Lebanon’s Electricity Sector Cost Recovery Plan

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I. Executive Summary

1. **Electricité du Liban (EDL) has navigated a tumultuous journey marked by persistent challenges exacerbated by external crises, such as the financial crises and the 2020 Beirut port explosion**. In the Past, reforms were blocked for reasons beyond and outside EDL control. Despite concerted efforts, EDL faces a critical juncture in 2026/2028 with the expiration of its generation fleet's lifespan and impending staff retirements. To address these challenges, a comprehensive approach focusing on financial sustainability and operational efficiency is imperative.

Objectives of the Cost Recovery Plan

2. ***Delivering reliable and affordable electricity services***. This Cost Recovery Plan (CRP) outlines a five-year roadmap (2024-2028) to rapidly improve electricity service delivery to EDL's consumers to a **minimum of 10 hours per day**. It is fully consistent with the objectives outlined in the Policy Statement "*Setting Lebanon's Electricity Sector on a Sustainable Growth Path*" approved by the Council of Ministers in March 2022, presenting a comprehensive reform pathway for the sector, conducive for private capital mobilization at the scale required to deliver continuous, reliable, and affordable electricity services in the medium term. The CRP capitalizes on the most recent development in the sector, including, but not limited to, the rapid deployment of standalone off-grid solar photovoltaic (PV) systems by households and businesses.

3. ***Achieving financial sustainability and enhancing operational efficiency***. Rapidly achieving financial sustainability is paramount to improve service delivery in a fiscally sustainable manner. The CRP includes several scenarios to reach a financially sustainable situation, where **EDL's revenues will cover the total cost of service by 2025-26**. This objective will be achieved through: (i) optimized cost structure, with the rapid ramp-up of EDL's most-efficient generation assets combined with critical investments to enable renewable energy supply into the grid, (ii) improved operational and commercial efficiency, to ensure energy control, accounting, billing and collection in line with industry best practices, (iii) strengthened EDL's financial management and reporting needed to inform corporate decision in real time, reduce perceived risks for prospective market entrants and reinforce financial transparency and predictability, and (iv) temporary financial support via the Government's fuel supply agreement with Iraq to bridge the cost-revenue gap during the transition phase.

4. ***Consolidating initial results from emergency and reformative measures***. The CRP builds on the emergency and reformative measures implemented since mid-2022 under the National Emergency Plan for the Electricity Sector to restore disrupted grid services. This plan was approved by the Board of Directors of EDL (Lebanon Electricity Company) under decision No. 300-19/2022 dated August 5, 2022, and further validated by the Ministry of Energy and Water (MOEW) through Letter No. 7564/W dated October 28, 2022, the Ministry of Finance (MOF) through Letter No. 2215 dated September 15, 2022, and the Presidency of the Council of Ministers through Letter No. 1690 dated September 28, 2022.

5. Notably, it includes: (i) **the first revision of EDL's electricity tariff since 1994** to reflect the current cost structure, (ii) secured fuel imports on preferential terms through the Government's agreement with Iraq to **restore a minimum of 4 hours of daily service from the grid**, (iii) reformative actions to reduce losses, such as billing special measures for connection with circuit breakers, strengthened regulation for infringement, theft prevention, and illegal connection removal campaigns, and (iv) support to produce reliable and timely financial information, establish EDL's opening balance, and prepare yearly audited financial statements per international auditing standards.

6. The CRP aims to consolidate and build on these initial steps to enhance service delivery in a financially and fiscally sustainable manner. EDL has implemented quick-action reforms, such as: (i) streamlining the billing and collection cycle, (ii) ensuring the application of the Right to Information Access Law, (iii) implementing the Public Procurement Law to enhance transparency and accountability, and (iv) encouraging renewable energy development through the implementation of net metering and the adoption of the newly approved Distributed Renewable Energy Sources Law.

Action Plan to Achieve Full Cost Recovery

7. *The CRP is based on several actions that will together lead to better services, improved operational efficiency, and **reduce the cost of service by 25 percent** by 2028, compared to 2023:*

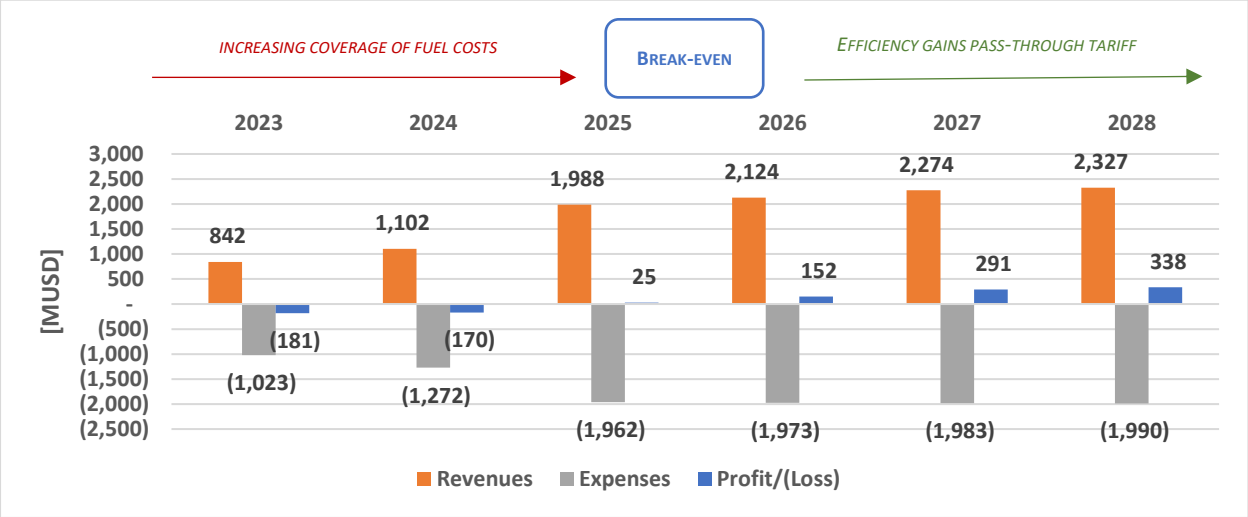
8. ***Increase the share of low-cost supply in EDL's generation mix***. The increase in electricity supply to the grid, from 5,700 to 11,200 GWh per year over the period described in the CRP, will result from **the commissioning of 315 MW utility-scale solar PV plants** with enabling network and system reinforcements, combined with increased supply from EDL's most efficient dispatchable power plants (Deir Ammar and Zahrani combined cycle gas turbine, and Zouk and Jieh reciprocating engine). With a focus on short-term and given current macro fiscal environment as well as, regional context, the CRP assumes only limited greenfield investments and no electricity or gas cross-border trade in the foreseeable future. If prevailing conditions allow, electricity and gas imports would further add supply to the grid and reduce average cost of generation by displacing costlier liquid fuel.

9. ***Reduce losses to increase revenues***. To achieve the objectives of CRP, EDL will scale-up loss reduction campaigns (initiated early 2023) to reduce total network **losses from 40.2 percent to 20.7 percent** by 2028, with the support of all concerned stakeholders (ministries of interior, of defense, of justice, security forces). EDL will invest in needed operational and commercial systems (smart meters, billing and invoicing systems, etc.) that will allow EDL to streamline protracted **billing and collection cycle from 12 to 3 months**, using advanced metering infrastructure. This will also contribute to improve client's experience and reduce EDL's working capital requirements.

10. ***Government's transition support***. The governments of Iraq and Lebanon have signed in 2021 a fuel supply agreement, to swap Iraqi High Sulphur Fuel Oil, for Gas Oil and/or Fuel Oil used to run EDL's power plants. Over the period of the CRP, **the share of fuel cost covered by EDL revenues will gradually increase, in a manner that bridges EDL notional shortfall** and until EDL reaches break-even. EDL is collaborating with the international community, namely United Nations High Commissioner for Refugees (UNHCR), United Nations Relief and Work Agency (UNRWA), the Lebanese Council of Ministers (and/or the ministerial committee) to ensure the diligent settlement of electricity dues for displaced Syrian and Palestinian refugee camps. Public administration and public establishments are expected to diligently settle their electricity bills. If they fail to do so, they will be subject to EDL's standard procedures for delinquent clients. Accordingly, MOF will make the necessary budget provisions or take responsibility for the payments of public client receivables, in cases where EDL is explicitly instructed to continue service despite overdue bills. The implementation of the CRP also requires BDL, as EDL's sole authorized financial service provider, to make available USD needed for payments denominated in hard currency, using EDL's revenues collected in LBP or USD.

Expected Results

***Figure 1*: CRP projected income statements – "Ambitious" scenario with full fuel cost coverage**



11. ***Increased revenues covering the full cost of services***. With the implementation of the CRP actions, EDL's revenues will increase to cover the economically justified cost of service by 2025. Until then, the shortfall will be bridged by the government's support to cover the cost of fuel obtained from its agreement with Iraq. EDL will pay a gradually increasing fraction of the fuel cost until reaching break-even, covering 30 percent in 2024 and 65 percent in 2025. Thereafter, any **notional profit will be passed through the tariff to benefit EDL's customers**. Given EDL's cost structure, the current electricity tariff is denominated in US dollars (payable in USD and LBP) and indexed to the international oil price. In the medium term, the tariff structure will evolve with EDL's efficiency gains and the diversification of the energy mix.

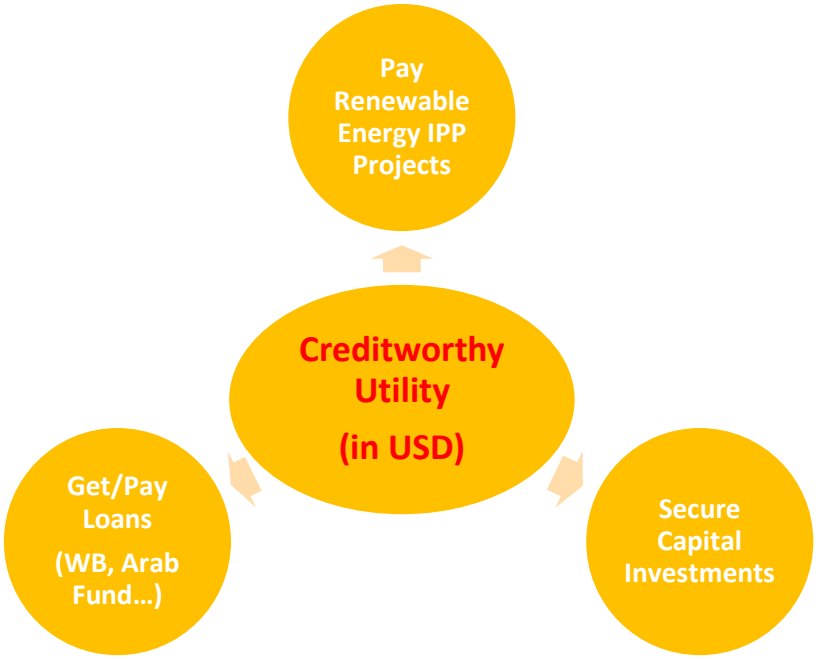
12. ***Strengthened EDL financial stance to improve service delivery***. CRP's pathway towards strengthened financial stance, decoupled from fiscal support (through declining in-kind fuel transfers), would enable **EDL to secure capital needed to modernize the network**, reduce risks for suppliers and **mobilize independent power producers in the renewable energy space** through transparent and structured competitive processes, to meet electricity demand in a least-cost manner. Large-scale solar parks will be developed in phases, with CRP focusing on EDL's technical and commercial readiness and initial phase, to de-risk private investments that macro-fiscal stabilization would subsequently unlock.

13. ***Risks***. CRP's accelerated recovery (the "Ambitious" scenario) is subject to developments beyond EDL's direct control, as well as support from other Government's stakeholders. If this support does not materialize or faces delay, the achievement of targets would be impacted as described in the "Baseline" scenario under status quo, with slower improvements in services quality (reaching a minimum of 8 hours per day) and in losses reduction (reaching 32%) by 2028.

Reforms and Vision

14. ***EDL as a financially viable, transparent, and creditworthy utility***. EDL reforms engaged under the CRP include the review of business processes to improve operational and commercial efficiency, as well as financial reporting, with the preparation and the **disclosure of EDL's audited financial statements** on annual basis. With the support of MOEW, MOF and BDL, a cash waterfall mechanism will be implemented for a more disciplined, transparent, predictable, and effective financial management system, ensuring the prioritized allocation of funds for critical operating expenses and investments, and ultimately, supporting the broader goals of sectoral reform and sustainability. With the stabilization of EDL's financial position, these reform actions will strengthen **EDL's creditworthiness**, laying the ground for sustainable infrastructure upgrades, private capital mobilization into low-cost clean energy solutions and improved services delivery.

Figure 2: Reforms and Vision



15. ***EDL at the forefront of the energy transition***. The CRP covers most urgent investments required to operate the grid with **large share of intermittent renewable generation, in line with the target of 30 percent of the mix over the next decade**. EDL's state-of-the-art national control center (to be reconstructed) and critical reinforcements of the transmission network would pave the way for a significant increase in renewable energy supply into the grid. In addition, the upgrade of EDL operational, commercial, and financial systems will support the implementation of the recently approved Distributed Renewable Energy law, notably for net-metering. In the medium term, diversifying the mix towards low-cost and cleaner renewable energy (RE) sources to fully meet the electricity demand is predicated on a resilient, technically sound, and financially viable power sector unlocked through sustained reform actions.

II. Introduction

16. EDL has faced a challenging journey, marked by numerous obstacles that have significantly impacted its financial standing. These challenges began with political decisions made years ago, including maintaining a fixed electricity retail tariff when fuel costs were based on just US$20 per barrel. Subsequent decisions, such as halting employment at EDL, further strained the utility's human resources capabilities.

17. As Lebanon's financial woes deepened in 2019, EDL found itself at the forefront of these challenges, exacerbated by the devastating explosion at the port of Beirut in August 2020. This tragedy resulted in the loss of skilled employees and subjected the remaining workforce to harsh working conditions. The financial crisis triggered a mass departure of talented professionals from EDL, intensifying the utility's struggles with both financial instability and a dwindling pool of skilled personnel. Adding to the adversity, the governance structure and legal restrictions on recruiting new employees, particularly engineers and technicians, further hampered EDL's ability to navigate its challenges. Political interventionism has also played a significant role, impeding decision-making and progress within the sector. The combination of these factors has created a complex web of obstacles for EDL as it strives to sustain its operations and adapt to a rapidly changing environment.

18. In the face of these tribulations, EDL's management exhibited resilience and determination. Through a series of reforms and strategic initiatives, they managed not only to restore electricity supply after hitting a historic low but also to craft a budget for 2023 without a deficit. Despite the odds, EDL achieved a noteworthy milestone, ensuring the provision of electricity for 4 to 6 hours daily.

19. However, the years 2026 to 2028, or possibly earlier, pose a critical juncture for EDL. The anticipated expiration of most of its generation fleet's lifespan and the imminent retirement of 347 out of the current 1,227 EDL employees, from the 5,020 required by EDL's organizational structure and specified by law, present significant challenges. This juncture threatens to place EDL in a precarious situation with potentially irreversible consequences.

20. The implementation of the cost recovery plan emerges as a lifeline for EDL's survival. Yet, this lifeline requires support from various fronts — political, financial, technical, and human resources. A collective effort is essential to ensure that EDL not only survives but thrives, continuing to operate and function effectively beyond the pivotal years of 2026 to 2028.

III. Objective of the Electricity Sector Cost Recovery Plan

21. CPR outlined below serves as a comprehensive strategy to deliver reliable and affordable electricity services to its clients while achieving financial sustainability and operational efficiency within the electricity sector. The objective revolves around three key pillars: cost reduction through enhanced operational performance, tariff adjustment aligned with reasonably incurred costs of services, and government financial/budget support to bridge the cost-revenue gap during the transition period. **Each component is strategically designed to address challenges and opportunities, contributing to the overarching goal of securing EDL's financial viability, making it financially stable and creditworthy. This, in turn, will enable payment to independent power producers (IPPs) and facilitate access to loans from international donors for the modernization of its infrastructure**.

A. Cost reduction due to continued optimization of cost structure and improved operational efficiency, tariff adjustment aligned with estimated economically justified cost of electricity service, and government financial/budget support to bridge the cost-revenue gap during the transition period.

22. Efforts to reduce generation costs focus on increasing supply to meet national demand in a cost-effective, fiscally balanced, and sustainable manner. The goal is for RE to constitute at least 30 percent of the energy mix by 2030, in alignment with Lebanon's Nationally Determined Contribution for Renewable Energy and the Least Cost Generation Plan (2021). This requires a comprehensive program of short-, medium-, and long-term solutions to transition the sector from expensive liquid fuel-based generation to

a mix that includes cheaper, cleaner gas for both existing and new power plants along with RE generation. A strategic regional connection, including access to affordable gas through the existing Arab Gas Pipeline and electricity imports from Jordan through the eight-country interconnection project (which links Lebanon, Syria, Jordan, Iraq, Egypt, Palestine, Turkey, and Libya via 400 kV transmission lines), is necessary to rapidly increase supply. Simultaneously, utility-scale RE projects will be expanded nationwide.

23. MOEW has devised a National Emergency Plan. This plan focuses on securing sufficient quantities of liquid fuel, such as the Iraqi swap agreement, to supply 4-6 hours of electricity per day using EDL's most efficient existing power plants.

24. An indexed tariff increase to US¢27 per kWh has been implemented to cover EDL's costs until it becomes creditworthy and capable of paying all its dues through a Cash Waterfall Mechanism. This tariff is subject to adjustments based on fuel prices and has been reduced to 24.27¢/kWh as per EDL Board of Directors Decision No. 536-27/2023 dated 7/11/2023, State Council Opinion No. 27/2023-2024 dated 28/11/2023, and with the approval of both the MOEW and MOF.

25. Improving network performance, reducing losses, enhancing collection, and streamlining the billing process will follow a comprehensive plan with the full commitment of Distribution Service Providers (DSPs). The Cost Recovery Plan includes campaigns to remove illegal connections with security force support and political backing, enhanced collection strategies, and the promotion of domiciliation of electricity bills.

B. Tariff Adjustment, Towards Reasonably Incurred Cost of Services

26. The objective is to attain financial sustainability by implementing a new tariff indexed to the international oil price and the USD exchange rate on the SAYRAFA platform. The tariff profile aligns with the Policy Statement and the National Emergency Plan, aiming to support limited-income households within the constraints of EDL's financial burdens. The National Emergency Plan tariff profile was adopted per EDL's Board of Directors decision 300-19/2022 dated 5/8/2022 and will be succeeded by the Policy Statement tariff profile as approved in March 2022, or any future policy statements prepared and ratified after achieving cost recovery.

27. As EDL becomes creditworthy and establishes a new dollar account to fund new investments, it will facilitate payments to Renewable Energy Independent Power Producers (RE IPP), other vendors, and service providers through a cash waterfall mechanism. This mechanism will prioritize expenditures to ensure that salaries, urgent O&M costs, energy purchases, debt service, and urgent investments are paid. It will also improve accessibility to funds from international donors. The tariff structure ensures substantial savings for consumers compared to the current cost of private generators.

C. Government’s Financial/Budget Support, to Bridge the Cost-Revenue Gap During the Transition Period

28. Substantial investments are necessary to fund both operating and capital expenditures. The financial condition and creditworthiness of the sector are critical prerequisites for securing support. Until EDL's financials show significant improvement during the cost recovery process, the MOF has allocated US$300 million through the Council of Ministers (COM) decision no. 3 dated 18/1/2023. Out of this allocation, only US$189 million has been provided to bridge the gap needed to sustain EDL operations (EDL’s letter no. 5686 dated 7/12/2023).

29. The Government-to-Government (G2G) Iraqi swap agreement provides EDL with a sufficient margin and support to generate enough electric energy to supply 4-6 hours of electricity per day, utilizing EDL's most efficient existing power plants. However, the question of who will bear the expense of Iraqi fuel remains unclear. This uncertainty is highlighted in MOEW Letter No. 4844 dated 29/06/2022, and EDL Letters No. 183 dated 10/01/2024, and No. 403 dated 23/01/2024, along with the MOEW reply No. 884 dated 19/3/2024.

30. MOEW has indicated that the renewed contract between the government of Lebanon and the Iraqi government this year, for the third time, allowing for the supply of Iraqi heavy fuel oil under the swap agreement, has been amended regarding the quantity. It has now been increased to 1.5 million tons annually compared to the previously agreed-upon 1 million tons annually. The cost of one million tons from this quantity will be covered by the government as per the aforementioned MOEW letter. Additionally, the clause concerning the payment method through services provided by the Lebanese government to the Iraqi government remains unchanged (in kind).

IV. The EDL Reform Initiative

A. Revised Electricity Retail Tariff as Part of Reform

31. As a key component of the ongoing reforms aimed at achieving financial sustainability for EDL and making it a creditworthy utility capable of paying its dues and investments through a fresh dollar account, EDL has implemented a revised electricity retail tariff. This reform aligns with the emergency plan proposed by MOEW and endorsed by MOF and the Prime Minister. The revised tariff, officially approved and effective since 1/11/2022, is calculated in Lebanese Pounds at the exchange rate determined by the Central Bank (BDL) and the ministerial committee. This committee, formed pursuant to Cabinet Decision No. 3 dated 18/1/2023 and chaired by the Prime Minister, includes the Deputy Prime Minister and the Ministers of Energy and Water, Finance, Public Works and Transportation, National Defense, Interior and Municipalities, Justice, Culture, Tourism, Industry, and Education and Higher Education. Its mission is to evaluate the stages of implementing the national emergency plan for the electricity sector and secure the necessary resources for its implementation.

32. The tariff adjustments result from collaborative efforts, including decisions from EDL's Board of Directors in their decision No. 420-26/2022 dated 11/11/2022 and various correspondences from MOEW. Notably, Board Resolution No. 285-15/2023, dated 6/7/2023, has been extended, modifying the electrical tariff by deducting 25% of the rehabilitation and subscription fees. The calculation for unsubsidized consumption has also been adjusted to US¢26 per kilowatt hour. These changes remain applicable until the release of the April 2023 bills, as per the amended minutes of Meeting Number 6 of the ministerial committee held on 1/11/2023, and are subject to change according to subsequent decisions.

33. Furthermore, EDL's Board of Directors issued Decision Number 68-3/2024 on 1/2/2024, furthering the reform by revoking the 20 percent additional charge on the Sayrafa platform exchange rate set by BDL. This decision mandates adopting the exchange rate set by BDL at that time and includes a reduction in the fixed fees portion of the energy consumption bill starting from the May 2023 invoice.

Table 1: Tariff Reforms (Low Voltage)

<table>
<tr><th colspan="2" rowspan="2">Charges</th><th rowspan="2">Old Tariff</th><th colspan="3">Amendments</th></tr>
<tr><th>1st
BOD#420-26/2022</th><th>2nd
BOD#285-15/2023</th><th>3rd
BOD#68-3/2024</th></tr>
<tr><td rowspan="5">Variable</td><td rowspan="5">Increased Block Tariff</td><td>x ≤ 100 : 35 LBP/ kWh (0.04 ¢/kWh)</td><td>Subsidized Block
(x ≤ 100)
10 ¢/kWh</td><td>Subsidized Block
(x ≤ 100)
10 ¢/kWh</td><td>Subsidized Block
(x ≤ 100)
10 ¢/kWh</td></tr>
<tr><td>100 < x ≤ 300 : 55 LBP/ kWh (0.06 ¢/kWh)</td><td rowspan="3">Unsubsidized Block
(x > 100)
27 ¢/kWh</td><td rowspan="3">Unsubsidized Block
(x > 100)
26 ¢/kWh</td><td rowspan="3">Unsubsidized Block
(x > 100)
27 ¢/kWh</td></tr>
<tr><td>300 < x ≤ 400 : 80 LBP/ kWh (0.09 ¢/kWh)</td></tr>
<tr><td>400 < x ≤ 500 : 120 LBP/ kWh (0.13 ¢/kWh)</td></tr>
<tr><td>x > 500 : 200 LBP/ kWh (0.22 ¢/kWh)</td></tr>
<tr><td rowspan="2">Fixed</td><td rowspan="2">Subscription</td><td>Single Phase: 240 LBP/A (0.26 ¢/A)</td><td>1-P: 21 ¢/A</td><td>-25% Discount
1-P: 20 ¢/A</td><td>1-P: 25 ¢/A</td></tr>
<tr><td>Three Phased : 720 LBP/A (0.78 ¢/A)</td><td>3-P: 63 ¢/A</td><td>3-P: 47 ¢/A</td><td>3-P: 75 ¢/A</td></tr>
</table>

Charges		Old Tariff	Amendments		
			1st BOD#420-26/2022	2nd BOD#285-15/2023	3rd BOD#68-3/2024
	Rehabilitation Fees	Single Phase: 5,000 LBP (5.55 ¢) Three Phased : 10,000 LBP (11.10 ¢)	1-P: 4.3 $ 3-P: 8.6 $	-25% Discount 1-P: 3.23 $ 3-P: 6.45 $	Annulled
Exchange Rate		Official Rate (1,500 LBP/USD)	SAYRAFA +20%	SAYRAFA +20%	SAYRAFA

Table 2: Tariff Reforms (Medium Voltage)

Charges		Old Tariff	Amendments		
			1st BOD#420-26/2022	2nd BOD#285-15/2023	3rd BOD#68-3/2024
Variable	Time of Use Tariff	Night : 80 LBP/ kWh (0.09 ¢/kWh) Day : 112 LBP/ kWh (0.12 ¢/kWh) Peak : 320 LBP/ kWh (0.36 ¢/kWh)	27 ¢/kWh	26 ¢/kWh	27 ¢/kWh
Fixed	Subscription	1,200 LBP/kVA (1.33 ¢/kVA)	105 ¢/kVA	-25% Discount 78.75 ¢/kVA	60 ¢/kVA
	Rehabilitation fees	200 LBP (0.22 ¢/kVA)	17.5 ¢/kVA	-25% Discount 13.13 ¢/kVA	Annulled
Exchange Rate		Official Rate (1,500 LBP/USD)	SAYRAFA +20%	SAYRAFA +20%	SAYRAFA

34. These tariff adjustments signify a strategic move aimed at safeguarding low-income households with subscriptions not exceeding 15/20A, while also protecting the productive sectors such as industrial, tourism, and agriculture. Simultaneously, the objective is to strive for a break-even point. This approach ensures the financial sustainability of EDL, enabling it to become creditworthy and effectively operate its generation fleet, distribution, and transmission network. Additionally, it ensures the timely payment of dues and facilitates new Renewable Energy Independent Power Producer (REIPP) investments through a cash waterfall mechanism, thus promoting efficiency.

B. Amendments to EDL bylaws and Regulations

35. A crucial aspect of the recovery plan involves strategic adjustments to the existing bylaws of EDL. Seven amendments have been made, encompassing vital components of the electricity service subscription system.

1. **Article 15 Amendment**: Modification of regulations governing the electricity subscription system to enhance adaptability (by EDL's BOD Decision no. 184-11/2022 dated 19/5/2022).
2. **Article 10 Amendment:** Revision of provisions related to the electricity subscription system to align with evolving needs (by EDL's BOD Decision no. 334-21/2022 dated 6/9/2022).
3. **Adjustment of Consumption Charges**: Introduction of a mechanism for calculating monthly estimated consumption charges, enhancing transparency and efficiency (by EDL's BOD Decision no. 293-16/2023 dated 22/6/2023).
4. **Modification of the Mechanism for calculating the fixed consumption charge**: Monthly updates for those drawing power based on open reports or through meters, according to Article 15 of Regulatory Order No. 255/2010 (by EDL's BOD Decision no. 375-19/2023 dated 10/8/2023).

5. **Modification of Anti-Violations System**: Update of regulations governing the anti-violations and electricity theft prevention system, ensuring robust enforcement (by EDL's BOD Decision no. 429-23/2023 dated 25/9/2023).
6. **Billing Mechanism for Metered Connections:** Introduction of a billing mechanism for connections, with circuit breakers only (by EDL's BOD Decision no. 430-23/2023 dated 25/9/2023).
7. **Amendment of Consumption Calculation Mechanism**: Monthly estimated consumption quotas for those sourcing electricity under open records are severed (by EDL's BOD Decision no. 429-23/2023 dated 25/9/2023).

C. Streamlining the Billing and Collection Cycle

36. In the realm of billing and collection, despite the persisting lengthy billing and collection cycles, and considering the time between reading the meter indexes and issuing and collecting the bills (estimated to be 35 working days for one-month emission and 45 working days for two-month emission), EDL has devised a comprehensive bill collection mechanism as of January 2024. This accomplishment follows extensive deliberations and coordination with service providers, addressing concerns related to delays and exposure to forex losses. The devised mechanism entails two key components:

- EDL introduced a system allowing consumers to settle their electricity consumption bills in US dollars, with the exchange rate determined by BDL. The aim is to issue the E05-06-2023 bills in US dollars, providing the option to pay in either LBP or USD. Currently, most DSPs are collecting E02-E03-E04 2023 bills.
- EDL established a complete collection mechanism with the objective of significantly reducing the overall duration of the billing and collection cycle. The target is to achieve near real-time status by July/August 2024, as outlined in the table below.

Table 3: Details of Billing and Collection Cycle

DSP	BUS	KVA	NEUC	MRAD
Now collecting	**E06-E08/2023**	**E04-E06/2023**	**E04-E06/2023**	**E04-E06/2023**
Collection cycle duration / Days	**40**	**45**	**70**	**60**
Opening new emission % of closure of preceding one	**60%**	**40%**	**40%**	**40%**
The target to be UpToDate in collection or (A Jour)	**Collecting E04/24 on 09/24**	**Collecting E04/24 on 09/24**	**Collecting E04/24 on 09/24**	**Collecting E04/24 on 09/24**

37. The above table factors in the constraint that no more than two issuances can be open simultaneously. Additionally, issuances from E06/2023 onwards are slated to be released by EDL bi-monthly. As part of its ongoing commitment to enhance operational efficiency, EDL is actively engaged in updating and cleaning its customer database. This initiative is a crucial step toward automating the billing system and eliminating the monetary value from bills, a milestone anticipated to be achieved within 2024. This automation is expected to significantly streamline the entire billing/collection cycle, consequently reducing working capital requirements.

38. An amendment to Article 10 of the Electricity Subscription System No. 255, dated 16/4/2010, based on State Council Consultation No. 2021/83-2022 dated 01/11/2022, stipulates that subscribers must settle invoices within one month of notification by EDL on its website or at designated locations. Failure to pay within this timeframe may result in service disconnection, with reconnection possible after settling unpaid invoices. A late payment penalty of 1 percent per month, up to a total of 15 percent, applies, but can be

waived if the subscriber adheres to EDL's installment payment regulations. Refusal or discontinuation of installments incurs penalties, and EDL reserves the right to pursue legal action for unpaid amounts.

D. EDL's Strides in Renewable Energy Development

39. In our ongoing commitment to sustainable energy practices and cost-effective measures, EDL has made significant strides in the realm of RE. Recognizing the escalating costs associated with fossil fuels and the imperative to reduce dependence on fuel imports and to reduce GHG emissions, EDL undertook several measures.

- **Signing of Power Purchase Agreement (PPA) for Wind Project:** A pivotal step was taken with the signing of the Power Purchase Agreement (PPA) for a 226MW wind power project, which will contribute to our grid-connected RE projects.
- **Signing of PPA for Solar PV Project:** EDL is currently in the process of finalizing the accession agreement for a 165MW solar power project, which would further diversify our renewable energy sources.
- **Hydropower Tariff Adjustment:** To incentivize hydropower development, EDL has implemented a revised tariff structure, gradually increasing from 2 cents/kWh in the first year to 2.5 cents/kWh in the second year and reaching 3 cents/kWh in the third year for hydropower plants concessions.
- **Rechmaya Hydropower Plant Rehabilitation:** EDL has undertaken the rehabilitation of the Rechmaya Hydropower Plant, with financial support secured through a grant from the United States Agency for International Development (USAID).
- **Al Bared Concession Transfer:** The concession for the Al Bared project has been successfully transferred to EDL, consolidating our efforts to expand and enhance renewable energy initiatives.
- **Nameh Landfill Power Plant Maintenance:** In an effort to ensure the reliability and efficiency of the Nameh Landfill Power Plant, which is owned by EDL, the utility has undertaken the overhaul and procurement of critical spare parts.
- **Bekaa Regional Solid Waste Site** (**BRSS) Operation and Maintenance Contract:** EDL has entered into an operation and maintenance contract for BRSS, which underscores our commitment to sustainable waste-to-energy solutions.
- **Increase of Grid-Connected Renewable Energy Supply through World Bank Project Component 2:** The potential World Bank loan project will finance the construction of grid-connected solar PV plants, totaling approximately 150 MW across up to four sites, along with grid reinforcements. It also covers Operation and Maintenance (O&M) contracts for two years, facilitating capacity building for EDL staff to eventually take over O&M responsibilities.
- **Collaboration with JICA Mission:** EDL has fostered a robust partnership with the Japan International Cooperation Agency (JICA), working collaboratively to advance renewable energy projects and initiatives.

40. This concerted effort underscores EDL's dedication to advancing RE solutions, reducing environmental impact, and ensuring a sustainable and cost-effective energy future for the region.

E. Financial Audit and Asset Registration as Part of Reform

41. As an integral part of the ongoing reform initiatives, EDL has taken decisive steps to ensure financial transparency and accountability. In a significant move, EDL’s Board of Directors, through Decision Number 225-13/2022 dated May 30, 2022, approved the appointment of a financial auditor to conduct a comprehensive audit of the company's financial operations for the years 2020, 2021, and 2022.

42. The approved contract outlines the scope of the external independent audit, emphasizing adherence to the requirements stipulated in the International Standards on Auditing (ISA). This audit involves a

thorough examination of EDL's financial statements, including detailed assessments of fixed assets, asset valuation, opening balances, and liabilities. The auditor will play a crucial role in evaluating fixed assets, ensuring a transparent and accurate representation of the company's financial position. Additionally, the audit will confirm commitments and contingent liabilities from opening balances.

43. In alignment with the specified terms and conditions, the audit will be conducted in phases with defined deadlines.

a. Audit Report and Management Letters:

- Audited financial statements for the year ending 2020 (to be delivered within 6 months from the date of contract signing, April 2024).
- Audited financial statements for the year ending 2021 (to be delivered within 12 months from the date of contract signing, October 2024).
- Audited financial statements for the year ending 2022 (to be delivered within 24 months from the date of contract signing, October 2025).

b. Agreed Upon Procedures:

- Fixed assets registry and asset valuation opening balances (to be delivered within 12 months from the date of contract signing, October 2024).
- Liability substantiation, including contingent liability opening balances (to be delivered within 18 months from the date of contract signing, April 2025).

44. This move towards conducting a comprehensive financial audit and registering assets is a testament to EDL's commitment to financial accountability as per the international practice and setting the stage for informed decision-making and ensuring the sustainability of the electricity sector in Lebanon.

F. EDL's Campaign to Eliminate Violations (Non-Technical Losses) and Enhance Financial Sustainability

45. One of the reforms implemented by EDL is the campaign to remove violations and illegal connections on its network. To maintain financial balance, especially in challenging economic, financial, and cash-strapped circumstances, the EDL Board of Directors issued Resolution No. 484-30/2022 on 20/12/2022. The key aspects of this reform include:

a. Launching a campaign to remove illegal connections, starting in Beirut and extending to various regions. This involves calculating the total losses on each distribution outlet based on the M3 meter, coordinating with distribution service providers, and implementing feeder reinforcement programs based on the results of illegal connection removal campaigns.

b. Initiating the removal of illegal connections in Beirut and reducing non-technical losses on MV Feeders with M3 meters, with effective support from security forces. Upon completion, a request is made for feeder reinforcement, followed by a gradual extension of the campaign to other provinces.

c. Notifying EDL’s General inspection after successfully removing illegal connections, coordinating with the transport directorate, and ensuring ongoing monitoring to prevent reinstallation of -illegal connections.

d. Maintaining the current power supply to Palestinian refugee camps and Syrian displaced camps until a mechanism for settling outstanding bills is established.

e. For outlets supplying public institutions, withholding increased power supply until the first bill is settled according to the new tariff.

f. Enforcing power supply schedules at main transformer stations based on the outlined strategy, stipulating that feeders with less than 10 percent PV connections compared to the

total number of customers on this specific feeder will receive an additional two hours of power per day

g. Periodically announcing a list of outlets or areas that have undergone power supply increases.

h. Setting an initial timeframe of nine months for illegal connection removal, providing detailed reports on completed and ongoing outlets, and informing relevant ministries about potential power cuts in areas outside of control.

i. Notifying concerned ministries that complete control must be restored to outlets outside control, with collaboration from security forces and local authorities.

j. Requesting the preparation of necessary studies to allocate separate service lines for essential public facilities (e.g., water, airport, port) to implement appropriate executive measures.

46. Additionally, feeding hours have been increased by 2 hours to reach 6-8 hours daily for surveyed exits, pursuant to Board of Directors Resolution No. 420 - 22/2023 dated 09/06/2023, effective 10/01/2023. A media statement was issued on 09/23/2023, announcing the increase in electrical supply as of 10/01/2023 for the exits inspected by the illegal connection removal campaign teams.

G. Proactive Commitment to Transparency and Information Access

47. Since the enactment of the Right to Access to Information Law in 2017 and its corresponding executive decree in 2020, EDL has demonstrated a firm commitment to transparency and accountability. EDL has consistently adhered to the stipulations of the law and the relevant decree, particularly emphasizing compliance with Article 15 of the law (Officer in Charge of Information) and Article 9 of the decree. EDL has appointed dedicated personnel to facilitate public access to information regarding the utility's operations. In December 2023, these personnel organized a training workshop at the ENA institution, focusing on handling information requests and overseeing all operations related to the Right to Access to Information Law.

48. EDL actively prepares and collects requested information from media, parliamentary members, and non-governmental organizations (NGOs), demonstrating a proactive stance. Notably, the utility has responded to all 70 information requests received to date, showcasing a commitment to fostering a culture of transparency and empowering citizens to interact with Lebanon's electricity utility. This approach not only aligns with the principles of the law but also serves to build trust and understanding between EDL and the public it serves.

H. Implementation of Public Procurement Law in the Reform Initiative

49. As part of its ongoing reform initiatives, EDL has successfully implemented the Public Procurement Law, developed by the Basil Fuleihan Institute of Financial and Economic Studies under the Ministry of Finance. This law, aligned with international standards and incorporating eight key principles from the Organization for Economic Cooperation and Development (OECD), applies to all entities involved in public spending. It promotes medium-term planning and establishes clear oversight mechanisms. The law emphasizes efficiency through competitive procedures, standardized documents, and anti-corruption measures, defining integrity and conflict of interest scenarios with prescribed penalties. It mandates transparency through central electronic platforms and prioritizes sustainability in line with development goals. This implementation reflects EDL's commitment to a transparent, accountable, and sustainable approach to procurement practices.

I. Distributed Renewable Energy Law

50. It is essential to emphasize that, since its inception, EDL has been committed to developing and implementing a viable Distributed Renewable Energy (DRE) law with the objective of organizing and increasing the share of renewable energy in EDL's network. However, the challenges posed by the Distributed Renewable Energy Sources, as ratified by the Lebanese Parliament under Law Number 318, are substantial and significantly impact EDL. These challenges are exacerbated by EDL's severe shortage

of human and technical capabilities, along with the tasks imposed by the law, necessitating strategic interventions.

51. EDL has actively participated in extensive discussions with various international delegations and parties, including JICA, EBRD, and the World Bank, to address these challenges. Mandated by the law, EDL must undertake a range of initiatives, including developing software programs, establishing compensation mechanisms, recycling surplus energy, installing meters, specifying technical requirements, and drafting a decree to establish a Directorate of Renewable Energy. This exhaustive list of responsibilities underscores the need for continuous support to navigate the complexities of the DRE law while acknowledging EDL's limited resources.

J. Net Metering System

52. Due to the overwhelming and increasing interest in subscribing to the Net Metering System, which EDL implemented in 2011 based on its Board of Directors' decision No. 318-32/2011 dated 5/7/2011, and considering that the smart meters available to distribution service providers can record both consumed and supplied electrical energy in two separate indicators, aligning with the recording features adopted in this system, the Board of Directors of EDL issued Resolution No. 366-19/2023 on 10/8/2023 after deliberation.

53. This resolution requests distribution service provider companies, through the Project Management Committee of Distribution Service Providers, to secure and install single-phase smart meters to fulfill subscription requests in the Net Metering System for the single-phase category. This is subject to the approval of these requests by the Net Metering Committee and the signing of the relevant agreements by the General Directorate. Once the necessary documents are sent to the relevant departments within the institution in accordance with the regulations, this decision is considered ratified by the Board of Directors in the same session.

K. Establishment of the Electricity Regulatory Authority (ERA)

54. In 2002, Law 462 aimed to privatize Lebanon's electricity sector by restructuring it and establishing the Electricity Regulatory Authority (ERA) for independent oversight. The ERA's responsibilities include regulating tariffs, issuing licenses, and promoting transparency and competition. It is worth noting that the National Plan for Sustainable Development of the electricity sector, approved by the Council of Ministers under its decision No. 8 dated 16/3/2022, emphasized the formation of the regulatory authority for the electricity sector immediately. Appointment of ERA commissioners is carried out through the Council of Ministers (COM) based on MOEW proposal in a transparent and merit-based process. The COM also approves ERA's business plan and allocates resources for it.

55. It is worth noting that ERA will propose a tariff structure that reflects various cost components, such as fixed, variable and time of use, while differentiating tariffs among consumer segments. This includes the potential incorporation of targeted social tariffs (e.g., lifeline tariffs) to ensure affordability and prevent drastic market fluctuations. The ERA will establish procedures for determining tariffs, including public consultation. Responsible for applying this tariff methodology, the ERA will also determine access to the network tariffs (e.g., wheeling charges) and transmission tariffs as the sector becomes more liberalized.

IV. Summary of Current Operational and Financial Performance of Electricity Sector

A. Current Operational Performance:

56. As of the present, and as primary estimated results EDL faces a technical and commercial losses rate of 36 percent in its medium voltage and low voltage levels coverage for the period . This rate is distributed across various service providers and regions on medium voltage and low voltage levels, as illustrated in the following table.

Table 4: Summary of Losses

Service Provider	Region	Preliminary Assessment at Distribution Level (TL & NTL Level)
BUS	*Northern Mount Lebanon, North Governorates, and Akkar*	*32.47%*
KVA	*Beirut*	*15.62%*
KVA	*Bekaa and Baalbek-Hermel Governorates*	*52.38%*
NEUC	*Southern Mount Lebanon*	*34.82%*
MRAD	*Southern Governorate and Nabatiyeh*	*40.00%*
Total Technical and non-technical losses rate		*35.99%**

** To note that Technical Losses at Transmission level are estimated to be equal to 5.7%*

57. Additionally, collections rates vary across regions and electoral districts.

Table 5: Electricity Bill Collection Rates

Service Provider	Region	Collection rates	
		11-12/2022	1-2/2023
BUS	*Northern Mount Lebanon, North Governorates, and Akkar*	*94.28%*	*91.13%*
KVA	*Beirut*	*88.84%*	*87.86%*
KVA	*Bekaa and Baalbek-Hermel Governorates*	*83.78%*	*71.15%*
NEUC	*Southern Mount Lebanon*	*86.06%*	*83.71%*
MRAD	*Southern Governorate and Nabatiyeh*	*88.21%*	*70%*

58. EDL faces several challenges in bill collection. One major issue is the rejection of bills by consumers in the region supplied with 24-hour power from the Litani River Authority. The residents demand a reduced tariff, arguing that their energy is generated from hydropower plants. Additionally, there are delays from BDL in providing exchange rates needed for accurate billing. Despite these challenges, EDL is committed to improving its billing and collection processes. By working closely with service providers, the utility is implementing strategies to expedite billing and collection, aiming for a more efficient and responsive system for sustainable energy services.

B. Detailed Analysis for improving EDL's Operational Performance

59. EDL acknowledges the challenges in technical and commercial losses, actively addressing issues through region-specific strategies. The variations in coverage rates necessitate targeted interventions to enhance efficiency and reduce losses.

a. Exploring USD Payments and Mobile Application Implementation

60. The Central Bank's currently limits the exchange in EDL accounts to US$5 million per week (LBP 425 billion per week), EDL prioritizes structured payments to stakeholders. Adhering to a rate of LBP 425 billion per week on the Sayrafa platform, EDL ensures equitable distribution and settlement of dues to maintain operation of EDL. Despite depositing all EDL revenues, the central bank restricts withdrawals, posing challenges to EDL's financial operations.

61. Considering the exchange limitations, EDL has launched the mechanism for allowing consumers to settle their electricity consumption fees in US$, based on the exchange rate established by the central bank. This aligns with the stance expressed by the Legislative and Consultative Authority within the

Lebanese Ministry of Justice in Consultation No. 445/2023 dated 14/9/2023. In connection with this, EDL dispatched a letter, No. 4820 dated 24/10/2023, to the Ministry of Finance.

62. Moreover, EDL is actively collaborating with service providers (DSPs) to start the implementation of a mobile application. This application would be downloadable by both consumers and collectors, providing immediate documentation of the amount paid by the consumer and its classification (in US dollars or the equivalent in Lebanese pounds at the applicable exchange rate).

63. **This initiative aims to improve monitoring and transparency in the payment process, making EDL financially stable and creditworthy, thereby enabling the payment for independent power producers (IPPs) and facilitating access to loans from international donors for the modernization of its infrastructure.**

b. Financial Entitlements and Settlement of Dues by Public Administrations and Institutions

64. As of the current date, outstanding financial obligations from public administrations and institutions for electricity bills issued from November 2022 to February 2023 amount to more than LBP 1,903,477,494,000, which is equivalent to US$25,374,057, considering an annual electricity bill estimate of US$100 million for the public administration and institutions. It's worth noting that on 18/8/2023, EDL's budget for 2023 was disclosed without a financial deficit, with a request for the first installment of US$10 million back to the treasury. EDL has taken various actions, including issuing informational statements and holding meetings to address this matter.

1. Press Releases

- On 14/8/2023, an announcement was made regarding the payment of electricity bills by public administrations and institutions, water authorities, and others.
- On 28/9/2023, a final warning was issued to settle electricity bills by public administrations and institutions, including water authorities, with the threat of power cutoff for non-payment from 24/10/2023.
- On 19/10/2023, a reminder was issued emphasizing the obligation to settle electricity bills by public administrations and institutions.

2. Ministry of Finance Meeting (25/9/2023)

- A meeting at the Ministry of Finance discussed settling electricity consumption bills by public administrations and institutions in alignment with ministerial committee recommendations.

3. Correspondence and Letters

EDL sent letters to relevant authorities informing them of the situation.

- A letter (4629, dated 9/10/2023) was sent to the Minister of Finance, with copies to the Prime Minister, the Minister of Energy and Water, and the ministerial committee, stressing the obligation to settle bills with the threat of power cutoff.
- Furthermore, EDL dispatched letters no. 5099 dated 8/11/2023, no. 5317 dated 21/11/2023, and 5603 dated 30/11/2023 to the Ministry of Finance, requesting the provision of advances to settle the dues of public administrations and institutions for their electricity consumption. These letters emphasize the critical need for timely financial support to ensure the uninterrupted provision of essential services**.**

4. Initiation of Gradual Power Cuts (24/10/2023)

- EDL initiated a gradual power cut to public administrations and institutions with overdue bills.

5. Extension of Deadline (27/10/2023)

- In response to steps taken by some public administrations and institutions to settle overdue bills, EDL announced an extension of the deadline for an additional month.

6. Decree No. 12816 dated 21/12/2023

- A decree issued by the Council of Ministers stipulates the provision of treasury advances to all public administrations and institutions. These advances are equivalent to the total value of electricity consumption invoices estimated on both low and medium voltage networks, necessary to settle their electricity bills owed to EDL and EDL North - Qadisha for the period from November 1, 2022, to June 30, 2023. On February 1, 2024, EDL dispatched letters to sixty-eight (68) public administrations/establishments, urging compliance with the aforementioned decree and prompting settlement of their electricity bills for the period from November 1, 2022, to June 30, 2023.

65. This comprehensive overview highlights EDL's efforts to address financial challenges, engage with relevant authorities, and find solutions to ensure the sustainability and financial stability of the electricity sector and make sure that each consumer pays its electricity bill.

c. Refugee Camps Electricity Billing: A Collaborative Approach

1. Syrian Refugee Camps

66. In an effort to address outstanding electricity bills from Syrian refugee camps, EDL engaged in a series of meetings and correspondences with UNHCR. Noteworthy events include meetings with the Prime Minister, committee sessions, and email exchanges, emphasizing clarity on data and inquiries. Meters have been installed in camps, and ongoing coordination aims to resolve technical issues. Some camps have shown willingness to settle dues, and mechanisms for consumption control reports started to be issued, aligning with the EDL Board of Directors' decision no. 496-26/2023 dated 2/11/2023, press releases was issued in this regard, until now 82 out of 900 camps are paying their bills regularly.

2. Palestinian Refugee Camps

67. Following a ministerial committee meeting on November 1, 2023, addressing energy consumption fee collection in Palestinian refugee camps, EDL engaged in extensive discussions with UNRWA and LPDC. Most camps lacked electricity meters, with regular readings only in Dbayeh and Wavel. EDL, in collaboration with UNRWA and LPDC, proposed a solution due to UNRWA's inability to settle bills. Draft Concept Notes for Bourj Barajneh camp outlined two phases:

- **First Phase:** A six-month period for immediate billing based on a fixed rate corresponding to each consumer's subscription until meters are installed to measure actual energy consumption.
- **Second Phase:** A ten-month period to secure and install meters and devices for each housing unit inside the camp, along with the necessary technical systems.

68. EDL informed all relevant parties, especially UNRWA and LPDC, of its commitment to the ministerial committee's decisions and political authority for adoption and implementation of this procedure. In case an alternative solution is not feasible, EDL proposed settling the invoiced energy value recorded on the meters at the camp entrances by UNRWA or any international or governmental donor. EDL sent a letter no. 5150 dated 14/11/2023, to the presidency of the council of ministers, to hold a meeting and take a decision concerning the Palestinian camps, Also, EDL emphasized the necessity of approval from the Council of Ministers on the process and a assurance from military and security forces on the security and geographic borders of each camp due to changes and developments since their establishment.

V. Key Measures to Improve Operating and Financial Performance

A. Jordan Electricity and Egypt Gas Agreements

69. On June 21, 2022, a significant contract was signed for the export of gas from Egypt for Deir Ammar power plant. The agreement, supplying 650 mcm of natural gas, is pivotal for generating approximately 3.5 TWh per annum. Concurrently, on January 26, 2022, EDL entered into another important contract with the National Electricity Utility of Jordan (NEPOC), importing 200 MW of electricity. The combined impact of these agreements, if executed, stands to yield about US$222 million of saving annually. Such a substantial saving of funds would undeniably bolster the financial standing of EDL, consequently facilitating a reduction in the electricity tariff, ultimately benefitting consumers.

B. Generation

70. EDL upgraded Deir-Aamar and Zahrani power plants over 13 years, coordinating with OEMs for efficient capacity improvements. The 2012 Lifetime Extension (LTE) and Upgrade and Major maintenance, such as Gas Turbine (GT)-Generator rewinding and HRSG rehabilitations, resulting in a 15 MW per GT capacity increase and 2 percent of efficiency improvement, saving over US$2 million monthly for each power plants (Zahrani & Deir Ammar) in fuel costs.

71. Deir-Aamar and Zahrani power plants now outperform their original design, with improved KPIs, enhanced availability and reduced production costs. EDL, with international consultants, updated O&M tender documents and conducted due diligence for sustained operational excellence after 25 years of operation.

72. EDL is set to launch O&M services bidding to ensure continued plant reliability. Updates to tender books and due diligence are completed, pending Public Procurement Authority and tender document approval. The O&M contract is crucial for plant functionality, sustainability and efficient operation, especially as they exceed the designed 25-year lifetime.

C. Enhancing Renewable Energy Integration

73. EDL with the support of the World Bank is preparing a project aimed at laying the groundwork for sector recovery, with a specific focus on strategic investments essential for bolstering the supply of cost-effective renewable energy and reinforcing the EDL network and systems. This initiative seeks to foster technical and financial preparedness within the sector to facilitate significant investments, particularly in renewable energy, which could be unlocked by macro-fiscal stabilization efforts. Through a US$250 million loan, the project will support various key endeavors. Firstly, the construction of the National Control Center (NCC) to enable EDL to effectively manage its network amidst the growing intermittent renewable energy capacity. Secondly, it will involve the implementation of Advanced Metering Infrastructure (AMI) and associated energy accounting systems to enhance energy accounting, billing, and collection practices at EDL. Thirdly, the project will encompass the establishment of grid-connected solar PV plants across four sites, with a cumulative capacity of approximately 150 MW, alongside necessary grid reinforcements. This phase will pave the way for the development of larger-scale solar parks to be subsequently fully developed by IPPs. Additionally, the project will provide technical assistance for implementation, reinforce financial management, and advance the sector reform agenda. Ultimately, the project's outcomes will include an augmented supply of grid-connected renewable energy to consumers, a reduction in transmission network failures, and a more streamlined billing and collection cycle.

D. Elimination of Bottlenecks in the Transmission Network

a. Transmission South Loop Project (US$200 million)

74. The South Loop Project, backed by a US$200 million investment, entails the expansion of the transmission system with the establishment of four GIS substations (Airport, Hazmieh, Jamhour, Choueifat).

b. Transmission North Loop Project (US$80 million)

75. The EBRD-supported previously a project focuses on the construction and operation of three new 220 kV substations at Bsalim, Baouchrieh, and Chebbak. It also involves the installation and operation of 220 kV underground cables (UGC), including lines between Bsalim and Chebbak substations, Chebbak and Baouchrieh substations, and Baouchrieh and Marina, each contributing to the development and reliability of the transmission network.

c. Achrafieh Substation Rehabilitation (US$4 million)

76. The EBRD-backed Achrafieh substation rehabilitation initiative, following the devastating Beirut port blast on August 4, 2020, took a crucial step forward as EDF, the consultant, meticulously crafted a tender document. This document adheres to international regulations and rules, ensuring a comprehensive and standardized approach to the rehabilitation process. Notably, the detailed Terms of Reference (TOR) for this project received official approval from EDL on April 29, 2021.

d. Construction of a New National Control Center

77. The World Bank's Renewable Energy Integration Project for Lebanon includes a key task focused on NCC. The consultant, in collaboration with EDL, will assess current IT and OT systems, identify an optimal location for the NCC, prepare a comprehensive conceptual design, evaluate the associated costs, and develop a strategic procurement plan. This holistic approach aims to ensure the NCC's seamless integration, operational efficiency, and cost-effectiveness in facilitating the increased integration of renewable energy into Lebanon's electricity system and for real-time network management.

E. Exploration of Options to Increase Efficiency of Distribution Network Operations

78. As part of the exploration of options to enhance the efficiency of distribution network operations, the World Bank is set to launch a bid for hiring a consultant to conduct a study on alternative electricity distribution models in Lebanon. The study aims to offer comprehensive analytics covering technical, economic, financial, institutional, and regulatory aspects. The objective is to provide valuable insights to EDL and stakeholders for informed decision-making, facilitating a transition towards a more efficient distribution and retail model through public-private partnerships. The activity will leverage previous analyses conducted by the technical team, considering current Distribution Service Provider (DSP) and potential concession models, with specified tasks to be undertaken in the process.

F. Introduction of Advanced Metering Infrastructure (AMI) at the distribution level

79. EDL initiated a significant step toward modernization by organizing a pre-bid meeting on June 18, 2020. This meeting aimed to procure services essential for the comprehensive design, engineering, supply, installation, testing, commissioning, implementation, management, reporting, and operation/maintenance of activities related to the Central AMI System. The system encompasses crucial components such as the Head End (HE), Meter Data Management (MDM), Billing, and Customer Relationship Management (CRM). Notably, EDL engaged in extensive discussions with the World Bank and officially shared the tender document with them through EDL's email on February 25, 2020.

G. Allocation of fresh funds in the State Budgets

80. MOF must prioritize allocating sufficient funds in the state budget to cover the electricity consumption of public administrations. A key measure to ensure the financial stability of EDL is to establish a perpetual fresh fund transfer mechanism, providing a steady source of revenue for its essential operations. Additionally, the Ministry should extend financial support to defaulting or financially strained public establishments, including water utilities and municipalities, by offering tailored loans or grants to help them cover their electricity dues.

81. Furthermore, addressing outstanding arrears of the public sector related to electricity consumption and directing those payments to EDL will enhance and strengthen its fiscal health. This integrated strategy is vital for fostering a reliable and sustainable energy landscape in the country.

VI. Financial Model

82. This section delves into the intricacies of the EDL's financial model, providing a comprehensive overview of the assumptions underpinning its structure. This section also examines the utility's financial sustainability and viability, through a detailed exploration of its projected income and cash flow statements, shedding light on the key factors influencing EDL's fiscal health.

83. Attaining financial sustainability and viability for EDL involves a meticulous examination and optimization of several key factors both individually and collectively, predominantly:

1. **EDL Tariffication and Revenues Streams**
   a. Electricity Sales
   b. New Subscriptions
   c. Arrears and Orders for Collections

2. **Other EDL Financial Support Mechanisms**
   a. Working Capitals
   b. International Financing Agency (IFA) Loans
   c. Grants

3. **EDL Costs**
   a. Fuel costs (Fuel Oil, Gas Oil, Natural gas)
   b. Power Purchase (Litani River Authority, The Phoenician Society of Hydroelectric Forces of Nahr Ibrahim)
   c. Electricity Imports (Syria, Jordan, Egypt)
   d. Operation and Maintenance Activities (at Generation, Transmission and Distribution Levels)
   e. Depreciation and Amortization (at Generation, Transmission and Distribution Levels)
   f. Preservation Activities (at Generation Level)
   g. Administrative Costs (Salaries and affiliates, Healthcare, and Insurance, etc.)
   h. Debts and Loans Repayment
   i. Other Miscellaneous expenses
   j. Interest Payments

4. **EDL System Losses**
   a. Technical Losses (at Transmission and Distribution Levels)
   b. Non-Technical Losses (at Distribution Level)

5. **EDL Collection Losses**
   a. Collection Losses (Uncollected Bills)

6. **EDL Financial Planning**
   a. Prudent Budgeting
   b. Income Statements
   c. Cash Flow Statements
   d. Cash Waterfall and Liquidity Support mechanisms.

84. Despite significant challenges, EDL has successfully advanced towards financial sustainability, viability, and creditworthiness through a comprehensive set of reforms. The newly implemented tariff is gradually transitioning the utility towards a more cost-reflective structure. This shift will enable EDL to efficiently cover operational expenses, reduce reliance on government support, and maintain targeted subsidies for low-income households to ensure inclusivity. By prioritizing operational efficiency improvements, EDL is implementing an ambitious plan to reduce system losses, particularly at the

electricity distribution level, and investing in smart grid solutions to minimize both technical and non-technical losses.

85. A critical component of EDL's path to financial sustainability is its commitment to enhancing governance and transparency. The utility is fostering a culture of accountability and openness to build confidence among international investors and the public. EDL is also actively pursuing international collaboration and partnerships to aid its financial turnaround. By engaging with international financing agencies, EDL aims to secure funding for capital-intensive projects and access valuable technical expertise.

86. Additionally, EDL is diversifying its energy mix and integrating more renewable sources into the grid. This effort aims to contribute to environmental sustainability and reduce dependency on costly fuel imports.

A. Financial Model Assumptions

87. During discussions with various stakeholders, they recommended adopting more ambitious assumptions to increase production and reduce loss rates. This ambitious scenario requires increased support for EDL from all stakeholders, as many critical success factors are beyond EDL's control.

88. On the other hand, if the expected supports don't materialize EDL has proposed a more conservative, achievable, and auditable scenario that considers the current political security and economic situation in the country.

89. To explore EDL's options, four scenarios were considered and studied:

- Ambitious Scenario with Full Coverage of Iraqi Fuel Costs.
- Ambitious Scenario with Gradual Coverage of Iraqi Fuel Costs (as per H.E. The Energy and Water Minister's letters No. 4844 Dated 29/06/2022 and No. 884 dated 19/3/2024).
- EDL's Base-case Scenario with Full Coverage of Iraqi Fuel Costs.
- EDL's Base-case Scenario with Gradual Coverage of Iraqi Fuel Costs (as per H.E. The Energy and Water Minister's letters No. 4844 Dated 29/06/2022 and No. 884 dated 19/3/2024).

90. The assumptions for all the above-listed scenarios are detailed in Appendix 1.

a. Ambitious Scenarios

91. The ambitious scenario presented in this CRP has been meticulously crafted to align with the recommendations put forth by the various stakeholders. In our analysis, we have carefully studied two key scenarios to gauge their impact and feasibility. The first scenario involves an ambitious approach with full coverage of Iraqi fuel costs, aiming to achieve stability and sustainability in the near term. The second scenario takes a similarly ambitious stance but with a more gradual coverage of Iraqi fuel costs (as per H.E. The Energy and Water Minister's letter No. 884 dated 19/3/2024), allowing for a phased approach towards financial recovery while maintaining operational efficiency and service quality. Further details and insights into these scenarios can be found in Appendix No. 2.

Income and Cash Flow Statements for Ambitious Scenarios

92. In line with recommendations from various stakeholders, more ambitious scenarios have been considered. The income and cash flow statements for EDL from 2023 to 2028 show a significantly improved financial outlook, highlighting a notable enhancement in the utility's overall financial stability.

Achieving this positive trajectory requires collaborative efforts and steadfast support from various stakeholders, including governmental bodies, international organizations, and local communities. A dedicated commitment from all involved parties is essential to realize these favorable projections and ensure sustainable cost recovery.

93. It is worth noting that, although the cost of Iraqi fuel has been included in EDL's financial model, it remains unclear who will bear this expense. This uncertainty stems from MOEW Letter No. 4844 dated 29/06/2022, EDL Letters No. 183 dated 10/01/2024 and No. 403 dated 23/01/2024, and MOEW Reply No. 884 dated 19/03/2024. MOEW indicated that the renewed contract between the Lebanese and Iraqi governments this year, for the third time, allows for the supply of Iraqi heavy fuel oil under a swap agreement. The quantity has been increased to 1.5 million tons annually, compared to the previously agreed 1 million tons annually. The government will cover the cost of one million tons as per the aforementioned MOEW letter. Additionally, the clause concerning the payment method through services provided by the Lebanese government to the Iraqi government remains unchanged (in kind). However, the cost of Iraqi fuel could gradually be covered by EDL revenues, bridging EDL's notional shortfall for the first few years until EDL reaches break-even by 2025 (on an accrual basis).

Table 6: Profit/Loss Projections under Ambitious Scenario with Full Coverage of Iraqi Fuel Costs (excluding required temporary Government support)

Items	**year**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**
Revenues	**MUSD**	**772**	**1,037**	**1,767**	**2,091**	**2,236**	**2,314**
Electricity Sales	MUSD	772	1,037	1,764	2,085	2,230	2,308
Electricity New Subscriptions	MUSD	-	0.5	2.9	5.9	6.0	6.1
Expenses	**MUSD**	**(1,024)**	**(1,273)**	**(1,962)**	**(1,973)**	**(1,983)**	**(1,990)**
Generation Cost (incl. Dep.)	MUSD	(250)	(494)	(1,503)	(1,505)	(1,642)	(1,779)
Transmission Cost (incl. Dep.)	MUSD	(26)	(27)	(28)	(30)	(31)	(33)
Distribution Cost (incl. Dep.)	MUSD	(59)	(61)	(109)	(113)	(116)	(120)
Administrative Cost	MUSD	(27)	(27)	(25)	(23)	(21)	(20)
Miscellaneous Cost	MUSD	(20)	(21)	(21)	(22)	(22)	(22)
Internal Debts Payment	MUSD	(101)	(101)	-	-	-	-
Loan Interests	MUSD	(1)	(3)	(7)	(11)	(15)	(15)
A portion of the Iraqi fuel was paid for by the Government in the partial coverage scenario, while in this scenario it is paid for by EDL		(540)	(540)	(270)	(270)	(135)	-
Profit/(Loss)[1]	**MUSD**	**(252)**	**(236)**	**(196)**	**118**	**254**	**324**

Figure 3: Profit/Loss under Ambitious Scenario with Full Coverage of Iraqi Fuel Costs

[1] With Reference to MOEW Letter No. 4844 Dated 29/06/2022 and EDL Letters No. 183 Dated 10/01/2024 and No. 403 Dated 23/01/2024 and MOEW response No. 884 dated 19/3/2024. Where MOEW has indicated that the renewed contract between the government of Lebanon and the Iraqi government this year, for the third time, allowing for the supply of Iraqi heavy fuel oil under the SWAP agreement, has been amended regarding the quantity. It has now been increased to 1.5 million tons annually, compared to the previously agreed-upon 1 million tons annually. The cost of one million tons from this quantity will be covered by the government as per the hereabove mentioned Minister of Energy and Water letter. n addition, the clause concerning the payment method through the services provided by the Lebanese government to the Iraqi government has not been amended and remains unchanged (In kind). Decrease in losses is due to the equivalent increase in coverage of the Iraqi Fuel Agreement reaching full autonomy in 2028.

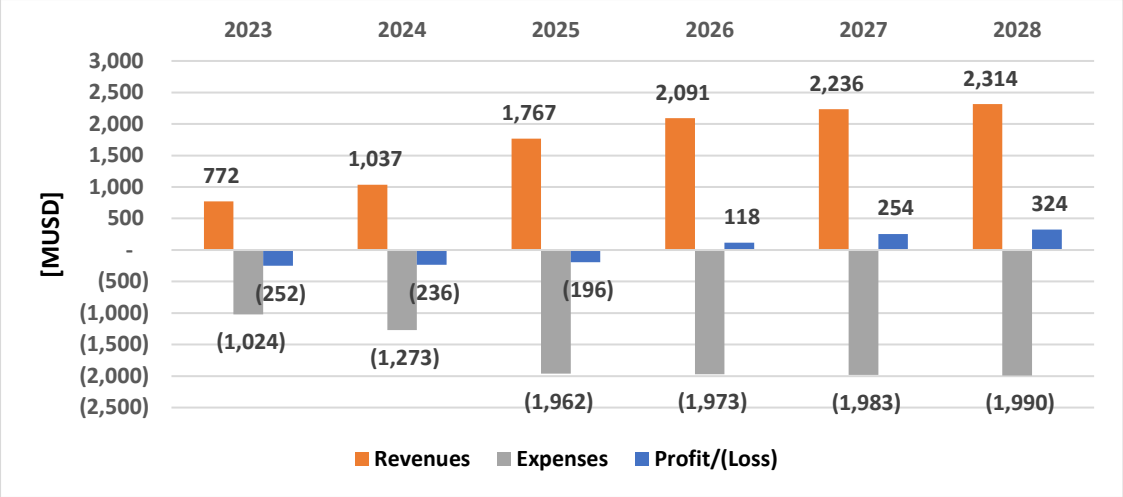


Table 7: Cash Flow Projections under Ambitious Scenario with Full Cover of Iraqi Fuel Costs

Items	**year**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**
Revenues	**MUSD**	**412**	**1,330**	**1,708**	**2,020**	**2,163**	**2,240**
Electricity Sales	MUSD	397	1,308	1,666	1,969	2,107	2,180
Electricity New Subscriptions	MUSD	-	0.5	2.9	5.9	6.0	6.1
Arrears & Orders for Collections	MUSD	16	21	40	45	51	55
Other Receivables	**MUSD**	**-**	**-**	**50**	**50**	**50**	**-**
Grants	MUSD	-	-	-	-	-	-
Loans	MUSD	-	-	**50**	**50**	**50**	-
Expenses	**MUSD**	**(1,023)**	**(1,270)**	**(1,956)**	**(1,962)**	**(1,968)**	**(1,974)**
Generation Cost	MUSD	(250)	(494)	(1,503)	(1,505)	(1,642)	(1,779)
Transmission Cost	MUSD	(26)	(27)	(28)	(30)	(31)	(33)
Distribution Cost	MUSD	(59)	(61)	(109)	(113)	(116)	(120)
Administrative Cost	MUSD	(27)	(27)	(25)	(23)	(21)	(20)
Miscellaneous Cost	MUSD	(20)	(21)	(21)	(22)	(22)	(22)
Internal Debts	MUSD	(101)	(101)	-	-	-	-
A portion of the Iraqi fuel was paid for by the Government in the partial coverage scenario, while in		(540)	(540)	(270)	(270)	(135)	-
Adjustments	**MUSD**	**40**	**43**	**46**	**50**	**55**	**60**
Depreciation	***MUSD***	**40**	**43**	**46**	**50**	**55**	**60**
Generation	*MUSD*	28	28	28	30	32	34
Transmission	*MUSD*	5	6	7	8	9	10
Distribution	*MUSD*	7	8	10	12	14	15
Financial Cost	**MUSD**	**(44)**	**(136)**	**(186)**	**(191)**	**(194)**	**(108)**
Working Capital Repayment	*MUSD*	(37)	(37)	(37)	(37)	(37)	-
Capital Investments	*MUSD*	-	(91)	(141)	(141)	(141)	(91)
External Loans Repayment	*MUSD*	(7)	(9)	(9)	(13)	(17)	(17)

Items	year	2023	2024	2025	2026	2027	2028
Net Cash Flow (excluding Gov/MOF support)[2]	**MUSD**	**(614)**	**(34)**	**(338)**	**(32)**	**106**	**218**
Cash Balance at Beginning of Period	**MUSD**	**7**	**(607)**	**(641)**	**(979)**	**(1,011)**	**(905)**
Cash Balance at End of Period	**MUSD**	**(607)**	**(641)**	**(979)**	**(1,011)**	**(905)**	**(687)**

Figure 4: Cash Flow Projections under Ambitious Scenario with Full Cover of Iraqi Fuel Costs

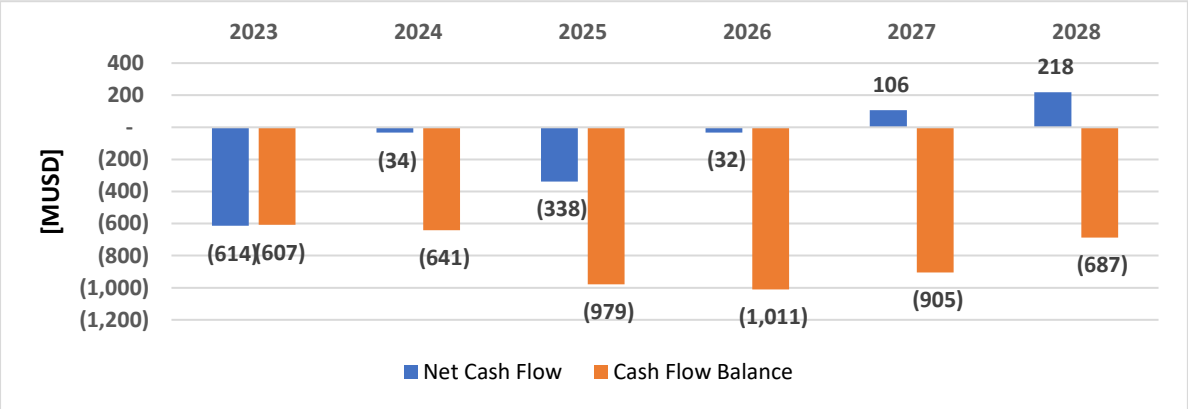


Table 8: Profit/Loss Projections under Ambitious Scenario with Gradual Coverage of Iraqi Fuel Costs

Items	year	2023	2024	2025	2026	2027	2028
Revenues	**MUSD**	**772**	**1,037**	**1,767**	**2,091**	**2,236**	**2,314**
Electricity Sales	MUSD	772	1,037	1,764	2,085	2,230	2,308
Electricity New Subscriptions	MUSD	-	0.5	2.9	5.9	6.0	6.1
Expenses	**MUSD**	**(484)**	**(733)**	**(1,692)**	**(1,703)**	**(1,848)**	**(1,990)**
Generation Cost (incl. Dep.)	MUSD	(250)	(494)	(1,503)	(1,505)	(1,642)	(1,779)
Transmission Cost (incl. Dep.)	MUSD	(26)	(27)	(28)	(30)	(31)	(33)
Distribution Cost (incl. Dep.)	MUSD	(59)	(61)	(109)	(113)	(116)	(120)
Administrative Cost	MUSD	(27)	(27)	(25)	(23)	(21)	(20)
Miscellaneous Cost	MUSD	(20)	(21)	(21)	(22)	(22)	(22)
Internal Debts Payment	MUSD	(101)	(101)	-	-	-	-

[2] With Reference to MOEW Letter No. 4844 Dated 29/06/2022 and EDL Letters No. 183 Dated 10/01/2024 and No. 403 Dated 23/01/2024 and the MOEW response No. 884 dated 19/3/2024. Where the Ministry of Energy and Water (MOEW) has indicated that the renewed contract between the government of Lebanon and the Iraqi government this year, for the third time, allowing for the supply of Iraqi heavy fuel oil under the SWAP agreement, has been amended regarding the quantity. It has now been increased to 1.5 million tons annually, compared to the previously agreed-upon 1 million tons annually. The cost of one million tons from this quantity will be covered by the government as per the hereabove mentioned Minister of Energy and Water letter. In addition, the clause concerning the payment method through the services provided by the Lebanese government to the Iraqi government has not been amended and remains unchanged (In kind). Decrease in Cash Flow is due to the equivalent increase in coverage of the Iraqi Fuel Agreement reaching full autonomy in 2028.

Items	year	2023	2024	2025	2026	2027	2028
Loan Interests	MUSD	(1)	(3)	(7)	(11)	(15)	(15)
Profit/(Loss)[3]	**MUSD**	**288**	**304**	**74**	**388**	**389**	**324**

Figure 5: Cash Flow Projections under Optimistic Scenario with Gradual Coverage of Iraqi Fuel Costs

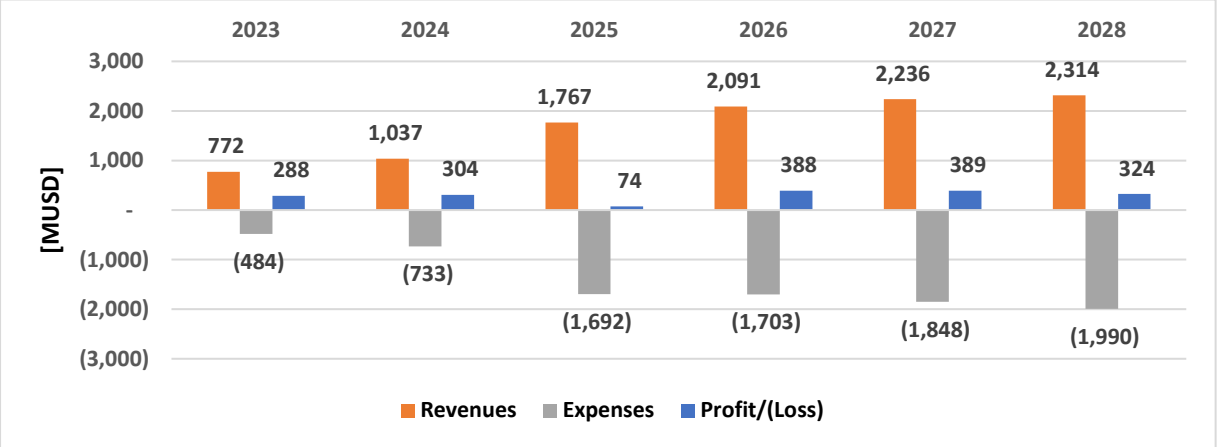


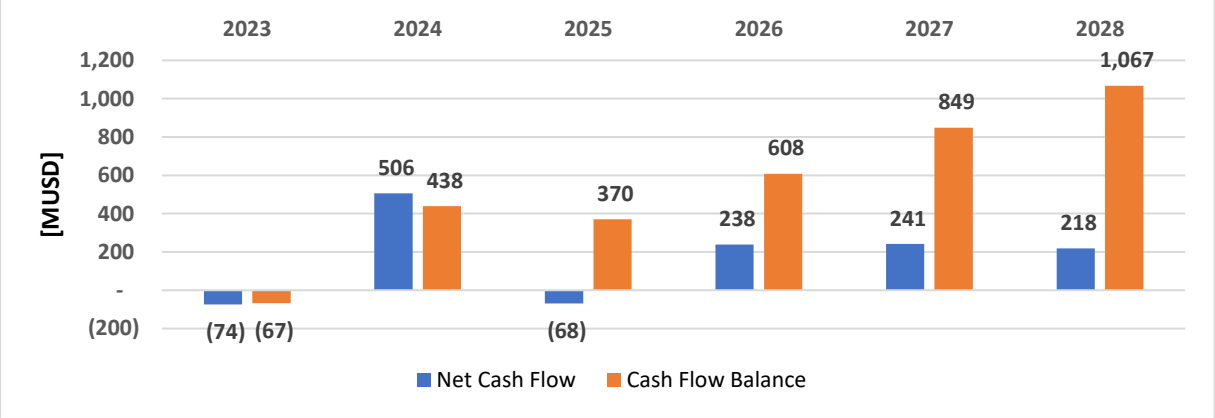
Table 9: Cash Flow Projections under Ambitious Scenario with Gradual of Iraqi Fuel Costs

Items	year	2023	2024	2025	2026	2027	2028
Revenues	**MUSD**	**412**	**1,330**	**1,708**	**2,020**	**2,163**	**2,240**
Electricity Sales	MUSD	397	1,308	1,666	1,969	2,107	2,180
Electricity New Subscriptions	MUSD	-	0.5	2.9	5.9	6.0	6.1
Arrears & Orders for Collections	MUSD	16	21	40	45	51	55
Other Receivables	**MUSD**	**-**	**-**	**50**	**50**	**50**	**-**
Grants	MUSD	-	-	-	-	-	-
Loans	MUSD	-	-	**50**	**50**	**50**	-
Expenses	**MUSD**	**(483)**	**(730)**	**(1,686)**	**(1,692)**	**(1,833)**	**(1,974)**
Generation Cost	MUSD	(250)	(494)	(1,503)	(1,505)	(1,642)	(1,779)
Transmission Cost	MUSD	(26)	(27)	(28)	(30)	(31)	(33)
Distribution Cost	MUSD	(59)	(61)	(109)	(113)	(116)	(120)
Administrative Cost	MUSD	(27)	(27)	(25)	(23)	(21)	(20)
Miscellaneous Cost	MUSD	(20)	(21)	(21)	(22)	(22)	(22)
Internal Debts	MUSD	(101)	(101)	-	-	-	-
Adjustments	**MUSD**	**40**	**43**	**46**	**50**	**55**	**60**
Depreciation	***MUSD***	**40**	**43**	**46**	**50**	**55**	**60**
Generation	*MUSD*	28	28	28	30	32	34
Transmission	*MUSD*	5	6	7	8	9	10
Distribution	*MUSD*	7	8	10	12	14	15
Financial Cost	**MUSD**	**(44)**	**(136)**	**(186)**	**(191)**	**(194)**	**(108)**

[3] Decrease in profits is due to the equivalent increase in coverage of the Iraqi Fuel Agreement reaching full autonomy in 2028.

Items	year	2023	2024	2025	2026	2027	2028
Working Capital Repayment	*MUSD*	(37)	(37)	(37)	(37)	(37)	-
Capital Investments	*MUSD*	-	(91)	(141)	(141)	(141)	(91)
External Loans Repayment	*MUSD*	(7)	(9)	(9)	(13)	(17)	(17)
Net Cash Flow[4]	**MUSD**	**(74)**	**506**	**(68)**	**238**	**241**	**218**
Cash Balance at Beginning of Period	**MUSD**	**7**	**(67)**	**438**	**370**	**608**	**849**
Cash Balance at End of Period	**MUSD**	**(67)**	**438**	**370**	**608**	**849**	**1,067**

Figure 6: Cash Flow Projections under Ambitious Scenario with Gradual Coverage of Iraqi Fuel Costs



b. EDL's Base-case Scenarios (excluding required temporary Government's support)

94. The Base-case Scenarios developed by EDL were crafted with a deep understanding of Lebanon's current financial situation and political landscape. This includes an assessment of EDL's capacity to implement Non-Technical Loss (NTL) campaigns or initiate electricity cuts for customers, which are not paying their bills. These scenarios are designed to align with EDL's operational capabilities while addressing the challenges posed by the broader economic and political environment in Lebanon. Two scenarios were studied: Base-case Scenarios "with Iraqi fuel cost coverage" and "without Iraqi fuel cost coverage." Further details and insights into these scenarios can be found in Appendix #3.

Income and Cash Flow Statements for the Base-case Scenario

95. The income and cash flow statements for EDL spanning from 2023 to 2028 reflect a notable positive trajectory in the utility's financial health, primarily attributable to the strategic adoption of reforms, particularly the implementation of the new tariff initiated in 2022. The restructured tariff has facilitated

[4] Decrease in cash flow is due to the equivalent increase in coverage of the Iraqi Fuel Agreement reaching full autonomy in 2028.

improved cost recovery, empowering EDL to effectively meet its operational and capital expenditures and generate a positive cash flow. This extra financial flexibility will enable EDL to further solidify its autonomy from government transfers, which were once a critical source of funding for the company.

Base-case with Full Coverage of Iraqi Fuel Costs Scenario

Table 10: Profit/Loss Projections under Base Case Scenario with Full Coverage of Iraqi Fuel Costs

Items	year	2023	2024	2025	2026	2027	2028
Revenues	**MUSD**	**772**	**868**	**1,150**	**1,267**	**1,314**	**1,358**
Electricity Sales	MUSD	772	868	1,147	1,261	1,308	1,352
Electricity New Subscriptions	MUSD	-	0.5	2.9	5.9	6.0	6.1
Expenses	**MUSD**	**(1,024)**	**(1,102)**	**(1,310)**	**(1,318)**	**(1,325)**	**(1,329)**
Generation Cost (incl. Dep.)	MUSD	(250)	(325)	(856)	(858)	(995)	(1,133)
Transmission Cost (incl. Dep.)	MUSD	(26)	(26)	(26)	(27)	(27)	(28)
Distribution Cost (incl. Dep.)	MUSD	(59)	(60)	(105)	(107)	(109)	(111)
Administrative Cost	MUSD	(27)	(27)	(25)	(23)	(21)	(20)
Miscellaneous Cost	MUSD	(20)	(21)	(21)	(22)	(22)	(22)
Internal Debts Payment	MUSD	(101)	(101)	-	-	-	-
Loan Interests	MUSD	(1)	(3)	(7)	(11)	(15)	(15)
A portion of the Iraqi fuel was paid for by the Gov. in the partial coverage scenario, while in this scenario it is paid for by EDL[5]		(540)	(540)	(270)	(270)	(135)	-
Profit/(Loss)	**MUSD**	**(252)**	**(234)**	**(160)**	**(51)**	**(11)**	**29**

Figure 7: Profit/Loss Projections under Base Case Scenario with Full Coverage of Iraqi Fuel Costs

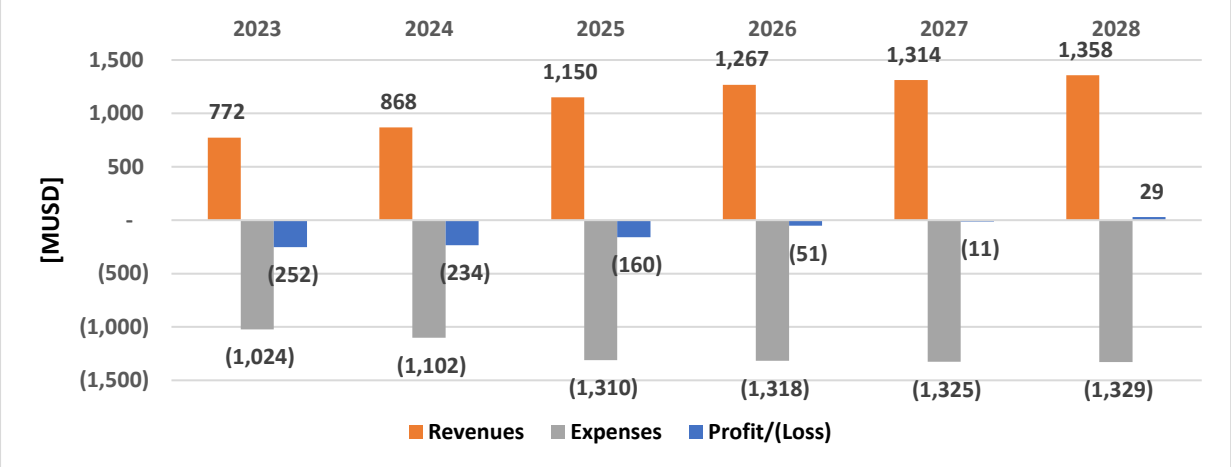


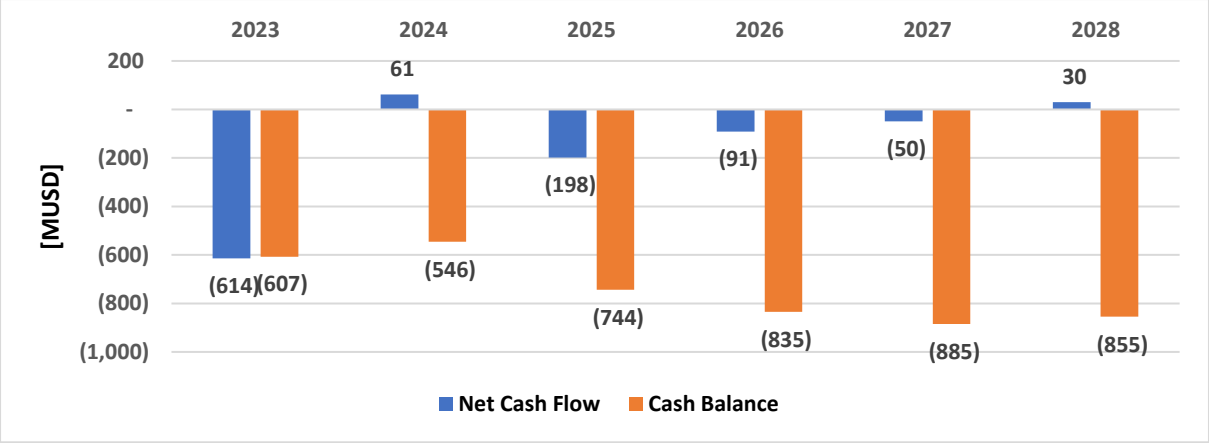
Table 11: Cash Flow Projections under Base Case Scenario with Full Coverage of Iraqi Fuel Costs

[5] With Reference to MOEW Letter No. 4844 Dated 29/06/2022 and EDL Letters No. 183 Dated 10/01/2024 and No. 403 Dated 23/01/2024 and the MOEW response No. 884 dated 19/3/2024. Where the Ministry of Energy and Water (MOEW) has indicated that the renewed contract between the government of Lebanon and the Iraqi government this year, for the third time, allowing for the supply of Iraqi heavy fuel oil under the SWAP agreement, has been amended regarding the quantity. It has now been increased to 1.5 million tons annually, compared to the previously agreed-upon 1 million tons annually. The cost of one million tons from this quantity will be covered by the government as per the hereabove mentioned Minister of Energy and Water letter. In addition, the clause concerning the payment method through the services provided by the Lebanese government to the Iraqi government has not been amended and remains unchanged (In kind).

Items	year	2023	2024	2025	2026	2027	2028
Revenues	**MUSD**	**412**	**1,165**	**1,110**	**1,223**	**1,270**	**1,315**
Electricity Sales	MUSD	397	1,148	1,082	1,190	1,234	1,276
Electricity New Subscriptions	MUSD	-	0.5	2.9	5.9	6.0	6.1
Arrears & Orders for Collections	MUSD	16	17	25	27	30	33
Other Receivables	**MUSD**	**-**	**-**	**50**	**50**	**50**	**-**
Grants	MUSD	-	-	-	-	-	-
Loans	MUSD	-	-	**50**	**50**	**50**	-
Expenses	**MUSD**	**(1,023)**	**(1,099)**	**(1,303)**	**(1,307)**	**(1,310)**	**(1,314)**
Generation Cost	MUSD	(250)	(325)	(856)	(858)	(995)	(1,133)
Transmission Cost	MUSD	(26)	(26)	(26)	(27)	(27)	(28)
Distribution Cost	MUSD	(59)	(60)	(105)	(107)	(109)	(111)
Administrative Cost	MUSD	(27)	(27)	(25)	(23)	(21)	(20)
Miscellaneous Cost	MUSD	(20)	(21)	(21)	(22)	(22)	(22)
Internal Debts		(101)	(101)	-	-	-	-
A portion of the Iraqi fuel was paid for by the Gov. in the partial coverage scenario, while in this scenario it is paid for by EDL	MUSD	(540)	(540)	(270)	(270)	(135)	-
Adjustments	**MUSD**	**40**	**40**	**40**	**42**	**44**	**46**
Depreciation	***MUSD***	**40**	**40**	**40**	**42**	**44**	**46**
Generation	*MUSD*	28	28	28	30	32	34
Transmission	*MUSD*	5	5	5	5	5	5
Distribution	*MUSD*	7	7	7	7	7	7
Financial Cost	**MUSD**	**(44)**	**(46)**	**(95)**	**(100)**	**(103)**	**(17)**
Working Capital Repayment	*MUSD*	(37)	(37)	(37)	(37)	(37)	-
Capital Investments	*MUSD*	-	-	(50)	(50)	(50)	-
External Loans Repayment	*MUSD*	(7)	(9)	(9)	(13)	(17)	(17)
Net Cash Flow (excluding MOF support)[6]	**MUSD**	**(614)**	**61**	**(198)**	**(91)**	**(50)**	**30**
Cash Balance at Beginning of Period	**MUSD**	**7**	**(607)**	**(546)**	**(744)**	**(835)**	**(885)**
Cash Balance at End of Period	**MUSD**	**(607)**	**(546)**	**(744)**	**(835)**	**(885)**	**(855)**

Figure 8: Cash Flow Projections under Base Case Scenario with Full Coverage of Iraqi Fuel Costs

[6] With Reference to MOEW Letter No. 4844 Dated 29/06/2022 and EDL Letters No. 183 Dated 10/01/2024 and No. 403 Dated 23/01/2024 and the MOEW response No. 884 dated 19/3/2024. Where the Ministry of Energy and Water (MOEW) has indicated that the renewed contract between the government of Lebanon and the Iraqi government this year, for the third time, allowing for the supply of Iraqi heavy fuel oil under the SWAP agreement, has been amended regarding the quantity. It has now been increased to 1.5 million tons annually, compared to the previously agreed-upon 1 million tons annually. The cost of one million tons from this quantity will be covered by the government as per the hereabove mentioned Minister of Energy and Water letter. In addition, the clause concerning the payment method through the services provided by the Lebanese government to the Iraqi government has not been amended and remains unchanged (In kind).



Base-case with Gradual Coverage of Iraqi Fuel Costs Scenario

Table 12: Profit/Loss Projections under Base Case Scenario with Gradual Coverage of Iraqi Fuel Costs

Items	**year**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**
Revenues	**MUSD**	**772**	**868**	**1,150**	**1,267**	**1,314**	**1,358**
Electricity Sales	MUSD	772	868	1,147	1,261	1,308	1,352
Electricity New Subscriptions	MUSD	-	0.5	2.9	5.9	6.0	6.1
Expenses	**MUSD**	**(484)**	**(562)**	**(1,040)**	**(1,048)**	**(1,190)**	**(1,329)**
Generation Cost (incl. Dep.)	MUSD	(250)	(325)	(856)	(858)	(995)	(1,133)
Transmission Cost (incl. Dep.)	MUSD	(26)	(26)	(26)	(27)	(27)	(28)
Distribution Cost (incl. Dep.)	MUSD	(59)	(60)	(105)	(107)	(109)	(111)
Administrative Cost	MUSD	(27)	(27)	(25)	(23)	(21)	(20)
Miscellaneous Cost	MUSD	(20)	(21)	(21)	(22)	(22)	(22)
Internal Debts Payment	MUSD	(101)	(101)	-	-	-	-
Loan Interests	MUSD	(1)	(3)	(7)	(11)	(15)	(15)
Profit/(Loss)[7]	**MUSD**	**288**	**306**	**110**	**219**	**123**	**29**

Figure 9: Cash Flow Projections under Base Case Scenario with Gradual Coverage of Iraqi Fuel Costs

[7] Decrease in profits is due to the equivalent increase in coverage of the Iraqi Fuel Agreement reaching full autonomy in 2028.

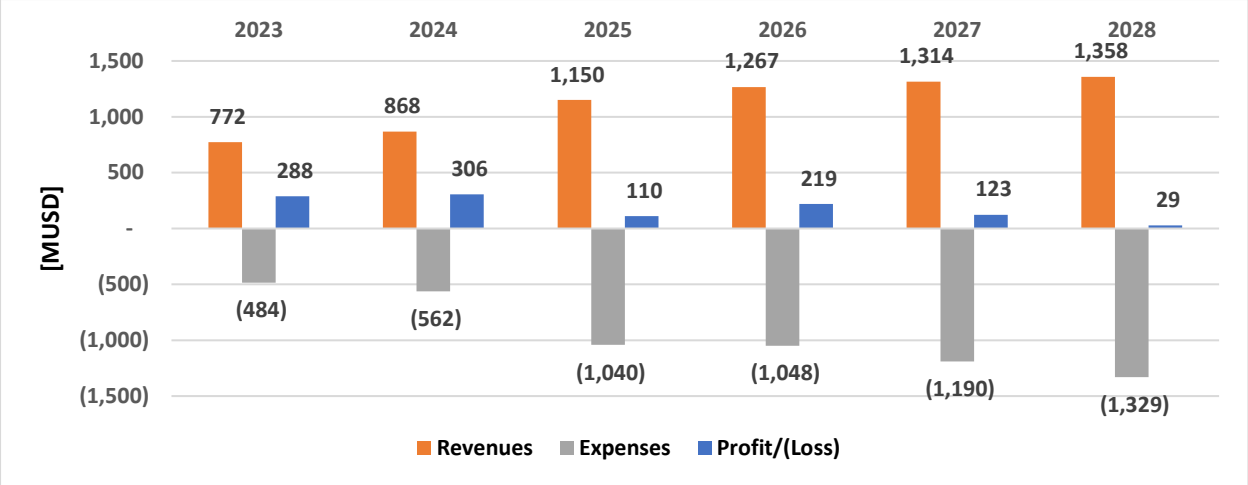


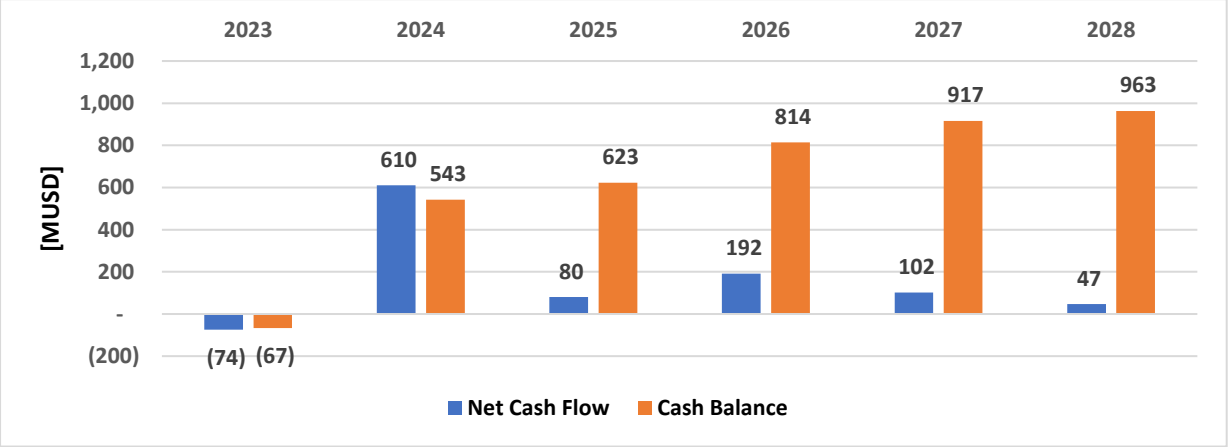
Table 13: Cash Flow Projections under Base Case Scenario with Gradual Coverage of Iraqi Fuel Costs

Items	**year**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**
Revenues	**MUSD**	**412**	**1,165**	**1,110**	**1,223**	**1,270**	**1,315**
Electricity Sales	MUSD	397	1,148	1,082	1,190	1,234	1,276
Electricity New Subscriptions	MUSD	-	0.5	2.9	5.9	6.0	6.1
Arrears & Orders for Collections	MUSD	16	17	25	27	30	33
Other Receivables	**MUSD**	**-**	**-**	**50**	**50**	**50**	**-**
Grants	MUSD	-	-	-	-	-	-
Loans	MUSD	-	-	50	50	50	-
Expenses	**MUSD**	**(483)**	**(559)**	**(1,034)**	**(1,037)**	**(1,175)**	**(1,314)**
Generation Cost	MUSD	(250)	(325)	(856)	(858)	(995)	(1,133)
Transmission Cost	MUSD	(26)	(26)	(26)	(27)	(27)	(28)
Distribution Cost	MUSD	(59)	(60)	(105)	(107)	(109)	(111)
Administrative Cost	MUSD	(27)	(27)	(25)	(23)	(21)	(20)
Miscellaneous Cost	MUSD	(20)	(21)	(21)	(22)	(22)	(22)
Internal Debts	MUSD	(101)	(101)	-	-	-	-
Adjustments	**MUSD**	**40**	**40**	**40**	**42**	**44**	**46**
Depreciation	***MUSD***	**40**	**40**	**40**	**42**	**44**	**46**
Generation	*MUSD*	28	28	28	30	32	34
Transmission	*MUSD*	5	5	5	5	5	5
Distribution	*MUSD*	7	7	7	7	7	7
Financial Cost	**MUSD**	**(44)**	**(37)**	**(87)**	**(87)**	**(87)**	**-**
Working Capital Repayment	*MUSD*	(37)	(37)	(37)	(37)	(37)	-
Capital Investments	*MUSD*	-	-	(50)	(50)	(50)	-
External Loans Repayment	*MUSD*	(7)	(9)	(9)	(13)	(17)	(17)
Net Cash Flow[8]	**MUSD**	**(74)**	**610**	**80**	**192**	**102**	**47**
Cash Balance at Beginning of Period	**MUSD**	**7**	**(67)**	**543**	**623**	**814**	**917**

[8] Decrease in cash flow is due to the equivalent increase in coverage of the Iraqi Fuel Agreement reaching full autonomy in 2028.

Items	year	2023	2024	2025	2026	2027	2028
Cash Balance at End of Period	MUSD	(67)	543	623	814	917	963

Figure 10: Cash Flow Projections under Base Case Scenario with Gradual Coverage of Iraqi Fuel Costs



96. These financial documents highlight significant results and demonstrate the utility's ability and commitment to maintaining a strong cost recoverability ratio, thereby solidifying its financial standing. The newly available resources will be directed towards strategic investments, including expanding generation capacity according to the transmission master plan, reducing losses, and completing the smart meter grid along with the implementation of the AMI center. This will ensure a more consistent and reliable electricity supply for Lebanon's population.

97. The utility's adoption of reformative policies will lead to several positive outcomes, as detailed and explained in Section "Ten Key Indicators to be Monitored."

- **Enhanced Cost Recoverability:** The revised tariff has aligned electricity prices with actual production costs, enabling EDL to cover its operational expenses and avoid accumulating debts, affirming its sustainability in the long term.
- **Positive Cash Flow:** The improved cost recoverability has resulted in a positive cash flow for EDL, allowing the utility to gradually operate without relying on government subsidies.
- **Independence from Government Transfers:** The reduced need for government support has enabled the Lebanese government to divert resources towards other critical sectors.
- **Investments in Generation Capacity:** The freed-up funds are being invested in expanding generation capacity, addressing Lebanon's power shortages.
- **Improved Electricity Reliability:** The enhanced generation capacity will lead to a more stable and reliable electricity supply for Lebanese households and businesses.

98. In conclusion, the transformative shift in EDL's financial trajectory, resulting from the implemented reforms, has marked a commendable turning point for the utility. It has transitioned from a financially challenged entity to a self-sustaining provider of electricity services. This newfound stability will contribute to Lebanon's economic recovery and improve living conditions for its citizens.

VII. Sensitivity analysis

99. Conducting a sensitivity analysis for key components of EDL reforms, specifically tariff modification and system loss reduction, is essential for a comprehensive understanding of their impact on the utility's financial sustainability.

100. The tariff change sensitivity analysis involves examining how variations of 1 USc/kWh at different tariff block levels affect revenue and consumer affordability. Striking the right balance is crucial to ensure EDL covers operational costs without placing an undue burden on consumers.

Table 14: Impact of Tariff Changes on Revenues: Ambitious Scenario

Each 1 USC/kWh	Year	2023	2024	2025	2026	2027	2028
At Subsidized Block	MUSD	13.60	13.74	13.87	14.15	14.43	14.72
At Regular Block	MUSD	17.50	26.29	56.26	60.68	65.60	67.23

Table 15: Impact of Tariff Changes on Revenues: Baseline Scenario

Each 1 USC/kWh	Year	2023	2024	2025	2026	2027	2028
At Subsidized Block	MUSD	13.60	13.74	13.87	14.15	14.43	14.72
At Regular Block	MUSD	17.50	18.57	30.72	31.60	33.14	34.37

101. Simultaneously, analyzing the sensitivity of system loss reduction initiatives involves assessing how improvements of 1 percent at energy transmission and distribution levels affect revenue.

Table 16: Impact of System Loss Reduction on Revenues: Ambitious Scenario

Each 1 %	Year	2023	2024	2025	2026	2027	2028
At System Level	MUSD	14.85	17.21	27.80	28.39	29.26	29.53

Table 17: Impact of System Loss Reduction on Revenues: Baseline Scenario

Each 1 %	Year	2023	2024	2025	2026	2027	2028
At System Level	MUSD	14.85	17.21	27.80	28.39	29.26	29.53

102. This analytical approach allows EDL to make informed decisions, adapting strategies that strike a harmonious equilibrium between financial viability, consumer welfare, and system efficiencies.

A. Subsequent Tariff Adjustments

103. In the wake of its transformative reforms, EDL has implemented measures between the regular base tariff reviews, which usually require political decisions, to strengthen its financial resilience (EDL BoD Decision No. 300-19/2022 dated 05/08/2022). Notably, EDL has incorporated a dynamic fuel adjustment process into its tariff structure. This mechanism, currently being finalized with its Board of Directors, will enable the utility to navigate the unpredictable terrain of fuel price fluctuations (EDL BoD Decision No. 420-26/2022 dated 03/11/2022). This forward-thinking approach allows EDL to pass on the impact of fuel cost changes directly to consumers, ensuring a more responsive and sustainable tariff system.

104. Furthermore, EDL has introduced an integrated indexation mechanism to address the challenges posed by exchange rate fluctuations and inflation. By linking the tariff to either the dynamic SAYRAFA Platform or the soon-to-be-established utility-specific exchange rate platform for electricity services, both set by the Lebanese Central Bank (BDL) and regularly updated, EDL can proactively adjust its pricing structures in the local currency to align with prevailing market conditions.

105. In parallel, EDL has actively engaged with relevant stakeholders, including the Ministry of Finance, the Lebanese Central Bank (BDL), and the Court of Legislation and Opinions at the Ministry of Justice, to mitigate the risk from local currency fluctuations. This is achieved by issuing its electricity invoices in foreign currency (US Dollars) and offering subscribers the option to settle their invoices in foreign currency as well (a fresh USD account was opened as indicated in the BDL letter no. 10/18 dated 19/1/2024).

106. This dual strategy of fuel adjustment and integrated indexation positions EDL as a financially agile entity, capable of adapting to the complexities of energy markets and economic dynamics while preserving its financial stability.

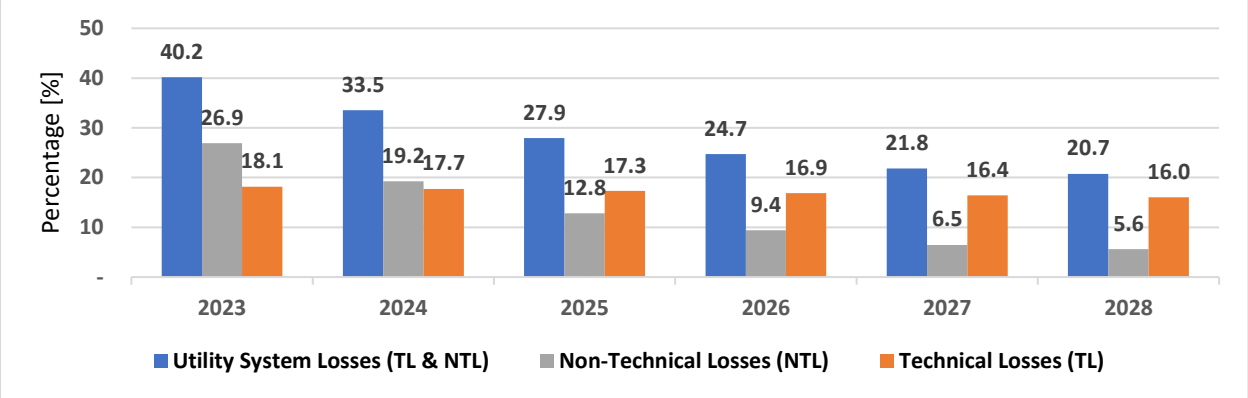
VIII. Expected Results

A. Targets: System Losses Reduction Plan (Ambitious Scenario)

Table 18: System Loss Reduction Targets under Ambitious Scenario

Loss Type	2023	2024	2025	2026	2027	2028
Total Network Losses	40.2%	33.5%	27.9%	24.7%	21.8%	20.7%
Transmission Technical Losses	5.7%	5.5%	5.4%	5.2%	5.1%	5.0%
Distribution Technical Losses	13.2%	12.8%	12.5%	12.2%	11.9%	11.6%
Distribution Non-Technical Losses	26.9%	19.2%	12.8%	9.4%	6.4%	5.6%

Figure 11: Loss Reduction Plan under Ambitious Scenario

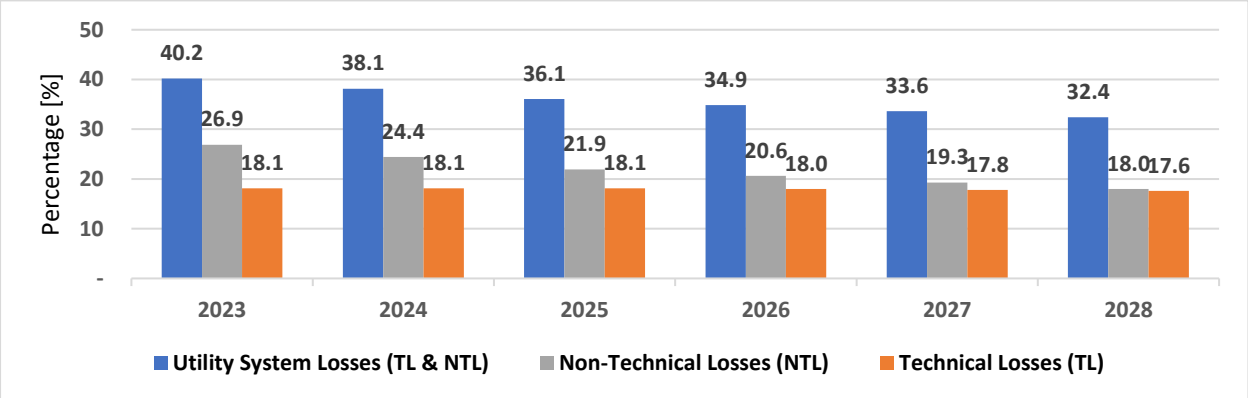


B. Targets: System Losses Reduction Plan (EDL's Base Case Scenario)

Table 19: System Loss Reduction Targets under Base Case Scenario

Loss Type	2023	2024	2025	2026	2027	2028
Total Network Losses	40.2%	38.1%	36.1%	34.9%	33.6%	32.42%
Transmission Technical Losses	5.7%	5.7%	5.7%	5.7%	5.7%	5.7%
Distribution Technical Losses	13.2%	13.2%	13.2%	13%	12.8%	12.6%
Distribution Non-Technical Losses	26.9%	24.4%	21.9%	20.6%	19.3%	18.00%

Figure 12: Loss Reduction Plan under Base Case Scenario



C. Targets: Commercial Losses Reduction Plan

107. In a proactive move to enhance financial sustainability and address the persistent issue of arrears collection, EDL's Board of Directors recently undertook a significant amendment to its bylaws. Recognizing the importance of maintaining a stable revenue stream to support its operations and investments, the board introduced a pivotal policy change. Specifically, the amendment in its Decisions No. 334-21/2022 Dated 06/09/2022 and No. 284-15/2022 Dated 30/06/2022, introduces a monthly fine mechanism, of 1 percent on overdue payments (not to exceed 15 percent) under penalty of disconnection of electricity supply. This strategic initiative aims not only to encourage timely payments but also to deter prolonged arrears, ultimately fostering a more robust financial framework for EDL.

Table 20: Recovery Rate of New Tariff Arrears[9]

Year	2023	2024	2025	2026	2027	2028
New Tariff Arrears Recoverability	30%	32%	34%	36%	38%	40%

D. Action Plan

Table 21: Loss Reduction Action Plan

Timeline	Loss Reduction Target Ambitious	Loss Reduction Target Baseline	Action Plan
2023	<40%	<40%	• Circuit Breakers installation for pending Subscription applications. ○ Distribution Service Providers (DSPs) proceeded with the installation of the Circuit Breakers as per EDL BoD Decisions mainly Decision No. 184-11/2022 Dated 19/05/2022. • Installation of Meters for all Syrian Displaced Camps (900 Meters) and all Palestinian Refugees Camps.

[9] Recovering the arrears that were not paid in the previous year, especially after the new tariff has been introduced.

<table>
<tr><th>Timeline</th><th>Loss Reduction Target Ambitious</th><th>Loss Reduction Target Baseline</th><th>Action Plan</th></tr>
<tr><td>2024</td><td><34%</td><td><38%</td><td rowspan="4">

Distribution Service Providers (DSPs) have installed meters on the relevant feeders that supply the camps which will be used in billing the consumption of both Syrian and Palestinian camps. (EDL letter to CoM No. 5150 Dated 14/11/2023).

Continuous Infringements Removal Campaigns (Reduction of Non-Technical Losses) in accordance with EDL BoD Decision No. 484-30/2022 Dated 20/12/2022, and in coordination with the Distribution Service Providers (DSPs), escorted by Military and Security forces, whereby:

EDL provides sworn officers to join the campaigns.
EDL coordinates with all stakeholders (Ministry of Interior and Municipalities, Ministry of Defense, Ministry of Justice, Internal Security Forces, Lebanese Army, Lebanese Central Bank, etc.) to ensure perpetual support for the ongoing campaigns as per its letter No. 118 dated 17/01/2022.
Distribution Service Providers (DSPs) provide all logistics (Vehicles, Technical teams, and all necessary equipment, etc.).
Distribution Service Providers (DSPs) set all workplans based on their data analysis and site survey reports of the concerned military and security forces in charge.
EDL ensures the issuance of Tickets (PVs) in case of violations in accordance with EDL recent BoD Decisions No. 426-23/2023 Dated 25/09/2023 and follows up on all related business procedures.

To note that any lack of commitment from anyone of the concerned stakeholders involved in the process will jeopardize the Infringements Removal Campaigns rendering
</td></tr>
<tr><td>2025</td><td><28%</td><td><36%</td></tr>
<tr><td>2026</td><td><25%</td><td><35%</td></tr>
<tr><td>2027</td><td><22%</td><td><34%</td></tr>
</table>

Timeline	Loss Reduction Target Ambitious	Loss Reduction Target Baseline	Action Plan

2028	**<21%**	**<32%**	*them unable to achieve the set targets as per the plans set by EDL and the DSPs.*
			• Maintaining an ensuring a stable revenue stream for EDL through a series of continuous bylaws amendment and constant policies adjustments introduced by the Utility's General Directorate and Board of Directors (BoD) especially:
			  ◦ BoD Decision No. 184-11/2022 Dated 19/05/2022, which resolves the issue of pending subscription applications in case of meter shortages to be installed by:
			  ▪ Allowing the installation of Breakers until the availability and installation of meters
			  ▪ Issuing monthly Invoices according to the subscription type's equivalent estimated consumption table.
			  ◦ BoD Decisions No. 334-21/2022 Dated 06/09/2022 and No. 284-15/2022 Dated 30/06/2022, which amends the arrears mechanism by basically:
			  ▪ Instilling a monthly fine mechanism, of 1% on overdue payments (not to exceed 15%), under penalty of disconnection of electricity supply.
			  ◦ BoD Decision No. 293-16/2023 Dated 22/06/2023, which increases tenfold all electricity related transactions.
			  ◦ BoD Decisions No. 375-19/2023 Dated 10/08/2023, No. 430-23/2023 Dated 25/09/2023, and No. 512-26/2023 Dated 02/11/2023, which establishes a mechanism for estimating monthly consumptions for the special cases where electricity is drawn via open Tickets or Breakers:
			  ▪ Palestinian Refugee Camps
			  ▪ Syrian Displaced Camps

Timeline	Loss Reduction Target Ambitious	Loss Reduction Target Baseline	Action Plan
			▪ Other Special Cases • BoD Decisions No. 496-26/2023 Dated 02/11/2023 and No. 429-23/2023 Dated 25/09/2022, which amends the ani-violation and electricity theft mechanism, whereby upon violation: ▪ A compensation fine is paid amounting to $100 for Single phased subscriptions and $300 for Three phased Subscriptions. ▪ Estimated consumption is priced at the highest adopted tariff block. • General Directorate Memos Dated 21/11/2023 and Dated 01/12/2023, regarding the separation of arrears based on the old tariff from those based on the new Tariff.

IX. Anticipated Risks and Challenges

108. EDL may face several anticipated risks and challenges on multiple tracks through the implementation of its cost-recovery model, despite ongoing comprehensive reforms.

A. Ministry of Finance

109. The inability of the MOF to allocate the necessary funds in the state budgets or to financially support bill payment by public administrations and/or establishments poses a critical challenge to the cost-recovery process.

B. Lebanese Central Bank (BDL)

110. The lack of access to foreign currency, coupled with the non-committal stance of the Lebanese central bank in adopting and updating the utility-specific exchange rate platform (SAYRAFA or otherwise), poses a major obstacle to EDL cost-recovery model as its capacity to procure essential resources, including fuel and payment of its operators and service providers, is severely compromised. The absence of a reliable and updated exchange rate platform undermines the predictability of tariff adjustments, hindering EDL's ability to align its revenues with escalating operational costs.

C. Palestinian Refugees camps and Syrian displaced Camps

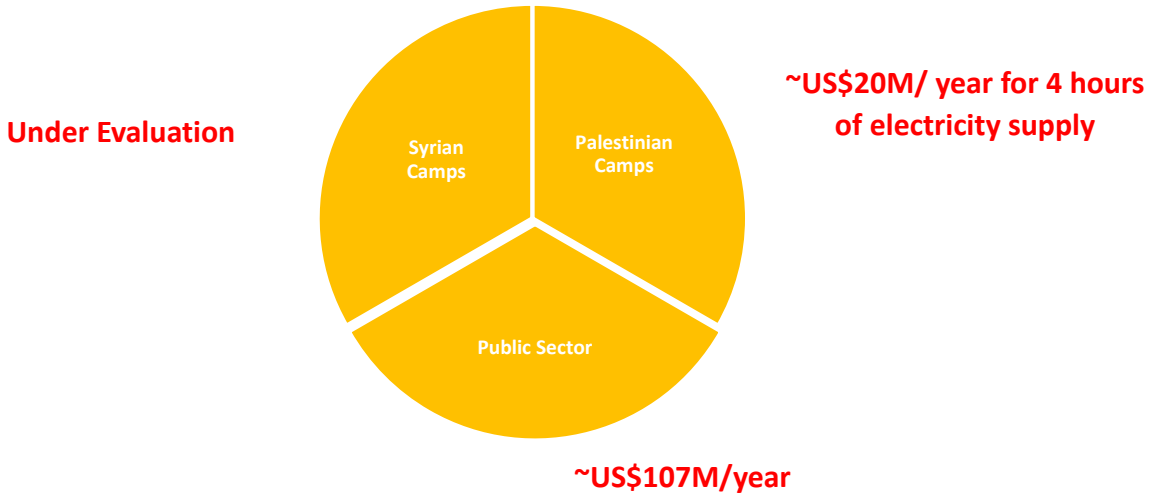
111. The non-payment of electricity dues by Palestinian refugees camps and Syrian displaced camps significantly jeopardizes EDL cost-recovery model. As these populations struggle with displacement and economic challenges, their inability to meet electricity payment obligations places an additional strain on EDL's financial sustainability. The accumulation of unpaid bills disrupts the revenue stream crucial for covering operational costs and implementing necessary upgrades. This scenario also exacerbates the burden on other consumer segments, potentially leading to an imbalance in the cost-recovery equation. Addressing this issue requires a nuanced approach, involving targeted assistance programs or international collaborations of both UNRWA and UNHCR to alleviate the financial constraints faced by

displaced communities and ensures a more equitable and sustainable contribution to EDL's cost-recovery efforts.

D. Public Administrations & Public Establishments

112. The non-cooperation of the Lebanese public administrations and public establishments in settling their electricity dues poses a substantial threat to EDL's cost-recovery model. Given that these entities constitute a significant portion of the subscriber base, their failure to fulfill payment obligations directly undermines EDL's financial stability.

Figure 13: Large Public Consumers



E. Ministry of Defense and Ministry of Interior & Municipalities

113. Any waned active support, or any decline in military and security escorts during infringement removal campaigns on all Lebanese territories or during the installation of smart meters in certain sensitive areas or even the absence of support in reducing thefts of EDL infrastructure poses a major risk on the cost-recovery process.

F. Ministry of Justice

114. The incapacity to speed up the processing time of legal cases related to electricity tickets resulting from the infringement removal campaigns also challenges the cost-recovery process.

G. Political and Economic Instability

115. Another risk lies in the political and economic stability of the region. EDL's cost-recovery model is sensitive to broader economic conditions, including currency fluctuations and inflation rates. Economic downturns or political instability can adversely impact consumers' ability to pay higher tariffs and disrupt the cost-recovery process.

H. Social and Media

116. Potential resistance from consumers to tariff adjustments and infringement removal campaigns as transitioning to cost-reflective tariffs might lead to public dissatisfaction, protests, or political backlash, particularly if not accompanied by effective communication strategies either through the active participation of the various Media channels and the Ministry of Information, explaining the necessity and benefits of such adjustments.

I. International Financing

117. Access to financing for capital-intensive projects poses an ongoing challenge. EDL's ability to secure funding for infrastructure improvements and sustainable energy initiatives is contingent on its creditworthiness and the availability of external funding sources. Economic downturns or changes in global financing conditions could limit EDL's capacity to invest in necessary upgrades.

118. Addressing these risks and challenges requires a resilient and adaptive approach, with ongoing monitoring, effective communication, and a commitment to sustainable practices, both operationally and financially. Continuous collaboration with stakeholders, including consumers, government bodies, and international agencies, is crucial to navigating the complexities of EDL's cost-recovery model successfully.

X. Key Monitoring Indicators

119. Regular assessment of the following indicators will provide valuable insights into the health and effectiveness of EDL's cost-recovery model, allowing for timely adjustments and strategic planning:

A. Revenue Collection Rate

120. Monitors the percentage of billed revenues that are successfully collected. A high collection rate is indicative of effective billing and payment processes.

B. System Losses Reduction

121. Tracks indicators such as technical and non-technical losses reductions, especially at distribution level. Improvements in system losses contribute to overall cost reduction.

C. Governance and Transparency Measures

122. Monitors adherence to governance reforms (integration of the new public procurement law, and bylaws amendments), transparency in financial reporting (continuous auditing), and the overall accountability of the utility. These factors are critical for building trust among local and international stakeholders and ensuring the long-term success of the cost-recovery model.

D. Generation Efficiency

123. Monitors the use of the most efficient production units (mostly CCGT power plants) generating electricity. Adoption of high efficiency units contributes directly to the electricity generation cost reduction.

E. Debt Management and Financial Health

124. Monitors the level of debt and financial health of the utility. Excessive debt can strain resources and hinder its ability to implement its cost-recovery model effectively.

XI. Acknowledgments of Progress

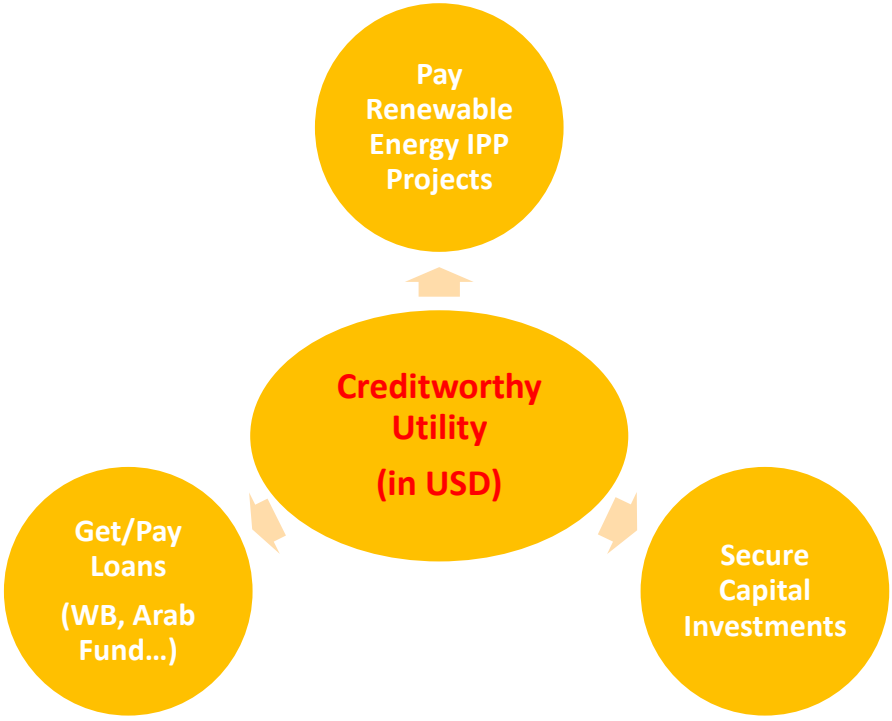
125. Operating under extremely challenging conditions, which included the severely damaged EDL Headquarters and the destruction of NCC, along with the low wages of its employees, EDL continued to persevere. Its unwavering commitment to implementing reforms has not gone unnoticed. The commendable efforts of EDL’s management and staff have garnered praise and recognition from key decision-making bodies. Notably, EDL received:

- Two Ministerial Committee praises (on 21/08/2023 and 01/11/2023, respectively) for the progress in implementing the plan.
- One Ministerial Committee compliment (on 01/11/2023) for the dedication to the plan's execution.

- One Ministerial Committee and one Parliamentary Committee Commendation (on 28/08/2023 and 16/11/2023, respectively) underscored the exceptional dedication and achievements of both EDL's management and staff in overcoming adversity and making progress in their mission.

XI. EDL's Vision: A Path to Creditworthiness and Sustainable Energy

126. EDL envisions becoming a creditworthy utility by implementing sound financial strategies and efficient management practices. This involves securing capital investments to modernize and upgrade its infrastructure, ensuring reliable and sustainable electricity supply to its customers. Additionally, EDL aims to prioritize the payment of renewable energy IPP projects, demonstrating its commitment to transitioning towards cleaner energy sources. To support these initiatives, EDL seeks to access financial support from institutions like the World Bank, Arab Fund, and other international donors, facilitating the necessary funding for its development projects and operational needs.



XII. Conclusions

127. In conclusion, EDL's comprehensive cost recovery plan is a multifaceted strategy aimed at achieving financial sustainability and viability, transforming EDL into a creditworthy utility with a dedicated dollar account at the Central Bank (BDL). This account facilitates the payment of operational costs and investments, fostering confidence among international companies to engage in investments, particularly in renewable energy IPP. The plan aims to establish a transparent cash flow mechanism and a perpetual fund transfer system to secure a stable revenue source for essential operations. Additionally, the plan underscores the importance of addressing outstanding arrears and securing financial support from the government for defaulting and financially challenged public establishments.

128. The financial sustainability aspect involves a meticulous examination of various factors, including tariff setting, revenue streams, financial support mechanisms, and cost management. Notably, EDL's ongoing commitment to reform, as evidenced by tariff restructuring and efficiency improvements, has led to positive outcomes. The utility's financial health has shown a notable positive trajectory, with the restructured tariff facilitating improved cost recovery and generating a positive cash flow.

129. The plan aims to grant EDL financial flexibility, autonomy from government transfers, and the ability to free up resources for strategic investments in expanding generation capacity. This transition positions EDL as a self-sustaining provider of electricity services, contributing significantly to Lebanon's economic recovery and the enhancement of living conditions.

130. While the cost recovery model demonstrates EDL's proactive approach to adapting to market dynamics and economic fluctuations, it is not without risks and challenges. The commitment of various stakeholders, including the Ministry of Finance, Lebanese Central Bank, Palestinian and Syrian camps, public administrations and institutions, and the ISF escorting EDL's inspectors during their NTL campaign, is crucial. Political and economic instability, as well as major challenges facing EDL, such as the decision to stop recruiting new employees and the mass migration of talented professionals since 2019, need to be addressed through ongoing monitoring, effective communication, and collaboration with stakeholders.

131. To gauge the effectiveness of EDL's cost-recovery model, regular monitoring of key indicators, such as revenue collection rates, system loss reduction, governance measures, generation efficiency, and debt management, will be crucial. These indicators will provide insights into the health of the model, allowing for timely adjustments and strategic planning to ensure long-term success. Overall, EDL's transformative and continuous reforms demonstrate the management's commitment to implementing reforms, marking a commendable turning point for EDL as a key player in Lebanon's energy landscape and contributing to the country's economic recovery.

Appendix 1
Financial Model Assumptions

Financial Model Assumptions

In developing the financial model for EDL, it was essential to establish a set of assumptions on multiple levels that will form the foundation of the analysis. The following outlines the model's key assumptions:

- **Combustion unit conversions and pricing:**
  - Pricing for various oil derivatives (and Natural Gas) is based on Based on historical (Platt's) data adjusted to relevant oil type premium and a unite price equal to 1,017 USD/mt for Gas Oil and a unit price equal to 585 USD/mt for Fuel Oil, as adopted in previous financial models and EDL Budget estimates.
  - Conversions between units of measurement are done as per market practice.
  - The cost of the Iraqi swap Agreement is assumed to be gradually transferred to EDL, despite the Higher Lebanese authorities' request not to include this cost in any EDL financial model.

- **Operation and Maintenance:**
  - O&M fees for Power Plants where independent operators exist are as per contractual agreements.
  - O&M fees for Power Plants where no independent operators are available are estimated based on actual expenses in the previous years.

- **Power Purchase Agreements:**
  - PPAs are as per contractual agreements and expected amendments.

- **Natural Gas Imports:**
  - No Natural Gas import is assumed till 2028.

- **Electricity Imports:**
  - No import of electricity is assumed till 2028.
  - Import fees for Jordan electricity are calculated based on the contractual agreement.

- **Grid Size:**
  - EDL and La Kadisha utilities are assumed to constitute 97% of the electrical network.
  - Jbeil and Zahle Concessions are assumed to constitute 3% of the electrical network.

- **Tariff and Subscribers:**
  - An increase of 1% in new subscriptions (both in regular customers and private substations) is assumed till 2025 and is assumed to be increased to 2% till 2028.
  - New Subscription fees for both regular customers and private substations is based on official Currency Rate (15,000 LBP/USD) for the years 2023-2024 and is assumed to be modified and adjusted afterwards to reflect actual market value of the local currency (currently 89,500 LBP/USD).
  - Subsidized consumption is priced at 10 USC/kWh (for the first 100 kWh for LV subscribers).
  - Regular consumption is priced at 27 USC/kWh.
  - Concessions consumption is priced at 21 USC/kWh.
  - Subscription fees for regular customers is priced at 25 USC/A.
  - Subscription fees for private substations is priced at 60 USC/kVA.
  - Recovery rate for arrears is assumed to be 30% initially and improves by 2% per year.
  - A fine for late payment is assumed to be equivalent to 6%.

- **Concessions System Losses:**
  - Concessions (Jbeil and Zahle) System Losses (Technical and Non-Technical Losses) are assumed to be equal to 7%.

- **EDL Human Resources:**
  - EDL reduction in staff is reflected in percentage as per actual data.

- **Financial and Economic metrics:**
  - Inflation in USD is assumed to be equal to 2% per year.
  - Foreign Currency conversions are as per market value.

These assumptions serve as the cornerstone for a comprehensive and reliable financial model, facilitating a more accurate evaluation of EDL's future financial performance.

1. **Additional Assumptions for Baseline Scenario:**

    a. **Capital Investments:**

        i. 150 MW World Bank funded solar farms are assumed to be gradually introduced to the grid as of 2026.

        ii. World Bank Loan of 150 MUSD for solar farms project (150MW) is assumed to be provided.

2. **Additional Assumptions for Ambitious Scenario:**

In addition to all the assumptions for the baseline scenario, the following major assumptions are also considered:

    a. **Capital Investments:**

        i. 195 MUSD worth of investments in the Transmission Network are assumed to be facilitated.

        ii. 280 MUSD worth of investments in the Distribution Network are assumed to be facilitated.

    b. **Renewable Energy IPPS:**

        i. 165 MW solar farm IPPS are assumed to be connected to the grid as of mid-2026.

        ii. Electricity purchased from solar IPP(s) is paid for as per their respective Power Purchase Agreements.

Appendix 2
Financial Model: (Ambitious Scenario)

Variables	yr	2023	2024	2025	2026	2027	2028
Fuels	-	-	-	-	-	-	-
Natural Gas Conversion rate mMBtu to m³	*mmbtu/m³*	*28.263682*	*28.26368*	*28.26368*	*28.26368*	*28.26368*	*28.26368*
Natural Gas Conversion rate m³ to tons	*m³/t*	*0.000829*	*0.000829*	*0.000829*	*0.000829*	*0.000829*	*0.000829*
Crude Oil Barrel Conversion rate to tons	*bbl/t*	*7.33*	*7.33*	*7.33*	*7.33*	*7.33*	*7.33*
Average Brent Crude Oil Unit Price	USD/bbl	95.00	95.00	95.00	95.00	95.00	95.00
Average Iraqi Crude Oil Unit Price	USD/t	696.3500	696.3500	696.3500	696.3500	696.3500	696.3500
Average F.O. Unit Price	USD/t	585.9080	585.9080	585.9080	585.9080	585.9080	585.9080
Average G.O. Unit Price	USD/t	1,017.4320	1,017.4320	1,017.4320	1,017.4320	1,017.4320	1,017.4320
Average N.G. Unit Price	USD/mmbtu	9.9000	9.9000	9.9000	9.9000	9.9000	9.9000
Average N.G. Unit Price	USD/t	422.5245	422.5245	422.5245	422.5245	422.5245	422.5245
Average HSFO Unit Price	USD/t	539.6260	539.6260	539.6260	539.6260	539.6260	539.6260
Fuel Oil HSFO SWAP Conversion Ratio	%	92.10	92.10	92.10	92.10	92.10	92.10
Gas Oil HSFO SWAP Conversion Ratio	%	53.04	53.04	53.04	53.04	53.04	53.04
Fuel Oil CO SWAP Conversion Ratio	%	118.85	118.85	118.85	118.85	118.85	118.85
Gas Oil CO SWAP Conversion Ratio	%	68.44	68.44	68.44	68.44	68.44	68.44
Generation	-	-	-	-	-	-	-
Operation And Maintenance (O&M) - Operators	-	-	-	-	-	-	-
R.E. - Zouk	*USc/kWh*	*1.09*	*1.09*	*1.09*	*1.09*	*1.09*	*1.09*
R.E. - Jieh	*USc/kWh*	*1.09*	*1.09*	*1.09*	*1.09*	*1.09*	*1.09*
Deir Aammar	*USc/kWh*	*1.11*	*1.11*	*1.11*	*1.11*	*1.11*	*1.11*
Zahrani	*USc/kWh*	*1.11*	*1.11*	*1.11*	*1.11*	*1.11*	*1.11*
Power Purchase Agreements	-	-	-	-	-	-	-
Litani River Authority (LRA)	*USc/kWh*	*2.00*	*2.50*	*3.00*	*3.00*	*3.00*	*3.00*
The Phoenician Society of Hydroelectric Forces of Nahr Ibrahim	*USc/kWh*	*2.00*	*2.50*	*3.00*	*3.00*	*3.00*	*3.00*
Solar IPPs	-	-	-	-	-	-	-
Beqaa	*USc/kWh*	-	-	-	*5.70*	*5.70*	*5.70*
Other Regions	*USc/kWh*	-	-	-	*6.27*	*6.27*	*6.27*

Electricity Imports	-	-	-	-	-	-	-
Syria	*USc/kWh*	-	-	-	-	-	-
Egypt	*USc/kWh*	-	-	-	-	-	-
Jordan	*USc/kWh*	*12.70*	*12.70*	*12.70*	*12.70*	*12.70*	*12.70*
Tariff Metrics	-	-	-	-	-	-	-
Total Customers (Low Voltage)	**#**	**1,511,022**	**1,526,132**	**1,541,394**	**1,572,221**	**1,603,666**	**1,635,739**
Total Power Rating (LV)	A	45,639,220	46,095,612	46,556,568	47,487,700	48,437,454	49,406,203
Customers' forecasted Increase	*%*	-	*1.00*	*1.00*	*2.00*	*2.00*	*2.00*
Private Substations (Medium & High Voltage)	**#**	**4,706**	**4,753**	**4,801**	**4,897**	**4,995**	**5,094**
Total Power Rating (MV & HV)	kVA	2,028,757	2,049,045	2,069,535	2,110,926	2,153,144	2,196,207
Private Substations' forecasted Increase	*%*	-	*1.00*	*1.00*	*2.00*	*2.00*	*2.00*
Variable Charges	-	-	-	-	-	-	-
Subsidized Consumption [≤ 100 kWh]	USc/kWh	*10.00*	*10.00*	*10.00*	*10.00*	*10.00*	*10.00*
Regular Consumption [>100 kWh]	USc/kWh	*27.00*	*27.00*	*27.00*	*27.00*	*27.00*	*27.00*
Concessions Consumption	USc/kWh	*21.00*	*21.00*	*21.00*	*21.00*	*21.00*	*21.00*
Fixed Charges	-	-	-	-	-	-	-
Customers (Low Voltage)	USc/A	*25.00*	*25.00*	*25.00*	*25.00*	*25.00*	*25.00*
Private Substations (Medium & High Voltage)	USc/kVA	*60.00*	*60.00*	*60.00*	*60.00*	*60.00*	*60.00*
New Subscription Fees	-	-	-	-	-	-	-
Customers (Low Voltage)	*USD/A*	*0.22*	*0.22*	*1.35*	*1.35*	*1.35*	*1.35*
Private Substations (Medium & High Voltage)	*USD/kVA*	*18.54*	*18.54*	*111.24*	*111.24*	*111.24*	*111.24*
Arrears and Orders for Collection	-	-	-	-	-	-	-
Recovery Rate	*%*	*30.00*	*32.00*	*34.00*	*36.00*	*38.00*	*40.00*
Fine	*%*	*6.00*	*6.00*	*6.00*	*6.00*	*6.00*	*6.00*
Grid Size	**%**	**100**	**100**	**100**	**100**	**100**	**100**
Utilities (EoL & La Kadisha) Proportion	%	97.00	97.00	97.00	97.00	97.00	97.00
Concessions (Jbeil & Zahle) Proportion	%	3.00	*3.00*	*3.00*	*3.00*	*3.00*	*3.00*
Losses	-	-	-	-	-	-	-
Utility System Losses (TL & NTL)	**%**	**40.17**	**33.55**	**27.92**	**24.70**	**21.84**	**20.72**
Technical Losses (TL)	%	18.15	17.72	17.30	16.87	16.45	16.02
Transmission Losses	*%*	*5.70*	*5.56*	*5.42*	*5.28*	*5.14*	*5.00*

(TTL)							
Distribution Losses (TDL)	*%*	*13.20*	*12.88*	*12.56*	*12.24*	*11.92*	*11.60*
Non-Technical Losses (NTL)	%	26.90	19.23	12.85	9.41	6.46	5.60
Concessions System Losses (TL & NTL)	**%**	**7.00**	**7.00**	**7.00**	**7.00**	**7.00**	**7.00**
Commercial Losses (Uncollected Bills)	**%**	**5.50**	**5.50**	**5.50**	**5.50**	**5.50**	**5.50**
Financial and Fiscal Metrics	-	-	-	-	-	-	-
USD Inflation	%	-	2.00	2.00	2.00	2.00	2.00
Interest Rate	%	-	-	-	-	-	-
Exchange Rate	EUR/USD	1.09	1.09	1.09	1.09	1.09	1.09
Administrative Metrics	-	-	-	-	-	-	-
Degradation Rate of EoL Staff	%	-	5.8	7.4	6.7	7.8	6.1

Generation Fleet - Capacity	yr	2023	2024	2025	2026	2027	2028
Generation Capacity	**MW**	**647**	**744**	**1,278**	**1,493**	**1,543**	**1,593**
Electricity of Lebanon (EoL)	**MW**	**591**	**694**	**1,227**	**1,277**	**1,327**	**1,377**
Thermal Power Plants (TPP)	***MW***	**-**	**100**	**200**	**200**	**200**	**200**
Zouk	*MW*	*-*	*100*	*200*	*200*	*200*	*200*
Jieh	*MW*	*-*	*-*	*-*	*-*	*-*	*-*
Reciprocating Engine Power Plants (REPP)	***MW***	**-**	**-**	**215**	**215**	**215**	**215**
R.E. - Zouk	*MW*	*-*	*-*	*160*	*160*	*160*	*160*
R.E. - Jieh	*MW*	*-*	*-*	*55*	*55*	*55*	*55*
Combined Cycle Gas Turbine Power Plants (CCGTPP)	***MW***	**585**	**585**	**800**	**800**	**800**	**800**
Deir Aammar	*MW*	*400*	*400*	*400*	*400*	*400*	*400*
Zahrani	*MW*	*185*	*185*	*400*	*400*	*400*	*400*
Open Cycle Gas Turbine Power Plants (OCGTPP)	***MW***	**-**	**-**	**-**	**-**	**-**	**-**
Baalbek	*MW*	*-*	*-*	*-*	*-*	*-*	*-*
Tyr	*MW*	*-*	*-*	*-*	*-*	*-*	*-*
Renewable Energy	***MW***	***6***	***9***	***12***	***62***	***112***	***162***
Hydraulic Power Plants (HPP)	**MW**	**5**	**5**	**9**	**9**	**9**	**9**
Safa	*MW*	-	-	3.5	3.5	3.5	3.5
Al Bared 1	*MW*	3.5	3.5	3.5	3.5	3.5	3.5
Al Bared 2	*MW*	1.5	1.5	1.5	1.5	1.5	1.5
Solar	**MW**	**0**	**0**	**0**	**50**	**100**	**150**
Beirut River Solar Snake (BRSS)	MW	0.1	0.1	0.1	0.1	0.1	0.1
Solar Farms	MW	-	-	-	50	100	150
Biogas	**MW**	**1**	**4**	**4**	**4**	**4**	**4**
Naahmeh Landfill	*MW*	0.7	3.5	3.5	3.5	3.5	3.5
La Kadisha	**MW**	**6**	**6**	**6**	**6**	**6**	**6**
Thermal Power Plants (TPP)	**MW**	-	-	-	-	-	-
Houreiche	*MW*	-	-	-	-	-	-
Hydraulic Power Plants (HPP)	***MW***	**6**	**6**	**6**	**6**	**6**	**6**
Becharre	*MW*	*0.9*	*0.9*	*0.9*	*0.9*	*0.9*	*0.9*
Mar Lichaa	*MW*	*0.8*	*0.8*	*0.8*	*0.8*	*0.8*	*0.8*
Blaouza	*MW*	*2.3*	*2.3*	*2.3*	*2.3*	*2.3*	*2.3*
Abou Ali	*MW*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*
Power Purchase Agreements (PPA)	**MW**	**51**	**51**	**51**	**216**	**216**	**216**
Litani River Authority (LRA)	**MW**	**43**	**43**	**43**	**43**	**43**	**43**
Hydraulic Power Plants (HPP)	***MW***	**43**	**43**	**43**	**43**	**43**	**43**
Markaba	*MW*	7.7	7.7	7.7	7.7	7.7	7.7
Awali	*MW*	24.4	24.4	24.4	24.4	24.4	24.4
Joune	*MW*	10.8	10.8	10.8	10.8	10.8	10.8
The Phoenician Society of Hydroelectric Forces of Nahr Ibrahim	***MW***	**8**	**8**	**8**	**8**	**8**	**8**
Hydraulic Power Plants (HPP)	***MW***	**8**	**8**	**8**	**8**	**8**	**8**
Nahr Ibrahim 1	*MW*	*3.4*	*3.4*	*3.4*	*3.4*	*3.4*	*3.4*
Nahr Ibrahim 2	*MW*	*2.8*	*2.8*	*2.8*	*2.8*	*2.8*	*2.8*
Nahr Ibrahim 3	*MW*	*1.5*	*1.5*	*1.5*	*1.5*	*1.5*	*1.5*
Solar IPPs	***MW***	**-**	**-**	**-**	**165**	**165**	**165**
Solar IPPs - Beqaa	***MW***	**-**	**-**	**-**	**45**	**45**	**45**
Solar IPPs - Other Regions	***MW***	**-**	**-**	**-**	**120**	**120**	**120**
Imports	**MW**	**-**	**-**	**-**	**-**	**-**	**-**
Syria	**MW**	**-**	**-**	**-**	**-**	**-**	**-**
Egypt	**MW**	**-**	**-**	**-**	**-**	**-**	**-**
Jordan	**MW**	**-**	**-**	**-**	**-**	**-**	**-**

Generation Fleet - Operation	yr	2023	2024	2025	2026	2027	2028
Electricity of Lebanon (EoL)	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Thermal Power Plants (TPP)	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Zouk	*h*	*-*	*8,760*	*8,760*	*8,760*	*8,760*	*8,760*
Jieh	*h*	*-*	*-*	*-*	*-*	*-*	*-*
Reciprocating Engine Power Plants (REPP)	**-**	**-**	**-**	**-**	**-**	**-**	**-**
R.E. - Zouk	*h*	*-*	*-*	*8,760*	*8,760*	*8,760*	*8,760*
R.E. - Jieh	*h*	*-*	*-*	*8,760*	*8,760*	*8,760*	*8,760*
Combined Cycle Gas Turbine Power Plants (CCGTPP)	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Deir Aammar	*h*	*8,760*	*8,760*	*8,760*	*8,760*	*8,760*	*8,760*
Zahrani	*h*	*8,760*	*8,760*	*7,183*	*7,183*	*7,183*	*7,183*
Open Cycle Gas Turbine Power Plants (OCGTPP)	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Baalbek	*h*	*-*	*-*	*-*	*-*	*-*	*-*
Tyr	*h*	*-*	*-*	*-*	*-*	*-*	*-*
Renewable Energy	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Hydraulic Power Plants (HPP)	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Safa	*h*	*-*	*-*	8,760	8,760	8,760	8,760
Al Bared 1	*h*	8,760	8,760	8,760	8,760	8,760	8,760
Al Bared 2	*h*	8,760	8,760	8,760	8,760	8,760	8,760
Solar	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Beirut River Solar Snake (BRSS)	h	8,760	8,760	8,760	8,760	8,760	8,760
Solar Farms	h	-	-	-	4,380	8,760	8,760
Biogas	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Naahmeh Landfill	*h*	8,760	8,760	8,760	8,760	8,760	8,760
La Kadisha	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Thermal Power Plants (TPP)	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Houreiche	*h*	*-*	*-*	*-*	*-*	*-*	*-*
Hydraulic Power Plants (HPP)	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Becharre	*h*	*8,760*	*8,760*	*8,760*	*8,760*	*8,760*	*8,760*
Mar Lichaa	*h*	*8,760*	*8,760*	*8,760*	*8,760*	*8,760*	*8,760*
Blaouza	*h*	*8,760*	*8,760*	*8,760*	*8,760*	*8,760*	*8,760*
Abou Ali	*h*	*8,760*	*8,760*	*8,760*	*8,760*	*8,760*	*8,760*
Power Purchase Agreements (PPA)	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Litani River Authority (LRA)	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Hydraulic Power Plants (HPP)	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Markaba	*h*	8,760	8,760	8,760	8,760	8,760	8,760
Awali	*h*	8,760	8,760	8,760	8,760	8,760	8,760
Joune	*h*	8,760	8,760	8,760	8,760	8,760	8,760
The Phoenician Society of Hydroelectric Forces of Nahr Ibrahim	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Hydraulic Power Plants (HPP)	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Nahr Ibrahim 1	*h*	*8,760*	*8,760*	*8,760*	*8,760*	*8,760*	*8,760*
Nahr Ibrahim 2	*h*	*8,760*	*8,760*	*8,760*	*8,760*	*8,760*	*8,760*
Nahr Ibrahim 3	*h*	*8,760*	*8,760*	*8,760*	*8,760*	*8,760*	*8,760*
Solar IPPs	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Solar IPPs - Beqaa	***h***	**-**	**-**	**-**	**4,380**	**8,760**	**8,760**
Solar IPPs - Other Regions	***h***	**-**	**-**	**-**	**4,380**	**8,760**	**8,760**
Imports	**h**	**-**	**-**	**-**	**-**	**-**	**-**
Syria	**h**	**-**	**-**	**-**	**-**	**-**	**-**
Egypt	**h**	**-**	**-**	**-**	**-**	**-**	**-**

Jordan	h	-	-	-	-	-	-

Electricity Production	yr	2023	2024	2025	2026	2027	2028
Generation	**kWh**	**5,670,348,000**	**6,519,016,800**	**10,561,756,800**	**10,787,940,000**	**11,119,068,000**	**11,224,188,000**
Electricity of Lebanon (EoL)	**kWh**	**5,174,532,000**	**6,075,760,800**	**10,118,500,800**	**10,171,236,000**	**10,328,916,000**	**10,434,036,000**
Thermal Power Plants (TPP)	***kWh***	**-**	**876,000,000**	**1,752,000,000**	**1,752,000,000**	**1,752,000,000**	**1,752,000,000**
Zouk	*kWh*	-	*876,000,000*	*1,752,000,000*	*1,752,000,000*	*1,752,000,000*	*1,752,000,000*
Jieh	*kWh*	-	-	-	-	-	-
Reciprocating Engine Power Plants (REPP)	***kWh***	**-**	**-**	**1,883,400,000**	**1,883,400,000**	**1,883,400,000**	**1,883,400,000**
R.E. - Zouk	*kWh*	-	-	*1,401,600,000*	*1,401,600,000*	*1,401,600,000*	*1,401,600,000*
R.E. - Jieh	*kWh*	-	-	*481,800,000*	*481,800,000*	*481,800,000*	*481,800,000*
Combined Cycle Gas Turbine Power Plants (CCGTPP)	***kWh***	**5,124,600,000**	**5,124,600,000**	**6,377,280,000**	**6,377,280,000**	**6,377,280,000**	**6,377,280,000**
Deir Aammar	*kWh*	*3,504,000,000*	*3,504,000,000*	*3,504,000,000*	*3,504,000,000*	*3,504,000,000*	*3,504,000,000*
Zahrani	*kWh*	*1,620,600,000*	*1,620,600,000*	*2,873,280,000*	*2,873,280,000*	*2,873,280,000*	*2,873,280,000*
Open Cycle Gas Turbine Power Plants (OCGTPP)	***kWh***	**-**	**-**	**-**	**-**	**-**	**-**
Baalbek	*kWh*	-	-	-	-	-	-
Tyr	*kWh*	-	-	-	-	-	-
Renewable Energy	***kWh***	***49,932,000***	***75,160,800***	***105,820,800***	***158,556,000***	***316,236,000***	***421,356,000***
Hydraulic Power Plants (HPP)	**kWh**	**43,800,000**	**43,800,000**	**74,460,000**	**74,460,000**	**74,460,000**	**74,460,000**
Safa	*kWh*	-	-	30,660,000	30,660,000	30,660,000	30,660,000
Al Bared 1	*kWh*	30,660,000	30,660,000	30,660,000	30,660,000	30,660,000	30,660,000
Al Bared 2	*kWh*	13,140,000	13,140,000	13,140,000	13,140,000	13,140,000	13,140,000
Solar	**kWh**	**438,000**	**700,800**	**700,800**	**53,436,000**	**211,116,000**	**316,236,000**
Beirut River Solar Snake (BRSS)	kWh	438,000	700,800	700,800	876,000	876,000	876,000
Solar Farms	kWh	-	-	-	52,560,000	210,240,000	315,360,000
Biogas	**kWh**	**5,694,000**	**30,660,000**	**30,660,000**	**30,660,000**	**30,660,000**	**30,660,000**
Naahmeh Landfill	*kWh*	5,694,000	30,660,000	30,660,000	30,660,000	30,660,000	30,660,000
La Kadisha	**kWh**	**52,560,000**	**52,560,000**	**52,560,000**	**52,560,000**	**52,560,000**	**52,560,000**
Thermal Power Plants (TPP)	**kWh**	-	-	-	-	-	-
Houreiche	*kWh*	-	-	-	-	-	-
Hydraulic Power Plants (HPP)	***kWh***	**52,560,000**	**52,560,000**	**52,560,000**	**52,560,000**	**52,560,000**	**52,560,000**
Becharre	*kWh*	*8,059,200*	*8,059,200*	*8,059,200*	*8,059,200*	*8,059,200*	*8,059,200*
Mar Lichaa	*kWh*	*7,270,800*	*7,270,800*	*7,270,800*	*7,270,800*	*7,270,800*	*7,270,800*
Blaouza	*kWh*	*19,710,000*	*19,710,000*	*19,710,000*	*19,710,000*	*19,710,000*	*19,710,000*
Abou Ali	*kWh*	*17,520,000*	*17,520,000*	*17,520,000*	*17,520,000*	*17,520,000*	*17,520,000*
Power Purchase Agreements (PPA)	**kWh**	**443,256,000**	**443,256,000**	**443,256,000**	**616,704,000**	**790,152,000**	**790,152,000**
Litani River Authority (LRA)	**kWh**	**375,804,000**	**375,804,000**	**375,804,000**	**375,804,000**	**375,804,000**	**375,804,000**
Hydraulic Power Plants (HPP)	***kWh***	**375,804,000**	**375,804,000**	**375,804,000**	**375,804,000**	**375,804,000**	**375,804,000**
Markaba	*kWh*	67,452,000	67,452,000	67,452,000	67,452,000	67,452,000	67,452,000
Awali	*kWh*	213,744,000	213,744,000	213,744,000	213,744,000	213,744,000	213,744,000
Joune	*kWh*	94,608,000	94,608,000	94,608,000	94,608,000	94,608,000	94,608,000
The Phoenician Society of Hydroelectric Forces of Nahr Ibrahim	***kWh***	**67,452,000**	**67,452,000**	**67,452,000**	**67,452,000**	**67,452,000**	**67,452,000**
Hydraulic Power Plants (HPP)	***kWh***	**67,452,000**	**67,452,000**	**67,452,000**	**67,452,000**	**67,452,000**	**67,452,000**
Nahr Ibrahim 1	*kWh*	*29,784,000*	*29,784,000*	*29,784,000*	*29,784,000*	*29,784,000*	*29,784,000*
Nahr Ibrahim 2	*kWh*	*24,528,000*	*24,528,000*	*24,528,000*	*24,528,000*	*24,528,000*	*24,528,000*
Nahr Ibrahim 3	*kWh*	*13,140,000*	*13,140,000*	*13,140,000*	*13,140,000*	*13,140,000*	*13,140,000*
Solar IPPs	***kWh***	-	-	-	**173,448,000**	**346,896,000**	**346,896,000**
Solar IPPs - Beqaa	***kWh***	-	-	-	**47,304,000**	**94,608,000**	**94,608,000**
Solar IPPs - Other Regions	***kWh***	-	-	-	**126,144,000**	**252,288,000**	**252,288,000**
Imports	**kWh**	-	-	-	-	-	-
Syria	**kWh**	-	-	-	-	-	-
Egypt	**kWh**	-	-	-	-	-	-
Jordan	**kWh**	-	-	-	-	-	-
Gross Energy Produced	**kWh**	**5,670,348,000**	**6,571,576,800**	**10,614,316,800**	**10,840,500,000**	**11,171,628,000**	**11,276,748,000**
EoL Proportion of Supply	***%***	***91.26***	***92.46***	***95.33***	***93.83***	***92.46***	***92.53***
Fossil Based Generation Proportion	*%*	*99.04*	*98.76*	*98.95*	*98.44*	*96.94*	*95.96*
Renewable Energy Based Generation Proportion	*%*	*0.96*	*1.24*	*1.05*	*1.56*	*3.06*	*4.04*
La Kadisha Proportion of Supply	***%***	***0.93***	***0.80***	***0.50***	***0.48***	***0.47***	***0.47***
Fossil Based Generation Proportion	*%*	-	-	-	-	-	-
Renewable Energy Based Generation Proportion	*%*	*100.00*	*100.00*	*100.00*	*100.00*	*100.00*	*100.00*
PPA Proportion of Supply	***%***	***7.82***	***6.75***	***4.18***	***5.69***	***7.07***	***7.01***
Imports Proportion of supply	***%***	-	-	-	-	-	-
Syrian Imports Proportion	*%*	-	-	-	-	-	-
Egyptian Imports Proportion	*%*	-	-	-	-	-	-
Jordanian Imports Proportion	*%*	-	-	-	-	-	-
Energy Mix	**%**	**100**	**100**	**100**	**100**	**100**	**100**
Primary Generation	**%**	**90.38**	**91.31**	**94.33**	**92.36**	**89.63**	**88.79**
Renewable Energy Generation	**%**	**9.62**	**8.69**	**5.67**	**7.64**	**10.37**	**11.21**
Generation Capacity	**MW**	**647**	**750**	**1,212**	**1,238**	**1,275**	**1,287**
Average Daily Electricity Supply	**h**	**5**	**7**	**9**	**10**	**10**	**10**
Grid Size	**%**	**100**	**100**	**100**	**100**	**100**	**100**
Utilities (EoL & La Kadisha) Proportion	%	97.00	97.00	97.00	97.00	97.00	97.00
Concessions (Jbeil & Zahle) Proportion	%	3.00	3.00	3.00	3.00	3.00	3.00
System Losses (TL & NTL)	**kWh**	**2,209,219,676**	**2,138,539,859**	**2,874,834,082**	**2,597,158,310**	**2,366,995,915**	**2,266,714,744**
Proportion of Supply	*%*	*40.2*	*33.5*	*27.9*	*24.7*	*21.8*	*20.7*
Technical Losses (TL)	***kWh***	***998,161,111***	***1,129,795,725***	***1,781,111,077***	***1,774,320,589***	***1,782,309,537***	***1,752,338,979***
Proportion of Supply	*%*	*18.1*	*17.7*	*17.3*	*16.9*	*16.4*	*16.0*
Transmission Losses (TTL)	**kWh**	313,513,541	354,418,280	558,037,091	555,207,048	556,995,029	546,922,278
Proportion of Supply	*%*	*5.7*	*5.6*	*5.4*	*5.3*	*5.1*	*5.0*
Distribution Losses (TDL)	***kWh***	684,647,571	775,377,445	1,223,073,986	1,219,113,541	1,225,314,508	1,205,416,701
Proportion of Supply	*%*	*13.2*	*12.9*	*12.6*	*12.2*	*11.9*	*11.6*
Non-Technical Losses (NTL)	**kWh**	1,211,058,565	1,008,744,135	1,093,723,005	822,837,721	584,686,378	514,375,766
Proportion of Supply	*%*	*26.9*	*19.2*	*12.8*	*9.4*	*6.5*	*5.6*
Concessions System Losses (TL & NTL)	**kWh**	**11,907,731**	**13,800,311**	**22,290,065**	**22,765,050**	**23,460,419**	**23,681,171**
Proportion of Supply	*%*	*7.0*	*7.0*	*7.0*	*7.0*	*7.0*	*7.0*
Net Energy to be Collected	**kWh**	**3,449,220,593**	**4,419,236,629**	**7,717,192,652**	**8,220,576,640**	**8,781,171,666**	**8,986,352,085**
Utilities (EoL & La Kadisha) Proportion	*kWh*	*3,291,017,884*	*4,235,889,637*	*7,421,053,214*	*7,918,126,690*	*8,469,483,245*	*8,671,730,816*
Concessions (Jbeil & Zahle) Proportion	*kWh*	*158,202,709*	*183,346,993*	*296,139,439*	*302,449,950*	*311,688,421*	*314,621,269*

Fuel	yr	2023	2024	2025	2026	2027	2028
Government-to-Government Contracts (G2G)	**t**	**1,000,000**	**1,430,000**	**1,430,000**	**1,430,000**	**1,430,000**	**1,430,000**
Contract 1 - Iraqi High Sulphur Fuel Oil (HSFO)	**t**	**1,000,000**	**1,430,000**	**1,430,000**	**1,430,000**	**1,430,000**	**1,430,000**
Not Covered by the Utility (EoL)	t	1,000,000	1,000,000	500,000	500,000	250,000	-
Proportion of Non-coverage	*%*	*100*	*69.93*	*34.97*	*34.97*	*17.48*	-
Covered by the Utility - Electricity of Lebanon (EoL)	t	-	430,000	930,000	930,000	1,180,000	1,430,000
Proportion of EoL coverage	*%*	-	*30.07*	*65.03*	*65.03*	*82.52*	*100.00*
Fuel Oil Conversion Ratio	%	92.10	92.10	92.10	92.10	92.10	92.10
Gas Oil Conversion Ratio	%	53.04	53.04	53.04	53.04	53.04	53.04
Contract 2 - Iraqi Crude Oil (CO)	**t**	-	-	-	-	-	-
Not Covered by the Utility (EoL)	t	-	-	-	-	-	-
Proportion of Non-coverage	**%**	-	-	-	-	-	-
Covered by the Utility - Electricity of Lebanon (EoL)	t	-	-	-	-	-	-
Proportion of EoL coverage	**%**	-	-	-	-	-	-
Fuel Oil Conversion Ratio	**%**	118.85	118.85	118.85	118.85	118.85	118.85
Gas Oil Conversion Ratio	**%**	68.44	68.44	68.44	68.44	68.44	68.44
Ministry of Energy and Water Swap Contracts (MoEW - SWAP)	**t**	**530,380**	**758,444**	**758,444**	**758,444**	**758,444**	**758,444**
Under Contract 1 (Iraqi HSFO)	**t**	**530,380**	**758,444**	**758,444**	**758,444**	**758,444**	**758,444**
Fuel Oil (F.O.)	**t**	**-**	**-**	**-**	**-**	**-**	**-**
F.O. Proportion of Contract	*%*	-	-	-	-	-	-
Fuel Oil - Grade A (F.O.A)	**t**	**-**	**-**	**-**	**-**	**-**	**-**
F.O.A Proportion of F.O.	*%*	-	-	-	-	-	-
F.O.A Proportion of Contract	*%*	-	-	-	-	-	-
Fuel Oil - Grade B (F.O.B)	**t**	**-**	**-**	**-**	**-**	**-**	**-**
F.O.B Proportion of F.O.	*%*	-	-	-	-	-	-
F.O.B Proportion of Contract	*%*	-	-	-	-	-	-
Gas Oil (G.O.)	**t**	**530,380**	**758,444**	**758,444**	**758,444**	**758,444**	**758,444**
G.O. Proportion of Contract	*%*	100.00	100.00	100.00	100.00	100.00	100.00
Under Contract 2 (Iraqi CO)	**t**	**-**	**-**	**-**	**-**	**-**	**-**
Fuel Oil (F.O.)	**t**	**-**	**-**	**-**	**-**	**-**	**-**
F.O. Proportion of Contract	*%*	-	-	-	-	-	-
Fuel Oil - Grade A (F.O.A)	**t**	**-**	**-**	**-**	**-**	**-**	**-**
F.O.A Proportion of F.O.	*%*	-	-	-	-	-	-
F.O.A Proportion of Contract	*%*	-	-	-	-	-	-
Fuel Oil - Grade B (F.O.B)	**t**	**-**	**-**	**-**	**-**	**-**	**-**
F.O.B Proportion of F.O.	*%*	-	-	-	-	-	-
F.O.B Proportion of Contract	*%*	-	-	-	-	-	-
Gas Oil (G.O.)	**t**	**-**	**-**	**-**	**-**	**-**	**-**
G.O. Proportion of Contract	*%*	-	-	-	-	-	-
Ministry of Energy and Water SPOT Contracts (MoEW - SPOT)	**t**	**132,000**	**287,620**	**1,253,101**	**1,253,101**	**1,253,101**	**1,253,101**
Fuel Oil (F.O.)	**t**	**-**	**287,620**	**931,171**	**931,171**	**931,171**	**931,171**
F.O. Proportion of Contract	*%*	-	*100.00*	*74.31*	*74.31*	*74.31*	*74.31*
Fuel Oil - Grade A (F.O.A)	**t**	**-**	**287,620**	**521,311**	**521,311**	**521,311**	**521,311**
F.O.A Proportion of F.O.	*%*	-	*100*	*56*	*56*	*56*	*56*
F.O.A Proportion of Contract	*%*	-	*100*	*42*	*42*	*42*	*42*
Fuel Oil - Grade B (F.O.B)	**t**	**-**	**-**	**409,860**	**409,860**	**409,860**	**409,860**
F.O.B Proportion of F.O.	*%*	-	-	*44.02*	*44.02*	*44.02*	*44.02*
F.O.B Proportion of Contract	*%*	-	-	*32.71*	*32.71*	*32.71*	*32.71*
Gas Oil (G.O.)	**t**	**132,000**	**-**	**321,930**	**321,930**	**321,930**	**321,930**
G.O. Proportion of Contract	*%*	*100.00*	-	*25.69*	*25.69*	*25.69*	*25.69*
Imports (Egypt)	**t**	**-**	**-**	**-**	**-**	**-**	**-**
Natural Gas (N.G.)	t	-	-	-	-	-	-
In Cubic Meters	*m^3*	-	-	-	-	-	-
Total Supplied Fuel	**t**	**662,380**	**1,046,064**	**2,011,545**	**2,011,545**	**2,011,545**	**2,011,545**
Fuel Oil (F.O.)	**t**	**-**	**287,620**	**931,171**	**931,171**	**931,171**	**931,171**
F.O. Proportion of Supply	*%*	-	27	46	46	46	46
Fuel Oil - Grade A (F.O.A)	**t**	**-**	**287,620**	**521,311**	**521,311**	**521,311**	**521,311**
F.O.A Proportion of F.O.	*%*	-	*100.00*	*55.98*	*55.98*	*55.98*	*55.98*
F.O.A Proportion of Supply	*%*	-	*27.50*	*25.92*	*25.92*	*25.92*	*25.92*
Fuel Oil - Grade B (F.O.B)	**t**	**-**	**-**	**409,860**	**409,860**	**409,860**	**409,860**
F.O.B Proportion of F.O.	*%*	-	-	*44.02*	*44.02*	*44.02*	*44.02*
F.O.B Proportion of Supply	*%*	-	-	*20.38*	*20.38*	*20.38*	*20.38*
Gas Oil (G.O.)	**t**	**662,380**	**758,444**	**1,080,374**	**1,080,374**	**1,080,374**	**1,080,374**
G.O. Proportion of Supply	*%*	*100.00*	*72.50*	*53.71*	*53.71*	*53.71*	*53.71*
Natural Gas (N.G.)	**t**	**-**	**-**	**-**	**-**	**-**	**-**
N.G. Proportion of Supply	*%*	-	-	-	-	-	-
Government Fuel Coverage	**%**	**100**	**51**	**13**	**13**	**7**	**-**
Utility Fuel Coverage	**%**	**-**	**49**	**87**	**87**	**93**	**100**

Fuel - Pricing	yr	2023	2024	2025	2026	2027	2028
Average Brent Crude Oil Unit Price	**USD/bbl**	**95.00**	**95.00**	**95.00**	**95.00**	**95.00**	**95.00**
Average F.O. Unit Price	**USD/t**	**585.9080**	**585.9080**	**585.9080**	**585.9080**	**585.9080**	**585.9080**
Average G.O. Unit Price	**USD/t**	**1,017.4320**	**1,017.4320**	**1,017.4320**	**1,017.4320**	**1,017.4320**	**1,017.4320**
Average N.G. Unit Price	**USD/t**	**422.5245**	**422.5245**	**422.5245**	**422.5245**	**422.5245**	**422.5245**
Total Cost of Fuel	**MUSD**	**674**	**940**	**1,645**	**1,645**	**1,645**	**1,645**
Cost of Fuel Oil	**MUSD**	**-**	**169**	**546**	**546**	**546**	**546**
Cost of Fuel Oil - Grade A	MUSD	-	169	305	305	305	305
Cost of Fuel Oil - Grade B	MUSD	-	-	240	240	240	240
Cost of Gas Oil	**MUSD**	**674**	**772**	**1,099**	**1,099**	**1,099**	**1,099**
Cost of Natural Gas	**MUSD**	**-**	**-**	**-**	**-**	**-**	**-**
Cost of Fuel Not Covered by Electricity of Lebanon (EoL)	**MUSD**	**540**	**540**	**270**	**270**	**135**	**-**
Cost of Fuel Oil	**MUSD**	**-**	**-**	**-**	**-**	**-**	**-**
Cost of Fuel Oil - Grade A	MUSD	-	-	-	-	-	-
Cost of Fuel Oil - Grade B	MUSD	-	-	-	-	-	-
Cost of Gas Oil	**MUSD**	**540**	**540**	**270**	**270**	**135**	**-**
Cost of Natural Gas	**MUSD**	**-**	**-**	**-**	**-**	**-**	**-**
Cost of Fuel Covered by Electricity of Lebanon (EoL)	**MUSD**	**134**	**401**	**1,375**	**1,375**	**1,510**	**1,645**
Cost of Fuel Oil	**MUSD**	**-**	**169**	**546**	**546**	**546**	**546**
Cost of Fuel Oil - Grade A	MUSD	-	169	305	305	305	305
Cost of Fuel Oil - Grade B	MUSD	-	-	240	240	240	240
Cost of Gas Oil	**MUSD**	**134**	**232**	**829**	**829**	**964**	**1,099**
Cost of Natural Gas	**MUSD**	**-**	**-**	**-**	**-**	**-**	**-**

Tariff Structure	yr	2023	2024	2025	2026	2027	2028
Gross Energy Produced	**kWh**	**5,670,348,000**	**6,571,576,800**	**10,614,316,800**	**10,840,500,000**	**11,171,628,000**	**11,276,748,000**
Grid Size	**%**	**100**	**100**	**100**	**100**	**100**	**100**
Utilities (EoL & La Kadisha) Proportion	%	97.00	97.00	97.00	97.00	97.00	97.00
Concessions (Jbeil & Zahle) Proportion	%	3.00	3.00	3.00	3.00	3.00	3.00
Equivalent Energy	**kWh**	**5,670,348,000**	**6,571,576,800**	**10,614,316,800**	**10,840,500,000**	**11,171,628,000**	**11,276,748,000**
Utilities (EoL & La Kadisha)	kWh	5,500,237,560	6,374,429,496	10,295,887,296	10,515,285,000	10,836,479,160	10,938,445,560
Concessions (Jbeil & Zahle)	kWh	170,110,440	197,147,304	318,429,504	325,215,000	335,148,840	338,302,440
Total Subscribers	**#**	**1,515,728**	**1,530,885**	**1,546,194**	**1,577,118**	**1,608,660**	**1,640,834**
Total Customers (Low Voltage)	#	1,511,022	1,526,132	1,541,394	1,572,221	1,603,666	1,635,739
Total Power Rating (LV)	A	45,639,220	46,095,612	46,556,568	47,487,700	48,437,454	49,406,203
Customers' forecasted Increase	*%*	-	*1.00*	*1.00*	*2.00*	*2.00*	*2.00*
Private Substations - (Medium & High Voltage)	#	4,706	4,753	4,801	4,897	4,995	5,094
Total Power Rating (MV & HV)	kVA	2,028,757	2,049,045	2,069,535	2,110,926	2,153,144	2,196,207
Private Substations' forecasted Increase	*%*	-	*1.00*	*1.00*	*2.00*	*2.00*	*2.00*
Utilities System Losses (TL & NTL)	**%**	**40.17**	**33.55**	**27.92**	**24.70**	**21.84**	**20.72**
Concessions System Losses (TL & NTL)	**%**	**7.00**	**7.00**	**7.00**	**7.00**	**7.00**	**7.00**
Commercial Losses (Uncollected Bills)	**%**	**5.50**	**5.50**	**5.50**	**5.50**	**5.50**	**5.50**
Collected Energy	**kWh**	**3,268,214,609**	**4,186,262,699**	**7,309,034,726**	**7,785,079,672**	**8,315,350,088**	**8,509,406,890**
Collected Energy - Utilities	**kWh**	**3,110,011,900**	**4,002,915,707**	**7,012,895,287**	**7,482,629,722**	**8,003,661,667**	**8,194,785,621**
Subsidized Block [≤100 kWh]	*kWh*	*1,359,919,800*	*1,373,518,998*	*1,387,254,188*	*1,414,999,272*	*1,443,299,257*	*1,472,165,242*
Regular Block [>100 kWh]	*kWh*	*1,750,092,100*	*2,629,396,709*	*5,625,641,099*	*6,067,630,450*	*6,560,362,409*	*6,722,620,378*
Collected Energy - Concessions	**kWh**	**158,202,709**	**183,346,993**	**296,139,439**	**302,449,950**	**311,688,421**	**314,621,269**

Tariff Revenues	yr	2023	2024	2025	2026	2027	2028
Billed Energy	**MUSD**	**793**	**1,039**	**1,874**	**2,001**	**2,142**	**2,192**
Variable Charges	**MUSD**	**642**	**886**	**1,720**	**1,843**	**1,981**	**2,028**
Subsidized Consumption [≤100 kWh]	*MUSD*	*136*	*137*	*139*	*141*	*144*	*147*
Regular Consumption [>100 kWh]	*MUSD*	*473*	*710*	*1,519*	*1,638*	*1,771*	*1,815*
Concessions Consumption	*MUSD*	*33*	*39*	*62*	*64*	*65*	*66*
Fixed Charges	**MUSD**	**152**	**153**	**155**	**158**	**161**	**164**
Customers (Low Voltage)	*MUSD*	*137*	*138*	*140*	*142*	*145*	*148*
Private Substations (Medium & High Voltage)	*MUSD*	*15*	*15*	*15*	*15*	*16*	*16*

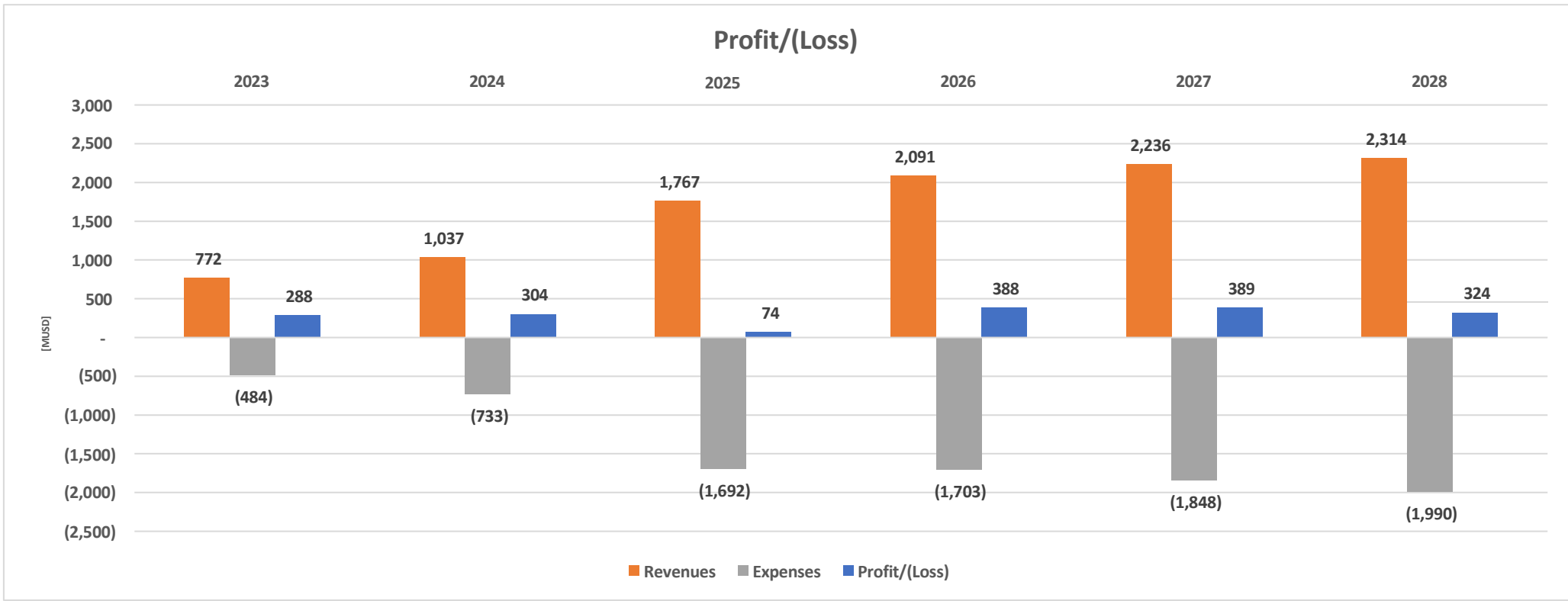
Other Receivables	yr	2023	2024	2025	2026	2027	2028
Loans	**MUSD**	**-**	**-**	**50**	**50**	**50**	**-**
World Bank	*MUSD*	*-*	*-*	*50*	*50*	*50*	*-*
IMF	*MUSD*	*-*	*-*	*-*	*-*	*-*	*-*

Utility (EoL) Expenses	yr	2023	2024	2025	2026	2027	2028
Generation Cost	**MUSD**	**250**	**494**	**1,503**	**1,505**	**1,642**	**1,779**
Fuel	**MUSD**	**134**	**401**	**1,375**	**1,375**	**1,510**	**1,645**
Operation And Maintenance (O&M)	**MUSD**	**65**	**65**	**99**	**100**	**100**	**100**
Zouk	*MUSD*	*4*	*4*	*4*	*4*	*4*	*4*
Jieh	*MUSD*	*3*	*3*	*3*	*3*	*3*	*3*
R.E. - Zouk	*MUSD*	*-*	*-*	*15*	*15*	*15*	*15*
R.E. - Jieh	*MUSD*	*-*	*-*	*5*	*5*	*5*	*5*
Deir Aammar	*MUSD*	*39*	*39*	*39*	*39*	*39*	*39*
Zahrani	*MUSD*	*18*	*18*	*32*	*32*	*32*	*32*
Baalbek	*MUSD*	*0.6*	*0.6*	*0.6*	*0.6*	*0.6*	*0.6*
Tyr	*MUSD*	*0.8*	*0.8*	*0.8*	*0.8*	*0.8*	*0.8*
Safa	*MUSD*	*0.04*	*0.04*	*0.04*	*0.04*	*0.04*	*0.04*
Al Bared 1	*MUSD*	*0.04*	*0.04*	*0.04*	*0.04*	*0.04*	*0.04*
Al Bared 2	*MUSD*	*0.04*	*0.04*	*0.04*	*0.04*	*0.04*	*0.04*
Beirut River Solar Snake	*MUSD*	*0.04*	*0.04*	*0.04*	*0.04*	*0.04*	*0.04*
Solar Farms	*MUSD*	*-*	*-*	*-*	*0.25*	*0.50*	*0.75*
Naameh Landfill	*MUSD*	*0.04*	*0.04*	*0.04*	*0.04*	*0.04*	*0.04*
Preservation Activities	**MUSD**	**14**	**14**	**-**	**-**	**-**	**-**
R.E. - Zouk	*MUSD*	*8*	*8*	*-*	*-*	*-*	*-*
R.E. - Jieh	*MUSD*	*6*	*6*	*-*	*-*	*-*	*-*
Depreciation	**MUSD**	**28**	**28**	**28**	**30**	**32**	**34**
Zouk	*MUSD*	*-*	*-*	*-*	*-*	*-*	*-*
Jieh	*MUSD*	*-*	*-*	*-*	*-*	*-*	*-*
R.E. - Zouk	*MUSD*	*10*	*10*	*10*	*10*	*10*	*10*
R.E. - Jieh	*MUSD*	*4*	*4*	*4*	*4*	*4*	*4*
Deir Aammar	*MUSD*	*7*	*7*	*7*	*7*	*7*	*7*
Zahrani	*MUSD*	*7*	*7*	*7*	*7*	*7*	*7*
Baalbek	*MUSD*	*-*	*-*	*-*	*-*	*-*	*-*
Tyr	*MUSD*	*-*	*-*	*-*	*-*	*-*	*-*
Safa	*MUSD*	*-*	*-*	*-*	*-*	*-*	*-*
Al Bared 1	*MUSD*	*-*	*-*	*-*	*-*	*-*	*-*
Al Bared 2	*MUSD*	*-*	*-*	*-*	*-*	*-*	*-*
Beirut River Solar Snake	*MUSD*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*
Solar Farms	*MUSD*	*-*	*-*	*-*	*2.0*	*4.0*	*6.0*
Naameh Landfill	*MUSD*	*0.3*	*0.3*	*0.3*	*0.3*	*0.3*	*0.3*
Power Purchase Agreements	**MUSD**	***9***	***11***	***13***	***24***	***35***	***35***
Litani River Authority (LRA)	*MUSD*	*8*	*9*	*11*	*11*	*11*	*11*
The Phoenician Society of Hydroelectric Forces of Nahr Ibrahim	*MUSD*	*1*	*2*	*2*	*2*	*2*	*2*
Solar IPPs - Beqaa	*MUSD*	*-*	*-*	*-*	*3*	*5*	*5*
Solar IPPs - Other Regions	*MUSD*	*-*	*-*	*-*	*8*	*16*	*16*
Electricity Imports	**MUSD**	**-**	**-**	**-**	**-**	**-**	**-**
Syria	*MUSD*	*-*	*-*	*-*	*-*	*-*	*-*
Egypt	*MUSD*	*-*	*-*	*-*	*-*	*-*	*-*
Jordan	*MUSD*	*-*	*-*	*-*	*-*	*-*	*-*
Transmission Cost	**MUSD**	**26**	**27**	**28**	**30**	**31**	**33**
Substations, Overhead Lines, Underground Cable, etc. O&M	**MUSD**	**20**	**21**	**21**	**22**	**22**	**23**
Transmission S/S, OHL, UGC, etc. Depreciation	**MUSD**	**5**	**6**	**7**	**8**	**9**	**10**
Distribution Cost	**MUSD**	**59**	**61**	**109**	**113**	**116**	**120**
Distribution O&M	**MUSD**	**52**	**53**	**99**	**101**	**103**	**105**
Distribution Substations, Poles, etc. Depreciation	**MUSD**	**7**	**8**	**10**	**12**	**14**	**15**
Capital Investments	**MUSD**	**-**	**91**	**141**	**141**	**141**	**91**
Generation	**MUSD**	**-**	**-**	**50**	**50**	**50**	**-**
Solar Farms	*MUSD*	*-*	*-*	*50*	*50*	*50*	*-*
Transmission	**MUSD**	**-**	**39**	**39**	**39**	**39**	**39**
Substations, Overhead Lines, Underground Cable, etc.	*MUSD*	*-*	*39*	*39*	*39*	*39*	*39*
Distribution	**MUSD**	**-**	**52**	**52**	**52**	**52**	**52**
Distribution Substations, Poles, etc.	*MUSD*	*-*	*52*	*52*	*52*	*52*	*52*
Debt Repayment	**MUSD**	**144**	**146**	**45**	**50**	**53**	**17**
Internal Debts (Operators)	**MUSD**	**101**	**101**	**-**	**-**	**-**	**-**
Generation	*MUSD*	*38*	*38*	*-*	*-*	*-*	*-*
Transmission	*MUSD*	*-*	*-*	*-*	*-*	*-*	*-*
Distribution	*MUSD*	*63*	*63*	*-*	*-*	*-*	*-*
Governmental Loan - Working Capital	**MUSD**	37	37	37	37	37	-
External Debts - International Financing Agencies (IFA)	**MUSD**	**7**	**9**	**9**	**13**	**17**	**17**
World Bank (WB)	*MUSD*	*-*	*2*	*6*	*11*	*15*	*15*
Principal	MUSD	-	-	-	-	-	-
Interest	MUSD	-	2	6	11	15	15
International Monetary Fund (IMF)	*MUSD*	*-*	*-*	*-*	*-*	*-*	*-*
Principal	MUSD	-	-	-	-	-	-
Interest	MUSD	-	-	-	-	-	-
Arab Fund for Economic and Social Development	*MUSD*	*7*	*7*	*2*	*2*	*2*	*2*
Principal	MUSD	6	6	2	2	2	2
Interest	MUSD	1	1	0.29	0.13	0.01	0.00
Administrative Cost	**MUSD**	**27**	**27**	**25**	**23**	**21**	**20**
Salaries and Affiliates	MUSD	17	16	15	14	13	12
Medical Care and Insurance	MUSD	6	8	8	7	7	6
National Social Security Fund (NSSF)	MUSD	1	1	1	1	1	1
End-of-Service Indemnity (EOSI)	MUSD	1	1	1	1	1	1
Salary Tax	MUSD	2	2	2	2	2	2
Miscellaneous Cost	**MUSD**	**20**	**21**	**21**	**22**	**22**	**22**
Total OPEX (With Gradual Coverage of Iraqi Fuel)	**MUSD**	**527**	**776**	**1,731**	**1,742**	**1,886**	**1,991**
Total OPEX (With Full Iraqi Fuel Coverage)	**MUSD**	**1,066**	**1,316**	**2,001**	**2,011**	**2,021**	**1,991**
Total CAPEX	**MUSD**	**-**	**91**	**141**	**141**	**141**	**91**
Total Cost (With Gradual Coverage of Iraqi Fuel)	**MUSD**	**527**	**867**	**1,872**	**1,883**	**2,027**	**2,082**

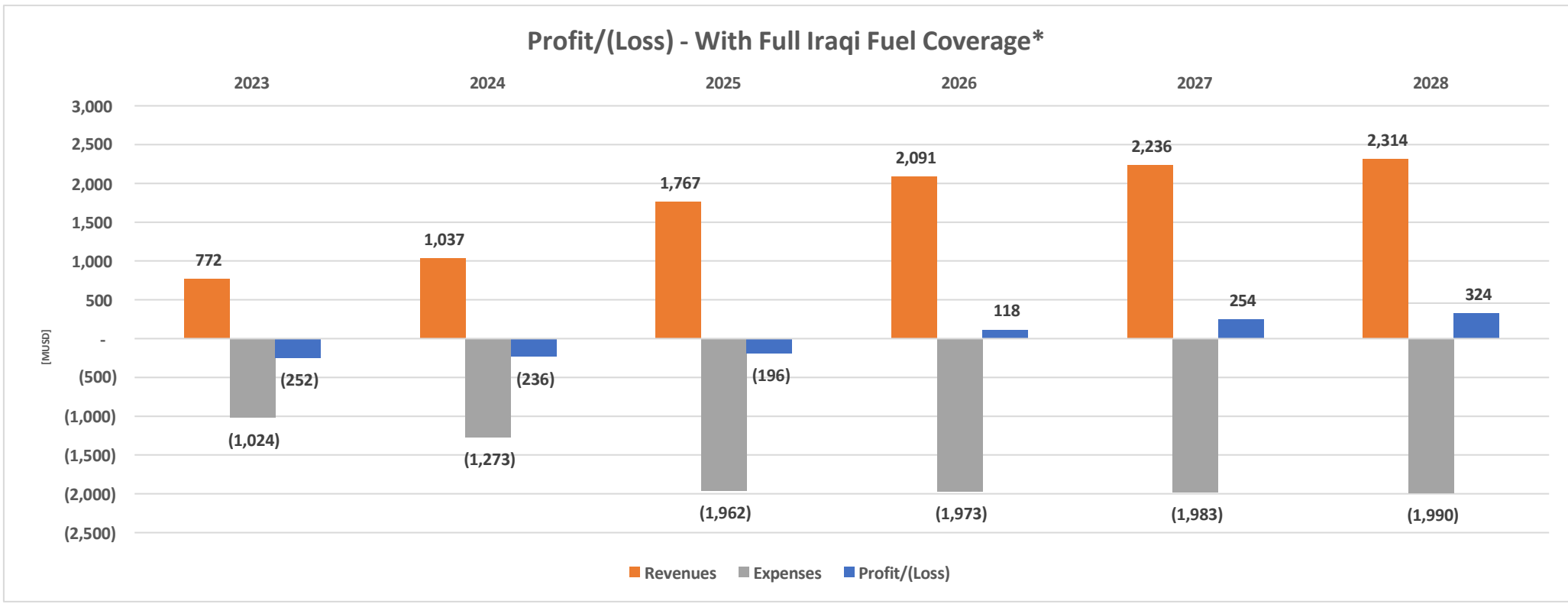
Total Cost (With Iraqi Fuel Coverage)	**MUSD**	**1,066**	**1,407**	**2,142**	**2,152**	**2,162**	**2,082**

Recoverability Ratio	yr	2023	2024	2025	2026	2027	2028
Levelized Tariff	USC/kWh	24.27	24.82	25.65	25.70	25.76	25.76
Levelized OPEX (With Gradual Coverage of Iraqi Fuel)	USC/kWh	9.29	11.90	16.39	16.14	16.96	17.74
Levelized OPEX (With Full Iraqi Fuel Coverage)	USC/kWh	18.81	20.18	18.94	18.65	18.18	17.74
Levelized CAPEX	USC/kWh	-	1.40	1.33	1.31	1.27	0.81
Levelized Expenditures (With Gradual Coverage of Iraqi Fuel)	USC/kWh	9.29	13.30	17.72	17.45	18.23	18.55
Levelized Expenditures (With Full Iraqi Fuel Coverage)	USC/kWh	18.81	21.58	20.28	19.95	19.44	18.55
Cost Recoverability Ratio (With Gradual Coverage of Iraqi Fuel)	%	261.27	208.48	156.47	159.20	151.84	145.22
Cost Recoverability Ratio (With Full Iraqi Fuel Coverage)	%	129.06	122.97	135.37	137.85	141.71	145.22
Total Cost Recoverability Ratio (With Gradual Coverage of Iraqi Fuel)	%	261.27	186.61	144.68	147.28	141.28	138.88
Total Cost Recoverability Ratio (With Full Iraqi Fuel Coverage)	%	129.06	115.01	126.46	128.82	132.47	138.88

Income Statement (With Gradual Coverage of Iraqi Fuel)	yr	2023	2024	2025	2026	2027	2028
Revenues	**MUSD**	**772**	**1,037**	**1,767**	**2,091**	**2,236**	**2,314**
Electricity Sales	MUSD	772	1,037	1,764	2,085	2,230	2,308
Electricity New Subscriptions	MUSD	-	0.5	2.9	5.9	6.0	6.1
Expenses	**MUSD**	**(484)**	**(733)**	**(1,692)**	**(1,703)**	**(1,848)**	**(1,990)**
Generation Cost (incl. Dep.)	MUSD	(250)	(494)	(1,503)	(1,505)	(1,642)	(1,779)
Transmission Cost (incl. Dep.)	MUSD	(26)	(27)	(28)	(30)	(31)	(33)
Distribution Cost (incl. Dep.)	MUSD	(59)	(61)	(109)	(113)	(116)	(120)
Administrative Cost	MUSD	(27)	(27)	(25)	(23)	(21)	(20)
Miscellaneous Cost	MUSD	(20)	(21)	(21)	(22)	(22)	(22)
Internal Debts Payment	MUSD	(101)	(101)	-	-	-	-
Loan Interests	MUSD	(1)	(3)	(7)	(11)	(15)	(15)
Profit/(Loss)	**MUSD**	**288**	**304**	**74**	**388**	**389**	**324**



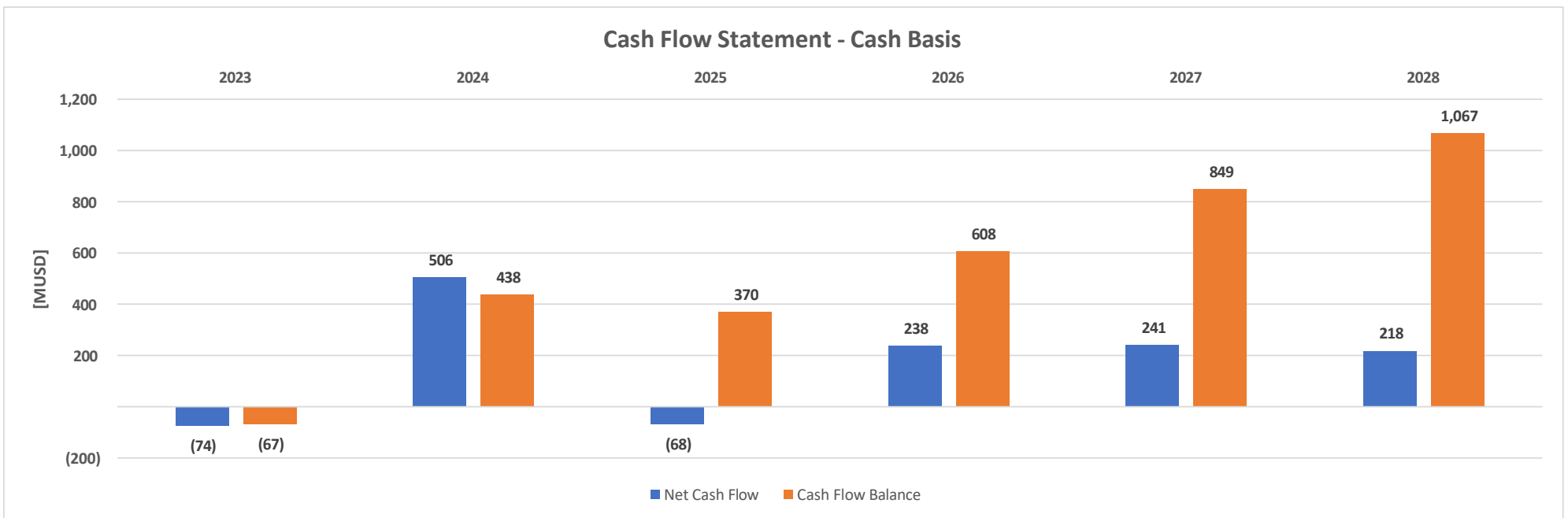
Income Statement (With Full Iraqi Fuel Coverage)	yr	2023	2024	2025	2026	2027	2028
Revenues	**MUSD**	**772**	**1,037**	**1,767**	**2,091**	**2,236**	**2,314**
Electricity Sales	MUSD	772	1,037	1,764	2,085	2,230	2,308
Electricity New Subscriptions	MUSD	-	0.5	2.9	5.9	6.0	6.1
Expenses	**MUSD**	**(1,024)**	**(1,273)**	**(1,962)**	**(1,973)**	**(1,983)**	**(1,990)**
Generation Cost (incl. Dep.)	MUSD	(250)	(494)	(1,503)	(1,505)	(1,642)	(1,779)
Transmission Cost (incl. Dep.)	MUSD	(26)	(27)	(28)	(30)	(31)	(33)
Distribution Cost (incl. Dep.)	MUSD	(59)	(61)	(109)	(113)	(116)	(120)
Administrative Cost	MUSD	(27)	(27)	(25)	(23)	(21)	(20)
Miscellaneous Cost	MUSD	(20)	(21)	(21)	(22)	(22)	(22)
Internal Debts Payment	MUSD	(101)	(101)	-	-	-	-
Loan Interests	MUSD	(1)	(3)	(7)	(11)	(15)	(15)
Portion of the Iraqi Fuel Not Coverd by the Utility*	MUSD	(540)	(540)	(270)	(270)	(135)	-
Profit/(Loss)	**MUSD**	**(252)**	**(236)**	**(196)**	**118**	**254**	**324**



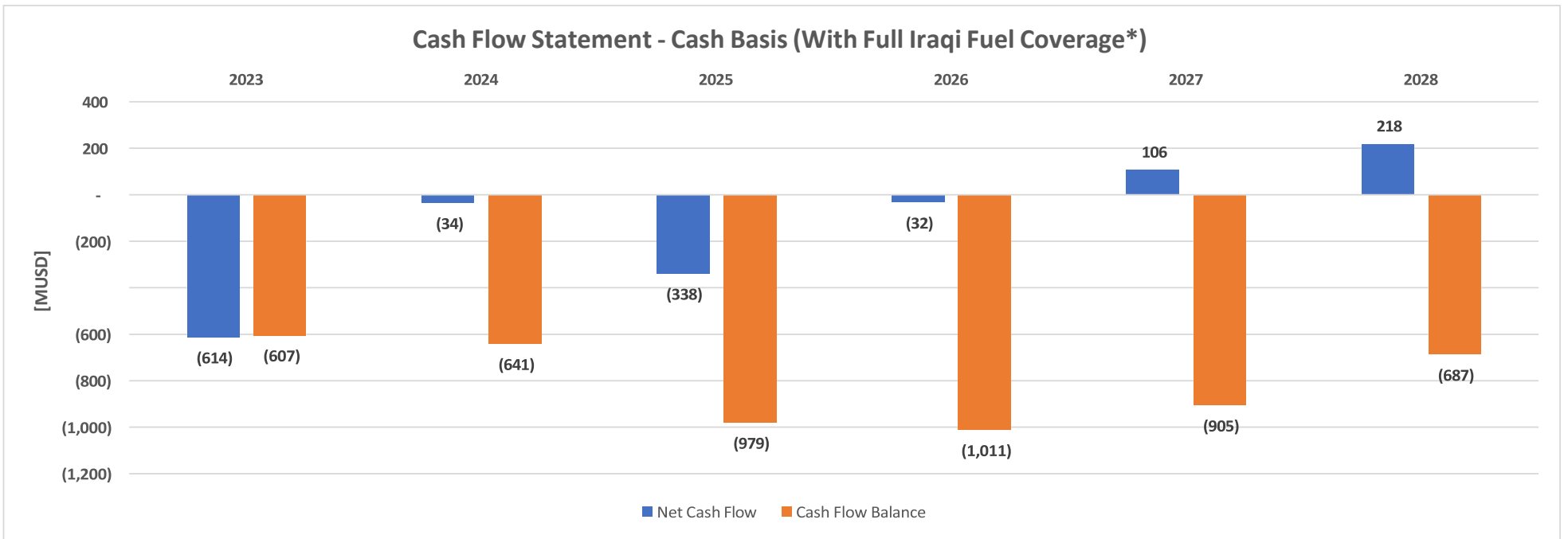
*** Remarks**:

With Reference to MOEW Letter No. 4844 Dated 29/06/2022 and EDL Letters No. 183 Dated 10/01/2024 and No. 403 Dated 23/01/2024 and the MOEW response No. 884 dated 19/3/2024. Where the Ministry of Energy and Water (MOEW) has indicated that the renewed contract between the government of Lebanon and the Iraqi government this year, for the third time, allowing for the supply of Iraqi heavy fuel oil under the SWAP agreement, has been amended regarding the quantity. It has now been increased to 1.5 million tons annually, compared to the previously agreed-upon 1 million tons annually. The cost of one million tons from this quantity will be covered by the government as per the hereabove mentioned letter of MOEW. However, in addition, the clause concerning the payment method through the services provided by the Lebanese government to the Iraqi government has not been amended and remains unchanged (In kind).

Cash Flow Statement - Cash Basis (With Gradual Coverage of Iraqi Fuel)	yr	2023	2024	2025	2026	2027	2028
Revenues	**MUSD**	**412**	**1,330**	**1,708**	**2,020**	**2,163**	**2,240**
Electricity Sales	MUSD	397	1,308	1,666	1,969	2,107	2,180
Electricity New Subscriptions	MUSD	-	0.5	2.9	5.9	6.0	6.1
Arrears & Orders for Collections	MUSD	16	21	40	45	51	55
Other Receivables	**MUSD**	**-**	**-**	**50**	**50**	**50**	**-**
Grants	MUSD	-	-	-	-	-	-
Loans	MUSD	-	-	50	50	50	-
Expenses	**MUSD**	**(483)**	**(730)**	**(1,686)**	**(1,692)**	**(1,833)**	**(1,974)**
Generation Cost	MUSD	(250)	(494)	(1,503)	(1,505)	(1,642)	(1,779)
Transmission Cost	MUSD	(26)	(27)	(28)	(30)	(31)	(33)
Distribution Cost	MUSD	(59)	(61)	(109)	(113)	(116)	(120)
Administrative Cost	MUSD	(27)	(27)	(25)	(23)	(21)	(20)
Miscellaneous Cost	MUSD	(20)	(21)	(21)	(22)	(22)	(22)
Internal Debts	MUSD	(101)	(101)	-	-	-	-
Adjustments	**MUSD**	**40**	**43**	**46**	**50**	**55**	**60**
Depreciation	***MUSD***	**40**	**43**	**46**	**50**	**55**	**60**
Generation	*MUSD*	28	28	28	30	32	34
Transmission	*MUSD*	5	6	7	8	9	10
Distribution	*MUSD*	7	8	10	12	14	15
Financial Cost	**MUSD**	**(44)**	**(136)**	**(186)**	**(191)**	**(194)**	**(108)**
Working Capital Repayment	*MUSD*	(37)	(37)	(37)	(37)	(37)	-
Capital Investments	*MUSD*	-	(91)	(141)	(141)	(141)	(91)
External Loans Repayment	*MUSD*	(7)	(9)	(9)	(13)	(17)	(17)
Net Cash Flow	**MUSD**	**(74)**	**506**	**(68)**	**238**	**241**	**218**
Cash Balance at Beginning of Period	**MUSD**	**7**	**(67)**	**438**	**370**	**608**	**849**
Cash Balance at End of Period	**MUSD**	**(67)**	**438**	**370**	**608**	**849**	**1,067**

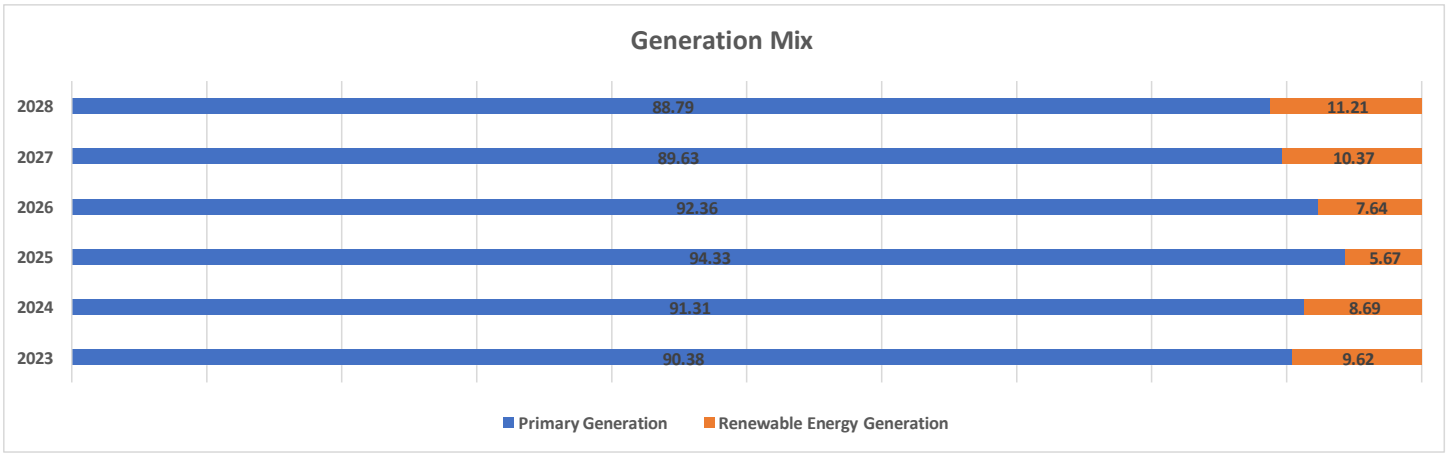


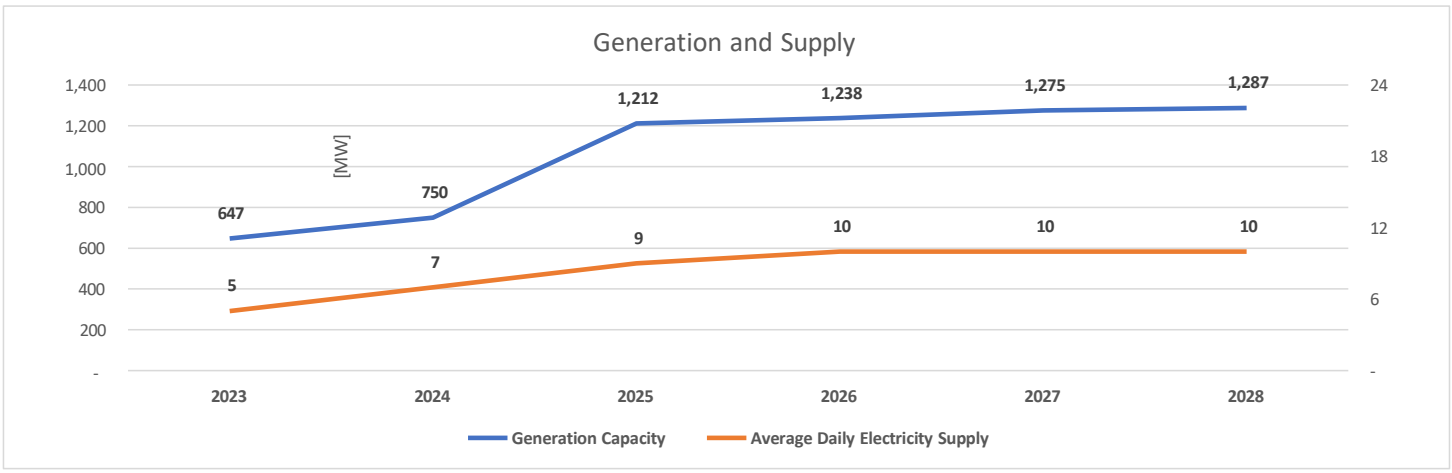
Cash Flow Statement - Cash Basis (With Full Iraqi Fuel Coverage)	yr	2023	2024	2025	2026	2027	2028
Revenues	**MUSD**	**412**	**1,330**	**1,708**	**2,020**	**2,163**	**2,240**
Electricity Sales	MUSD	397	1,308	1,666	1,969	2,107	2,180
Electricity New Subscriptions	MUSD	-	0.5	2.9	5.9	6.0	6.1
Arrears & Orders for Collections	MUSD	16	21	40	45	51	55
Other Receivables	**MUSD**	**-**	**-**	**50**	**50**	**50**	**-**
Grants	MUSD	-	-	-	-	-	-
Loans	MUSD	-	-	**50**	**50**	**50**	-
Expenses	**MUSD**	**(1,023)**	**(1,270)**	**(1,956)**	**(1,962)**	**(1,968)**	**(1,974)**
Generation Cost	MUSD	(250)	(494)	(1,503)	(1,505)	(1,642)	(1,779)
Transmission Cost	MUSD	(26)	(27)	(28)	(30)	(31)	(33)
Distribution Cost	MUSD	(59)	(61)	(109)	(113)	(116)	(120)
Administrative Cost	MUSD	(27)	(27)	(25)	(23)	(21)	(20)
Miscellaneous Cost	MUSD	(20)	(21)	(21)	(22)	(22)	(22)
Internal Debts	MUSD	(101)	(101)	-	-	-	-
Portion of the Iraqi Fuel Not Covered by the Utility*	MUSD	(540)	(540)	(270)	(270)	(135)	-
Adjustments	**MUSD**	**40**	**43**	**46**	**50**	**55**	**60**
Depreciation	***MUSD***	**40**	**43**	**46**	**50**	**55**	**60**
Generation	*MUSD*	28	28	28	30	32	34
Transmission	*MUSD*	5	6	7	8	9	10
Distribution	*MUSD*	7	8	10	12	14	15
Financial Cost	**MUSD**	**(44)**	**(136)**	**(186)**	**(191)**	**(194)**	**(108)**
Working Capital Repayment	*MUSD*	(37)	(37)	(37)	(37)	(37)	-
Capital Investments	*MUSD*	-	(91)	(141)	(141)	(141)	(91)
External Loans Repayment	*MUSD*	(7)	(9)	(9)	(13)	(17)	(17)
Net Cash Flow	**MUSD**	**(614)**	**(34)**	**(338)**	**(32)**	**106**	**218**
Cash Balance at Beginning of Period	**MUSD**	**7**	**(607)**	**(641)**	**(979)**	**(1,011)**	**(905)**
Cash Balance at End of Period	**MUSD**	**(607)**	**(641)**	**(979)**	**(1,011)**	**(905)**	**(687)**

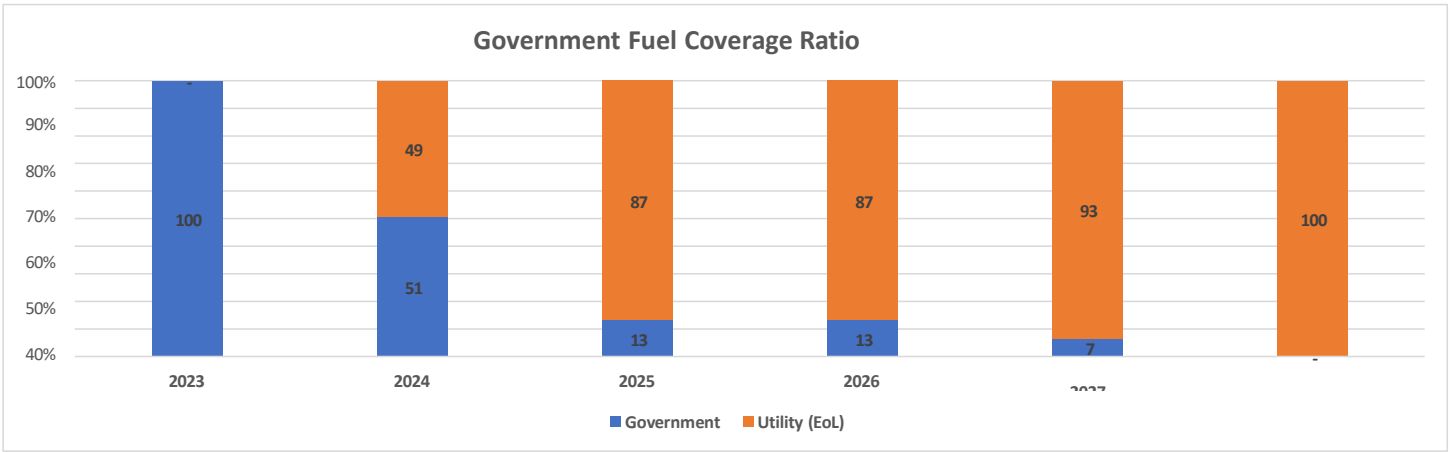


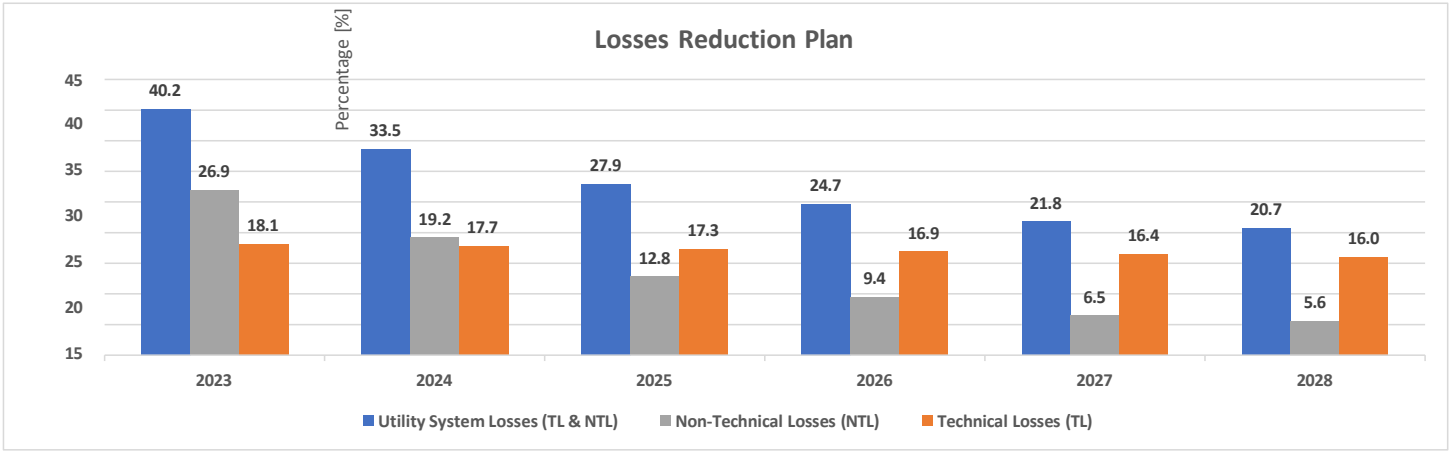
*** Remarks:**

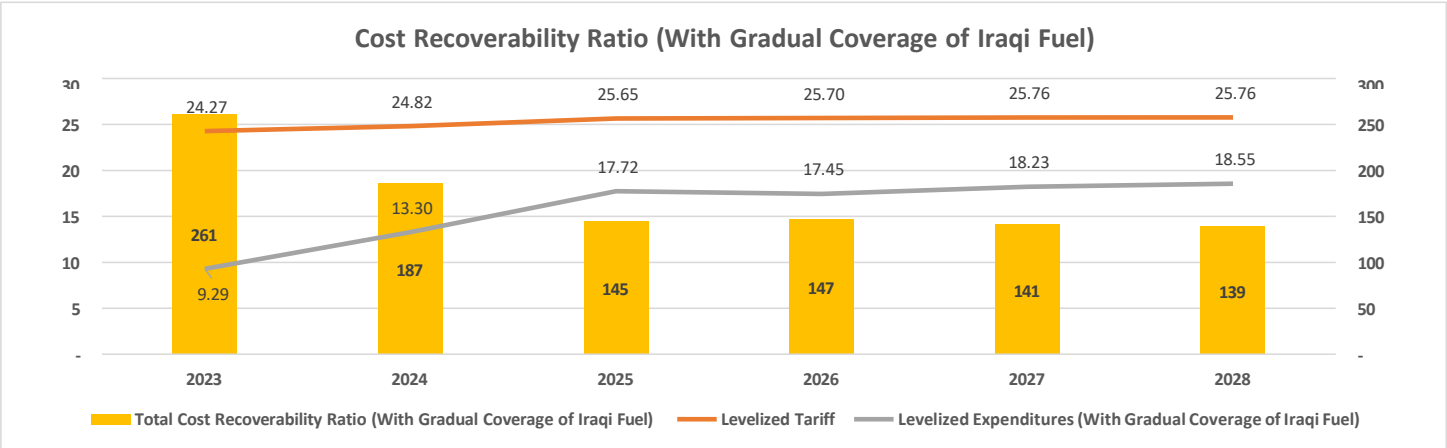
With Reference to MOEW Letter No. 4844 Dated 29/06/2022 and EDL Letters No. 183 Dated 10/01/2024 and No. 403 Dated 23/01/2024 and the MOEW response No. 884 dated 19/3/2024. Where the Ministry of Energy and Water (MOEW) has indicated that the renewed contract between the government of Lebanon and the Iraqi government this year, for the third time, allowing for the supply of Iraqi heavy fuel oil under the SWAP agreement, has been amended regarding the quantity. It has now been increased to 1.5 million tons annually, compared to the previously agreed-upon 1 million tons annually. The cost of one million tons from this quantity will be covered by the government as per the hereabove mentioned letter of MOEW. In addition, the clause concerning the payment method through the services provided by the Lebanese government to the Iraqi government has not been amended and remains unchanged (in-kind).


Generation Mix
2028
2027
2026
2025
2024
2023
88.79
11.21
89.63
10.37
92.36
7.64
94.33
5.67
91.31
8.69
90.38
9.62
Primary Generation
Renewable Energy Generation


Generation and Supply
[MW]
1,400
1,200
1,000
800
600
400
200
-
24
18
12
6
-
647
750
1,212
1,238
1,275
1,287
5
7
9
10
10
10
2023
2024
2025
2026
2027
2028
Generation Capacity
Average Daily Electricity Supply


Government Fuel Coverage Ratio
100%
90%
80%
70%
60%
50%
40%
100
49
51
87
13
87
13
93
7
100
-
2023
2024
2025
2026
Government
Utility (EoL)


Losses Reduction Plan
Percentage [%]
45
40
35
30
25
20
15
40.2
26.9
18.1
33.5
19.2
17.7
27.9
12.8
17.3
24.7
9.4
16.9
21.8
6.5
16.4
20.7
5.6
16.0
2023
2024
2025
2026
2027
2028
Utility System Losses (TL & NTL)
Non-Technical Losses (NTL)
Technical Losses (TL)


Cost Recoverability Ratio (With Gradual Coverage of Iraqi Fuel)
30
25
20
15
10
5
-
300
250
200
150
100
50
-
24.27
24.82
25.65
25.70
25.76
25.76
261
13.30
187
17.72
145
17.45
147
18.23
141
18.55
139
9.29
2023
2024
2025
2026
2027
2028
Total Cost Recoverability Ratio (With Gradual Coverage of Iraqi Fuel)
Levelized Tariff
Levelized Expenditures (With Gradual Coverage of Iraqi Fuel)

Appendix 3
Financial Model: (EDL's Base-Case Scenario)

Variables	yr	2023	2024	2025	2026	2027	2028
Fuel	-	-	-	-	-	-	-
Natural Gas Conversion rate mMBtu to m³	*mmbtu/m³*	*28.263682*	*28.26368*	*28.26368*	*28.26368*	*28.26368*	*28.26368*
Natural Gas Conversion rate m³ to tons	*m³/t*	*0.000829*	*0.000829*	*0.000829*	*0.000829*	*0.000829*	*0.000829*
Crude Oil Barrel Conversion rate to tons	*bbl/t*	*7.33*	*7.33*	*7.33*	*7.33*	*7.33*	*7.33*
Average Brent Crude Oil Unit Price	USD/bbl	95.00	95.00	95.00	95.00	95.00	95.00
Average Iraqi Crude Oil Unit Price	USD/t	696.3500	696.3500	696.3500	696.3500	696.3500	696.3500
Average F.O. Unit Price	USD/t	585.9080	585.9080	585.9080	585.9080	585.9080	585.9080
Average G.O. Unit Price	USD/t	1,017.4320	1,017.4320	1,017.4320	1,017.4320	1,017.4320	1,017.4320
Average N.G. Unit Price	USD/mmbtu	9.9000	9.9000	9.9000	9.9000	9.9000	9.9000
Average N.G. Unit Price	USD/t	422.5245	422.5245	422.5245	422.5245	422.5245	422.5245
Average HSFO Unit Price	USD/t	539.6260	539.6260	539.6260	539.6260	539.6260	539.6260
Fuel Oil HSFO SWAP Conversion Ratio	%	92.10	92.10	92.10	92.10	92.10	92.10
Gas Oil HSFO SWAP Conversion Ratio	%	53.04	53.04	53.04	53.04	53.04	53.04
Fuel Oil CO SWAP Conversion Ratio	%	118.85	118.85	118.85	118.85	118.85	118.85
Gas Oil CO SWAP Conversion Ratio	%	68.44	68.44	68.44	68.44	68.44	68.44
Generation	-	-	-	-	-	-	-
Operation And Maintenance (O&M) - Operators	-	-	-	-	-	-	-
R.E. - Zouk	*USc/kWh*	*1.09*	*1.09*	*1.09*	*1.09*	*1.09*	*1.09*
R.E. - Jieh	*USc/kWh*	*1.09*	*1.09*	*1.09*	*1.09*	*1.09*	*1.09*
Deir Aammar	*USc/kWh*	*1.11*	*1.11*	*1.11*	*1.11*	*1.11*	*1.11*
Zahrani	*USc/kWh*	*1.11*	*1.11*	*1.11*	*1.11*	*1.11*	*1.11*
Power Purchase Agreements	-	-	-	-	-	-	-
Litani River Authority (LRA)	*USc/kWh*	*2.00*	*2.50*	*3.00*	*3.00*	*3.00*	*3.00*
The Phoenician Society of Hydroelectric Forces of Nahr Ibrahim	*USc/kWh*	*2.00*	*2.50*	*3.00*	*3.00*	*3.00*	*3.00*
Electricity Imports	-	-	-	-	-	-	-
Syria	*USc/kWh*	-	-	-	-	-	-
Egypt	*USc/kWh*	-	-	-	-	-	-
Jordan	*USc/kWh*	*12.70*	*12.70*	*12.70*	*12.70*	*12.70*	*12.70*
Tariff Metrics	-	-	-	-	-	-	-
Total Customers (Low Voltage)	**#**	**1,511,022**	**1,526,132**	**1,541,394**	**1,572,221**	**1,603,666**	**1,635,739**
Total Power Rating (LV)	A	45,639,220	46,095,612	46,556,568	47,487,700	48,437,454	49,406,203
Customers' forecasted Increase	*%*	-	*1.00*	*1.00*	*2.00*	*2.00*	*2.00*
Private Substations (Medium & High Voltage)	**#**	**4,706**	**4,753**	**4,801**	**4,897**	**4,995**	**5,094**
Total Power Rating (MV & HV)	kVA	2,028,757	2,049,045	2,069,535	2,110,926	2,153,144	2,196,207
Private Substations' forecasted Increase	*%*	-	*1.00*	*1.00*	*2.00*	*2.00*	*2.00*
Variable Charges	-	-	-	-	-	-	-
Subsidized Consumption [≤100 kWh]	USc/kWh	*10.00*	*10.00*	*10.00*	*10.00*	*10.00*	*10.00*
Regular Consumption [>100 kWh]	USc/kWh	*27.00*	*27.00*	*27.00*	*27.00*	*27.00*	*27.00*
Concessions Consumption	USc/kWh	*21.00*	*21.00*	*21.00*	*21.00*	*21.00*	*21.00*
Fixed Charges	-	-	-	-	-	-	-
Customers (Low Voltage)	USc/A	*25.00*	*25.00*	*25.00*	*25.00*	*25.00*	*25.00*
Private Substations (Medium & High Voltage)	USc/kVA	*60.00*	*60.00*	*60.00*	*60.00*	*60.00*	*60.00*
New Subscription Fees	-	-	-	-	-	-	-
Customers (Low Voltage)	*USD/A*	*0.22*	*0.22*	*1.35*	*1.35*	*1.35*	*1.35*

Private Substations (Medium & High Voltage)	*USD/kVA*	*18.54*	*18.54*	*111.24*	*111.24*	*111.24*	*111.24*
Arrears and Orders for Collection	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Recovery Rate	*%*	*30.00*	*32.00*	*34.00*	*36.00*	*38.00*	*40.00*
Fine	*%*	*6.00*	*6.00*	*6.00*	*6.00*	*6.00*	*6.00*
Grid Size	**%**	**100**	**100**	**100**	**100**	**100**	**100**
Utilities (EoL & La Kadisha) Proportion	%	97.00	97.00	97.00	97.00	97.00	97.00
Concessions (Jbeil & Zahle) Proportion	%	3.00	*3.00*	*3.00*	*3.00*	*3.00*	*3.00*
Losses	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Utility System Losses (TL & NTL)	**%**	**40.17**	**38.12**	**36.07**	**34.86**	**33.64**	**32.42**
Technical Losses (TL)	%	18.15	18.15	18.15	17.96	17.77	17.58
Transmission Losses (TTL)	*%*	*5.70*	*5.70*	*5.70*	*5.70*	*5.70*	*5.70*
Distribution Losses (TDL)	*%*	*13.20*	*13.20*	*13.20*	*13.00*	*12.80*	*12.60*
Non-Technical Losses (NTL)	%	26.90	24.40	21.90	20.60	19.30	18.00
Concessions System Losses (TL & NTL)	**%**	**7.00**	**7.00**	**7.00**	**7.00**	**7.00**	**7.00**
Commercial Losses (Uncollected Bills)	**%**	**5.50**	**5.50**	**5.50**	**5.50**	**5.50**	**5.50**
Financial and Fiscal Metrics	**-**	**-**	**-**	**-**	**-**	**-**	**-**
USD Inflation	%	-	2.00	2.00	2.00	2.00	2.00
Interest Rate	%	-	-	-	-	-	-
Exchange Rate	EUR/USD	1.09	1.09	1.09	1.09	1.09	1.09
Administrative Metrics	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Degradation Rate of EoL Staff	%	-	5.8	7.4	6.7	7.8	6.1

Generation Fleet - Capacity	yr	2023	2024	2025	2026	2027	2028
Generation Capacity	**MW**	**647**	**644**	**863**	**913**	**963**	**1,013**
Electricity of Lebanon (EoL)	**MW**	**591**	**594**	**812**	**862**	**912**	**962**
Thermal Power Plants (TPP)	***MW***	**-**	**-**	**-**	**-**	**-**	**-**
Zouk	*MW*	-	-	-	-	-	-
Jieh	*MW*	-	-	-	-	-	-
Reciprocating Engine Power Plants (REPP)	***MW***	**-**	**-**	**215**	**215**	**215**	**215**
R.E. - Zouk	*MW*	-	-	*160*	*160*	*160*	*160*
R.E. - Jieh	*MW*	-	-	*55*	*55*	*55*	*55*
Combined Cycle Gas Turbine Power Plants (CCGTPP)	***MW***	**585**	**585**	**585**	**585**	**585**	**585**
Deir Aammar	*MW*	*400*	*400*	*400*	*400*	*400*	*400*
Zahrani	*MW*	*185*	*185*	*185*	*185*	*185*	*185*
Open Cycle Gas Turbine Power Plants (OCGTPP)	***MW***	**-**	**-**	**-**	**-**	**-**	**-**
Baalbek	*MW*	-	-	-	-	-	-
Tyr	*MW*	-	-	-	-	-	-
Renewable Energy	***MW***	***6***	***9***	***12***	***62***	***112***	***162***
Hydraulic Power Plants (HPP)	**MW**	**5**	**5**	**9**	**9**	**9**	**9**
Safa	*MW*	-	-	3.5	3.5	3.5	3.5
Al Bared 1	*MW*	3.5	3.5	3.5	3.5	3.5	3.5
Al Bared 2	*MW*	1.5	1.5	1.5	1.5	1.5	1.5
Solar	**MW**	**0**	**0**	**0**	**50**	**100**	**150**
Beirut River Solar Snake (BRSS)	MW	0.1	0.1	0.1	0.1	0.1	0.1
Solar Farms	MW	-	-	-	50	100	150
Biogas	**MW**	**1**	**4**	**4**	**4**	**4**	**4**
Naahmeh Landfill	*MW*	0.7	3.5	3.5	3.5	3.5	3.5
La Kadisha	**MW**	**6**	**6**	**6**	**6**	**6**	**6**
Thermal Power Plants (TPP)	**MW**	-	-	-	-	-	-
Houreiche	*MW*	-	-	-	-	-	-
Hydraulic Power Plants (HPP)	***MW***	**6**	**6**	**6**	**6**	**6**	**6**
Becharre	*MW*	*0.9*	*0.9*	*0.9*	*0.9*	*0.9*	*0.9*
Mar Lichaa	*MW*	*0.8*	*0.8*	*0.8*	*0.8*	*0.8*	*0.8*
Blaouza	*MW*	*2.3*	*2.3*	*2.3*	*2.3*	*2.3*	*2.3*
Abou Ali	*MW*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*	*2.0*
Power Purchase Agreements (PPA)	**MW**	**51**	**51**	**51**	**51**	**51**	**51**
Litani River Authority (LRA)	**MW**	**43**	**43**	**43**	**43**	**43**	**43**
Hydraulic Power Plants (HPP)	***MW***	**43**	**43**	**43**	**43**	**43**	**43**
Markaba	*MW*	7.7	7.7	7.7	7.7	7.7	7.7
Awali	*MW*	24.4	24.4	24.4	24.4	24.4	24.4
Joune	*MW*	10.8	10.8	10.8	10.8	10.8	10.8
The Phoenician Society of Hydroelectric Forces of Nahr Ibrahim	***MW***	**8**	**8**	**8**	**8**	**8**	**8**
Hydraulic Power Plants (HPP)	***MW***	**8**	**8**	**8**	**8**	**8**	**8**
Nahr Ibrahim 1	*MW*	*3.4*	*3.4*	*3.4*	*3.4*	*3.4*	*3.4*
Nahr Ibrahim 2	*MW*	*2.8*	*2.8*	*2.8*	*2.8*	*2.8*	*2.8*
Nahr Ibrahim 3	*MW*	*1.5*	*1.5*	*1.5*	*1.5*	*1.5*	*1.5*
Imports	**MW**	**-**	**-**	**-**	**-**	**-**	**-**
Syria	**MW**	**-**	**-**	**-**	**-**	**-**	**-**
Egypt	**MW**	**-**	**-**	**-**	**-**	**-**	**-**
Jordan	**MW**	**-**	**-**	**-**	**-**	**-**	**-**

Generation Fleet - Operation	yr	2023	2024	2025	2026	2027	2028
Electricity of Lebanon (EoL)	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Thermal Power Plants (TPP)	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Zouk	*h*	-	-	-	-	-	-
Jieh	*h*	-	-	-	-	-	-
Reciprocating Engine Power Plants (REPP)	**-**	**-**	**-**	**-**	**-**	**-**	**-**
R.E. - Zouk	*h*	-	-	*8,760*	*8,760*	*8,760*	*8,760*
R.E. - Jieh	*h*	-	-	*8,760*	*8,760*	*8,760*	*8,760*
Combined Cycle Gas Turbine Power Plants (CCGTPP)	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Deir Aammar	*h*	*8,760*	*8,760*	*8,760*	*8,760*	*8,760*	*8,760*
Zahrani	*h*	*8,760*	*8,760*	*8,760*	*8,760*	*8,760*	*8,760*
Open Cycle Gas Turbine Power Plants (OCGTPP)	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Baalbek	*h*	-	-	-	-	-	-
Tyr	*h*	-	-	-	-	-	-
Renewable Energy	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Hydraulic Power Plants (HPP)	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Safa	*h*	-	-	8,760	8,760	8,760	8,760
Al Bared 1	*h*	8,760	8,760	8,760	8,760	8,760	8,760
Al Bared 2	*h*	8,760	8,760	8,760	8,760	8,760	8,760
Solar	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Beirut River Solar Snake (BRSS)	h	8,760	8,760	8,760	8,760	8,760	8,760
Solar Farms	h	-	-	-	4,380	8,760	8,760
Biogas	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Naahmeh Landfill	*h*	8,760	8,760	8,760	8,760	8,760	8,760
La Kadisha	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Thermal Power Plants (TPP)	**-**	-	-	-	-	-	-
Houreiche	*h*	-	-	-	-	-	-
Hydraulic Power Plants (HPP)	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Becharre	*h*	*8,760*	*8,760*	*8,760*	*8,760*	*8,760*	*8,760*
Mar Lichaa	*h*	*8,760*	*8,760*	*8,760*	*8,760*	*8,760*	*8,760*
Blaouza	*h*	*8,760*	*8,760*	*8,760*	*8,760*	*8,760*	*8,760*
Abou Ali	*h*	*8,760*	*8,760*	*8,760*	*8,760*	*8,760*	*8,760*
Power Purchase Agreements (PPA)	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Litani River Authority (LRA)	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Hydraulic Power Plants (HPP)	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Markaba	*h*	8,760	8,760	8,760	8,760	8,760	8,760
Awali	*h*	8,760	8,760	8,760	8,760	8,760	8,760
Joune	*h*	8,760	8,760	8,760	8,760	8,760	8,760
The Phoenician Society of Hydroelectric Forces of Nahr Ibrahim	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Hydraulic Power Plants (HPP)	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Nahr Ibrahim 1	*h*	*8,760*	*8,760*	*8,760*	*8,760*	*8,760*	*8,760*
Nahr Ibrahim 2	*h*	*8,760*	*8,760*	*8,760*	*8,760*	*8,760*	*8,760*
Nahr Ibrahim 3	*h*	*8,760*	*8,760*	*8,760*	*8,760*	*8,760*	*8,760*
Imports	**h**	**-**	**-**	**-**	**-**	**-**	**-**
Syria	**h**	**-**	**-**	**-**	**-**	**-**	**-**
Egypt	**h**	**-**	**-**	**-**	**-**	**-**	**-**
Jordan	**h**	**-**	**-**	**-**	**-**	**-**	**-**

Electricity Production	yr	2023	2024	2025	2026	2027	2028
Generation	**kWh**	**5,670,348,000**	**5,643,016,800**	**7,557,076,800**	**7,609,812,000**	**7,767,492,000**	**7,872,612,000**
Electricity of Lebanon (EoL)	**kWh**	**5,174,532,000**	**5,199,760,800**	**7,113,820,800**	**7,166,556,000**	**7,324,236,000**	**7,429,356,000**
Thermal Power Plants (TPP)	***kWh***	**-**	**-**	**-**	**-**	**-**	**-**
Zouk	*kWh*	-	-	-	-	-	-
Jieh	*kWh*	-	-	-	-	-	-
Reciprocating Engine Power Plants (REPP)	***kWh***	**-**	**-**	**1,883,400,000**	**1,883,400,000**	**1,883,400,000**	**1,883,400,000**
R.E. - Zouk	*kWh*	-	-	*1,401,600,000*	*1,401,600,000*	*1,401,600,000*	*1,401,600,000*
R.E. - Jieh	*kWh*	-	-	*481,800,000*	*481,800,000*	*481,800,000*	*481,800,000*
Combined Cycle Gas Turbine Power Plants (CCGTPP)	***kWh***	**5,124,600,000**	**5,124,600,000**	**5,124,600,000**	**5,124,600,000**	**5,124,600,000**	**5,124,600,000**
Deir Aammar	*kWh*	*3,504,000,000*	*3,504,000,000*	*3,504,000,000*	*3,504,000,000*	*3,504,000,000*	*3,504,000,000*
Zahrani	*kWh*	*1,620,600,000*	*1,620,600,000*	*1,620,600,000*	*1,620,600,000*	*1,620,600,000*	*1,620,600,000*
Open Cycle Gas Turbine Power Plants (OCGTPP)	***kWh***	**-**	**-**	**-**	**-**	**-**	**-**
Baalbek	*kWh*	-	-	-	-	-	-
Tyr	*kWh*	-	-	-	-	-	-
Renewable Energy	***kWh***	***49,932,000***	***75,160,800***	***105,820,800***	***158,556,000***	***316,236,000***	***421,356,000***
Hydraulic Power Plants (HPP)	**kWh**	**43,800,000**	**43,800,000**	**74,460,000**	**74,460,000**	**74,460,000**	**74,460,000**
Safa	*kWh*	-	-	30,660,000	30,660,000	30,660,000	30,660,000
Al Bared 1	*kWh*	30,660,000	30,660,000	30,660,000	30,660,000	30,660,000	30,660,000
Al Bared 2	*kWh*	13,140,000	13,140,000	13,140,000	13,140,000	13,140,000	13,140,000
Solar	**kWh**	**438,000**	**700,800**	**700,800**	**53,436,000**	**211,116,000**	**316,236,000**
Beirut River Solar Snake (BRSS)	kWh	438,000	700,800	700,800	876,000	876,000	876,000
Solar Farms	kWh	-	-	-	52,560,000	210,240,000	315,360,000
Biogas	**kWh**	**5,694,000**	**30,660,000**	**30,660,000**	**30,660,000**	**30,660,000**	**30,660,000**
Naahmeh Landfill	*kWh*	5,694,000	30,660,000	30,660,000	30,660,000	30,660,000	30,660,000
La Kadisha	**kWh**	**52,560,000**	**52,560,000**	**52,560,000**	**52,560,000**	**52,560,000**	**52,560,000**
Thermal Power Plants (TPP)	**kWh**	-	-	-	-	-	-
Houreiche	*kWh*	-	-	-	-	-	-
Hydraulic Power Plants (HPP)	***kWh***	**52,560,000**	**52,560,000**	**52,560,000**	**52,560,000**	**52,560,000**	**52,560,000**
Becharre	*kWh*	*8,059,200*	*8,059,200*	*8,059,200*	*8,059,200*	*8,059,200*	*8,059,200*
Mar Lichaa	*kWh*	*7,270,800*	*7,270,800*	*7,270,800*	*7,270,800*	*7,270,800*	*7,270,800*
Blaouza	*kWh*	*19,710,000*	*19,710,000*	*19,710,000*	*19,710,000*	*19,710,000*	*19,710,000*
Abou Ali	*kWh*	*17,520,000*	*17,520,000*	*17,520,000*	*17,520,000*	*17,520,000*	*17,520,000*
Power Purchase Agreements (PPA)	**kWh**	**443,256,000**	**443,256,000**	**443,256,000**	**443,256,000**	**443,256,000**	**443,256,000**
Litani River Authority (LRA)	**kWh**	**375,804,000**	**375,804,000**	**375,804,000**	**375,804,000**	**375,804,000**	**375,804,000**
Hydraulic Power Plants (HPP)	***kWh***	**375,804,000**	**375,804,000**	**375,804,000**	**375,804,000**	**375,804,000**	**375,804,000**
Markaba	*kWh*	67,452,000	67,452,000	67,452,000	67,452,000	67,452,000	67,452,000
Awali	*kWh*	213,744,000	213,744,000	213,744,000	213,744,000	213,744,000	213,744,000
Joune	*kWh*	94,608,000	94,608,000	94,608,000	94,608,000	94,608,000	94,608,000
The Phoenician Society of Hydroelectric Forces of Nahr Ibrahim	***kWh***	**67,452,000**	**67,452,000**	**67,452,000**	**67,452,000**	**67,452,000**	**67,452,000**
Hydraulic Power Plants (HPP)	***kWh***	**67,452,000**	**67,452,000**	**67,452,000**	**67,452,000**	**67,452,000**	**67,452,000**
Nahr Ibrahim 1	*kWh*	*29,784,000*	*29,784,000*	*29,784,000*	*29,784,000*	*29,784,000*	*29,784,000*
Nahr Ibrahim 2	*kWh*	*24,528,000*	*24,528,000*	*24,528,000*	*24,528,000*	*24,528,000*	*24,528,000*
Nahr Ibrahim 3	*kWh*	*13,140,000*	*13,140,000*	*13,140,000*	*13,140,000*	*13,140,000*	*13,140,000*
Imports	**kWh**	**-**	**-**	**-**	**-**	**-**	**-**
Syria	**kWh**	-	-	-	-	-	-
Egypt	**kWh**	-	-	-	-	-	-
Jordan	**kWh**	-	-	-	-	-	-
Gross Energy Produced	**kWh**	**5,670,348,000**	**5,695,576,800**	**7,609,636,800**	**7,662,372,000**	**7,820,052,000**	**7,925,172,000**
EoL Proportion of Supply	***%***	***91.26***	***91.29***	***93.48***	***93.53***	***93.66***	***93.74***
Fossil Based Generation Proportion	*%*	*99.04*	*98.55*	*98.51*	*97.79*	*95.68*	*94.33*
Renewable Energy Based Generation Proportion	*%*	*0.96*	*1.45*	*1.49*	*2.21*	*4.32*	*5.67*
La Kadisha Proportion of Supply	***%***	***0.93***	***0.92***	***0.69***	***0.69***	***0.67***	***0.66***
Fossil Based Generation Proportion	*%*	-	-	-	-	-	-
Renewable Energy Based Generation Proportion	*%*	*100.00*	*100.00*	*100.00*	*100.00*	*100.00*	*100.00*
PPA Proportion of Supply	***%***	***7.82***	***7.78***	***5.82***	***5.78***	***5.67***	***5.59***
Imports Proportion of supply	***%***	**-**	**-**	**-**	**-**	**-**	**-**
Syrian Imports Proportion	*%*	-	-	-	-	-	-
Egyptian Imports Proportion	*%*	-	-	-	-	-	-
Jordanian Imports Proportion	*%*	-	-	-	-	-	-
Energy Mix	**%**	**100**	**100**	**100**	**100**	**100**	**100**
Primary Generation	**%**	**90.38**	**89.98**	**92.09**	**91.46**	**89.62**	**88.43**
Renewable Energy Generation	**%**	**9.62**	**10.02**	**7.91**	**8.54**	**10.38**	**11.57**
Generation Capacity	**MW**	**647**	**650**	**869**	**875**	**893**	**905**
Average Daily Electricity Supply	**h**	**5**	**5**	**7**	**7**	**7**	**8**
Grid Size	**%**	**100**	**100**	**100**	**100**	**100**	**100**
Utilities (EoL & La Kadisha) Proportion	%	97.00	97.00	97.00	97.00	97.00	97.00
Concessions (Jbeil & Zahle) Proportion	%	3.00	3.00	3.00	3.00	3.00	3.00
System Losses (TL & NTL)	**kWh**	**2,209,219,676**	**2,105,996,365**	**2,662,693,897**	**2,590,928,617**	**2,551,799,597**	**2,492,035,759**
Proportion of Supply	*%*	*40.2*	*38.1*	*36.1*	*34.9*	*33.6*	*32.4*
Technical Losses (TL)	***kWh***	***998,161,111***	***1,002,602,180***	***1,339,537,454***	***1,334,802,826***	***1,347,964,885***	***1,351,586,254***
Proportion of Supply	*%*	*18.1*	*18.1*	*18.1*	*18.0*	*17.8*	*17.6*
Transmission Losses (TTL)	**kWh**	313,513,541	314,908,441	420,736,819	423,652,548	432,370,675	438,182,760
Proportion of Supply	*%*	*5.7*	*5.7*	*5.7*	*5.7*	*5.7*	*5.7*
Distribution Losses (TDL)	***kWh***	684,647,571	687,693,739	918,800,636	911,150,278	915,594,210	913,403,494
Proportion of Supply	*%*	*13.2*	*13.2*	*13.2*	*13.0*	*12.8*	*12.6*
Non-Technical Losses (NTL)	**kWh**	1,211,058,565	1,103,394,185	1,323,156,443	1,256,125,791	1,203,834,712	1,140,449,505
Proportion of Supply	*%*	*26.9*	*24.4*	*21.9*	*20.6*	*19.3*	*18.0*
Concessions System Losses (TL & NTL)	**kWh**	**11,907,731**	**11,960,711**	**15,980,237**	**16,090,981**	**16,422,109**	**16,642,861**
Proportion of Supply	*%*	*7.0*	*7.0*	*7.0*	*7.0*	*7.0*	*7.0*
Net Energy to be Collected	**kWh**	**3,449,220,593**	**3,577,619,723**	**4,930,962,665**	**5,055,352,402**	**5,251,830,294**	**5,416,493,379**
Utilities (EoL & La Kadisha) Proportion	*kWh*	*3,291,017,884*	*3,418,713,131*	*4,718,653,799*	*4,841,572,223*	*5,033,650,843*	*5,195,381,081*
Concessions (Jbeil & Zahle) Proportion	*kWh*	*158,202,709*	*158,906,593*	*212,308,867*	*213,780,179*	*218,179,451*	*221,112,299*

Fuel	yr	2023	2024	2025	2026	2027	2028
Government-to-Government Contracts (G2G)	**t**	**1,000,000**	**1,430,000**	**1,430,000**	**1,430,000**	**1,430,000**	**1,430,000**
Contract 1 - Iraqi High Sulphur Fuel Oil (HSFO)	**t**	**1,000,000**	**1,430,000**	**1,430,000**	**1,430,000**	**1,430,000**	**1,430,000**
Not Covered by the Utility (EoL)	t	1,000,000	1,000,000	500,000	500,000	250,000	-
Proportion of Non-coverage	*%*	*100*	*69.93*	*34.97*	*34.97*	*17.48*	-
Covered by the Utility - Electricity of Lebanon (EoL)	t	-	430,000	930,000	930,000	1,180,000	1,430,000
Proportion of EoL coverage	*%*	-	*30.07*	*65.03*	*65.03*	*82.52*	*100.00*
Fuel Oil Conversion Ratio	%	92.10	92.10	92.10	92.10	92.10	92.10
Gas Oil Conversion Ratio	%	53.04	53.04	53.04	53.04	53.04	53.04
Contract 2 - Iraqi Crude Oil (CO)	**t**	-	-	-	-	-	-
Not Covered by the Utility (EoL)	t	-	-	-	-	-	-
Proportion of Non-coverage	**%**	-	-	-	-	-	-
Covered by the Utility - Electricity of Lebanon (EoL)	t	-	-	-	-	-	-
Proportion of EoL coverage	**%**	-	-	-	-	-	-
Fuel Oil Conversion Ratio	**%**	118.85	118.85	118.85	118.85	118.85	118.85
Gas Oil Conversion Ratio	**%**	68.44	68.44	68.44	68.44	68.44	68.44
Ministry of Energy and Water SWAP Contracts (MoEW - SWAP)	**t**	**530,380**	**758,444**	**758,444**	**758,444**	**758,444**	**758,444**
Under Contract 1 (Iraqi HSFO)	**t**	**530,380**	**758,444**	**758,444**	**758,444**	**758,444**	**758,444**
Fuel Oil (F.O.)	**t**	**-**	**-**	**-**	**-**	**-**	**-**
F.O. Proportion of Contract	*%*	-	-	-	-	-	-
Fuel Oil - Grade A (F.O.A)	**t**	**-**	**-**	**-**	**-**	**-**	**-**
F.O.A Proportion of F.O.	*%*	-	-	-	-	-	-
F.O.A Proportion of Contract	*%*	-	-	-	-	-	-
Fuel Oil - Grade B (F.O.B)	**t**	**-**	**-**	**-**	**-**	**-**	**-**
F.O.B Proportion of F.O.	*%*	-	-	-	-	-	-
F.O.B Proportion of Contract	*%*	-	-	-	-	-	-
Gas Oil (G.O.)	**t**	**530,380**	**758,444**	**758,444**	**758,444**	**758,444**	**758,444**
G.O. Proportion of Contract	*%*	100.00	100.00	100.00	100.00	100.00	100.00
Under Contract 2 (Iraqi CO)	**t**	**-**	**-**	**-**	**-**	**-**	**-**
Fuel Oil (F.O.)	**t**	**-**	**-**	**-**	**-**	**-**	**-**
F.O. Proportion of Contract	*%*	-	-	-	-	-	-
Fuel Oil - Grade A (F.O.A)	**t**	**-**	**-**	**-**	**-**	**-**	**-**
F.O.A Proportion of F.O.	*%*	-	-	-	-	-	-
F.O.A Proportion of Contract	*%*	-	-	-	-	-	-
Fuel Oil - Grade B (F.O.B)	**t**	**-**	**-**	**-**	**-**	**-**	**-**
F.O.B Proportion of F.O.	*%*	-	-	-	-	-	-
F.O.B Proportion of Contract	*%*	-	-	-	-	-	-
Gas Oil (G.O.)	**t**	**-**	**-**	**-**	**-**	**-**	**-**
G.O. Proportion of Contract	*%*	-	-	-	-	-	-
Ministry of Energy and Water Spot Contracts (MoEW - SPOT)	**t**	**132,000**	**-**	**409,860**	**409,860**	**409,860**	**409,860**
Fuel Oil (F.O.)	**t**	**-**	**-**	**409,860**	**409,860**	**409,860**	**409,860**
F.O. Proportion of Contract	*%*	-	-	*100.00*	*100.00*	*100.00*	*100.00*
Fuel Oil - Grade A (F.O.A)	**t**	**-**	**-**	**-**	**-**	**-**	**-**
F.O.A Proportion of F.O.	*%*	-	-	-	-	-	-
F.O.A Proportion of Contract	*%*	-	-	-	-	-	-
Fuel Oil - Grade B (F.O.B)	**t**	**-**	**-**	**409,860**	**409,860**	**409,860**	**409,860**
F.O.B Proportion of F.O.	*%*	-	-	*100.00*	*100.00*	*100.00*	*100.00*
F.O.B Proportion of Contract	*%*	-	-	*100.00*	*100.00*	*100.00*	*100.00*
Gas Oil (G.O.)	**t**	**132,000**	**-**	**-**	**-**	**-**	**-**
G.O. Proportion of Contract	*%*	*100.00*	-	-	-	-	-
Imports (Egypt)	**t**	**-**	**-**	**-**	**-**	**-**	**-**
Natural Gas (N.G.)	t	-	-	-	-	-	-
In Cubic Meters	*m^3*	-	-	-	-	-	-
Total Supplied Fuel	**t**	**662,380**	**758,444**	**1,168,304**	**1,168,304**	**1,168,304**	**1,168,304**
Fuel Oil (F.O.)	**t**	**-**	**-**	**409,860**	**409,860**	**409,860**	**409,860**
F.O. Proportion of Supply	*%*	-	-	35	35	35	35
Fuel Oil - Grade A (F.O.A)	**t**	**-**	**-**	**-**	**-**	**-**	**-**
F.O.A Proportion of F.O.	*%*	-	-	-	-	-	-
F.O.A Proportion of Supply	*%*	-	-	-	-	-	-
Fuel Oil - Grade B (F.O.B)	**t**	**-**	**-**	**409,860**	**409,860**	**409,860**	**409,860**
F.O.B Proportion of F.O.	*%*	-	-	*100.00*	*100.00*	*100.00*	*100.00*
F.O.B Proportion of Supply	*%*	-	-	*35.08*	*35.08*	*35.08*	*35.08*
Gas Oil (G.O.)	**t**	**662,380**	**758,444**	**758,444**	**758,444**	**758,444**	**758,444**
G.O. Proportion of Supply	*%*	*100.00*	*100.00*	*64.92*	*64.92*	*64.92*	*64.92*
Natural Gas (N.G.)	**t**	**-**	**-**	**-**	**-**	**-**	**-**
N.G. Proportion of Supply	*%*	-	-	-	-	-	-
Government Fuel Coverage	**%**	**100**	**70**	**23**	**23**	**11**	**-**
Utility Fuel Coverage	**%**	**-**	**30**	**77**	**77**	**89**	**100**

Fuel - Pricing	yr	2023	2024	2025	2026	2027	2028
Average Brent Crude Oil Unit Price	**USD/bbl**	**95.00**	**95.00**	**95.00**	**95.00**	**95.00**	**95.00**
Average F.O. Unit Price	**USD/t**	**585.9080**	**585.9080**	**585.9080**	**585.9080**	**585.9080**	**585.9080**
Average G.O. Unit Price	**USD/t**	**1,017.4320**	**1,017.4320**	**1,017.4320**	**1,017.4320**	**1,017.4320**	**1,017.4320**
Average N.G. Unit Price	**USD/t**	**422.5245**	**422.5245**	**422.5245**	**422.5245**	**422.5245**	**422.5245**
Total Cost of Fuel	**MUSD**	**674**	**772**	**1,012**	**1,012**	**1,012**	**1,012**
Cost of Fuel Oil	**MUSD**	**-**	**-**	**240**	**240**	**240**	**240**
Cost of Fuel Oil - Grade A	MUSD	-	-	-	-	-	-
Cost of Fuel Oil - Grade B	MUSD	-	-	240	240	240	240
Cost of Gas Oil	**MUSD**	**674**	**772**	**772**	**772**	**772**	**772**
Cost of Natural Gas	**MUSD**	**-**	**-**	**-**	**-**	**-**	**-**
Cost of Fuel Not Covered by Electricity of Lebanon (EoL)	**MUSD**	**540**	**540**	**270**	**270**	**135**	**-**
Cost of Fuel Oil	**MUSD**	**-**	**-**	**-**	**-**	**-**	**-**
Cost of Fuel Oil - Grade A	MUSD	-	-	-	-	-	-
Cost of Fuel Oil - Grade B	MUSD	-	-	-	-	-	-
Cost of Gas Oil	**MUSD**	**540**	**540**	**270**	**270**	**135**	**-**
Cost of Natural Gas	**MUSD**	**-**	**-**	**-**	**-**	**-**	**-**
Cost of Fuel Covered by Electricity of Lebanon (EoL)	**MUSD**	**134**	**232**	**742**	**742**	**877**	**1,012**
Cost of Fuel Oil	**MUSD**	**-**	**-**	**240**	**240**	**240**	**240**
Cost of Fuel Oil - Grade A	MUSD	-	-	-	-	-	-
Cost of Fuel Oil - Grade B	MUSD	-	-	240	240	240	240
Cost of Gas Oil	**MUSD**	**134**	**232**	**502**	**502**	**637**	**772**
Cost of Natural Gas	**MUSD**	**-**	**-**	**-**	**-**	**-**	**-**

Tariff Structure	yr	2023	2024	2025	2026	2027	2028
Gross Energy Produced	**kWh**	**5,670,348,000**	**5,695,576,800**	**7,609,636,800**	**7,662,372,000**	**7,820,052,000**	**7,925,172,000**
Grid Size	**%**	**100**	**100**	**100**	**100**	**100**	**100**
Utilities (EoL & La Kadisha) Proportion	%	97.00	97.00	97.00	97.00	97.00	97.00
Concessions (Jbeil & Zahle) Proportion	%	3.00	3.00	3.00	3.00	3.00	3.00
Equivalent Energy	**kWh**	**5,670,348,000**	**5,695,576,800**	**7,609,636,800**	**7,662,372,000**	**7,820,052,000**	**7,925,172,000**
Utilities (EoL & La Kadisha)	kWh	5,500,237,560	5,524,709,496	7,381,347,696	7,432,500,840	7,585,450,440	7,687,416,840
Concessions (Jbeil & Zahle)	kWh	170,110,440	170,867,304	228,289,104	229,871,160	234,601,560	237,755,160
Total Subscribers	**#**	**1,515,728**	**1,530,885**	**1,546,194**	**1,577,118**	**1,608,660**	**1,640,834**
Total Customers (Low Voltage)	#	1,511,022	1,526,132	1,541,394	1,572,221	1,603,666	1,635,739
Total Power Rating (LV)	A	45,639,220	46,095,612	46,556,568	47,487,700	48,437,454	49,406,203
Customers' forecasted Increase	*%*	-	*1.00*	*1.00*	*2.00*	*2.00*	*2.00*
Private Substations - (Medium & High Voltage)	#	4,706	4,753	4,801	4,897	4,995	5,094
Total Power Rating (MV & HV)	kVA	2,028,757	2,049,045	2,069,535	2,110,926	2,153,144	2,196,207
Private Substations' forecasted Increase	*%*	-	*1.00*	*1.00*	*2.00*	*2.00*	*2.00*
Utilities System Losses (TL & NTL)	**%**	**40.17**	**38.12**	**36.07**	**34.86**	**33.64**	**32.42**
Concessions System Losses (TL & NTL)	**%**	**7.00**	**7.00**	**7.00**	**7.00**	**7.00**	**7.00**
Commercial Losses (Uncollected Bills)	**%**	**5.50**	**5.50**	**5.50**	**5.50**	**5.50**	**5.50**
Collected Energy	**kWh**	**3,268,214,609**	**3,389,590,501**	**4,671,436,706**	**4,789,065,930**	**4,974,979,497**	**5,130,747,420**
Collected Energy - Utilities	**kWh**	**3,110,011,900**	**3,230,683,908**	**4,459,127,840**	**4,575,285,751**	**4,756,800,047**	**4,909,635,121**
Subsidized Block [≤100 kWh]	*kWh*	*1,359,919,800*	*1,373,518,998*	*1,387,254,188*	*1,414,999,272*	*1,443,299,257*	*1,472,165,242*
Regular Block [>100 kWh]	*kWh*	*1,750,092,100*	*1,857,164,910*	*3,071,873,652*	*3,160,286,479*	*3,313,500,789*	*3,437,469,879*
Collected Energy - Concessions	**kWh**	**158,202,709**	**158,906,593**	**212,308,867**	**213,780,179**	**218,179,451**	**221,112,299**

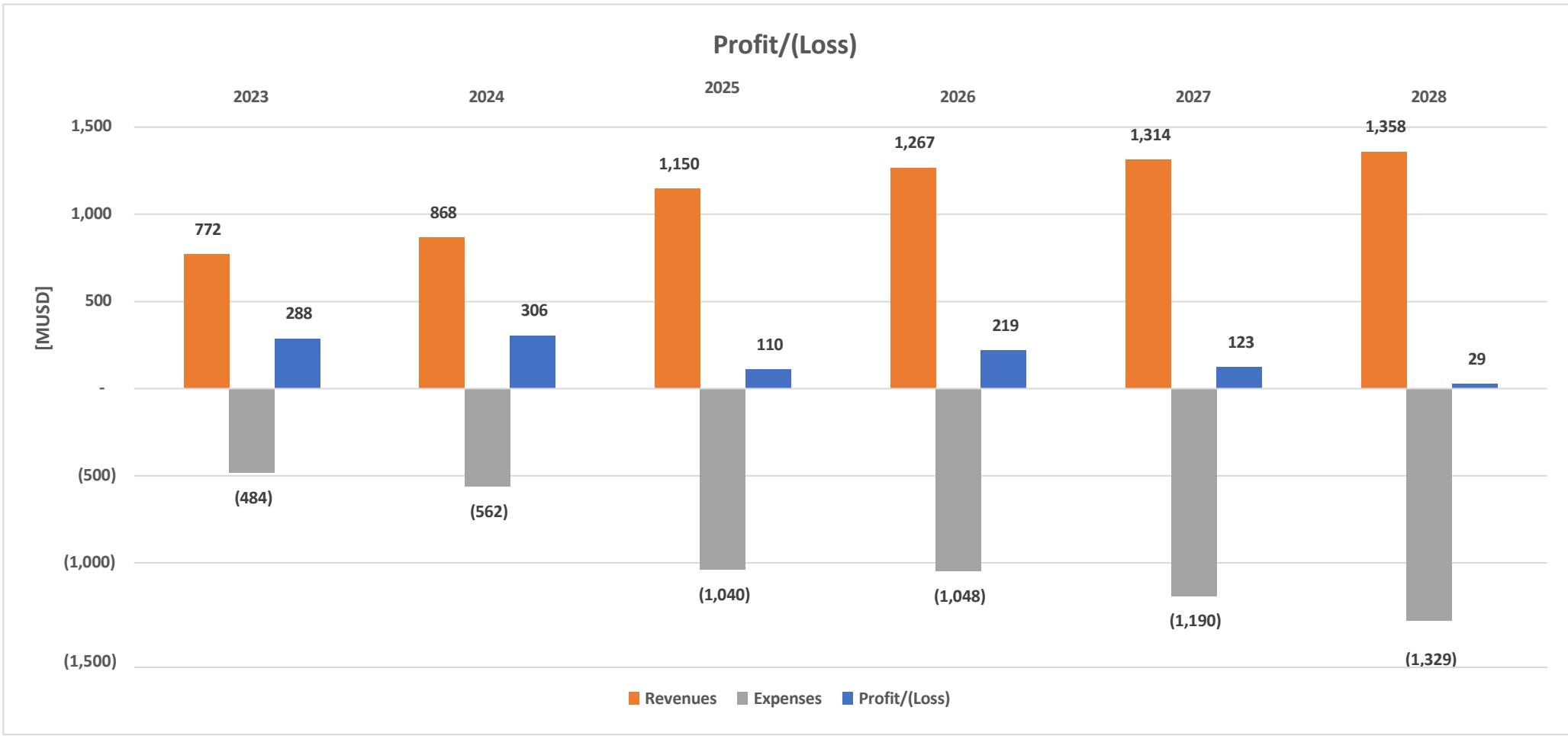
Tariff Revenues	yr	2023	2024	2025	2026	2027	2028
Billed Energy	**MUSD**	**793**	**825**	**1,167**	**1,197**	**1,246**	**1,286**
Variable Charges	**MUSD**	**642**	**672**	**1,013**	**1,040**	**1,085**	**1,122**
Subsidized Consumption [≤100 kWh]	*MUSD*	*136*	*137*	*139*	*141*	*144*	*147*
Regular Consumption [>100 kWh]	*MUSD*	*473*	*501*	*829*	*853*	*895*	*928*
Concessions Consumption	*MUSD*	*33*	*33*	*45*	*45*	*46*	*46*
Fixed Charges	**MUSD**	**152**	**153**	**155**	**158**	**161**	**164**
Customers (Low Voltage)	*MUSD*	*137*	*138*	*140*	*142*	*145*	*148*
Private Substations (Medium & High Voltage)	*MUSD*	*15*	*15*	*15*	*15*	*16*	*16*

Other Receivables	yr	2023	2024	2025	2026	2027	2028
Loans	**MUSD**	**-**	**-**	**50**	**50**	**50**	**-**
World Bank	*MUSD*	*-*	*-*	*50*	*50*	*50*	*-*
IMF	*MUSD*	*-*	*-*	*-*	*-*	*-*	*-*

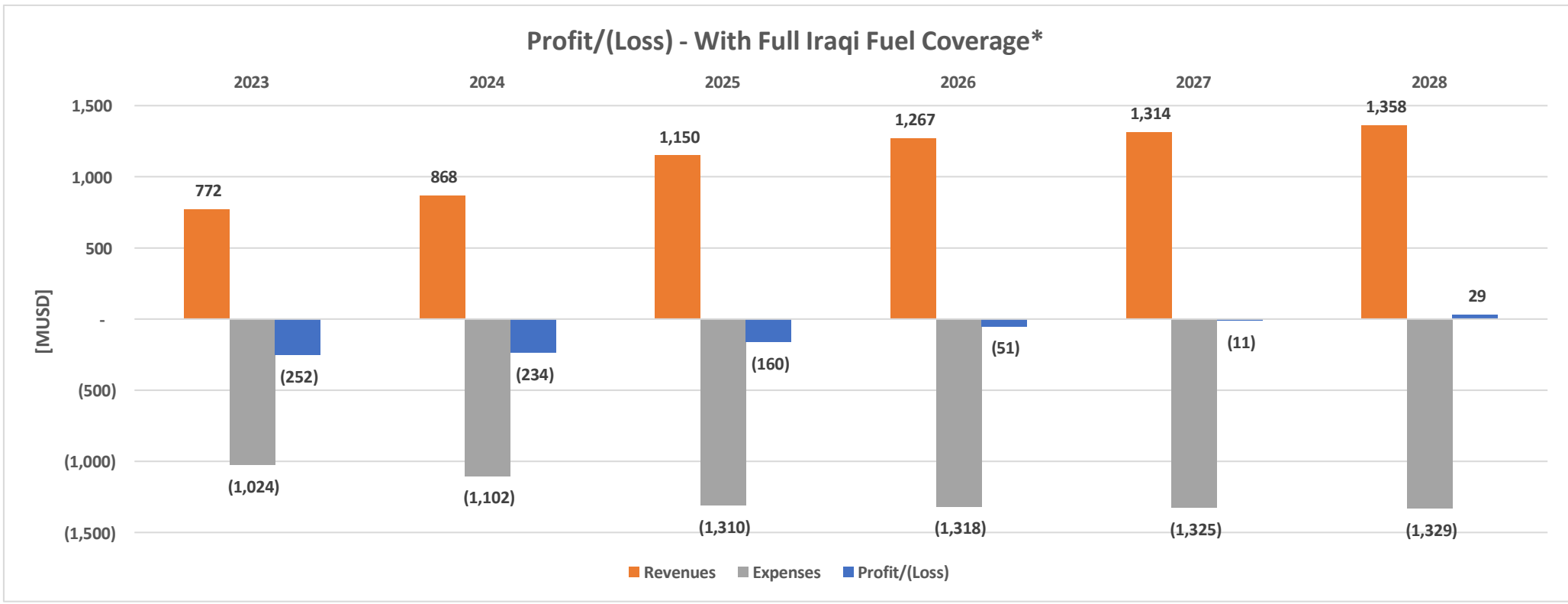
Utility (EoL) Expenses	yr	2023	2024	2025	2026	2027	2028
Generation Cost	**MUSD**	**250**	**325**	**856**	**858**	**995**	**1,133**
Fuel	**MUSD**	**134**	**232**	**742**	**742**	**877**	**1,012**
Operation And Maintenance (O&M)	**MUSD**	**65**	**65**	**86**	**86**	**86**	**86**
Zouk	*MUSD*	*4*	*4*	*4*	*4*	*4*	*4*
Jieh	*MUSD*	*3*	*3*	*3*	*3*	*3*	*3*
R.E. - Zouk	*MUSD*	*-*	*-*	*15*	*15*	*15*	*15*
R.E. - Jieh	*MUSD*	*-*	*-*	*5*	*5*	*5*	*5*
Deir Aammar	*MUSD*	*39*	*39*	*39*	*39*	*39*	*39*
Zahrani	*MUSD*	*18*	*18*	*18*	*18*	*18*	*18*
Baalbek	*MUSD*	*0.6*	*0.6*	*0.6*	*0.6*	*0.6*	*0.6*
Tyr	*MUSD*	*0.8*	*0.8*	*0.8*	*0.8*	*0.8*	*0.8*
Safa	*MUSD*	*0.04*	*0.04*	*0.04*	*0.04*	*0.04*	*0.04*
Al Bared 1	*MUSD*	*0.04*	*0.04*	*0.04*	*0.04*	*0.04*	*0.04*
Al Bared 2	*MUSD*	*0.04*	*0.04*	*0.04*	*0.04*	*0.04*	*0.04*
Beirut River Solar Snake	*MUSD*	*0.04*	*0.04*	*0.04*	*0.04*	*0.04*	*0.04*
Solar Farms	*MUSD*	*-*	*-*	*-*	*0.25*	*0.50*	*0.75*
Naameh Landfill	*MUSD*	*0.04*	*0.04*	*0.04*	*0.04*	*0.04*	*0.04*
Preservation Activities	**MUSD**	**14**	**14**	**-**	**-**	**-**	**-**
R.E. - Zouk	*MUSD*	*8*	*8*	*-*	*-*	*-*	*-*
R.E. - Jieh	*MUSD*	*6*	*6*	*-*	*-*	*-*	*-*
Depreciation	**MUSD**	**28**	**28**	**28**	**30**	**32**	**34**
Zouk	*MUSD*	*-*	*-*	*-*	*-*	*-*	*-*
Jieh	*MUSD*	*-*	*-*	*-*	*-*	*-*	*-*
R.E. - Zouk	*MUSD*	*10*	*10*	*10*	*10*	*10*	*10*
R.E. - Jieh	*MUSD*	*4*	*4*	*4*	*4*	*4*	*4*
Deir Aammar	*MUSD*	*7*	*7*	*7*	*7*	*7*	*7*
Zahrani	*MUSD*	*7*	*7*	*7*	*7*	*7*	*7*
Baalbek	*MUSD*	*-*	*-*	*-*	*-*	*-*	*-*
Tyr	*MUSD*	*-*	*-*	*-*	*-*	*-*	*-*
Safa	*MUSD*	*-*	*-*	*-*	*-*	*-*	*-*
Al Bared 1	*MUSD*	*-*	*-*	*-*	*-*	*-*	*-*
Al Bared 2	*MUSD*	*-*	*-*	*-*	*-*	*-*	*-*
Beirut River Solar Snake	*MUSD*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*	*0.1*
Solar Farms	*MUSD*	*-*	*-*	*-*	*2.0*	*4.0*	*6.0*
Naameh Landfill	*MUSD*	*0.3*	*0.3*	*0.3*	*0.3*	*0.3*	*0.3*
Power Purchase Agreements	**MUSD**	***9***	***11***	***13***	***13***	***13***	***13***
Litani River Authority (LRA)	*MUSD*	*8*	*9*	*11*	*11*	*11*	*11*
The Phoenician Society of Hydroelectric Forces of Nahr Ibrahim	*MUSD*	*1*	*2*	*2*	*2*	*2*	*2*
Electricity Imports	**MUSD**	**-**	**-**	**-**	**-**	**-**	**-**
Syria	*MUSD*	*-*	*-*	*-*	*-*	*-*	*-*
Egypt	*MUSD*	*-*	*-*	*-*	*-*	*-*	*-*
Jordan	*MUSD*	*-*	*-*	*-*	*-*	*-*	*-*
Transmission Cost	**MUSD**	**26**	**26**	**26**	**27**	**27**	**28**
Substations, Overhead Lines, Underground Cable, etc. O&M	**MUSD**	**20**	**21**	**21**	**22**	**22**	**23**
Transmission S/S, OHL, UGC, etc. Depreciation	**MUSD**	**5**	**5**	**5**	**5**	**5**	**5**
Distribution Cost	**MUSD**	**59**	**60**	**105**	**107**	**109**	**111**
Distribution O&M	**MUSD**	**52**	**53**	**99**	**101**	**103**	**105**
Distribution Substations, Poles, etc. Depreciation	**MUSD**	**7**	**7**	**7**	**7**	**7**	**7**
Capital Investments	**MUSD**	**-**	**-**	**50**	**50**	**50**	**-**
Solar Farms	**MUSD**	**-**	**-**	**50**	**50**	**50**	**-**
Debt Repayment	**MUSD**	**144**	**146**	**45**	**50**	**53**	**17**
Internal Debts (Operators)	**MUSD**	**101**	**101**	**-**	**-**	**-**	**-**
Generation	*MUSD*	*38*	*38*	*-*	*-*	*-*	*-*
Transmission	*MUSD*	*-*	*-*	*-*	*-*	*-*	*-*
Distribution	*MUSD*	*63*	*63*	*-*	*-*	*-*	*-*
Governmental Loan - Working Capital	**MUSD**	37	37	37	37	37	-
External Debts - International Financing Agencies (IFA)	**MUSD**	**7**	**9**	**9**	**13**	**17**	**17**
World Bank (WB)	*MUSD*	*-*	*2*	*6*	*11*	*15*	*15*
Principal	MUSD	-	-	-	-	-	-
Interest	MUSD	-	2	6	11	15	15
International Monetary Fund (IMF)	*MUSD*	*-*	*-*	*-*	*-*	*-*	*-*
Principal	MUSD	-	-	-	-	-	-
Interest	MUSD	-	-	-	-	-	-
Arab Fund for Economic and Social Development	*MUSD*	*7*	*7*	*2*	*2*	*2*	*2*
Principal	MUSD	6	6	2	2	2	2
Interest	MUSD	1	1	0.29	0.13	0.01	0.00
Administrative Cost	**MUSD**	**27**	**27**	**25**	**23**	**21**	**20**
Salaries and Affiliates	MUSD	17	16	15	14	13	12
Medical Care and Insurance	MUSD	6	8	8	7	7	6
National Social Security Fund (NSSF)	MUSD	1	1	1	1	1	1
End-of-Service Indemnity (EOSI)	MUSD	1	1	1	1	1	1
Salary Tax	MUSD	2	2	2	2	2	2
Miscellaneous Cost	**MUSD**	**20**	**21**	**21**	**22**	**22**	**22**
Total OPEX (With Gradual Coverage of Iraqi Fuel)	**MUSD**	**527**	**605**	**1,079**	**1,087**	**1,229**	**1,331**
Total OPEX (With Full Iraqi Fuel Coverage)	**MUSD**	**1,066**	**1,144**	**1,349**	**1,356**	**1,363**	**1,331**
Total CAPEX	**MUSD**	**-**	**-**	**50**	**50**	**50**	**-**
Total Cost (With Gradual Coverage of Iraqi Fuel)	**MUSD**	**527**	**605**	**1,129**	**1,137**	**1,279**	**1,331**
Total Cost (With Iraqi Fuel Coverage)	**MUSD**	**1,066**	**1,144**	**1,399**	**1,406**	**1,413**	**1,331**

Recoverability Ratio	yr	2023	2024	2025	2026	2027	2028
Levelized Tariff	USC/kWh	24.27	24.35	24.99	25.00	25.04	25.06
Levelized OPEX (With Gradual Coverage of Iraqi Fuel)	USC/kWh	9.29	10.72	14.28	14.28	15.82	16.91
Levelized OPEX (With Full Iraqi Fuel Coverage)	USC/kWh	18.81	20.28	17.85	17.83	17.55	16.91
Levelized CAPEX	USC/kWh	-	-	0.66	0.66	0.64	-
Levelized Expenditures (With Gradual Coverage of Iraqi Fuel)	USC/kWh	9.29	10.72	14.94	14.94	16.46	16.91
Levelized Expenditures (With Full Iraqi Fuell Coverage)	USC/kWh	18.81	20.28	18.51	18.48	18.20	16.91
Cost Recoverability Ratio (With Gradual Coverage of Iraqi Fuel)	%	261.27	227.18	175.04	175.08	158.30	148.23
Cost Recoverability Ratio (With Full Iraqi Fuel Coverage)	%	129.06	120.05	140.02	140.26	142.64	148.23
Total Cost Recoverability Ratio (With Gradual Coverage of Iraqi Fuel)	%	261.27	227.18	167.29	167.38	152.11	148.23
Total Cost Recoverability Ratio (With Full Iraqi Fuel Coverage)	%	129.06	120.05	135.02	135.27	137.59	148.23

Income Statement (With Gradual Coverage of Iraqi Fuel)	yr	2023	2024	2025	2026	2027	2028
Revenues	**MUSD**	**772**	**868**	**1,150**	**1,267**	**1,314**	**1,358**
Electricity Sales	MUSD	772	868	1,147	1,261	1,308	1,352
Electricity New Subscriptions	MUSD	-	0.5	2.9	5.9	6.0	6.1
Expenses	**MUSD**	**(484)**	**(562)**	**(1,040)**	**(1,048)**	**(1,190)**	**(1,329)**
Generation Cost (incl. Dep.)	MUSD	(250)	(325)	(856)	(858)	(995)	(1,133)
Transmission Cost (incl. Dep.)	MUSD	(26)	(26)	(26)	(27)	(27)	(28)
Distribution Cost (incl. Dep.)	MUSD	(59)	(60)	(105)	(107)	(109)	(111)
Administrative Cost	MUSD	(27)	(27)	(25)	(23)	(21)	(20)
Miscellaneous Cost	MUSD	(20)	(21)	(21)	(22)	(22)	(22)
Internal Debts Payment	MUSD	(101)	(101)	-	-	-	-
Loan Interests	MUSD	(1)	(3)	(7)	(11)	(15)	(15)
Profit/(Loss)	**MUSD**	**288**	**306**	**110**	**219**	**123**	**29**



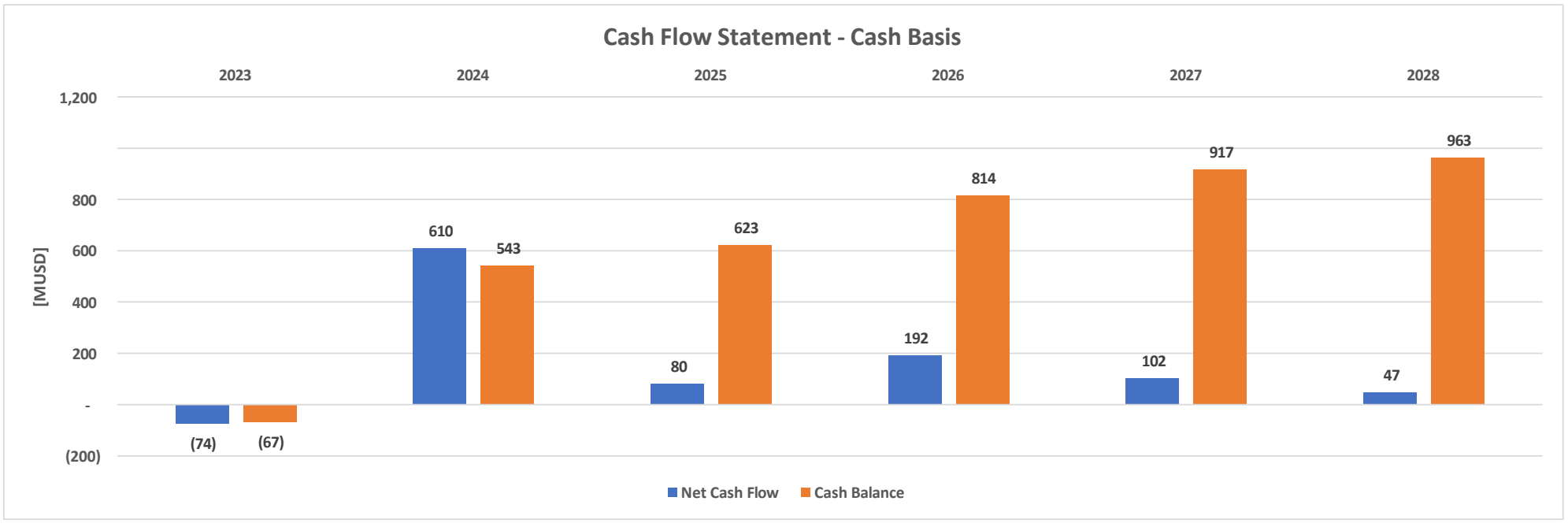
Income Statement (With Full Iraqi Fuel Coverage)	yr	2023	2024	2025	2026	2027	2028
Revenues	**MUSD**	**772**	**868**	**1,150**	**1,267**	**1,314**	**1,358**
Electricity Sales	MUSD	772	868	1,147	1,261	1,308	1,352
Electricity New Subscriptions	MUSD	-	0.5	2.9	5.9	6.0	6.1
Expenses	**MUSD**	**(1,024)**	**(1,102)**	**(1,310)**	**(1,318)**	**(1,325)**	**(1,329)**
Generation Cost (incl. Dep.)	MUSD	(250)	(325)	(856)	(858)	(995)	(1,133)
Transmission Cost (incl. Dep.)	MUSD	(26)	(26)	(26)	(27)	(27)	(28)
Distribution Cost (incl. Dep.)	MUSD	(59)	(60)	(105)	(107)	(109)	(111)
Administrative Cost	MUSD	(27)	(27)	(25)	(23)	(21)	(20)
Miscellaneous Cost	MUSD	(20)	(21)	(21)	(22)	(22)	(22)
Internal Debts Payment	MUSD	(101)	(101)	-	-	-	-
Loan Interests	MUSD	(1)	(3)	(7)	(11)	(15)	(15)
Portion of the Iraqi Fuel Not Covered by the Utility*	MUSD	(540)	(540)	(270)	(270)	(135)	-
Profit/(Loss)	**MUSD**	**(252)**	**(234)**	**(160)**	**(51)**	**(11)**	**29**



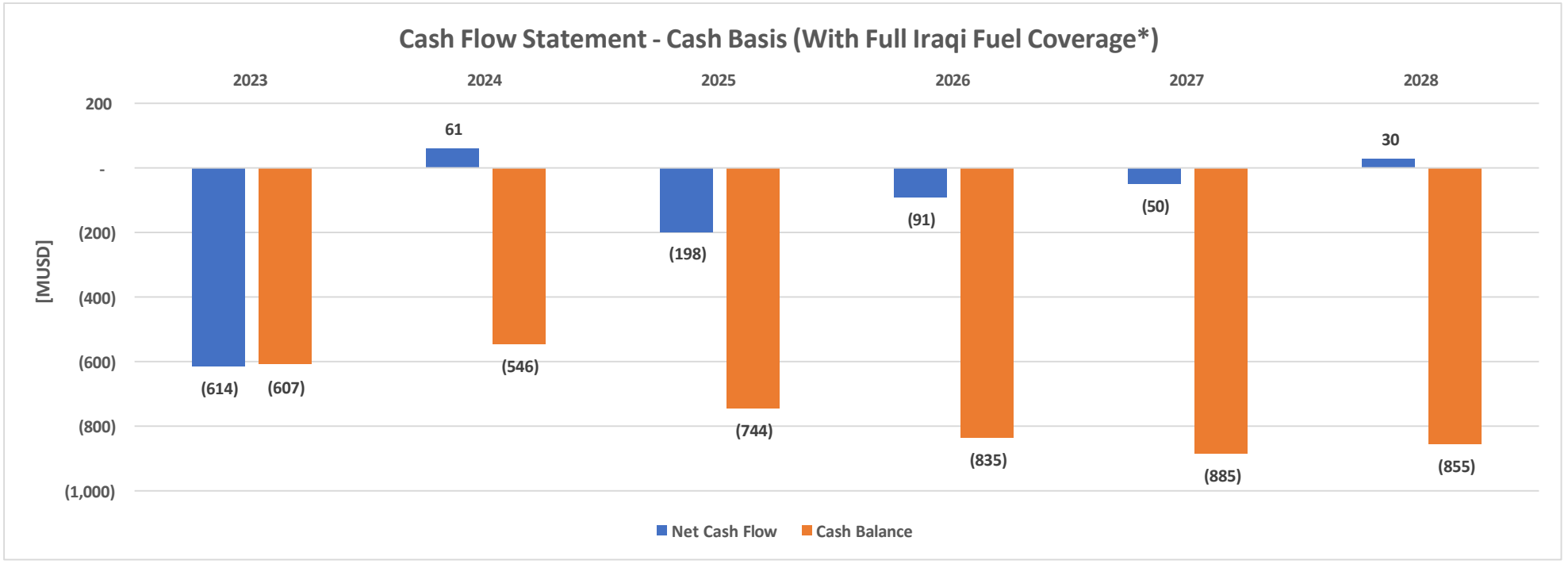
*** Remarks:**

With Reference to MOEW Letter No. 4844 Dated 29/06/2022 and EDL Letters No. 183 Dated 10/01/2024 and No. 403 Dated 23/01/2024 and the MOEW response No. 884 dated 19/3/2024. Where the Ministry of Energy and Water (MOEW) has indicated that the renewed contract between the government of Lebanon and the Iraqi government this year, for the third time, allowing for the supply of Iraqi heavy fuel oil under the swap agreement, has been amended regarding the quantity. It has now been increased to 1.5 million tons annually, compared to the previously agreed-upon 1 million tons annually. The cost of one million tons from this quantity will be covered by the government as per the hereabove mentioned letter of MOEW. In addition, the clause concerning the payment method through the services provided by the Lebanese government to the Iraqi government has not been amended and remains unchanged (In kind).

Cash Flow Statement - Cash Basis (With Gradual Coverage of Iraqi Fuel)	yr	2023	2024	2025	2026	2027	2028
Revenues	**MUSD**	**412**	**1,165**	**1,110**	**1,223**	**1,270**	**1,315**
Electricity Sales	MUSD	397	1,148	1,082	1,190	1,234	1,276
Electricity New Subscriptions	MUSD	-	0.5	2.9	5.9	6.0	6.1
Arrears & Orders for Collections	MUSD	16	17	25	27	30	33
Other Receivables	**MUSD**	**-**	**-**	**50**	**50**	**50**	**-**
Grants	MUSD	-	-	-	-	-	-
Loans	MUSD	-	-	50	50	50	-
Expenses	**MUSD**	**(483)**	**(559)**	**(1,034)**	**(1,037)**	**(1,175)**	**(1,314)**
Generation Cost	MUSD	(250)	(325)	(856)	(858)	(995)	(1,133)
Transmission Cost	MUSD	(26)	(26)	(26)	(27)	(27)	(28)
Distribution Cost	MUSD	(59)	(60)	(105)	(107)	(109)	(111)
Administrative Cost	MUSD	(27)	(27)	(25)	(23)	(21)	(20)
Miscellaneous Cost	MUSD	(20)	(21)	(21)	(22)	(22)	(22)
Internal Debts	MUSD	(101)	(101)	-	-	-	-
Adjustments	**MUSD**	**40**	**40**	**40**	**42**	**44**	**46**
Depreciation	***MUSD***	**40**	**40**	**40**	**42**	**44**	**46**
Generation	*MUSD*	28	28	28	30	32	34
Transmission	*MUSD*	5	5	5	5	5	5
Distribution	*MUSD*	7	7	7	7	7	7
Financial Cost	**MUSD**	**(44)**	**(37)**	**(87)**	**(87)**	**(87)**	**-**
Working Capital Repayment	*MUSD*	(37)	(37)	(37)	(37)	(37)	-
Capital Investments	*MUSD*	-	-	(50)	(50)	(50)	-
External Loans Repayment	*MUSD*	(7)	(9)	(9)	(13)	(17)	(17)
Net Cash Flow	**MUSD**	**(74)**	**610**	**80**	**192**	**102**	**47**
Cash Balance at Beginning of Period	**MUSD**	**7**	**(67)**	**543**	**623**	**814**	**917**
Cash Balance at End of Period	**MUSD**	**(67)**	**543**	**623**	**814**	**917**	**963**

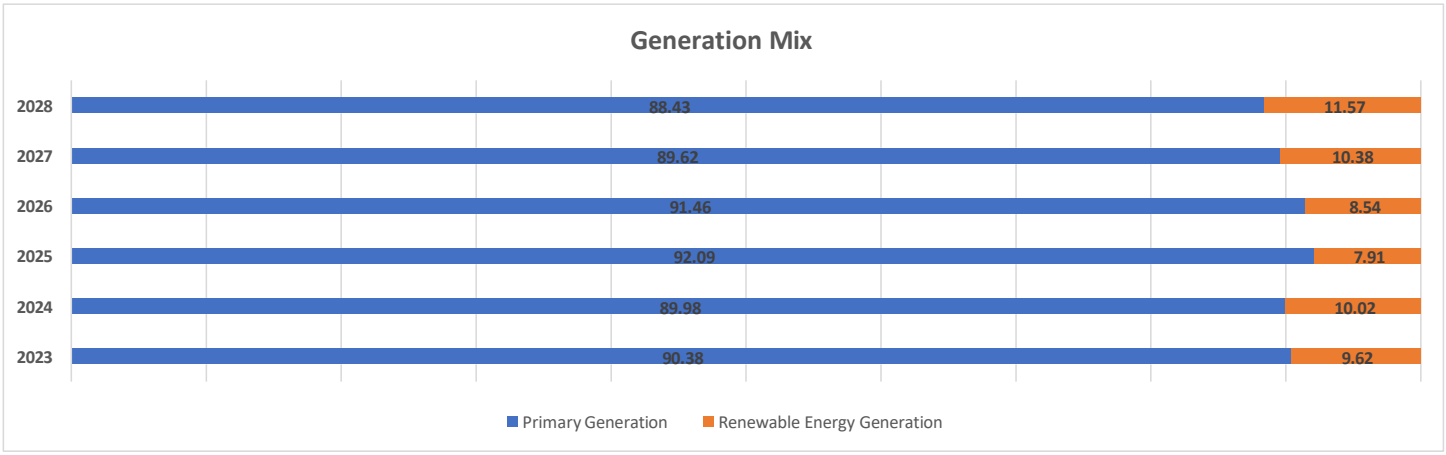


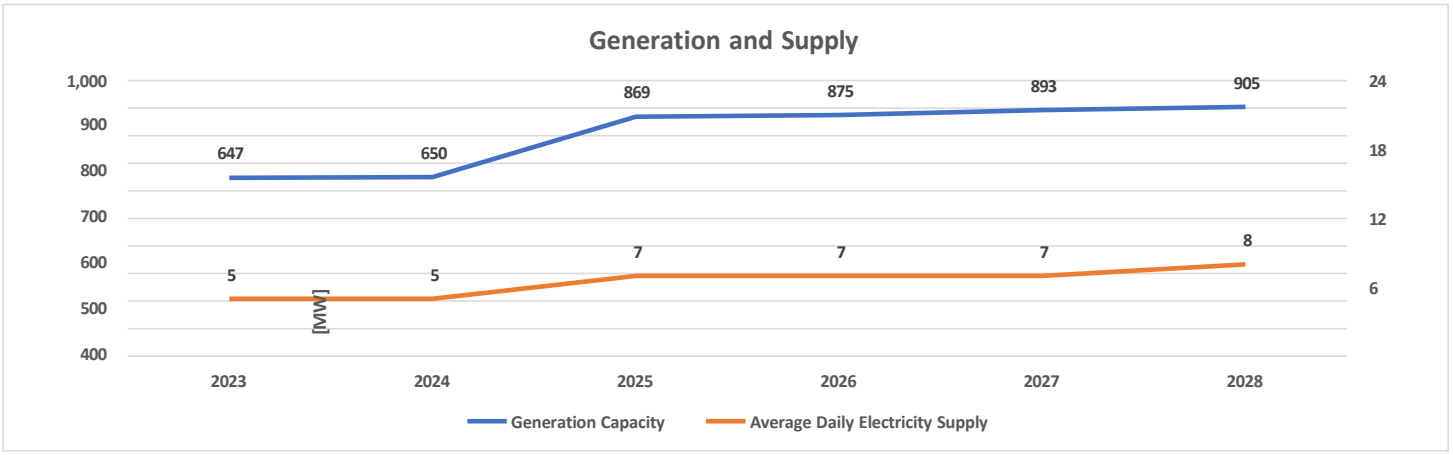
Cash Flow Statement - Cash Basis (With Full Iraqi Coverage)	yr	2023	2024	2025	2026	2027	2028
Revenues	**MUSD**	**412**	**1,165**	**1,110**	**1,223**	**1,270**	**1,315**
Electricity Sales	MUSD	397	1,148	1,082	1,190	1,234	1,276
Electricity New Subscriptions	MUSD	-	0.5	2.9	5.9	6.0	6.1
Arrears & Orders for Collections	MUSD	16	17	25	27	30	33
Other Receivables	**MUSD**	**-**	**-**	**50**	**50**	**50**	**-**
Grants	MUSD	-	-	-	-	-	-
Loans	MUSD	-	-	50	50	50	-
Expenses	**MUSD**	**(1,023)**	**(1,099)**	**(1,303)**	**(1,307)**	**(1,310)**	**(1,314)**
Generation Cost	MUSD	(250)	(325)	(856)	(858)	(995)	(1,133)
Transmission Cost	MUSD	(26)	(26)	(26)	(27)	(27)	(28)
Distribution Cost	MUSD	(59)	(60)	(105)	(107)	(109)	(111)
Administrative Cost	MUSD	(27)	(27)	(25)	(23)	(21)	(20)
Miscellaneous Cost	MUSD	(20)	(21)	(21)	(22)	(22)	(22)
Internal Debts	MUSD	(101)	(101)	-	-	-	-
Portion of the Iraqi Fuel Not Covered by the Utility*	MUSD	(540)	(540)	(270)	(270)	(135)	-
Adjustments	**MUSD**	**40**	**40**	**40**	**42**	**44**	**46**
Depreciation	***MUSD***	**40**	**40**	**40**	**42**	**44**	**46**
Generation	*MUSD*	28	28	28	30	32	34
Transmission	*MUSD*	5	5	5	5	5	5
Distribution	*MUSD*	7	7	7	7	7	7
Financial Cost	**MUSD**	**(44)**	**(46)**	**(95)**	**(100)**	**(103)**	**(17)**
Working Capital Repayment	*MUSD*	(37)	(37)	(37)	(37)	(37)	-
Capital Investments	*MUSD*	-	-	(50)	(50)	(50)	-
External Loans Repayment	*MUSD*	(7)	(9)	(9)	(13)	(17)	(17)
Net Cash Flow	**MUSD**	**(614)**	**61**	**(198)**	**(91)**	**(50)**	**30**
Cash Balance at Beginning of Period	**MUSD**	**7**	**(607)**	**(546)**	**(744)**	**(835)**	**(885)**
Cash Balance at End of Period	**MUSD**	**(607)**	**(546)**	**(744)**	**(835)**	**(885)**	**(855)**

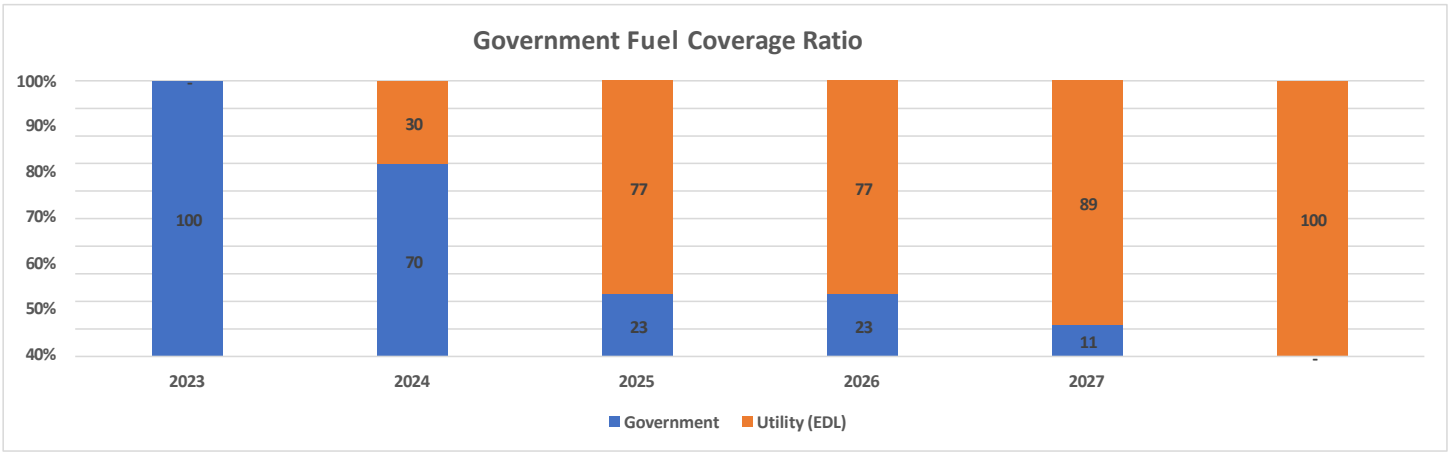


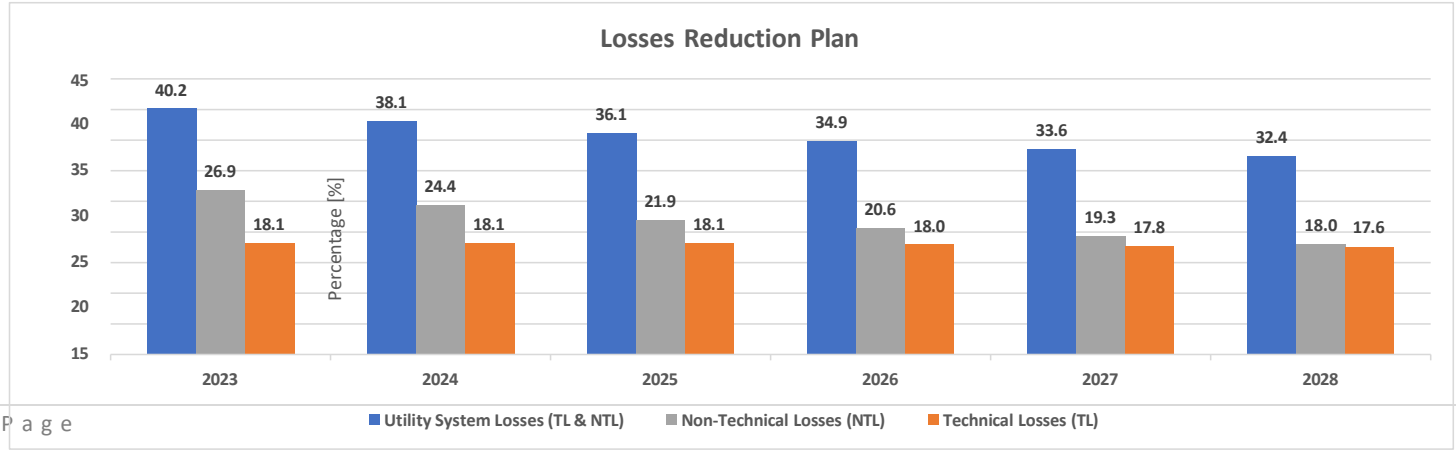
***Remarks:**

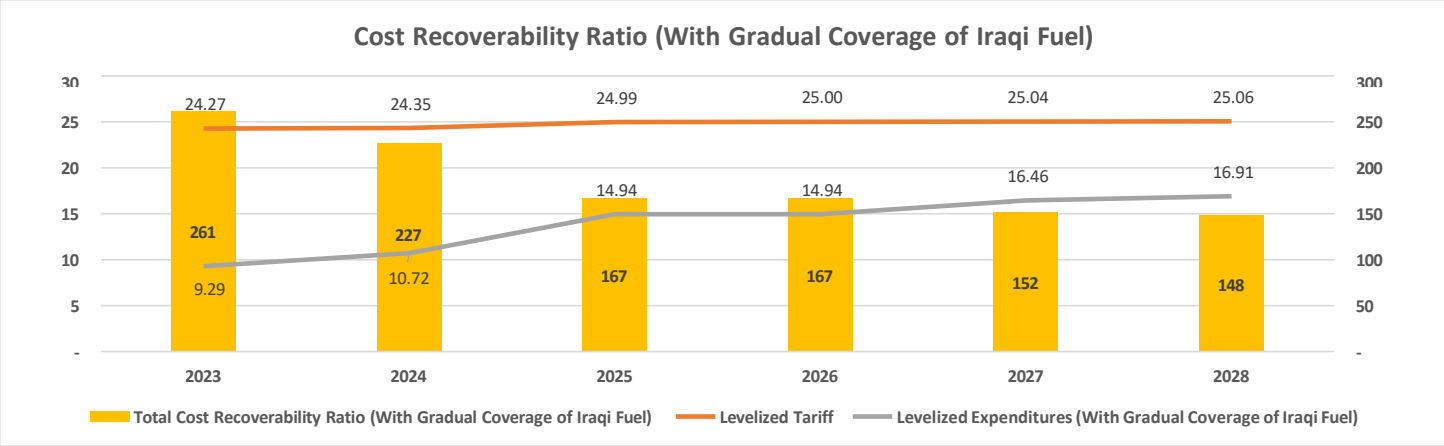
With Reference to MoEW Letter No. 4844 Dated 29/06/2022 and EDL Letters No. 183 Dated 10/01/2024 and No. 403 Dated 23/01/2024 and the MOEW reply No. 884 dated 19/3/2024. Where the Ministry of Energy and Water (MOEW) has indicated that the renewed contract between the government of Lebanon and the Iraqi government this year, for the third time, allowing for the supply of Iraqi heavy fuel oil under the SWAP agreement, has been amended regarding the quantity. It has now been increased to 1.5 million tons annually, compared to the previously agreed-upon 1 million tons annually. The cost of one million tons from this quantity will be covered by the government as per the hereabove mentioned MOEW letter. In addition, the clause concerning the payment method through the services provided by the Lebanese government to the Iraqi government has not been amended and remains unchanged (in-kind)


Generation Mix
2028
2027
2026
2025
2024
2023
88.43
11.57
89.62
10.38
91.46
8.54
92.09
7.91
89.98
10.02
90.38
9.62
Primary Generation
Renewable Energy Generation


Generation and Supply
1,000
900
800
700
600
500
400
[MW]
24
18
12
6
647
650
869
875
893
905
5
5
7
7
7
8
2023
2024
2025
2026
2027
2028
Generation Capacity
Average Daily Electricity Supply


Government Fuel Coverage Ratio
100%
90%
80%
70%
60%
50%
40%
100
30
70
77
23
77
23
89
11
100
-
2023
2024
2025
2026
2027
Government
Utility (EDL)


Losses Reduction Plan
45
40
35
30
25
20
15
Percentage [%]
40.2
26.9
18.1
38.1
24.4
18.1
36.1
21.9
18.1
34.9
20.6
18.0
33.6
19.3
17.8
32.4
18.0
17.6
2023
2024
2025
2026
2027
2028
Utility System Losses (TL & NTL)
Non-Technical Losses (NTL)
Technical Losses (TL)


Cost Recoverability Ratio (With Gradual Coverage of Iraqi Fuel)
30
25
20
15
10
5
-
300
250
200
150
100
50
-
24.27
24.35
24.99
25.00
25.04
25.06
261
227
167
167
152
148
9.29
10.72
14.94
14.94
16.46
16.91
2023
2024
2025
2026
2027
2028
Total Cost Recoverability Ratio (With Gradual Coverage of Iraqi Fuel)
Levelized Tariff
Levelized Expenditures (With Gradual Coverage of Iraqi Fuel)

Variables	yr	2023	2024	2025	2026	2027	2028
Fuel	-	-	-	-	-	-	-
Natural Gas Conversion rate mMBtu to m^3	*mmbtu/m^3*	*28.263682*	*28.26368*	*28.26368*	*28.26368*	*28.26368*	*28.26368*
Natural Gas Conversion rate m^3 to tons	*m^3/t*	*0.000829*	*0.000829*	*0.000829*	*0.000829*	*0.000829*	*0.000829*
Crude Oil Barrel Conversion rate to tons	*bbl/t*	*7.33*	*7.33*	*7.33*	*7.33*	*7.33*	*7.33*
Average Brent Crude Oil Unit Price	USD/bbl	95.00	95.00	95.00	95.00	95.00	95.00
Average Iraqi Crude Oil Unit Price	USD/t	696.3500	696.3500	696.3500	696.3500	696.3500	696.3500
Average F.O. Unit Price	USD/t	585.9080	585.9080	585.9080	585.9080	585.9080	585.9080
Average G.O. Unit Price	USD/t	1,017.4320	1,017.4320	1,017.4320	1,017.4320	1,017.4320	1,017.4320
Average N.G. Unit Price	USD/mmbtu	9.9000	9.9000	9.9000	9.9000	9.9000	9.9000
Average N.G. Unit Price	USD/t	422.5245	422.5245	422.5245	422.5245	422.5245	422.5245
Average HSFO Unit Price	USD/t	539.6260	539.6260	539.6260	539.6260	539.6260	539.6260
Fuel Oil HSFO SWAP Conversion Ratio	%	92.10	92.10	92.10	92.10	92.10	92.10
Gas Oil HSFO SWAP Conversion Ratio	%	53.04	53.04	53.04	53.04	53.04	53.04
Fuel Oil CO SWAP Conversion Ratio	%	118.85	118.85	118.85	118.85	118.85	118.85
Gas Oil CO SWAP Conversion Ratio	%	68.44	68.44	68.44	68.44	68.44	68.44
Generation	-	-	-	-	-	-	-
Operation And Maintenance (O&M) - Operators	-	-	-	-	-	-	-
R.E. - Zouk	*USc/kWh*	*1.09*	*1.09*	*1.09*	*1.09*	*1.09*	*1.09*
R.E. - Jieh	*USc/kWh*	*1.09*	*1.09*	*1.09*	*1.09*	*1.09*	*1.09*
Deir Aammar	*USc/kWh*	*1.11*	*1.11*	*1.11*	*1.11*	*1.11*	*1.11*
Zahrani	*USc/kWh*	*1.11*	*1.11*	*1.11*	*1.11*	*1.11*	*1.11*
Power Purchase Agreements	-	-	-	-	-	-	-

Litani River Authority (LRA)	*USc/kWh*	*2.00*	*2.50*	*3.00*	*3.00*	*3.00*	*3.00*
The Phoenician Society of Hydroelectric Forces of Nahr Ibrahim	*USc/kWh*	*2.00*	*2.50*	*3.00*	*3.00*	*3.00*	*3.00*
Solar IPPs	-	-	-	-	-	-	-
Beqaa	*USc/kWh*	*-*	*-*	*-*	*5.70*	*5.70*	*5.70*
Other Regions	*USc/kWh*	*-*	*-*	*-*	*6.27*	*6.27*	*6.27*
Electricity Imports	-	-	-	-	-	-	-
Syria	*USc/kWh*	*-*	*-*	*-*	*-*	*-*	*-*
Egypt	*USc/kWh*	*-*	*-*	*-*	*-*	*-*	*-*
Jordan	*USc/kWh*	*12.70*	*12.70*	*12.70*	*12.70*	*12.70*	*12.70*
Tariff Metrics	-	-	-	-	-	-	-
Total Customers (Low Voltage)	**#**	**1,511,022**	**1,526,132**	**1,541,394**	**1,572,221**	**1,603,666**	**1,635,739**
Total Power Rating (LV)	A	45,639,220	46,095,612	46,556,568	47,487,700	48,437,454	49,406,203
Customers' forecasted Increase	*%*	*-*	*1.00*	*1.00*	*2.00*	*2.00*	*2.00*
Private Substations (Medium & High Voltage)	**#**	**4,706**	**4,753**	**4,801**	**4,897**	**4,995**	**5,094**
Total Power Rating (MV & HV)	kVA	2,028,757	2,049,045	2,069,535	2,110,926	2,153,144	2,196,207
Private Substations' forecasted Increase	*%*	*-*	*1.00*	*1.00*	*2.00*	*2.00*	*2.00*
Variable Charges	-	-	-	-	-	-	-
Subsidized Consumption [≤100 kWh]	USc/kWh	*10.00*	*10.00*	*10.00*	*10.00*	*10.00*	*10.00*
Regular Consumption [>100 kWh]	USc/kWh	*27.00*	*27.00*	*27.00*	*27.00*	*27.00*	*27.00*
Concessions Consumption	USc/kWh	*21.00*	*21.00*	*21.00*	*21.00*	*21.00*	*21.00*
Fixed Charges	-	-	-	-	-	-	-
Customers (Low Voltage)	USc/A	*25.00*	*25.00*	*25.00*	*25.00*	*25.00*	*25.00*
Private Substations (Medium & High Voltage)	USc/kVA	*60.00*	*60.00*	*60.00*	*60.00*	*60.00*	*60.00*
New Subscription Fees	-	-	-	-	-	-	-
Customers (Low Voltage)	*USD/A*	*0.22*	*0.22*	*1.35*	*1.35*	*1.35*	*1.35*
Private Substations (Medium & High Voltage)	*USD/kVA*	*18.54*	*18.54*	*111.24*	*111.24*	*111.24*	*111.24*

Arrears and Orders for Collection	-	-	-	-	-	-	-
Recovery Rate	*%*	*30.00*	*32.00*	*34.00*	*36.00*	*38.00*	*40.00*
Fine	*%*	*6.00*	*6.00*	*6.00*	*6.00*	*6.00*	*6.00*
Grid Size	**%**	**100**	**100**	**100**	**100**	**100**	**100**
Utilities (EoL & La Kadisha) Proportion	%	97.00	97.00	97.00	97.00	97.00	97.00
Concessions (Jbeil & Zahle) Proportion	%	3.00	*3.00*	*3.00*	*3.00*	*3.00*	*3.00*
Losses	-	-	-	-	-	-	-
Utility System Losses (TL & NTL)	**%**	**40.17**	**33.55**	**27.92**	**24.70**	**21.84**	**20.72**
Technical Losses (TL)	%	18.15	17.72	17.30	16.87	16.45	16.02
Transmission Losses (TTL)	*%*	*5.70*	*5.56*	*5.42*	*5.28*	*5.14*	*5.00*
Distribution Losses (TDL)	*%*	*13.20*	*12.88*	*12.56*	*12.24*	*11.92*	*11.60*
Non-Technical Losses (NTL)	%	26.90	19.23	12.85	9.41	6.46	5.60
Concessions System Losses (TL & NTL)	**%**	**7.00**	**7.00**	**7.00**	**7.00**	**7.00**	**7.00**
Commercial Losses (Uncollected Bills)	**%**	**5.50**	**5.50**	**5.50**	**5.50**	**5.50**	**5.50**
Financial and Fiscal Metrics	-	-	-	-	-	-	-
USD Inflation	%	-	2.00	2.00	2.00	2.00	2.00
Interest Rate	%	-	-	-	-	-	-
Exchange Rate	EUR/USD	1.09	1.09	1.09	1.09	1.09	1.09
Administrative Metrics	-	-	-	-	-	-	-
Degradation Rate of EoL Staff	%	-	5.8	7.4	6.7	7.8	6.1

Appendix 4

EDL's Board of Directors' Decisions on Emergency Action Plan

EDL's BOD Decision number 300 - 19/2022 Dated | 05/08/2022 |	EDL's BOD Decision number 369 - 19/2023 Dated | 10/08/2023 |
EDL's BOD Decision number 254 - 13/2023 Dated | 22/05/2023 |	EDL's BOD Decision number 66 - 4/2023 Dated | 17/02/2023 |
EDL's BOD Decision number 416 - 26/2022 Dated | 03/11/2022 |	EDL's BOD Decision number 393 - 20/2023 Dated | 24/08/2023 |
EDL's BOD Decision number 278 - 15/2023 Dated | 07/06/2023 |	EDL's BOD Decision number 67 - 4/2023 Dated | 17/02/2023 |
EDL's BOD Decision number 420 - 26/2022 Dated | 03/11/2022 |	EDL's BOD Decision number 394 - 20/2023 Dated | 24/08/2023 |
EDL's BOD Decision number 282 - 15/2023 Dated | 07/06/2023 |	EDL's BOD Decision number 88 - 4/2023 Dated | 17/02/2023 |
EDL's BOD Decision number 484 - 30/2022 Dated | 20/12/2022 |	EDL's BOD Decision number 402 - 20/2023 Dated | 24/08/2023 |
EDL's BOD Decision number 285 - 15/2023 Dated | 07/06/2023 |	EDL's BOD Decision number 111 - 6/2023 Dated | 08/03/2023 |
EDL's BOD Decision number 485 - 30/2022 Dated | 20/12/2022 |	EDL's BOD Decision number 403 - 20/2023 Dated | 24/08/2023 |
EDL's BOD Decision number 293 - 16/2023 Dated | 22/06/2023 |	EDL's BOD Decision number 135 - 7/2023 Dated | 21/03/2023 |
EDL's BOD Decision number 491 - 31/2022 Dated | 22/12/2022 |	EDL's BOD Decision number 419 - 22/2023 Dated | 06/09/2023 |
EDL's BOD Decision number 299 - 16/2023 Dated | 22/06/2023 |	EDL's BOD Decision number 156 - 8/2023 Dated | 05/04/2023 |
EDL's BOD Decision number 6 - 1/2023 Dated | 12/01/2023 |	EDL's BOD Decision number 420 - 22/2023 Dated | 06/09/2023 |
EDL's BOD Decision number 310 - 16/2023 Dated | 22/06/2023 |	EDL's BOD Decision number 177 - 8/2023 Dated | 05/04/2023 |
EDL's BOD Decision number 11 - 1/2023 Dated | 12/01/2023 |	EDL's BOD Decision number 421 - 22/2023 Dated | 06/09/2023 |
EDL's BOD Decision number 327 - 17/2023 Dated | 06/07/2023 |	EDL's BOD Decision number 203 - 9/2023 Dated | 02/05/2023 |
EDL's BOD Decision number 36 - 2/2023 Dated | 19/01/2023 |	EDL's BOD Decision number 448 - 23/2023 Dated | 25/09/2023 |
EDL's BOD Decision number 342 - 18/2023 Dated | 26/07/2023 |	EDL's BOD Decision number 241 - 11/2023 Dated | 16/05/2023 |
EDL's BOD Decision number 38 - 3/2023 Dated | 06/02/2023 |	EDL's BOD Decision number 475 - 24/2023 Dated | 10/10/2023 |
EDL's BOD Decision number 355-22/2022 dated | 21/09/2022	EDL's BOD Decision number 268-14/2023 dated | 30/05/2023

Appendix 5
Collection Rates

Issuance of the new tariff for the months of November and December of the year 2022

Region	Electoral District	Percentage
Northern Mount Lebanon and North Governorate and Akkar:	First Region (BUS)	94.28% (Orange)
Beirut and Baalbek-Hermel Governorates and Bekaa:	Second Region (KVA)	88.19% (Blue)
	(Under collection)	66.33% (Yellow)
Southern Mount Lebanon:	Third Region – A (NEUC) (Under collection)	73.01% (Red)
Southern Governorate and Nabatiyeh:	Third Region – B (MRAD) (Under collection)	78.12% (Green)