

APPLICATION FOR PILOT PROJECTS UNDER THE MINISTRY OF MINES

(To be submitted by designated Centres of Excellence Hub of Ministry of Mines)

1 BASIC INFORMATION

1.1 Title of the Pilot Project

1.2 Name of the Lead Institution (CoE Hub)

1.3 Project Coordinator (Principal Investigator, CoE Hub)

Name	
Designation	
E-mail	
Mobile	
Institutional Address	

1.4 DETAILS OF INDUSTRY / ACADEMIC / R&D PARTNERS

Table A – Details of Partners

S No	Name of Institution / Partner	Category / Type (Industry Spoke / R&D–Academia Spoke / Other CoE Hub)	Complete Address (including City, State, PIN)	Project Coordinator / PI from Partner Institution (Name, Designation, Email, Mobile)

1.5 Proposed Duration of Pilot Project

Total Duration: ____ Months

2 TECHNOLOGY READINESS & JUSTIFICATION

2.1 Present TRL of the Technology

☐ TRL 5

☐ TRL 6

(Minimum TRL 5 is mandatory; attach supporting documentation)

2.2 Detailed technical project proposal with evidence Supporting TRL

(The uploaded technical note must clearly demonstrate TRL with supporting documentation.)

Attachments must include, but not be limited to:

- ☐ Laboratory validation data
- ☐ Publication(s) / Technical reports
- ☐ Bench-scale study reports
- ☐ Previous trials data
- ☐ Photographs / video evidence
- ☐ Test certificates

(Applicant must upload a consolidated TRL justification document as Annexure–TRL)

2.3 Commercialisation Target

(Upload a note detailing how the pilot will progress the technology to TRL 7–9 and eventual commercial deployment.)

3 PROJECT TEAM – HUB AND SPOKE COMPOSITION

3.1 Participation of Hub-and-Spoke Members

List entities participating in the project:

TABLE A – Roles & Responsibilities of Participating Entities

Sr. No.	Name of Institution / Partner	Category (CoE Hub / CoE Spoke / Industry Partner / PSU / R&D Institution)	Role in the Pilot Project (Technical, Operational, Facility Support, Raw Material Supply, Site Hosting, Testing, Scale-up Engineering)	Specific Responsibilities	Financial Commitment (₹ Lakhs) (Industry only)

4 DETAILED PROJECT PROPOSAL (DPP)

(To be submitted as a comprehensive technical document and attached. The attachment must address ALL items listed below.)

The Detailed Project Proposal shall include, but not be limited to, the following:

4.1 Project Summary (≈250 words)

A concise description of objectives, novelty, relevance, and expected outcomes.

4.2 Comprehensive Technical Description of the Process / Technology

(The uploaded DPP must include the following mandatory annexures:)

Mandatory Technical Annexures to Upload:

- ☐ Process Flow Diagrams (PFDs)
- ☐ Mass & Energy Balances (basis of design, yield assumptions, stoichiometry)
- ☐ Pilot-Scale Engineering Design Drawings
- ☐ Feedstock Assurance Letters from Industry Partner(s)
- ☐ Risk Assessment / HSE Plan

Optional but Recommended Technical Annexures:

- ☐ Scale-up methodology and modelling results
- ☐ Photographs of lab/bench-scale setups (TRL evidence)
- ☐ Dataset supporting mass balance, simulations or trials

4.3 Feedstock / Raw Material Requirement

(Attach a sheet which must include source, composition, quantity, logistics plan, and risk-mitigation strategy.)

4.4 Expected Output and Performance Benchmarks

(The uploaded DPP must explicitly quantify each of the following; attach calculations wherever applicable.)

- Mineral recovery (%)
- Product purity (%)
- Reagent consumption norms (kg/tonne, L/tonne etc.)
- Energy consumption norms (kWh/tonne or MJ/tonne)
- Waste generation & disposal plan
- Environmental compliance parameters (emissions, effluents, solid waste)

5 IMPLEMENTATION PLAN & MILESTONES

TABLE C – MILESTONE, DELIVERABLE AND TIMELINE

Milestone	Deliverables (to be defined by applicant)	Timeline (from T_0 = Date of Fund Receipt)	Indicative Industry Contribution for the Milestone (% / ₹ Lakhs)*
Milestone 1 Scale-up R&D & Engineering Preparation		$T_1 \rightarrow T_0 + M_1$	
Milestone 2 Fabrication & Installation		$T_2 \rightarrow T_1 + M_2$	
Milestone 3 Commissioning, Trials & Pilot Production		$T_{\#} \rightarrow T_2 + M_3$	

*The above values represent indicative industry contribution expected to be realised by the end of each milestone. These are not strict disbursement conditions; however, the CoE shall ensure that the committed contribution is progressively realised and documentary proof is submitted along with Utilisation Certificate (UC) for release of subsequent instalments

6 BUDGET AND FINANCIAL DETAILS

TABLE D – SUMMARY OF BUDGET

Sr. No.	Budget Head	Description	Estimated Cost (₹ Lakhs)	MoM Grant (₹ Lakhs)	Industry Contribution (₹ Lakhs)
1.	Pilot Plant Fabrication & Equipment				
2.	Process Equipment Modification				
3.	Utilities & Consumables				
4.	Feedstock / Raw Material for Trials				
5.	Testing & Analytical Charges				
6.	Safety & Environmental Compliance				
7.	Engineering Consultancy				
8.	Technical Manpower (Project-Specific)				
9.	Scale-up R&D Support				
10.	Overhead				
11.	Contingency (max 5%)				
TOTAL PROJECT COST			₹		

Note:

- *Overhead charges are permitted towards meeting institutional support expenses at the host institute, including provision of infrastructural facilities and administrative support required for execution of the project. These may cover costs related to utilities, office space, IT and communication facilities, accounting and administrative services, and other general institutional support functions.*
- *Overheads and contingencies, though capped as per prescribed limits, shall be subject to reduction during evaluation based on recommendations of TEC and approval of PSC*

7 DETAILED TABLES (Mandatory Attachments)

7.1 Detailed Equipment List – for pilot plant

S No	Equipment Name	Qty	Unit Cost	Total Cost	Essential for Pilot (Y/N)

7.2 Detailed Equipment List – for testing & characterisation

S No	Equipment Name	Qty	Unit Cost	Total Cost	Essential for Pilot (Y/N)

7.3 Raw Material / Feedstock Details

S No	Type of Feedstock	Source	Quantity	Cost (₹)	Transport/Handling Cost (₹)	Industry Partner Assurance (Y/N)

7.4 Manpower for Pilot Project

S No	Designation	No. of Persons	Duration (Months)	Monthly Cost	Total Cost	Justification

7.5 Consumables

S No	Name of Consumable / Reagent / Chemical	Purpose / Use in Process	Estimated Quantity	Total Cost (₹)

7.6 Environment & safety Requirements

S. No.	Environment / Safety Item	Purpose / Use	Quantity	Total Cost (₹)

Scale-up R&D

S. No.	Activity / Item	Description	Estimated Cost (₹ Lakhs)

SECTION 8: DECLARATIONS

8.1 Declaration by CoE (On letter head)

We certify that:

- The project meets the minimum TRL requirement (TRL 5 at application stage).
- All partners are declared upfront as per the Hub-and-Spoke model.
- The proposed expenditures comply with eligible/non-eligible categories.
- Milestones and timelines proposed are realistic and based on internal assessment.
- All submitted data, drawings, and commitments are true to the best of our knowledge.

Signature of Project Lead
Name:
Date:

Signature of the Head of the Institute
Name:
Date:
Seal: