Prof. Dr. ANNAMANI CENTENARY CELEBRATION INTERNATIONAL CONFERENCE ON WIND AND SOLAR RESOURCE ASSESSMENT

13th & 14th December 2019

CHENNAI

Organized by

National Institute of Wind Energy, CHENNAI

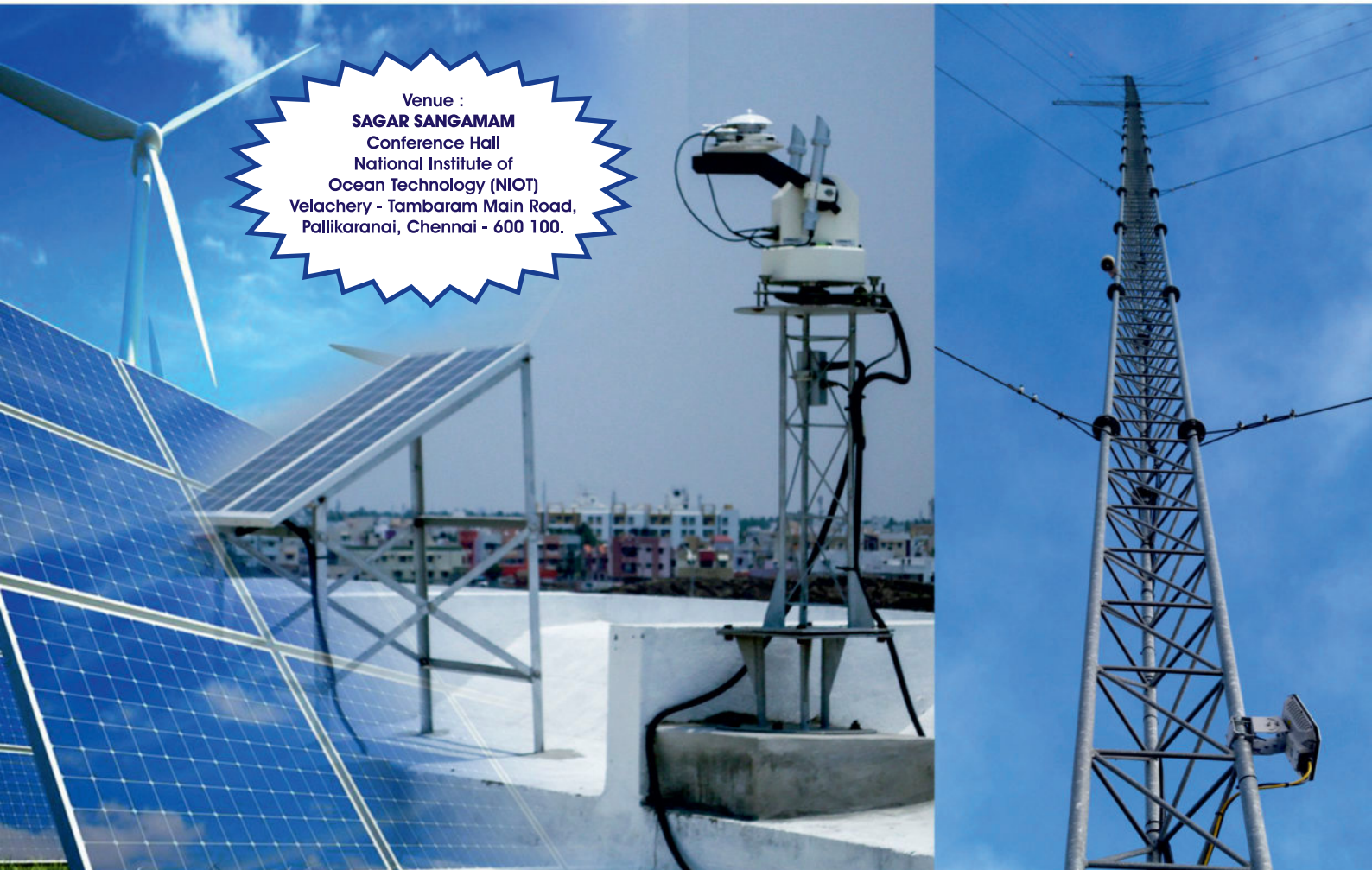
Ministry of New and Renewable Energy, Government of India

Sponsored by

Ministry of New and Renewable Energy, NEW DELHI

Government of India

Venue :
SAGAR SANGAMAM
Conference Hall
National Institute of
Ocean Technology (NIOT)
Velachery - Tambaram Main Road,
Pallikaranai, Chennai - 600 100.



INTRODUCTION

Wind and solar energy have become an integral part of Global energy mix. As on July 2019, the country has the installed capacity of 66.8GW of grid connected wind and solar generation along with 1GW (approximate) of off grid connected solar power plants. To accelerate the installation of wind and solar power in the country, the Government of India has set a target of 60 GW from wind and 100 GW from solar for 2022 and to have at least 40% renewable power capacity by 2030. The resource assessment is the critical elements for developing wind and solar power plant.

The journey of resource assessment was driven by the vision and tireless efforts from the wind and solar community right from the early seventies. Measuring and assessing the wind and solar resource potential of the country became the natural first step which then found its natural progression in the development of Renewable sector.

A concerted efforts on the resource assessment has picked up its pace when the Government mandated National Institute of Wind Energy (NIWE) formerly Centre for Wind Energy Technology (CWET) for Resource Assessment in the country for both wind and solar. NIWE started the wind resource assessment program in the year 2000 and the solar program in 2011. Several efforts for resource measurements followed with active participation and investment from the private sector and State Nodal Agencies which were parallely taken up. These collective efforts by all the stakeholders created the strong foundation on which the wind sector grew and became as established as we see today.

The first Indian wind map was prepared and published in year 2004 for 50m hub height. In 2010 NIWE prepared 50m, 80m height Wind Atlas with updated techniques and estimated potential in the country as 49 GW and 102 GW respectively. As the hub height of the turbine is increasing, NIWE prepared and released 100m Wind Atlas in September 2015 with the estimated potential of 302 GW and is on the verge of releasing the 120m Atlas. The 150m height wind atlas with advanced technique is under progress.

However, it was Prof. Dr. Anna Modayil Mani who pioneered in resource assessment and took the first visionary step of carrying out Pan India campaign of measuring and assessing the wind and solar resource potential.

About Prof. Dr. Annamani

Prof. (Dr.) Anna Modayil Mani, the pioneer in field of Wind and Solar Resource Assessment was born on 23rd August 1918. Dr. Anna Mani made several contributions to the field of meteorological instrumentation, conducted research and published numerous papers on solar radiation, ozone and wind energy measurements. She published the handbook for Solar Radiation Data for India (1980) and also published the Wind Energy Resource Survey of India in 1983.To commemorate her birth centenary, NIWE has organized series of events in last year and in culmination, an International Conference on Wind and Solar Resource Assessment is being organized on the 13th and14th December 2019 in Chennai.

To tribute and celebrate, the birth centenary of Prof. Dr. Anna Mani as the Wind Resource Day 23rd August 2019.

WIND & SOLAR RESOURCE ASSESSMENT

Wind and solar resources assessment work in India contributions to the field of meteorological started way back in 1970s. National Wind Resource Assessment program was launched in 1985 by the Government of India to assess the potential with actual measurements, wherein Prof. Dr. Anna Mani played a crucial role. Currently 896 wind monitoring stations were established under program. Further about 1100 private wind monitoring stations are also established in the country, thanks to the “Guidelines for Wind Measurement by Private Sector” released by MNRE in June 2008. In total, India holds a data bank for about 2000 wind-monitoring stations, which is one of the largest in the world.

Prof. Anna Mani published the Handbook for Solar Radiation Data for India in 1980 and Solar Radiation over India in 1981 and in 1990s, her efforts saw the publication of Wind Resource Survey in India series Volume I to V. NIWE continued the publishing of remaining volumes from Vol. VI to Vol. IX through its measurements campaigns.

These measurements and survey volumes helped in the potential estimation of the country in a well-defined way.

The solar radiation data in the country till 2010 was challenging due to non-availability of bankable and investor grade ground measured solar data. It was a major hurdle in the implementation of solar power projects in the country. To overcome these challenges MNRE launched a national program in 2010 for the establishment of a network of Solar Radiation Resource Assessment (SRRA) stations to collect solar radiation resource data measuring Global Horizontal Irradiance (GHI), Direct Normal Irradiance (DNI), Diffuse Horizontal Irradiance (DHI) and associated meteorological parameters in a phased manner through NIWE, by establishing an exclusive project called SRRA. Under this program, 115 stations have been established, out of these SRRA stations, 4 advanced measurement stations also have been commissioned in the country to collect site specific attenuation of solar radiation due to various atmospheric constituents and these 4 stations are part of the prestigious BSRN (Baseline Solar Radiation Network) an arm of world climate research programme (WCRP) of World Meteorological Organization (WMO). India and Japan are two countries in Asia that are in this prestigious network.

THEME OF THE CONFERENCE

1. Advances in measuring techniques for Resource Assessment
2. Tools and techniques for Resource Assessment
3. Temporal and Spatial variation of resources
4. Resource mapping
5. Uncertainties Quantification
6. Offshore wind assessment

TARGET OF THE CONFERENCE

Prof. Dr. Anna Mani was always keen in looking for technological breakthrough, inventing products and technical solutions, to address the challenges faced while implementing the wind and solar measurement campaign as well as in the process of assessment of the resource potential.

Keeping this spirit, the conference will focus on the latest technological developments in the field of measurements and resource assessment. The conference shall be a forum for amalgamation of national and international countries, thoughts leaders, engineers and professionals working in this field. This meet shall be an open platform for exchange of ideas, learnings, technical advancements, sharing of experiences in Wind and Solar Resource Assessment (WSRA) to move the operational expertise to the next paradigm.

INVITED SPEAKERS

The resource persons for the conference will be national and international experts from wind and solar industry across the globe who have contributed significantly to the development of wind and solar resource assessment.

IMPORTANT DATES

Conference on 13th & 14th December 2019

Last Date for Registration : 30th November 2019

Date of confirmation : 5th December 2019

EXHIBITION OF PRODUCTS AND SERVICES

The Conference provides opportunity for Exhibition to display the products and services to the professionals and stakeholders across the wind and solar industry. Those who need exhibition spaces may contact the conference coordinators for booking forms and terms & conditions. The booking will be open un till 30th November 2019.

TARGET PARTICIPANTS

- Industry Personnel
- Meteorologists
- Entrepreneurs
- Innovators
- Faculty
- Research Scholars / Students
- Scientists and Engineers

LANGUAGE

The official language of the Conference will be in English

REGISTRATION PROCEDURE

The Registration form should be submitted before the deadline of 30th November 2019. Kindly send your nomination / participant details to wsraconference@gmail.com . The registration form can be downloaded from the NIWE website (http://niwe.res.in).

Participation is free and there is no registration fee. Hence, the registered participants will be scrutinized based on the relevant credentials.

CONFERENCE SPONSOR OPPORTUNITIES

The Conference offers Platinum, Diamond, Gold and Silver sponsorship opportunity. The interested company may contact the Conference Directors.

Platinum	Diamond	Gold	Silver
5,00,000/- INR	3,00,000/- INR	2,00,000/- INR	1,00,000/-INR

ABOUT NIWE

National Institute of Wind Energy (NIWE) has been established in Chennai in the year 1998, as an autonomous R&D institution by the Ministry of New and Renewable Energy (MNRE), Government of India. It is a knowledge-based institution of high quality and dedication, offers services and seeks to find complete solutions for the kinds of difficulties and improvements in the entire spectrum of the wind energy sector by carrying out further research. It has a Wind Turbine Test Station (WTTS) at Kayathar with the technical & partial financial support by DANIDA, Govt. of Denmark.

National Institute of Wind Energy is meant only for wind energy technology research organization in Asia and perhaps in countries of the South. It is a young organization peopled with highly experienced professionals with expertise in all fields that wind turbine technology. This unique combination makes it a forward looking and practical place that will take the next logical steps in taking wind energy applications in the right directions. With its open approach to all wind energy related science and technology, you can be sure to get all the assistance you may need from resource assessment to project implemen- tation. It is sure that the centre with its excellent infrastructure & resource, will support, sustain and achieve high quality in the wind energy domain. The Centre will also promote expert products and services to other countries too.

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