

## TERMS OF REFERENCE FOR THE R&D PROJECT

**1. Title of the Project:** To define environmental friendliness rating for electrotechnical products.

**2. Background:**

We often hear term-environment friendly products. This term is ubiquitously used and is linked to climate protection and sustainability goals declared by United Nations. There are few standards available as guidelines for environmentally conscious designs, GHG emission calculation, energy ratings etc. But there is no consolidated standard to judge extent of environment friendliness of a particular electrotechnical product. A single harmonised standard will be extremely useful for customers to determine extent of environmental friendliness rating of electrotechnical product.

**3. Objective:**

Determination of rating criterion to define extent of environmental friendliness of electrotechnical products.

**4. Scope:**

The scope of this research project encompasses following:

- a) Definition of electrotechnical products
- b) A consolidated hazardous substance list
- c) Document for environmental friendly product rating criterion based on following parameters:
  - i. Environmentally Hazardous substance content-
  - ii. Ease of packaging waste disposal – are packaging items biodegradable free of plastics etc.
  - iii. Energy Efficiency during product usage- BEE energy ratings can be considered.
  - iv. Durability of product- expected lifetime of product.
  - v. Extent of emission of harmful products during accidental degradation. Example fire accident.
  - vi. Extent of emission of harmful gases during usage of product
- d) Report shall be prepared of research findings and data collected as per the deliverables of this project.

**5. Research Methodology:**

It includes following:

- a) Study of existing relevant national, international standards, literature, if any.
- b) Conducting survey for best industry practices for environmental friendly ratings in this field.
- c) Study of existing hazardous substance lists relevant to electrotechnical products.

- d) Preparation of hazardous substance list for electrotechnical products
- e) Performing actual tests at qualified testing laboratory on atleast 2 electrotechnical product samples to validate hazardous substance content.

**6. Expected Deliverables:**

- a. Final project report covering all the aspects referred in the scope.
- b. Questionnaire, discussion, visit reports, test reports to be appended with the final project report

**7. Timeline and Method of Progress Review:**

<b>Sr No</b>	<b>Stage</b>	<b>Time from date of award of project (cumulative)</b>
1	Literature review ( Study, Surveys, etc)	3 months
2	First draft	4 months
3	Final draft along-with report	6 months

The review will be carried out in each month along with consultation of other experts if required. The literature review after 3 month, the first draft after 4 months and the final draft along-with report at the end of 6 months.

**8. Support BIS will provide:**

BIS will provide access to latest editions of standards for the project.

**9. Nodal Person:**

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