

Development of Green Campus/townships/SEZs/ industrial towns, Institutional campus under the “Development of Solar Cities” programme

Invitation of Proposal

The Ministry is implementing a programme on Development of Solar Cities wherein about 100 small townships/campuses (new and the existing one), duly notified/permited by the concerned Authorities being developed by the promoters/builders, SEZs/ industrial towns, Institutional campus etc. are proposed to be developed as green campus during the 12th five year plan. The financial assistance Upto Rs. 5.00 lakh for preparation of a Master Plan and DPR including the action plan for renewable energy installations, green campus development, awareness generation and trainings etc. is available.

2.0. The installation of renewable energy projects/systems in these entities will be done as per provisions of various schemes of MNRE.

3.0. The tentative guidelines for the green campus is given in Annexure - I. The format for submission of proposal is given in Annexure – II.

4.0. The proposals are invited from the organizations who are interested and committed for developing their campus as green campus. The proposal should be prepared by the respective developer/builder/institution/RWA etc. in prescribed format(Annexure – II) with the commitment in the suitable bond paper indicating that the installations of the projects/systems/devices of Renewable Energy will be under taken after preparation of the Master Plan/DPR(Annexure – III).

The proposals may be submitted to:

Director (Solar Cities)
Ministry of New and Renewable Energy
Block 14, CGO Complex,
Lodhi Road,
New Delhi -110003.
Email: veena.sinha@nic.in

For further details on the “**Development of Solar Cities Programme**” please visit the MNRE’s website at www.mnre.gov.in

GUIDELINES FOR DEVELOPMENT OF GREEN CAMPUS

At present the large area development i.e., for townships, neighborhoods, educational and institutional campuses, medical colleges, hospitals, group housing, commercial complexes etc. is taking place in a fast track mode in the country through private and public sectors and even by the Government. In order to ensure energy efficiency and environmental sustainability, these developments need to be on “Green Campus” concepts.

2.0 A green campus is a higher education community with optimum land use, environmental planning and resource management i.e., improving energy efficiency, conserving resources, enhancing environmental quality including habitat preservation, healthy living environment, use of renewable energy and management of wastes, water recycling etc.. The buildings within the campus should be based on green building concepts to the extent possible.

3.0 The Ministry of New and Renewable Energy has taken initiatives to develop green campuses/ townships under “Development of Solar Cities Programme”. A financial CFA for preparation of a Master Plan and DPRs including the action plan for small townships/campuses being developed by the promoters/builders, SEZs/ industrial towns, Institutional campus etc. Upto Rs. 5.00 lakh for preparation of a Master Plan and DPR including the action plan for renewable energy installations, green campus development, awareness generation and trainings etc. will be provided for each new and existing small townships/campuses duly notified/permitted by the States/Local Authorities. This will also be applicable for the existing townships/campuses. The existing campuses will be encouraged to have suitable retrofitting’s of renewable energy and energy efficiency equipment’s/measures to the extent possible to make them green campus. The installation of renewable energy projects/systems in these entities will be done as per provisions of various schemes of MNRE.

4.0 While developing the green campus, following guidelines may be taken in to consideration:

A. FOR DEVELOPMENT OF EXISTING CAMPUS AS GREEN CAMPUS

- i. The energy audit and water audit of the entire campus should be carried out through registered certified professionals and the base line for the energy and water consumption should be defined.
- ii. Energy efficient measures including energy efficient street lighting system with proper control, low energy fixtures, energy efficient pumping system, energy efficient motors and other equipment’s, sensors for lighting, use of energy star rating equipments, improvement of power factor, use of variable frequency drive

- and other energy efficient technologies should be adopted and reflected in the proposed master plan.
- iii. Utilization of renewable energy system such as solar water heater, solar air conditioning, solar dryers, solar cookers, solar lantern, solar pumps, solar traffic signals, battery operated vehicle, hybrid systems etc. should be explored.
 - iv. Solar cooking systems must be utilized for hostels/hospitals etc. All houses, hostels, kitchen must have solar water heaters (including multi-storied buildings).
 - v. The buildings in the campus should have rooftop SPV systems preferably grid connected systems.
 - vi. A master plan for the entire campus should be prepared keeping in view the overall reduction in fossil fuel based energy by 25% within next 5 years by utilizing renewable energy applications, and taking suitable measures for energy conservation and energy efficiency.
 - vii. The master plan should be site specific and should have minimum 5 numbers of implementable a detailed project reports as per guidelines of MNRE and BEE under various schemes. An audit report should be prepared and submitted along with the master plan.
 - viii. An awareness/training workshop should be organized in the campus regarding renewable energy applications, and taking suitable measures for energy conservation and energy efficiency.
 - ix. Suitable architectural retrofit options for building envelop (floor, roof, walls etc.) and energy efficient glasses for windows should be explored and included in the report.
 - x. The possibility of redesigning of exterior surfaces of the buildings with energy efficient material may be explored.
 - xi. Any other innovative actions/ points to be taken for making existing green campus.

B. FOR DEVELOPMENT OF NEW CAMPUS AS GREEN CAMPUS

- i. Simply making green buildings would not create a green campus; however, it should be sustainable also. A green campus should follow the optimum path for :
 - land use vis-à-vis population density
 - Vertical or horizontal growth - Infrastructure including pitched roads
 - Transport (more walkability & less use of vehicles)
 - Renewable energy use and Energy conservation,
 - Waste management and water conservation
- ii. All buildings in the campus may be green buildings preferably rated with rating systems in vogue i.e. GRIHA, LEED India, ECBC compliant buildings et..
- iii. A master plan for the entire campus should be prepared keeping in view the overall reduction in fossil fuel based energy by 25% within in next 5 years by utilizing

- renewable energy applications, and taking suitable measures for energy conservation and energy efficiency.
- iv. The master plan should be site specific and should have minimum 5 numbers of implementable a detailed project reports as per guidelines of MNRE and BEE under various schemes.
 - v. The master plan of the campus should follow optimum floor area ratio, controlling of soil erosion, avoiding contamination of air and natural water bodies. The natural water bodies and trees should be protected accordingly the layout plan should be prepared.
 - vi. Dense planning may be preferred over dispersed layout to avoid use of excessive motorized transport and land use and unnecessary construction of infrastructure like sewerage/water lines, roads, and electricity cables.
 - vii. Major portion of land should be planned as green belt as per prevalent bye laws. This should include tree and water bodies' preservation, natural topography conservation and tree plantation, restoring and reuse of contaminated sites, farming of different crops, fruits, vegetables etc. for internal use.
 - viii. Encourage the use of public transportation with better road planning to reduce fossil fuel consumption , use of alternate fuel vehicles such as CNG, biofuels, electric vehicles, solar vehicles with charging station, bicycles. In fact fossil fuel vehicles should not be allowed in campus and parked at entry gate to the extent possible.
 - ix. The layout plan should be such that each point should be reached from any other by walking to the extent possible. This would also require shading for footpaths and pathways through tree cover and proper streetlight designing for optimum lux level in the night.
 - x. Optimize parking with underground parking systems preferably near gate should be considered and the cycle path should be given preference to the extent possible.
 - xi. Water conservation through rain water harvesting, use of efficient water fixtures, waste water recycling should be an integral part of the building designs and layout.
 - xii. Energy efficient measures including energy efficient street lighting system with proper control, low energy fixtures, energy efficient pumping system, energy efficient motors and other equipment should be taken.
 - xiii. Use of renewable energy system such as solar water heater, solar rooftop, solar dryers, solar cookers, solar lantern, solar traffic signals, and battery operated vehicle, solar air conditioning etc. should be made to the extent possible. Solar cooking systems and solar water heaters must be utilized for hostels/hospitals etc. The maximum houses, hostels, kitchen must have solar water heaters (including multi-storied buildings) in the campus. The kitchen waste generated within the

- campus should be treated with biogas generation technology and the generated biogas may be utilized for cooking or electricity generation purpose.
- xiv. The common lights, interior, exterior or street lights should be preferably through Renewable Energy Technologies particularly solar.
 - xv. Use of solar passive architecture for buildings with minimum air-conditioned load and optimum ventilations with efficient HVAC systems should be ensured.
 - xvi. Waste management with an aim to zero waste institutions should be carried out e.g. all waste in the campus (hostels, kitchens, households and markets etc.) should be treated for useful applications within the campus itself through waste to energy technologies. This biogas can be used for hostels, kitchen or for powering water system.
 - xvii. The ecofriendly and recycled material and certified green building materials should be used for construction purpose.
 - xviii. An awareness/training workshop should be organized in the campus regarding renewable energy applications, and taking suitable measures for energy conservation and energy efficiency.
 - xix. Any other innovative actions/ points to be taken for making existing green campus.

Format for submission of proposals for Small Townships/Campuses for preparation of a Master Plan/DPR including the action plan for renewable energy installations, green campus development, awareness generation and trainings.

1. Townships/Campus Information
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Townships/Campus Name	
Townships/Campus Population	
Area (Sq Km)	
No of Wards/Colonies/Sectors	
Regional setting and connectivity (Air, Rail and Road)	
Economic Base of Townships/Campus	
Ownership of Campus/Township (Private/ Public/Government/ Others Please Specify)	

2. Implementing agency/organization
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Name of Local Body	
Organization (Please mention) Municipal Corporation/ Municipal Council / /Municipality/Developer /Builder/Institution	
Contact Person	
Complete Address	
Telephone:	
Fax:	
Email Address and Website:	

3. Townships/Campus Leadership and Commitment
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Please describe briefly enclose separate sheet for details	
Details of initiatives already taken by Townships/Campus/Council/Administration in promoting renewable energy and energy conservation	
Any regulatory measures taken on adoption of	

renewable energy and energy conservation devices	
Exemplary initiatives taken in renewable energy/ energy conservation by the private sector	
Local/State Institutions (academic/ research institutions), corporate organizations, architects, NGOs, energy auditors, consultants etc. who can contribute in the initiative	
Political commitment to the project	
Can Townships/Campus establish and support a local expert group including administrators (state/local) relevant organizations/ institutions, politicians, consultants, utilities, information centers etc.	Yes/ No

4. Activity Plan and Budget

Please describe briefly enclose separate sheet for details	
Amount sought from MNRE as per the provision of scheme.	
Action Plan for utilization of funds for Master Plan/DPR including Action Plan & PERT Chart, Awareness Generation and Training	
Name of Agency hired/to be hired for preparing Master Plan/DPR	
Time period for preparation and submission of Master Plan to the Ministry after sanctioning of the proposal	
Financial Commitment of the Township/Campus for setting up of renewable energy projects/systems/devices	
Commitment for adopting National Rating System for Green Buildings like GRIHA	

Expression of Interest

On behalf of we express our interest for joining the Solar Township/Campus program of Ministry of New and Renewable Energy, Govt. of India.

Signature with Official Stamp
(Head of the Township/Campus with Seal)

Enclosure (Please tick the appropriate check box):

1. Commitment in Non Judicial Bond Paper
2. Filled in Mandate Form

FORMAT FOR BOND

The below bond should be submitted in non judicial bond paper of Rs 100/-:

I, **<Name of head of Campus>**, **<Designation>**, **<Township/Campus Name>**, do hereby commit that **<Institution/Campus name>** will implement the Renewable Energy projects/systems/devices and Energy Efficient projects/systems/devices after the preparation of the Master Plan/DPR.

<Signature of Head of Campus/Township>

Date

Place

MANDATE FORM
ELECTRONIC CLEARING SERVICE (CREDIT CLEARING)/REAL TIME GROSS
SETTLEMENT (RTGS) FACILITY FOR RECEIVING PAYMENTS

A. Details of Account Holder

Name of Account Holder	
Complete Contact Address	
Telephone Number/Fax/E-mail	

B. Bank Account Details

Bank Name	
Branch Name with Complete Address, Telephone Number and E-mail	
Whether the Branch is Computerised?	
Whether the branch is RTGS enabled? If yes, then what is the branch's IFSC Code	
Is the Branch also NEFT enabled?	
Type of Bank Account (SB/Current/Cash Credit)	
Complete Bank Account Number (Latest)	
MICR Code of Bank	

Date of Effect:

I hereby declare that the particulars given above are corrected and complete. If the transaction is delayed or not effected at all for reasons of incomplete or incorrect information I would not hold the user institution responsible. I have read the option invitation letter and agree to discharge responsibility expected of me as a participant under the scheme.

Date:

(.....)

Signature of Customer

Certified that the particulars furnished above are correct as per our records.

(Bank Stamp)

(.....)

Signature of Customer

Date:

1. Please attach a photocopy of cheque along with the verification obtained from the bank.
2. In case your Bank Branch is presently not "RTGS Enabled", then upon its up gradation to "RTGS Enabled" branch, please submit the information again in the above proforma to the Department at the earliest.