

Proceedings

Webinar on Japan–India Partnership for the Decarbonization of the Industrial Sector



The banner features three logos at the top: IGES (Institute for Global Environmental Strategies) on the left, the Ministry of the Environment logo in the center, and TERI on the right. The central text reads "Webinar Japan-India partnership on decarbonization of industrial sector" with the date and time "Date: February 24, 2026 Time: 15:00 - 17:00 (IST)" below it. The banner is decorated with green and blue curved lines on the left and right sides.

IGES
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Webinar
**Japan-India partnership on decarbonization
of industrial sector**

Date: February 24, 2026 Time: 15:00 - 17:00 (IST)

24 February 2026

Proceedings of the **Webinar on Japan–India Partnership for the Decarbonization of the Industrial Sector**. The event was organized by **The Energy and Resources Institute (TERI)** in collaboration with the **Institute for Global Environmental Strategies (IGES)**.

Mr. Girish Sethi, Senior Director of the Energy Program at TERI, welcomed the participants to the webinar on the *Japan–India Partnership on Decarbonization of the Industrial Sector*. He expressed appreciation for the continued collaboration between TERI and the Institute for Global Environmental Strategies (IGES), as well as the support of the Ministry of the Environment, Japan (MOEJ), in organizing the event. He extended special thanks to colleagues from IGES, particularly Mr. Kojima, for their longstanding partnership and joint efforts in advancing environmental cooperation between Japan and India.



Reflecting on the institutional relationship between TERI and IGES, Mr. Sethi noted that the partnership has spanned more than fifteen years, with particularly strong engagement through the IGES Kobe Centre. Over this period, both organizations have worked closely to promote technology exchange, knowledge sharing, and collaborative initiatives aimed at supporting low-carbon development pathways.

Highlighting the importance of the webinar theme, Mr. Sethi emphasized that industrial decarbonization has emerged as a key global priority in recent years. While much of the international discourse focuses on so-called “hard-to-abate” sectors such as steel, cement, chemicals, and ammonia, he noted that significant opportunities for emission reductions also exist across a broader range of industries in India.

Mr. Sethi pointed out that the industrial sector accounts for more than half of India’s total energy consumption, underscoring its central role in the country’s energy transition. Within this sector, alongside large-scale industries, India also has a vast network of small and medium enterprises (SMEs), including sectors such as textiles, dairy processing, and chemicals. These industries represent a substantial opportunity for the adoption of energy-efficient technologies and low-carbon solutions.

Recalling past cooperation between Japan and India, Mr. Sethi referred to a successful bilateral initiative implemented around a decade ago with the support of the Japan International Cooperation Agency (JICA). The project focused on the dairy sector and explored the potential for deploying advanced heat pump technologies in dairy processing facilities. Several Japanese technology providers—including Mayekawa and Yanmar—actively contributed to this initiative by sharing technical expertise and solutions.

Mr. Sethi further highlighted the role of the Japan–India Technology Matchmaking Platform (JITMAP), which facilitates the introduction of Japanese technologies and operational best practices to Indian industries. Through such platforms, collaboration extends beyond

technology transfer to include improved operational efficiency and process optimization. As an example, he noted the contribution of companies such as TLV Co., Ltd., which specialize in steam system optimization and condensate recovery solutions—key elements in improving industrial energy efficiency.

Looking ahead, Mr. Sethi emphasized that the recent formalization of the Joint Crediting Mechanism (JCM) between Japan and India presents a significant opportunity to translate dialogue into tangible outcomes. He stressed that the time is now ripe to move beyond discussions and toward concrete implementation through feasibility studies and demonstration projects that can be deployed in the near future.

In concluding his remarks, Mr. Sethi expressed his pleasure at the participation of Milind Deore, Secretary of the Bureau of Energy Efficiency (BEE), under India’s Ministry of Power, in the opening session. He welcomed his presence and noted that BEE’s leadership will be instrumental in advancing collaborative initiatives for industrial decarbonization in India.

Keynote Address: The National Perspective: Mr. Milind Deore, Secretary, Bureau of Energy Efficiency (BEE)

Delivering the keynote address, Mr. Milind Deore, Secretary of the Bureau of Energy Efficiency (BEE), expressed his appreciation to the The Energy and Resources Institute (TERI) and the Institute for Global Environmental Strategies (IGES) for organizing the webinar and facilitating dialogue on strengthening Japan–India collaboration for the industrial low-carbon transition. He also acknowledged the presence of participants from Japan, including representatives from IGES, and commended the organizers for convening a timely and relevant discussion.



At the outset, Mr. Deore noted his preference for the term “low-carbon transition” rather than “decarbonization,” emphasizing that while complete decarbonization may be a long-term aspiration, the immediate priority is to accelerate the transition towards lower-carbon industrial pathways. He observed that the agenda of the webinar clearly reflects the shared commitment of both India and Japan to enhance climate action and deepen technological cooperation in the industrial sector.

Highlighting India’s evolving economic landscape, Mr. Deore stated that India has emerged as the fourth-largest economy globally and is expected to become the third-largest in the coming years. With sustained economic growth—currently exceeding 7–8 percent annually—the country’s energy demand is projected to increase substantially and could potentially double by 2047, aligning with India’s vision of *Viksit Bharat* or a developed India by that year. In this context, he underscored that improving energy efficiency and advancing industrial low-

carbon transitions are not optional measures but essential pillars for achieving sustainable economic growth.

Mr. Deore also reiterated India's climate commitments, noting that the country has pledged to reduce the emissions intensity of its GDP by 45 percent by 2030 and to achieve net-zero emissions by 2070, as announced by the Hon'ble Prime Minister. Within this broader climate agenda, the industrial sector occupies a critical position, as it accounts for approximately 50–55 percent of India's total energy consumption. He emphasized that sectors such as steel, cement, aluminum, fertilizer, and petrochemicals will require significant technological innovation and international collaboration to enable a successful low-carbon transition.

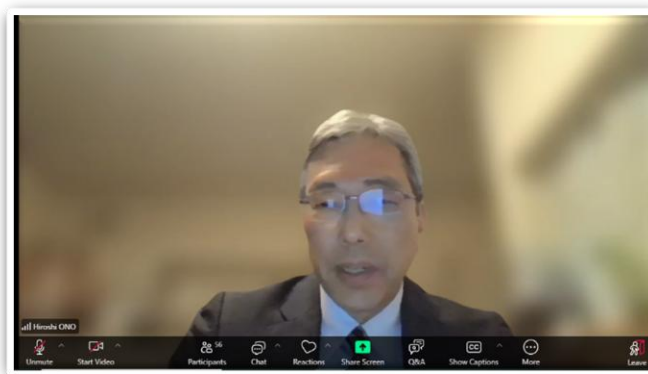
Speaking about ongoing policy initiatives, Mr. Deore highlighted the role of BEE in advancing energy efficiency across industries. He referred to the implementation of the Perform, Achieve and Trade (PAT) scheme, which has been instrumental in promoting energy efficiency improvements in energy-intensive sectors. Building on this experience, the government is now transitioning towards the Carbon Credit Trading Scheme (CCTS), a market-based mechanism designed to incentivize emission reductions. Under this framework, emission-intensity targets have already been assigned to seven industrial sectors.

Mr. Deore further noted that Japan has long been recognized as a global leader in advanced industrial and energy-efficient technologies, including waste heat recovery systems, hydrogen-based industrial processes, high-efficiency boilers, and advanced steam management solutions. These technologies hold considerable potential for supporting India's industrial transition. In this regard, he expressed optimism that enhanced cooperation between India and Japan could accelerate the adoption of such solutions in Indian industries.

In concluding his keynote address, Mr. Deore stated that he would be keen to review the outcomes and recommendations emerging from the webinar. He expressed confidence that the insights and suggestions generated through this dialogue could contribute meaningfully to the ongoing initiatives of BEE and further strengthen collaborative efforts between the two countries in advancing industrial low-carbon transitions.

Remarks by Hiroshi Ono (Executive Director, Institute for Global Environmental Strategies – IGES)

Mr. Hiroshi Ono, Executive Director of the Institute for Global Environmental Strategies (IGES), welcomed the distinguished participants and expressed his pleasure in co-organizing the webinar in partnership with the The Energy and Resources Institute



(TERI). He highlighted the longstanding collaboration between IGES and TERI in promoting the transfer and adoption of Japanese low-carbon and energy-efficient technologies in India.

Mr. Ono noted that the two institutions have been working closely for more than a decade through the Japan–India Technology Matchmaking Platform (JITMAP), an initiative launched in 2016 to facilitate cooperation between Japanese technology providers and Indian industries. Through this platform, information on advanced Japanese low-carbon technologies has been widely disseminated among Indian companies, enabling them to enhance operational practices and improve energy efficiency across various industrial sectors.

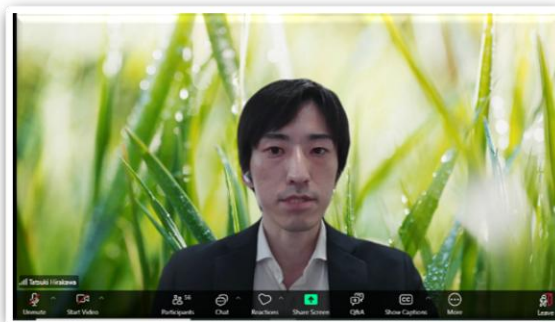
He further mentioned that an important milestone in bilateral climate cooperation was achieved with the signing of a memorandum of cooperation on the Joint Crediting Mechanism (JCM) between Japan and India in August, following several years of intensive consultations. This agreement provides a new framework for advancing collaborative climate action through the deployment of innovative technologies and the implementation of emission reduction projects.

Mr. Ono also introduced the synergy-based JCM feasibility study scheme funded by the Ministry of the Environment, Japan. The program aims to facilitate the development of JCM projects that address climate change mitigation alongside broader environmental challenges in an integrated and mutually beneficial manner.

In concluding his remarks, Mr. Ono expressed his hope that the webinar would serve as a productive platform for dialogue, knowledge exchange, and the identification of new collaborative opportunities between Japanese and Indian stakeholders in advancing industrial low-carbon transitions.

Remarks by Tatsuki Hirakawa, Second Secretary, Embassy of Japan in India

Mr. Tatsuki Hirakawa, Second Secretary at the Embassy of Japan in India, conveyed his appreciation to the organizers for convening the webinar and bringing together stakeholders from government, industry, and research institutions to discuss cooperation on industrial low-carbon transition. He acknowledged the collaborative efforts of the The Energy and Resources Institute (TERI) and the Institute for Global Environmental Strategies (IGES) in promoting dialogue and practical cooperation between Japan and India in the field of climate action and energy efficiency.



Mr. Hirakawa emphasized that Japan attaches great importance to strengthening bilateral cooperation with India in addressing climate change and advancing sustainable industrial development. He noted that both countries share common priorities in improving energy efficiency, promoting clean technologies, and accelerating the transition toward low-carbon growth pathways. In this regard, platforms that facilitate technology exchange and collaboration between Japanese and Indian stakeholders are particularly valuable.

He also highlighted the significance of the recently formalized cooperation under the Joint Crediting Mechanism (JCM), which provides an important framework for implementing projects that contribute to greenhouse gas emission reductions while supporting the deployment of advanced technologies. Through such mechanisms, Japan aims to work closely with partner countries like India to promote innovative solutions that benefit both environmental sustainability and industrial productivity.

In closing, Mr. Hirakawa expressed his hope that the discussions during the webinar would lead to the identification of concrete collaboration opportunities and project ideas. He reaffirmed Japan's commitment to supporting initiatives that foster technology transfer, strengthen institutional partnerships, and contribute to the shared goal of achieving a sustainable and low-carbon future.

Remarks by Satoshi Kojima (Program Director, Kansai Research Center, Institute for Global Environmental Strategies – IGES)

Dr. Satoshi Kojima briefly introduced the Japan–India Technology Matchmaking Platform (JITMAP), a collaborative initiative jointly operated by The Energy and Resources Institute (TERI) and IGES. Established in 2016, the platform aims to promote the transfer and adoption of low-carbon and energy-efficient technologies between Japan and India. Through JITMAP, both organizations facilitate business matchmaking and foster collaboration between Japanese technology providers and Indian industries. The platform supports these objectives through a range of activities, including seminars, technical workshops, and feasibility studies designed to identify practical opportunities for technology deployment and industrial energy efficiency improvements.



Dr. Kojima then presented a few examples of outcomes achieved through past JITMAP activities. In one case, a feasibility study conducted in 2017 in the state of Maharashtra focused on automobile parts manufacturing companies. As part of the study, technical experts recommended replacing outdated reciprocating air compressors with energy-efficient inverter compressors and addressing air leakage within the compressed air systems. The implementation of these measures resulted in approximately 30 percent energy savings, generating financial benefits estimated at around INR 60 million.

In another example, Dr. Kojima highlighted a seminar organized in 2020 in Gujarat in collaboration with TLV International Corporation. The seminar focused on improving the efficiency of industrial steam systems, particularly through enhanced steam management and condensate recovery practices. Such initiatives, he noted, demonstrate how knowledge exchange and targeted technical interventions can deliver tangible energy savings and operational improvements in Indian industries.

Technical Presentation on ‘Steam Management System’: Mr. Peush Jaitly, General Manager – Country Head, TLV India Pvt. Ltd.

Mr. Peush Jaitly delivered a technical presentation on the importance of efficient steam management systems in improving industrial energy performance and reducing operational costs. He explained that steam is one of the most widely used utilities in industrial processes across sectors such as textiles, chemicals, food processing, pharmaceuticals, and paper. However, in many industrial facilities, steam systems operate below optimal efficiency due to poor maintenance, inadequate system design, and lack of monitoring, leading to significant energy losses.



Mr. Jaitly emphasized that a comprehensive steam management approach involves optimizing the entire steam cycle—from steam generation and distribution to utilization and condensate recovery. He noted that inefficiencies commonly arise from issues such as steam leakage, improper condensate removal, malfunctioning steam traps, and insufficient insulation in pipelines. Addressing these challenges through systematic assessment and maintenance can significantly improve energy efficiency while enhancing system reliability.

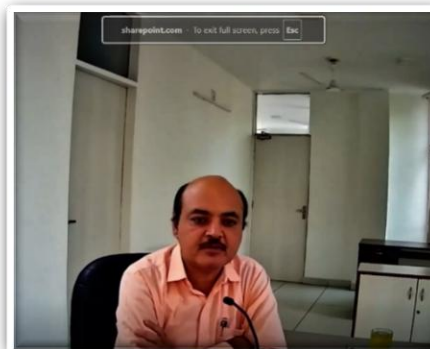
He further highlighted the role of advanced steam management technologies and best operational practices in reducing fuel consumption and greenhouse gas emissions. Solutions such as high-efficiency steam traps, automated monitoring systems, condensate recovery units, and proper pressure management can substantially improve the performance of steam systems. According to Mr. Jaitly, recovering and reusing condensate not only conserves water but also saves the thermal energy contained in the condensate, thereby reducing the overall energy demand of industrial boilers.

Mr. Jaitly also shared practical experiences from industrial applications where improvements in steam system management resulted in considerable energy savings and reduced operational costs. He stressed that even relatively simple interventions—such as regular steam trap inspections, minimizing leakages, and improving condensate recovery—can generate measurable financial and environmental benefits.

In conclusion, Mr. Jaitly underscored that optimizing steam systems represents one of the most cost-effective pathways for industries to enhance energy efficiency and contribute to low-carbon industrial development. He encouraged industries to adopt a holistic approach to steam system management, combining advanced technologies with proper operational practices and regular system audits to achieve sustained improvements in performance and sustainability.

Remarks by Ketan Kakkad, CEO, Gujarat Industrial and Technical Consultancy Organisation Ltd. (GITCO Ltd.)

Mr. Ketan Kakkad, Chief Executive Officer of Gujarat Industrial and Technical Consultancy Organisation Ltd. (GITCO), shared his perspectives on the importance of strengthening industry-oriented initiatives to support the low-carbon transition in India. He emphasized that technical consultancy organizations such as GITCO play an important intermediary role in bridging the gap between technology providers, financial institutions, and industrial enterprises—particularly small and medium-sized industries that often require technical guidance to adopt advanced energy-efficient technologies.



Mr. Kakkad highlighted that many industries in India, especially in manufacturing clusters, have significant potential for improving energy efficiency through better process optimization, modernization of equipment, and adoption of innovative technologies. However, these improvements often require technical feasibility assessments, financial structuring, and institutional support. In this context, he noted that organizations like GITCO assist industries by conducting detailed technical studies, preparing project reports, and facilitating the implementation of energy efficiency and sustainability initiatives.

He also emphasized that collaboration between Indian institutions and international partners—such as the ongoing cooperation between the The Energy and Resources Institute (TERI) and the Institute for Global Environmental Strategies (IGES)—creates valuable opportunities to introduce advanced technologies and best practices from countries like Japan. Such partnerships help build technical capacity within Indian industries and support the scaling up of low-carbon solutions.

In conclusion, Mr. Kakkad expressed his support for initiatives such as the Japan–India Technology Matchmaking Platform (JITMAP) and the Joint Crediting Mechanism (JCM), which encourage collaboration between technology providers and industrial users. He noted that these platforms can play a crucial role in facilitating technology transfer, enabling feasibility studies, and supporting the implementation of projects that contribute to energy efficiency, environmental sustainability, and industrial competitiveness in India.

Remarks by Bhavdeep Shah, Head – Energy Conservation Cell, MANTRA (Man Made Textile Research Association), Surat

Mr. Bhavdeep Shah, Head of the Energy Conservation Cell at the Man Made Textile Research Association (MANTRA), Surat, shared insights on the importance of energy efficiency and low-carbon technology adoption within the textile sector. He noted that Surat is one of India's largest textile manufacturing clusters, with a significant concentration of man-made



fibre processing units that collectively consume substantial amounts of thermal and electrical energy. In this context, improving energy efficiency and introducing cleaner technologies are essential steps toward reducing the environmental footprint of the sector.

Mr. Shah highlighted the role of MANTRA in supporting textile industries through research, technical guidance, and capacity-building initiatives. Through its Energy Conservation Cell, the organization assists textile units in identifying opportunities for energy savings, optimizing process operations, and adopting advanced technologies that improve productivity while reducing energy consumption. Such initiatives are particularly important for small and medium enterprises that may lack the technical expertise required to implement energy-efficient solutions.

He also emphasized that collaborative initiatives between Indian institutions and international partners—such as those facilitated through the Japan–India Technology Matchmaking Platform—provide valuable opportunities for the textile sector to access advanced technologies and operational practices from Japan. These partnerships can support improvements in steam systems, waste heat recovery, and other process efficiencies that are highly relevant to textile manufacturing.

In conclusion, Mr. Shah expressed his appreciation for platforms that bring together industry, research institutions, and technology providers to accelerate the adoption of low-carbon solutions. He noted that continued cooperation and knowledge exchange will be critical in enabling the textile industry to enhance its competitiveness while progressing toward more sustainable and energy-efficient operations.

Session 2: Moderated Discussion Theme: *How Japan and India could utilize environmental technology transfer to overcome climate and environmental issues in India*

Moderator: Prosanto Pal, Director – Industrial Energy Efficiency, The Energy and Resources Institute (TERI)

The second session of the webinar was conducted as a moderated discussion focusing on how Japan and India could strengthen collaboration in environmental technology transfer to address climate change and environmental challenges in India. The session was moderated by Mr. Prosanto Pal, Director of Industrial Energy Efficiency at TERI.



At the outset, Mr. Pal welcomed the panelists and participants and briefly introduced the theme of the session. In his opening remarks, he emphasized the growing importance of international collaboration in accelerating industrial decarbonization and improving environmental performance across sectors. He noted that India's rapidly expanding industrial sector presents both challenges and opportunities in terms of energy consumption, emissions reduction, and technology adoption. In this context, he highlighted the relevance of Japanese expertise in advanced industrial technologies and energy-efficient systems.

Mr. Pal further underscored that technology transfer initiatives between Japan and India can play a critical role in supporting Indian industries—particularly small and medium enterprises—in adopting cleaner and more efficient production systems. He referred to ongoing collaborative platforms such as the Japan–India Technology Matchmaking Platform and emerging opportunities under the Joint Crediting Mechanism, which facilitate partnerships between technology providers, research institutions, and industrial stakeholders.

Following his introductory remarks, Mr. Pal invited the panellists to share their perspectives on how environmental technology transfer, policy support mechanisms, and collaborative projects could be leveraged to address climate and environmental challenges in India while simultaneously strengthening bilateral cooperation between the two countries. The discussion aimed to identify practical pathways for scaling up technology deployment, enhancing industry engagement, and promoting sustainable industrial development.

Remarks by Archana Walia, India Director, Clean Air Asia

Dr. Archana Walia, India Director of Clean Air Asia, shared her perspectives on the critical linkages between industrial decarbonization, environmental sustainability, and air quality improvement. She emphasized that industrial emissions remain a significant contributor to air pollution and greenhouse gas emissions in many rapidly industrializing regions of India. Therefore,



addressing industrial energy use and adopting cleaner technologies are essential steps not only for climate mitigation but also for improving local air quality and public health outcomes.

Dr. Walia highlighted the importance of integrating climate action with air pollution control strategies. She noted that many interventions—such as improving energy efficiency, promoting cleaner fuels, optimizing industrial processes, and deploying advanced emission control technologies—offer co-benefits by simultaneously reducing greenhouse gas emissions and air pollutants such as particulate matter, nitrogen oxides, and sulfur dioxide. In this regard, the adoption of advanced environmental technologies can significantly contribute to achieving both climate and clean air objectives.

She also emphasized the role of international cooperation in facilitating the transfer of proven technologies and best practices. Partnerships between institutions in India and technologically advanced countries like Japan can support capacity building, knowledge exchange, and the deployment of innovative solutions tailored to the needs of Indian industries. Such collaborations can help industries transition toward cleaner production systems while maintaining competitiveness and supporting sustainable economic growth.

In conclusion, Dr. Walia stressed that collaborative platforms bringing together policymakers, industry representatives, research institutions, and technology providers are essential for accelerating the adoption of low-carbon and clean technologies. Strengthening these partnerships will help India address its climate and environmental challenges more effectively while advancing toward a more sustainable industrial future.

Remarks by Kunal Soni, Head – Industrial Process & Environment, HORIBA India

Mr. Kunal Soni, Head of Industrial Process and Environment at HORIBA India, highlighted the growing importance of measurement, monitoring, and data-driven decision-making in achieving industrial decarbonization and environmental compliance. He emphasized that accurate monitoring of emissions and process parameters is fundamental for industries aiming to improve operational efficiency, reduce environmental impacts, and meet increasingly stringent regulatory requirements.



Mr. Soni explained that advanced monitoring technologies enable industries to better understand their energy consumption patterns, emissions profiles, and process inefficiencies. Continuous emission monitoring systems (CEMS), process analyzers, and environmental monitoring instruments can provide real-time data that helps industries identify areas for improvement and implement targeted interventions. Such data-driven insights are essential for optimizing industrial processes, minimizing resource wastage, and reducing greenhouse gas and pollutant emissions.

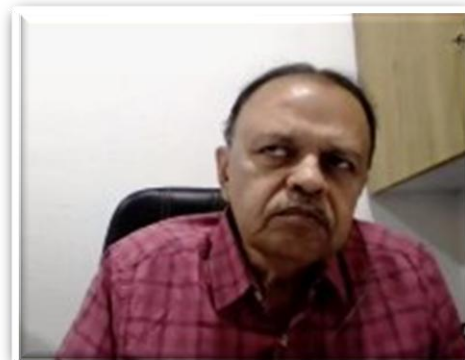
He further noted that many industries in India are progressively adopting digital monitoring solutions to enhance environmental performance and regulatory compliance. These technologies support industries in tracking emissions, maintaining transparency, and ensuring adherence to environmental standards. At the same time, reliable monitoring systems also play a crucial role in evaluating the effectiveness of energy efficiency and emission reduction measures implemented within industrial facilities.

Mr. Soni also underscored the potential for collaboration between India and Japan in deploying advanced environmental monitoring technologies and analytical solutions. Japan has significant expertise in precision instrumentation and environmental monitoring, which can complement India's efforts to modernize its industrial infrastructure and strengthen environmental management practices.

In conclusion, Mr. Soni emphasized that robust monitoring and measurement systems form the backbone of effective environmental management and low-carbon industrial transition. By combining advanced technologies with strong policy frameworks and international collaboration, industries can make measurable progress toward improved environmental performance and sustainable industrial growth.

Remarks by M G Parikh, Consultant – Textile Industry

Mr. M. G. Parikh, a senior consultant with extensive experience in the textile industry, shared his perspectives on the opportunities and challenges associated with improving energy efficiency and environmental performance within India's textile sector. He noted that the textile industry, particularly in clusters such as Surat and other major manufacturing hubs, is a significant consumer of thermal and electrical energy due to the energy-intensive nature of processes such as dyeing, processing, and finishing.



Mr. Parikh emphasized that improving energy efficiency in these processes offers substantial potential for reducing operational costs as well as environmental impacts. He highlighted that technologies related to efficient steam systems, heat recovery, and optimized process management can significantly improve the overall energy performance of textile units. However, he also pointed out that many small and medium enterprises in the textile sector often face challenges in adopting advanced technologies due to limited technical awareness and financial constraints.

He further stressed the importance of capacity building, technical advisory services, and demonstration projects to encourage the adoption of energy-efficient solutions in the textile sector. In this regard, collaborative initiatives involving research institutions, technology providers, and industry associations can play a crucial role in disseminating knowledge and facilitating the implementation of best practices.

Mr. Parikh also welcomed the prospects of enhanced collaboration between India and Japan in promoting cleaner production technologies and energy-efficient systems. Access to advanced Japanese technologies and operational expertise could significantly support Indian textile industries in modernizing their operations and improving sustainability performance.

In conclusion, Mr. Parikh underscored that strengthening industry–technology partnerships and promoting awareness about practical energy-saving opportunities will be essential to drive the transition toward more efficient and environmentally responsible textile manufacturing in India.

Remarks by Suneel Pandey, Director – Circular Economy & Waste Management, The Energy and Resources Institute (TERI)

Dr. Suneel Pandey, Director of the Circular Economy and Waste Management Division at TERI, shared his perspectives on the importance of adopting circular economy approaches to address industrial environmental challenges and support low-carbon development. He emphasized that the transition toward sustainable industrial systems requires not only improvements in energy efficiency but also better management of materials, waste streams, and resource flows across the industrial value chain.



Dr. Pandey highlighted that the concept of a circular economy focuses on reducing resource consumption, minimizing waste generation, and maximizing the reuse and recycling of materials. By promoting resource efficiency and closing material loops, industries can significantly reduce their environmental footprint while improving economic performance. He noted that many industrial sectors in India generate large quantities of waste and by-products, which, if managed effectively, can be transformed into valuable resources.

He also stressed the importance of integrating waste management strategies with broader industrial sustainability initiatives. Approaches such as industrial symbiosis, resource recovery, and waste-to-energy solutions can help industries reduce both emissions and environmental pollution. In addition, improved waste management practices contribute to reducing pressure on natural resources and support the development of more resilient industrial systems.

Dr. Pandey further underscored the role of international cooperation in advancing circular economy practices. Collaboration between India and Japan can facilitate the exchange of technologies, policy frameworks, and best practices related to waste management, recycling, and resource efficiency. Japan's experience in advanced waste management systems and circular economy policies offers valuable lessons that can be adapted to the Indian context.

In conclusion, Dr. Pandey noted that the integration of circular economy principles into industrial development strategies will be essential for achieving long-term sustainability goals. Strengthening partnerships among research institutions, industry stakeholders, and international collaborators can accelerate the adoption of innovative solutions that promote resource efficiency, environmental protection, and low-carbon growth.

Closing Remarks by N K Ram, The Energy and Resources Institute (TERI)

Dr. N K Ram delivered the closing remarks and expressed his sincere appreciation to all speakers, panelists, and participants for their valuable contributions to the webinar on the Japan–India partnership for the decarbonization of the industrial sector. He acknowledged the strong



collaboration between TERI and the Institute for Global Environmental Strategies (IGES), as well as the continued support from the Ministry of the Environment, Japan, in advancing dialogue and cooperation on climate and energy-related initiatives.

Dr. Ram highlighted that the discussions during the webinar clearly demonstrated the significant potential for strengthening cooperation between India and Japan in promoting industrial low-carbon transitions. He noted that the exchange of knowledge, technologies, and operational best practices—particularly in areas such as energy efficiency, steam system optimization, environmental monitoring, and circular economy approaches—can play a crucial role in helping Indian industries reduce emissions while improving productivity and competitiveness.

He also emphasized the importance of emerging collaborative mechanisms such as the Joint Crediting Mechanism (JCM), which can facilitate the implementation of concrete projects through technology transfer and joint feasibility studies. According to Dr. Ram, such initiatives offer practical opportunities for industries in India to adopt advanced low-carbon technologies from Japan while contributing to global climate mitigation efforts.

Dr. Ram further noted that the webinar served as an important platform for bringing together policymakers, technology providers, industry representatives, and research institutions to share experiences and identify pathways for collaboration. He expressed hope that the insights and recommendations emerging from the discussions would translate into concrete partnerships, pilot projects, and long-term cooperation between stakeholders in both countries.

In conclusion, Dr. Ram once again thanked all the partner organizations, speakers, and participants for their active engagement and valuable inputs. He expressed optimism that continued collaboration between India and Japan will accelerate the adoption of sustainable technologies and contribute to building a more resilient and low-carbon industrial future.