Renewable Energy Feed-in-Tariff
Stakeholder Workshop Objectives

Lusaka, Zambia
September 22, 2015
Venue:
Taj Pamodzi Hotel
Presented by:
Energy Regulation Board
Alfred M. Mwila – Director Economic Regulation
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Background – REFIT Policy
The draft REFIT Policy has been developed and aims:

- to lower the barriers for increased private sector involvement in renewable energy power generation.
- In the short-term aim to increase power generation through private sector investments in renewable energy.
- In the medium to long-term aim to contribute to the creation of a diversified energy mix and increase energy security in Zambia.

REFIT objectives for the first 3-year period (Phase 1):

- To provide for an initial allocation of 150 MW for the REFIT program
  - 100 MW hydropower and 50 MW non-hydropower (room for revision)
- To provide for an initial allocation of 10 MW for micro-generation

REFIT phase 2 to follow after a 3-year period.
The principal stakeholders for the implementation of the Policy are:

- **The Ministry Of Mines, Energy and Water Development (MMEWD)** as the national Ministry responsible for energy policy formulation and implementation

- **The Energy Regulation Board (ERB)** as the national independent energy sector regulator responsible for ensuring reasonable return on investment for operators/utilities, ensuring quality services at affordable prices for the consumer, licensing of operators/utilities, setting tariffs and monitoring market competition

- **ZESCO Limited** as the state-owned public utility involved in generation, transmission, distribution and supply of electricity to the end-user

### Specific Roles of ERB in the Policy

- Participate in operationalizing the first Phase of the REFIT program by undertaking the development of
  
  - REFIT pricing framework (model);
  - REFIT guidelines; standards; rules and regulations
  - licensing agreements,
  - standardized PPA,
  - connection guidelines and agreements
Objectives of Workshop
Objectives of Workshop

- Provide an overview of the proposed REFIT Program for Zambia
- Describe the process for developing REFIT
- Provide an indicative REFIT for Solar PV projects (as a cap for specific project size ranges and allow for price discovery below the cap)
- Provide an overview of REFIT rules and regulations
- Provide an overview of licenses for REFIT eligible projects
- Present a standardized PPA for REFIT eligible projects
- Discuss additional documents and mechanisms to be developed
- Discuss timeline for rollout of REFIT
- Consultation and discussion with stakeholders in preparation for the launch of the regulatory framework.
Overview of REFIT for Zambia
The draft REFIT Policy - to initially develop small-scale renewable energy projects totaling to 150 MW

Small scale renewable energy projects eligible for REFIT include:
- Solar PV
- Hydropower
- Biomass

**Project size limit:** Individual projects of up to 20 MW

**REFIT to be differentiated** by renewable energy technology and by project size

**Standardize process and documents** for development of projects eligible under REFIT program

REFIT developed to **attract private sector** investment in renewable energy projects
Process for Developing REFIT
Process for Developing REFIT

Principles

- The draft REFIT has been developed based on cost-based and value-based approaches, which consider the perspectives of project developers and the utility
  - A detailed discounted cash flow model has been developed to estimate cost-based tariffs (high enough to cover the generation cost, including a sufficient rate of return and supplements for risks)
  - The short-run marginal cost is used as a guide to the estimating value based tariffs and estimate impact on the utility (concept of avoided cost; i.e. Cost the utility like ZESCO escapes or avoids by purchasing the product for resale from another party instead of building a new plant. It mostly consists of capital cost and operating cost of the foregone plant.)

Data

- Data challenges real, since there are no such plants tried and tested in Zambia;
- Consultant was engaged to collect domestic relevant data
- Data and assumptions made in the analysis gathered from multiple sources in Zambia and stakeholders including project developers, equipment suppliers, financial institutions, reliable published data, and experience from international and African renewable energy projects. Tax and accounting information for Zambia.
Consistencies and References

- REFIT rules and regulations have been developed based on a review of existing and applicable Laws, Acts, and Policies.

- Draft REFIT generation license has been developed consistent with ZESCO and ERB rules and regulations.

- Draft REFIT PPA has been developed in consistent with existing ZESCO PPA’s and in consultation with relevant stakeholders.

- All documents and approaches have been developed consistent with international and regional best practice.
Additional Mechanisms to be Developed before full implementation of REFIT for various Technologies
Additional Mechanisms to Support the REFIT Program

- Development of a **standardized connection agreement** for projects eligible under the REFIT program

- Development of a **standardized implementation agreement** for projects eligible under the REFIT program

- Development of a **structured and transparent procurement mechanism** to procure projects eligible under the REFIT program

- Alignment of REFIT program to other ongoing initiatives such as the GET FIT program

- Align to Grid rules (technical standards and rules; independent transmission system operator; transmission / wheeling pricing methodology; open access to the grid; net metering, etc).

- Align legislation as necessary to support and facilitate the implementation of the REFIT program (including enhanced Energy Regulation Bill, Electricity Act, multi year tariff framework; automatic pass through, etc.)
Timeline for Rollout of REFIT
### Indicative Timeline for Rollout of the REFIT Program

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<th>Agency Responsible</th>
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<td>All Stakeholders</td>
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<td>Connection Guidelines</td>
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<td>Implementation Agreement</td>
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<td>Procurement Mechanisms</td>
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<td>Alignment with other Programs (e.g. GET FIT)</td>
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Summary Steps to Implementation of the Proposed Regulatory Framework

Necessary conditions

1. Renewable Energy National Policy (process underway, near conclusion)

2. Regulatory Framework (indicative REFiT tariff; Market and Technical Rules and Guidelines; Licensing Guidelines; Standard PPAs; ) – Final Stakeholder Consultative process – 22nd Sept 2015)

3. Supportive mechanisms (standardized connection agreements framework; implementation agreement; structured and transparent procurement mechanism; alignment of REFIT program to other ongoing initiatives; and align to legislation)
With the REFIT regulatory framework and secondary mechanisms developed, the REFIT program can be implemented and used before the end of the year (2015).

END