

JORDAN – BACK TO THE FUTURE

JORDAN – THE MIDDLE EAST’S RENEWABLE ENERGY PIONEER – HAS DECIDED TO TEMPORARILY LIMIT THE INTRODUCTION OF NEW POWER GENERATION CAPACITY ONTO ITS ELECTRICITY GRID, CITING GRID CAPACITY CONSTRAINTS. THE LENGTH OF THE SUSPENSION PERIOD IS UNCERTAIN. BY **GRAHAM VINTER** AND **MARC NORMAN, COVINGTON & BURLING LLP**.

Further to a Jordanian cabinet decision, the kingdom will not issue any procurement, nor issue any project award, in respect of any conventional or renewable power generation project until completion by the energy ministry of electricity grid capacity studies.

However, the third round of direct proposals for renewable energy is unaffected, subject to evidence that projects procured thereunder contribute towards a reduction of electricity costs in the kingdom. The third round has, however, been marred by uncertainty; partly due to the energy ministry reducing project sizes during the tendering process – again, due to grid capacity constraints.

Any direct proposals in respect of renewable energy projects for official entities – which is likely to be wider than strictly governmental entities – approved prior to January 9 2019 will be unaffected, provided electricity tariffs are “consistent with” the electricity tariffs in the third round of direct proposals for renewable energy, with “clear and reasonable profit to the official entity”, the cabinet said.

The lowest electricity tariff bid for a 50MW solar photovoltaic project in the third procurement round, in late 2018, was US\$0.0249. However, such tariff was bid on the basis of a largely banked power purchase agreement form, involving the highly experienced national transmission company as offtaker, and with a ministry of finance guarantee backstopping offtaker payment obligations.

Official entities with no proven track record in procuring power generation projects, and with little chance of success in obtaining any ministry of finance guarantee to secure their payment obligations, are likely to struggle to attract the type of pricing bid by solar photovoltaic power project developers in the third round of direct proposals. Further, there is uncertainty as to relevance, and the means for third parties to properly assess, the profitability of an official entity.

Jordan is restricting approvals for any new grid-connected distributed generation projects. Distributed generation generally refers to an arrangement involving the generation of electricity at a given site, and the consumption of such electricity at the same site or nearby; however, there are variants involving greater distances between the point of power generation and the point of consumption.

Approvals for net metering projects and wheeling projects in excess of 1MW will be suspended “until grid capacity has been assessed”, the cabinet said. Net metering permits the injection of excess electricity into the electricity grid in return for credits from the electricity grid operator; wheeling goes further, allowing a consumer with an interest in two sites to generate electricity on one site and net meter such electricity at the consumer’s other site.

Where grid capacity studies demonstrate that the grid can absorb any net metering or wheeling project in excess of one megawatt, government land will be allocated for such projects in accordance with applicable law. There is uncertainty as to the status of previously-approved net metering projects, as well as what would be deemed to constitute approval for such purposes.

In addition, any official entity or university that has previously obtained approval for a wheeling project in excess of five megawatts is required to coordinate with the direct tenders committee of the energy ministry “to secure the best prices and conditions”, the cabinet said.

For years, grid capacity constraints have been a challenging hallmark of the Jordanian electricity market; particularly since the first renewable energy projects in the initial renewable energy procurement round came online in 2015.

Already in September 2013, when the energy ministry issued the second round of direct proposals for renewable energy, it specified in its tender documents that, due to grid limitations in the south, projects located in the northern and eastern parts of the country would be prioritised.

Later, in June 2016, wheeling projects in the south of the country were suspended until completion of the “Green Corridor” project, a much-touted grid expansion and reinforcement project that has been in the works for years.

Against this backdrop, the Jordanian government’s renewed emphasis on comprehensive grid enhancement works makes sense, as does its new-found focus on energy efficiency and storage. However, the suspension of new grid-connected power generation capacity may also be partly driven by socio-political considerations surrounding the recent surge of distributed solar photovoltaic generation.

Over the past few years, Jordan has experienced a perfect storm for distributed solar photovoltaic generation.

First, the global weighted average levelled cost of electricity for utility-scale solar photovoltaic projects decreased by 73% between 2010 and 2017, according to the International Renewable Energy Agency.

Second, Jordan enjoys enviably high solar irradiation levels. German development agency Deutsche Gesellschaft für Internationale Zusammenarbeit reported that in many of Jordan's regions the solar yield – the electricity output achieved by a solar photovoltaic panel under full solar radiation – stands at around 1,800 kilowatt hours per kilowatt peak.

This is far more, for example, than the 900 to 950 kilowatt hours per kilowatt peak recorded by research institute Fraunhofer ISE for solar output in Germany, one of the world's leading distributed solar markets.

Third, commercial and industrial consumers of electricity in Jordan pay some of the highest electricity grid tariffs in the world. With very little oil and gas of its own, Jordan has historically had to import almost all of its energy needs. Electricity generation and distribution costs in Jordan have accordingly been high; which, in turn, has led to particularly expensive electricity grid tariffs.

Due to a cross-subsidisation system among electricity grid consumers – which primarily benefits small residential consumers and industrial consumers in strategic sectors – the grid tariffs charged to commercial and certain, less strategic, industrial consumers are particularly high.

For example, one kWh of electricity supplied by the national transmission or distribution companies currently costs a high-consuming telecommunications company US\$0.279, reduced from US\$0.42 in 2018, and costs a bank a staggering US\$0.40 – a far cry from the US\$0.0249 tariff bid for a 50MW solar photovoltaic project in the third round of direct proposals in late 2018.

In this context, the business case for commercial and industrial electricity consumers in Jordan to adopt distributed solar, and renewable energy more widely, has in recent years become extremely compelling – particularly given the existence of dedicated regulatory frameworks for net metering and wheeling projects.

Accordingly, a race by solar photovoltaic power project developers to secure electricity offtake agreements with the electricity grid's highest-paying and credit-worthy consumers – by offering significant discounts on applicable electricity grid rates – unfolded in earnest.

After several years of distributed solar photovoltaic project developers devising commercial and contractual models to implement distributed solar photovoltaic projects for commercial and industrial electricity consumers on a project finance basis, Adenium Energy Capital succeeded in December 2018 in closing the first limited-recourse financing of a utility-scale distributed solar photovoltaic project involving a corporate offtaker – Lafarge Cement Jordan, one of Jordan's largest electricity consumers.

The successful financing of the Lafarge solar project firmly set the local distributed generation market on a path to accelerated growth.

Distributed solar has the merit of addressing Jordan's desperate need to reduce its reliance on energy imports, and its ongoing desire to shift towards greener sources of energy. However, too great an exodus of high-paying commercial and industrial electricity consumers from the electricity grid risks undermining the delicate social and economic policy balancing act that underpins Jordan's electricity cross-subsidisation system.

Such considerations are likely to have formed part of the Jordanian government's calculus in suspending approvals of new net metering and wheeling projects.

The Jordanian government's decision invariably strikes a blow to one of the Middle East's most dynamic renewable energy markets. The government must demonstrate that it will now turn talk into action with respect to grid enhancement works, and ensure that such works are executed in a timely fashion.

In the meantime, Jordan will need to devise “win-win” solutions that allow commercial and industrial consumers of electricity to reap the rewards of Jordan's renewable energy revolution – a much-needed shot in the arm for a fragile business environment – while safeguarding the reasonable interests of government stakeholders and addressing the ongoing social needs of the population at large.

A possible silver lining for investors resulting from these developments is that interesting new opportunities are likely to arise from the government's renewed emphasis on comprehensive grid enhancement works, and its new-found focus on energy efficiency and storage.

A recent case in point is the national transmission company's recent announcement that it plans to tender, in mid-March, up to US\$68m of construction and consultancy contracts for a number of electricity transmission projects aimed at integrating renewable energy projects into the electricity grid.

Another good example is the energy ministry's tender in 2018 for a 30MW/60MW-hour battery storage project to be located in the northern-eastern city of Irbid, and to be financed on a project finance basis. However, while the Irbid battery storage project initially created considerable excitement, significant tendering delays have invariably had a dampening effect.

Given the suspension of new grid-connected power generation projects, Jordan must now double-down in its efforts to demonstrate to the market that it is serious in its commitment to comprehensive grid enhancement works, and in its drive towards energy efficiency and storage, so as to convince investors that the country's energy market remains attractive; and ultimately to propel the kingdom back to where it came from – at the forefront of the Middle East's renewable energy revolution. ■