

Guidelines for the Cost Estimations of the R&D Proposals

Sponsored by CPRI

Format for the Estimation and Justification of the Project Budget

| Sl No. | Item | Quantity | Per Unit Cost | Total Budget (including taxes) | Basis of the cost estimates ((Minimum Three Quotations from GeM/ Market if item is not available in GeM/ market survey/ previous purchases of the same items, etc) | Justification for the relevance of the item for the research project with specifications |
|-----------|--|----------|---------------|--------------------------------|--|--|
| 1. | Machinery /Equipment (specific to the project and not for making durable capital assets like buildings, long-term machinery, etc.) 1. 2. 3. . | | | | | |
| 2. | Applicable BIS standard for the equipment, input material, and output of the project. If BIS standard not available, applicable international standard like IEC, ISO etc be mentioned. | | | | | |
| 3. | Physical input material/ components for project fabrication etc, if required. 1. 2. 3. | | | | | |
| 4. | Applicable BIS standard for the input material, and output of the project. If BIS standard not available, applicable international standard like IEC, ISO etc be mentioned. | | | | | |
| 5. | Manpower (Research associates/assistants): Associate 1. Associate 2. | | | | | |
| 6. | Hardware (specific for the project and not general items like | | | | | |

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|-----|---|--|--|--|--|--|
| | printers, computers/ laptops etc.) | | | | | |
| 7. | Software (specific specification/ requirement for the project execution) | | | | | |
| 8. | Travel expenses (with justification for why travel required.) | | | | | |
| 9. | Consumables (specific items with names, use, price, etc.) | | | | | |
| 10. | Contingency (Indicate the names of the items covered in the contingency.) | | | | | |
| 11. | Sub-Total | | | | | |
| 12. | Institutional overheads (percentage of the sub –Total) | | | | | |
| 13. | Project Management Charges to CPRI (percentage of the sub –Total) | | | | | |
| 14. | Total | | | | | |

Explanatory note/ instructions for filling up the cost estimate form

A. General:

1. Applicants will have to follow the provisions of General Financial Rules (GFR) 2017 for all procurements/tendering.
2. Equipment procured through the CPRI grant should bear a label “**CPRI funded**”.
3. **Necessary quotations** for consumables & equipment/ software need to be submitted as applicable with the proposal.
4. Minimum Three Quotations from GeM is required for cost estimates for equipment/ software, consumables etc. If the item is not available on GeM, non-availability certificate from GeM be enclosed with the proposal and minimum three quotations from market/ market survey be submitted with the proposal. In case of procurement of propriety item, a Propriety Article Certificate (PAC) shall be submitted.
5. Travel budget will be allowed if travel forms an integral part of the project (e.g. extensive fieldwork, etc.). The travel budget can be utilized for travel by the PI, Co-I or by Research fellow/Associates/ Project Staff (staff) working in the project for:
 - a. Visiting for meeting(s) (review etc.) related to the project.
 - b. Attending seminars/symposia/conference provided the PI himself or the Project Staff/ Fellow/Associate is presenting a research Paper (based on the project work) which has been accepted.
 - c. For field work / survey in respect of project related activities.
 - d. International travel is NOT permissible under the project.

B. Serial number-wise explanation for filling up various items:

Sl. No. 1: Machinery / Equipment

1. **Item:** List the specific equipment or machinery required for the project. This should only include items directly related to the project, and not for general use or long-term capital assets like buildings or general office equipment. The specifics should be mentioned like only mentioning “Transformer” is not acceptable, the rating has to be mentioned.
2. **Quantity:** Specify the number of units needed for each item.
3. **Per Unit Cost:** Mention the cost per unit, including taxes.
4. **Total Budget (including taxes):** Multiply the per unit cost by the quantity to get the total budget.
5. **Basis of the cost estimates:** Mention the method used to derive the cost (e.g., minimum three quotations from GeM, if not available on GeM, then minimum three quotations from open market survey with non-availability certification from GeM, or previous purchases of similar items, etc. If propriety equipment, then Propriety Article Certificate (PAC) shall be submitted.).
6. **Justification:** Provide a clear justification for why the equipment is needed for the project and its relevance. Also, specify any particular features or technical specifications that make the equipment essential for the research work.

Example:

| Item | Quantity | Per Unit Cost | Total Budget (including taxes) | Basis of the cost estimates | Justification |
|----------------------------------|----------|---------------|--------------------------------|--|---|
| High-Speed Camera (1000 fps, 4K) | 1 | INR 1,50,000 | INR 1,50,000 (GST included) | GEM quotations from: Vendor 1 Vendor 2 Vendor 3 | Required for recording fast-motion experiments with high resolution for detailed analysis. This resolution will help in better analysis through computer vision algorithms. The minimum specification is at least 1000 fps and 4K resolution. |

Sl. No. 2: Applicable BIS Standard for Machinery / Equipment

1. **BIS Standard:** Mention the applicable BIS (Bureau of Indian Standards) for the equipment or input material. If no BIS standard is available, mention any relevant international standards (e.g., IEC, ISO). This is to ensure the equipment meets the required standard for safety, performance, and quality, if applicable.

Sl. No. 3: Physical Input Material / Components

1. **Item:** List the components or materials that will be used for fabrication.
2. **Quantity:** Specify the quantity required for each material.

3. **Justification:** Explain the role of the material in the project, including specific properties or specifications necessary for the research. Whether any approval is required for procuring the Materials. Also mention if the material has to be imported or is available through local vendors.

Sl. No. 4: Applicable BIS Standard for Input Material

- **BIS Standard for Materials:** Mention the applicable BIS standard for the materials being used. If no standard is available, note the relevant international standard (IEC, ISO, etc.). This ensures the materials used in the project meet safety and quality regulations.

Sl. No. 5: Manpower

1. **Designation:** List the positions required, such as Research Associates/ Research Assistants/JRF/SRF.
2. **Justification:** Explain the need for each position and how their work will contribute to the project.
3. **Cost Estimate:** Provide an estimate for each person's remuneration, based on institutional rates or approved Govt. norms (DST order). .

Example:

| Designation | Quantity | Monthly Cost | Total Budget | Justification |
|--------------------|----------|--------------|--------------|--|
| Research Assistant | 1 | INR 30,000 | INR 3,60,000 | Needed for data collection and analysis of experimental results. |

Sl. No. 6: Hardware

1. **Item:** List specific hardware required for the project (e.g., microcontrollers, sensors) and justify how it will aid in the execution of the project. Exclude general-use items like computers or printers. In case of workstation, the justification for the specific configuration may be mentioned.

Sl. No. 7: Software

1. **Software Required:** List any specialized or specific software required for executing the project (e.g., FEM, ANSYS software). Provide technical details, version specifications, and a justification for its necessity. It is expected that basic softwares like MATLAB, CAD will be available at the Institute.
2. **Quantity:** Indicate the number of licenses for the software.

Estimate be based on minimum three quotations from GeM, if not available on GeM, then minimum three quotations from open market survey with non-availability certification from GeM, or previous purchases of similar items, etc. If propriety equipment, then Propriety Article Certificate (PAC) shall be submitted.

Sl. No. 8: Travel Expenses

1. **Justification for Travel:** Explain why travel is essential for the project (e.g., field visits, data collection, conferences).
2. The travel budget can be utilized for travel by the PI, Co-I or by Research fellow/Associates/ Project Staff (staff) working in the project for:
 - a. Visiting for meeting(s) related to the project.
 - b. Attending seminars/symposia/conference provided the PI himself or the Project Staff/ Fellow/Associate is presenting a research Paper (based on the project work) which has been accepted.
 - c. For field work / survey in respect of project related activities.
 - d. International travel is NOT permissible under the project.

Sl. No. 9: Consumables

1. **Item:** List consumables like chemicals, test kits, or any material that will be used up during the project.
2. **Quantity and Cost:** Provide an estimate of the quantity required and the associated cost, including taxes.
3. **Justification:** Explain the role of the consumables in the project and how often they will need to be replaced.

Estimate be based on minimum three quotations from GeM, if not available on GeM, then minimum three quotations from open market survey with non-availability certification from GeM. In case of small value, previous purchases of similar items, etc may be the basis. If propriety equipment, then Propriety Article Certificate (PAC) shall be submitted.

Sl. No. 10: Contingency

1. **Items:** List the types of expenses that will be covered under the contingency category (e.g., unforeseen repairs, emergency material purchases).
2. **Justification:** Explain why a contingency budget is necessary and what kind of unexpected expenses may occur.

The contingency grant can be utilized for purposes it was sanctioned by the appropriate Technical Committee/ SCRD like:

- (a) Acquisition of books and documents of relevance to the research topic in case these are not available in the library, these would become the property of the

Institution's library and after purchase and accession may be issued to the Department / Scientist till they are needed.

- (b) Charges for specialized investigations for which facilities do not exist in the host institute.
 - (c) Publication Charges/Article Processing Fees/ reprints/ off-prints of research papers published as an outcome of the research.
 - (d) Printing of questionnaire.
 - (e) Preparing software for data management or Apps for data entry.
 - (f) Expenses in connection with the preparation of the final report.
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Sl. No. 11: Sub-Total

1. Calculate the sub-total by adding up all the costs from sections 1-10.
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Sl. No. 12: Institutional Overheads

1. **Percentage:** The institutional overhead as 10 percent at present as decided by MoP/CPRI.
 2. **Total Overhead:** Calculate the overheads based on the sub-total.
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Sl. No. 13: Project Management Charges to CPRI

1. **Percentage:** Calculate the project management charges at 10% percentage of the sub-total subject to revision by MoP/CPRI/SCRD.
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Sl. No. 14: Total

1. Add the sub-total, institutional overheads, and project management charges to arrive at the total project budget.
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Final Considerations:

1. Ensure that all equipment, materials, and services listed have a clear and concise justification for why they are essential for the project.
2. The cost estimates should be realistic, supported by documentation like quotations, and reflect current market rates.
3. Adhere to all applicable BIS or international standards to ensure the quality and safety of materials and equipment used in the project.

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