



## National Conference



On

# “Renewable Energy Resources & it's Applications”

2<sup>nd</sup> April, 2016

Organised by

Shri Shivaji Education Society Amravati's

**College of Engineering & Technology, Akola**

In association with

**International Journal of Pure & Applied Research  
in Engineering & Technology.**



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Dept. of Civil Engg.

## **Message from Vice Chancellor**

I am very glad to know that the College of Engineering and Technology, Akola is organizing a National level conference “Renewable Energy Resource & its Applications” on 2<sup>nd</sup> April 2016.



It is known fact to all today that unstoppable population and urbanization is creating acute stress on available resource. The urge for rapid satisfaction of demands is further leading to exploitation of nonrenewable resources. Neither development can be stopped nor can demand be neglected. The key for it is skillful handling and management of such available resource. This skill of managing resources is proving great challenge for technocrats globally.

I am happy enough to know that the theme of Conference is reflecting such global issues and strategy to handle it. In such rapid growing technical environment there are thousands of intellectuals who are taking efforts towards application of renewable energy resources. However, knowledge and experience without sharing turns useless, thus providing such opportunity for professionals, eager learners and academicians to exchange experience and learning's is necessary.

I am sure that this endeavor will provide huge boost and encouragement to the academicians, research students, and professionals to learn and express their technical skills for serving society and nation in better way. I convey my greetings to everyone associated with this effort and wish them success.

A handwritten signature in black ink, appearing to read 'Dr. V. S. Sapkal'.

**Dr. V. S. Sapkal**  
**Acting Vice Chancellor**  
**Sant Gadge Baba Amravati University**

## **Message from Patron**

I am delighted to know that the College of Engineering and Technology , Akola is organizing a National Conference on “Renewable Energy Resources & it’s Applications” on 2nd April 2016 in association with International Journal of Pure & Applied Research in Engineering & Technology.



Looking towards the global issues of environmental problems like pollution, resource exploitation etc. it has emerged as key problem which demands appropriate solution to mitigate it. Being in profession of teaching, teachers turn main drivers to discuss and suggest such resource consumption problem and remedy over it. Faculty act as an bridge between minds of intellectual industrialist, students and society to overcome such global attention demanding issues. One such solution for mitigating these high nonrenewable resource consumption is switching more towards renewable energy sources.

The conference is focused on the same themes and covers area of nonrenewable energy and its application , which would definitely provide good platform for faculties , researchers , industrialist and research students to share and express their views . I extend my best wishes for the grand success of NCRERA 2016.

A handwritten signature in black ink, appearing to read 'ArunKumar Shelke'.

**Adv. ArunKumar Shelke  
Patron & President  
Shri Shivaji Education Society,  
Amravati**

## **Message from Principal**

I am very delighted to welcome all the authors , delegates for the National Conference on “ Renewable Energy Resources & it’s Applications” being organized at our institute on April 2nd , 2016.



Being part of society we all know that world is facing high scarcity of nonrenewable resources like water, coal etc. along with added problems like population, pollution, deforestation and many more. Population and urbanization cannot be stopped but it became necessary to bring perfect balance between demand and eco friendly supply techniques. Using renewable sources like solar energy, wind, and oceanic, geothermal, bio-energy may help to reduce this acute stress on resources demand if adopted properly.

Thus for bringing awareness and providing common dais to share ideas related to it, institute is organizing this conference. We are looking forward to the brainstorming sessions during the conference which would result in greater exchange of ideas and evolve a solution to many complex problems. The quality of research papers received from the various streams like computer, mechanical, civil, chemical engineering; architecture shows that adaptation of renewable resources is having high scope globally. And thus, sharing all such research papers in scientific and research community and similar functioning organizations would be our pleasure.

I take this opportunity to congratulate the team of NCRERA 2016 for their tireless efforts for organization of the event.

I wish the conference be a great success.

A handwritten signature in black ink, appearing to read 'Deshmukh' with a long horizontal stroke extending to the left.

**Dr. S. K. Deshmukh  
Chairman & Principal  
College of Engineering &  
Technology, Akola**

## **Message from Convener**

Dear Colleagues / Participants,

On behalf of the College of Engineering and Technology, Akola, It is my great pleasure and honor to welcome you all on this truly memorable and joyful occasion, National Conference on 'Renewable Energy Resources and Its Applications' to exchange views and enhance our renewable knowledge and networking on its applications.



As we all know, that renewable energy is in the forefront of development initiatives and a priority for all countries. Energy is thus an important if not crucial topic in India. There is no doubt Dialogue on energy issues in a democracy must include in the first place a comprehensive dialogue with all stakeholders, parliament, government, business, civil society and academia. In times of economic stagnation and climate change sustainable solutions to energy issues are of vital significance. This dialogue is often cumbersome.

I wish this conference to become a milestone on the way to such a dialogue which implies that we have to continue our efforts in this respect in the years to come. Energy has remained central to all our developmental needs yet we need to protect our environment for the benefit of all and future generations.

In order to promote knowledge about renewable energy, its advantages, its applications and presenting more in detail the different sources and production of renewable energy and its technologies from Water, wind, sun and biomass this conference is organized.

May be this conference can contribute to better understand what renewable energy is all about. I would like to thank my colleagues in the embassy which helped to organize the conference.

I show my gratitude towards the Patron, Chairman, Organizers, Technical Committee members and participants of the conference and wish for good success!

A handwritten signature in black ink, appearing to read 'S. C. Makwana', written over a light blue circular stamp.

**Prof. S. C. Makwana  
Convener**

## **Message from Organizing Secretary**

It is increasingly clear that the battle for resources saving and sustaining will be won or lost with time. Over half of the world's population now lives in urban areas, a figure which will reach almost 60% by 2025. Already the demands for resources like water, coal, raw wood, sand, cement, iron etc. are shooting significantly. And for production out of raw resources, high amount of electricity is getting consumed. The interdependent chain of population, demand, production is leading to high scarcity of nonrenewable resources and greater environmental pollutions making living hard to sustain. And thus demand global attention.



This conference describes a series of technological levers of varying effectiveness, and with different cost implications, which can all contribute to greater resource optimization in urban and rural areas. In doing so, it aims to provide necessary clarity about these levers to policy makers, planners, businesses, consumers and concerned individuals. The encouraging message is that many of the streams or levers to reduce energy and water like resource consumption and usage of renewable resources in urban agglomerations not only help to protect the environment, but also pay back from an economic point of view.

The conference holistic perspective, rigorous quantification, common methodology applied to different areas of renewable energy application, and consideration of a comprehensive set of potential technologies options for improvement including their economic dimensions make it unique. It focus on some key determinates related to global environmental performance and also provide insight for other associated issues like pollution, demand , scarcity and alternative options needed to be adopt.

I would like to thank all the researchers, academicians, practicing engineers, policy makers, administrators & students who have made praise worthy contribution to the conference.

As it has been rightly said that “ Teamwork divides that task and multiplies the success”, being an Organizing Secretary , I admire and appreciate the suggestions , cooperation and coordination of all the committee members of National Conference – RERA 2016 and hope that conference would definitely turn as a useful tool to overcome global challenges.

A handwritten signature in black ink, appearing to read 'Abhinandan R. Gupta'. The signature is stylized and written in a cursive-like font.

**Dr. Abhinandan R. Gupta**  
**Organizing Secretary**  
**Dept. of Civil Engineering,**  
**C.O.E.T, Akola.**