

ANNUAL ASSESSMENT STATUS REPORT

Name of the School : School of Energy and Environmental Studies

Year of Report : 2011-12

Part A:

The plan of action chalked out by the IQAC in the beginning of the year towards quality enhancement and the outcome achieved by the end of the year.

The IQAC committee of School planned the following activities for the year July, 2011 to June 2012.

1. Academic Activities:

a. Curricular Aspects

1. This year Course of M.B.A (Energy Management-with specialization in Power, Industrial/ Building Energy Conservation and Environment) may be started after adding required facilities and completing the all formalities.
2. Revision and modifications in Syllabus.

Action Taken:

- | |
|---|
| <ul style="list-style-type: none">• Final Syllabus/Curriculums of M.B.A (Energy Management) is approved in BOS and in process for further formalities by University.• Syllabus of M. Phil was modified according to UGC guidelines and in view of New Ordinance.• Syllabus of M. Tech was modified. |
| <ul style="list-style-type: none">• Copies enclosed. <p style="text-align: right;">Annexure I</p> |

b. Teaching-Learning and Evaluation

In continuation of last year plan, the following activities/ works to be done with required modifications.

1. Up gradation in Power Point Presentations.
2. Up gradation of notes for distribution to students before the topic taught in the class.
3. Development of new assignments/ problems/ seminar for students. One assignments/ problems/ seminar in fortnight should be given in each subject taught.
4. Examination and results should be finished up to 30th , June-2011
5. Commuter program shall be prepared for feedback.
6. Feedback from stakeholders should be collected by sending the e-mails or during their visit to department.

Action Taken:

- The Power Points Presentations were upgraded and loaded in computers.
- Hard copies of PPT's were distributed.
- New assignments/ problems/ seminar were developed and distributed among the students.
- Examination results were declared in time.
- Commuter program for feedback of are under progress.
- Students Gone to the field visits and new sites were added in the old list of Field visits.
- Feedback from students were taken for each subject and analyzed.
- Parents – Teacher Association was organized on 13-8-2010 at Seminar Hall, SEES, DAVV, Indore. Unfortunately no patents were turn up, in spite of continuous effort made by the SEES, IQAC committee

Copies enclosed.**Annexure I****c. Research Activities**

1. Two papers should be communicated by each teacher as individual or with other researchers in Journals of good Impact Factors
2. New Research Fields for Algae to Fuel production and Horizontal gasification (100% bio-fuel based engine) would be initiated.
3. New Research equipments should be procured.
4. Minimum Two workshops / seminars/ conference should be planned in this year.

Action Taken:

- Each Faculty member has published/communicated more than two research papers in International Journals having good Impact Factors as targeted last academic year. Some papers are under process in Journals. Apart from that number of papers has been presented by the faculty in the seminar/ workshop.
- Two Research Projects worth of Rs. 25.4 & 9.81 Lakhs were received from DST and UGC respectively.
- All formality for purchase of new equipment of worth nearly 9.2 Lakhs was completed, except EC approval. Other equipment would be purchased in next year.
- Due to other responsibilities of University and assignment no any workshops / seminars/ conference could be conducted, however faculty attended number of seminar/ workshop and presented paper.

Copies enclosed**Annexure I**

d. Consultancy Activities

1. The students of final year should also be involved to develop the confidence and train in all practical aspects of the Energy audit and conservation in different utilities. Five Energy Audit and Energy Management Projects in Industries, Commercial and Residential Building sectors should be completed in year 2010-11.
2. Renewable energy systems for power generation and water heating would be installed at least in one collage/ University department. Design to installation work would be done for the same.
3. One Consultancy projects on Building design based on passive architecture features should be prepared and applied in the field.

Action Taken:

<ul style="list-style-type: none">• Energy Audits of Fifty four hotels of MP State Tourism Department were completed.• 10 kW PV system and 24000 L /Day solar hot water systems were installed in the building and hostel of Delhi Collage under the monitoring of the department.• PV power pack for 55 kW at 8 University Departments was sanctioned by UGC, tender was opened and further process is under progress.
Copies enclosed Annexure I

2. Infrastructure

- a. Laboratory would be upgraded with new extension/ partition to make them better.
- b. Last year target of Design and Construct earth Air Tunnel/ Pipe system as a demo and experimental unit for students would be taken this year.
- c. Design and Construct another Passive cooling tower for cooling of the building as a demo and experimental unit for students.

Action Taken:

<ul style="list-style-type: none">• New testing equipments are added for better measurements.• Design and Construct another Passive cooling tower for cooling of the building was not completed due over load on faculty on other University activities.• Earth Air Tunnel/Pipe system and Passive cooling tower was not completed due over load on faculty on other University activities. <p>Copies enclosed</p>
Annexure II

3. Library: Learning Resource

New books published and DVD's issued in market in 2011-12 should be purchased with the relevant contents to energy and environment. It was also decided to purchase some Journals and other famous books.

Action Taken:

<ul style="list-style-type: none">• New magazines and journals are added in the departmental library in 2010-11.• Few books were also added, due to the problems in purchasing procedures. It should not be a store item as treated in National Institutes.
List enclosed. III Annexure

4. Student Support and Progression

- a. More scholarships from MNRE, Govt. of India for Ph. D and M. Tech students would be tried.
- b. Review of Student Counseling Cell and Career counseling cell, would be carried out if needed.
- c. Review of Grievance Redresser Cell & Complaints Cell for preventing sexual harassment of women, would be carried out if needed.
- d. Alumni Association website would be up-graded.
- e. Review of Parent-Teacher Association

Action Taken:

<ul style="list-style-type: none">• Ph. D scholarship from MNRE, Govt. of India was not advertise this year by MNRE.• Committees/Cells comprising faculty, staff and student members are working well.• Alumni Association information was loaded in university website
Copies enclosed. Annexure IV

5. Governance and Leadership

Discuss in open house of department meeting for better development of the department. All activities are finished within stipulated time period.

Action Taken:

Feedback is taken for better governance in meetings.

6. Innovative Practices

Quality enhancement in education through Extension Activities and community Services would be increased.

Action Taken:

- Students were engaged in field measurements and preparing the Audit reports.
- Energy Audits of Fifty four hotels of MP State Tourism Department were completed and students were also involved for training them in the field of energy Audit and Energy conservation.
- Students were taken for field visit in different industry such as wind farm, solar installation est. to understand the functioning of real system which is also taught in the class room.

Copies enclosed.

Annexure VI

e. Extension Activities and Community Services

Extension activities in the field of Energy and Environment would be continuing through our sister organization, Centre of Energy Studies and Research. CESR is an autonomous unit for R&D and extension activities in the field of renewable energy and energy conservation, especially in rural areas.

- a. It is planned to carry out the Biogas training Programs in M.P and In Chhattisgarh and other projects to use the all resources available in both units. The training programs are to be planned to complete in year 2011-12.
- b. Awareness program would be continued to promote renewable energy systems like solar systems/Biogas based Power Generation projects.
- c. Scope of testing of fuels, waste water, and solar energy devices should be increased to bring the work from industries/organizations/institutes to ensure the optimum use of equipments and facilities of the both units.

Action Taken:

<ul style="list-style-type: none"> • In view of above set plan, the huge extension work is done in the field.
<p>Copies enclosed. Annexure VI</p>

Part B:

01	Activities reflecting the goals and objectives of the institution	<p><i>The main objectives of the school are:</i></p> <ul style="list-style-type: none"> a. To provide trained manpower with strong engineering and R & D capabilities in the energy and environment related areas like <ul style="list-style-type: none"> 1. Energy efficiency and energy conservation 2. Renewable energy technologies 3. Energy and Environment Audit 4. Energy use and conversion technologies and their impact on environments 5. Energy and environment instrumentation and control systems 6. Cost Benefits analysis of impact of used of conventional and renewable technologies on Environment. 7. Socio-Cultural and behavioral aspects of Energy production and environmental changes 8. Environmental Impact Analysis 9. Resource Assessment and Waste Management b. To provide Auditors/ Managers/Consultants for Energy & Environment. c. To develop and promote technologies which are closer to natural processes. d. To provide testing, calibration and third party certification facilities to industries and other organizations in the field of Energy and Environment. e. To train manpower for developing projects <ul style="list-style-type: none"> i. specifically related to Clean Development Mechanism (CDM). f. To undertake R & D and consultancy work in the energy and environment related fields. g. To introduce to the industry various environment friendly energy efficient technologies and provide help in implementing energy conservation measures
02	New academic program initiated (UG and PG)	PG, MBA in Energy Management
03	Innovations in curricular design and transaction	Courses modified in M. Tech and M. Phil Programs;

04	Inter-disciplinary programmers started	No
05	Examination reforms implemented	As per university rules; Ordinance 31
06	Candidates qualified NET/SLET/GATE etc.	02 NET, 1. Mr. Aporva Rai M Phil (Energy & Environment) 2. Mr. Vinay Kr Singh M Phil (Energy & Environment)
07.	Initiative towards faculty development programme	Faculty attended International and National conferences /workshops/seminars
08	Total number of seminars/workshops conducted	Nil
09	Research projects a) Newly implemented b) Completed	04 02 Annexure I
10.	Patents generated if any	Nil
11.	New collaborative research program	Nil
12.	Research grants received from various agencies	65.97 lakhs; MNRE, New Delhi, DST, New Delhi, UGC, Delhi & MPUVN, Bhopal
13	Details of research scholars	Ph. D Thesis Awarded : 02 Ph. D Thesis Submitted : 02 Ph. D Thesis Pursuing : 12 Annexure I
14.	Citation index of faculty members and impact factor	1. Dr S P Singh 2. Dr R N Singh Impact Factor: 4.84 3. Dr. Rubina Chaudhary Impact Factor: 1.27
15	Honors/Awards to the faculty	Nil
16	Internal resources generated	M. Tech- Energy Management (DE) in Self Finance Rs. 19.80 lakhs
17.	Details of departments getting SAP, FIST, etc assistance/recognition	Nil
18.	Community services	Annexure I
19.	Teachers and officers newly recruited	No
20.	Teaching-Non-teaching staff ratio	2:1
21.	Improvements in the library services	Computerization of books is completed and Networking with Main library and other departments is also completed.

		Annexure 1
22.	New books/journals subscribed and their Value	Nil
23.	Courses in Which Student Assessment of Teachers is introduced and the action taken on student feedback.	Feedback was taken for all courses taught in the year. Feedback was found excellent for all teachers in all respect. Annexure I
24.	Unit Cost of Education.	<u>Regular Courses:</u> Rs. 27842/- (Rs./Student/Year) M. Tech Energy Management M. Phil Energy & Environment <u>Self Finance :</u> Rs.15,000 (Rs./Student/Year) M. Tech -Energy Management (Distance Education)
25.	Computerization and Administration and the process of Admissions and examination, result issue of certificates.	Computerization of admission and Results preparation was completed and used now. Admission Forms are Filled through Online Process (MP online web used) Administration: Head looks after the administrative work of School and responsibilities are decentralized among the teachers.
26	Increase in the infrastructural facilities.	Nil
27.	Technology up gradation.	Digital documentation available
28	Computer and internet excess and training to teacher and students.	Computer and Internet is available 24 hrs for the teachers and students. All are already trained.
29.	Financial aid to students.	02 Gate Scholarship for M. Tech (regular) students are disbursed this year. SC/ST candidates get scholarship as per govt. rules.
30.	Activities and support from the Alumni Association.	Alumni association is formed and a website is used to collect all students at one forum. Alumni meet was not held last year. Old student helps in getting training/Job of new students.
31.	Activities and support from the parent Teacher Association.	Formation of Association was done, but Parents seems to be not interested in participating in activities of the school. The reason may be maturity of Students at P.G level and time required to come from distant places for any activity in School.
32.	Health Services.	Health care center in the campus providing the medical facilities under the supervision of experienced and qualified doctors all students, faculty members and staff.
33.	Performance in support activities.	Gymnasium hall for Indoor games Open Grounds for outdoor games

34.	Incentives to outstanding sports persons.	University takes care of these persons
35.	Students Achievements and awards.	Nil
36.	Activities of the Guidance and Counseling Units.	Regular guidance and counseling is provided to students by Faculty members and Experts coming from different organizations.
37.	Placements services provided to student.	Head and Faculty members efforts and suggest the students for suitable positions in different energy and environment related organizations. Placement is 100% in regular courses except 0.5 % try for higher education.
38	Development programme's for Non- teaching staff.	Training and facilities of computer and Internet is provided. Staff members are participating in games at university and state level. Ms. Manju Soni (Employee) owned 1 st prize in MP higher secondary commissioner Teacher/Officer/Employee State Level- Inter University Tournament completion.
39.	Healthy practices of the institution.	Group and participatory activities in all academic, research and in conducting/organize seminars/workshops/conferences etc. All facilities are provided to faculty, staff and non teaching staff to carry out work smoothly.
40	Linkages developed with National/ International, Academic/Research bodies.	<ol style="list-style-type: none"> 1. Academic and Research MoU was done with Kun Shan University, Tainan, Taiwan. Both side faculty exchanges are continuing. 2. Faculty Members are Reviewers of National and International Journals. 3. Member of Expert Committee for promotion of Biomass based Cook Stove at MP state Agro Industries Development Corporation Ltd (Dr. R N Singh). 4. Member of inspection committee for approval of MSW courses at Bherulal Patidar Government Under graduate Collage Mahu (Dr. R N Singh). 5. Resources person at International Conference "SOLARIS 2012 organized by BHU, Varanasi (Dr. S P Singh) 6. Nominated by MNRE, GOI, New Delhi as Consultant/ Expert for National Solar City Projects in India (Dr. S P Singh). 7. Nominated as member for Constitution of State level registration committee for recyclers/ re-processors under hazardous waste rule 2008 for the year of 2011-14 (Dr. Rubina Chaudhary)
41.	Any other relevant information the institution wishes to add	<ol style="list-style-type: none"> 1. Unique Course structure with in line of latest development in the Field of Energy Conservation, Renewable Energy Systems and Environment. 2. Energy audits in Industries and buildings are a part of

		<p>teaching and developing work skill enhancement of Students.</p> <ol style="list-style-type: none"> 3. Real System Design applications are discussed and a strong part of the curriculum. 4. Skill Development programs for our students are run on CDM, Green Productivity, Climate Change and Energy use impacts on Environment. 5. Experienced and dedicated Faculty 6. Well equipped laboratories for students and for Research 7. Eminent Expert Lectures of the country 8. Excellent Computerized Departmental Library Facilities 9. Excellent Infrastructure with <ol style="list-style-type: none"> a. First Energy Efficient Building is designed and constructed in MP. b. Women rest room is added. c. 5 kW solar PV system to meet all electrical need of the school except few equipments d. Passive Cooling Tower to provide cooling to whole Building in Summer e. No lighting needs in building at all place in day time. 10. Three Stage Teaching Methodology <ol style="list-style-type: none"> a. Class Room Teaching: Power Point Presentation/Overhead b. Projector/Black Board Teaching c. On Site Teaching: Visits to Actual Systems in the field and in Industries at alternative Saturdays d. Audio-Visual Teaching: DVD^s/CD^s/Videos on the technical topics are shown as a part of curriculum.
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Part C: Detail the plans of the institution for 2012-13:

The IQAC committee of School planned the following activities for the year July, 2012 to June 2013.

1. Academic Activities:

A. Curricular Aspects

- a. This year Course of M.B.A (Energy Management) Regular and distance mode with Specialization in Energy Conservation may be started after adding required facilities and completing all the formalities.
- b. M. Sc in **Energy and Environment** may be started in next year after approval & completing all the formalities.
- c. Revision and modifications in Syllabus.

B. Teaching-Learning and Evaluation

In continuation of last year plan, the following activities/ work to be done with required modifications.

- a. Up gradation in Power Point Presentations.
- b. Up gradation of notes for distribution to students before the topic taught in the class.
- c. Up gradation of laboratory and Manuals
- d. Development of new assignments/ problems/ seminar for students. One assignments/ problems/ seminar in fortnight should be given in each subject taught.
- e. Examination and results should be finished up to 30th , June-2013
- f. Commuter program shall be prepared for feedback.
- g. Feedback from stakeholders should be collected by sending the e-mails or during their visit to department.

C. Research Activities

- a. Two papers should be communicated by each teacher as individual or with other researchers in Journals of good Impact Factors.
- b. New Research Fields for Impact of crop residue burning on the ambient aerosol and soil would be initiated
- c. New Research equipments should be procured.
- d. Minimum One workshop / seminars/ conference should be planned in this year.

D. Consultancy Activities

- a. Energy Audit and Energy Conservation Projects in Industries, Commercial and Residential Building sectors.
- b. Third Party Verification for various schemes implemented by the different agencies

2. Infrastructure

- a. Laboratory would be upgraded with new extension/ partition to make them better.
- b. Last year target of Design and Construct earth Air Tunnel/ Pipe system as a demo and experimental unit for students would be taken this year.
- c. Design and Construct another Passive cooling tower for cooling of the building as a demo and experimental unit for students.

3. Library: Learning Resource

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4. Student Support and Progression

- a. More scholarships from MNRE, Govt. of India and other sponsoring agency for Ph. D and M. Tech students would be tried.
- b. Review of Student Counseling Cell and Career counseling cell, would be carried out if needed.
- c. Review of Grievance Redresser Cell & Complaints Cell for preventing sexual harassment of women, would be carried out if needed.
- d. Alumni Association website would be up-graded.

5. Governance and Leadership

Discuss in open house of department meeting for better development of the department. All activities are finished within stipulated time period.

6. Innovative Practices

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- b. Awareness program would be continued to promote renewable energy systems like solar systems/Biogas based Power Generation projects.
- c. Scope of testing of fuels, waste water, and solar energy devices should be increased to bring the work from industries/organizations/institutes to ensure the optimum use of equipments and facilities of the both units.

(Dr. S.P. Singh)
Head

Annexure I

Academic Activities
<ol style="list-style-type: none"> a. Syllabus b. Feedback from students c. Field visits list

- d. Feedback from stakeholders (**Not Included**)
- e. Feedback from parents (**Not Included**)
- f. Research and Development Activities
- g. Consultancy Activities

List of Field Visits of year 2011-2012

Sr. No.	Date	Companies name
1	8-8-2011	Rayon Applied Engineers Ltd., Indore
2	30-9-2011	Municipal Water Treatment Plant, Indore
3	27-8-2011	400 Kv Sub-Station, Indore
4	15-10-2011	Enercon Wind Farm Ltd., Dewas
5	4-10-2011	Tata International Ltd., Dewas
6	4-11-2011	A2z Infrastructure Ltd.(Msw Processing Division), Indore
7	21-11-2011	Omkareswar Hydro Power Plant, Omkareswar
8	23-01-2012	Pluton Cement Pvt. Ltd., Dhar
9	14-02-2012	Century Yarns & Denim Ltd., Khargaon
10	25-02-2012	Lloyd Insulations (I) Ltd., Pithampur
11	11-2-2012	Barli Development Institute For Rural Women

Research and Development Activities

1. List of Research Papers Published /Communicated
2. Ph. D Awarded/Submitted/Ongoing
3. Guiding/Guided Major Projects M. Tech. and M. Phil
4. List Of Workshop/Seminars/Conference Organized/Attended
5. Projects And Grant Received
6. Equipment Purchased

1. List of Research Papers Published /Communicated

INTERNATIONAL JOURNALS

1. Singh, R N and Sharma Shaishav (2012) "Development of suitable Photobioreactor for Algae production - A Review" Renewable & Sustainable Energy Reviews 16 (1), PP: 2347– 2353 (**Impact factor 4.82**).
2. Rajendra Singh Thakur and Rubina Chaudhary (2012) Photocatalytic Treatment of Industrial Wastewater Containing Chromium as a Model Pollutant Effect on

Process Parameters and Kinetically Studies" J. Renewable Sustainable Energy (Accepted,)

3. Shukti Tomar, Rana Pratap Singh and Rubina Chaudhary (2012) Environmental monitoring of hazardous waste disposal Site – a case study, International journal of Science and Nature (Society of Science and Nature, India), I.J.S.N., VOL. 2(4) (2011): 837-843 ,ISSN :2229 – 6441 (**Impact factor 1.82**).

NATIONAL JOURNALS

1. Divya Khale, Rubina Chaudhary and Smita Badur (2011) Leaching Behavior and Effectiveness of Curing days (7& 28) of Solidified/Stabilized Fly Ash based Geopolymer (multi-metal bearing sludge): Experimental and Modeling Study, Journal of Environmental Science and Engineering NEERI (In Press).
2. Smita Badur and Rubina Chaudhary (2012) Treatment Effectiveness of Solidification/Stabilization on Heavy Metal Containing Waste” International journal of Engineering Sciences and Technology, (Accepted)

INTERNATIONAL CONFERENCES

1. **Singh R N** and Sharma Shaishav (2011) “Development of suitable Photobioreactor for Algae production - A review” Poster presented at International Workshop on Algae Technology, hydrogen production and use of algae biomass, held at Kolkata on 17-18 October 2011.

NATIONAL CONFERENCES

1. Singh R N and Sharma Shaishav (2012) “Different approaches of Biohydrogen production from Algae: A review ” presented in National Symposium on Green Chemistry & Technology for Sustainable Development held at Department of Chemical Engineering, G. H. Patel College of Engineering & Technology, Vallabh Vidyanagar, Gujarat on 24-25 February 2012
2. Singh R N and Trpathi Satyendra (2012) “A Review on Crop residue burning and other management options for crop residue” presented in National Symposium on Green Chemistry & Technology for Sustainable Development held at Department of Chemical Engineering, G. H. Patel College of Engineering & Technology, Vallabh Vidyanagar, Gujarat on 24-25 February 2012.
3. Tripathi Satyendra and Singh R.N. (2011) “Crop residue burning is a boon or curse for soil- A Review” presented in National conference on Recent Advancements in science, Technology & Management, held at Vindhya Institute of Technology, Indore on 12-13 November 2011,

2. **Ph. D. Awarded/Submitted/Ongoing**

Ph.D. Thesis Awarded

1. Performance Evaluation of Conversion Process of Biomass to Bio Oil Production through Fast Pyrolysis Technique. (Ashish Pratap Singh Chouhan).
2. Assessment Prediction and Techno Economical Analysis of New Developed Concrete by Utilizing Heavy Metals Bearing Hazardous Sludge (Ms. Smita Badur).
3. Assessment Prediction And Techno Economical Analysis Of New Developed Concrete By Utilizing Heavy Metals Bearing Hazardous Sludge (Mr. Rajendra Singh Thakur)

Ph.D. Thesis Submitted:

1. Design, development and performance evaluation of packed bed reactor for dung and poultry waste. (Smt. Prerana Pandey)
2. Design, development and performance evaluation of a concentrator based solar dryers and hybrid dryers of drying leafs of tendu (*diospyros melonoxylon*) plants, Amla Fruit (*Phyllanthus emblica*) & red Chili (*Capsicum annum*) (Biplab Paul).

Ph.D. Thesis Ongoing:

1. Effectiveness of Shading in Reducing Energy Requirements of Buildings in Composite Climate. (Dipti Vyas)
2. Design, development and evaluation of horizontal gasifier for biomass material (Mr. Jay Balwansi)
3. Optimization And Assessment Of Solar Photocatalytic Treatment Of Municipal Wastewaters(Chandan Singh)
4. Impact assessment study of Municipal Solid Waste Disposal site on Environmental components and climate in relation to seasonal variations (Ms Shukti Tomar)
5. To Study The Utilization Of Leather Solid Waste And Fly Ash Through Chemical Treatment To Develop Composite Material (Mr. Rana Pratap Singh)
6. Studies on the preparation, characterization and development of bio-compatible materials using collagen hydrolysis ate obtained from chrome shavings through chemo- enzymatic pathway. (Ms. Anupama Pati)
7. A Solar Concentrator Based Indirect Drying System for Grapes (K.S.Jairaj)

8. Distributed Power Generation and Bio-manure Production in Madhya Pradesh Through Optimum Mix of Renewable Energy Sources Including Plantation of Petro – Crops on Available Wasteland (Bhawani Prasad Gupta).
9. Investigations on Algae species and its growth for Biohydrogen production and their applications (Shaishav Sharma)
10. Impact of crop residue burning on the ambient aerosol and soil of rural Indore (Satendra Tripathi).
11. Design, development and performance evaluation of energy efficient hybrid air-conditioning system (Devendra Kumar Joshi)
12. Identification development and performance evaluation of organic phase change storage materials for cooling load reduction in buildings (Mr Vijay Bhat)
13. Design and development of automatic sun tracking systems for optimising the energy gain of a solar photovoltaic system (Mr. K. Srikant)

3. Guided Major Projects of M. Tech. and M. Phil

S.No.	Name of Student	Title of the Projects
M. Tech Students (Regular)		
1.	Kaushal Lodaya	Energy Simulation of Commercial Building
2.	Sohail Khan Pathan	Energy Audit at Pharmaceutical Industry
3.	Laxmikant Gaikward	Performance Analysis of 40 MW Solar P.V Plant
4	Prashant Nene	Detailed Project Management Cycle for renewable Energy Certification (REC) & Power Trading
5	Neha Pathak	Techno - Economic Feasibility of Grid Connected 20 MW Solar PV Power Plant
6	Chinten Singh Parmar	Detail Energy Audit of Commercial building
7	Madhav Kothari	Energy Audit of Engineering Plant and Radiator Industry
8	Umang Gupta	Energy Audit of Power grid Corporation of India Limited
9	Shank Mandovra	Energy Simulation of Existing Building
10	Kaushik Paul	Detail Energy Audit, Conservation and Opportunities at Kirloskar Oil Engine Plant, Kolhapur
11	Mangesh Kunbhar	Detailed HVAC Energy Audit of Thermal Power Plant
12	Kanungo Anjali	To design Grid interactive Roof Top Solar PV Power Plant
13	Nandanpawar Aditya	Validation of CDM Program Activity at Skol breweries Ltd. (CPA 015)
14	Patel Richa	Loss Analysis of Grid Connected 1.1 MWp Solar PV Plant
15.	Rangwani Bharat	Energy Audit at Uniparts India Ltd. And Munjal Showa Ltd

M. Tech Students (DE)

S.N.	Name of Student	Project Title
1	Parul Chaudhary	Designing of automatic power factor correction system.
2	Govind Sharan Singh	Energy submitted through efficient operations and proper maintenance.
3	Ayan Ganguly	Grid interactive 14 kWp Roof top system: Design and Insatallation
4	Preeti Parmar	Energy audit of M.P. Dyechem Industries Pvt. Ltd.
5	Nipun Pharlia	CW discharge channel of a thermal power plant as a prospective source of small hydro power generation.
6	Ajay Kumar Mishra	Energy conservation opportunities in 210 MW(Unit IV) including Coal handling plant of Sanjay Gandhi Thermal Power Station, Birsinghpur (M.P.)
7	Sanjeev Kumar	Energy Audit of Radha Govind Group of Institutions (RGGI), Meerut
8	Sushil Chandra	Improvement in Efficiency of solar Panel Using Tracker System
9	Swati Bajpai	Design of solar inverter
10	Manisha Gour	Impact of Recycle Ratio on Aeration Tank Performance Energy Conservation opportunities in STP, Delawas, Jaipur
11	Mr. Abhishek Gupta	Load Gaining Scheme of Transformers at EHV Sub Station
12	Mr. Abhishek Rai	Energy Audit if Steam & Condensate at Sharda Solvent Limited – Shivpuri & Evaluation of Biolers Efficiency (11 No's) of Oil Division – Bhaskar Group
13	Mr. Anil Kumar Berwal	Combustion and Performance Characteristics Evaluation of Diesel Engine Fueled With Pre-Heated Jatropa Oil
14	Mr. Ashish Pratap Singh	Pathari Power Plant: Shortcoming & Suggestions for Improvement of Efficiency with Mathematical Approach
15	Mr. Amit Kumar	Energy Auditing and Energy Conservation Opportunities in Street Lightening of Nagar Nigam Haridwar Uttarakhand
16	Mr. Amit Gupta	Climate Change Mitigation – Technical Perspective
17	Ms. Jyoti Bajpai	Design & Development of Wireless based Data Collection RF System & Wireless Transmission of Energy
18	Mr. Mohit Kumar Sharma	Study of Parametric Sensitivity of Downdraft Gasifier using Thermodynamic and CFD modeling Techniques
19	Mr. Manish Thakre	Power Quality Audit at Pipes & Tubes Manufacturing Plant
20	Mr. Sakthivel.G	Detailed Energy Audit & Energy Conservation Measures for Tea Industries
21	Mr. Satish kumar Shejkar	Evaluation & Analysis of Energy Performance Index of BSNL Telephone Exchange Meghdoot Park, Indore
22	Mr. Sanjay Baliram Bagul	Application and Analysis of Energy Efficient Cooling in BTS And Major Telecom Building
23	Mr. Sachin Mane	Application of Vapour Absorption Heat Pump in the Malt Company India Pvt Ltd. Kashipur Uttarakhand
24	Ms. Neeta Yadav	Electrical Energy Audit of Building of Surya Group of Institution Lucknow
25	Mr. Vijay R.	Energy Simulation of Building for ECBC Compliance a Typical Office Building

26	Atul Kumar Soni	Projection of Electricity Demand and Consumption Pattern in Domestic Sector of Mumbai
27	Jitendra Singh Rajpoot	Energy Auditing of Mantralya Vallabh Bhawan Bhopal, M.P.
28	Zainual Abedin	Energy Conservation in Smithy Shop o& Analysis of wastage of fuel in jaipur city.

4. Research Projects And Grants Received From Various Agencies

S.No	Title Of The Major Research Projects	Funding Agency	Duration	Total Grant
1	Biogas Development and Testing Centre funded by Ministry of Non-conventional Energy Sources, GOI, New Delhi, under the National Biogas and Manure Management Program	Ministry of New and Renewable Energy, Delhi	2011-12	18.22 Lakh
2	Regional Test Centre: Testing of Solar Thermal Devices as per national and International Testing Norms funded by Ministry of Non-conventional Energy Sources, GOI, New Delhi	Ministry of New and Renewable Energy, Delhi	2011-12	14.44 Lakh
3	Design and Development of Horizontal Gasifier for Biomass materials	DST, New Delhi	2011-14	25.4 Lakh
4	Holistic Approach to Utilize Algae for fuel production	UGC, New Delhi	2011-13	7.91 Lakh

5. Membership of professional bodies

1. National Expert For Solar City Development, Panel of Experts, Ministry of New and Renewable Energy, Govt. of India, New Delhi.
2. Member of R & D Committee (RDSPAC), MNRE, Govt. of India
3. Member of Sub-Group under the working Group on New and Renewable Energy (NRE) for “Cooking Energy from Renewables” for the Twelfth Five Year Plan (2012-17). The first meeting to be held on 2nd June, 2011
4. Member Governing Body of JAYPEE University of Engineering & Technology Nominated by His Excellency the Governor of M.P
5. Member of MPCST Governing Body, Govt. of M.P
6. Life member of Solar Energy Society of India (SESI)
7. Life member of National Institute and Industry forum for Energy (NIFE), Indore
8. Life Member, Water works Association(Institutional Member)
9. Chairmen, Board of Studies(BOS), School of Energy and Environmental Studies
10. Life member – Association of Food Scientist and Technologist (India)

11. Life member -- Indian Society of Agricultural Engineering (ISAE

S. No.	Name	Qty	Price, Rs.
1.	8 Channel fixed input data logger	1	21074/
2.	Supply of 4 channel DVR	1	22600/
3.	Auto Hematology Analyzer	1	367500/
4.	Electrolyte Analyzer	1	178819/
5.	Centrifugal machine	1	50479/
6.	Digital LX meter	1	2430/
7.	Digital Thermometer	1	1921/
8.	Access Control	1	3500/
9.	Garmin Make GPS	1	18984/
10.	Type a writing board (big size)	1	12069/
11.	Type a writing board (small size)	1	4785/
12.	HP all in one printer	1	12000/
13.	Mike along office table	1	8116/
14.	Office chair	1	22770/

n Research.

13. Member, Energy Faculty Center for Environment Protection and Research Development (CEPRD), Indore (M.P.)

12. Member
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6. List of Equipment

7. Other Activities

1. Training Course for technicians

S. No.	Course Name	Allocated Target	Target Achieved	Number of Trainees	Venue of the Training	Name of the Agency
1	CCM Refresher Training	5	5	52	Janggir Khandwa Sagar Shivpuri Guna	CREDA MPAGRO MPAGRO MPAGRO MPAGRO
2	Turn-key Workers	2	2	20	BDTC, Centre, Indore	CREDA MPAGRO
3	Staff Training	2	2	20	Sagar, MP	Agriculture department
4	Users	100	52	1800	In different regions of MP and CG	

2. Training Course for Agencies

S.No	Name of the Course	Agency	Requisite Target	Target Achieved	Number of Trainees
1.	CCM Training	CREDA (CG)	1	1	10
2.	CCM Training	MP AGRO	5	5	50
3.	Staff Training	MPAGRO	2	2	20

3. Training for TKW (2 Number)

Sr. No.	Duration of Training	Venue	Agency	No. of trainees
1	05.09.11 to 19.09.11	BDTC, Indore	MP Agro	16
2			CREDA	4
3			MPRLP	-

4. Staff Training Allocated under NBMMP

Sr No	Duration of the training	Venue	Block	District	Agency	No. of Trainees
1	26.03.12 to 27.03.12	DDA office, Sagar	Sagar	Sagar	Agriculture Dept. MP	10
2	26.03.12 to 27.03.12	DDA office, Sagar	Sagar	Sagar	Agriculture Dept. MP	10

5. Design and Developed of Domestic size Biogas Storage Balloon



6. Testing of Solar devices

Sr. No.	Solar Devices	Number
1	Flat Plate Collectors	19
2	Evacuated Tube Collector Systems	20
3	Flat Plate Collector Systems	3
4	Box Type Solar Cookers	5
5	Parabolic Cookers (SK-14)	4

Annexure II

Infrastructure
a. Biomass Gasification Lab
b. Solar Thermal Testing Lab Up gradation
c. New Garden Development

Biomass gasification Lab



New Garden Developed



Annexure III

Library: Learning Resources	
a.	List of books purchased in 2011-12
b.	List of journals purchased in 2011-12
c.	List of magazines purchased in 2011-12
d.	CD's and DVD's purchased in 2011-12

List of Magazines

Sr. No.	Name of the magazine
01	Dream
02	Terragreen
03	Teri News Wire
04	Lighting India
05	Competition Affairs
06	Electra
07	Resource
08	The Bulletin on Energy Efficiency
09	Akshay Urja
10	Cane Cogen India
11	Green Energy
12	Cooling India
13	Tide
14	Biofuels India
15	Cooling India
16	Vastu News
17	Down to Earth
18	Paravaran Urja Times
19	German News
20	Ireda News
21	Sustainable Environments
22	Electrical India

List of Journals

01	SESI
02	Journal of Indian Water Works Association

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| <ul style="list-style-type: none">a. Student Counseling Cell and Career Counseling cell Formation (mentioned in 20011-12 report)b. Grievance Redressal Cell Formation & Complaints Cell Formation or preventing sexual harassment of womenc. Alumni Association websited. Parent-Teacher Association |
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Annexure V

Innovative Practices

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| <ul style="list-style-type: none">a. Participation of students in quality improvementsb. Stakeholder perception (not documented)c. Extension and Community Services |
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Field Visit Photo





Extension Activities and Community Services



