikely to eliminate the electricity deficit by the end of 2021, it also risks trading-off sustainability for short-term wins.

*Jessica Obeid is an independent energy consultant and academy associate at Chatham House, where she previously served as a resident fellow in the Energy, Environment and Resources Department. She previously worked as chief energy engineer at the UN Development Programme in Beirut. Jessica holds a master's degree in Political Sciences and a bachelor's degree in Electrical Engineering. She is a senior advisor at Castlereagh Associates.*