



VIMAL JYOTHI ENGINEERING COLLEGE

JYOTHI NAGAR, CHEMPERI – 670632, KANNUR, KERALA

Affiliated to APJ Abdul Kalam Technological University, Approved by AICTE
ISO 9001 : 2015 Certified | Accredited by Institution of Engineers (India), NBA, NAAC
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NAAC Cycle 2

Criterion: 3.1.1

2019-2020

Index

Sl Number	Name of the Project/ Endowments, Chairs	Amount Sanctioned (INR)	Awarding Agency	Type (Government/non-Government)
1	Design and Implementation of Metaheuristic Algorithm based MPPT Controller of Partially Shaded Photo Voltaic System.	172266	ANERT , Trivandrum , Kerala	Government
2	Automatic Puttu making machine	156000	KTU-CERD	Government
3	Development of smart SCADA	30000	KTU-CERD	Government
4	Design and development of Smart Ambulatory Monitoring for Alakkode Old Age Homes-UBA	100000	UBA	Government





AGENCY FOR NON-CONVENTIONAL ENERGY & RURAL TECHNOLOGY
DEPARTMENT OF POWER, GOVERNMENT OF KERALA
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ANERT-TECH/81/2019-S(NEP)

12/04/2019

To

The Principal,
Vimal Jyothi Engineering College, Chemperi
Kannur-670632

Sir/Madam,

Sub:Financial Support under SRI 2018-19- Technical Proposal
(SRI-06/2018-19) from Dr. R Senthil Kumar - details requested

We are happy to inform that the Project Proposal on "Design and Implementation of Metaheuristic Algorithm based MPPT Controller of Partially Shaded Photo Voltaic System" (SRI-06/2018-19) submitted by Dr. R Senthil Kumar, Professor, Dept. of EEE, VJCE, Chemperi, Kannur has been recommended for funding under SRI 2018-19 by the Technical Advisory Committee of ANERT.

For further processing of the Project Proposal, we would like to know/have

- 1) A detailed proposal describing the status of research work in this area elsewhere, gap areas and the methodology proposed to be adopted in the suggested work
- 2) The status of the project (whether your work has already been started and if started, physical and financial progress achieved may be informed)
- 3) Latest quotations of the equipment and Consumables costing Rs. 15000/- or above
- 4) A copy of the Guidelines signed by the PI and counter signed by HoI (Revised Guidelines attached herewith)

As per the schedule provided by you, the project duration is 12 months. However, the project will have to be completed before 30th September 2019. Therefore you are requested to provide the required details/documents at the earliest.

Thanking you,

Yours faithfully,

To HoI
in
25/4/19


GM ANERT

ANERT GUIDELINES FOR THE PROGRAMME "SUPPORTING R&D AND INNOVATION-(SRI)"
2018-19

Programme:

The objective of the programme is to promote innovative ideas and technology adaptations in Renewable Energy. Financial and technical support shall be given for technical studies, technology evaluation, making of prototypes etc. on the basis of technically feasible proposals. The technical feasibility of the proposals shall be evaluated by an expert committee. On the basis of recommendations of the Technical Advisory Committee, a maximum financial support of Rs 5 lakhs shall be given for single project. It is proposed to support 14 such projects during the current financial year 2018-19. The Guidelines for implementation of this programme are given below:

Guidelines

Following Guidelines are proposed for smooth implementation of the programme. For any clarification or further details, the concerned official dealing with the programme may be contacted. ANERT reserves the right to review these guidelines and modify them.

1. Who can Apply

Institutions/organizations within Kerala, that function under the direct control of State Govt. (eg. Govt. Engg Colleges, etc.) or indirect control of State Govt. (eg. LBS Engg College, State Universities etc.) or institutions cooperating with State Govt. (like self financing Engg colleges, where Govt. quota seats are allowed) or NGOs with State Govt. approval having innovative ideas in Renewable Energy are eligible to apply for financial support. Financial Support will be limited for one project per Principal Investigator in the case of institutions and one project per an NGO at a time.

2. How to Apply

1. The application for financial support in the prescribed format alongwith the Project Proposal and a copy of the Guidelines signed by the PI and counter signed by HoI shall be forwarded by the Head of Institution (HoI) to The Director, ANERT, PMG-Law College Road, Vikas Bhavan PO, Thiruvananthapuram-695033. Four hard copies of the complete set of application shall be submitted. A soft copy of the complete set of application (in pdf format) also to be sent by e-mail to info@anert.in with subject line "Supporting R&D and Innovation-2018-19".
2. Private academic institutions will have to furnish a declaration that they do not levy and collect donations for admissions from the students.

3. Project Proposal shall be submitted in the prescribed format containing the Project Profile Technical Information and the below documents
 - a) Endorsement from the HoI (on letter head)
 - b) Copy of Registration Certificate in the case of NGOs and Declaration regarding non-collection of donation for admission in the case of Private Academic Institutions (on letter head)
 - c) Certificate from the Principal Investigator (PI)
 - d) Consent from the Co-investigator(s)
 - e) Certificate regarding pending UC/SoE (if applicable) and
 - f) Detailed bio data of the PI and Co-investigator(s)
4. Item wise financial estimates under each head of manpower, equipment, consumables, travel, contingencies and overhead should be mentioned clearly in the proposal submitted, showing rates, quantity and total for each item.
5. All documents submitted shall be in the prescribed formats. Documents in other formats will not be accepted.

3. Guidelines for Implementation

1. The maximum duration of the project is 1 year- however, the project shall be completed before 30th September 2019. The project becomes operative with effect from the date of sanction order.
2. ANERT reserves the right to terminate the project at any stage if it is convinced that the sanctioned amount has not been properly utilised or sufficient progress has not been reported under the project or sufficient efforts have not been devoted.
3. The recipient organisation should provide full infrastructural facilities such as accommodation, water, electricity, library, communication facilities etc. for smooth implementation of the project.
4. The recipient organisation is not permitted to seek or utilise funds from any other external source for the research project. On project approval, an undertaking in this regard will have to be submitted by the PI.
5. The Investigator(s) should not enter into collaboration with a foreign party (individual/ industry) for the project being supported by ANERT without prior approval of ANERT.
6. The recipient organisation shall not entrust the implementation of the project for which the financial support is being sanctioned to another institution nor shall it divert the amount to other institute as assistance. In case the organisation is not able to implement the project, it should refund the entire amount received as financial support (alongwith the interest) to ANERT.

7. The financial support shall not be utilized for purchase of vehicle or construction of any building unless specific provision is made for this purpose in the sanction order.
8. For permanent, semi-permanent or infrastructural assets acquired from the financial support, an audited record in the form of a register in the prescribed format shall be maintained by the organisation. The term "Assets" include (a) the immovable property acquired out of the financial support and (b) movable property of capital nature if its value exceeds Rs 1,000/-. The organisation is required to send to ANERT the details of assets acquired using the financial support.
9. All the assets acquired from the financial support will be the property of ANERT and should not be disposed of, encumbered or utilized for purposes other than those for which the financial support had been sanctioned without the prior sanction of ANERT.
10. After completion/ termination of the project, ANERT will be free to sell or otherwise dispose of the assets, which are the property of ANERT. The organisation shall render to ANERT necessary facilities for arranging the sale of these assets. ANERT also has the discretion to gift the assets to the organisation for research purpose or transfer them to any other Institute if it is considered appropriate and justified.
11. In case the project is sanctioned to Private Academic Institutions, and if it is subsequently brought to the notice of ANERT that donations are being collected from the students for admissions, the financial support would be cancelled. The institutions will be required to refund the financial support received with interest and such institutions will be banned from getting further financial support from ANERT.
12. The recipient organisation/PI is encouraged to publish technical/scientific papers based on the research work done under the project. Due acknowledgment should be given to the support received from ANERT. However, if the results of research are to be legally protected, they should not be published without action being taken to secure legal protection for the research results.
13. The knowledge generated/patent/IPR from the project will be the property of ANERT. Transfer of technology generated shall be done in consultation with ANERT.
14. ANERT may enforce additional guidelines for implementation of the Programme from time to time and the recipient organisation, PI and Investigators are required to adhere to such additional guidelines.

4. Processing of Applications

1. Receipt of Application will be acknowledged with a reference number and other instructions, if any. Further correspondence with ANERT regarding the project should invariably quote the reference number and date.

2. Opportunity will be given to present the short-listed Project Proposals before the Technical Advisory Committee of ANERT. The Technical Advisory Committee will evaluate and ascertain the relevance of the projects in line with the guidelines. Only those projects recommended by the Technical Advisory Committee will be considered for Financial Assistance depending on funds availability.
3. In case, the proposal is not found relevant or deficient in critical information, the same will be intimated to the PI accordingly.
4. Once the project is approved, an intimation will be issued to the recipient organisation. The total cost of the project is finalised based on the latest quotation(s) of equipment approved under the project and other relevant documents related to manpower, contingencies etc. submitted by the PI.
5. The PI has to submit willingness to undertake the project with the sanctioned budget & objectives and an undertaking regarding non-receipt of fund from other external sources.
6. A formal sanction order will be released on receipt of the willingness and undertaking from the PI.

5. Monitoring the Progress

1. The recipient organization/ PI shall furnish quarterly Progress Reports of the project in the prescribed format.
2. Officer(s)/Scientists of ANERT or an Expert Committee deputed by ANERT may visit the recipient organisation to review the progress of the work being carried out and to suggest suitable measures to ensure realisation of the objectives of the project.

6. Project Staff

1. No personnel appointed under the project, are to be treated as employee of ANERT and ANERT will have no liability, whatsoever, in this regard.

7. Financial Support

1. Financial Support will be provided for the projects recommended by the Technical Advisory Committee depending on funds availability to cover the selected expenditure under manpower, equipment, consumables, travel, contingencies and overhead.
2. NGOs/Private Academic Institutions will not be eligible for financial support under 'equipment' head. If equipment are absolutely required for the project, ANERT may consider 50% support for the expenditure under equipment head. In such cases, ANERT shall consider release of the financial support for equipment only upon receipt of supportive evidence that the recipient organisation has remitted the remaining 50%

share of the fund to the PI's account created for the implementation and management of the project.

3. For Student Projects no financial support under manpower and overheads will be provided.
4. The maximum financial support for a project shall be Rs. 5 lakhs. In deserving cases if recommended by the Technical Advisory Committee, further support if required will be considered in phase 2 after completion of Phase 1 of the project. But, in the case of student projects, the financial support will be limited to Rs. 1,00,000/-.
5. The first installment will be 25% of the sanctioned financial support or the cost of equipment whichever is higher. This will be released after issue of the sanction order. Further installments will be released as decided by ANERT only after receiving the Progress Report. Final installment will be released after completion of the Project and submission of the specified documents by the PI.
6. The amount sanctioned as Financial Support shall be
 - i) spent for the project within the specified time; and
 - ii) Any portion of the financial support, which is not ultimately required/used for the project, shall be duly surrendered to ANERT.
7. The recipient organisation shall maintain a separate bank account for implementation and management of the project and it should be reported to ANERT and the interest accrued should be reflected in the Statement of Expenditure. The interest so earned will be treated as a credit to the recipient organisation to be adjusted towards future installments of the financial support.
8. The recipient organisation should maintain separate audited accounts for the project.
9. ANERT reserves the right to order verification/audit of accounts by any Officer authorised by ANERT.
10. Re-appropriation of funds among different heads is normally not allowed. If any reallocation/ re-appropriation of the sanctioned amount under different heads becomes inevitable, it should be done with prior approval from ANERT.

8. Completion of the Project

1. On completion of the research, a presentation on the implementation of the project and major achievements shall be done.
2. The PI through the recipient organisation should send the following details/documents to ANERT to enable settlement of the account:
 - o A copy of Final Project Report in the prescribed format.

- One page abstract highlighting the outcome.
- Soft copy of the Final Project Report and abstract.
- Statement of Expenditure and Utilization Certificate (Audited by a Chartered Accountant).
- Details of electronic transfer of unspent amount/DD for any unspent amount drawn in favour of DIRECTOR, ANERT payable at Thiruvananthapuram.
- Reprints/copies of papers/patents/articles etc.

We agree to the Guidelines stated above.

Name and Signature of
Principal Investigator

Name and Signature of
Head of Institution

(Seal)

A P J Abdul Kalam Technological University
List of Research Seed Money Projects selected for funding

ARCHITECTURE

SL NO	PRINCIPAL INVESTIGATOR	TITLE OF PROJECT	NAME OF COLLEGE	AMOUNT SANCTIONED	Ist INSTALMENT	IIInd INSTALMENT
1	Archana A P Asst. Professor	Designing of building envelope through passive cooling strategies for warm humid climate	RIT Kottayam	148000	130000	18000

COMPUTER SCIENCE & ENGINEERING

SL NO	PRINCIPAL INVESTIGATOR	TITLE OF PROJECT	NAME OF COLLEGE	AMOUNT SANCTIONED	Ist INSTALMENT	IIInd INSTALMENT
1	Dhanya P M Asst. Professor	Criminal policing system	Rajagiri School of Engineering & Technology	30000	15000	15000
2	Dr. Jayasudha J S Professor	Interactive and informative learning using Augmented and Virtual Reality	SCT College of Engineering Trivandrum	115000	85000	30000

CIVIL ENGINEERING

SL NO	PRINCIPAL INVESTIGATOR	TITLE OF PROJECT	NAME OF COLLEGE	AMOUNT SANCTIONED	Ist INSTALMENT	IIInd INSTALMENT
1	Sheena Hassan Asst. Professor	Modelling of flow through Gabion Weirs	College of Engineering, Trivandrum	200000	180000	20000
2	Dr. Girija K Asso. Professor	A standardised cross section for restricted depth prestressed concrete road bridge superstructure over railway track	College of Engineering, Trivandrum	200000	180000	20000

3	Dr Jisha S V Asst. Professor	Seismic soil structure interaction response of structures subjected to pounding	Mar Baselious College of Engineering Trivandrum	62000	50000	12000
4	Dr.Resmi G Professor	Development of Bio Compost System for treating Degradable solid waste and production of manure	NSS College of Engineering	195000	175000	20000
5	Jithin Kurian Andrews Asst. Professor Dr Reebu Z Koshy Prof & Head	Distress identification & estimation in flexible pavements using image processing	Saintgits college of Engineering	72000	65000	7000

FOOD TECHNOLOGY

SL NO	PRINCIPAL INVESTIGATOR	TITLE OF PROJECT	NAME OF COLLEGE	AMOUNT SANCTIONED	Ist INSTALMENT	IIInd INSTALMENT
1	Lakshmi Mohan Asst. Professor Jyothi K Nair Asst. Professor (Co- Investigator)	Isolation and characterization of plastic degrading microbes	Saintgits college of Engineering	115000	85000	30000

ELECTRONICS & COMMUNICATION ENGINEERING

SL NO	PRINCIPAL INVESTIGATOR	TITLE OF PROJECT	NAME OF COLLEGE	AMOUNT SANCTIONED	Ist INSTALMENT	IIInd INSTALMENT
1	Dr . Venugopal G Asso. Professor	Characterization of effect of muscle fiber types in fatigue progression using surface	NSS College of Engineering	200000	157000	37500

2	Dr.Renu Jose Asst. Professor	Machine Learning based Channel Equalization in Digital Communication Systems.	RIT Kottayam	200000	169000	31000
3	Dr. V Sampath Kumar Professor	Puttumatic - Automatic puttu making machine	Vimal Jyothi Engineering College	156750	136750	20000
4	Er. Harinarayanan Nampoothiri M G Asst. Professor Dr. Godwin	Mud and manhole cleaning robot with optimized control parameters	Saintgits college of Engineering	140000	110000	30000
5	Dr.Ragesh G.K Professor	Implementation of an autonomous Wireless Body Area Network(WBAN) for IoT enabled healthcare applications using wearable sensor node with solar energy harvesting	Adi Shankara Institute of Engineering and Technology,Kalady	114500	92500	22000
6	Vinayakumar B Asst. Professor Dr. Godwin Anand P S Professor (Co-Investigator)	Power generation using controlled gravitational water vortex power plants (GWVPP) in rural waterbodies of kerala	Saintgits college of Engineering	140000	110000	30000
7	Dr. G Glan Devadhas Professor	Development of a smart SCADA structure for intelligent rainfall prediction in kerala and real time flood level alerting system	Vimal Jyothi Engineering College	159000	129000	30000

ELECTRICAL AND ELECTRONICS ENGINEERING

SL NO	PRINCIPAL INVESTIGATOR	TITLE OF PROJECT	NAME OF COLLEGE	AMOUNT SANCTIONED	Ist INSTALMENT	IInd INSTALMENT
1	Jayasree M S Asst. Professor Dr.Harikumar R Asst. Professor	Design and development of E-Waste PCB Component Separator and Segregator	College of Engineering, Trivandrum	200000	50000	150000
2	Dr. J S Savier Asst. Professor	Design and development of a micro phasor measurement unit	College of Engineering, Trivandrum	198000	120000	78000
3	Dr. Mahendran N Professor Dr. Pinkymol K P Asso. Professor (Co- Investigator)	Design and development of solar photo voltaic system with reduced current ripple KY boost converter	Saintgits college of Engineering	172500	72500	100000
4	Dr. Francis M Fernandez Asst. Professor Anu G Asst. Professor	Quantification of Harmonic Injection in Power System using Non -Active Power Theory	College of Engineering, Trivandrum	200000	175000	25000
5	Deepa M U Asst. Professor	Solar assisted electric vehicle with one converter for charging and motor driving	College of Engineering, Trivandrum	137875	75000	62875
6	Dr Bijuna Kunju Head of the dept	Self sustainable nanogrid for homes	TKM College of Engineering Kollam	196000	150000	46000
7	Dr. Lal Priya P S Asst. Professor	Design and Implementation of an energy efficient robust controller for an electric vehicle with In - Wheel motors	College of Engineering, Trivandrum	198000	100000	98000
8	Dr Sreeja S Asst. Professor	Design and development of a humanoid robot	College of Engineering, Trivandrum	199843	100000	99843

MECHANICAL ENGINEERING

SL NO	PRINCIPAL INVESTIGATOR	TITLE OF PROJECT	NAME OF COLLEGE	AMOUNT SANCTIONED	Ist INSTALMENT	IIInd INSTALMENT
1	Harikrishnan C Asst. Professor Dr. Thankachan T Pullan Asso. Professor	Fabrication and Analysis of Al-Li Surface Composite Using Friction Stir Processing	Rajagiri School of Engineering & Technology	125000	105000	20000
2	Dr. Lijo Paul Asso. Professor	Experimental investigations and performance optimization of the micro abrasive jet machining	St. Josephs College of Engineering Palai	130000	115000	15000
3	Dr. Jilse Sebastian Asso. Professor	Experimental investigations on the performance and emission characteristics of CI engine fueled by plastic oil derived from polyethylene waste plastic	St. Josephs College of Engineering Palai	140000	120000	20000
4	Dr Jacob T Varghese Asst. Professor Sajan Thomas Asst. Professor (Co Investigator)	Energy efficient green structures	Saintgits college of Engineering	127500	107500	20000
5	Dr. Sudheesh Kumar C P Asst. Professor	Investigation of human body vibration to minimise occupational health hazards	Govt College of Engineering, Kannur	165000	155000	10000

6	Harish T V Asso. Professor	Experimental Study of Changes in Micro Mechanism of Wear With Vibration in Stroke Length under Reciprocating Sliding Conditions of A390-SiCp AND A336-SiCp Composites.	College of Engineering, Trivandrum	200000	180000	20000
7	K S Sajikumar Asst. Professor	Experimental and numerical characterisation of a non contact handling device	College of Engineering, Trivandrum	200000	192500	7500

Sanction order will be issued separately for each project.

**Dean Research
KTU**

Funds transfer details of Technology Development /customization proposal selected under the UBA program

S. N.	Account No.	Amount in Rs.	Beneficiary Name	UTR No.	Date	AISHE Code	Institute Name	Title of project
1	0396053000015000	100000	CHRIST UNIVERSITY	SBIN419207743092	26/07/2019	U-0217	Christ University Bengaluru Karnataka	Organic Fertilizer (Manure) From Cow,Goat And Sheep Dung And Organic Pesticides From Vegetables(Chillies & Garlic Or Onion),Cooking Oil & Soap,Soap & Water And Neem Oil & Soap
2	1952500100145001	100000	PRINCIPAL S D M C E T	SBIN419207743093	26/07/2019	C-1315	S D M College Of Engg & Technology Dharwad	Improvement Of Harnessing Device Of Bullock Carts
3	08021450000101	100000	CAREER POINT UNIVERSITY HAMIRPUR	SBIN419207743095	26/07/2019	U-0694	Career Point University Hamirpur	Manufactory Baria,Seviyan,Pickle Murabba,Cotton Razai Making Machine:On Eco Friendly Low Cost Technology,Refinement Demonstration And Adoptinh By Village In Gram Panchyat Tikker Kharwarian
4	911010057430573	100000	INDO GLOBAL COLLEGE OF ENGINEERING	SBIN419207743098	26/07/2019	C-10460	Indo Global College Of Engineering Abhipur	Robotic Panchagavya Sprayer For Organic Farming

5	005002000000269	70000	AARUPADAI VEEDU INSTITUTE OF TECHNOLOGY	SBIN419207743100	26/07/2019	C-10224	Aarupadai Veedu Institute Of Technology	Fabrication And Installation Of Seed Balls Production Equipment
6	696820110000037	50000	RAMA UNIVERSITY	SBIN419207743094	26/07/2019	U-0808	Rama University Uttar Pradesh	Advance Cycling Spray Pump Using Of Solar Plate
7	134311100001264	80000	PRINCIPAL WELFARE INSTITUTE OF SCIENCE TECHNOLOGY AND MANAGEMENT	SBIN419207743101	26/07/2019	C-50908	Wellfare Institute Of Science Technology And Management	Smart Solar Toilet Light
8	052394600000707	90000	M A M COLLEGE OF ENGINEERING AND TECHNOLOGY	SBIN419207743103	26/07/2019	C-25045	M A M College Of Engineering And Technology	E-Commerce For Food Products And Handicrafts In Rural Areas
9	705270386	50000	ST JOSEPHS COLLEGE OF ENGINEERING	SBIN419207742239	26/07/2019	C-16537	St Josephs College Of Engineering	Save Our Lives
10	24273050000016	100000	VIMAL JYOTHI ENGINEERING COLLEGE	SBIN419207742242	26/07/2019	C-43798	Vimal Jyothi Engineering College	Design And Development Of Smart Ambulatory Monitoring For Alakkode Old Age Homes
11	1952500100145001	100000	PRINCIPAL S D M C E T	SBIN419207743106	26/07/2019	C-1315	S D M College Of Engg & Technology Dharwad	Setting Up Of Utility Center For Communities

12	117109000015329	100000	SRMIST EXAMINATIONS	SBIN419207743108	26/07/2019	U-0473	S R M Institute Of Science & Technology Chennai	End-To-End Integrated Rationing System For Distribution Of Provisions
13	017501006789	100000	BIRLA INSTITUTE OF TECHNOLOGY MESRA RANCHI	SBIN419207742241	26/07/2019	U-0202	Bit Mersa Ranchi Jharkhand	Digital Coaching Systems For Class V/Vi/Vii Students In Local Languages(Nagpuri) For Maths/Sciences/General Awareness
14	31680604712	50000	PROF RAM MEGHE COLLEGE OF ENGINEERING AND MANAGEMENT	029124911	26/07/2019	C-43184	Prof Ram Meghe College Of Engineering And Management Badnera Rly Amravati Maharashtra	Crop Protection From Wild Animals Around Farms
15	34204318792	100000	TOC H INSTITUTE OF SCIENCE AND TECHNOLOGY	029131161	26/07/2019	C-9460	Toc H Institute Of Science And Technology Arakunnam	Litre Of Luminosity
16	33510544367	100000	GRG POLYTECHNIC COLLEGE MODROBS ACCOUNT	029131307	26/07/2019	S-2789	Grg Polytechnic College Kuppepalayam	Organic Cotton Cultivation
17	31949323944	100000	PRINCIPAL NRI INSTITUTE OF TECHNOLOGY	029131452	26/07/2019	C-18121	Nri Institute Of Technology Pothavarappadu Andhra Pradesh	Zero Budget Of Natural Farming (Zbnf) In Drought Effectted Villages In Andhra Pradesh