POLICY ANALYSIS

SECURING OPTIMAL POLICY MIX IN THE ENERGY SECTOR

Ensuring stable electricity rates at low enough prices to encourage production for sustainable economic growth is the stated goal of the National Energy Policy (2009-2030). A key element of the policy is diversification of fuel sources to include renewables.

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What are the optimal strategies to achieve energy diversification? This question was brought into focus recently with a public debate concerning the future of the licencing regime under which the island's main electricity provider, the Jamaica Public Service (JPS), operates.

Under the regime, known as a revenue cap mechanism, electricity rates are calculated on the basis of a forecast of usage by each category of customer over a year which establishes the JPS revenue target for the year. If that targeted revenue is exceeded, the price for electricity in the next year should, in theory, fall to reflect the fact that the utility collected more money than was budgeted in the previous year. The converse is also true.

Under the previous regime JPS secured its revenues through a price cap mechanism based on an efficiency target set by its regulator, the Office of Utilities Regulation, (OUR). This system in theory, should force the utility to be more efficient.

Questions about the benefits of the new regime to consumers and the broader economy were recently brought into the public domain by government senator Aubyn Hill. In his contribution to the 2017 State of the Nation debate he argued that the recently revised operating licence granted to the JPS threatens economic progress and even the very diversification on which rests the energy security of Jamaica. Hill argues that the new revenue cap mechanism blunts any incentives the company would have to support expansion of renewable energy sources or eliminate inefficiencies.

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MECHANISM COULD DISADVANTAGE CONSUMERS

Dan Theoc, the chief financial officer of the JPS, however argues that the revenue cap mechanism will force the utility to be more efficient, not less. He points out that with revenue cap, the only thing the JPS is guaranteed is the revenue. It is not guaranteed profit even though implicit in the revenue cap, is a profit of U.S. $35mn-$40mn. That profit will only be earned if the company manages its costs by being more efficient. That extends to reducing system losses including theft (which is close to 20 percent), which—if left unchecked -- could overshadow gains made in other areas; therefore, the company's profitability will be challenged.

Another argument to consider in Mr Hill's concern is that the revenue cap does not support the integration of renewables. The merits of that argument can be easily deciphered. It however, skilfully skirts the fact that the JPS must take the power generated by renewables ahead of power generated by itself or the Independent Power Producers (IPPs).

For example, the recently commissioned windfarm in Malvern, St Elizabeth, BMR Jamaica, produces electricity at 18cents U.S. per kilowatt hour. IPPs produce at around 14cents U.S. and the JPS has plants which produce at between 14cents and 16cents U.S. However, in the merit order, the JPS must take the higher priced electricity from BMR first and sell it to consumers before power from the IPPs or its own plants enter the mix.

In that reality, the argument about blunting the "incentives... to support expansion of renewable energy...," doesn't go a far way. In fact, if anything could be true, it is that renewables, which are intermittent, put the JPS at a disadvantage.

If renewables are to form a broader part of the energy mix, doing so now without a mechanism to store excess energy when it is generated, will require the JPS to always be ready to fill the gap when the source of renewable energy is not producing. Currently, cloud cover or a drop in the wind causes between a 20MW to 40MW swing in electricity production from renewables in as little as two minutes.

To be ready to fill the gap caused by these swings in electricity production, the JPS – as the power dispatcher -- must ensure that only the power that is needed is generated, while at the same time keeping spare capacity, called spinning reserves, between itself and the Independent Power Producers (IPP). This spare capacity must then be able to be brought online within seconds of a renewable energy production unit going off-line. Otherwise, power cuts will result which can sometimes morph into rolling blackouts.

Getting gas fired plants on the grid will help in this regard. They can be ramped up and down much faster than oil fired plants and therefore will help to eliminate some of the instability created by renewable energy at the moment.

The revised electricity licence also gives the JPS the first right to replace its plants. That too is causing concern among investors. Under that provision, the JPS is now replacing the old oil fired plant at Old Harbour to a new gas fired one. This new policy seems to reinforce the company's monopoly status. But it doesn't mean inefficiencies. New power plants are more efficient than the old ones being replaced and consumers should benefit, regardless of who builds the plant. What is needed is not for this policy to be seen as detrimental; it's for regulation to protect consumers.

NOT A TIME TO RENEGOTIATE JPS LICENCE

Overall, talk of renegotiating the company's licence is premature. We must see how it works before making adjustments based on real, ▸▸

not supposed outcomes. Since the push is towards greater energy security and the JPS has to take and distribute renewable energy first, let the policies trend in that direction. It took the country eight years to double renewable capacity from 5.6 percent in 2008 to 12 percent in 2016 - a year behind schedule. For the rest of the world, the International Energy Agency and the World Bank report that, looking back, renewable targets set for 2020 were achieved in 2010.

It means, Jamaica must be more deliberate to have up to half the country's electricity generated from renewable sources by at least 2050. The policy should turn to replacing older plants with renewables with storage capacity. But these must be integrated in a structured way, looking at demand trends and responding accordingly. Everyone who puts up a solar panel on his roof is reducing demand from the JPS. If more people are off the grid, the revenue cap the JPS must make will have to be shared among those who remain.

Care must also be taken in adding new capacity. As it stands now, Jamaica can generate up to 920MW of electricity with peak power demand at 650 MW. Along with the new plant at Old Harbour, another is under consideration to be built at Jamalco in Clarendon. Excess electricity totalling 94MW from that plant is to be sold into the grid. When added with the power being generated at the Bogue plant and that which is to be generated at the Old Harbour plant, in the next five years, 404MW of electricity will come from Liquified Natural Gas (LNG) plants alone.

Still, getting it right involves greater use of renewables. That is where the policy should be clearest. The policy will no doubt require investments in storage capacity. This could cost an estimated U.S. $10m to U.S.$20m for renewables which are now on stream or programmed to come on stream.

Policies should also tend to proper regulation to ensure the JPS does not exploit its consumers. Anomalies which are detrimental to consumers should be addressed, but always with the understanding that potential foreign investors watch how we treat with those already in place locally. This does not mean we should cave in to all demands to secure investments. It however means we have a debate with all stakeholders on what is best for the country.

A perfect solution may not be achievable, but we must strive to have an optimal solution which encourages the JPS to invest in the grid, whether it continues to be a national grid or one supplemented by micro grids, and at the same time, encourages large consumers to use the grid. They are the ones who really subsidise smaller users. If there are to be changes, this must be done transparently and there should be no rush, lest we end up with something worse than we currently have. ■

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