



# BELIZE UTILITY TRANSFORMATION

## Belize Energy Services, an Integrated Utility Model for a Sustainable Future

### SUMMARY

Energy is critical to nearly every aspect of economic development in the Caribbean. Development and use of domestic natural resources for electricity and transportation, combined with energy efficiency are essential for a sustainable energy future. The government of Belize is improving Belize’s energy footprint with support from the OAS/SECBI program to transform its energy sector. Belize Electric, Ltd. (BEL) is developing a new utility business model, which has been endorsed as the Integrated Utility Companies (IUC) model in the CARICOM energy strategy. This mirrors the global trend for utilities to provide ‘behind-the-meter’ energy services. In this new paradigm utilities help customers with the entire bill, not just delivery of electricity. All BEL customers will have access to reliable clean energy services that are affordable 24x7. This helps address social inequities, ensuring that the poor also have access first world energy services.

### OVERCOMING BELIZE’S CHALLENGES

Belize has developed policies and strategies to leverage local resources, overcome local barriers and lay the framework for a regional implementation of the model.

**Energy Independence** Belize’s abundance of local renewable energy resources combined with efficient use of energy reduce the need to import fossil fuels.

**Lack of financing mechanisms** Many customers can’t afford energy efficient and renewable energy equipment. Access to affordable lending improves the penetration of energy efficient appliances.

**Limited access to efficient equipment** Market conditions favor the import of lower quality low cost appliances. The concurrent implementation of appliance Minimum Energy Performance Standards will require the supply chain to offer more suitable appliances.

**Coordination** Collaboration between the Ministry of Finance, Public Service, Energy & Public Utilities, BEL, and the Development Finance Corporation is core for success of the IUC model.

### THE IUC MODEL

Integrated Utilities offer customers a wide range of services to enhance quality of life blending reliability and cost to ‘ensure the lights remain on’. Traditional generation, transmission, and distribution services are complemented with ‘behind-the-meter’ services such as energy efficiency, renewable energy, storage, and smart grids. This new model meets BEL’s mission ‘To provide reliable electricity at the lowest sustainable cost, stimulate national development and improve the quality of life in Belize.’

## INTEGRATED UTILITY COMPANY MODEL KEY FEATURES

### Universal Access

Ensure the poor have access to modern energy services

### Energy Services

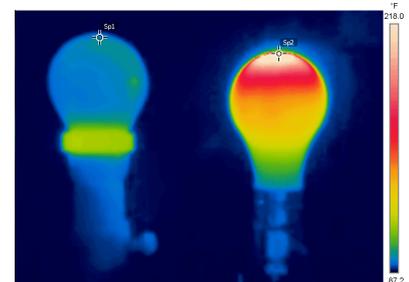
Help to use energy and water efficiently

### Project Financing

Facilitate access to project funding

### Quality Control

Assured quality installation and operations



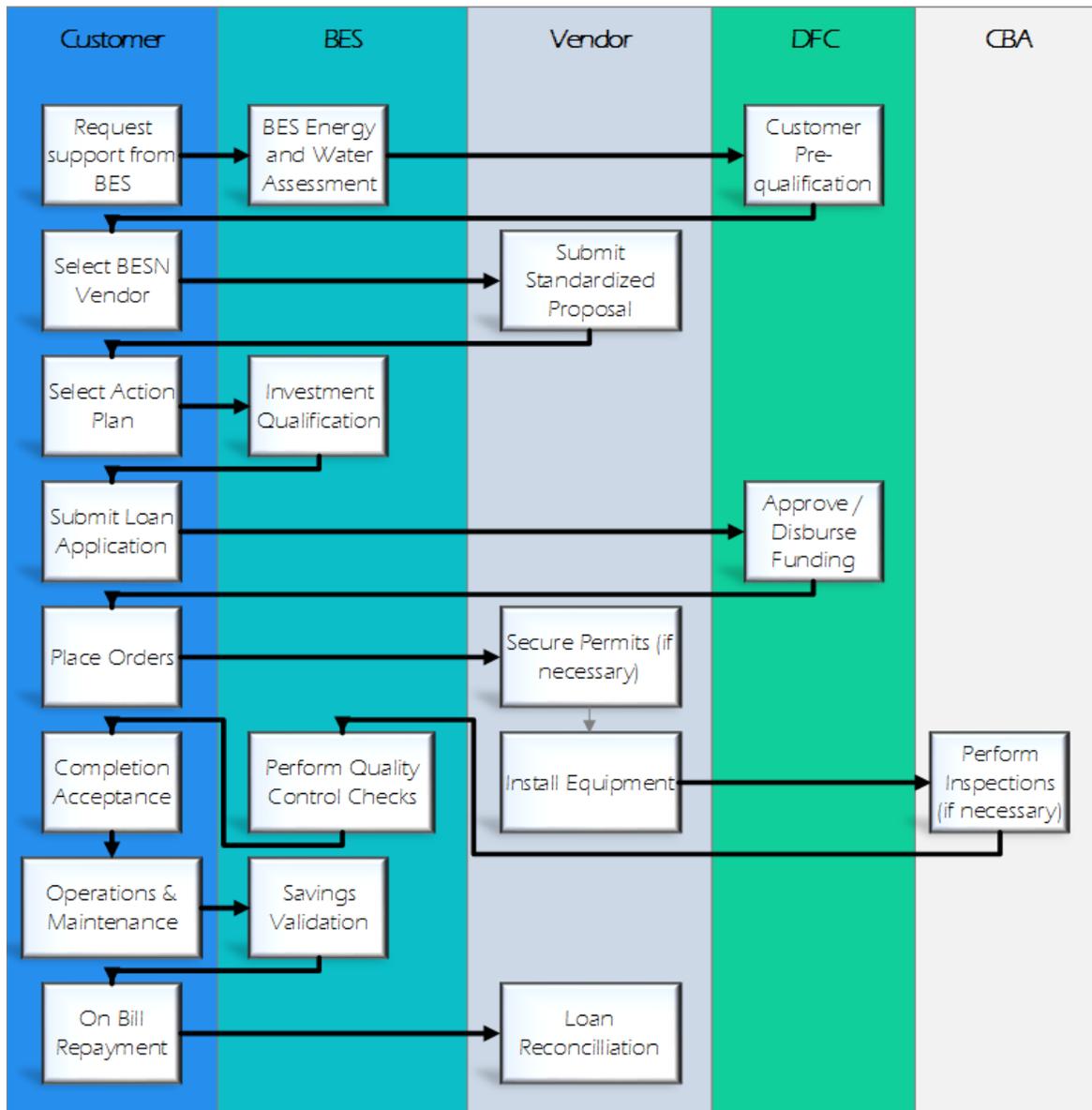
Thermal image depicting energy wasted as heat by an incandescent bulb on the right vs. a cool LED bulb left.

Image Source: Miguel Quinones

## GOALS

<b>Portfolio Standards</b>	Meet Belize's energy efficiency and renewable energy portfolio standards and reach greenhouse
<b>Market Growth</b>	Expand business opportunities for vendors, builders, installers, and other service providers to achieve significant increases in customer adoption of energy efficiency and renewables.
<b>Resiliency</b>	Improve electric grid resiliency by deploying distributed energy generation, smart grids, and storage to minimize the impacts of climate change and tropical storms.
<b>Clean Energy Funding</b>	Universal access to affordable funding for residential and commercial clean projects paid through the electricity bill, known as on-bill financing.
<b>Consumer Awareness</b>	Increase consumer awareness and streamline the often confusing and overwhelming process involved in pursuing energy efficiency retrofits or renewables. The figure below illustrates the entire project implementation process.

### Belize Energy Services Project Process



## LOCAL TO REGIONAL

Belize is fostering rapid changes in technology and web-enabled business practices to reshape the services that electricity companies provide. Providing all citizens with access to energy services that are affordable at all times will dramatically improve quality of life and competitiveness. Through SECBI, the OAS facilitated a new approach to redefine the role of the energy utility in Belize, offering a model to transform the energy sector in the entire region. The CARICOM Caribbean Sustainable Energy Roadmap and Strategy (C-SERMS) uses Belize as a template for the Integrated Utility Companies (IUC) strategy to be offered to all members.

This approach builds a sustainable future for the region, boosting economic growth, building local skills and new small businesses in energy efficiency and renewable energy, and reducing dependency on fossil fuel imports.

The CARICOM Council for Trade and Economic Development (COTED) has demonstrated support for OAS' embryonic model to transform the energy sector and provide access to modern energy services to all. This major milestone is a demonstration of the effectiveness of support from the OAS, migrating from studies to implementation of projects.

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### CONCEPT PREPARED BY:



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