



# Integrated Resource Plan (IRP) Process for Bermuda's Electricity Sector

Date: May 8<sup>th</sup> & 10<sup>th</sup>, 2018

# Introductions

## ▶ Presenters

### ▶ The Regulatory Authority of Bermuda

- ▶ Aaron Smith, Interim CEO
- ▶ Nigel Burgess, Snr. Manager Electricity Analysis & Planning
- ▶ Jozelle Escolastica, Head of Regulatory Finance
- ▶ Monique Lister, Snr. Legal Advisor
- ▶ Alison Bardgett, Project Consultant (Q&A)

# Introductions



## ► Presenters

### ► Jostein Kristensen, Partner

Specializing in Market analysis and regulation in the energy and related infrastructure sectors.

Advisor to companies, governments, investors and regulatory authorities. Within the energy sector, his work has covered coal, electricity (including renewable and nuclear generation), natural gas and oil.

<https://www.oxera.com/Our-People/Key-People/Partners/Jostein-Kristensen.aspx>

# Introductions



## ► Presenters

### ► Sahar Shamsi, CFA, Principal

Specializing in corporate finance, with a focus on the economic regulation of utilities, in particular in the energy sector. Advisor to companies and regulators across the UK, Europe, the Middle East and Australasia. Seconded as a lead Economic Adviser to the UK Competition Commission (now the Competition and Markets Authority, CMA) to advise on regulatory finance issues.

<https://www.oxera.com/Our-People/Key-People/Partners/Sahar-Shamsi.aspx>

# Agenda

## Presenter

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Aaron Smith

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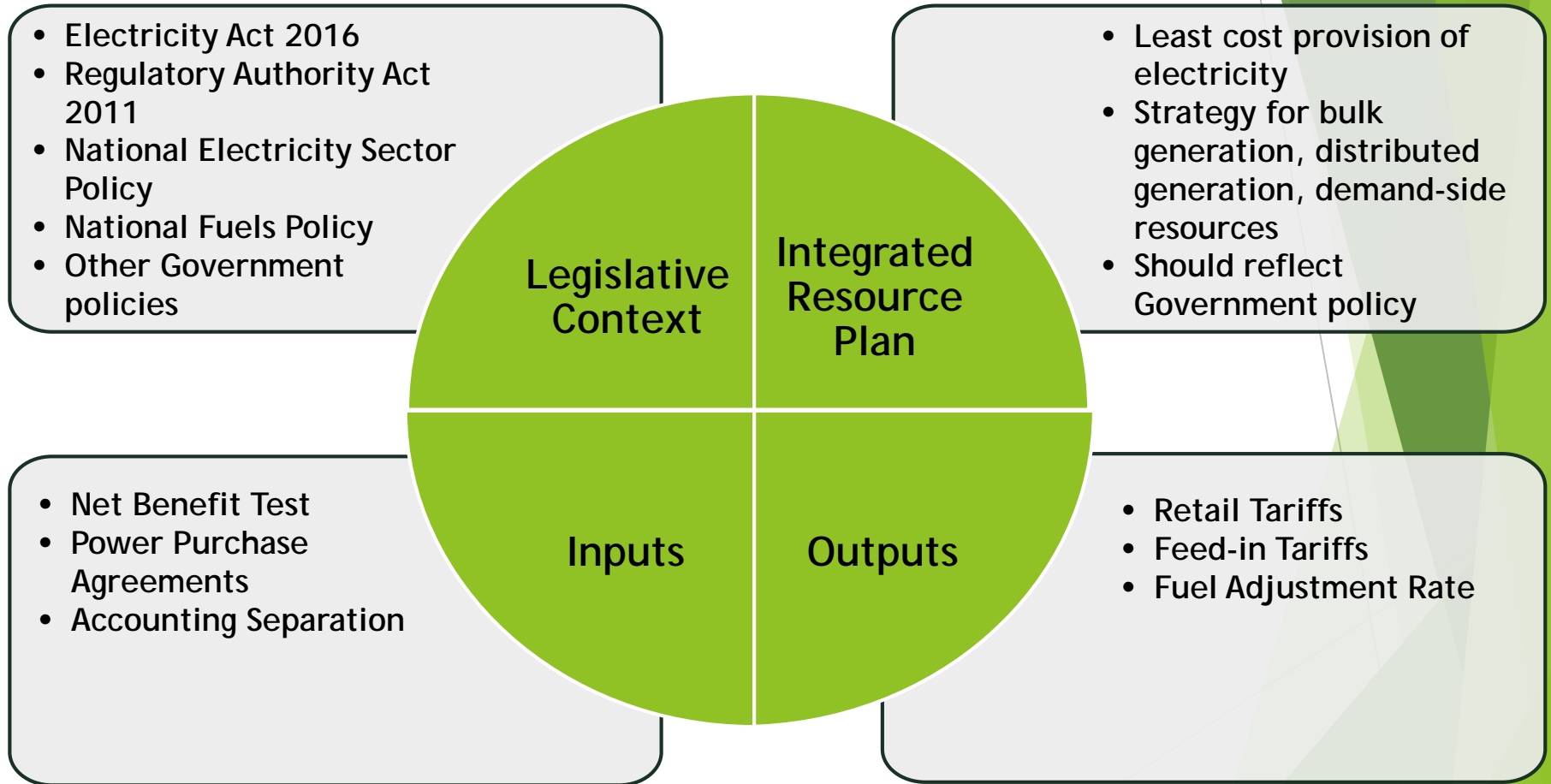
Questions & Answers

Alison Bardgett

# About the Authority

- ▶ Established on January 28th, 2013
- ▶ A national regulating body for the Electronic Communications Sector & the Electricity Sector in Bermuda
- ▶ Electricity Regulation commenced October 2016
- ▶ Developing Bermuda's Electricity Plan - IRP

# Regulatory Framework



# What is an IRP?

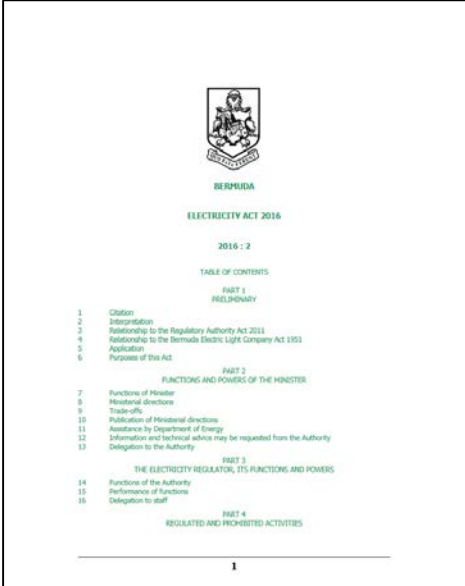
- ▶ **Integrated Resource Plan - a plan for Bermuda's electricity future**
- ▶ **Bermuda's long-term electricity plan, seeking to balance forecasted electricity demand through existing and planned mix of resources**
  - ▶ **Supply-side resources**
  - ▶ **Demand-side resources**
- ▶ **Evaluate and balance the expected costs, risks and electricity policy objectives**
- ▶ **An iterative process to achieve a practical long-term plan for Bermuda's electricity system**



# Legislative Context of the IRP Proposal

## Electricity Act 2016 (EA)

- ▶ BELCO is the sole Transmission Distribution and Retail (TD&R) Licensee, as required by the EA
- ▶ Every five years or less, as determined by the Authority, or as directed by the Minister, the Authority shall request an Integrated Resource Plan proposal from the TD&R Licensee, containing:
  - ▶ a resource plan including expected demand for the period and the state of the TD&R Licensee's existing resources
  - ▶ a procurement plan that details how the TD&R Licensee proposes to meet this demand



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ELECTRICITY ACT 2016  
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# Legislative Context of the IRP Proposal (cont.)

## Electricity Act 2016

- ▶ The TD&R Licensee is to consider:
  - ▶ all possible resources, including new generation capacity, demand side resources (including demand response and electricity efficiency), and retirement of generation capacity; and
  - ▶ a range of renewable energy and efficient electricity generation options, and a prudent diversification of the generation portfolio
- ▶ The IRP Proposal shall comply with the EA, any administrative determinations, and the request for the IRP Proposal

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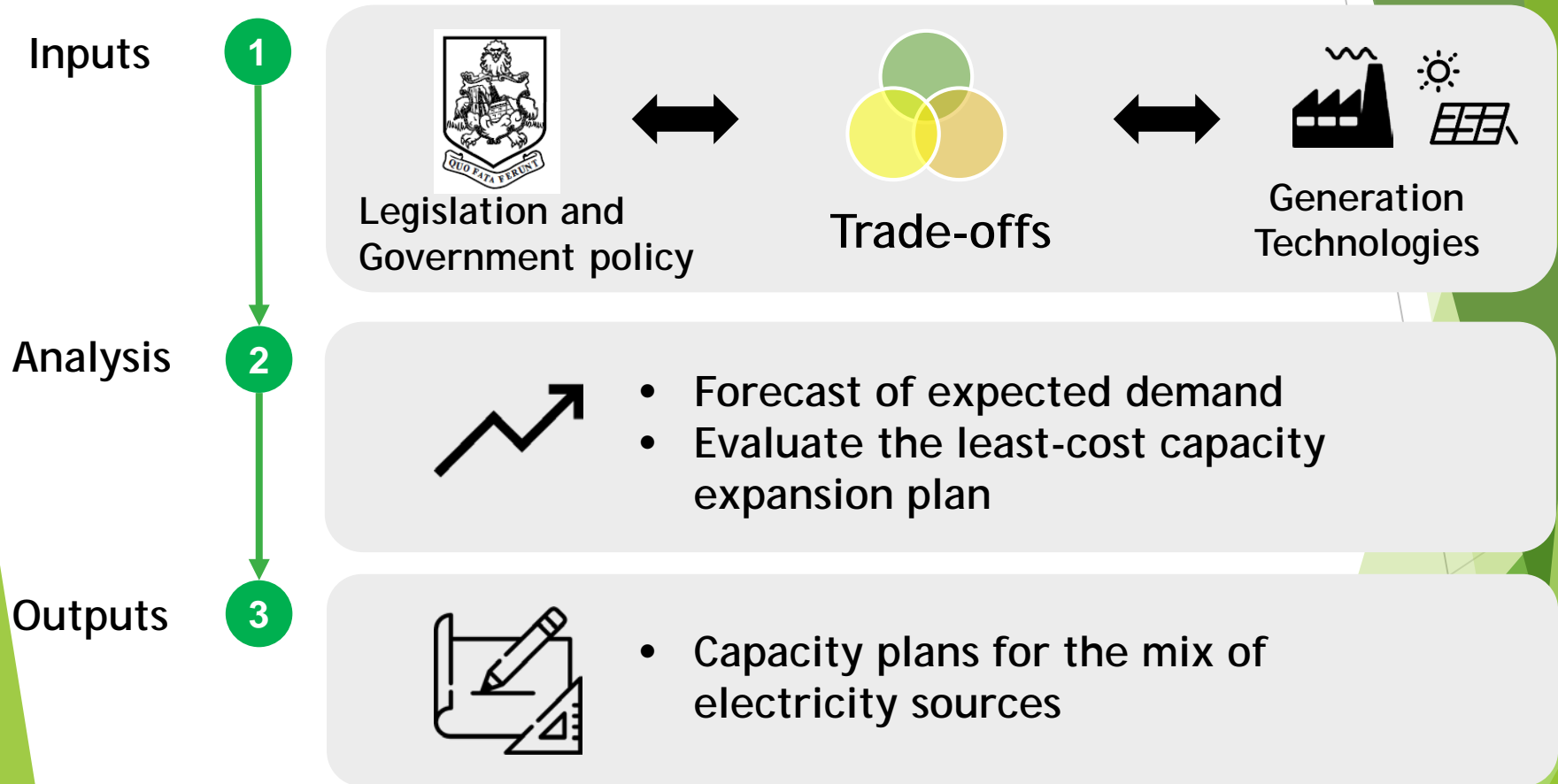
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# What is the IRP Proposal?

- ▶ Proposed by TD&R Licensee (BELCO) as required by the Electricity Act
- ▶ The first stage of developing a national electricity plan
- ▶ Open to 60 Day Public Consultation - review, submit public and industry opinion, submit supply/generation proposals
- ▶ Open to all - potential investors, regulated entities, sectoral participants, government agencies and consumers

# Resolving the Trade-offs

Illustration of the role of the IRP  
within policy and regulation



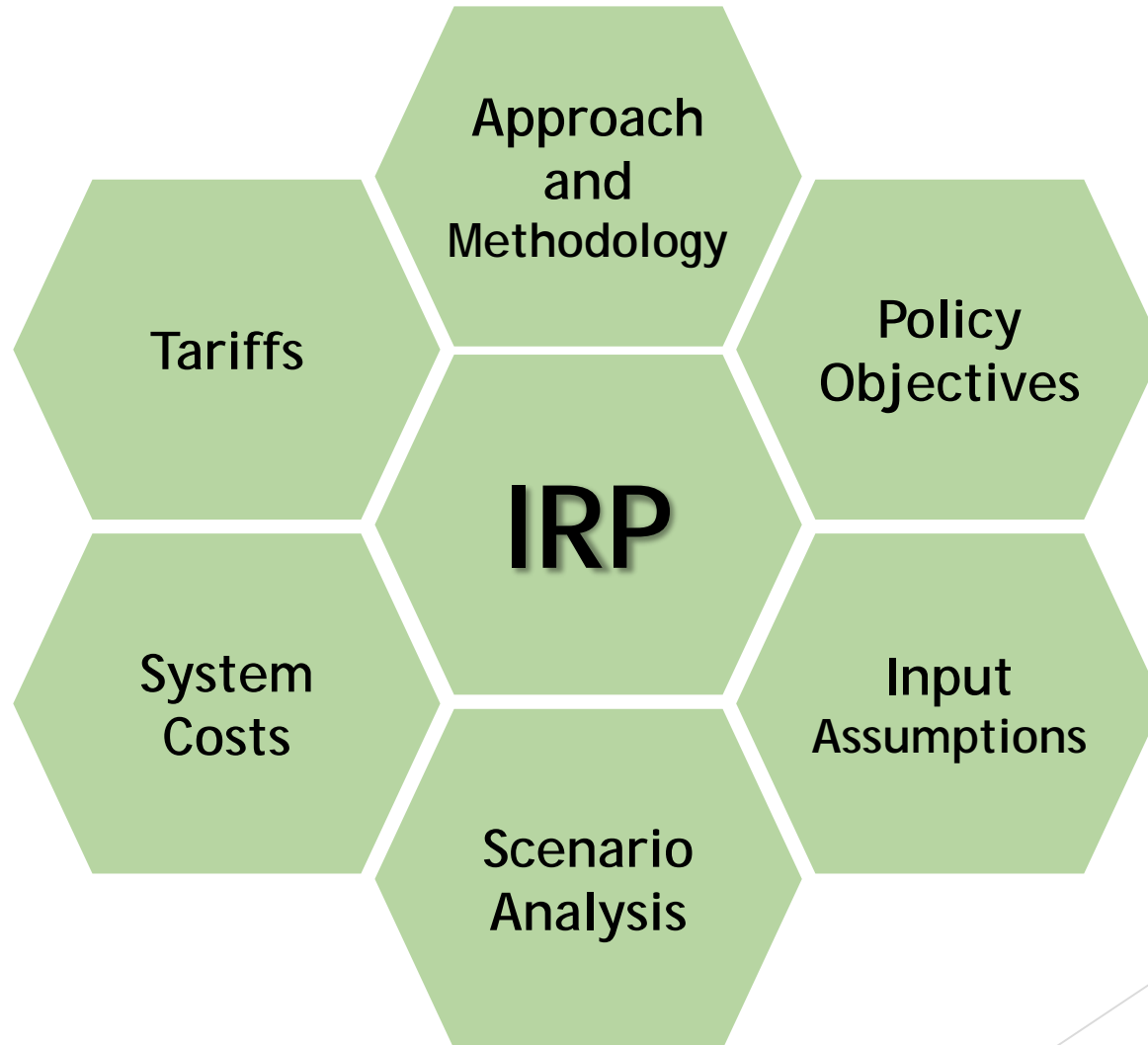
# Aims of the IRP

## IRP design

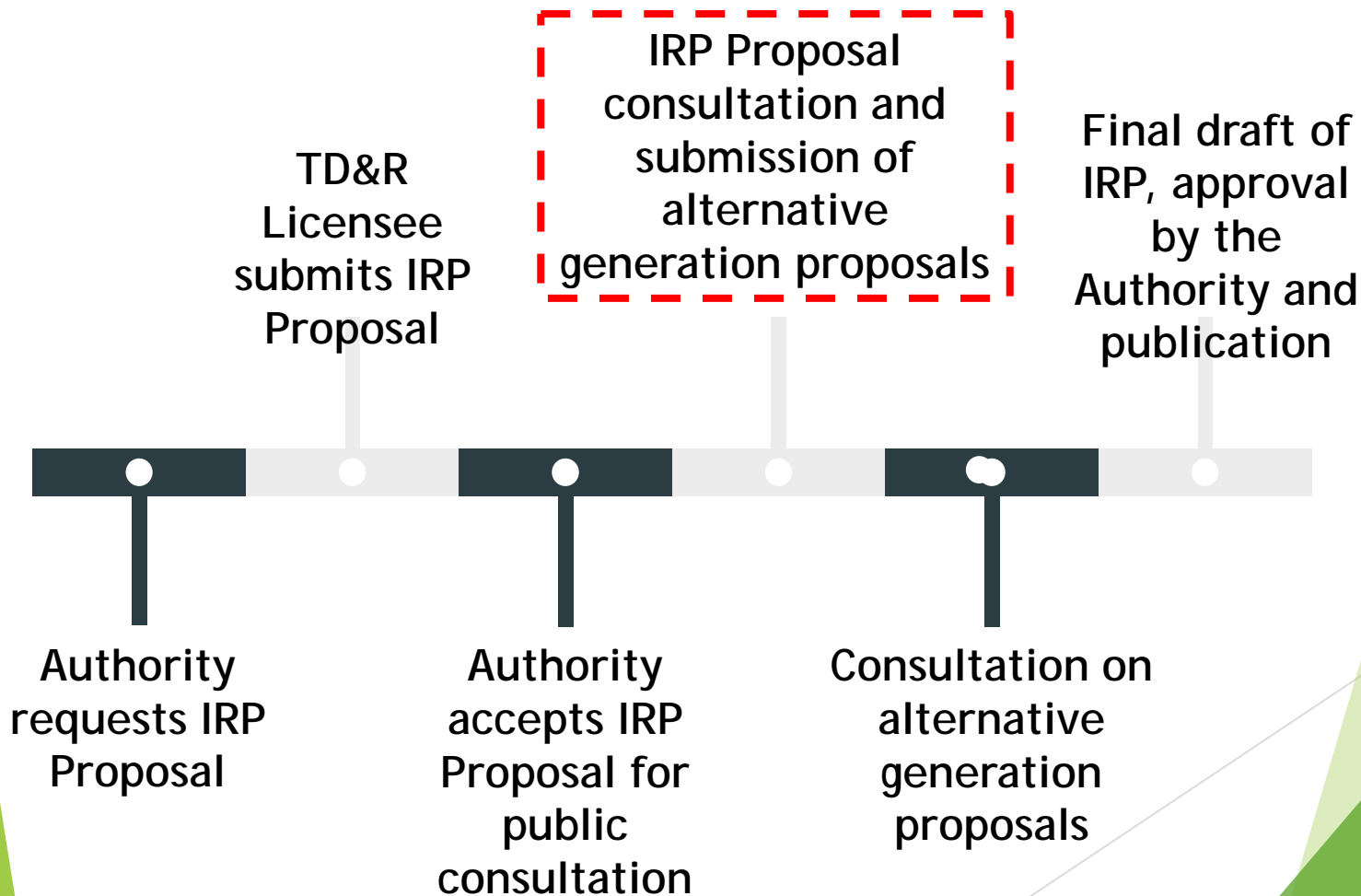
The IRP must be **credible** and **comprehensive** in its treatment of available resources, **auditable**, and **robust to identifiable sources of uncertainty**, in order to enable the Authority to:

- 1** **Approve** the lowest cost, or otherwise most appropriate, electricity capacity expansion plan that meets demand at lowest overall cost and with acceptable levels of system reliability and implementation risk to consumers
- 2** **Assess** the economic, environmental, and social implications of adopting alternative capacity expansion plans so as to be able to determine the optimal trade-offs contained in Ministerial directions
- 3** **Evaluate** the merits of applications by prospective IPPs or other licensees as well as other proposals that entail deviations from the IRP, in particular by calculating their benefits, costs, and risks to the electricity system

# IRP Best Practices



# The IRP Process



# Expectations of the IRP Process

- ▶ Facilitate engagement by consumers and other stakeholders to ensure all the facts and relevant considerations are included in the IRP process
- ▶ Identify Bermuda's electricity requirements and expected costs of available investment alternatives
- ▶ Provide the technical and economic information necessary to enable decisions on policies and regulations to meet the requirements of the Electricity Act
- ▶ All practical alternatives involve costs and trade-offs



# Questions & Answers

The process and purpose  
of the  
**IRP**

# Submit your feedback

- Find the relevant documents, including BELCO's proposal and submit your feedback and/or proposal via the link below on our website

<http://www.rab.bm/index.php/ele-consultations/irp-proposal-consultation>

- Deadline: July 7, 2018

