



Why Integrated Electricity Planning?

As the power system of a country expands, it becomes more and more critical for a utility to embrace an integrated planning approach with the objective to enhance Security, Reliability, Quality, Sustainability and Affordability of electricity supply.

CEB, by embracing this philosophy, will continue to provide value-added services!

UNDERLYING PHILOSOPHY OF THE IEP 2013–2022

Chapter 2

Regardless of multiple constraints in the local electricity market and despite being the sole electricity service supplier, CEB has persistently geared its strategies to adapting to the operating conditions of a competitive market environment. This persistency stems from CEB's underlying planning philosophy, which itself is inherently linked to the firm's core values.

By embracing a specific planning philosophy, CEB ensures that it will continue to pursue its strategic role of supporting the national development by effectively balancing supply and demand of electricity through least-cost investment, while diligently meeting emerging challenges.

2.1 CEB STRATEGIC ROLE AND ITS NATIONAL CONTRIBUTION

Beyond the traditional definition of an electric utility, the CEB, as a dynamic organization that embraces an integrated planning approach, has been actively involved in assessing the national electricity market evolution, evaluating alternative power generation technologies and carrying out studies of the electricity network in order to secure the long-term, least-cost, electricity supply for the country.

The main goal of the CEB is to exist as a competitive organization and to be ready to meet emerging challenges resulting from changes in the power market for the benefits of its customers and the public at large.

In line with the above, with a view to effectively meeting future electricity demand, CEB will continue to formulate and evaluate electricity supply strategies based on assumptions relating to the availability and prices of fuel, market penetration rates of new technologies, new investment limits, environmental emissions, the structure of the electricity market and global economic concerns.

2.2 CEB'S LEAST-COST POLICY*

CEB, being a regulated utility operating in an ever-changing environment, has constantly aimed at producing and delivering reliable electricity at the lowest possible cost. The least-cost policy will remain a fundamental element of the CEB's strategic objectives, which underpin this **Integrated Electricity Plan (IEP)**.

Through the proposals in this present IEP, CEB strongly reiterates its commitment to target the *sustainable development** of the national power system at the **least possible cost**, while paying due attention to the socio-economic and environmental concerns of the country. Under the least-cost policy, CEB through its *merit order dispatching plan** has always sought to operate with the best mix of inputs in order to produce electricity. In accordance with this policy, CEB has explored, and will continue to explore strategically, opportunities to diversify the *generation mix**.

Through this business *modus operandi*, to the extent it has been, and will be possible, CEB has maintained and will uphold stable electricity prices (tariffs).

2.3 BALANCING THE 10-YEAR DEMAND-SUPPLY

In this IEP, CEB attempts to pave the way towards ensuring the delivery of safe and dependable electricity to all its customers, in both Mauritius and Rodrigues, for the coming decade. Balancing demand-supply of electricity over the next 10 years implies paying due attention to the most likely changes in electricity demand and to the transformational nature of the power system in Mauritius and Rodrigues.

In principle, CEB, in its continuous quest for security of electricity supply, will be guided by its commitment to seeking the lowest *long-run marginal cost (LRMC)** of supply. By aiming to minimize the LRMC of electricity supply, CEB will endeavour to continue its partnership with its dedicated stakeholders, who support the achievement of its corporate objectives.

* See glossary

2.4 THE IEP 2013–2022 IN SUPPORT OF NATIONAL INFLUENTIAL STRATEGIES

By preparing and releasing the IEP 2013–2022, CEB further confirms its support for the positive social and economic development of Mauritius and Rodrigues.

The current IEP takes into account the national influential strategies discussed below. To the extent that it is economical for the CEB, the IEP 2013–2022 advocates initiatives, whether on-going or impending, under these strategies.

2.4.1 The Maurice Ile Durable (MID)* Concept and its Implications

While the redefined *Maurice Ile Durable* conceptual model sets the scene for a paradigm shift in the energy sector in Mauritius, the intrinsic challenges in the model call for a major rethinking of the CEB's energy supply strategies.

In pursuing its mission, CEB recognizes the fact that considerable effort has to be made, especially to remain in line with the *Maurice Ile Durable* objective on energy. Hence, in aiming to deliver least-cost electricity supply, to the extent possible, CEB will also factor-in the MID objectives on energy (electricity). This, however, will be dependent, among other things, on appropriate policy mechanisms of funding sanctioned in favour of the CEB by the MID fund.

2.4.2 Government Long-Term Energy Strategy (LTES)* 2009-2025

In harmony with the LTES 2009–2025, CEB will accompany the development of its power systems by setting appropriate targets: (a) to diversify its energy mix, (b) to promote the shared goal of energy efficiency and (c) to manage demand through worthwhile demand-side management initiatives.

Shared Goals

A sustainable approach to the energy sector entails efforts to reduce the emission of *Greenhouse Gas (GHG)** and the preservation of non-renewable energy resources. CEB believes that these are being, and will be, partly met through:

- the continuous tapping and integrating of the island's *renewable energy** resources in the energy mix, as will be outlined in the *Renewable Energy Master Plan (REMP)**, under the framework of the

long-term national energy strategy. CEB is already making allowance for this concern in its *generation expansion planning**.

- the enhancement of the power system capability to allow for higher integration of renewable energy sources, while ensuring *system security/stability** and taking measures to minimize energy losses along the transmission and distribution networks. CEB's transmission and distribution network planning has been addressing, and will continue to give due attention to, this concern.

Demand-Side Management (DSM)*

It is known that variations in the daily electricity demand cause a certain degree of sub-optimal utilisation of electricity generation assets. In our context, at times, the variability in demand requires the CEB to dispatch high-cost engines so as to meet short-duration peaks, a fact which subsequently increases the cost of producing electricity.

CEB recognizes that if nothing is done, the variations in the demand patterns will exert even higher pressure on its business operations over time and will eventually have an impact on the overall electricity tariff. As a mitigation measure, CEB in the recent past engaged in activities geared to managing the electricity demand, with a special focus on peak reduction.

In the future, along with government actions, CEB, in the interest of all stakeholders, will continue to endeavour to give due attention to DSM initiatives, as discussed in Chapter 9.

2.4.3 The Utility Regulatory Authority (URA)

For quite some time, Government has been planning the setting up of a URA. The URA will operate under the URA Act 2004 and will have as main responsibility, among others, to regulate the local power sector. CEB views positively the coming into operation of the URA.

As a forward-looking organisation, while maintaining its current corporate principles, CEB will continue to exert its strategic role even within this expected new operating environment. The IEP 2013–2022 indeed sets the CEB's orientation so that it continues to operate as a competitive entity, purposely to meet the conditions of a regulated operating environment.

* See glossary