



RMK-12 ENERGY AUDIT CONDITIONAL GRANT (EACG) AND ENERGY MANAGEMENT PROJECT IMPLEMENTATION

TERMS OF REFERENCE

(INDUSTRIAL AND COMMERCIAL SECTORS)

Table of Contents

1.0	INTRODUCTION	3
2.0	OBJECTIVES	3
3.0	APPLICATION REQUIREMENTS FOR ENERGY AUDIT CONDITIONAL GRANT	4
4.0	PROCESS FLOW	6
5.0	ROLES AND RESPONSIBILITIES	9
5.1	Sustainable Energy Development Authority (SEDA Malaysia)	9
5.2	Applicant	9
5.2.1	Energy auditing exercise phase	9
5.2.2	Implementation of the Energy Saving Measures (ESM) phase	11
6.0	CONTACT INFORMATION	12

1.0 INTRODUCTION

As a continuity from Energy Audit Conditional Grant under RMK-11 Energy Efficiency Projects for year 2016-2020, The Energy Audit Conditional Grant (EACG) is an energy efficiency programme under the 12th Malaysia Plan (RMK-12) for the implementation year of 2021-2025. This programme is supported by grants which were allocated for the year 2021 until 2025 to industrial and commercial building owners/operators to collaborate with local Energy Service Companies (ESCOs) registered with the Suruhanjaya Tenaga (ST) to conduct energy audit in their premises.

The programme is executed by Ministry of Energy and Natural Resources (KeTSA). SEDA Malaysia is the implementing agency and ST is the coordinator for this program. SEDA Malaysia is the implementing agency for both commercial and industrial building sector.

This programme was approved with a total allocation of RM 86,734,000.00 under RMK-12 (2021-2025).

The allocation will be channelled in stages in accordance to the financial procedure and ceiling allocation approved for the Authority for the 5 years quota involving 230 commercial buildings and 630 industrial premises. The grant can be used by the recipients to cover the cost of energy audits of their premises under the condition that the applicants/owner agree to implement the EE measures recommended in the energy audit report to achieve efficiency in energy saving

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 main objectives of this program are:

- i. To provide financial facility (assistance) through the 5 years (2021-2025) conditional grant;
- ii. As a catalyst for the implementation of energy audits and to identify the total energy consumption as well as setting up the baselines for industrial and commercial premises;
- iii. To provide a platform and facilitation for the implementation the energy saving measures (ESM) according to the outcome of energy audit report;
- iv. Capacity development for industry and commercial premises owner and ESCOs, in order to fulfil the current and future demand of energy management in industrial and commercial sector; and
- v. To foster awareness on the importance of energy management among the industrial and commercial premises owners in Malaysia in order to reduce the electricity consumption.

3.0 APPLICATION REQUIREMENTS FOR ENERGY AUDIT CONDITIONAL GRANT

- a) Any installation (industrial and commercial) which receives electrical energy from a licensee or supply authority with a total electrical energy consumption equal to or exceeding 100,000 kWh per month as measured at one metering point or more;
- b) Any installation which is used, worked or operated by a private installation licensee with a total net electrical energy generation equal to or exceeding 100,000 kWh per month;
- c) For Sarawak state, the applicants must submit the latest electricity bill from Sarawak Energy Berhad for 6 consecutive months whereby the average 6 months consumption shall be equal or higher than 100,000 kWh;
- d) For installation listed under Efficient Management of Electrical Energy Regulations 2008, applicant shall appoint or designate a Registered Electrical Energy Manager (REEM) to carry out the **functions and duties***;
- e) For installation which is not listed under Efficient Management of Electrical Energy Regulations 2008, applicant shall appoint or designate a person in charge to carry out the **functions and duties***;
- f) The Energy audit exercise must be completed within two (2) months starting from the date of contract signing;
- g) One owner/operator can apply for one or more installations and must appoint an Energy Service Company (ESCO) registered with Energy Commission or Electrical Inspectorate Unit, EIU (for Sarawak only) for the energy audit implementation. (List of the ESCO can be referred via <https://www.st.gov.my/web/consumer/esco>);
**for Pre-Registration, please put the details of the ESCO that will be appointed (if any) to implement the energy audit in the installation.*
- h) Energy audit grant will be provided to the eligible applicant. However, applicants need to be agreed and ready to implement the energy saving measures for which the cost of implementation is equal, or more than the received amount of energy audit grant;
- i) The implementations of the energy saving measures are according to energy audit report and shall be within 3 years after the completion of 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;

- j) The energy saving target is based on the findings from the energy audit report that has been approved by SEDA Malaysia. **Example** of scenarios that meet the terms and conditions of the EACG Program can be referred as below;

				Within three (3) years of EACG contract	
Sector	Scenario (if)	Common minimum target of energy savings	Energy Audit Report findings	Expected minimum energy savings to be achieved	Expected minimum implementation cost
Industrial (applied maximum for RM100k)	1	10%	8%	8%	Equal to amount of grant received
	2	10%	20%	10%	
Commercial (applied maximum for RM60k)	1	20%	12%	12%	Equal to amount of grant received
	2	20%	30%	20%	

Table 1: Example of scenarios that meet the EACG Program terms and conditions

- k) The applicant/owner must implement the recommended ESMs according to the energy audit report. However, the applicant/owner is not compulsory to implement all the recommended ESMs in the energy audit report as long as the total minimum energy saving is achieved and the implementation cost is similar or higher than the total amount of grant.

*Functions and duties of a Registered Electrical Energy Manager or Person in charge:

- 1) To audit and analyze the total electrical energy consumption;
- 2) To advise in developing and implementing measures to ensure efficient management of electrical energy at the installation;
- 3) To monitor effective implementation of the measures;
- 4) To supervise the keeping of records on efficient management electrical at the installation (verify the accuracy of the record); and
- 5) To ensure timely submission of information and reports under the regulations

4.0 PROCESS FLOW

4.1 The overall process flow of the programme is as below:

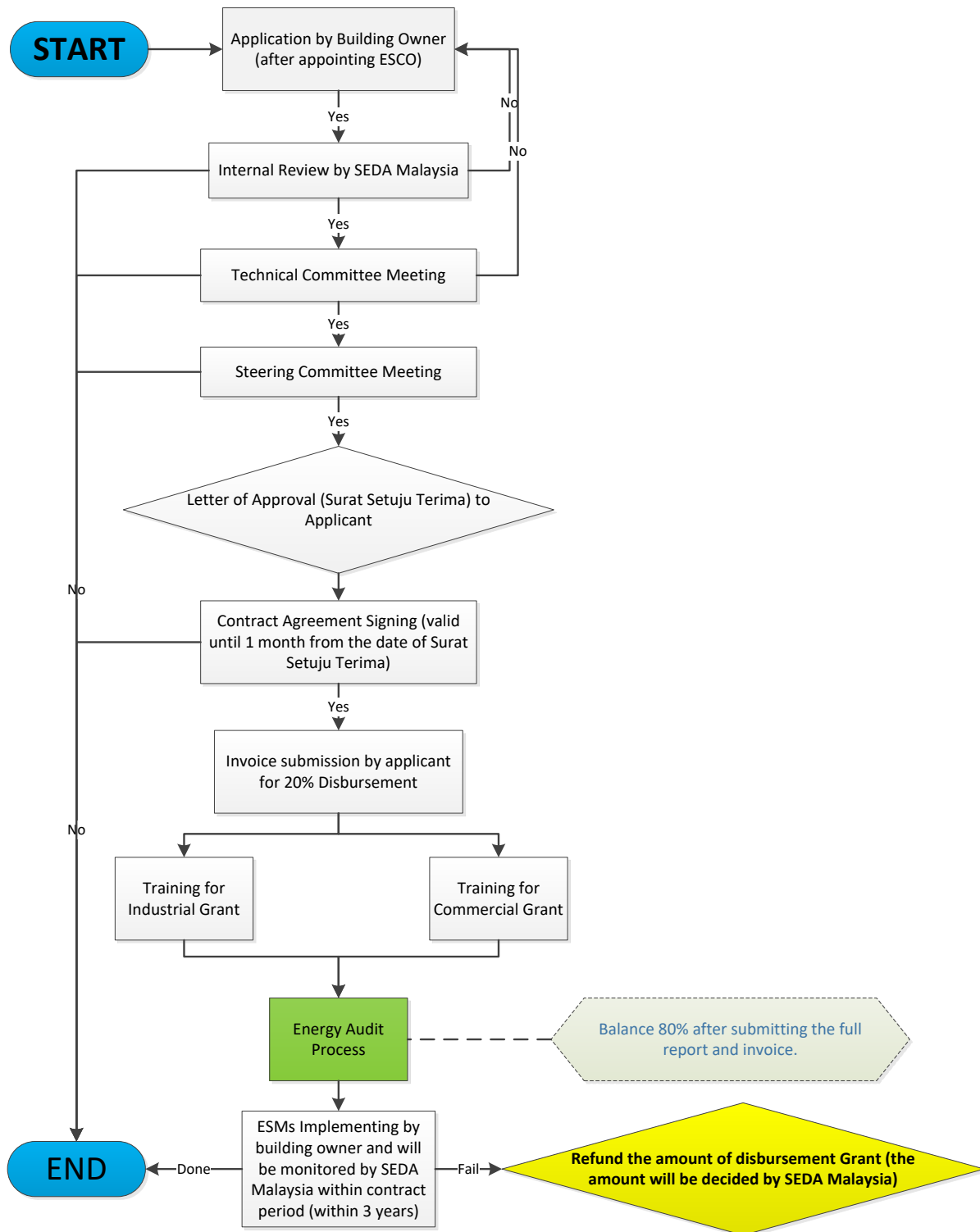


Figure 4.1: Process flow of the project

4.2 The application process flow of the programme is as below:

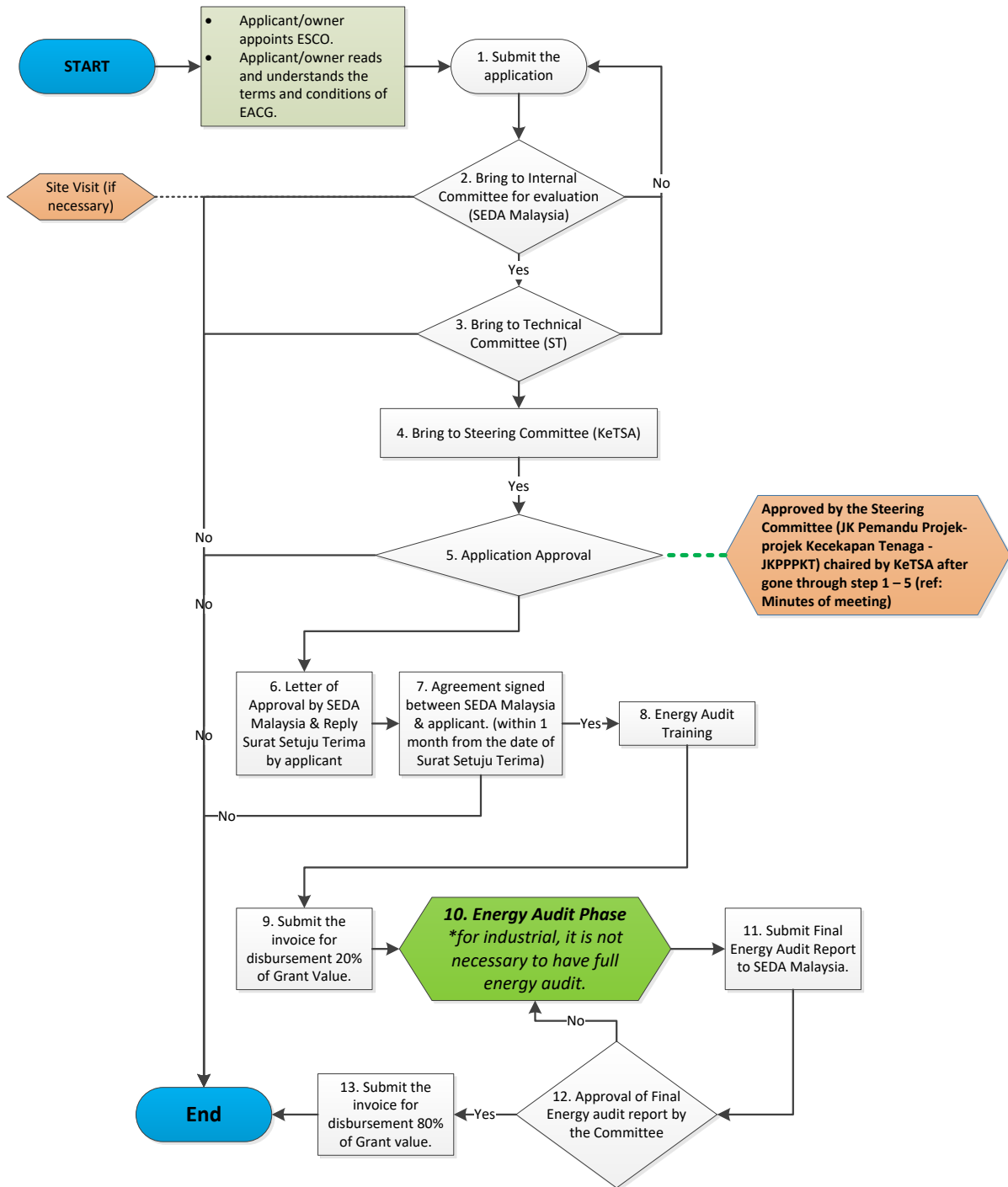


Figure 4.2: Application process of the grant

4.3 Reporting and data verification process flow of the programme is as below:

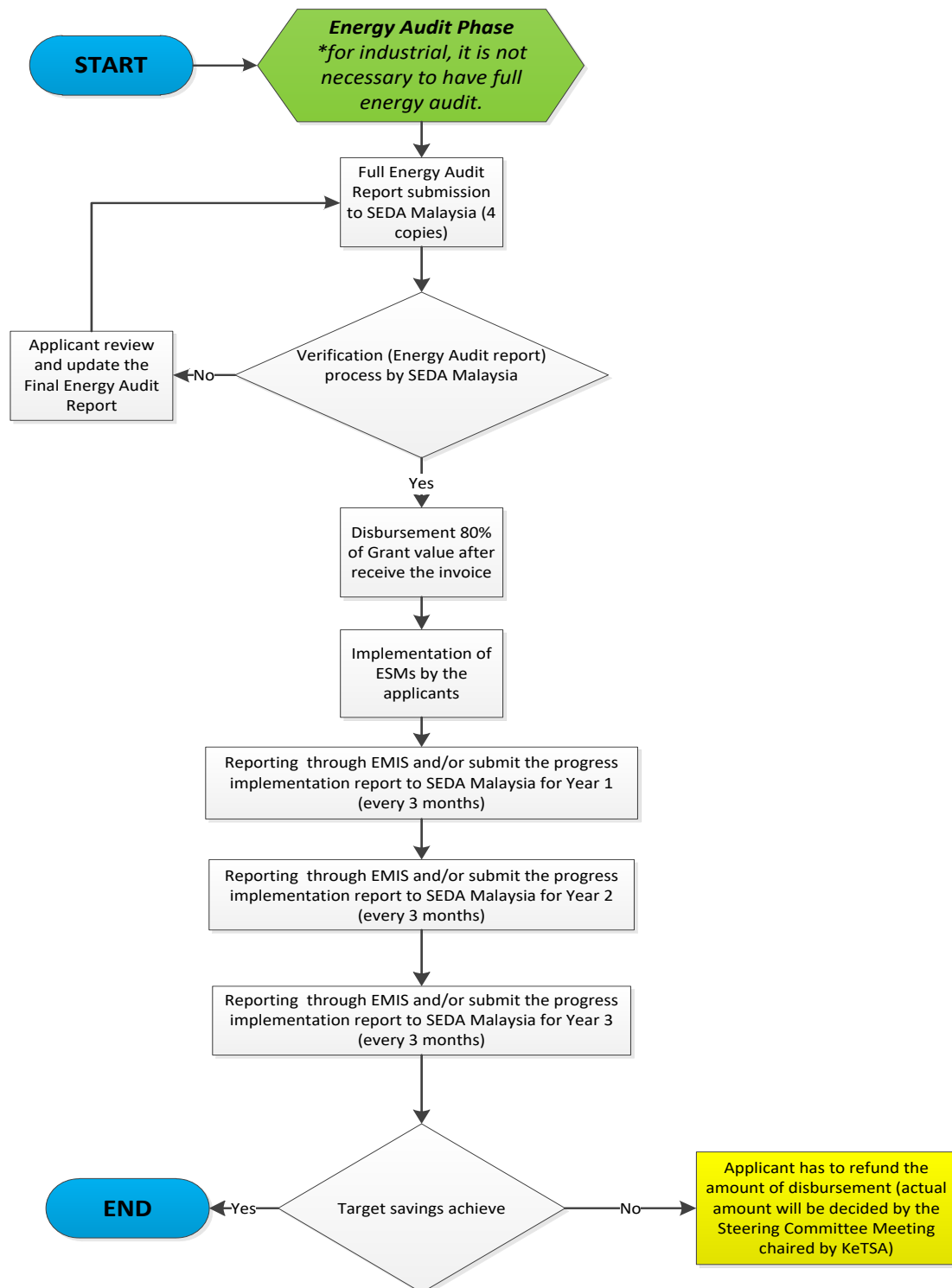


Figure 4.3: Reporting and verification process flow

5.0 ROLES AND RESPONSIBILITIES

5.1 Sustainable Energy Development Authority (SEDA Malaysia)

SEDA Malaysia as the implementing agency is responsible to:

- i. Manage the contract which is signing under both parties;
- ii. To provide the application form, application requirement and criteria, process workflow, document contract, scope of work and grant disbursement to the applicant;
- iii. Manage conditional energy audit grant;
- iv. Assist KeTSA and ST in promotional activities and technical training;
- v. Review, process and approve the conditional energy audit grant application;
- vi. Monitor energy audit works at applicant's premise;
- vii. Review and verify energy audit report submitted by applicant;
- viii. Process and disburse grant according to progress works;
- ix. 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;
- x. Organise energy management trainings;
- xi. Coordinate and monitor the implementation of the project from time to time; and
- xii. Monitor and verify the implementations of the energy saving measures recommended in the energy audit final report.

5.2 Applicant

5.2.1 Energy auditing exercise phase

Applicant is responsible to;

- i. Honour (mandatory) the contract where if applicant fails to fulfil the contract, they will have to refund back the disburse amount;
- ii. Fill-up the relevant forms and submit the official application to SEDA Malaysia. The Application Form (Industrial and Commercial);
- iii. To nominate the focal person/person in charge for the project;
- iv. To appoint their own Energy Services Companies (ESCO) that is registered with Energy Commission to conduct the energy auditing exercise. SEDA Malaysia and government are not responsible to the selection and appointment of the ESCO. The appointment and service charges payment to the ESCO is under the responsibility of the applicant;

- v. To provide SEDA Malaysia with project timeline once the application was approved;
- vi. To ensure that the ESCO executes the energy audit exercise according to the methodology, quality and reporting format outlined in the Energy Audit requirements. SEDA Malaysia has the right to reject any energy audit exercise and reports that is not according to the requirements. SEDA Malaysia will not be held responsible to any additional cost arise due to the delay in complying the requirements.

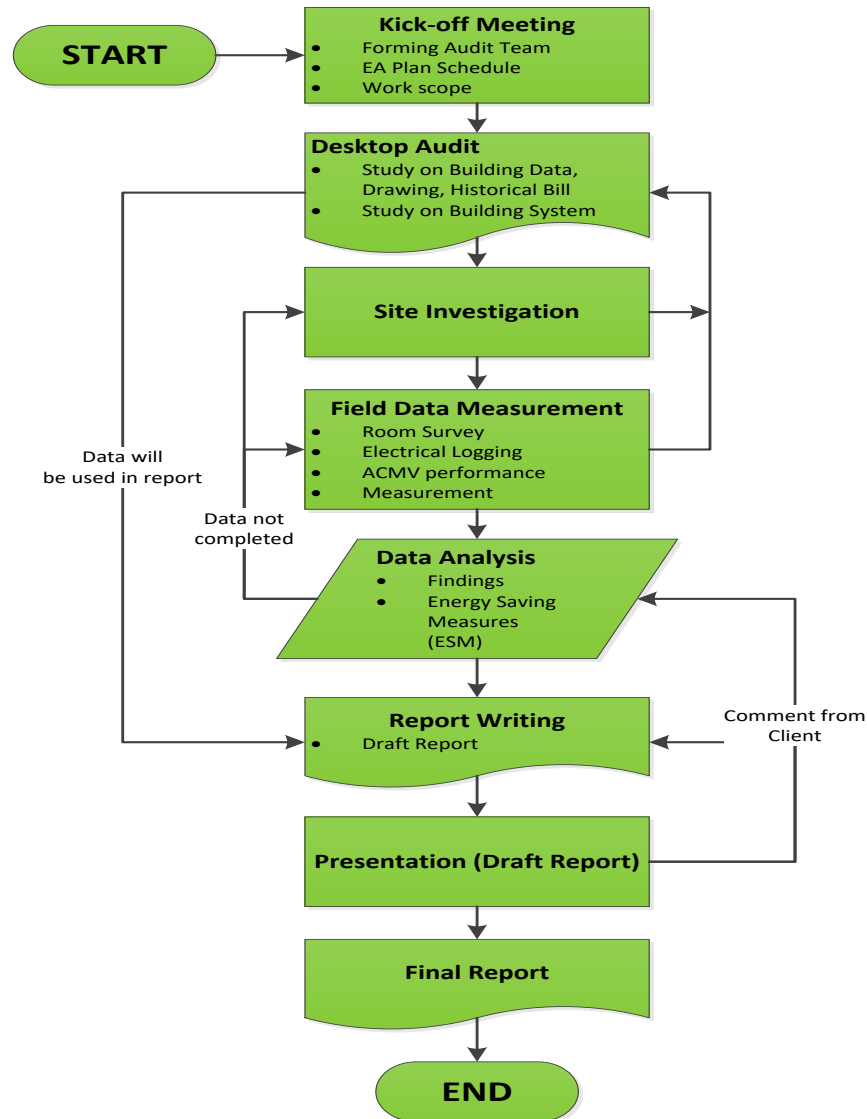


Figure 5.1: Energy Audit Flow Process

- vii. To provide the progress, draft and final reports to SEDA Malaysia according to the agreed timeline, SEDA Malaysia will make comments and revert for improvement;
- viii. To provide four (4) final reports hard copy and a soft copy (Ms Office) to SEDA Malaysia;

- ix. To submit two (2) invoices or letters (upfront and final payment) to SEDA Malaysia for payment purposes. Applicant is responsible to pay the additional charges such as GST and/or other taxes;
- x. To submit the monitoring & evaluation report to SEDA Malaysia (once in every three (3) months) and/or do the reporting through the Energy Management Information System (EMIS) under Energy Commission (every six (6) months);
- xi. To attend the energy management training conducted by SEDA Malaysia under the project to ensure continuous development of capacity building within the organisation; and
- xii. Communicate with SEDA Malaysia in ensuring the energy audit exercise is complete and according to the objective and requirement of the project.

5.2.2 Implementation of the Energy Saving Measures phase

Within 3 years after energy audit exercise completed, applicants are responsible to;

- i. Comply with EMEER requirements issued by Energy Commission (for installation which listed under EMEER Regulations only);
- ii. Achieve energy saving in 3 years as per final energy audit report;
- iii. Implement the energy saving measures as recommended in the energy audit report submitted by the ESCO for this project. However, the applicant/owner may select the most appropriate ESMs and it is not compulsory to implement all the recommended ESMs in the energy audit report as long as the total minimum energy saving is achieved and the investment is similar or higher than total amount of grant;
- iv. The implementation cost could be borne by applicant or using energy performance contracting (EPC). The expenditure of investment cost equivalent to, or greater than the Grant amount for the purpose of implementing the energy saving measures;

$$\begin{aligned}
 & \textit{Year of Investment Cost (RM X)} \\
 & + \textit{Year 2 Investment Cost (RM Y)} \\
 & + \textit{Year 3 of Investment Cost (RM Z)}
 \end{aligned}
 \geq \textit{Grant Amount}$$

Failure to implement the ESMs (as stated in ii and iii) without any reasonable justification and agreement from SEDA Malaysia and Program Steering Committee will cause the applicant to refund back the amount of disbursement (actual amount will be decided by the Steering Committee Meeting chaired by KeTSA).

- v. Submit the Monitoring and Evaluation Report quarterly to SEDA Malaysia and through Energy Management Information System (EMIS); and
- vi. Communicate with SEDA Malaysia to ensure the implementation of energy saving measures was successfully held.

6.0 Contact Information

For any further inquiry or information, please contact:

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*Prepared and updated by,
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