Securing Energy for Development in West Bank and Gaza

This new World Bank report focuses on the energy sector as an important sector for Palestinian development and economic growth. It lays out a vision of improved energy security in the Palestinian territories based on expanding and diversifying power supply and provides a sequenced road map of actions to improve the current situation of the energy sector so it can meet the requirements of the development of the related sectors.

Gaza already struggles to meet even basic electricity needs, while seasonal power shortages are emerging in the West Bank. With demand growing demand at 3.5 percent annually until 2030, failure to invest in the West Bank's power sector would lead to deepening power shortages over time, and in Gaza, would make an already dire situation worse. Implementing a sound energy strategy could boost economic growth by 0.3 percentage points in the West Bank and 0.5 percentage point in Gaza.

The Palestinian territories rely primarily on Israeli imports to meet its electricity needs, amounting to 99 percent of total supply in the West Bank and 64 percent of total supply in Gaza.

A top priority is to improve the creditworthiness of the sector. Tariffs do not reflect the full cost of providing service. In the case of Gaza, retail prices have been frozen for a decade and are not even high enough to cover the cost of power purchase and generation. In both West Bank and Gaza, service providers need to improve their efficiency by lowering losses, non-collections and overhead costs. Even when revenues are collected, they are sometimes diverted by municipal governments to other expenditures rather than paying for to the purchase of power. As a result of all of the above, the energy sector became financially weak and the resulting deficit in the electricity companies ultimately ends-up with the government, putting further strain on the Palestinian Authority's budget.

Electricity sector deficits are estimated at 1 percent of GDP in the West Bank and 4-5 percent in Gaza.

Improving sector creditworthiness will make it possible to finance the US$4 billion of investment needed to meet energy security objectives in the Palestinian territories by 2030. Most of it can be delivered by the private sector.

Diversification of energy sources is key to a resilient sector, balancing out Israeli imports with new sources of traditional and green energy. A desirable outcome for 2030 would be an energy mix that combines domestically produced Palestinian gas-fired power and solar energy, with power imports from Israel and other neighboring countries.

With abundant gas resources in the neighborhood, the Palestinian territories can realistically be supplied with natural gas through modest extensions to the existing Israeli gas transportation network. This makes it feasible to consider gas-fired power generation in the West Bank (potentially in Jenin and Hebron) within the next 5 years, providing a cost-effective source of energy.

Converting the Gaza Power Plant (GPP) from running on diesel to run on natural gas would reduce operating costs to one third of current levels, with high economic returns. Until this happens, and considering the desperate need for power in Gaza, additional Israeli imports through the long discussed 161kV line present the fastest and cheapest supply option in the short term. The same amount of money currently being spent to produce 60MW from GPP on diesel, could buy 180MW from Israel.

Gaza's annual power demand is 450MW. Currently, 20-30 MW is imported from Egypt, 120MW from Israel and 60MW are produced by the GPP, which runs at half capacity due to the prohibitive cost of diesel.

Scaling-up solar energy will strengthen energy security. The Palestinian territories are located in a region rich with the sun's energy and are rank amongst the world's top locations for construction of solar systems. Solar energy represents one of the few untapped supply options for West Bank and Gaza, and is becoming increasingly attractive as costs have dropped by 80 percent over the past 5 years driven by rapid technological change.

Rooftop solar power represents a quick win and could provide a much-needed safety net for meeting basic electricity needs. For the Gaza Strip, the impact could be huge considering the critical shortage of electricity, allowing hospitals to continue lifesaving treatments, telecommunications systems to function, businesses to operate, water supply to be pumped and sewage to be treated; even during the frequent interruptions to the network supply. The World Bank study suggests that the combined available area of

Gaza rooftops has the potential for annual production of 150 MW, more than double the current production of the Gaza Power Plant and no fuel required.

In the West Bank, somewhat greater availability of land would also allow solar farms to be developed starting in Areas A and B. By far the largest potential, however, lies in Area C (60% of West Bank lands under Israeli military control), with its much larger tracts of desert land potentially suitable for solar generation. Access to Area C would have a huge impact on the ability to develop domestic renewable energy generation. If just 3 percent of the land in Area C was used for utility scale solar production, over 3,000MW could be built. Relaxing the constraint on access to Area C, would significantly reduce import dependence.

Despite the advantages of developing these new sources of energy, on their own they are not yet sufficient to meet all future needs. Power imports will remain an important part of the Palestinian energy mix.

Continuing to import power from Israel remains a valid option. The Palestinian territories already represent the largest and fastest growing customer of the Israeli Electric Corporation (IEC), which has been a longstanding reliable provider. Strong entry of Independent Power Producers (IPPs) to the Israeli market also provide new opportunities to purchase power directly from these private providers on negotiated commercial terms.

Expanding power imports from Jordan and Egypt is also a realistic medium term option. Both countries are rapidly expanding their power generation capacity and will have available surplus for export. Political and technical efforts should be made to enable access to the neighboring network in order to enhance Palestinian energy security.

Progress in many of the areas identified will require continued and even deepened cooperation with Israeli institutions. This includes a resolution on the ongoing Power Purchase Agreement negotiations, and the energization of the 4 substations in the West Bank, and additional power supply to Gaza through the 161kv power line. In addition, as the creditworthiness of the Palestinian energy sector improves, and domestic generation comes online, the Israeli grid will need to be used to evacuate the power in the short term until a transmission backbone is built in the West Bank. Tariffs and arrangements should be discussed in advance.

Both sides, with support of international community, need to engage in dialogue over the use of Area C for domestic Palestinian power generation and grid expansion and provide clear guidelines for private developers interested in building additional generation or expanding grid capacity in Area C. This should also include the construction of gas pipelines to connect the Palestinian territories to the Israeli gas transportation network, and gas supply agreements for the construction of new gas plants in Jenin and Hebron, and convert the Gaza Power Plant to operate on natural gas.

Private sector investment will be crucial to meet future energy needs. However, this investment will not materialize unless the PA and GoI create a suitable enabling environment.