
Rajiv Gandhi Renewable Energy Park (RGREP)

www.energycentre.in



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Nov 2009; HAREDA to Advit



Apr 2010; Open and Fully Functional



Energy Centre

...about the project

Rajiv Gandhi Renewable Energy Park (RGREP)

- Nodal Energy Centre developed by Haryana Renewable Energy Development Agency (HAREDA), with support from Ministry of New & Renewable Energy (MNRE) and BEE
- Managed by Advit Foundation, - Promotes energy efficiency, renewable energy, climate mitigation (carbon neutral options) and environment friendly technologies for benefit of civil society and industries



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Energy Centre

...Key highlights

Rajiv Gandhi Renewable Energy Park (RGREP)

- Solar passive building, demonstrating several green architecture features
- Off-grid campus, generating the required electricity by solar energy
- Facilities:
 - 1.6 acres of campus area
 - Well maintained lawn space
 - 2 Training rooms – equipped with projector, TV & sound system; capacity of 25 people in each
 - 2 rooms with models and games
 - Roots – A low carbon slow food cafe
 - The shop – Climate change adaptation and mitigation products



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Energy Centre

...objectives

Harness

Create awareness among citizens about Environment Conservation & related areas

Accelerate

Demonstrate and help adoption of new technologies to achieve measurable goals in the above areas

Educate

Build capacity at various levels

Support

Support by creating a market platform for their products/services
Support marketing efforts
Create monitoring and feedback mechanism



Our Methodology

....*multipronged approach*

Adopting RE and EE technologies that indirectly have positive impact on environment in general and climate change in particular.

- **Holistic and Creative approach**

- build awareness
- initiate actions

- **Ideal venue**

- To enable and engage in adopting renewable energy technology options
- EE and RE to exhibit
- Service providers in EE and RE architecture



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Current affiliations

....technology support

- EE posters - ADEME/ Robert Angioletti - 12 posters designed by BCIL and Advit
- Display products – Su kam, TATA BP Solar, Easy to Commute, Pluss polymers, Schneider, Enablers and Enhancers,
- NGO's – Centre for Media Studies, IRRAD, Shristi, Search Years
- Architecture information – EDS, Space design consultants, Sanjay Prakash and Associates, Kalpakrit



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Technology support





- Su kam inverter
- Lightning protection system



KALPAKRIT SUSTAINABILITY BY DESIGN

DESIGN IDEAS

SERVICES

EXPERIENCE

BUILDING ENERGY ANALYSIS AND COMPLIANCE SERVICES

- Whole Building Energy Simulation and Modeling
- Energy Consumption Measures (ECM) development
- Thermal Comfort assessment
- Lighting and Daylighting analysis
- Monitoring services
 - Facility Walkthrough
 - Measurement and Verification exercises
- Lifecycle Analysis
- Energy Code Compliance
- Green Rating Certification / Documentation

BUILDING ENVIRONMENT DESIGN SERVICES

- Design Charrette and Green Workshops
- Goal setting and feasibility review
- Value engineering guidance
- Architectural assistance
 - Site Selection: Planning, Orientation, and Shading
 - Study: Envelope Design, Glazing Optimization / Comfort System Selection
 - Operations and Maintenance plan development

VOOT Rest Stop, New Kent, VA

Annual Energy Savings: **\$ 18,824**
LEED NC v2.2 EA points: **18**

700 6th Street, Washington DC

Annual Energy Savings: **\$ 8,827**
LEED NC v2.2 EA points: **1**

Yorktown High Sch., Arlington, VA

Annual Energy Savings: **\$ 12,728**
LEED NC v2.2 EA points: **4**

OFFICE BUILDING FOR PLUS HOTEL, Gurgaon

AMERICAN INSTITUTE OF DESIGN SPECIAL, Gurgaon

OFFICE FOR MR. TOOSH ANAND, KANOLI, HANICHALE, PRADESH

OFFICE BUILDING FOR SMART SHARMA, NOIDA

SPACE DESIGN CONSULTANTS

ARCHITECTURE, INTERIOR DESIGN, URBAN PLANNING, FURNITURE DESIGN
G. H. MALHOTRA HOTEL, G. H. 3, NEW DELHI - 110008
TEL: (91) 11 4007 3213, (91) 11 4007 3264 EMAIL: MALHOTRA@SPACE-DESIGN.COM WEBSITE: WWW.SPACE-DESIGN.COM

Architectural Information Support

ITC Green Centre, Gurgaon, India

ITC Limited THE WORLD'S LARGEST COMPLETED 'PLATINUM RATED' GREEN OFFICE BUILDING (2005)

105)

RECEIVED

LEED PLATINUM

INSTITUTE FOR RURAL RESEARCH AND DEVELOPMENT
gurgaon, haryana

SENIOR SECONDARY SCHOOL CUM HOSTEL, SHARMAUR, HIMACHAL
research project

APPROPRIATE BUILDING TECHNOLOGY

- Continuity of vernacular building technology
- Appropriate and replicable building system derived from the native architecture
- Contextually appropriate and satisfactorily resist seismic forces
- Design in an economically and environmentally viable manner
- Efficient use of wood in roof truss, window frames
- Efficient envelope design using resources as close to source as possible
- Reduction in mixing of slabs
- Craft oriented products made of thin microconcrete slabs with trace amount of steel chips

SUSTAINABILITY BY DESIGN

- Internal courtyard for enhanced thermal mass climate and daylight penetration
- Efficient envelope, lighting and H.V.A.C. system
- Chapparrat ventilation for auditorium
- 20% of energy consumption met by onsite renewable and solar PV
- Sewage water treated and utilized for irrigation
- Rain water harvesting
- 30% reduction in water usage due to efficient fixtures
- Minimization of waste during construction
- Erosion and sedimentation control
- Planting greater forest and bio-diversity
- Mitigation of heat island effect
- Low VOC paints, sealants and adhesives
- Innovative use of packaging material on site as building features
- Materials with low embodied energy chosen over others eg. Aluminium is recycled

COST SAVINGS DUE TO RENEWABLES/ SOLAR: 20%

KALPAKRIT SUSTAINABLE ENVIRONMENTS PVT. LTD.

Energy Centre

...awareness initiatives

- >15000 people in 10 months
- Films on RE, EE and CC from Centre for Media Studies
 - Catalogue of >25 nominated films
- Green birthdays – with a pledge to go renewable
 - Hosted about 15 birthdays
- Energy efficiency as a holistic approach
 - Organic farming and CC
 - Water conservation
 - Composting
 - Education on materials for energy conservation
- Low Carbon Café – Roots



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Well equipped rooms with models and games





Green Birthdays





Community awareness programmes





Organic food and Climate Change



RWA Meet on Energy Efficiency



Energy Centre

...industry initiatives

- >75 industries have consulted on RE technology
- Industrial trainings – Cleantech Conclave
- Energy efficiency awareness for industries
- Partnered to prepare guidelines for designing energy efficiency for Apparel Industries – project for GTZ
- Fixed type solar cooker making workshop – rural entrepreneurs
- Energy audits – facilitated 11 investment grade energy audits in the last 1 yr



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- Energy efficiency awareness programme, Feb 2010
- Cleantech Conclave, Apr 2010
- Designing energy efficiency for apparel industries





Energy Centre

...school programme

70 schools and 10 colleges visited in the last one year.
> 3000 children made aware of the RE technology.

The activities include:

- a brief about RGREP (accompanied by a film)
- awareness on energy efficiency and climate change
- hands on with the models and games
- special workshops – science projects (making of a solar cooker, assessing a RE equipment vs a conventional equipment, etc)



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School Programme





Energy Centre

...workshops

Almost every weekend hands on workshops are conducted for children and adults – energy efficiency in a holistic approach

The workshops include:

- being energy efficient - natural holi colour making
- learn to audit your house and school
- convert your pizza box into a solar cooker
- learn to reuse products and save energy
- importance of organic farming and climate change – learn to do your own composting
- carbon offsetting plantation



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Rajiv
Gandhi
Renewable
Energy
Park

- Home composting
- Paper bag making



Energy Centre

...planned initiatives

- Promotion of waste segregation and recycling to reduce carbon emissions
- Carbon offsetting through plantation – tree plantation drive
- Setup of library and information center with magazines, books, CDs on RE, CC
- Competition among children on Green Innovations in the sphere of EE, RE and climate mitigating options
- Energy mela, street play and musical events for promoting RE, EE, green buildings, climate responsibility poster exhibition
- Solar installations



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Energy Information Centre







Energy Centre

...special visits

Networking and handholding for sustainability -

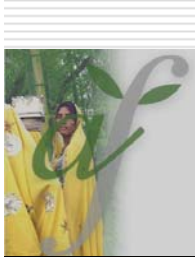
- French Embassy
- ADEME
- Chief Minister, Haryana
- Minister of Power, Haryana
- Financial Secretary, Dept of Renewable Energy, Haryana
- Deputy Commissioner, Gurgaon
- Swedish Embassy
- CEO, TATA BP Solar
- CEO, SuKam



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Energy Centre

...self sustainability

Strategic steps:

- Getting corporates on board - CSR, events
- Independent of government financial support
- Converting shop into CC mitigation and adaptation shop – giving more choice to consumer
- Initiating a café to serve as a meeting ground
- Improved infrastructure
- Regular events

*.....idea is to get people to revisit;
make it an evolving place*



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Improved facilities





CC adaptation and mitigation products



Energy Centre

...challenges

- Self sustainable to raise revenues for large projects
- Convert to profit centre to enable long term growth
- Encourage corporates to contribute financially
- Make it a one stop place for information
- Offer handholding between RE companies and students for career options
- Creation of projects on RE and energy efficiency for school children

Think Globally, Act Locally



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Energy Centre

...learnings

- BEE to create a **brand name** for such centres
- Have an **monthly calendar** of events – now in place
- Creation of **RGREP logo**
- Creation of **handouts/ flyers**
- Registration of a **website** – www.energycentre.in





RGREP

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It has been set up to disseminate information on renewable energy technologies.

The building is a solar passive building and demonstrates several green architecture features.

The Campus is off-grid generating the required electricity by solar energy.

Facilities:

- 1.6 acres of campus area.
- Well maintained lawn space
- 2 Training rooms, with the capacity of 25 people. Equipped with projector, TV and sound system
- Roots - A low carbon slow food cafe

Contact Us

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RGREP

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Web: www.energycentre.in

Add Value to Your Event!



Workshops...

CSR Events...



Movie Screenings...

Talks & Trainings...



Music...

School Visits...



Slow Food Cafe...

Organize Your Events @ RGREP

RGREP

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www.energycentre.in



An Initiative of
State Govt. of Haryana

Visit the Energy Centre

(An off-grid building generating electricity from Sun!
- 10 kW solar power generation)

- Learn about various renewable energy generation methods by operating models - Wind, Solar, Biomass

- Attend interactive trainings, workshops on energy efficiency & importance of Renewable Energy

- See musicals & documentary films on environment

- Play the energy quiz

- Ride solar cars



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www.advit.org

Knowledge Partner

GREEN STRATOS

www.greenstratos.com

Rajiv Gandhi Renewable Energy Park (RGREP)

Leisure Valley, City Centre, Sector-29, Gurgaon-122001, Email: info@energycentre.in,
Web: www.energycentre.in, For details, call us at 0124- 2575616



Focus on Climate Change Mitigation & Adaptation through Renewable Energy options

- Awareness Camps & Outreach Programmes on Renewable Energy
- Community led Drives on Energy Efficiency
- Bringing Govt. initiatives to Community level
- Implementing CSR initiatives for Corporates
- Platform for Industries to Exhibit Renewable Energy & Energy Efficiency products
- Training programmes for Industry

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Knowledge Partner

GREEN STRATOS
www.greenstratos.com

For details, call us at 0124- 2575616

Activities

- Solar Car Rides
- Film Screenings
- Energy Festivals
- School Visits
- Theatre/Music/Dance Evenings



- Workshops

- * Solar Cooking
- * Waste Utilisation
- * Kabaad Se Jugaad
- * Candle Making
- * Solar Baking
- * Painting
- * Craft
- * Music/Dance



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Organize a **GREEN** Birthday and take a pledge to go renewable at The Energy Centre



Things to do:-

- Watch films on Climate Change
- Ride Solar Cars
- Play Energy Games
- Eat Low Carbon Food
- Paint Bird-Houses
- Make Puppets
- Plant a Tree

and much more...

for more info write to mathangi@energycentre.in

birthday

Media Partner

suburb
The only Lifestyle & Infotainment
magazine on GURGAON!