

Ministry of New and Renewable Energy



Bioenergy will play a vital role in reducing carbon emissions of small and medium enterprises: Union Minister of State Shripad Yesso Naik

Biomass solutions can support livelihoods and clean industrial heat nationwide: Shri Santosh Kumar Sarangi, Secretary, MNRE

MNRE-GIZ report presents roadmap for adoption of biomass-based green steam and heat in MSMEs

MNRE organises workshop on biomass for green steam and heat applications in MSMEs

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The Union Minister of State for New and Renewable Energy and Power highlighted the important role of bioenergy in India's clean energy transition, particularly in decarbonizing industrial process heat in the small and medium enterprise (MSME) sector. The Minister delivered the keynote address at a national workshop on "*Introduction and Use of Biomass for Green Steam and Heating Applications in MSMEs*," organized by the Ministry in collaboration with the German International Cooperation Agency (GIZ) and Grant Thornton India. On this occasion, he also jointly released a report titled "*Decarbonizing MSMEs: Use of Biomass for Green Steam and Heating Applications*."



Shri Naik said that under the leadership of Prime Minister Narendra Modi, the country's renewable energy journey has gained unprecedented momentum in the last decade, with bioenergy emerging from a marginal role to become a strategic pillar in the country's clean energy transition.

The Minister said that bioenergy today goes beyond power generation and simultaneously contributes to several national priorities such as energy security, rural livelihoods, waste management, pollution control, and climate change. Addressing the challenge of decarbonization in the MSME sector, he pointed out that while MSMEs account for nearly a third of the country's manufacturing output and provide employment to millions, a significant portion of their energy demand for steam and heating is still met by fossil fuels such as coal, furnace oil, and pet coke. Therefore, it is crucial to transition this sector to clean and renewable thermal energy.

The Minister stated that biomass-based green steam and heat solutions offer a viable, scalable, and adaptable path to meet the country's specific needs. India's abundant availability of agricultural residues, animal waste, and solid waste provides a unique opportunity to convert waste into value, reduce emissions, and generate additional income for farmers and rural entrepreneurs. He outlined the government's integrated approach through initiatives such as the National Bioenergy Program, SATAT, and Gobardhan, which support biomass briquettes and pellets, non-bagasse-based cogeneration, and decentralized solutions designed for industrial applications and small and medium enterprises, as well as strengthening linkages with the National Green Hydrogen Mission.



Highlighting the significance of the report released during the workshop, the Minister said that it provides a data-driven, sector-specific roadmap for the adoption of biomass-based green heat and steam solutions in industries such as textiles, food processing, chemicals, foundries, and pharmaceuticals. The report also highlights key policy and market enabling factors, including biomass deployment obligations, standardized steam supply agreements, biomass exchanges, and robust supply-chain coordination. It will serve as a valuable reference for policymakers, industry, and financial institutions.

The Minister stated that technology alone cannot drive change. He called for closer collaboration across the entire value chain, from farmers and family owned organizations (FPOs) supplying biomass to aggregators, logistics providers, boiler manufacturers, energy service companies, financiers, and regulators. Small and medium enterprises need confidence in fuel availability, price stability, operational reliability, and supportive policies. Platforms like this workshop are crucial for building trust, sharing knowledge, and co-creating solutions.

The Minister said that bioenergy truly reflects the spirit of " *Sabka Saath , Sabka Vikas* ." He expressed confidence that the workshop outcomes and insights gained from the report will accelerate the adoption of green steam and heating solutions in the MSME sector and urged all stakeholders to translate their intentions into action.



Shri Santosh Kumar Sarangi, Secretary, Ministry of New and Renewable Energy, said that biomass-based applications have immense potential for use across the country. He said that from solid waste to energy projects and compressed biogas to decentralized biogas plants in rural areas, biomass solutions boost livelihoods, encourage decentralized energy access, and strengthen rural value chains, making bioenergy an important pillar of the country's clean energy transition.

Citing the report released at the event, the Secretary said that it highlights the immense potential of biomass-based industrial heat and steam applications in various sectors such as textiles, food processing, metals, and traditional industries, and is also suited for both large-scale and decentralized use. He emphasized the need to strengthen biomass supply chains, promote research and development, and encourage multi-fuel boiler technologies to ensure year-round fuel availability and cost-effective operations for small and medium enterprises. Emphasizing the importance of international collaboration, especially with Germany, he called for more active engagement on advanced boiler technologies and encouraged the scientific and R&D community of multinational and national governments and the Ministry of New and Renewable Energy (MNRE) to expand partnerships and accelerate the adoption of biomass-based solutions in Indian industry.

The workshop was attended by senior officials from the Ministry of Power, representatives from the German Embassy and GIZ, industrialists, small and medium enterprises, financial institutions, state governments, technology providers and knowledge partners.

Brief summary of the report on reducing carbon emissions of SMEs: Using biomass for green steam and heat applications

This report, jointly prepared by India's National Institute of Energy Research and Technology (MNRE) and GIS, identifies key industries and sectors such as textiles, food processing, chemicals, and metallurgy/foundry that should adopt biomass-based green heat and steam generation. The report also provides recommendations to promote biomass use in industries through biomass deployment obligations, development of biomass exchange and trading platforms, specific industrial policies to promote biomass use, standardization of steam supply agreements, etc. The report provides a comprehensive understanding of the current state of industries in terms of energy consumption and biomass adoption, and what India can do to increase the adoption of biomass and green heat and steam.

PK / KC /HN/ OP

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