## **CALL FOR PROPOSALS**

#### FOR

## RESEARCH ON PRODUCTION AND UTILIZATION OF METHANOL & DI-METHYL ETHER AS SUSTAINABLE FUEL

(Clean Energy Research Initiative)

DST plans to initiate a major development programme for production of Methanol from various sources including Indian coal and CO2 from thermal plants, steel plants etc. The programme would also include direct utilization as drop-in fuel in automobiles and fuel for fuel cell based vehicles.

There are several research issues involved both in production and utilization of methanol and di-methyl ether (DME). The production routes hitherto unexplored but having future potential and requiring research in future viz. development of novel catalysts, utilization of methanol in direct methanol fuel cell, development of engines fuelled on methanol and DME etc. will be considered. These areas are only indicative and any other research area having bearing on methanol economy could also be considered under the ambit of the programme. The interdisciplinary and transformative R&D proposals will be preferred.

WHO CAN APPLY: Faculties of

Faculties of recognized universities and academic institutions, scientists working in National Laboratories, R&D institutions and Research organizations recognized by DSIR individually or in consortium. Genuine and meaningful participation of industry having capability in the area and potential to commercialise the developed technology is desirable. Companies registered under The Indian Company's Act, 1956 / MSMEs having DSIR recognized R&D Centres may also apply individually or jointly with universities / academic institutions / National Laboratories / Public Funded Research Institutions / R&D institutions

**DURATION:** 36 Months

**CALL OPENING DATE:** 15.01.2016

**CALL CLOSING DATE: 15.03.2016** 

#### **INDUSTRIAL CONTRIBUTION:**

There is no mandatory contribution required from the Industry. However the proposals having industrial contribution would be encouraged. In all the proposals, participating Industry would be required to invest within its own system i.e. production/ test lines and/or develop required infrastructure to adopt research leads and is expected to bring design, engineering and development capability for the benefit of the project.

#### SPECTRUM OF ACTIVITIES SUPPORTED:

The spectrum of activities include translational research to convert available know how to useful product / process etc as well as applied research aimed at performance enhancement of existing processes and systems. This would also include but not limited to Research, Design, Development and Engineering (RDD&E), Prototype Development of Product/System, Process Development, etc.

#### **ASSESSMENT CRITERIA:**

The scientific out-come of the proposal should have clear connect with methanol and DME application. This should be clearly brought out in the proposal. The proposal meeting this requirement would be evaluated based on following criteria:

- Novelty, scientific uniqueness and technical merit
- Expertise, facilities and track record of Project Investigation Team
- Proposal formulation (Precision in objective, adequacy and completeness of literature review, preliminary work done, methodology and work plan, resources requested for this purpose etc.)
- Need assessment and demand for proposed work

#### **COMPONENT OF GRANT**

- 1. Research Manpower (Nomenclature and salary as per DST guidelines)
- 2. Equipment cost
- 3. Outsourcing / Fabrication cost
- 4. Domestic travel
- 5. Consumables
- 6. Contingencies
- 7. Other cost
- 8. Overheads as per DST norms.

#### PROPOSAL SUBMISSION:

Submit following documents in an Envelope marked "Methanol Call: Name of Principal Investigator":

- A. 3 copies of complete project proposal in prescribed format (Methanol) with all enclosures (1 marked original + 2 hard copies)
- B. Soft copy in CD:
  - i. Complete proposal (MS word / PDF)
  - ii. Executive Summary of the proposal as given in Project Proposal format (in MS word document only)

The complete set of documents are to be addresses to: Dr. J.B.V.Reddy, Scientist 'D', Room no 12, Hall-C, Technology Mission Cell, Department of Science &Technology (DST), Technology Bhavan, New Mehrauli Road, New Delhi- 110016 before the closing date of the call. Soft copy of Project Proposal and the Executive Summary is also to be e-mailed (Subject Captioned: Methanol Call 2016 / Name of the Principal Investigator) to jbvreddy.methanol2016@gmail.com.

## **PROPOSAL SUMMARY**

## (RESEARCH ON PRODUCTION AND UTILIZATION OF METHANOL & DI-METHYL ETHER AS SUSTAINABLE FUEL)

1.	Project Title		
2.	Project cost (Amount in lakhs)	DST:	Collaborator(s) (if any):
3.	Duration (in months)		
4.	PI Name		
	Date of Birth		
5.	Co-PI (s) Name		
	Date of Birth		
6.	Lead Organisation		
7.	Status of Lead Organisation	Recognized universities and acade Laboratories/R&D institution,/Resear DSIR/Others-Specify the affiliation of	arch organizations recognized by
8.	Collaborator/Consortium partner name(s), if any	,	ever necessary. In sections 11 and the need for forming the consortium feach partner).
9.	Collaborators'/ Consortium partners' Status		y, please indicate <b>DSIR</b> registration D units and provide their areas of
		should exhibit the potential to condeveloped under the proposal.	en standing and R&D capability and nmercialize the products / systems The extent of participation and er should be clearly defined in the
10.	Objectives	(Precise and quantified)	
11.	Novelty	(Highlight the novelty and uniqu	ue aspects of the proposal)

12.	Deliverables (Select	New/Upgraded Product; New/ Upscaled Process; New/ Upgraded			
	the appropriate	System; Services (including software); Performance analysis;			
	option(s )and	(Scientific data generation; analysis and evaluation); Feasibility			
	summarise it in single	analysis; Technological Capability; Database development and			
	line.	documentation; Proof of new concepts at a device level; Achieving			
		State of art performance in a chosen device )			
		(Deliverables should include target performance and projected cost when commercialized, and how these targets compare with existing national and international ones)			

## 13. Budget details:

A.	Project Manpower	DST:	Collaborator(s):
	(Post & Nos)  Research group/ institution- wise if more than one institutions are involved)	(JRF/SRF/Research Associate/ Project Assistant / other Professional Manpower)	
B.	List of Equipments  required (Research group/ institution-wise if more than one institutions are involved)	DST:	Collaborator(s):
C.	Fabricated system /prototype, if any	DST:	Collaborator(s):
D	Nature of Contribution from Collaborators	In Cash & Kind (Please elaborate)	

## **Proposal Summary (Continued)**

## 14. Funds requirements from DST:

Item Head	1st Year	2 <sup>nd</sup> Year	3 <sup>rd</sup> Year	Total (Rs.)
Non-recurring (Capital Items)				
Non-recurring (outplear items)				
Permanent Equipments				
Plant cost /Fabricated systems/				
Demonstration models				
Sub total (capital items)				
Recurring Items (General)				
Manpower				
Consumables				
Contingencies				
Travel				
Other Costs ( Outsource work etc),if any				
Overhead				
Sub total (General)				
Total cost of the project (A+B)				
	Non-recurring (Capital Items)  Permanent Equipments  Plant cost /Fabricated systems/ Demonstration models  Sub total (capital items)  Recurring Items (General)  Manpower  Consumables  Contingencies  Travel  Other Costs ( Outsource work etc),if any  Overhead  Sub total (General)	Non-recurring (Capital Items)  Permanent Equipments  Plant cost /Fabricated systems/ Demonstration models  Sub total (capital items)  Recurring Items (General)  Manpower  Consumables  Contingencies  Travel  Other Costs ( Outsource work etc),if any  Overhead  Sub total (General)	Non-recurring (Capital Items)  Permanent Equipments  Plant cost /Fabricated systems/ Demonstration models  Sub total (capital items)  Recurring Items (General)  Manpower  Consumables  Contingencies  Travel  Other Costs ( Outsource work etc),if any  Overhead  Sub total (General)	Non-recurring (Capital Items)  Permanent Equipments  Plant cost /Fabricated systems/ Demonstration models  Sub total (capital items)  Recurring Items (General)  Manpower  Consumables  Contingencies  Travel  Other Costs ( Outsource work etc),if any  Overhead  Sub total (General)

Total requirement of funds from DST =

Contribution of participating institution(s), if any=

Total project cost =

## FORMAT FOR SUBMISSION OF PROPOSAL FOR SUPPORT (RESEARCH ON PRODUCTION AND UTILIZATION OF METHANOL & DI-METHYL ETHER AS SUSTAINABLE FUEL)

## **CONTENTS**

S. No	ITEMS	Page No(s)
Ι	Proposal Summary	
II	Core Proposal	
III	Budget	
IV	Bio-Data of PI and Co-PI	
V	Undertaking from the Investigator	
VI	Endorsement from The Head of Institution	
VII	Endorsement from the Collaborator(s)	
VIII	Terms and Conditions for the Grant	

# I. Proposal Summary (To be limited to two A-4 sheets) (Methanol-2016)

1.	Project Title		
2.	Project cost (Amount in lakhs)	DST:	Collaborator(s) (if any):
3.	Duration (in months)		
4.	PI Name		
	Date of Birth		
5.	Co-PI (s) Name		
	Date of Birth		
6.	Lead Organisation		
7.	Status of Lead Organisation	Recognized universities and academic insta institution,/Research organizations recogn	ized by DSIR/Companies registered under
		The Indian Company's Act, 1956 / MSMEs	
8.	Collaborator/Consorti um partner name(s), if		necessary. In sections 11 and 12 of the orming the consortium and the roles and
	any		
9.	Collaborators'/ Consortium partners' Status	recognition of in-house R&D units) (Industry partner should have proven step exhibit the potential to commercialize the	te indicate <b>DSIR</b> registration number of tanding and R&D capability and should be products / systems developed under the contribution of the industry partner should
10.	Objectives	(Precise and quantified)	
11.	Methodology	(Detailed Methodology to imple	ement the project)
12.	Deliverables (Select		aled Process; New/Upgraded System; formance analysis; (Scientific data
	the appropriate option(s) and summarise it in		; Feasibility analysis; Technological
	single line.	Capability; Database development	and documentation; Proof of new
			State of art performance in a chosen
			performance and projected cost when tts compare with existing national and

## 13. Budget details:

	aget actains.		
A.	Project Manpower (Post & Nos Research group/ institution-wise if more than one institutions are involved)	DST: (JRF/SRF/Research Associate/ Project Assistant / other Professional Manpower)	Collaborator(s):
В.	List of Equipments required (Research group/ institution-wise if more than one institutions are involved)	DST:	Collaborator(s):
C.	Fabricated system /prototype, if any	DST:	Collaborator(s):
D	Nature of Contribution from Collaborators	In Cash / Kind (Please elaborate)	

## 14. Funds requirements from DST:

S. No	Item Head	1 <sup>st</sup> Year	2 <sup>nd</sup> Year	3 <sup>rd</sup> Year	Total (Rs.)
A	Non-recurring (Capital Items)				
1	Permanent Equipments				
2.	Plant cost /Fabricated systems/ Demonstration models				
	Sub total (capital items)				
В	Recurring Items (General)		l .		
1.	Manpower				
2.	Consumables				
3.	Contingencies				
4.	Travel				
5.	Other Costs ( Outsource work etc),if any				
6.	Overhead				
	Sub total (General)				
C	Total cost of the project (A+B)				

Total requirement of funds from DST =
Contribution of participating institution(s), if any=
Total project cost =

## II. CORE PROPOSAL

(Kindly ensure to read the Guidelines (in italics fonts) and fill the text accordingly )

1.	Proj	iect	<b>Title</b>
	110	·	1111

## 2. Lead Organization Principal Investigator (PI)\*

Name:
Designation:
Complete Address (with city pin code):
Telephone & Mobile No.:
E-mail:
Lead Organization Co-Principal Investigator(s) (Co-PI)
Name:
Designation:
Complete Address (with city pin code):
Telephone & Mobile No.:
E-mail:

3. Consortium partner organization(s) / collaborator(s):

Name(s) of Principal Investigator(s)\*:

**Designation:** 

Complete address (with city pin code):

**Telephone & Mobile No.:** 

E-mail:

(\* No project shall be considered in absence of Co-PIs)

(\* One Principal Coordinating Investigator has to be identified in case of Consortium Projects)

4. Collaborating Agencies/Industries (If any)

(Consortia may be formed wherever necessary. In sections 11 and 12 of the proposal, clearly explain the need for forming the consortia and the roles and responsibilities of each partner.)

- 5. Target Beneficiaries
- 6. Objectives of the Proposal

(Precise and quantified: Estimated possible values, Use bullet form)

#### 7. Critical Review of Status Identifying Gaps

(include important references & IPR survey)

- 7.1 National Status Review
- 7.2 International Status Review
- **8. Novelty / uniqueness of the Proposal** (not more than 50 words)

#### 9. Outline of the Project

(Define the problem and give technical details including schematics wherever necessary)

- 10. Deliverables of the project (select the relevant option and give its brief details. (Deliverables should include target performance and projected cost when commercialized, and mention how these targets compare with existing national and international ones)
  - i) New/Upgraded Product:
  - ii) New/Upscaled Process:
  - iii) New/ Upgraded System:
  - iv) Services (including software):
  - v) Performance analysis: (Scientific data generation, analysis and evaluation)
  - vi) Feasibility analysis:
  - vii) Technological Capability:
  - viii) Database development and documentation:
  - ix) Proof of new concepts at a device level.
  - x) Achieving State of art performance in a chosen device/system

#### 11. Methodology

(This section should also include preliminary/background work done by all the investigators, which is relevant to the project. The description of methodology should adequately demonstrate the pathways, main work element etc and highlight the capability of the investigators to achieve them)

#### **12. Work Plan** (mention project activities and Highlight Milestones)

Sl	Activity/Milestone	$1^{st}$	year	2 <sup>nd</sup> year		3 <sup>rd</sup> year	
no.		1-6 M	6-12 M	13-18 M	19-24 M	25-30 M	31-36 M
AI							
A2							
-							
**	Draft completion report for review (3 month prior to date of completion)						

## 13. Names of 5 Experts/Agencies/ Institutions working in the similar area

(Please give complete Name, Designation, Email, Address with pin code, telephone number)

14. Any other information relevant to the Project proposal/ execution of the	ne project
(Importance of the proposed R & D to India, Group strength, site details, economic analys,	is. Institution

(Importance of the proposed R & D to India ,Group strength, site details, economic analysis, Institutional Details etc. In case the collaborator is a private sector company, please indicate their plan of commercialization of the product/process/technology development under the project)

## 15. Facilities & Infrastructure already available to the PI(s) at their Institute for Implementing the project.

S.no	<b>Equipment Name / Funding Source</b>	For which purpose it would be utilised in current project

## III. BUDGET ESTIMATES

## **Break-up of Total Budget**

a)	DST	Support			All Amount in Lakh )
S. No	Item Head	1 <sup>st</sup> Year	2 <sup>nd</sup> Year	3 <sup>rd</sup> Year	Total (Rs.)
A	Non-recurring (Capital Items)				
1	Permanent Equipments				
	Sub total (capital items)				
В	Recurring Items (General)				
1.	Manpower				
2.	Plant cost /Fabricated systems/ demonstration models, if any				
3.	Consumables				
4.	Contingencies				
5.	Travel				
6.	Other Cost ( Outsource work etc), if any				
7.	Overhead				
	Sub total (General)				
C	Total cost of the project (A+B)				

- b) Submit fund requirement (if any) for collaborator separatelyc) Nature of Contribution from Collaborators, if any : Cash / Kind (Please elaborate)

## **Details of Itemized Budget**

(\* To be given institution/research group-wise in case of consortium projects)

#### A. Non-recurring (Capital Items)

## A1. Equipment\*

**Budget for Permanent Equipment (To be borne by DST)** 

<b>Description</b> of	Unit Landed Price	Nos.	<b>Total Cost</b>	Justification in	context	of		
Equipment	(CIF+ Custom Duty/	of	(Rs. in lakh)	proposed work.				
	Taxes + others charges	Equipment						
	etc )* ( Rs.in lakh )							
	Gross total =							

<sup>\*</sup>Page/sheet indicating the total landed cost in Indian rupees(Ensure to mention Currency Exchange rate considered in case of imported equipments, freight, taxes, spares, special installation, etc.) Please project the actual cost taking into account reliable cost estimates as no cost revision would be admissible

## **B.** Recurring Items (General)

## **B1.** Manpower

Designation*	Educational Qualification	Experience in years, if applicable	Justification

<sup>\*</sup> Refer guidelines at DST website: <a href="http://dst.gov.in/whats\_new/main-new.htm">http://dst.gov.in/whats\_new/main-new.htm</a>
(Emoluments shall be provided as per Guidelines for Research fellow, Scientist and Assistant)

## **Manpower Budget**

## JRF /SRF/ Research Associates/ Project Assistants Details (applicable for the given category)

	Total Emoluments (in Rupees)					(Inclusive of all
Designation	1 <sup>st</sup> Year	2 <sup>nd</sup> Year	3 <sup>rd</sup> Year	Total (1 <sup>st</sup>	No. of	Allowances)
				$+2^{\text{nd}}+3^{\text{rd}}$	persons	Total
				Years)		Amount
						(Rs.)
	Gross amo	ount require				

Please mention category/ class of city for admissible HRA along with %.

## B2. Fabrication system: Tailor made models/ experimental set up (if any)

## i) Budget for Fabrication system/Tailor made items

Description	of	Unit Land	led Price	Nos.	Total Rupees	Justification in context of proposed
fabricated		(CIF+	Custom	of	(Rs. in lakh)	work
system		<b>Duty+</b>	others	Equipment		
		charges)*	(Rs in			
		lakh)				
		Gross total		•	•	

<sup>\*</sup>Page/sheet indicating the total landed cost in Indian rupees(Ensure to mention Currency Exchange rate considered in case of imported equipments, freight, taxes, spares, special installation, etc.) Please project the actual cost taking into account reliable cost estimates as no cost revision would be admissible

## **B3.** Consumables

**Budget for Consumable Materials (**To be borne by DST**)** 

Items	<b>Unit Price</b>	<b>Qty Needed</b>	Amount (Rs. in lakh)	Justification
Gross total =Rs	akh			

## **B4.** Contingencies

**Budget for Contingencies** (*To be borne by DST*)

Items	Amount	Justification
(unforeseen expenses, patents, report preparations etc)	( Rs. in lakh)	
Total		

## **B5.** Domestic Travel\*

**Budget for Domestic Travel (To be borne by DST)** 

Items (to attend)	Total Amount	Detailed Justification (In case of extensive field visits needed in project indicating breakup of cost w.r.t. to journeys, mode and class of transport needed)
Review		
meetings		
Total		

<sup>(\*)</sup> Foreign travel is generally not permitted under DST grants. Class and mode of transportation should be as per the entitlement of the concerned staff in the institute.

## **B6. Other Costs ,if applicable**

**Budget for Other Costs** (To be borne by DST)

Item	Total	Detailed Justification ( derived cost calculation and
	(Rs. in lakh)	relevant Quotation at Annexure- / page no* )
Outsource work		
Other items, if any		
Gross total =	Rs.	

## **Collaborator budget / Contribution**

Submit similar above detail breakup for each collaborator, if any

## Organization details:

- a. Designation of the financial authority in organization:
- b. Whether organization registered with Govt. of India Central Plan Scheme Monitoring System\* (CPSMS): Yes/No \*( refer website: http://cpsms.nic.in/Users/LoginDetails/Login.aspx?ReturnUrl=/default.aspx)
- c. If not, please get it registered as soon as possible at CPSMS website which is mandatory. If yes, inform Agency code registered at CPSMS

## IV. Proforma for Bio-Data of Principal Investigator(s) (PI), Co-Principal Investigator(s) (Co PI) and Coordinating Investigator of each partner Institution (Please be brief and follow the format)

		O	( ) (	(Please be		O	O
1.	ľ	Name					
2.	(	Gender					
3.	]	Date of	Birth				
4.	]	E-mail l	ID				
5.	(	Qualific	cations				
	S. N	0.	Degree	Institution	Year	Division/	Class
	70.7.2						
6.		Employment Experience					[n : 1
	S. N	10.	Position & O	organisation	Nature	01 J0b	Period
7.	Selo	ected Li	ist of Ten B	est Publication	<b>IS</b> (relevant to	the proposed pr	oject)
8.	Pat	ents file	ed/Granted	with details (re	elevant to the p	proposed project	
9.	Boo	oks Pub	lished /Cha	pters contribu	ted <i>(relevar</i>	nt to the propo	osed project)
10	S	ponsor	ed Researcl	h Projects (last	five years)	)	
10.	D						
10.	S.	Title		ng Agency and	Period	Amount	Achievements
10.			Sponsorin Officer Co		Period	Amount	Achievements
10.	S.				Period	Amount	Achievements

a. Consultancy Projects (last five years)	
---	--

S. No	Title	Sponsoring Agency	Period	Amount

## b. Sponsored Research/Consultancy Projects submitted for approval

S.No.	Title	Funding Agency	Duration	Amount

1	1	Aws	rds	and	Hor	ours:

- A. National list
- B. International list:

## 12 Technologies Developed / Transferred:

(please provide details of technologies transferred to industry, technologies commercialized)

Date (Signature of PI)

## V. UNDERTAKING FROM THE INVESTIGATOR(S)

## **Project Title:**

- 1. I/We have carefully read the terms and conditions of the Methanol Programme and I/We agree to abide by them.
- 2. I/We have not submitted this or a similar Project proposal elsewhere for financial support.
- 3. I/We have explored and ensured that the equipment and the basic facilities described in the Research Proposal, will actually be available as and when required for the purpose of the Project. I/We shall not request financial support under this project, for procurement of these items.
- 4. I/We undertake that spare or idle capacity of the permanent equipment procured under the project will be made available to other legitimate users from parent and other organizations.
- 5. I/We have enclosed the following:
- A Endorsement from the Heads of the Institution *(on letter head)*
- B Undertaking from the Collaborator(s) (on letter head)
- C Complete Project Proposal with all enclosures
  (1 marked' original' + 2 hard copies + 1 soft copy as .doc file)

Name(s) and Signature(s) of the Investigators\*

Date Place

(\* To be signed by PI and Co-PI of each Participating Institution)

## VI. ENDORSEMENT FROM THE HEAD OF THE ORGANISATION

(*To be typed on the letter-head of the organization*) (To be provided by each of the participating Institutions)

## **Project Title**

1.	Certified that the organization welcomes the participation of Dr/Mr/Mrsa
	the PI and Dr/Mr/Mrsas the Co-PI for the project and that in the unforesee
	and legitimate event of discontinuation by the PI, the Co-PI will assume full responsibilit
	for completion of the project. Information to this effect, endorsed by me, will be promptl
	sent to the DST

- 2. Certified that the equipment, other basic facilities and other administrative facilities as per the terms and conditions of the award of the Project, will be extended to the investigator(s) throughout the duration of the project
- 3. The Organization shall ensure that financial and purchase procedures are followed as per the prevailing norms of the organization, within the allocated budget.
- 4. The Organisation shall provide timely the Statement of Expenditure and the Utilisation Certificate of the grant as required by the DST in the prescribed format.
- 5. The grant for the proposal, if approved, the funds shall be transferred to following organization account:

1	Name of A/c holder (as per Bank record)
2	Bank Account No.
3	Bank Branch Name & Address
4	MICR Code
5	IFSC Code
6	E-mail (Agency /PI )
7	Mobile No. (Agency/PI)
8	Unique agency code*

<sup>\*</sup> Refer website: http://website.informer.com/visit?domain=cpsms.nic.in

(Head of the Institute) Seal/Stamp

Date Place

VII. Endorsement f	rom co	llab	orating	Indu	stry/	Agency	(if any)
	(0	. 1	CC • 11	7 7\			

(On the official letter head)

I have gone through the Project proposal entitled submitted by
below:
1. Contribution in financial terms (mention amount in Rs.)
2. Contribution in kind (list activities)
I hereby affirm that my organization/ industry is committed to participate in the Project to the full extent as indicated including financial liabilities accruing therefrom as detailed above. A brief profile of my organization is summarised below:
Name of Organisation
Line of Business/ Major Products No. of employees
Annual Turn over
The Annual Report for the last financial year is enclosed.
(Head of the Organisation) Seal/Stamp
Date
Place

## Department of Science & Technology Researchon Methanol Programme Terms & Conditions of the Grant

- 1. Approval of the Research Proposal and the grant released for it is for the specific Project sanctioned and the released grant should be exclusively spent on the Project within the stipulated period. The Institution may use funds obtained from any other Organisation with the concurrence of DST, for the Project. Any un-spent balance out of the amount sanctioned must be surrendered to the Government of India through a crossed Cheque/ Demand Draft drawn in favour of Drawing & Disbursing Officer, DST, New Delhi.
- 2. For permanent, semi-permanent assets acquired solely or mainly out of the Project grant, an audited record in the form of a register shall be maintained by the Grantee Organisation. The term "Assets" include (a) the immovable property acquired out of the grant; and (b) movable property of capital nature where the value exceeds Rs 50,000/-. The Organisation is required to send to the Department of Science & Technology a list of Assets acquired from the grant. The grant shall not be utilized for construction of any building unless a specific provision is made for that purpose. Full infrastructural facilities by way of accommodation, water, electricity, communication, etc. for smooth implementation of the Project shall be provided by the Organisation.
- 3. All the Assets acquired from the grant will be the property of the Government of India and should not be disposed off or encumbered or utilized for purposes other than those for which the grant had been sanctioned, without the prior sanction of DST.
- 4. At the conclusion/ termination of the Project, the Government of India will be free to sell or otherwise dispose off the Assets which are the property of the Government. The Organisation shall render to the Government necessary facilities for arranging the sale of these Assets. The Government of India has the discretion to gift the Assets to the Organisation or transfer them to any other Organisation if it is considered appropriate.
- 5. The Organisation / PI will furnish Six-Monthly Progress Report (5 copies) of the work on the Project on half-yearly basis form date of start. The first half-year period shall be rounded off to the last date of the sixth month. The subsequent periods of six months shall begin from the first day of the following calendar month. In addition, DST may designate a Scientist/ Specialist or an Expert Panel to visit the Organisation periodically to review the progress of the work being carried out and to suggest suitable measures to ensure realisation of the objectives of the Project. During the implementation of the Project, the Organisation will provide all facilities to the visiting scientist/ specialist or the Expert Panel by way of accommodation, etc. at the time of their visit. On completion of the Project, final consolidated "project completion report " on the work done on the project will be prepared after incorporating the suggestions ,if any, from the revieers of the project and ten copies of the same will be submitted to Project Completion Report as per the DST format on the work done on the Project should be sent to DST.

- 6. At the time of seeking further installment of the grant, the Organisation/ PI has to furnish the following documents:
- a) Utilisation Certificate (UC) and Statement of Expenditure (SE) for the previous financial year (in original or copy if sent earlier);
- b) An authenticated Statement of Expenditure (SE) including committed Expenditure for the Project till the previous month.
- c) Progress report ,if not sent earlier.
- 7. Request for specific approval of DST to **carry forward** the unutilised grant to the next financial year for utilisation for the same Project, should be sent along with UC and SE, after completion of the financial year.
- 8. The Comptroller & Auditor General of India, at his discretion, shall have the right of access to the books and accounts of the Organisation maintained in respect of the grant received from the Government of India.
- 9. The Organisation will maintain separate audited accounts for the Project and would keep the whole of the grant in a bank account earning interest, the interest thus earned should be reported to DST and should be reflected in the Statement of Expenditure. The interest thus earned will be treated as a credit to the Organisation to be adjusted towards further installment of the grant.
- 10. The Organisation will neither entrust the implementation of the work (except the outsourced part as approved) for which the grant has been sanctioned to any other Organisation nor will it divert the grant receipts to any other Organisation as assistance. In case the Organisation is not in a position to implement or complete the Project, it should, forthwith, refund to DST the entire grant received by it or the balance grant remaining with it.
- 11. All the personnel including Research personnel appointed under the Project, for the full/part duration of the Project, are to be treated as project personnel on contract to organization and will be governed by the administrative rules/service conditions (for leave, TA/DA, etc.) of the implementing institute.. They are not to be treated as employees of the Government of India and DST will have no liability, whatsoever, for the project personnel after the completion of the Project duration.
- 12. For expeditious implementation of the research Project, PI will take the assistance of the Organisation in the process of selection and appointment of staff and payment to them. Pay Scale and emoluments for the posts not covered under DST's OM are governed by the norms prevalent in the implementing Organisation or as decided in consultation with DST.

- 13. <u>DST reserves the right to terminate the Project at any stage if it is convinced that the grant has not been properly utilised or sufficience progress has not been reported under the project or sufficient effort have not been devoted.</u>
- 14. The Project becomes operative with immediate or within a maximum of 1month from the date on which the funds is received by the implementing Organisation. This date should be immediately intimated by the Grantee authorities/ Principal Investigator to DST.
- 15. The grantee organization shall associate a Co-PI with the project ,if not already a part of the project team. The Co-PI shall function as PI in the absence of PI and should be totally in knowledge of the activities of the project to avoid loss to the project , in case PI leaves the organization. If PI to whom a grant for a Project has been sanctioned wishes to leave the Grantee Organisation where the Project is sanctioned , Grantee Organisation/PI will inform DST of the same and in consultation with DST, evolve steps to ensure successful completion of the Project through co-PI before relieving the PI or appoint another equivalent position officer as PI.
- 16. Investigator(s) wishing to publish technical/ scientific papers based on the research work done under the Project, should acknowledge the assistance received from DST, indicating the Project sanction number under which Grant has been given to the Grantee organization So PI will submit a copy of the paper to the ministry as soon as it is published.
- 17. If the results of research are to be legally protected under the IPR, the results should not be published without action being taken to secure legal protection for the research results. For further information/ clarification on this subject The Director, Technology Information, Forecasting and Assessment Centre (TIFAC), Patent Facilitating Cell, Vishwakarma Bhawan, Shaheed Jeet Singh Marg, New Mehrauli Road, New Delhi- 110016, <a href="mailto:tifac@nda.vsnl.net.in">tifac@nda.vsnl.net.in</a>, may be contacted.
- 18. If the results of the work carried out under the grant require preparation of a technical booklet/guides/software/CD etc. in such cases the grantee organization will publish/prepare sufficient copies (number of copies to be decided in consultation with DST) and keep a portion for their use/ dissemination and submit the remaining copies to the Ministry for their use and distribution.
- 19. If the result is in the form of a survey repot/product performance evaluation or other such activities which have commercial implications, the grantee organization will not publish the results without specific written approval of this Ministry.
- 20. The grantee institution/PI should provide a copy of the 'FullText Document' of the patent within one month of its publication.

- 21. The grantee organization(s)/ Inventor(s) are required to seek protection of Intellectual Property Rights for the results/ output of the sanctioned projects. The terms and conditions regarding IPR issues shall be in accordance with the guidelines contained in the DST issued with the concurrence of Ministry of Finance, Department of Expenditure vide their O.M. No.33 (5) PF-1199, dated 22<sup>nd</sup> February, 2000 or subsequent circulars which may be issued by DST/MOF on the subject.
- 22. In case of any dispute the decision of Secretary, Ministry of Science and Technology shall be final.