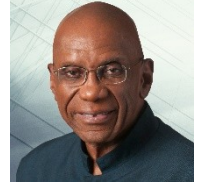




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Who Pays the Transition Cost to Renewable Energy?

It has been established that the costs of generating electric power from onshore wind turbines and solar photovoltaic systems is very low compared to the cost using fossil fuels. For all Caribbean countries other than the three oil exporters - Trinidad-Tobago, Guyana and Suriname - there is the additional benefit of saving on the foreign currency now used to import fuel. That foreign currency then becomes available and may be used to invest in new capacity in tourism and other foreign-earning activities. In this way the switch to renewables accelerates economic growth, with additional foreign earnings to pay for the imports the growing economy needs.

However, there is a period of transition from fossil fuel generation to renewables before the potential benefits can be realised. The switch from a system where electricity is generated at one or more central points and distributed across the nation as a whole to one where generation is from producing units scattered across the grid is a lengthy process. It is also very costly, involving replacement of the existing step-down grids which reduce the high voltage leaving power plants to voltages that are safe for firms and households to use. The replacement has to be a “smart” grid, equipped with sensors and controls, and linked to a central management computer which balances supply and demand to ensure that customers’ needs are fully satisfied at all times.

Renewable energy systems also require storage because their power output fluctuates widely, and supply cannot be fired up as and when there is a demand. Power that is produced when the sun shines and when wind speeds are sufficient has to be stored in large battery arrays, ready to be dispatched across the grid as needed.

The cost of replacing the existing distribution systems with smart grids, installing storage capacity and implementing the new system in a coordinated way is very large. Also, it has become apparent that the transition period is a lengthy one. During much of this period, the grid will continue to be supplied mainly by fossil fuels. Thus the region faces a period of several years when the total cost of generating and distributing electricity is set to rise: countries will still be paying for fossil fuels, plus the additional costs of financing the smart grid and storage. The full benefits of cost reduction and foreign currency saving will be realised only at the end of this transition period.

This rise in the cost of electricity during the transition period is threatening to slow down or arrest progress in the implementation of the renewable energy strategy all across the Caribbean. The Caribbean is already burdened with some of the highest electricity tariffs in the world. Adding the costs of the energy transition would push inflation higher, reduce consumer purchasing power and impair the profitability of producers.

With only a handful of exceptions, Caribbean governments are in no position to borrow on the international market to make the needed investments themselves. Their international credit ratings are almost all below investment grade, and they operate with such tight budgets that they are unable to service new international borrowings of the required magnitude at market interest rates.

Governments which have committed to aggressive targets for the adoption of renewables are faced with a dilemma. An increase in electricity rates of the magnitude required to fund the transition will reduce consumer spending power at a time when household budgets are already being stretched. As for governments, public sector finances are already tight, and there is no way to cut taxes on renewables or to provide subsidies sufficient to cover the transition costs. For many governments, it will be necessary to cut expenditures elsewhere in the government budget to free up resources for advancing the renewable energy strategy, if progress with the adoption of renewables is to be sustained.

My Economic Letters may be found under "[Commentary](#)" at DeLisleWorrell.com.