

**PATENT ACQUISITION AND COLLABORATIVE
RESEARCH AND TECHNOLOGY DEVELOPMENT
(PACE)**

**FOR DEVELOPMENT AND DEMONSTRATION OF
INNOVATIVE PRODUCT AND PROCESS TECHNOLOGIES**

**GUIDELINES
AND
APPLICATION FORMAT**



**DEPARTMENT OF SCIENTIFIC AND INDUSTRIAL RESEARCH
MINISTRY OF SCIENCE & TECHNOLOGY
GOVERNMENT OF INDIA**

<http://www.dsir.gov.in>

May 2022

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PATENT ACQUISITION AND COLLABORATIVE RESEARCH AND TECHNOLOGY DEVELOPMENT (PACE)

I. GUIDELINES

The DSIR through the PACE scheme provides catalytic support to industries and institutions for development and demonstration of innovative product and process technologies, traversing the journey from proof of concept or laboratory stage to pilot stage, so that they can be launched for commercialization. The scheme supports ingenious work and assists in development of new technologies or creative/innovative application of the existing technologies to solve unmet needs of industry. The scheme also strengthens the interface between industry, R&D organizations/ academic institutions/ universities/PFRIs (Public Funded Research Institutions) by supporting collaborative proposals.

1. OBJECTIVES OF THE SCHEME

- i. To support development and demonstration of indigenous product / process technologies by industry alone aimed at commercialization of new products and processes;
- ii. To support collaborative research between Indian industry and R&D organizations/ academic institutions/ universities for development and demonstration of lab scale technologies, aimed at commercialization of new products and processes;

2. SCOPE OF SCHEME

- i. The scheme supports industry to develop and demonstrate the technology (either acquired technology or its own indigenous in-house technology) alone or in collaboration with R&D organizations/ academic institutions/ universities/PFRIs.
- ii. The scheme shall cover proposals in any industrial sector except biotechnology and software as a service (SaaS) leading to industrially useful applications.

3. ELIGIBILITY CRITERIA

- i. This scheme shall be open for: (a) all industries registered in India, where at least 51% of the shares of the company should be held by Indian citizen, including NRIs. Industry having a healthy financial track record or a promising financial health forecast and should be in a position to furnish Bank guarantee for the loan. Preference would be given to industry having DSIR recognized in-house R&D units; and also for (b) R&D organizations/ academic institutions/ universities/ PFRIs.
- ii. The R&D organization / academic institution / university / PFRIs for collaboration with the industry should have the requisite expertise and track record in the proposed area of research.

The proposal can be made by industry, either on their own or jointly with R&D organization / academic institution / university / PFRIs. If the project involves collaboration with/assistance from R&D organization / academic institution / university / PFRIs, international bodies/companies, individuals, then proposal should clearly highlight the scope of work and responsibilities of each entity participating in the project. MoUs/Agreements between the concerned entities, towards this should be submitted.

4. OPERATIVE MECHANISM

The technology development project should aim at development of a new product or a process (including development of process equipment) with attractive market potential. The projects should result in significant benefits in terms of raising the technological level of the industry concerned, increased turnover, energy and material savings/recovery, export sales etc.

Nature of Proposals supported –

- (a) Development of a new or improved product resulting in prototype development and ending with demonstration in commercial environment.
- (b) Development of a new or improved process resulting in establishment of process know-how, development of process equipment and demonstration of yield, efficacy etc in a pilot plant.
- (c) Absorption and up-gradation of imported technology.
- (d) Priority technology development projects of PSUs in consultation with and co-financing from economic ministries.
- (e) Development and demonstration of technologies for common use by cluster of industries.
- (f) Development and demonstration of technologies for government's flagship and mission mode projects.

Activities supported –

The partial financial support by DSIR primarily covers prototype development, cost of pilot plant and process equipment development, test and evaluation of products, user trials and IPR protection. Bulk of the financial support to the projects has to be from industry's resources. The financial support from DSIR is mainly to meet part of the developmental expenditures for:

- a. Consultancy (cost of indigenous consultancy and equivalent services used exclusively for the research activity, including research, technical knowledge, patents, etc);
- b. IPR protection, viz. Patenting in India and PCT filing, design registration, trademarks and any other forms of IPR protection;
- c. Running costs (such as expenditure towards raw materials, consumables, hardware/software tools, components/sub-assemblies for prototype, equipment for pilot plant etc. incurred directly as a result of proposed research activity)
- d. Testing, trials & certification.
- e. Support is available only when evidence of proof of concept exists and the project is for up-scaling innovations to address an unmet need.

5. FUNDING MECHANISM

- a. Industries can submit proposal directly to DSIR either on its own or in collaboration with R&D organizations/academic institutions/universities / PFRI's.

- b. Funding norms for the above cases shall be as follows:

| | |
|---|---|
| 1. Funding R&D projects of industry alone | Support up to 50% of the project cost to industry in form of secured loan. |
| 2. Funding R&D projects of industry in collaboration with R&D organization/ academic institution/ university / PFRIs. | Support up to 100% of the project component cost, estimated to be incurred at R&D organization/ academic institution/ university/ PFRIs in the form of grants-in-aid and in accordance with General Financial Rules(GFR)/GOI guidelines, and support up to 50% of the project component cost, estimated to be incurred at industry in form of secured loan. |

- c. All proposals would be peer reviewed initially by domain expert. Technical Advisory Committee (TAC) constituted by DSIR shall consider the proposals peer reviewed by domain expert and recommend for appropriate financial support. The TAC may invite additional domain experts, based on the proposals being considered, if necessary.
- d. Industry will have to sign a tripartite agreement with DSIR and National Research Development Corporation (NRDC), a public sector enterprise of DSIR before release of funds. A quadripartite agreement will have to be entered in case of collaborative projects of industry and R&D organization/ academic institution/ university / PFRIs.
- e. The funds provided to R&D organizations/ academic institutions/ universities / PFRIs would be grants-in-aid in accordance with GFR/GOI guidelines with no payback liability.
- f. The funding provided to industry for technology development and demonstration shall be in the form of secured loan. The loan shall be secured through a bank guarantee which shall be thirty-three and one-third per cent more than amount of the loan as per Rule 255 of the GFR 2017 provisions of the Government of India. The bank guarantee however shall be taken in installments, coinciding with the release of loan.
- g. Loan installment will be disbursed as advance for each milestone and subsequent loan installment for the next milestone to be disbursed after industry spends Department's as well as its own share for the previous milestone. The first installment will be released on signing the agreement. Industry will submit copy of invoice for capital equipment within one month of purchase.
- h. The loan shall be sanctioned to the borrower (private companies) at the normal prescribed rate of interest (12%) and the difference between the normal rate and the concessional rate (3%) will have to be claimed as subsidy from the Government by the borrower, subject to timely repayment of principal and interest thereon. The borrower (Industry/Company) shall be required to repay the loan, interest on which shall be calculated from the date of release of any loan installment till the date of repayment of first installment. The total principal plus the total interest calculated till the date of repayment of first installment shall be repaid in five equal annual installments. Further, the borrower (Industry/Company) shall be required to pay an additional interest on reducing balance of principal at the prescribed normal rate over the tenure of repayment.
- i. The repayable amount will be collected by NRDC on behalf of DSIR and deposited with DSIR. Subsequently, NRDC shall be entitled to claim from DSIR 15% of the deposited amount as professional service charges. Service tax or any other tax to be paid on the amount on the professional service charges shall be paid by NRDC. Subsidy from the Government shall be claimed by the borrower (Industry/Company)

after repayment of each installment of principal and interest thereon. Schedule of loan repayment and subsidy claimable by borrower is given at Appendix (page 6).

- j. Project Review Committees (PRCs) shall be constituted for each project which shall periodically review (at least once in 6 months) the technical and financial progress of the project, recommend release of loan/grants, continuity / extension / short-closure, etc.
- k. It will be mandatory on the part of the industry to return the money irrespective of the fact whether the product/process is commercialized or not and the commencement of the payment of installments by the industry will be no later than six months from the date of completion of the project. The Project Review Committee can extend the completion date of the project by recording appropriate reasons.
- l. The money returnable by the industry upon completion/commercialization of the project, or in case of any dispute, will be collected by NRDC, New Delhi. Any delays in repayment will entail payment of penal interest @ 2½ % per annum above the normal rate of interest prescribed by the Government for the period of delay. The date of charging the penal interest will be from the date on which the repayment of the defaulted installment becomes due. However, if the company abandons the project midway or DSIR decides to short-close the project with the approval of the competent authority, the company will be required to return the money received along with the normal rate of interest per annum prescribed by the Government (with no provision to claim subsidy) from the date of release within 3 months from the date of abandonment beyond which a penal interest of 2.5% shall be levied. The company will also be required to transfer any technology developed under the project to NRDC. Only in case of short-closure for reasons not attributable to the company/ R&D organizations/ academic institutions/ universities / PFRI, the company will have the option, not to transfer any technology/know how generated under the project to NRDC or claim subsidy on the normal rate of interest applicable for the loan. The company may either retain the technology/know how generated without claiming the subsidy or transfer the technology/know how generated and claim the subsidy.
- m. NRDC is mandated to deal with technology transfer and is primarily concerned with facilitating transfer of technologies to industries and commercialization thereof. NRDC has been signatory to all tripartite agreements [involving itself, DSIR and industry], signed before the technology development and demonstration projects are sanctioned by DSIR to industry. It has been successfully collecting the payback of DSIR grants from companies since past many years. Therefore, nomination of NRDC for the purpose of loan recovery in the PACE sub-scheme is considered in accordance with Rule 204 of GFR-2017.
- n. Bank guarantee will be invoked by DSIR after six months of any default by the company or on abandonment of the project by the company. Partial repayment of any loan installment would also be considered a default attracting penal interest.
- o. Other terms and conditions of the loan to be sanctioned, not discussed above shall be as per General Financial Rules (GFR)-2017 [Rule Nos. 246 to 263] issued by the Government of India.
- p. The companies would be required to commercialize the product/process after completion of the project for development and demonstration.

6. APPLICATION PROCEDURE

The application format for making the project proposal is given at Annexure-I. Proposals are invited from innovative and technologically oriented industrial firms. Five hard copies of the proposal along with a soft copy in pen drive is required to be submitted. These proposals should be forwarded by the Chief Executive/Managing Director of the industry or head of R&D organizations/ academic institutions/ universities / PFRIs to:

Dr. Sujata Chaklanobis,
Scientist 'G' & Head (PACE),
Department of Scientific & Industrial Research,
Technology Bhavan, New Mehrauli Road,
New Delhi-110 016.
Email: priya@nic.in
Phone No.: 011-26590277

Appendix**II. ILLUSTRATIVE REPAYMENT SCHEDULE OF LOAN & SUBSIDY**

Example with Loan Amount of Rs. 10 lakh released in 4 installments:

Installments disbursed

Say first installment of Rs. 4 lakh released on 1.4.2017

Say second installment of Rs. 3 lakh released on 1.4.2018

Say third installment of Rs. 2 lakh released on 1.4.2019

Say fourth and final installment of Rs. 1 lakh released on 1.4.2020

Project completion date: 30.09.2020

Due Date of first installment after six months moratorium: 1.4.2021;

Prescribed normal rate of interest per annum – 12%; Concessional rate of interest per annum – 3%

Total Interest @ 12% on all the loan installments till the due date of repayment of I installment = $[4 \times 4 + 3 \times 3 + 2 \times 2 + 1 \times 1] \times 0.12 = \text{Rs. 3.60 lakh}$

Total interest @ 3% on all the loan installments till the due date of repayment of I installment = $[4 \times 4 + 3 \times 3 + 2 \times 2 + 1 \times 1] \times 0.03 = \text{Rs. 0.90 lakh}$

(Amount in Rs. Lakh)

| Re-payment Schedule | Principal (a) | Reducing Balance of Principal | Amortized Interest @ 12% (b) | Interest Amount on Reducing Balance @ 12% (c) | Total Interest repayable @ 12% (b+c)= (d) | Amortized Interest @ 3% (e) | Interest Amount on Reducing Balance @ 3% (f) | Total Interest repayable @ 3% (e+f) = (g) | Interest Subsidy (d)-(g) |
|-------------------------|---------------|-------------------------------|------------------------------|---|---|-----------------------------|--|---|--------------------------|
| I instalment 1.4.2021 | 2.0 | 8.00 | 0.72 | -- | 0.72 | 0.18 | -- | 0.18 | 0.54 |
| II instalment 1.4.2022 | 2.0 | 6.00 | 0.72 | 0.96 | 1.68 | 0.18 | 0.24 | 0.42 | 1.26 |
| III instalment 1.4.2023 | 2.0 | 4.00 | 0.72 | 0.72 | 1.44 | 0.18 | 0.18 | 0.36 | 1.08 |
| IV instalment 1.4.2024 | 2.0 | 2.00 | 0.72 | 0.48 | 1.20 | 0.18 | 0.12 | 0.30 | 0.90 |
| V instalment 1.4.2025 | 2.0 | 0 | 0.72 | 0.24 | 0.96 | 0.18 | 0.06 | 0.24 | 0.72 |
| Total | 10.0 | | 3.60 | 2.40 | 6.00 | 0.90 | 0.60 | 1.50 | 4.50 |

Total Subsidy to be claimed by the borrower = $6.00 - 1.50 = \text{Rs. 4.50 lakh}$

ANNEXURE-I**III. APPLICATION FORMAT FOR PROJECT PROPOSAL SEEKING PARTIAL FINANCIAL SUPPORT FOR NEW PROCESS / PRODUCT DEVELOPMENT****Part A: Executive Summary of the Proposal**

Executive Summary of the Proposal as Part A of the application is to be submitted as a separate section. The coverage must be comprehensive and self contained, as this executive summary will be circulated during Technical Advisory Committee meeting for discussion. It must cover, in brief, all the details of the proposal, in not more than 5 pages. This portion is automatically created and editable while preparing Part B and Part C of the application online.

1. Project Title
2. Name of the Applicants
 - Company's brief history
 - Company's financial track record for last three years in table
 - Brief details of Collaborating institution / agency
3. Project Objectives
4. Prior work and Proof of Concept work already done
5. Up-scaling required to pre-commercialization, clearly stating the innovative content
6. Project Team and their credentials
7. Project duration and Work Plan including PERT/ GANTT chart etc.
8. Project Budget Outlay and demand from DSIR
9. Key Deliverables
10. Commercialization Plan

Part-B: General Details of Proposal**Project Title****B1. Company Background**

- i. Company Name and complete address (correspondence, administrative office and registered office, telephone Nos./fax/e-mail etc.)
- ii. Brief details of corporate history,
- iii. Status of the company - Pvt. Ltd/Ltd./Joint sector/Others (Specify)
- iv. Date of incorporation with registration number
- v. Whether in-house R & D unit of the firm is recognized by DSIR (if yes, Registration No. and Date, attach copy of recognition letter).
- vi. Board of Directors and share holding pattern of the company as on date
- vii. R&D achievements, plans and projections for the future,
- viii. Company's full financial details for last three years including relevant financial indicators as below.

| Sr. No. | Particulars | FY--- | FY---- | FY--- |
|---------|----------------------|-------|--------|-------|
| 1 | Reserves and Surplus | | | |
| 2 | Secured Loan | | | |
| 3 | Unsecured Loan | | | |
| 4 | Net current Assets | | | |

| | | | | |
|----|--|--|--|--|
| 5 | Sales Turn Over | | | |
| 6 | Total Income | | | |
| 7 | Total Expenditure | | | |
| 8 | Total R&D Expenditure (Capital+Recurring) | | | |
| 9 | PAT | | | |
| 10 | Cumulative Profit/Loss carried to BS | | | |

- ix. Details of loans outstanding against the applicant for the project or other projects etc.,
- x. Details of prosecution, if any, in a court of law launched against the applicant company,
- xi. Background details of collaborative agency in case of collaborative projects.

B2. Technology Background

- i. Details of technology, historical origin and patent position,
- ii. Technology trends, technology forecasting , standards/specifications,
- iii. Knowledge gaps, critical elements of technology, enabling technologies,

B3. Personnel Background

- i. Project Team and their credentials,
- ii. Personnel details of collaborative agency in case of collaborative projects.

B4. Project duration and Work Plan

For work plan, advance project planning techniques like Work Breakdown Structure to be used for project planning (PERT/ GANTT chart etc.). The activities must be broken down into tasks, which can be monitored regularly. Against each task, resources required to complete the tasks are to be identified.

- B5. Details of financial support received from Central/State Govt. & loan repayments under past projects, if any.
- B6. Has company's Board of Directors given its consent to take up the project including financial commitments? If yes, attach true copy of Board Resolution /Authorization (Annexure II)

Part C: Technical, Financial, Output/Outcome & Commercial Details of Project

C1. Technical Details

- i. Project objectives,
- ii. Prior work and Proof of concept work already done,
- iii. Up-scaling required to pre-commercialization,
- iv. Innovative content in the proposed activities,
- v. Results of literature survey and patent search on the product/process,
- vi. Technological challenges and plan of action to overcome the technology barriers,
- vii. Risk factors envisaged in the project and Mitigation plan,
- viii. Targeted specifications for the product/pilot plant.

- ix. Number of prototypes and reason for selecting the number and Test protocols. In case of process innovation, justification for the pilot plant.

C2. Financial Details

Detailed break-up of each Expenditure Heads in the budget outlay must separately be provided with justifications. The cost estimates to be given and the same need to be supported by backup offers/ estimation. Cost estimates are required to be drawn realistically with full justification.

i. Budget Outlay of project at Industry

| Sl.No. | Expenditure Heads | Total Estimated Cost | | Demand from DSIR |
|--------|--|----------------------|-----------|------------------|
| | | Capital | Recurring | |
| 1. | Design/Engineering/Consultancy from external agencies (their background and work assigned to them are to be given along with cost estimate). | | | |
| 2. | Pilot Plant installation Or Prototype Development (Sub-assemblies/ components/ parts/ consumables, software, assembly/integration). | | | |
| 3. | Chemicals & Raw materials consumed , Mechanical Tools, Jigs, Fixtures, Dies, Software tools etc. | | | |
| 4. | Manpower costs of industry personnel (including their travel costs). | | | |
| 5. | Specialized test equipment required for pilot plant or to test prototypes. | | | |
| 6. | Testing/ endurance trials/ national and international certification. | | | |
| | Total (A) | | | |

ii. Budget Outlay of project at Collaborating Agency, if applicable

| Sl. No. | Expenditure Heads | Total Estimated Cost | | Demand from DSIR |
|---------|---|----------------------|-----------|------------------|
| | | Capital | Recurring | |
| 1. | Professional Charges | | | |
| 2. | Equipment, Machinery, Consumables, etc. | | | |
| 3. | Others | | | |
| | Total (B) | | | |
| | Total Project Cost (A+B) | | | |

C3. Existing facilities that will be utilized.

Existing facilities with the company should be utilized. Applicants should desist from attaching list of production and testing equipment in the project. Only those facilities that are relevant and critical need to be highlighted. Establishment of test facilities is not normally supported; however, if the applicant desires to procure/develop specific and specialized test equipment for testing the prototype, the same may be included in the list of specialized test equipment with justification.

C4. Summary of Output/Outcome

- i. Key Deliverables,
- ii. Expected commercial turnover for five years,
- iii. IPR generation,
- iv. Market share improvement,
- v. Cost reduction, reduction in energy consumption/emissions,
- vi. Foreign exchange earnings,
- vii. Networking with resource experts,
- viii. Enhancement of capabilities.

C5. Commercial Details

- i. Market survey report, export possibilities and global competition,
- ii. Minimum Economic Scale of operation,
- iii. Competitor's profile and user's profile,
- iv. Commercialization Plan.

Annexure(s)

1. In-house R & D unit recognition letter by DSIR, if applicable.
2. Board Resolution /Authorization (Format at Annexure II)
3. Self Evaluation of Proposal (Format at Annexure III)
4. Other annexure(s) as per check list mentioned in section VII

Signature of Chief Executive/ Managing Director

ANNEXURE-II

IV. FORMAT FOR BOARD RESOLUTION/AUTHORIZATION

Extract of the Resolution passed at the meeting of Board of Directors
of the Company held on day, date at place.

Resolved that the following items are approved by the Board of Directors of the Company.

1. Name of Company is hereby authorized to prepare the project proposal on Title of the project and to make an application seeking financial help from Department of Scientific and Industrial Research, Government of India under Patent Acquisition and Collaborative Research and Technology Development (PACE) scheme.
2. Name of authorized personnel is/are hereby authorized to sign papers on behalf of Name of Company.*
3. Name of Company hereby commits to implement the project and provide all necessary resources including financials, over and above the DSIR support, to complete the project in the projected duration.

//Certified True Copy//

For Name of Company

Chairman & Managing Director

Note

1. * Preferably, CMD may sign the agreement.
2. The board resolution must bear the company's Common Seal

ANNEXURE-III

V. FORMAT FOR SELF EVALUATION OF PROPOSAL

Patent Acquisition and Collaborative Research and Technology Development (PACE)

Project Title:**Company:****Evaluated by:****End Objective of Evaluation:** Successful Completion of Project and Commercialization of Technology**Project to be Examined with respect to its:** Innovative Content, Objectives, Project Team, Work Plan, Financials and Commercialization

Criteria is formulated in such a way (generally in query form) that it is possible to assess on a 5-point scale [5 – Excellent; 4 – Very Good; 3 – Good; 2 – Average; 1 – Poor]

| No. | Criteria Weightage given in [bracket] | Qualitative Comments | Assessment [1-5] |
|-----|--|----------------------|---------------------|
| 1 | Innovative Content | | |
| a. | Innovative content in the project or the project's potential to lead to patents, design registration etc. (e.g. patents filed, design registration etc. would yield a higher rating) [10%] | | |
| b. | Probability that development of innovative product / process will lead to increased competitiveness and improvement in the image of the company. [5%] | | |
| 2 | Objectives | | |
| a. | Clarity in definition of objectives (Clarity may be assessed by examining whether objectives are in tune with vision, mission and core competencies of the company, whether final objective has been broken into smaller objectives for completing intermediate steps, whether objectives address environmental concerns, etc.) [10%] | | |
| b. | Societal impact of the Objectives. [5%] | | |
| 3 | Project Team | | |
| a. | Strength of the Project team; their qualifications, experience, etc.[10%] | | |
| b. | Team's access to latest literature, international patents on the subject and linkages and associations with | | |

| | | | |
|----|---|--|--|
| | research laboratories etc. [5%] | | |
| 4 | Work Plan | | |
| a. | Clarity in the work plan (Clarity may be assessed by examining whether milestones and time targets have been defined) [10%] | | |
| b. | Deployment of Project Management tools (e.g. bar chart, pert chart and other advanced tools) [10%] | | |
| 5 | Financials | | |
| a. | Company's Financial Position and its ability to mobilize funds (other than DSIR's share) for the project [10%] | | |
| b. | Estimation of budget details and their reasonableness [5%] | | |
| 6 | Commercialization | | |
| a. | Quality of Company's Marketing Strategy / Plan [10%] | | |
| b. | Demand of the product/process being developed at the probable time of its introduction into market [5%] | | |
| c. | Probability that the demand would sufficiently take care of the investments (DSIR and company's share) in the project [5%] | | |
| | Total | | |

Final Recommendations

Signature , Name & Designation of the Evaluator

VI. FREQUENTLY ANSWERED QUESTIONS (FAQ)

1. *Who can apply?*

All Indian industries (Private Ltd. and Public Ltd. companies) can apply for support under PACE but preference will be given to industries whose in-house R&D units are recognized by DSIR.

2. *Is institute linkage essential?*

DSIR encourages industry to network with R&D organizations/ academic institutions/ universities / PFRIs wherever capabilities and facilities exist although it is not compulsory. Industry can take up project all by themselves. If it is a joint project of industry with an R&D organizations/ academic institutions/ universities / PFRIs, then the project proposal has to be signed by both the parties. If industry is seeking only limited services and consultancy from the R&D organizations/ academic institutions/ universities / PFRIs, then proposal should include a letter or offer from the Director of the R&D organizations/ academic institutions/ universities / PFRIs or his authorized signatory indicating the scope of services and related payments. Similarly if the industry is proposing to up-scale lab/bench level technology of national laboratories/R&D organizations/ academic institutions/ universities / PFRIs then the related agreements already entered between the industry lab for development/utilization of that lab level technology will need to be enclosed in the proposal.

3. *Are there any priority sectors/areas?*

PACE can consider projects for technology development and demonstration in any sector leading to industrially useful applications.

4. *What kinds of project proposals are not supported?*

Project proposals of following nature will not be generally supported under PACE:

- (a) Lab scale work at Institutions
- (b) Bench scale work at Industry
- (c) Technology import / commercialization
- (d) Minor improvements in Product / Process
- (e) Projects involving open ended research
- (f) Projects involving clinical trials only

5. *What activities are eligible for support?*

The support is for R&D in New Product / Process Development i.e. expenditure towards research / design / development / engineering, software development, consultancy, prototype/pilot plant equipment & machinery, specialized equipment & tools, testing and evaluation/certification, users trials / field trials and expenditure related to Intellectual property Rights, viz. patents, design registration, trademarks and any other form of IPR protection. Only activities taken up after release of administrative sanction are eligible for DSIR support.

6. *What activities are not eligible for support?*

Costs of following activities are not supported under PACE:

- (a) Pre-project activities (including preliminary literature survey and patent search)
- (b) Permanent employee costs of industry

- (c) Travel costs of industry personnel
- (d) Industry overheads
- (e) Contingency provisions
- (f) Payments for technology received from commercial organizations
- (g) Infrastructure facilities like land, building
- (h) Production equipment
- (i) Standard quality control equipment

7. *What is the definition of 'project'?*

The projects under PACE generally cover the activities taken up after successful completion of a lab scale/bench scale work either by industry and/or by R&D organizations/ academic institutions/ universities / PFRI till completion of technology development and demonstration of the product(s) developed as commercially producible prototypes/or the process(es) at a pilot/demonstration scale before further commercialization of that technology. The project can be for (a) design and development of engineered prototypes, or for (b) design, development and demonstration of pilot plant level process technologies for process development products such as in chemicals, fertilizers, metallurgical industry etc.

7a. What does PFRI mean?

PFRI or Public Funded Research Institution means a research institution in the case of which not less than fifty per cent of the recurring expenditure is met by the Central Government or the Government of any State or the administration of any Union Territory.

8. *How much support one can expect?*

The support would be generally limited to 50% of the total project cost. Higher quantum of support can be considered, if supported by proper justification. However, maximum amount of Government support in any single project shall generally be limited upto Rs.5.00 Crores. In cases of collaborative projects, grants to Public Funded Research Institutions (PFRI) are concurrent to loan and grant sanctioned to PFRI in any project shall not exceed the amount of loan sanctioned to industry, limited to a total DSIR support (grant + loan) of Rs.5.00 crore per project.

9. *How the proposal will be evaluated?*

The proposal will be initially screened for completeness by the Department internally followed by peer review by domain experts. Thereafter, proposal will be taken up for consideration by a high level Technical Advisory Committee (TAC) of PACE.

10. *Does one get an opportunity to explain his proposal?*

The proposal should be self-explanatory giving all requisite details. However, during the initial screening by the Department, if there is a need for further clarification/discussions, the applicant may be asked to provide these details. The applicant will be given an opportunity to present his proposal before the Technical Advisory Committee of PACE.

11. *Is there any last date for submission of the proposal?*

Proposals submitted by the last date of the latest advertisement shall be considered in the ensuing TAC.

12. *How will the funds be released?*

Subsequent to TAC recommendation, the first installment of funds will be released after administrative and financial approval of the competent authority in the department and signing of the tripartite agreement. The balance funds will be released in installments based on the projected requirements for the project. Towards this, the company has to provide a six monthly schedule for funds requirement indicating their share as well as DSIR share sought. Last installment of grant will be released after project completion, after receipt of Project Completion Report, Audited Statement of Expenditure and Audited Utilization Certificate.

13. *Does the company have to give a bank guarantee?*

The loan shall be secured through a bank guarantee as per Rule 255 of the GFR 2017 provisions of the Government of India. The bank guarantee however shall be taken in installments, coinciding with the release of loan. Release of bank guarantee shall also be coinciding with the repayment of loan installments.

14. *What is 'successful completion/commercialization' of the project?*

A project will be deemed to have been successfully completed when all the projected deliverables have been accomplished by the company and a project completion report is submitted to DSIR. The project completion date shall be declared by the Project Review Committee in its last meeting, and the same shall be considered for the purposes of loan repayment and calculation of interest thereon. A project will be deemed to have been successfully commercialized on the date when the industry undertakes first commercial sale of the product in their existing plant or a new producing plant installed on the basis of result of the PACE project.

15. *Does the company have to repay the DSIR fund extended to it for the project?*

The company will have to repay the loan sanctioned by DSIR along with applicable interest thereon. The loan shall be sanctioned to the borrower (private companies) at the normal prescribed rate of interest (12%) and the difference between the normal rate and the concessional rate (3%) will have to be claimed as subsidy from the Government by the borrower, subject to prompt repayment of principal and interest thereon. The borrower (company) shall be required to repay the loan, interest on which shall be calculated from the date of release of any loan installment till the date of repayment of first installment. The total principal plus the total interest calculated till the date of repayment of first installment shall be repaid in five equal annual installments. Further, the borrower (company) shall be required to pay an additional interest on reducing balance of principal at the prescribed normal rate over the tenure of repayment. The repayable amount will be collected by NRDC on behalf of DSIR and deposited with DSIR. Subsequently, NRDC shall be entitled to claim from DSIR 15% of the amount deposited as professional service charges. Service tax or any other tax to be paid on the professional service charges shall be paid by NRDC. Subsidy from the Government shall be claimed by the borrower (company) after repayment of each installment of principal and interest thereon.

16. *What is NRDC?*

National Research Development Corporation is a Public Sector Enterprise of Government of India under DSIR, with expertise in transfer of technology.

17. *Who owns the I.P.R.?*

The firm and the collaborating agencies will own the I.P.R (as per the agreement they enter into). They will also indemnify the Government against any possible infringement of IPR.

18. *Will the firm need to sell its technology to any other party?*

The company will have the first right to utilize and commercialize the technology developed. In case of short closure of the project for reason as per Clause 13 and other associated clauses of the PACE agreement, the technology will need to be assigned to NRDC for third party licensing. Revenues from such licensing will be shared with the executing agency as per the actual financial contributions in the project or as specific to the concerned project. In case of technologies, which are jointly developed/scaled up based on earlier lab/bench scale work of national lab, obligation and terms & conditions of earlier agreement, MOU will be taken into account.

19. *What about Confidentiality?*

All concerned in the project will ensure confidentiality as required.

20. *Agreements/ Reports to be submitted?*

Companies supported under PACE will be required to sign an agreement with DSIR before sanctioning of the project. They will also be required to submit half yearly brief progress reports and audited statement of accounts. Brief progress reports and projection will need to be submitted to the Project Review Committee members 10 days before the meeting. At the end of the project, a Project Completion Report will have to be submitted.

21. *Is revision, pull-out possible?*

DSIR shall not encourage any revision, while the project is underway. Revised proposal will be considered as a new proposal, unless revisions are of minor nature as adjudged by the department. Similarly, the company is expected to honour its commitments and complete the project as planned. If the company abandons the project, the Department will take serious note of it and the company will be required to return the money received along with the normal rate of interest per annum prescribed by the Government from the date of release till date of repayment to DSIR.

22. *What additional benefits can the company expect?*

Customs Duty exemption is recommended for companies whose in-house R&D units are recognized by DSIR, for imported items coming under the project scope as per existing rules.

23. *When does the company shake-off hands?*

Duration of the agreement is 12 years to cover various commitments in the agreement such as re-payment, third party licensing, if any, etc.

24. *Can the company take financial support from any other agency/Govt. departments/bank?*

Yes, but all this information needs to be given in project proposal application.

25. *Does the PACE scheme support Patent Acquisition activity?*

Patent Acquisition activity has been withdrawn in view of inadequate response from stakeholders.

VII. CHECKLIST FOR PACE PROJECT APPLICATIONS

Before submitting the application, please ensure that the following supporting documents are given in the application form

| S.No. | Document/Item | Check if attached | Page no. in Appln. |
|--------------|---|--------------------------|---------------------------|
| 1. | Articles of Association | | |
| 2. | Annual reports for the last three years | | |
| 3. | DSIR in-house R&D recognition letter, if applicable | | |
| 4. | Statement of R&D expenditure for the past three years | | |
| 5. | MoUs between the concerned entities, in case of consortium projects of industries and scientific establishments. | | |
| 6. | Board resolution/authorization committing the firm to this technology development project and approving the disbursement of funds by the firm for carrying out the project. | | |
| 7. | Results of market survey for the proposed product. | | |
| 8. | Results of patent search. | | |
| 9. | Targeted specifications for the product. | | |
| 10. | Comparison of the targeted specifications with the market leader. | | |
| 11. | Test protocols | | |
| 12. | Cost back up with relevant offers/estimation | | |
| 13. | Activity-resource plan | | |
| 14. | Source of funds for the firm (other than DSIR support) | | |
| 15. | List of existing facilities that will be utilized for this project | | |
| 16. | Nature and commitment of potential users to test the product and facilitate commercialization of the technology. | | |
| 17. | Self Evaluation of Proposal | | |