

**Evaluative Report of the Department
School of Energy and Environmental Studies**

1. **Name of the Department** : School of Energy and Environmental Studies
2. **Year of establishment** : 1990
3. **Is the Department part of a School/Faculty of the university?**

: Faculty of Engineering Sciences

4. **Names of programmes offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., D.Sc., D. Lit., etc.)**

Programmes	Number	Course/Subjects
PG	01	M. Tech (Energy Management)
M. Phil.	01	Energy and Environment
Ph.D.	02	a. Energy b. Energy and Environment
Total	04	

5. **Interdisciplinary programmes and departments involved**

All courses are Interdisciplinary and department involved in Research a& development. Testing, Consultancy and extension programmes related to Energy and Environment.

6. **Courses in collaboration with other universities, industries, foreign institutions, etc.**

No

7. **Details of programmes discontinued, if any, with reasons**

M. Tech (Energy Management) in Distance Mode was discontinued due to MHRD Circular.

8. Examination System: Annual/Semester/Trimester/Choice Based Credit System

Semester System

9. Participation of the department in the courses offered by other departments

No

10. Number of teaching posts sanctioned, filled and actual (Professors/Associate Professors/Asst. Professors/others)

	Sanctioned	Filled	Actual (including CAS & MPS)
Professor	03	01	02
Associate Professors	02	01	01
Asst. Professors	02	01	00
Others	04 Contract Lectures against Vacant Posts	04	04

11. Faculty profile with name, qualification, designation, area of specialization, experience and research under guidance

Name Qualification Designation	Specialization	No. of Years of Experience	No. of Ph.D. Students guided for the last 4 years
Dr S. P. Singh Ph. D Professor	<ul style="list-style-type: none">• Green Buildings/ Solar Passive Buildings• Evaporative Air Conditioning• Solar Thermal Systems• Biomass Conversion Technologies• Decentralized Energy Planning for Rural Development• Energy and Environmental Management	30	05

Name Qualification Designation	Specialization	No. of Years of Experience	No. of Ph.D. Students guided for the last 4 years
Dr R. N. Singh Ph. D Professor	<ul style="list-style-type: none"> • Gasification • Renewable Energy 	18	00
Dr Rubina Chaudhary Ph. D Associate Professor	<ul style="list-style-type: none"> • Hazardous Waste Management • Water and Waste Water Treatment Technologies • Solar Detoxification 	22	03

12. List of senior Visiting Fellows, adjunct faculty, emeritus professors

S.No	Expert Name	Specialization	Address
1	Mr. Sudhir Mohan	Present and Future application of Renewable Energy Systems	Scientist-G / Advisor ; Ministry of New and Renewable Energy, GOI; Remote Village Electrification Programme – I Office : Block No. 14, CGO Complex, Lodi Road, New Delhi Tel. : 24360404, Fax : 24361298 Off:+91-11- 24362267, Res: +91-11-26160318 Email: sudhirmohan@nic.in
2	Mr. A.V. Dinesh	Energy Conservation in Electrical Systems	Devki Energy Consultancy Pvt. Ltd.; 405, Ivory Terrace, R.C. Dutta Road, Alkapuri , Vadodara – 390007 Phone: -0265-2354813, 2330636, 2354813 (Fax), Email- devkienergy@sify.com
3	Prof. R.H. Siddique	Fundamentals of Biological Treatment and Advanced Biological System - "UASB" Anaerobic Process – UASB and their applications”	Dara – Hasan Muzammil Manzil Civil Lines Dodhpur; Aligarh- 202002 0571-2702918

4	Mr. O.P. Mittal	(i) Energy Saving Potential in Cement Processing (ii) Energy Saving Opportunity in Services Used in Cement Industry”	M.D., Pluton Cements 112, Janaki Nagar, Indore Phone – 2461633, 246613, Mobile No. 98270-27992
5	Mr. Shantanu Bandhopadhyaya	Process Integration ,Pinch Analysis Industrial Energy Conservation Modeling and Simulation of Processes	Energy Systems Engineering; Indian Institute of Technology Mumbai, Powai, Mumbai Postcode 400076 Maharashtra, INDIA Email Id. head.ese@iitb.ac.in Phone+91-22-25767883 Fax+91-22-25726875, Mob. 9869321000
6	Mr. Roy Choudhary	About Metal Processing and energy conservation opportunities in Metal Processing Industries”	Manager, Hindustan Aeronautics Ltd. Post Box No. 1791, Bangalore; Ph.080-25234610, 25227894
7	Dr. S. B. Sadananda	Energy Conservation measures one each in any of the three designated industries	Chief Consultant, NPC, Novelty Chambers, 7 th Floor Grant Road, Mumbai-400007 ; Phone – 022-23071322, 23002924, Fax – 022- 23073323 (R) 022-26651780 Email – npcmum@vsnl.net
8	Mr. Sumit Goyal	“Explaining the online control systems and the potential of their application in Industries”	General Manager, Connectgals.com; Plot No. 70 A, EHTP, Sector -34, Gurgaon – 122 004, Haryana, Mobile : 09811305468, Ph: 0124- 4129900 Fax: 0124-4129999 Email : sumitg@plgsystel.com
9	Mr. Gajanan Yadav	"Wind Energy Technologies”	Assistant Manager-Service, Enercon (India) Ltd.;41, Shivaji Nagar, Near Sal Tax Office;Dewas-455001 (M.P.);Ph: 07272-253832, Mobile: 9981500612 (R) 07292-505152, Site: 09893304458 Email: gajanan.yadav@enerconindia.net

10	Mr P.K. Saxena	“Hydro Power Plant”	Dy. Manager (Electrical); Narmada Hydroelectric Development Corporation Ltd., Indira Sagar Power Station; PO Narmada Nagar Khandwa 450 119 (MP); Ph: 07323: 284723 Fax: 07323 284723/284080; M: 94259-52521
11	Mr Jai Prakash	“Hydro Power Plant”	Dy. Manager (Electrical); Narmada Hydroelectric Development Corporation Ltd.; Indira Sagar Power Station; PO Narmada Nagar; Khandwa 450 119 (MP) Ph: 07323: 284723 Fax: 07323 284723 / 284080
12	Dr. A.R. Shukla	“Biomass Utilization”	Ministry of New and Renewable Energy, Government of India Remote Village Electrification Programme – I;Office : Block No. 14, CGO Complex, Lodi Road, New Delhi; Tel. : 24362488, (R) 2216-3711, Email : singhalak@nic.in
13	Dr. Rakesh Saxena	Power Electronics, Electrical drives, Digital controls, High voltage	SGSITS;23, Park Road, Indore – 452003;Phone: 0731- 2434095, 0731-2541567 Fax: 2432540;Mobile: 94250-68030
14	Mr Ram Chandra	“Wind Energy and Geothermal Energy”	Regional Director; IGNOU, Regional Centre; 2 nd Floor, Biscomaun Tower, West Gandhi Maidan, Patna-80001, Bihar Ph: 0612-2221538/ 2221541, Email: ignoupt@sanchar.in
15	Prof. J.K. Nayak	Passive solar architecture, Solar thermal systems, Energy Conscious Buildings	Prof. J.K. Nayak Room No. 315;Mechanical Engineering Department; IIT, Bombay Phone (o) 022 – 25767881, jknayak@me.iitb.ac.in
16	Mr M. P. Ramesh	Indian Status of Wind Energy Technology”	Executive Director;Centre for Wind Energy Technology Government of India. Velachery - Tambaram High Road, Pallikaranai, Chennai - 601 302; Phone : +91-44-2246 3982 ;Fax : +91-44-2246 3980, +91-44-2246 3981 Email: ed@cwet.res.in

17	Dr. Arun Kumar	“Indian-status of Mini and Micro Hydel Technology.”	Alternate Hydro Energy Centre; Department of AHEC , Indian Institute of Technology; Roorkee – 247667, Uttaranchal, Email: ahec@iitr.ernet.in Tel: +91-1332-272349, 274860, 285213 Fax: +91-1332-273560
18	Mr J.S. Chaudhary	“Energy Conservation in Oil Extraction”	Shri J.S. Chaudhary; President; Prime Feeds, Prime Plaza, Prime City;Sukhlia, Indore – 452008; Mobile –98266-55441 Email – jschaudhary@yahoo.co.in
19	Prof. V.K.Jain	“Air Pollution Control Technologies for Industrial Applications”	Professor School of Environmental Sciences; Jawaharlal Nehru University New Delhi;9868585788 (M) < vkj0400@mail.jnu.ac.in >
20	Dr. M.G. Gharpure	“Energy Conservation”	Director, Yajna Fuel Services; 5, Jai Shivsiddhi Vinayak Cooperative Housing Society ;G-Floor, Shivaji Nagar, B-Cabin Thane(w)-400602 (Mumbai); Phone (022) 25424983 / 25403070 Fax: (022) 25424983 e- mail yajna_fuel@vsnl.net
21	Mr. A. R. Thiagarajan,	“Pulp and Paper Industry”	Mr. A. R. Thiagarajan,SPB Projects and Consultancy Ltd.;Esvin House , Perungudi,Chennai – 600 096, India Ph: 044-66849300 /66849415 Fax: 055-66849499/24961625 Email: art@spbpc.com psraghunandan@spbpc.com ,
22	Mr. S. K. Nayak,	"Instrumentation, Measurement and Controls for Energy and Environmental Audit”	S.K. Nayak;Sr. Manager; IL & FS Ecosmart Ltd.;Ahmedabad Ph: 079-4020 6255 (Direct);Mob:99090 13148 "SK.Nayak" < sk.nayak@ilfsecosmart.com >
23	Mr. Hemant Nandanpawar	Concept of CDM	National CDM Expert (India) Clean Energy & Climate Change Specialist, Energy, Transport & Water Division;Asian Development Bank (ADB),

			Hyderabad, Ph:+91-66441816,Mobile : +91-9866896615 Avenue, Mandaluyong City, 1550 Metro Manila, Philippines www.adb.org
24	Mr. Manish Chandekar,	“Environmental Management Systems (EMS) and ISO 14001”	Mr. Manish Chandekar,194, Rajaram Nagar, Dewas (M.P.) Mobile: 099811 99675;Ph: 07272-228330 "Dr. Manish Chandekar" manish@ehsconsultants.co.in
25	Mr. S. Padmanaban	"The Development and Current Status of Energy Conservation and Energy Efficiency Movement in India	Senior Energy and Environmental Advisor Office of Energy and Environment & Enterprises.U.S. Agency for International Development; American Embassy Chankyapuri - 110021 ,New Delhi
26	Dr. O.S. Sastry	P.V.Cell (Solar Energy)	Director (PV Testing); Solar Energy Centre ,MNRE; Block No. 14, CGO Complex Lodhi Road, New Delhi – 110003; (M) 92124-79213, (R) 24362155 Email – ossastry@hub.nic.in , sankar_sec@yahoo.co.in
27	Mr.R. Paraman	Energy Auditing Technique	Devki Energy Consultancy Pvt.Ltd.;405,Ivory Terrace R.C. Dutta Road ;Alkapuri, Vadodara- 390007 ; Ph No. 0265-2354813, 2330636, Email- devkienergy@sify.com
28	Dr. A.K. Singh	Thermal Energy Conservation Opportunities in Thermal Power Systems Electrical Power Generation	Electrical Research & Development Association,ERDA, Road,Makarpura Industrial Estate , Vadodra -390010 Gujrat Phone- 0265-2638382, Fax- 0265-2638382, Email- erda@erda.org , dir@erda.org , awadhesh11@yahoo.co.in
29	Dr. S. Kedare	Concentrating Solar Collectors ;Rural application technologies	Adjunct Assistant Professor;IIT, Bombay Ph. No. 22 2576-7835 Fax- +91 22 25726875, 09324288198

30	Dr. Deepak Kaul	“Motivation for Employees”	Professor; Sanghvi Institute of Management & Science Sapphire Twins, 16-17, A.B. Road, 2nd Floor Chautha Sansar office Building; Indore - 452010, Tel.: 0731-3269009, 4214047,
31	Mr A.K. Asthana	Carrier Opportunities for Prospective Energy Auditors and Energy Managers	Group Head (Energy Management); National Productivity Council Productivity House, 5-6, Institution Area; Lodi Road ,New Delhi-110003;Fax No. 24698138 or 24615002
32	Mr.Kamlesh Dillilwar	Thermal Energy Conservation in System	Associate Consultant; Conzerv Systems Pvt. Ltd. India – West 201, Tarunika Apartments ,19, Malaviya Road , Vile Parle- East , Mumbai- 400057
33	Mr Sanjeev Kumar	“Energy Auditing Techniques”	Environmental Services, SGS India Private Limited;Manager- Climate Change Programme; 250, Udyog Vihar, Phase IV, Gurgaon,, Haryana - 122 015, India Mobile: +91 9871794628 Sanjeev.Kumar@sgs.com
34	Mr D.S. Gandhe	“Energy Auditing Techniques”, “Indian Energy Scenario and Codes”	The Institution of Engineers 1332 JM Road, Shivaginagar, Pune (R) 020 -25436892 (M) 98220-26195 Email : gandheds@yahoo.co.in
35	Mr. A.V. Dinesh	“Energy Conservation in Electrical Systems”	Devki Energy Consultancy Pvt. Ltd.405, Ivory Terrace, R.C. Dutta Road, Alkapuri , Vadodara – 390007 Phone: -0265-2354813, 2330636, 2354813 Email- devkienergy@sify.com
36	Mr. Anand Sapre,	“Motivation for Employees”	Mr. Anand Sapre, Professor, IIPS, DAVV, Indore Bypass Road, Manglia Square, Indore (M.P.) 453771 Mobile : 94250-78013
37	Prof. T.C. Kandpal	“Energy Action Planning, and Project Management”	Professor; IIT Delhi ,Hauz Khas New Delhi -110 016 Email - tarak@ces.iitd.ernet.in

38	Dr. Upinder Dhar	“Energy Action Planning, and Project Management”	Director, Institute of Management, Nirma University; Sarkhej-Gandhinagar Highway, Post: Chandlodia, Via: Gota, Ahmedabad - 382 481.Gujarat, India. +91 - 2717 - 241900 to 04. +91 - 2717 – 241916
39	Dr. Ashvini Kumar	Solar Energy	Director (ST);Ministry of New and Renewable Energy; Block No.14, C.G.O. Complex, Lodhi road, New Delhi- Ph: 011-24363546
40	Dr. P. C. Pant	Storage Battery	Scientiste ‘D’ ; Solar Energy Centre, Block 14, CGO complex, Lodi road, New Delhi -110003 Tel: 0124-2579214 Email pcpant@nic.in
41	Dr. S. B. Kedare	“Solar Concentrates Energy Action Planning and Project Management”	Adjunct Assistant Professor;IIT, Bombay Ph. No. +91 22 2576-7835 Fax- +91 22 25726875, 09324288198
42	Dr. J. Mathur	“Energy Conservation in Buildings	Mechanical Engineering Department Malviya National Institute of Technology;Jaipur Phone : (R) 0141-2708764 Mobile – 09414250329, Email : ijotirmay@mint.ac.in
43	Dr. Vishal Garg	“Energy Conservation in Buildings”	Asst. Professor, Course Coordinator (IT for Building Science) IIT, Hyderabad, Ph. No. 040-23001967 Mobile: 09949990900 Email Id vishal@iit.net
44	Mr P.L. Nene	Electricity Act 2004	Ex-Chairman ; MPEB, Indrapuri Colony, Indore
45	Prof. D. Killedar	Treatments and Sedimentation and Coagulation	SGSITS 23, Nehru Park Road; Indore
46	Mr. D.K. Kemkar	"Energy Conservation through Thermal Storage in Air Conditioning Systems "	Kehems Engineering Pvt. Ltd; 303, Kothari; Manor;10, Diamond Colony, New Palasia,Indore Phone – 0731-536624, Email – kehems@sancharnet.in

47	Mr K.K. Chakravarti	“Pulp and Paper Industry”	GTZ Office India; 21, Jor Bagh. New Delhi, 110003, India Tel: +91 11 2460-3832; Email: gtz-indien@gtz.de
48	Dr. N.S. Rathore	“Gasifiers”	Dean : College of Dairy & Food Science Technology, MPUAT , Udaipur - 313001 Ph. +91-294-2470719 (O)+91-09414166961 (Mob) Fax : 0294 2470479 E-Mail: rathoren@rediffmail.com
49	Prof. Kannan. N. Iyer	Heat Transfer	Indian Institute of Technology Bombay, Powai, Mumbai Postcode 400076 Maharashtra, INDIA Phone+91-22-25767544, Fax+91-22-25726875, 25764890 Email: kiyer@iitb.ac.in
50	Mr A.K. Pandey	“Wind Energy Technologies”	Proprietor; Fair Aero Consultant & Technologist; House No. 20, 24 Bungalows, Scheme No. 114, A.B. Road, Indore – 452010 Ph/Fax : 0731-2576764, Mobile –98260-24787, Email – akpandey58@hotmail.com
51	Mr. M.T. Sambandhan	Energy Conservation: Case Studies	Energy Cell; NSIC Technical Service Centre A-JI Industrial Area, Rajkot; Phone – 2387885, (R) 2586639 Email mt_sambandam@rediffmail.com
52	Mr. S. Sridharan	(i) Energy Conservation Opportunities in the Sugar Process in the Industry (ii) Energy Conservation Opportunities in the Process in Pulp & Paper Industry	Engineers and Consultants (P) Ltd. 68A, Porur Kunndrathur High Road Porur, Chennai – 600116 Phone – 044-24827843, 24828532, 24828717-20 Fax – 044-24828531 Email – avantgrade@vsnl.com

13. Percentage of classes taken by temporary faculty – programme-wise information

M. Tech and M. Phil

Years	Semesters	% of classes by visiting faculty M. Tech	% of classes by visiting faculty M. Phil
2007	I	9.2	0
	II	0	0
	III	7.6	
2008	I	17	0
	II	9.2	0
	III	10	
2009	I	8.7	13.6
	II	20 (Contract + visiting)	12.5
	III	7.4	
2010	I	14.5	28.3
	II	20 (Contract +visiting)	0
	III	8.7	
2011	I	17	0
	II	25 (Contract +visiting)	0
	III	8.7	
2012	I	5.5	0
	II	8.7	0
	III	5.5	
2013	I		
	II	8.7	0

S.N.	Academic Session	SEM	Course	Name	Percentage
1	2007-08	III	Energy Conservation (Electrical Systems)	Mr Yogesh Pahariya	63
		III	Electrical Power generation Transmission & distribution	Mr Yogesh Pahariya	64
		I	Instrumentation, Measurements and Controls	Mr Ravi Sindal	91
		III	Energy Conservation Lab	Mr.VVS Murthi	67
2	2008-09	II	Energy Conservation (Electrical Systems)	Prof Y. Pahariya	73
		I	Information Technology For Energy Managers and energy Soft wares	Mahendra Joshi	96
		III	Energy Conservation (Electrical Systems)	Mr Yogesh Pahariya	63
		I	Instrumentation, Measurements and Controls	Mr. Ravi Sindal	79
3	2009-10	II	Energy Conservation (Electrical Systems)	Mr Yogesh Pahariya	100
		II	Instrumentation, Measurements and Controls	Mr D.S Bais	40
		II	Instrumentation, Measurements and Controls	Mr Parag Parandkar	33
4	2010-11	II	Engineering Thermodynamics : Quality & Quantity Aspects	Mr. P. Yadav	100
		I	Mass transfer	Mr. P Yadav	98
		II	Energy Auditing Techniques	Mr. N.Baroniya	100
		II	Energy Conservation (Electrical Systems)	Mr. N.Baroniya	100
		II	Energy Conservation Lab	Mr. N.Baroniya	100

5	2011-12	I	Energy Auditing Techniques	Mr. N.Baroniya	100
		I	Electrical Power generation Transmission & distribution	Mr. N.Baroniya	89
		III	Energy Conservation process in designated Industries	Mr. N.Baroniya	100
		II	Research Methodology	Dr S. Banerjee	90
		II	Engineering Thermodynamics : Quality & Quantity Aspects	Mr. Balwanshi	98
6	2012-13	II	Energy Auditing & Conversion Technology	Mr. N.Baroniya	100
		II	Energy Conservation (Electrical Systems)	Mr. N.Baroniya	100
		III	Instrumentation, Measurements and Controls	Dr Ajay Verma	90
		I	Electrical Power Generation, Transmission and Distribution	Mr. N. Baroniya	100
		I	Energy Auditing Techniques	Mr. N Baroniya	100
		II	Engineering Thermodynamics : Quality & Quantity Aspects	Mr Jai Balwanshi	95

14. Programme-wise Student Teacher Ratio

Programme	Student Teacher Ratio
M. Tech	5:1
M. Phil	2:1
Ph. D	7:1

15. Number of academic support staff (technical) and administrative staff: sanctioned, filled and actual

Technical Staff		Administrative Staff	
Sectioned	Filled	Sectioned	Filled
01	01	04	03

16. Research thrust areas as recognized by major funding agencies

- ✓ Solar Thermal Systems
- ✓ Biomass Conversion Technologies
- ✓ Green Buildings/ Solar Passive Buildings
- ✓ Evaporative Air Conditioning
- ✓ Decentralized Energy Planning for Rural Development
- ✓ Energy and Environmental Management
- ✓ Hazardous Waste Management:
- ✓ Solidification / Stabilization Process,
- ✓ Solar Detoxification Process,
- ✓ Environmental Impact Assessment and Environmental Audit
- ✓ Water and Wastewater Treatment Technologies

17. Number of faculty with ongoing projects from a) national b) international funding agencies and c) Total grants received. Give the names of the funding agencies, project title and grants received project-wise.

Faculty: 02

S. N	Project Name	Year	Amount Sanctioned (Lac Rs.)	Sponsored Agency
1	Biogas Development Training Centre, Indore Under National Biogas Manure Management	2011-12	14.44	Ministry of New and Renewable Energy Sources, Govt. of India, New Delhi

	Programme			
2	Regional Test center cum Technical Back up unit for Solar Thermal Devices	2011-12	18.6	Ministry of New and Renewable Energy Sources, Govt. of India, New Delhi
3	Holistic approach to utilize algae For fuel production	2011-13	7.912	University Grant Commission, Govt.of India, New Delhi
4	Design and Development Of Horizontal Gasifier for Biomass materials	2011-14	25.4	DST, New Delhi
5.	Water Conservation Studies on Old Monuments and Forts of M.P	2012-14	4.68	MPCST, Bhopal

18. Inter-institutional collaborative projects and associated grants received

- a) National collaboration: Nil b) International collaboration : Nil

19. Departmental projects funded by DST-FIST; UGC-SAP/CAS, DPE; DBT, ICSSR, AICTE, etc.; total grants received.

Nil

20. Research facility / centre with

- **state recognition**
 - Improved Biomass Cook stove testing Laboratory
 - Gasifier Testing for MPUVN
 - **national recognition**
 - Bureau of Indian Standard (BIS) approved Laboratory for Testing of Solar Thermal Devices
 - Ministry of New and Renewable Energy(MNRE) Approved Laboratory
 - **international recognition**
 - National Accreditation Board for testing and Calibration Laboratories (NABL),DST, New Delhi
- I Accredited Laboratory for Testing of Solar Thermal Devices – Solar Flat Plate Collector and Solar Cooker in India.
 - Biomass and Biofuel Conversion Laboratory.

21. Special research laboratories sponsored by / created by industry or corporate bodies

Nil

22. Publications:

International Publications	National Publications	Grand Total
Review 9	Review 2	
Papers 15	Papers 9	
Total 24	Total 11	35

International Publications : 24
National Publications : 11
Monographs : 0
Chapters in Books : Two Chapters in IGNOU
course Book
Edited Books : 0
Books with ISBN with details of publishers : 0
Number listed in International Database (For e.g. Web of Science, Scopus, Humanities International Complete, Dare Database - International Social Sciences Directory, EBSCO host, etc.) : All
Citation Index – range / average : 1 - 126 / 22
SNIP :
SJR : 0.4 - 2.45/ 1.34
Impact Factor – range / average : 0.915- 6.018/ 3.57
H-index : 10-97/ 54

23. Details of patents and income generated

Nil

24. Areas of consultancy and income generated

Areas of Consultancy

- Solar City Master Plan /Energy Planning
- Energy Audit And Conservation Reports
- Decentralized Rural Energy Plan
- Biomass And Bio-Energy

Total income generated from consultancy = Rs 42.63 Lacs

The following consultancy projects were completed from 2007-2012.

S.No	Name of Projects and Agencies	Income Generated in Lac of Rupees
SOLAR CITY MASTER PLAN /ENERGY PLANNING		
1	Detailed Master Plan for Solar City Dewas, submitted to Nagar Nigam, Dewas, 2011	2.5
2	Detailed Master Plan for Solar City Indore, submitted to Indore Municipal Corporation for Ministry of New and Renewable Energy Sources, Govt of India, New Delhi,2010	4.0
3	Electrical Energy Scenario of Indore City of Year 2020, submitted to TARU, Indore for Rockwell foundation, US;,2009	0.5
4	DPR and monitoring for installation of 24000 lit/day water heating systems and 10 KWp power project with storage batteries for hostels and office building of Daily College ,Submitted to Daily College for Ministry of New and Renewable Energy Sources, Govt of India, New Delhi,2011	0.25
5	Detailed Project Report on Grid Connected 35 KW _p Solar PV Power Plant for corporate office building for Ajmer Ajmer Vidyut Vitran Nigam Limited Submitted to Ajmer Vidyut Vitran Nigam Limited, AJMER (Rajasthan) ,2011	0.35
6	Third Party Verification work of Home Light and Street Light Systems installed by the M.P. Urja Vikas Nigam under the Remote Village Electrification Scheme of the MNRE of 80 villages, Report has been submitted to the M.P. Urja Vikas Nigam, Bhopal ,M.P 2011	5.32
7	Impact Assessment Study has been carried out of LED Village Campaign for Jait Village under the LED Village Scheme Launched by the Bureau of Energy Efficiency Village Jait, Taluka Budhni, and District Sihore (Madhya Pradesh) Project Implemented, submitted to Madhya Pradesh Urja Vikas Nigam Ltd., Bhopal, M.P 2011	Actual expenditure
ENERGY AUDIT AND CONSERVATION REPORTS		
1	Detailed Energy Audit Reports of <u>54 Hotels</u> Madhya	13.5

	Pradesh State Tourism Development Corporation Ltd. Bhopal, submitted to M.P.CDM Agency, Bhopal, M.P, 2011	
2	Detailed Project Report on Development of Energy Efficient Lighting Network at Kheda Growth Centre, Pithampur, M.P. submitted to the M.P. Udyogik Vikas Nigam, Indore, M.P, 2011	3.5
3	Detailed Energy Audit of Collect orate Building, Indore submitted to MPUVN, Bhopal, M.P, 2011	0.25
4	Detailed Energy Audit Of 132 KV/25 KV TSS, Gurla, ,submitted to The The SDEE Traction Distribution KOTA ,Rajasthan, 2010	0.45
5	Detailed Energy Audit of Raj Bhavan Buildings, Governor House Complex, Bhopal, Submitted to Madhya Pradesh Urja Vikas Nigam, Bhopal, M.P,2010	3.25
6	Detailed Energy Audit of Vallabh Bhavan Buildings, M.P. Govt. Secretariat Building, Bhopal, Submitted to Madhya Pradesh Urja Vikas Nigam, Bhopal, M.P,2010	
7	Detailed Energy Audit of Office Building of MPUVN, Bhopal, Submitted to Madhya Pradesh Urja Vikas Nigam, Bhopal,M.P,2010	
8	Detailed Energy Audit of Zenith Birla (India) Limited, Khopoli, Raigad, Maharashtra, Submitted to M /S Zenith Birla (India) Limited, Khopoli, Dist: Raigad, Maharashtra,2009	1.0
9	Preparation of list of Designated Consumers and Their Consumption in the state of M.P as per Energy Conservation Act 2001; Project of Bureau of Energy Efficiency(BEE), New Delhi, Report Submitted to M.P. Urja Vikas Nigam Ltd., Bhopal,2008.	2.25
10	Preparation of list of Certified Energy Managers/Auditors, Accredited in the State of M.P as per the provisions of Energy Conservation Act 2001; Project of Bureau of Energy Efficiency(BEE), New Delhi, Report Submitted to M.P. Urja Vikas Nigam Ltd., Bhopal,2008.	1.4
11	Detailed Energy Audit of BSF's Central School of Weapons and Tactics and BSF campus, Submitted to DG BSF, Indore,M.P, 2007	0.25
12	Detailed Energy Audit of Satguru Cement, Submitted to Satguru Cement, District Dhar, M.P,2007	0.50

BIOMASS AND BIO-ENERGY		
1	Physical Verification / Survey report of Family Size biogas plants in 3 district of Madhya Pradesh, constructed in the year; Submitted to M.P. Agro Ltd., Bhopal,2012	1.68
2	Physical Verification / Survey report of Family Size biogas plants in 4 district of Madhya Pradesh, constructed in the year; Submitted to M.P. Agro Ltd., Bhopal,2013	1.68

25. Faculty selected nationally / internationally to visit other laboratories / institutions / industries in India and abroad

Dr S.P.Singh

National

- In North Maharashtra University, Jalgaon-2012
- In Jawaharlal University (JNU), Delhi-2011
- In BHU, Varanasi,8-9 Oct,2011
- In Indian Institute of Technology (IIT), Delhi-2010

International

- Kun Shan University, Tainan, Taiwan 2007(One Month)
- Kun Shan University, Tainan, Taiwan 2008, (One Month)

26. Faculty serving in

a) National committees b) International committees c) Editorial Boards d) any other (please specify)

- I. National Expert for Solar City Development, Panel of Experts, Ministry of New and Renewable Energy, Govt. of India, New Delhi.
- II. Member of R& D Committee (RDSPAC), MNRE, Govt. of India
- III. Member of Sub-Group under the working Group on New and Renewable Energy (NRE) for “Cooking Energy from Renewable” for the Twelfth Five Year Plan (2012-17). The first meeting to be

held on 2nd June, 2011

- IV. Member ,Non Conventional Energy Sources Sectional Committee MED-04 and Solar Thermal Energy Sub Committee ME04:1; Bureau of Indian Standard, New Delhi
- V. Member Governing Body of JAYPEE University of Engineering & Technology Nominated by His Excellency the Governor of M.P
- VI. Member of MPCST Governing Body, Govt. of M.P
- VII. Member, Board of Post Graduate Studies of Dep't of Environmental Sciences, ,B.B.A University, Lucknow
- VIII. UGC Expert for UGC-SAP, SEES, North Maharashtra University, Jalgaon.
- IX. Member, Constitution of state level registration committee for recycler /re-processors under hazardous waste (M.H. & TM) rules 2008 for the duration of three years (M.P. Pollution Control Board, M.P.)
- X. Life Member of Indian Water Works Association.
- XI. Member, CEPRD, Indore.
- XII. Reviewer of Journal of Hazardous Materials, ISSN: 0304-3894, imprint: ELSEVIER,U.K
- XIII. Member of Board of School Of Energy and Environmental Studies.

b) International committees

Nil

c) Editorial Boards

Nil

d) any other (please specify)

27. Faculty recharging strategies (UGC, ASC, Refresher / orientation programs, workshops, training programs and similar programs).

- All Faculty members attended the workshops

- Dr Rubina Chaudhary: Two Refresher courses

28. Student projects

- **percentage of students who have done in-house projects including inter-departmental projects**

- M. Tech Students: Minor Project (12) credits
100% projects done in School

- **percentage of students doing projects in collaboration with other universities / industry / institute**

- M. Tech Students: Major Project (24) credits
100% projects in collaboration with Multinational organizations/Govt organizations/ Industries etc

29. Awards / recognitions received at the national and international level by

- Faculty :Nil
- Doctoral / post doctoral fellows : Nil
- Students :Yes

National Awards

- Energy Conservation Award of Rajasthan- Mr P.K Tiwari
- Energy Conservation Award From Institute of Engineers- Mr Hemant Nandan Pawar

30. Seminars/ Conferences/Workshops organized and the source of funding (national /International) with details of outstanding participants, if any.

Outstanding Participants

Dr P.Chitambram, Scientific Advisor to Prime Minister, Govt of India, New Delhi
Dr Vijay Bhatkar,

Dr Chairman, Central Pollution Control Board, Govt of India,
New Delhi
Dr Bhawalkar, Ex Director, Center of Advance Technology, Indore
Dr V.K. Jain, Dean & Professor, JNU, New Delhi (Presently Vice Chancellor,
Doon University),

S.N.	Seminar/ Conference/Workshop	Funding Agency	Participants
1	Carbon Credits in Industries, Seminar; Jointly Organized by NIFE and CESR, Dec.2007.	Sponsored by M/s Shakti pumps, Pithampur (M.P.)	for industrialists, students, Academicsians
2	3-Days Training Course on Energy Efficient Building Systems, January 18-20, 2007 at Indore.	Sponsored by MNRE, New Delhi.	Architects, Students of Architecture ,Civil, Energy students and builders
3	One day Awareness and training program on “Remote village electrification” for Field functionaries in district Jhabua, October 04, 2007.	Sponsored by MNRE, New Delhi	Field staff of MPUVN & villagers of solar electrified villages
4	Coordinator and Organized of work shop of “Building Energy simulation “SAID- ECO-III Project, in School of Energy and Environ. studies on 13 June, 2008.	USAID Division, BEE New Delhi	Architects, Students of Architecture ,Civil, Energy students and builders
5	Solar Technology Application for Women; 18-03-2008	Sponsored by MNRE, New Delhi	Polytechnic Students
6	Standard Test Procedure of Domestic Solar water heating system;16-05-2008	MNRE, New Delhi	Manufactures of Solar Water Heating systems of the India
7	Exhibition on Green Technologies for Sustainable Development, 27-30 Nov.2009	State Govt. of M.P	Researchers, Teachers, Students and public at large
8	2nd Bharatiya Vigyan Sammelan on Green Technologies for Sustainable Development, 1-3 December,2009	State Govt. of M.P and Vigyan Bharati	Researchers, Teachers, Students and professionals, manufacturers
9	Use of Solar Thermal System in	Sponsored by	Engg. Institute

	Institutional and Commercial Sectors; 13-03-2010.	MNRE, New Delhi	owners / trustees / teachers/ hotel owners / students /manufacturers and suppliers
10	I India International Energy Summit (IIES), 28-30 January 2011, at VNIT, Nagpur.	Vigyan Bharati and MNRE	Researchers and Academicians, Professionals and Students
11	Fuel Cell: Technology and its Application in Indian Context, 30 April 2011	Department	Students of University
12	Solid Waste Management: Present and Future Technologies, 25 April 2011	Department	Students of University

31. Code of ethics for research followed by the departments

The School seeks to promote the highest standards of scientific and professional integrity and to give due consideration to the ethical, social, cultural, Energy and Environmental issues arising from its activities.

Code of Scientific and Scholarly Conduct

All employees of School will abide by the following code of scientific and scholarly conduct to the best of their ability.

- 1 I will act in the interest of the advancement of science and technology for sound decision making, by using the most appropriate, best available, high quality scientific and scholarly data and information to support the mission of the School.
- 2 I will communicate the results of scientific and scholarly activities evidently, truthfully, impartially, methodically, accurately, and in a timely manner and ensure the best use of resources including equipment and funds.

- 3 I will adhere to the laws and policies related to conservation and protection of energy and environmental resources
- 4 I will not engage in activities that put others or myself in an actual or apparent conflict of interest and will not engage in scientific and scholarly misconduct,
- 5 I will be diligent in creating, using, preserving, documenting, and maintaining scientific and scholarly collections and records.
- 6 I will maintain scientific and scholarly integrity and will not engage in fabrication, falsification, or plagiarism in proposing, performing, reviewing, or reporting scientific and scholarly activities and their products.

In case of any conflict or complaint, the decision of the Department Committee will be final.

32. Student profile programme-wise:

Name of the Course (refer to question no.4) M.Tech	Applicati on received	Selected		Pass percentage In B.E/M.Tech/M.Sc (Physics)			
		Male	Femal e	Male		Female	
				Min	Max	Min	Max
2007-09	69	11	2	55	72	69	77
2008-10	49	13	1	57	72	66	66
2009-11	37	11	3	59	79	66	77
2010-12	62	14	3	63	76	67	75
2011-13	78	13	5	59	77	66	73

Name of the Course (refer to question no.4) M.Phil	Applicati on received	Selected		Pass percentage M.Sc (Environment Science)			
		Male	Femal e	Male		Female	
				Min	Max	Min	Max
2007-08	13	8	5	55	75	65	78
2008-09	13	8	5	55	80	60	72
2009-10	10	6	4	60	75	64	81
2010-11	11	6	5	64	74	69	80
2011-12	7	3	4	63	72	69	82

33 Diversity of students

Name of the Course	% of students from the same university	% of students from other universities within the State	% of students from universities outside the State	% of students from other countries
M.Tech	0	62.5%	37.5%	
M.Phil	0	40%	60%	
Ph.D	65%	10%	25%	

34. How many students have cleared Civil Services and Defense Services examinations, NET, SET, GATE and other competitive examinations? Give details category-wise.

NET Qualified Students

Student name	Year	NET
Apurva	2012	UGC NET(Lectureship)
Vinay Kumar Singh	2012	UGC NET(Lectureship)
Bhavisha Sharma	2012	Rajasthan SET (Lectureship)
Satyendra Tripathi	2012	UGC NET(Lectureship)

GATE qualified students

Student name	Year
Deepesh Singh Chautha	2013
Gurpreet Kaur Rai	2013
Gaurav Chaudhary	2013
Narendra Patel	2013
Shaishav Sharma	2013

35. Student progression

Record for 2007-2012

Total No. of students completed M.Tech and M. Phil	=151
Total No. of students admitted for Ph.D	=08
Total No. of students completed Ph. D	=11
Total No. of students Gone for Post-Doctoral	=02

Student progression	Percentage against enrolled
UG to PG	
PG to M.Phil.	
PG to Ph.D.	5 %

Student progression	Percentage against enrolled
Ph.D. to Post-Doctoral	18 %
Employed <ul style="list-style-type: none"> • Campus selection • Other than campus recruitment 	95%
Entrepreneurs	Nil

School faculty approach to the different organisations for training and later on these students are taken in jobs in the same organisations.

S. No.	Roll No. & Date of Registration & Awarded Date	Name of Student	Title of the Thesis
1.	07Ph.D0033 12.07.07-02-02-2012	Smita Badur M.Phil	Assessment Predication and Techno Economic Analysis of New Developed Concrete by Utilizing Heavy Metals Bearings Hazardous Waste
2.	07Ph.D0036 12.09.07-06-02-2012	Rajendra Singh Thakur M.Phil	Assessment and Influence of Operational Parameters on Photo Catalytic Treatment of Industrial Wastewater.
3.	09Ph.D0038 09/04/ 2009 Ongoing	Chandan Singh M.Phil	Optimization and Assessment Of Solar Photo catalytic Treatment Of Municipal Wastewaters
4.	09Ph.D0039 29/08/2009 Ongoing	Chanchal Chauhan M.Phil	Studies On Organic Molecular Markers In Ambient Aerosol And Emission Sources
5.	10Ph.D0040 03/02/2010 Ongoing	Shukti Tomar M.Phil	Impact Assessment Study Of Municipal Solid Waste Disposal Site On Environmental Components And Climate In Relation To Seasonal Variations

6.	10Ph.D0044 01/07/2010 Ongoing	Rana Pratap Singh M.Phil	To Study The Utilization Of Leather Solid Waste and Flyash Through Chemical Treatment To Develop Composite Material
7.	11Ph.D0047 4 -07-2011 Ongoing	Satyendra Tripathi M.Phil	Impact Of Crop Residue Burning On The Ambient Aerosol And Soil Of Rural Area
8.	11Ph.D0048 09-11-2011 Ongoing	Vijay Bhat M.Sc (Physics)	Identification Development And Performance Evaluation Of Organic Phase Change Storage Materials For Cooling Load Reduction In Buildings
9.	13Ph.D0051 03/01/2013	Mohan Rawat M.Sc (Physics)	Under Process of Registration after course work
10.	13Ph.D0053 04/01/2013	Anjali Barwal M.Phil	Under Process of Registration after course work
11.	13Ph.D0054 04/01/2013	Vikas Ahirwal M.Tech	Under Process of Registration after course work
12.	13Ph.D0055 05/01/2013	Payal Pancholi M.Phil	Under Process of Registration after course work
13.	13Ph.D0056 07/01/2013	D.Asha M.Phil	Under Process of Registration after course work

36. Diversity of staff

Percentage of faculty who are graduates	
of the same university	
from other universities within the State	
from universities from other States	100%
from universities outside the country	

37. Number of faculty who were awarded M.Phil., Ph.D., D.Sc. and D.Litt. during the assessment period

Nil

38. Present details of departmental infrastructural facilities with regard to

- | | |
|---|-----------------------------------|
| a) Library | Books : 4439
Book volumes : 85 |
| b) Internet facilities for staff and students | Yes |
| c) Total number of class rooms
Hall) | 03 (including Seminar
Hall) |
| d) Class rooms with ICT facility
Hall) | 03 (including Seminar
Hall) |
| e) Students' laboratories
Common) | 06 (* Two Labs
Common) |
| f) Research laboratories | 04 |

39. List of doctoral, post-doctoral students and Research Associates

a) from the host institution/university

1.	07Ph.D 0033 12.07.07 02-02- 2012	Smita Badur	Assessment Predication And Techno Economi Analysis Of New Developed Concrete By Utilizing Heavy Metals Bearings Hazardous Waste	Dr. Rubina Chaudhary Dr. Uttamesha Gupta
2.	07Ph.D00 34 27.07.07 Submitted	Prerana Pandey	Design, Development And Performance Evaluation Of Packed Bed Reactor For Dung And Poultry Waste.	Dr. S. P. Singh
3.	07Ph.D00 35 10.09.07 - 2012	Biplab Paul	Design, Development And Performance Evaluation Of A Concentrator Based Solar Dryers Of Drying Leafs Of Tendu (Diospyros Melonoxylon) Plant, Amla Fruit (Phyllanthus Embica) & Red Chilli (Capsicum Annum).	Dr. S. P. Singh
4.	07Ph.D00 36 12.09.07 06-02- 2012	Rajendra Singh Thakur	Assessment And Influence Of Operational Parameters On Photo Catalytic Treatment Of Industrial Wastewater.	Dr. Rubina Chaudhary Dr. R. L. Sawhney

b) from other institutions/universities

Nil

40. Number of post graduate students getting financial assistance from the university.

- 10 AICTE Scholarships for Gate Qualified students and
- Free ships for SC/ST, State Govt. provide support to at SC/St students and sub-income level OBC students generously
- Ph.D scholarships from MNRE/UGC projects/MPCST projects/DST projects

Year	Name of student	M. Tech/ M.Phil	SC/S T schola rship	Other scholar- ship	Agency
2007- 2009	Mr. Sanjay Kandari (Gen) Mr. Pankaj Kumar (SC) Mr. Rajkumar Rajalwal (SC) Mr. Anil Samudre (SC) Mr. Chetan Swaroop Sharma (Gen) Mr. Ajay Singh Thakur (Gen) Mr. Vikash Yadav (OBC) Mr. Narottam Baroniya (SC) Mr. Chandan Singh	M. Tech M. Phil M. Tech M. Tech M. Tech M. Phil M. Tech M. Tech M. Phil		GATE GATE GATE GATE GATE - - - -	AICTE , Delhi AICTE , Delhi AICTE , Delhi AICTE , Delhi AICTE , Delhi -M.P. Govt. -M.P. Govt. -M.P. Govt.
2008- 2010	Mr. Ankit Nagar (Gen) Mr. Dushyant Sahu (OBC) Mr. Rahul B. Kolhe (SC)	M. Tech M. Tech M. Tech	- - -	GATE GATE GATE	AICTE , Delhi AICTE ,

	Mr. Rahul V. Hiwase (OBC) Mr. Khan Juned (OBC) Mr. Bhargav Satish Kumar (SC)	M. Tech M. Tech M. Phil	- PMS* PMS*	GATE PMS PMS	Delhi AICTE , Delhi AICTE , Delhi M.P.Govt. M.P.Govt
2009-2011	Ms. Aarti Singh (Gen) Mr. Deepak Rathod (OBC) Mr.Mohammad Shahzad Sheikh (OBC) Mohd. Sahid Siddiqui (OBC)	M.Tech - - M. Phil	- - PM S* MAN F	GATE GATE - MANF**	AICTE , Delhi AICTE , Delhi M.P. Govt. MANF (UGC), New Delhi
2010-2012	Ms. Richa Patel (OBC) Mr. Umang Gupta (Gen) Mr. Mahesh Barya (SC)	M.Tech - M. Phil	- - PM S*	GATE GATE -	AICTE , Delhi AICTE , Delhi M.P. Govt.
2011-2013	Mr. Rajeev Kumar Baghel (OBC) Mr. Siddhesh Srikant Gawade (Gen) Mr. Pramod Rajput (OBC) Mr. Himanshu Arya (OBC) Mr. Mohd. Khalid Khan (Gen) Mr. Nabeel Anwer (OBC) Ms. Verma Ku. Varsha (SC) Mr. Balwant Chouhan (ST) Mr. Piyush Patidar (OBC)	M.Tech - - - - - - - -	- - - - - - PMS* PMS*	GATE GATE GAT E GAT E GAT E GAT E GAT E - -	AICTE ,Delhi AICTE ,Delhi AICTE ,Delhi AICTE ,Delhi AICTE ,Delhi AICTE ,Delhi AICTE ,Delhi AICTE ,Delhi AICTE ,Delhi -M.P. Govt. -M.P. Govt.
2012-2014	Mr. Gaurav Choudhary (OBC) Mr. Nikhil Kumar Chouhan (SC)	M.Tech - - -	- - - -	GATE GATE GATE GATE	AICTE, Delhi AICTE, Delhi

Mr. Deepesh Singh Chouhan (Gen)	-	-	GATE	AICTE, Delhi
Mr. Ankit Farkya (Gen)	-	-	GATE	AICTE, Delhi
Mr.Mandar Agnihotri (Gen)				AICTE, Delhi
Mr.Narendra Kumar Patel (Gen)				AICTE, Delhi

**MANF: Maulana Azad National Fellowship

* PMS: Post Metric Scholarship

41. Was any need assessment exercise undertaken before the development of new programme(s)? If so, highlight the methodology.

- ✓ No new course was introduced in last five year plan.
- ✓ Earlier courses were introduced as per need of the nation for the studies in Energy and Environment.

42. Does the department obtain feedback from

a. faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize the feedback?

We have faculty committee for finalization of curriculum. The committee meets in the beginning of academic session and incorporate the suggestion after discussion, if appropriate. The teaching learning methodologies are improved by incorporating the new technological tools and opinions of feedbacks.

Board of Studies (BOS) has the following Members

Name	Designation	BOS Committee
Dr S.P.Singh,	Professor and Head,SEES	Chairman
Dr R.N.Singh	Professor,SEES	Member
Dr Rubina Choudhary	Associate Professor,SEES	Member
Dr Sant Ram	Ex-Director, Ministry of New and Renewable Energy (MNRE). Govt of India, New Delhi	External Expert
Student Representative	Student	Member

b. students on staff, curriculum and teaching-learning-evaluation and how does the department utilize the feedback?

All the students' feedback forms are analysed for each paper for individual teacher and placed before this committee for finalization of curriculum. The students feedback for individual teacher is communicated to them and action taken to improve the teaching methodology.

c. alumni and employers on the programmes offered and how does the department utilize the feedback?

Feedback forms and discussion method is used from Alumni and employers during their visit to department or through e-mail. Employers' need is given priority in changing the curriculum and additional training programs are organised to meet the present and future marked demand.

43. List the distinguished alumni of the department (maximum 10)

1. Punk Mady Dhiman
Senior Design Engineer at ABB in Singapore; Mobile: +66 82 060 0208
E-mail pankajdhimanidhi@facebook.com
2. Mr Kishore Malviya; Director, SMS Envocare Ltd , Nagpur
E-mail: kihorem@gmail.com
3. Himanshu Sharma
Senior Engineer at Schneider Electric; Mumbai, Maharashtra, India
Email -100001520182177@facebook.com
4. Dr Punam Tyagi
Environmental Compliance Specialist, Maryland Dept. Of The Environment,

Rockville, Maryland City, United States ▶ Maryland
Email- punam.tyagi@facebook.com

5. Shashi Prakash
Program Officer at UNFCCC · Bonn, Germany; Ph: +971 50 132 7410
Email: shashi.prakash.73113@facebook.com
6. Pankaj Aggarwal, Industrialist
Aggarwal Chemicals & Refractories and Properitor at Naveen steels;
Yamunanagar, Haryana, India
7. Lokesh Chandra Duby
Lead GHG Auditor at TUV NORD; New Delhi
Email: lokesh.c.dube@facebook.com
8. Shalendra Kumwat
TÜV Rheinland Group; Bangalore, India
Email- India ▶ Karnataka, India
9. Pankaj Kasture; Sr. Manager - MEP & Sustainable Design
LEAD Consultancy & Engg Services Pvt Ltd; Mumbai Maharashtra
Email: pankaj.kasture.96@facebook.com
10. Pushpendra Nayak
Senior Asst. Director, Federation of Indian Chambers of Commerce
and Industry, New Delhi.

44. Give details of student enrichment programmes (special lectures / workshops / seminar) involving external experts.

Field Visits organised for better understanding of Energy and
Environmental issues on different types of actual systems and processes

List of Field Visits of year 2011-2012

S.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
12	30/07/2012	National Steel And Agro Industries Ltd.
13	11/08/2012	Rao Raja Chatrakaran Cold Storage Pvt. Ltd.
14	24/08/2012	Grasim Industries, Nagada
15	03/10/2012	Barli Development Institute For Rural Women
16	12/10/2012	400 KV Sub-Station M.P.T.C.L
17	24/01/2013	Pluton Cements Pvt. Ltd.
18	22/02/2013	Rayon Applied Engineers
19	05/03/2013	Narmada Hydroelectric Development Corporation Ltd.

Seminars/workshops are organised /attended by students regularly by invited experts

Students attended and participated in the following

- (a) Carbon Credits in Industries, Seminar for industrialists, students, and academics. Jointly Organized by NIFE and CESR, Dec.2007, Sponsored by M/s Shakti pumps, Pithampur (MP).
- (b) 3-Days Training Course on Energy Efficient Building Systems, January 18-20, 2007 at Indore, Sponsored by MNRE, New Delhi.
- (c) One day Awareness and training program on “Remote village electrification” for field functionaries in district Jhabua, October 04, 2007, Sponsered by MNRE, New Delhi.
- (d) Coordinator and Organized of work shop of “Building Energy simulation”USAID- ECO-III Project, in School of Energy and Environmental studies on 13 June, 2008.
- (e) Solar Technology Application for Women Polytechnic Students; 18-03-2008.
- (f) Standard Test Procedure of Domestic Solar water heating system; 16-05-2008.
- (g) Exhibition on Green Technologies for Sustainable Development, 27-30 Nov.2009.
- (h) 2nd Bharatiya Vigyan Sammelan on Green Technologies for Sustainable Development, 1-3 December, 2009.
- (i) Use of Solar Thermal System in Institutional and Commercial Sectors; 13-03-2010.
- (j) 1st India International Energy Summit (IIES), 28-30 January 2011, at VNIT, Nagpur.
- (k) Fuel Cell: Technology and its Application in Indian Context, 30 April 2011.
- (l) Solid Waste Management: Present and Future Technologies, 25 April 2011.

45. List the teaching methods adopted by the faculty for different programmes.

- Black Board and Power Point
- On Site teaching and discussion on Real systems and process in the field and industries
- Through technical CD’s/DVD’s and discussion.
- Curriculum recommended methods of Assessment
- Assignments, presentations and discussions

46. How does the department ensure that programme objectives are constantly met and learning outcomes are monitored?

Following faculty members monitor the learning outcome

Dr S.P.Singh,

Dr R.N. Singh

Dr Rubina Chaudhary

The learning outcomes are

- Excellent result and projects.
- Placement in industries.
- Proceedings to higher studies.
- Passing the competitive examinations

47. Highlight the participation of students and faculty in extension activities.

Faculty and Students are actively participate in extension programs/activities

- Energy Audit activities of industries and Buildings etc.
- Solar City Plans
- Solar PV system DPR preparation
- Solar Thermal water heating systems DPR , Commissioning and Installation
- Testing of Solar Thermal Devices ar per BIS standard
- Testing of Biomass Systems
- EIA activates
- Khan River revival activities in Indore (March 2013)
- Awareness programs of Energy and Environment by conducting the 28 programs in a year with the help of all departments following Green Calender Events and Green University Policy.
- Plantation in School and Whole Campus

48. Give details of “beyond syllabus scholarly activities” of the department.

- Participation in conferences/workshops/seminars.
- Participation by students in expert lectures/invited talks/keynote speaker talks.
- Research and development undertake by students.

49. State whether the programme/ department is accredited/ graded by other agencies? If yes, give details.

- Accreditation from NAAC Grade B (2008) ; Four Star out of 5 (2002)
- Approval from AICTE M. Tech
- Accreditation From NABL and BIS for Laboratory of Solar Thermal Devices (Solar Box type Cooker and Flat plat collector)

50. Briefly highlight the contributions of the department in generating new knowledge, basic or applied.

Since inception in 1991, total 235 M. Tech. 125 M. Phil and 35 Ph. D's have been educated and 146 Research papers have been published in National and International Journals. They are making significant contribution nationally and globally.

- School and Center received grant of Rs 244 lakhs for research project since 1990.
- School received 35 lakhs for Laboratory up gradation under FIST program from DST (2202-2007).
- Biogas technical Training programmes organised for field functionless to offices in the state of M.P and Chhattisgarh. These trainings are organised in villages and at block, tehshil and district headquarters. Students are also involved in a few trainings to provide the knowledge and skills of working in different socio-economic societies.

Following are highlights of contributions in last five years:

- More than 500 papers were reviewed of different topics of energy and environment to start new research areas in department to be competitive internationally and generating new innovative ideas in these areas too.
 - 07 Review papers were published in different areas in International Journal with high impact factors. (2008-13).
 - 20 Research Papers were published in Reputed and refereed National and International Journals (2008-13).
 - School and Center received grant of Rs 108 lakhs for research project (2008-2013)
 - Consultancy projects of Rs 27 lakhs were completed in last Four Years and Rs 14 lakhs are taken in 2013 and continue.
 - School received the NABL and BIS accredited laboratory for Testing of Solar Flat plate collectors and solar cookers.
 - School is also approved for testing for Other Solar thermal Devices by Ministry of New and Renewable Energy, Govt. of India, New Delhi.(2008 continue).
 - Consultancy projects on real systems/processes in the field were taken and solved the complexities to achieve the goals of techno-economic benefits in the society. Enhanced Practical knowledge and skills emerged from the field studies used in teaching of the students and to benefit the society.
 - Based on New and Creative concepts/ideas, the projects were guided to M. Tech/M. Phil students. The works were presented before the Faculty and Students for open discussion. Knowledge sharing makes the outcome better.
1. The student's employment in nationally and internationally reputed organizations /industries/institutions in India and abroad in the different activities. Students are working as energy planers, consultants, energy managers ,energy auditors and implementing the small to large projects in

Energy (specially in renewable energy systems) and environment.

2. M. Tech. in Energy Management at School is first designed course in the country

51. Detail five major Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the department.

1. Strength

- (a) High spirit of team work to complete any task assigned or taken by the School and focus on both knowledge acquisition and employment capabilities of student.
- (b) Promotion of Inter-disciplinary research to bring science and technology closer to humanities.
- (c) Regular Field visits & seminars to provide a suitable platform for practical knowledge, skills as well as English speaking/developing Communication skills among students to prepare them a better professional.
- (d) Excellent work environment for learning and research.
- (e) Excellent Interaction with rural and urban society, Industries/organisations and national and International Institutes and their faculty and scientists.

2. Weakness

- (a) Deficiency of permanent teachers
- (b) Want of adequate Infra-structure for expansion.
- (c) Deficiency of latest equipments and software's.
- (d) Less recreation facilities for students in the School.
- (e) All faculty members are not having Research projects.

3. Opportunities

- (a) Participation in Exchange programmes with foreign Universities.
- (b) Invite alumni for guest lectures and as external experts for examination.
- (c) Syllabus modifications according to Industries/organisations need.
- (d) Academic autonomy to the School.

4. Challenges

- (a) To develop Research and educational Laboratories of International standards.
- (b) Collaboration with International Institutes / Universities/ R&D organizations.
- (c) Increasing Student-teacher ratio.
- (d) To provide Value Education to students.

52. Future plans of the department.

1. Academic Activities:

In continuation of last year plan, the followings are the future plans of the School.

- i. Addition of new courses.
- ii. Upgradation of Infrastructure.
- iii. Expansion of research and consultancy areas.
- iv. Enrichment of Library.

In view of the above objectives, the activities would be carried out.

Curricular Aspects

- i. 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.

- ii. M. Tech in Environment may be started in next year after approval & completing the all formalities.
- iii. Revision and modifications in Syllabus.

a. Teaching-Learning and Evaluation

The following activities/ works to be done with required modifications.

- i. Up gradation in Power Point Presentations.
- ii. Up gradation of notes for distribution to students before the topic taught in the class.
- iii. Up gradation of laboratory and Manuals
- iv. Development of new assignments/ problems/ seminar for students. One assignments/ problems/ seminar in fortnight should be given in each subject taught.
- v. Commuter program shall be prepared for feedback.
- vi. Feedback from stakeholders should be collected by sending the e-mails or during their visit to department.

b. Research Activities

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

c. Consultancy Activities

- i. Energy Audit and Energy Conservation Projects in Industries, Commercial and Residential Building sectors.

- ii. Third Party Verification for various schemes implemented by the different agencies

2. Infrastructure

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

3. Library: Learning Resource

New books published and DVD's issued in market in 2012-13 are to be purchased with the relevant contents to energy and environment. It was also decided to purchase Journals and other famous books.

4. Student Support and Progression

- i. More scholarships from MNRE, Govt. of India and other sponsoring agency for Ph. D and M. Tech students would be tried.
- ii. Review of Student Counselling Cell and Career counselling cell would be carried out.
- iii. Review of Grievance Redresser Cell & Complaints Cell for preventing sexual harassment of women, would be carried out.
- iv. 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

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

- i) 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.
- ii) Awareness program would be continued to promote renewable energy systems like solar systems/Biogas based Power Generation projects.
- iii) 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.

Write up of efforts for Quality Sustenance and Assurance in the department- B

The action plan was prepared by the IQAC in the beginning of the year towards quality enhancement and the outcome achieved by the end of the year. For quality assurance, self analysis and feedback through discussion with academic peers, alumni, experts and students was routinely taken, analysed and implicated for updating and development through such a practice the course paper. Students played a role in quality improvement by giving suggestions. Department worked with a goal to provide best possible knowledge in the field and for the overall development of the students through regular teaching, seminars and discussion with them. Regular updating of the course contents for advanced knowledge of various topics was done by the concerned teachers. Research activities were always encouraged and available facilities were provided to the students and other researchers of the university. Visits of eminent scholars are the regular feature in the School. Participation was done in few workshops of university level in 2012-13.

- Quality Issues in Academics, Paper Setting and Valuation, September 26,2012.
- Fostering excellence in research, January 15, 2013.
- Aspects of Teaching-Learning: Best Practices” on May 10, 2013.
- Credit System for Students’ Evaluation at COEP- A case Study, May 15 2013.

Participation in following lecture series and lectures to inspire students and faculty:


- Optical telescopes: an eye to the universe since 1609; Feb, 02, 2013.
- Cancers and their prevention, April 09, 2013.
- Basics of identifying Heart Disease and preventive measures, April 09, 2013.

Declaration by the Head of the Department- C

I certify that the data included in this Self-Study Report (SSR) are true to the best of my knowledge.

This SSR is prepared by the institution after internal discussions, and no part thereof has been outsourced.

I am aware that the Peer team will validate the information provided in this SSR during the peer team visit.



**HEAD
SCHOOL OF ENERGY & ENVIRONMENTAL STUDIES
DEVI AHILYA VISHWAVIDYALAYA,
TAKSHASHILA CAMPUS, KHANDWA ROAD,
INDORE (M. P.)**

Signature of the Head of the
institution

with seal:

Place: Indore

Date: 27.8.2013

