## Indo-Norway Joint Call on Renewable Energy: Recommended projects

	Title	Indian PI	Norwegian PI
1	Design and development of modular multilevel converters for large scale grid connected Photovoltaic and Battery Energy storage systems	Anandarup Das, Department of Electrical Engineering ,Indian Institute of Technology Delhi HauzKhas New Delhi 110 016, India	Raymundo E. Torres-Olguin, Department of Energy Systems, SINTEF Energi AS SemSælandsvei 11, 7034 Trondheim
2	Integrated Renewable Resources and Storage: Operation and Management	Dr. (Mrs) Richa Negi, Electrical Engineering Motilal Nehru National Institute of Technology (MNNIT) Teliyarganj Allahabad- 211004	Dr. Nand Kishor, Department of Engineering Sciences University of Agder, Jon Lilletunsvei 9, 4878, Grimstad Norway
3	Czochralski Growth of Low- Oxygen Silicon Single Crystals for High-efficiency solar cell Applications	Dr. Anil Kottantharayil, Department of Electrical Engineering, IIT Bombay Mumbai 400 076	Dr. Martin Bellmann, Senior Department of Solar Cell Silicon SINTEF Materials technology Alfred Getz vei 2b – 7465 Trondheim, Norway
4	Grid Interconnection protocols for largely dispersed minigrids/microgrids for electrification of rural India	Dr. Chandrasekhar Perumalla, School of Electrical Sciences, Indian Institute of Technology Bhubaneswar-752050	Dr. MerkebuZenebeDegefa, Department of Energy Systems, SINTEF Energi AS SemSælandsvei 11, 7034 Trondheim

The above proposals have been recommended jointly by both Indian and Norwegian Expert Committees.

The Indian Project Investigators are requested to submit the enclosed check list(Annexure-I), bank details (Annexure-II) and Budgetary details as proposed in the project with sufficient justification for processing the individual cases for sanctioning the Projects from DST side. The documents submitted by post to the following address.

Dr. Chadaram Sivaji
Scientist – F
International Bilateral Cooperation Division
Department of Science & Technology
Ministry of Science and Technology
Government of India
Technology Bhavan, New Mahrauli Road
New Delhi – 110016
Email: sivaji@nic.in

#### CHECKLIST

1. Title of the Project :

2. Initiating Institute of project :

3. Sponsoring Agency/Ministry :

4. Total cost of the project :

Nature and Quantum of foreign

### Collaboration sought

(i) Financial support:

(ii) Equipment support :

(iii) Technical support :

(iv) Manpower training :

(v) Miscellaneous :

5. Is there any possibility, however remote of use of data, information

of result of the work which may impinge on India's national security?

If yes, the nature of such a use may be indicated. (In case the concerned scrutinizing Ministry do not have clear

answer, the matter should be referred to the DRDO and MHA for examination).

#### II. ORIGIN OF THE PROJECT AND ITS SPONSORS:

6. If the proposal is foreign-originated, what is the background of the foreign agency or organization which is sponsoring the project? Information available, if any on past collaboration by foreign agency with Indian Institution.

- 7. Are the foreign agency, organization, scientists concerned, known to have taken up any project of military significance in the past or are known to be associated with any military organization or project? (if the above information is not known or if there is definite information that there is no such association, these should be clearly indicated).
- 8. Is the proposer (Indian) known to the foreign collaborator and his group for some time and has this emerged naturally from the research work done by the two sides?

#### III. FUNDING OF THE PROJECT

- 9. Is the foreign source know to have funded research into sensitive and national security areas in its own country or in other countries?
- 10. Are there reasons to believe that the foreign source is a cover name for some other sponsor?

#### IV. ADMINISTRATION AND CONTROL OF THE PROJECT

- 11. Give a list of the likely places of visit: within the country planned by the foreign collaborator. Also give a list of the institutions which the collaborator is likely to visit.
- 12. Will any sensitive source material be referred to during the course of the research?
- 13. (I) Does the collaboration involve
  - a) Transfer of biological material(s) :
  - b) Use of radioactive materials :
  - c) Use of environmentally or otherwise : hazardous material(s)

	d)	Use of Genetically Modified Organisms	:
	e)	Field trials or testing	:
	f)	Ethical issues	:
	g)	Issues related to Intellectual Property Rights (IPR)	:
<ul><li>14. If answer to any section of question</li><li>13 is yes, are the investigators/ proposers</li></ul>		•	:
awa	are	of the relevant regulations and have	
they agreed to abide by them?			
15.		II the research be conducted in : cordance not only with the country's	
	ow	n ethical and environmental standards,	
	but	t with international standards as well?	
			Signature with date of the Principal Investigator

Signature with date and seal of Head of Department/ Institute

# **PROJECT SUMMARY**

1.	Project Title:	
2.	Total cost of the project (Indian side) (in Rs.):	
3.	Duration of the Project.	
4.	Project Investigators (PIs) and Co-Investigators:	
	4.1	Indian Pls
	4.2	Foreign
5.	Other Project participants:	
	5.3	Indian
	5.2	Foreign
6.	Implementing Agencies / Institutions:	
	6.1	Indian
	6.2	Foreign
7.	Sponsoring Agency / Department / Ministry	
	7.3	Indian
	7.2	Foreign
8.	Admini	strative Ministry in Government of India:

	Sponsoring Ministry/Department from security/sensitivity angle?:	Yes/No	
10.	If answer to (9) above is 'No', then does the Administrative/		
	sponsoring Ministry/Department recommend the Project to		
	be considered by High Level Committee of Secretaries?	Yes/No	

Has the Project been cleared by Secretary of the Administrative/

9.

Signature of the concerned Officer in the Administrative/Sponsoring

Ministry/Department

# International Cooperation Division Department of Science & Technology Bank details for transfer of DST fund electronically

Agency name as registered with DST CPMS Agency Code as per CPMS	
Account Holders name/ designation	
Name of Bank and address	
Saving Bank Account Number	
IFSC Code	
MICR Code	

I do hereby certify that the above mentioned account is an interest bearing account and I take all responsibility for declaring the interest so accrued on the released grant from DST in the SE/UC to be furnished to DST.

# Signature of Finance Authority with seal

(Please note that Agency name and Account holders name should be identical.)