



THE OFFICE OF UTILITIES REGULATION SEES A BRIGHTER FUTURE FOR ELECTRICITY

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The delivery of electricity service in respect of reliability, quality, cost of service and volatility of rates have been perennial concerns for many Jamaicans. As the regulator, the Office of Utilities Regulation (OUR) has often been asked pointedly by the public about its actions to address these issues.

As a responsible regulator, the OUR is cognizant of the importance of its role in ensuring that the Jamaican public is provided with affordable, and reliable electricity service. We are also acutely aware of the tremendous challenges and disruptive transformation affecting the electricity sector. It is the OUR's considered view that the future is looking bright for the electricity sector and that we are playing a vital and pivotal role in ensuring this. We are pleased therefore, to highlight recently completed and ongoing transformative developments in the sector, which bode well for addressing some of the longstanding concerns.

At the same time, we are also mindful that there have been ongoing discussions including articles in the press about how some of these developments are being funded and the implications for rates. We, therefore, consider this an appropriate time, especially given the status of the various initiatives, to provide a perspective on the electricity sector and to indicate what can be expected over the near term.

RENEWABLE ENERGY

Jamaica has had a good experience with renewables so far and it likely to get better, especially if Jamaica continues to take a steady commonsense approach to making this a major component of the fuel mix.

In 2016, some 80MW of renewable capacity representing US\$ 187.8 million of new investment was added to the grid in one tranche through a competitive procurement process managed and overseen by the OUR in 2013. Following hard on that procurement process, and at Cabinet's request the OUR went back to tender in July 2015 and procured a further 37 MW of capacity, at a record low price of eight and a half US cents per kilo-watt hours. This is still to be bettered by any offer in the region although we expect future such tenders to yield even lower rates. Significantly, the 37 MW capacity, which is produced by Eight Rivers Energy Company Limited (EREC), was commissioned in July 2019 and as reported by the grid operator, has already proven quite useful in assisting with unplanned generation shortfall.

ENERGY STORAGE

Recognizing that additional renewable power, particularly from solar and wind installations, could potentially increase grid instability due to the variable nature of these resources, we welcomed, evaluated and approved JPS's proposal for the construction and installation of 24.5 MW hybrid energy storage system (HESS) facility at the Hunts Bay power station with a price tag of US\$ 19.5 Million. This facility is expected to reduce the expected latency and instability issues arising from the further addition of renewable energy capacity to the grid. Notably, the first phase of this capacity is expected to be commissioned in August 2019, with full commissioning expected to be completed before year end. This is the first facility of its type to be constructed in the Caribbean region, underlining Jamaica's leadership in applying technology to better facilitate the utilization of renewable energy.

Full Force into LNG

In a landmark development in July 2019, New Fortress

Energy (NFE) commissioned its Floating Storage and Regasification Terminal (FSRT) off the coast of Old Harbour Bay, St. Catherine. NFE has indicated that it expects this facility - the first of its kind in the Caribbean region - to not only serve the needs of the electricity sector and other domestic demand, but to also operate as a hub for the Caribbean region. The utilization of the facility as a regional hub is of vested interest to the OUR, as we insisted that, going forward, capacity payments for the facility must be reduced in tandem with certain achieved levels of increased volume throughput over its useful life.

Notably, this large undertaking by NFE was preceded by an investment in a gas supply facility at Montego Bay Freeport, St James, which facilitated the conversion of JPS's Bogue 120MW capacity from utilizing automotive diesel oil (ADO) to liquefied natural gas (LNG). This was enabled and initiated by the OUR's decision in the 2014-19 JPS tariff review, to provide funding for the conversion on the basis that the move to a more efficient and less volatile price fuel would be beneficial to rate payers. The commissioning of the facility in December 2016 was a seminal moment in Jamaica's energy diversification strategy. It was also followed in 2017, by the OUR's approval of the conversion of a further 20 MW plant at the same facility to natural gas, to take advantage of the existing gas infrastructure.

Significantly, the changes at Bogue have seen two other substantial and related LNG based developments following immediately in their wake viz: the 192 MW combined gas fired combined cycle plant by South Jamaica Power Company Limited (SJPC) located at Old Harbour Bay, St. Catherine, which is scheduled to become fully operational during this month. This is to be followed by the commissioning of a co-generation project for JAMALCO at Halse Hall, Clarendon early in 2020. All told, the grid is expected to see an addition of just under 300MW of new and modern base load capacity within a twelve-month period in addition to the 37 MW of renewable capacity previously referenced.

SMART STREETLIGHT PROGRAMME

The public would have noticed the transformation that is taking place with regard to the installation of new energy efficient street light. The Smart Streetlight Programme (SSP) is the name given by JPS for the installation of LED streetlights enabled with smart technology to replace the existing 105,000 mostly High Pressure Sodium (HPS) lamps. Condition 28 of the Electricity Licence 2016, mandated JPS to commence the programme by 2016. The OUR has oversight of this programme and is keeping a keen eye on it to ensure that it delivers value for money. The point of relevance here, however, is that some US\$16.1 million of the capital spending on this initiative has been funded from the residual and accrued tax benefits of an Energy Efficiency Improvement Fund (EEIF) approved by the OUR in previous rate review applications. This was approved for transfer to the SSP initiative in the OUR determination on JPS's 2018 annual review application.

FINANCING

As a result of the deliberate and far reaching interventions by the OUR, cumulatively and conservatively, the electricity sector is realising well over US 1.2 Billion dollars in new investments over a four to five year period (2016-2020), none of which represents either public sector spending or guarantee. This underlines and is illustrative of the level of confidence that resides in the sector. So how is all of this being funded?

The investments are funded by a mix of Jamaican and overseas investors comprising private equity, private commercial banks (local and overseas), multilateral loans and institutional investors. Unlike, the Bogue conversion, where there was a prescribed charge to customers' bills to finance the conversion over thirteen months, the recovery from all the above-mentioned investments will come from future direct pass-through of these costs to rate payers and other users. This is done firstly via monthly fuel charges reflecting the cost of fuel to the grid operator, payments to Independent Power Providers (IPPs) embedding their fuel, and capital and operational costs. Secondly, it is also recoverable through the non-fuel charge to rate payers, approved by the OUR in five-year tariff reviews and reviewed monthly for foreign exchange changes and annually for inflation changes and other justified adjustments.

WHAT THIS WILL MEAN FOR RATE PAYERS?

Several benefits are expected to flow to rate payers from these developments.

Firstly, all of these investments represent commitment and calculated risks by disparate investors, that the Jamaican electricity sector, through a combination of sustained demand growth and a stable economic, social and

regulatory environment, will enable recovery of their investment and the generation of reasonable returns over the medium to long term.

At the same time, it also reflects the OUR's view and that of other stakeholders, that such investments will inure to the benefit of rate payers. It is also noteworthy that for the first time in the financing of large power investments in Jamaica, local financial entities are providing a large share of the financing.

The much needed investment in new base load capacity was well overdue and will perhaps put an end to the uncertainty of meeting load demand in the near to medium term. It is noteworthy that with the commissioning of the new plants, the Old Harbour units # 2, 3, 4 with a combined capacity of 190 MW and Hunts Bay unit B6 with a capacity of 68.5 MW, all with an average age of over 45 years, will be retired. All of this should give a boost to the reliability of the grid and the quality of electricity being delivered to customers.

The susceptibility of electricity production to external shocks, which has long been the bane of the electricity sector, and especially within the context of Jamaica's history of currency depreciation, should show signs of diminution. The adoption of LNG, a less volatile fuel source, the price of which has substantially tracked below that for Heavy Fuel Oils (HFO) in terms of equivalent price per MMBTU, the much smaller portion of variable cost in the price of the fuel supplied to the plants; and the adoption of renewables based on indigenous fuels, will go a long way in addressing issues of fuel uncertainty, bolstering security of supply and lessening rate volatility going forward.

As regards the objective of lowering electricity rates, the OUR's computation of the cumulative investments in renewables and the new natural gas fired plants, is that with HFO price at US\$70/bbl (barrel) and LNG price at \$4/MMBTU (the most likely scenario we envisage) and with all other things being equal, rates for electricity supply will be reduced by 0.47 of a US cent per kWh by the end of 2020. This reflects an annual savings of US\$20.48 Million in the tariff compared with what would have obtained without these changes. While this saving is by no means a sufficiently dramatic decline, there are a number of contextual considerations viz:

- The gains to rate payers from the expected improvement in lower fuel cost and greater generation efficiency (the fuel charge pass through) is clearly being offset by the increased capital cost to recover the investments as reflected in non-fuel charges, and the extent of reduction is a function of the movement of HFO versus LNG prices;
- The greater certainty with regard to supplies and reduced volatility already mentioned are clearly additional economic benefits that should be taken into account given the economic benefits to be derived from reduced outage costs due to a more reliable electricity supply;
- The reduction in the country's carbon footprint resulting from the adoption of more renewables and the transition to a cleaner fuel source in the form of LNG; and
- The potential for further reduction in fuel prices as the LNG facility experiences greater throughput as gas usage expands.

The OUR is gratified that it has played a pivotal role in these developments by way of leadership, promptings, policy recommendations, technical analyses, regulatory directives and creating and maintaining a facilitative regulatory environment. With respect to the future, we are confident that the sector is poised for even more far-reaching developments. We are mindful however, that the timing, scope and composition of such developments will be strongly influenced by the outcome of the long awaited Integrated Resource Plan (IRP). Once this is completed and published by the Ministry of Science Energy and Technology (MSET), the road map with respect to the next wave of electricity sector developments should become clearer.

For our part, we undertake to remain vigilant, as we continue to evaluate and approve new investment projects, examine applications for annual rate adjustments and conduct periodic tariff reviews so as to ensure that rate payers benefit fully from the investments they are paying for in terms of cost reflective rates and improved quality of service.