

# **JITMAP**

**Promoting the Application of Japanese Environmental Technology to Indian Industries** 

JAPAN-INDIA TECHNOLOGY MATCHMAKING PLATFORM





# **Opportunity**

Japan-India Technology Matchmaking Platform (JITMAP) is a multi-stakeholder platform initiated to promote the engagement and matching of Japanese and Indian stakeholders in facilitating mutually beneficial transfer of Environmental Technologies (ETs) including low-carbon technologies (LCTs), energy-efficient technologies (EETs), best operating practices (BOPs), and renewable energy technologies (RETs).

Showing their strong partnership, Institute for Global Environmental Strategies (IGES) and The Energy and Resources Institute (TERI) launched JITMAP in 2016 with the support of the Ministry of Environment, Japan (MOEJ), and since then, the platform has continued to promote and scale up the adoption of Japanese ETs in Indian Industries, including small and medium enterprises (SMEs).

India aims to achieve net zero emissions by 2070, as announced at the 26th UN Climate Change Conference (COP-26) held in Glasgow in 2021. To achieve this goal, India is striving to improve energy efficiency and reduce carbon emissions in different economic sectors, particularly in the industrial sector, which accounts for about 58% of the country's total commercial energy consumption.

Japan has also declared its aim to achieve net zero emissions by 2050. Japan is renowned for its expertise in manufacturing ETs with high energy efficiency and lower environmental impact. Both Japan and India stand to gain substantial environmental and economic benefits by promoting Japanese ETs in Indian industries on a large scale.

# **Examples of Technologies Promoted by JITMAP**

- Compressed air system
- Steam management system
- High-efficiency refrigeration system, electric heat pump (EHP)
- Energy-saving transmission belt
- Continuous Emission Monitoring System (CEMS)

# **Our History**



#### 2010~2013

Introduced India's first electric and gas heat pump (EHP, GHP) and applied best operating practices for compressed air systems and induction furnaces to Indian industries under the Science and Technology Research Partnership for Sustainable Development (SATREPS) programme.



#### 2014~

Identified local needs and promoted transfer of key technologies, including compressed air systems, steam management systems, electric heat pumps, high-efficiency refrigeration systems, and energy-saving transmission belts, through projects supported by MOEJ.



#### 2016~

JITMAP was launched by IGES and TERI with the support of MOEJ, Japan, to promote the transfer of LCTs and EETs from Japan for adoption by end-users in India's industrial sector.

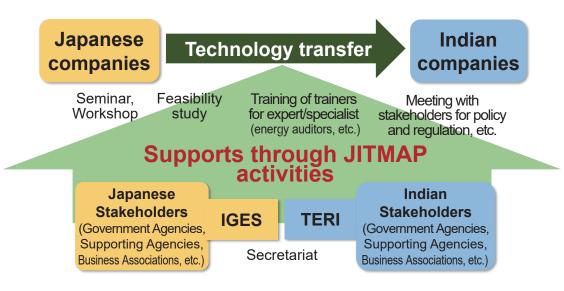


## 2020~

Targeted technology for transfer covers ETs that improve the environment and tackle environmental pollution.

# **Our Aim and Structure**

JITMAP aims to connect Japanese manufacturers of environmental technologies (ETs) with Indian industrial end-users seeking ways to reduce their carbon footprints to contribute to achieving net zero emissions in India.

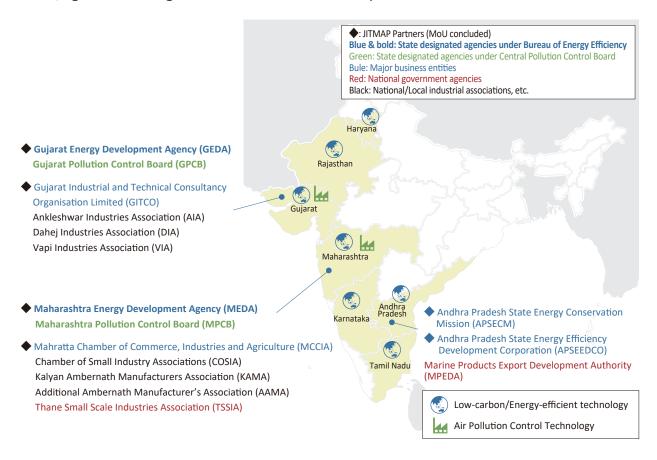


# Our Approach to Promoting Technology Transfer

- Seminars and workshops for energy managers of targeted local companies and energy auditors to deepen their understanding of the technologies.
- Feasibility studies or, preliminary energy audits (walk-through surveys), are carried out at selected local companies to confirm the applicability of the technology and its economic effect.
- **Training of trainers** for energy auditors who would be the propagators of the technology are also held. Engineers of Japanese technology suppliers cooperate in these activities.
- Meetings with relevant agencies and associations are also arranged to discuss the possibility of modifying relevant policies and regulations, which have been identified from these field studies.

## Our Partners & Locations of the Activities

JITMAP conducts its activities in close collaboration with a number of relevant public and private sectors, agencies and organisations in both India and Japan.



<sup>\*</sup> Conducting these activities in collaboration with local stakeholders respecting local situation

# Flow of Our Technology Transfer and Activities

**Feasibility** 

study

Meeting with

stakeholders

for policy and

regulation, etc.



Seminars and workshops:

Total: 15

Compressed air system: 5 EHP/Refrigeration system: 2 Steam management system: 4 Energy-efficient belt: 1 LCT/EE technologies: 1

CEMS: 2 (Continuous emission monitoring system)



#### Feasibility study (preliminary energy audit):

Total: 54

Compressed air system: 21 EHP/Refrigeration system: 13 Steam management system: 14 Energy-efficient belt: 6



Identification of Indian companies, matchmaking with Japanese companies

## Step 2 Support activities for technology transfer

Seminar, Workshop

**Training of** trainers for expert/specialist (energy auditors, etc.)

Step 3 Application of technologies

> Analysis of economic and environmental improvements of applications

## Step 4 Dissemination and expansion of applied technology

Dissemination of economic and environmental improvements of applications



Training of trainers: Total: 6

Compressed air system: 5
Steam management system: 1



Meeting with stakeholders:

Total: 5

Compressed air system: 2 EHP/Refrigeration system: 2 Energy-efficient belt: 1

## Our Achievements

JITMAP conducts its activities in close collaboration with a number of relevant public and private sectors, agencies and organisations in both India and Japan.

## [Case1] Awareness raising of steam management system in a seminar of the state government

- Date: Feb. 2020
- Location: Gujarat
- · Activity: Introduction of Steam Management System of TLV International, Inc. in a seminar of the state government.
- Implementing Partners: Gujarat Energy Development Agency (GEDA)
- Participants: About 120 BEE Certified Energy Auditors and Energy Managers.
- · Outputs: Possibility of energy saving by using the steam valves and traps was explained based on results of feasibility studies in Indian industries.



## [Case2] 30% energy saving by improving the operating practices

- Activity: Feasibility study (Sep. 2017) / Follow-up survey (Jan. 2020)
- · Location: Maharashtra
- Target industry: Automobile parts
- Recommendations on the FS by the expert of compressed air system: 1) To adopt an energy-efficient inverter type compressor. 2) To improve the operating practices such as reducing the air leakage.
- · Outcomes of the follow-up survey: By implementing most of the recommendations, the annual power consumption was reduced by about 1.8 million kWh (about INR16 million).



## [Case3] Promoting understanding and introduction of Japanese continuous emission monitoring systems

- · Location: Online
- Activity: Webinar to introduce Continuous Emission Monitoring Systems (CEMS) and exchange opinions on how to overcome India's air pollution problems
- Implementing Partners: Japan Environmental Technology Association (JETA)
- Participants: Approx. 240 people including representatives from Central Pollution Control Board (CPCB), State Pollution Control Boards (SPCBs), and energy-intensive industries
- Outcomes: Promote better understanding among Central Pollution Control Board (CPCB), State Pollution Control Boards (SPCBs), and energy-intensive industries about the importance of Japan-India cooperation in accurately measuring and evaluating flue gas emissions and introducing such technologies, as well as overcoming air pollution problems in India



# **Sharing and Dissemination of Information**

JITMAP website provides information on technologies, funding schemes, regulations and policies in the application of environmental technologies in India and Japan. Information on workshops and technical training, and feasibility studies of technology applications at local industries are also available in the JITMAP Website and the publications.



Workshops and technical training



Website (Japanese version)

Website (English version)



Pamphlet
Case Study Booklet

For more information
JITMAP website: https://jitmap.org/





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