THE ELECTRICITY DISASTER FUND: A SHELTER IN THE STORM

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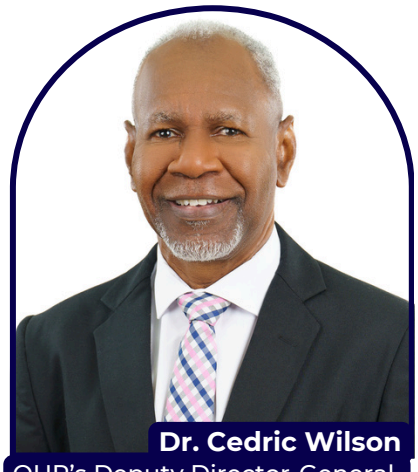

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Many Jamaicans, particularly those on the southwestern side of the island, will for a long time remember 2024 July 3. It was the day Hurricane Beryl hit Jamaica. The meteorological experts tell us it was an extraordinary weather system with the formidable distinction of intensifying from a tropical depression to a hurricane in a mere 42 hours. It was the first time that an Atlantic tropical cyclone achieved a Category 5 status so early in the season, one month earlier than what is considered the norm.

When it passed, it left sections of the transmission and distribution (T&D) components of the power grid in shambles, and approximately 65% of Jamaica Public Service's (JPS) customers without electricity supply. It caused significant economic loss and personal discomfort to many Jamaicans, and it took two months to restore electricity to all customers.

Therefore, in the context of the increasing threat that natural disasters pose to the electricity grid and the emerging discussion on how the Electricity Disaster Fund (EDF/Fund) should be used, it is timely to provide insight into the Fund, its evolution, performance, and benefits to customers and the sector.

The Evolution of the EDF

Even though preparations for the establishment of an EDF started in 2004, its conception was shaped by the experiences of natural disasters in the 1990s. One example was Hurricane Andrew in 1992 which battered the Bahamas, Florida, and Louisiana, and shook insurers who took a massive hit from the claims. Up to that point, with damage estimated at US$27.3B and 65 fatalities, it was the costliest on record. Further, compared to the 1980's, the frequency of hurricanes in the 1990's increased by 23%. So evidently insuring T&D assets became an unattractive line of business for insurers.

It was against that backdrop that JPS, in its rate review application in 2004, proposed a self-insurance fund - now called the Electricity Disaster Fund - to address the gap in the insurance market. JPS argued that most insurers were no longer providing coverage for T&D assets, and those who were willing to, required annual premiums ranging from 15% to 20% of the value of the T&D assets.

The Office of Utilities Regulation (OUR), therefore deemed the request prudent and approved the establishment of the self-insurance fund.

Outside of a self-insurance fund, payment for T&D recovery after a natural disaster would have to be recovered by way of the Z-Factor mechanism in customers' bills. The Z-Factor is a feature of utility tariff structure in many countries that becomes applicable when the utility's costs are affected by factors outside of managerial control and are not included in the tariff mechanism. In this regard, the increase in Z-Factor payments immediately after a catastrophe can be steep and shocking to customers, who themselves might also have been affected by the event.

Embodied in the concept of the EDF is the notion of saving for the proverbial 'rainy day'. Guided by rules which were formalised in 2008, and focused on the restoration of T&D assets after a natural disaster, the objectives of the EDF are to:

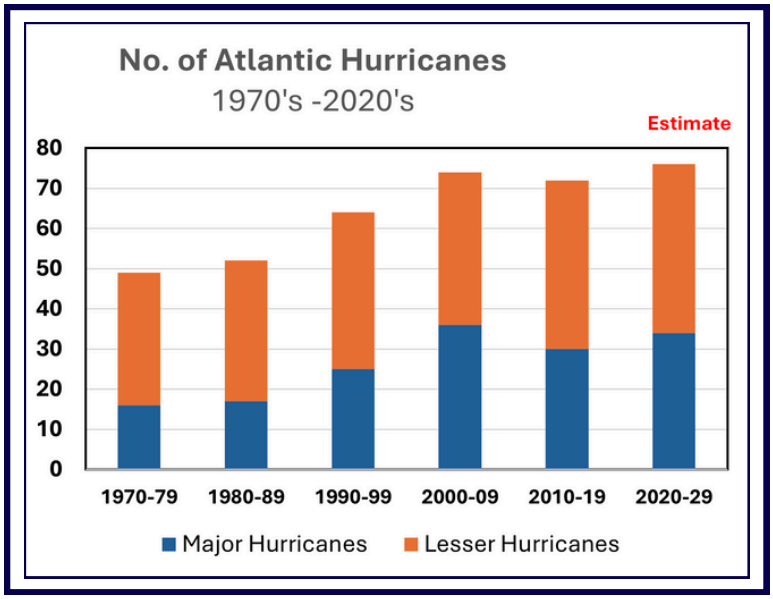
- Reduce uncertainty concerning the funding of restoration.
- Facilitate efficient restoration in the shortest possible time.
- Minimise the financial impact on electricity customers.

Consequently, among other things, the EDF operates on the following principles:

- Setting aside a predetermined sum for the Fund annually from customers' bills.
- Generating additional inflows through investment.
- Periodical review to ensure its adequacy.

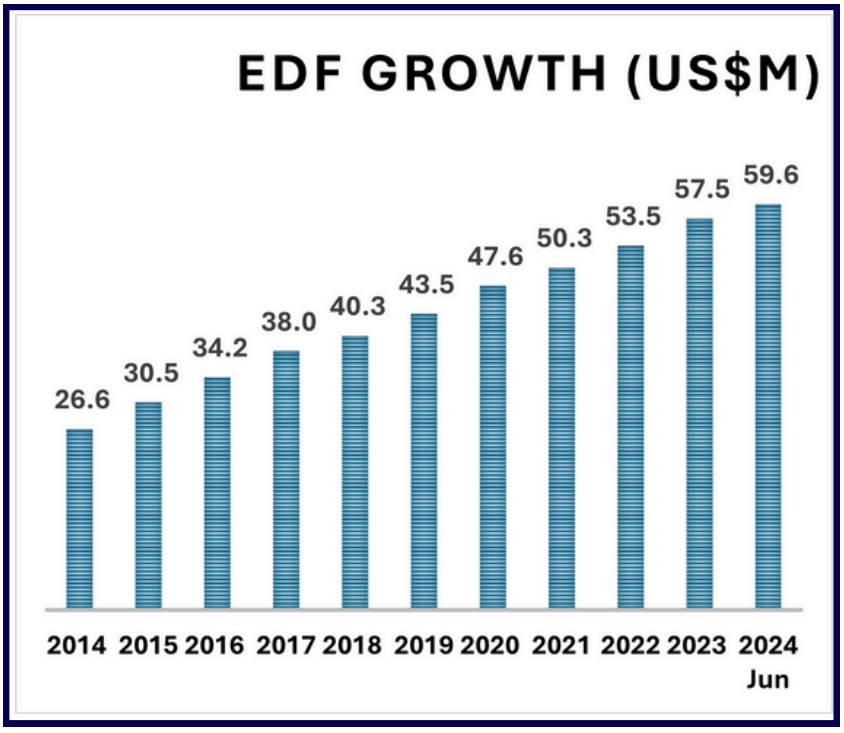
The Performance of the EDF

The first decade of the 21st century is undoubtedly the most active period ever for tropical cyclones. Within the Caribbean, since 2000 and before the advent of Hurricane Beryl, T&D assets have been significantly impacted by seven (7) tropical cyclones, six (6) of which occurred in the 2000s. Customers have paid a total of US$34.4 million for restoration efforts following these cyclones. Of this sum, US$27.0 million, or 78.4%, was covered by the EDF. The other US$7.4 million was paid by way of a Z-Factor increase.



Source: National Hurricane Center & Central Pacific Hurricane Center

Over the 20 years of its existence, the annual contributions to the EDF have ranged from US$2 million to US$5 million. Since 2014, the contribution has been US$2 million per year, and customers now pay 12.6 Jamaican cents per kWh to the Fund. In this regard, the average customer who consumes about 150 kWh pays an average of J$19 per month to the Fund.



The Benefits & Use of the EDF

It is incontestable that the EDF has brought several benefits to the electricity sector. Firstly, it has prevented the need to adjust rates at the worst possible time, which is immediately after a hurricane. Secondly, it has allowed for a smoother electricity rate trajectory since there is no need to resort to a Z-Factor adjustment in such instances which would result in a rate spike. Thirdly, it has facilitated the earlier restoration of electricity service by providing funding for T&D inventory of supplies before disaster events and financial advances to the utility in the immediate aftermath of a disaster. Without the availability of the EDF 'pre-hurricane' funds for boosting material inventory, restoration could be delayed because adequate replacement supplies would not be immediately available and, in any event, be more expensive after a major disaster. Additionally, the availability of funds to support the utility's timely restoration, given that revenues are invariably reduced after a disaster event, helps shorten restoration time.

What's Next?

The outlook for natural disasters in the Caribbean is pessimistic. Weather trends suggest that hurricanes will be more frequent and intense. In these situations, the challenges for Small Island Developing States (SIDS) are great because of the 'thinness' of their resources and the limited diversity in economic production. The two key tasks for minimizing the effects of disaster events are planning and preparation.

At the end of 2024 June, just before Hurricane Beryl, the accumulated balance in the EDF was US$59.6 million. However, JPS was permitted to withdraw US$4.4 million to stock up early on T&D material on the eve of the hurricane. Further, JPS has submitted a preliminary claim on the EDF for US$26.1 million for restoration costs. JPS's claim will have to be rigorously examined with all expenses submitted for review and subjected to verification before a final payout can occur. A preliminary calculation suggests that a settlement could see the Fund falling back to approximately US$30 million, the level it was at in 2014. The target balance for the EDF established in the operating rules is 15% of the value of JPS's T&D assets.

This is the notional level at which it is assumed that the Fund should be adequate to cover a powerful and devastating catastrophe. At present, that ideal target balance is approximately US$80 million.

Year	Hurricane Event	Claim	Pay-out		
			EDF	Z-Factor	Total
		US$M	US$M	US$M	US$M
2004	Ivan	23.1	9.6	7.4	17.0
2005	Dennis/Emily/Wilma	3.1	1.5		1.5
2007	Dean	17.7	9.2		9.2
2008	Gustav	3.5	2.2		2.2
2012	Sandy	6.1	4.4		4.4
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	Total	**53.5**	**27.0**	**7.4**	**34.4**

Even without knowing the precise payout associated with the settlement of the claim associated with Hurricane Beryl on the Fund, it is evident that the gap between the actual balance and the target balance will be significant. Accordingly, in keeping with the EDF rules, an evaluation of the adequacy of the Fund will have to be done at the appropriate time. This analysis, among other things, must balance the financial risk of recovery insufficiencies versus an incremental increase in the average tariff. At the same time, there will be a need to look at whether there are any additional options for managing EDF-type risks.

To conclude, the EDF has served Jamaica well in the absence of conventional T&D asset insurance coverage. Indeed, it has been a shelter in the storm. Consistent with the OUR's role as a prudent regulator, we have the responsibility to constantly revisit the arrangement to see that it is still fit for purpose in enduring anticipated storms.

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