

**RMK11 ENERGY EFFICIENCY PROJECT
IMPLEMENTATION**

**TERMS OF REFERENCE FOR ENERGY AUDIT
IN INDUSTRY SECTOR**

Table of Contents

1.0	INTRODUCTION.....	3
2.0	OBJECTIVES.....	3
3.0	APPLICATION REQUIREMENTS FOR ENERGY AUDIT CONDITIONAL GRANT	4
4.0	ROLES AND RESPONSIBILITIES.....	5
4.1	Malaysian Green Technology Corporation (GreenTech Malaysia)	5
4.2	Applicant	5
4.2.1.	Energy auditing exercise phase	5
4.2.2.	Implementation of the Energy Saving Measures phase.....	6

1.0 INTRODUCTION

Energy Efficiency Projects Malaysia is a program under the Eleventh Plan (RMK-11) approved by the Economic Planning Unit (EPU), Prime Minister Department recently.

The program provide conditional energy audit grant for Big Industry sectors. It is a three years period project starting from 2016 until 2018. Any industrial sector which are consuming big amount of electrical energy and categorised under the *Efficient Management of Electrical Energy Regulation 2008 (EMEER)* by Energy Commission, are eligible to apply.

The Ministry of Energy, Green Technology & Water (KeTTHA) and Energy Commission are the join executing organisations to ensure the implementation of the incentive will benefits the industrial sector, particularly on the effort to manage and reduce energy consumption.

GreenTech Malaysia has been appointed by KeTTHA as implementing agency on behalf of the government, to promote, facilitate and process the application by the Big Industrial owner.

Energy audit is a systematic process to understand how and where the energy being used, to explore on how to manage it and identify the energy savings potential.

2.0 OBJECTIVES

The objectives of the RMK11 Energy Efficiency Project are;

- a) To create awareness on the importance of implementing energy audits as part of energy efficiency and conservation program. Energy audit is a systematic process to understand how and where the energy being used, to explore on how to manage it and identify the energy savings potential.
- b) To provide financing assistance to the eligible applicants through grant, as a catalyst for the implementation of energy audit, so that current energy consumption pattern, baseline and energy savings potential can be identified.
- c) To attract financial institutions to provide financing mechanism for energy efficiency projects through energy performance mechanism, to reduce financial burden to the applicants.
- d) To develop capacity building in energy services industry.

3.0 APPLICATION REQUIREMENTS FOR ENERGY AUDIT CONDITIONAL GRANT

- a) Any big industry which are consuming big amount of electrical energy (using electrical energy equivalent or more than 3,000,000 kWh for 6 consecutive months, which listed under the *Efficient Management of Electrical Energy Regulation 2008 (EMEER)* by Energy Commission, are eligible to apply.
- b) Applicant shall appoint a *Registered Electrical Energy Manager (REEM)*.
- c) Energy audit exercise must be completed within 2 months starting from the date of contract signing.
- d) Applicant shall appoint an *Energy Service Company (ESCO)* before submit grant application to GreenTech Malaysia. The ESCO shall be registered with Energy Commission.
- e) Successful applicants are required to provide amount of funding matching to the audit grant provided to implement energy saving measures as recommended in the audit report
- f) The implementation of the energy saving measures are according to energy audit report, and shall be completed within 3 years after the energy audit. However, the No Cost Energy Saving Measures should be implemented immediately after acceptance of the energy audit final report for the benefits of the applicant.
- g) The energy saving target is 5% per year as per **Table 1**;

Table 1: Energy Saving Measures and Implementation Target

Item	Energy Saving Measures Recommended in the Energy Audit Report	Minimum Energy Saving to Achieve	Period of implementation
1	No Cost Energy Saving Measures	Minimum 5% energy saving compared to baseline.	1 st year
2	Low Cost and Medium/High Cost Energy Saving Measures	Minimum 5% per year energy saving compared to baseline	2 nd and 3 rd Year
	Total Energy Saving Measures implemented	Total minimum of 15% compared to baseline	

4.0 ROLES AND RESPONSIBILITIES

4.1 Malaysian Green Technology Corporation (GreenTech Malaysia)

GreenTech Malaysia as the implementing agency is responsible to;

- i. Provide the application form, application requirement and criteria, process workflow, conditional agreement, scope of work and grant disbursement to the applicant;
- ii. Manage conditional energy audit grant;
- iii. Review, process and approve the conditional energy audit grant application;
- iv. Monitor energy audit works at applicant's premise;
- v. Review and verify energy audit report submitted by applicant;
- vi. Process and disburse grant according to progress works;
- vii. Provide facilitation and advice to applicants on the overall project exercise, to ensure the project direction is according to the objective. This includes advisory activities related to energy management.
- viii. Organise energy technical trainings.
- ix. Coordinate and monitor the implementation of the project.
- x. Monitor and verify the implementations of the energy saving measures recommended in the energy audit final report.

4.2 Applicant

4.2.1. Energy auditing exercise phase

Applicant is responsible to;

- a) Fill-up the relevant forms and submit official application to GreenTech Malaysia.
- b) Nominate the focal person / person in charge for the project.
- c) Appoint own energy services companies (ESCO) that registered with Energy Commission to conduct the energy auditing exercise. GreenTech Malaysia and government are not responsible to the selection and appointment of the ESCO. The appointment and other additional service charges payment to the ESCO is under the responsibility of the applicant.

- d) Notify GreenTech Malaysia the actual commissioning date of energy audit project timeline once application approved.
- e) Ensure the ESCO execute energy audit exercise according to the methodology, quality and reporting format outlined in the Energy Audit requirements. GreenTech Malaysia has right to reject any energy audit exercise and reports that not according to the requirements. GreenTech Malaysia will not be held responsible to any additional cost arise due to the delay in complying the requirements.
- f) Provide weekly progress report, draft final report and final report to GreenTech Malaysia according to the agreed timeline, GreenTech Malaysia will make comments and revert for improvement.
- g) Provide 3 final reports hard copy and a soft copy (Ms Office) to GreenTech Malaysia.
- h) Submit 2 invoices (upfront and final payment) to GreenTech Malaysia for payment purposes. Applicant is responsible to pay other additional charges such as GST and/or other taxes.
- i) Attend the energy management training conducted by GreenTech Malaysia under the project.

4.2.2. Implementation of the Energy Saving Measures phase

Within 3 years after completion of the energy audit exercise, applicants are responsible to;

- a) Comply with EMEER requirements issued by Energy Commission.
- b) Achieve 15% accumulative saving in 3 years as per **Table 1**.
- c) Implement the energy saving measures recommended in the energy audit report submitted by the ESCO in this project.
- d) The implementation cost could be borne by applicant or using energy performance contracting (EPC).
- e) Communicate with GreenTech Malaysia to ensure the implementation of energy saving measures.
- f) Attend the energy management training organised by GreenTech Malaysia under the project to ensure continuous development of capacity building within the organisation.