



Mission Report - Singapore

Minutes of the meeting in Singapore for PaSTI- JAIF phase 1 project on development of facility/company level measurement, reporting and verification (MRV) to support carbon pricing in ASEAN member states (AMS)

01. Project Description

Project Type	Development and implementation of facility/company level Monitoring, Reporting and Verification (MRV) systems for Greenhouse Gas (GHG) emissions in ASEAN Member States (AMS)
Objectives of the mission	<ol style="list-style-type: none"> 1. To collect and validate the information on facility level GHG measurement and reporting (M&R) 2. To identify the priority sector to develop regional facility level M&R guideline for ASEAN.
Location	National Environment Agency, Singapore
Dates	15-16 October 2019
Project Participants	<p><u>OECC (Implementation Agency of PaSTI-JAIF)</u></p> <p>Yusuke Matsufuji (Principal Researcher), Aya Marabini (Researcher), Riki Nakajima (Researcher)</p> <p><u>ClimateSI (International Consultant of PaSTI-JAIF Phase 1)</u></p> <p>H.M.Buddika Hemashantha (International MRV expert), Himesh Hansamal (MRV Engineer)</p>



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02.Participating Organizations

1.	Overseas Environmental Cooperation Centre (OECC)
2.	National Environment Agency (NEA) - Singapore
3.	Climate Smart Initiatives (Pvt) Ltd (ClimateSI)

03.Participants

(Omitted)

04.Matters Discussed with the National Environment Agency

Agenda Item	Matters Discussed	Remarks
01.	Objective of the missions	PaSTI JAIF team provided a brief overview on the PaSTI JAIF project, the objectives of the project (to explore the experience of facility level M&R guideline in state and non-state level; to identify the legal gaps; and to identify a sector to develop facility level M&R guideline).
02.	Legal status for facility level M&R in Singapore	NEA indicated that there is a national carbon tax covering most of major emitting sector. The carbon tax has been legally enforced from 2019. As such, the major GHG emitting facilities have to measure and report their GHG emissions to NEA. The carbon tax covers power sector, IPPU, etc while it does not include the transport sector given the implicit carbon tax that has already been put in place for the transport sector. Since 2013, major energy consuming entities were submitting their energy related data to the government under Energy conservation Act (ECA) using template introduced by the government. Carbon pricing act was passed in Singapore parliament on 20th March 2018, and it was enforced from January 2019.



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03	Existing and proposed facility level M&R system	<p>Along with the carbon tax, the government also introduced M&R guideline to be followed by the facilities who are supposed to submit their GHG emission data annually. As such, Singapore has a facility level M&R guideline.</p> <p>Singapore has applied IPCC methodology while developing its M&R guidelines. However, each facility can propose their own GHG measurement methodology, and process related emission factors. Once the monitoring plan with the proposed methodologies and the emission factors is submitted to NEA, they will assess it & approve.</p>
04.	Preferred sectors for developing regional facility level M&R guideline	Option 1: Power
05.	Capacity building	NEA Suggested that it will be good to have capacity building for the staff members who involved in measuring and reporting the GHG emissions at the facilities.
06	Finalizing road map for M&R guideline	PaSTI JAIF team indicated that they will be able to finalize the draft roadmap by end of January 2020 after completing all country visits.
07	PaSTI JAIF Phase 2	NEA proposed to have the draft proposal for PaSTI JAIF phase 2 ready by February 2020.



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05. Additional information collected

- As per ECA, the facilities with consume over 54 TJ need to measure and report their energy consumption data.
- When carbon tax was introduced in 2015, major GHG emitters (emissions above 25,000 tCO₂e per year) start measuring and reporting their emissions to NEA.
- Larger emitters during the industry consultation held in 2016 realized the importance of having a proper M&R system to report.
- After determining the M&R requirement, legislations on carbon tax came into effect in 2018 and facilities that exceed 25,000 tCO₂e/year limit have to get registered under ECA.
- The facilities with the GHG emissions between 2,000 – 25,000 tCO₂e are reportable facilities, who have to report its GHG emissions to NEA. Facilities with GHG emissions above 25,000 tCO₂e should report to NEA about their emissions and get it verified by the NEA accredited third party. These are considered as taxable facilities.
- While NEA has introduced 4 tiers for the emission factors for each category, the facilities are supposed to go for higher tier unless they have justification to use the lower tier. NEA always check whether the facility is reporting in the correct tier.
- Since 2013, IPPU has been measuring and reporting its GHG emissions using IPCC guidelines and the templates issued by the government in pre-carbon tax
- Capacity building of the staff who are engaged in measuring and reporting GHG emissions at the facility level need to be done.

4. Actions to be taken

No	Action	Responsible organization/person	Deadline
1	Collect excel based templates used by the facilities to measure the GHG emissions before and after 2015	NEA	05/11/2019
2	Collect the presentation with the process of developing facility level M&R system	NEA	05/11/2019
3	Share Concept Note for PaSTI-JAIF Phase2	OECC	01/11/2019