

**PROGRAM INFORMATION DOCUMENT (PID)
APPRAISAL STAGE**

October 2016
Report No.: 109883

Operation Name	Second Programmatic Energy and Water Sector Reforms DPL
Region	MIDDLE EAST AND NORTH AFRICA
Country	Jordan
Sector	General energy sector (65%); General water, sanitation and flood protection sector (35%)
Operation ID	P160236
Lending Instrument	Development Policy Financing
Borrower(s)	Ministry of Finance
Implementing Agency	Ministry of Planning and International Cooperation
Date PID Prepared	September 6, 2016
Estimated Date of Appraisal	September 25, 2016
Estimated Date of Board Approval	December 9, 2016
Corporate Review Decision	Following the corporate review, the decision was taken to proceed with the preparation of the operation
Other Decision	{Optional} – If applicable following corporate review

I. Country and Sector Background

1. **The proposed operation in the amount of US\$ 250 million - the second in a programmatic series of two Development Policy Operations - aims to support the fiscal and policy reform programs undertaken by the Government of Jordan** (the Government) in the energy and water sectors. This operation will ensure the continued implementation of the energy and water sector reforms planned under the programmatic DPL to help Jordan achieve sector sustainability and financial viability over the medium term in the challenging context of the Syrian refugee crisis. The operation is fully aligned with Jordan's 2025 Vision which calls for achieving self-reliance and financial stability by enhancing financial sustainability and productivity across various economic sectors. The operation's policy program also supports key objectives of the Bank FY2017-2022 Country Partnership Framework for Jordan that focuses on improving the management of the water and energy sectors as key strategic sectors for promoting improved service delivery, economic growth, fiscal discipline and private sector development, contributing to the World Bank Group twin goals of reducing poverty and promoting shared prosperity in a sustainable manner.

2. **The Government's reform agenda responds to structural weaknesses of the energy and water sectors and the compounding effects of the influx of Syrian refugees.** An estimated 1.3 million Syrian refugees are currently residing in Jordan – equivalent to over 20 percent of Jordan's pre-crisis population – placing tremendous pressures on public services and infrastructure. Energy and water service delivery – already under great strain before the crisis – has been severely affected, especially in the northern governorates. Jordan was already one of the world's most energy-insecure countries before the crisis, relying on imports for 97 percent of its energy needs. The rapid growth of the residential population is putting additional pressure on the sector, adding to long-standing structural challenges relating to supply security, financial sustainability and efficiency. Electricity consumption in the residential sector and water pumping increased rapidly between 2010 and 2015, significantly outpacing demand in the commercial and industrial sectors. In total, residential electricity consumption has grown by 26 percent since 2010. The rate of distribution losses has grown by a sixth from 12 percent in 2010 to

14 percent 2015, reflecting higher strain on the distribution networks. Jordan is also one of the most water scarce countries in the world, a situation aggravated dramatically by the influx of Syrian refugees. Before the refugee crisis, the severe water scarcity and the subsequent lack of capacity in combination with an aging infrastructure and inefficiencies in operation and maintenance resulted in a deficiency of water services for a growing population. Since the beginning of the Syrian refugee crisis, Jordan has seen a 20 percent increase in water demand across the country and a 40 percent increase in the north. Due to insufficient water availability, the per capita daily consumption has decreased by 27 percent in the northern governorates since 2011. About 70 percent of the population (Jordanian and Syrian refugees) now suffer from inadequate water supply below the national standard of 100 liters per person per day.

3. Jordan's economy slowed down in 2015 for the first time since 2010, mainly due to the effects of security spillovers, requiring the Government to embark on a new program of fiscal consolidation and economic growth. Jordan grappled with addressing a number of exogenous shocks after the global financial crisis, notably the interruption of gas supply from Egypt and the massive influx of Syrian refugees that resulted in an average annual growth rate of 2.7 percent. However, despite a steady pick-up since 2010 to 3.1 percent in 2014 and better performance by NEPCO in 2015, a number of regional spillover risks, manifested in 2015 dragging down growth to 2.4 percent in 2015 and further widening Jordan's output gap. Consequently, the Government requested – after using the IMF's Standby Arrangement - the use of an IMF's Extended Fund Facility¹ (EFF) for the 2016-2019 period. The IMF EFF program will, amongst others, support policies for electricity tariff sustainability in line with the policy program supported by the Bank programmatic Development Policy Loan (DPL) and support measures to manage the debt of NEPCO and the Water Authority of Jordan (WAJ). It is critical for Jordan to continue implementing its broader energy and water policy and structural reforms included under the programmatic DPL to sustain fiscal stability and economic growth.

4. The implementation of the overall reforms in the energy sector has been strong and needs to be sustained over the coming years. Substantial reforms supported by the programmatic DPL have been implemented by the Government and are already showing positive results as reflected in an improved financial and operational performance of the electricity sector. The electricity tariff of the *National Electricity Power Company* (NEPCO) reached cost recovery levels in late 2015 level due to increases in NEPCO's revenues (as a result of three tariff adjustments implemented by EMRC between 2013 and 2015) and a reduction in the cost of electricity. The cost reduction is the result of the sharp decline in oil prices combined with the successful operation of the liquefied natural gas (LNG) terminal in Aqaba and the recent commissioning of several new renewable energy plants replacing the reliance on more expensive and polluting diesel and heavy fuel oil² in power. However, remaining challenges include limited energy supply diversification; the sector's vulnerability to oil price fluctuations; the management of NEPCO's debt, equivalent to about 20 percent of GDP; and the additional electricity demand generated by the large influx of Syrian refugees.

5. Implementation of the reforms in the water sector has been on track against an increasingly challenging environment in which the sector is operating. Jordan one of the most water-scarce countries, with low annual precipitation, dependent on transboundary surface water and groundwater. Jordan has faced a steep increase in water demand in recent years as a result of rapid population growth

¹ This EFF follows the successful completion in August 2015 of the International Monetary Fund's (IMF's) Stand-by-Arrangement (SBA) which supported a fiscal consolidation program that helped stabilizing and improving confidence in Jordan's macroeconomic framework during 2012-2015.

² The reliance on more expensive and polluting diesel and heavy fuel oil in power generation was caused by the interruption of Egypt gas supply to Jordan in 2011 and beyond.

(the Syrian refugee influx led to an increase in demand by 21 percent throughout the country, and a 40 percent increase in demand in the northern governorates), income growth and urbanization. In the longer run, Jordan faces major challenges. Aridity and water scarcity render Jordan environmentally sensitive to climate change. Water availability in this scenario is likely to continue to decrease. The Government has made progress in increasing water tariffs and implementing measures to improve the operational efficiency and revenue collection in the water sector in accordance with the Government Water Structural Benchmark Plan which aims to achieve operation and maintenance cost recovery in the water sector by 2021. It is also working to improve energy efficiency in its operations, while increasing its dependence on renewable energy as a means to reduce the cost of supply. Finally, a major objective of the government is to optimize its water allocation to use its water sources more sustainably, by reducing groundwater abstraction, and optimizing the use of its surface water resources through amongst others increasing surface water storage and reliance on reuse of treated wastewater so that freshwater can be allocated for higher value uses (i.e., drinking water).

6. Maintaining progress on the reform program is critical to strengthen the resilience of the energy and water sectors, particularly their ability to meet the continuing demands from Jordanians and the Syrian refugees. Humanitarian organizations are increasingly highlighting the need to complement the immediate provision of key electricity and water services(through measures such as generators and water tankers) with support focused on building the resiliency of these service delivery sectors to expand services to the increased population. This reflects the recognition that (i) the large majority of refugees reside in “host communities” where they draw upon the regular service delivery mechanisms, and (ii) the duration of refugees in the host communities often extends well beyond what was originally anticipated. .

II. Operation Objectives

7. The objective of the proposed operation is to improve the financial viability and increase efficiency gains in the energy and water sectors in Jordan. Experience from energy and water sector reform processes has shown that improving operational efficiency in parallel with increasing sector revenues is essential to achieve financial sustainability in the sectors. The proposed operation is built on the two pillars of the programmatic DPL focusing on:

- **Pillar A: improving the financial viability of the electricity and water sectors.** The first pillar will ensure sustained implementation of the Government program in the water sector through the adoption of an electricity tariff adjustment mechanism, the adoption of a debt management plan for NEPCO; and the adoption of a set of measures to boost the water sector revenues (including adjustments in water tariffs and increases in collection efficiencies) to improve cost recovery in the energy and water sectors;
- **Pillar B: increasing efficiency gains in the energy and water sectors.** The second pillar will support policies aimed at sustaining Jordan’s fuel and power generation diversification, institute new regulations for increasing transparency in renewable energy development, providing better access to renewable energy and energy efficiency, adopting protocols for integrating renewable energy in the transmission grid and reducing distribution losses which all will help to improve efficiency. In the water sector, the DPL will support a more optimal utilization of water resources in the country including scaling up energy efficiency in the water sector as important measure to reduce the cost of water in Jordan. It will also scale up the reuse of wastewater especially in agriculture as an important tool to make fresh water available to the domestic sector by adopting a Water Substitution and Reuse Policy. This will be accompanied by the adoption of a Wastewater

Treatment Plant National Plan for Operation and Maintenance, extending the use of performance-based operations of wastewater treatment plants amongst others to the Zaatari refugee camp.

III. Rationale for Bank Involvement

8. **The development objective of the proposed DPL contributes to the national objective articulated in the Jordan 2025 Vision for achieving self-reliance and financial stability and the Jordan Compact by supporting the macroeconomic framework and addressing immediate financing needs.** The substance of the proposed operation remains consistent with the program design presented under the First Programmatic Development Policy Loan (DPL) and its prior actions link directly to the indicative triggers established under the first operation. The Government has made significant progress in implementing the DPL supported reform program. Policies supported by the proposed DPL will contribute to the twin goals of reducing poverty and promoting shared prosperity. Reducing the fiscal burden of electricity and water subsidies will allow the Government to achieve greater fiscal sustainability and therefore provide the Government with the space to invest in pro-poor programs while dealing with the large influx of Syrian refugee and in the more inclusive and productive economic and social sectors to improve the standard of living of the population in Jordan.

IV. Tentative Financing

Source:	(\$m.)
Borrower	0.00
International Bank for Reconstruction and Development	250.00
Borrower/Recipient	
Others	
Total	250.00

V. Institutional and Implementation Arrangements

9. **The Ministry of Planning and International Cooperation (MoPIC) will be responsible for the overall implementation of the program supported by this proposed operation.** MoPIC will be responsible for the coordination, and reporting to the Bank, on progress of implementing the Development Policy Loan program with the Government authorities responsible for the program's implementation, including the Ministry of Energy and Mineral Resources, the National Electric Power Company, the Energy and Minerals Regulatory Commission, and the Ministry of Water and Irrigation. Throughout implementation, the World Bank multi-sector team will undertake intensive supervision missions, and provide technical assistance and policy advice, where needed, to support the implementation, monitoring and evaluation of the DPL supported program.

VI. Risks and Risk Mitigation

10. **The overall risk rating is assessed to be substantial.** Continued performance by the Government on its reform agenda in the energy and water sectors and the achievement of the proposed program's outcomes are subject to geopolitical and macroeconomic risks as well as financial sustainability risks related to the water and electricity sectors as follows:

- (a) **Macroeconomic risk is Substantial.** The balance of risks to growth is on the downside. Economic growth has been slowing down as a result of many shocks. Nevertheless, the Government has demonstrated an ability to manage these shocks. The macroeconomic stability objective is

supported by several programs and donors, including a US\$723 million extended arrangement under Extended Fund Facility approved by the IMF Executive Board in August 2016

- (b) **Sector strategy and policies risk is Substantial.** The most significant risk is linked to political support for the proposed policy reforms, especially tariff reforms. So far, the Government has been able to mitigate these risks through reducing the impact of tariff reform on large groups of residential users by using cross-subsidies between different groups of consumers. Moreover, in its Vision 2025, the Government assigns an important role to improve awareness among water and energy consumers to use these resources more efficiently. In the energy sector, a major risk is linked to the fluctuation of oil price. The Government's success in diversifying its energy sources will further mitigate supply vulnerability and reduce electricity production costs and will further reduce the size of required electricity tariff increases over time. In the water sector, a major risk factor is linked to the sharp increase in the debt of WAJ, which is a risk to the sector and the country as the current financing of this debt through relatively high-cost and short-term financing instruments is likely to result in high debt service payments. Although the reduction of water subsidies is politically sensitive, households are, according to opinion polls, more willing to consider a reduction in water subsidies, possibly the result of previous awareness campaigns. The IMF's EFF focuses on extending the average maturity of public debt, in combination with the AFD's studies on WAJ debt, which will reduce the risk associated with the WAJ debt, whereas the IMF's EFF also includes an update of the Structural Benchmark Plan, which may result in additional revenue enhancing measures. These risks can be further mitigated by technical assistance provided by development partners.
- (c) **Geopolitical and regional risk is High.** The volatility of the region and Jordan's high degree of integration with its neighbors remain a substantial risk to the DPL as the rapid population growth fueled by the Syrian refugee crisis has major impacts on the energy and water sectors. These risks will be mitigated by grant support such as the Jordan Compact. Yet, a reduction in grant support is likely going to affect the cost of electricity and even more so the costs of water services, and could adversely affect the financial viability of the sectors.

VII. Poverty and Social Impacts and Environment Aspects

Poverty and Social Impacts

11. **The implementation of the policy actions in this DPL are expected to have modest poverty and social impacts on residential consumers.** The programs and the DPL policies are supposed to help to improve the efficiency of the energy and water sector services to their customers by reducing their real cost. These policies will also enable significant energy efficiency and renewable energy investments that would reduce air pollution (and hence reduce its impact on public health), and minimize the effect of over-exploitation of groundwater withdrawals. The Government is mitigating the impact of electricity and water prices on the poor and vulnerable by limiting price increases through the use of cross-subsidies. Preliminary results show that the direct welfare impact on residential consumers is very small because of electricity represents a limited share of household expenditures even for the poor and vulnerable (as prices for most households are highly cross-subsidized and have remained unchanged since 2010). Policy simulations of the estimated increase in residential water tariffs found that the impact of the direct real tariff increases on household welfare, approximated by the change in household expenditures, is estimated to be equivalent to 0.34 percent of the household expenditure for the bottom quintile declining to 0.29 percent for the top quintile.

Environmental Impacts

12. **The implementation of the policy actions supported by the proposed DPL is not likely to have a significant impact on the environment, forests, and natural resources.** Many of the prior actions will benefit the environment. The tariff reform process supported under Pillar I is likely to help curb the demand for water and energy resulting in less environmental degradation, including a reduction in the overexploitation rates of ground water. The efficiency gains program under Pillar II promoting energy efficiency, the growth of renewable energy, and more extensive use of gas in power generation (as opposed to heavy fuels and diesel) will reduce carbon emissions. The optimization of surface water use may also result in a more sustainable use of scarce water resources, and adoption of the water substitution and re-use policy will increase the use of treated wastewater. In parallel with this policy, current treated wastewater specifications and standards are currently being amended and are expected to match WHO provisions for environmental and health safety standards of reuse in the areas where there are current gaps.

VIII. Contact point

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