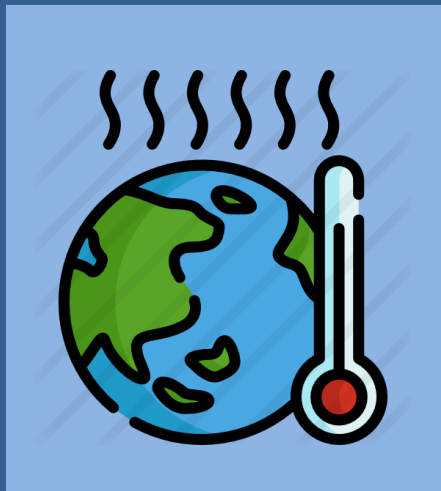




Sony Device Technology (Thailand) Co.,Ltd

Thailand Greenhouse Gas Management Organization's activities toward the Joint Crediting Mechanism (JCM)

Contribution toward the Achievement of Paris Agreement
through Public-Private Collaboration
9th December 2019, COP25 Japan Pavillion

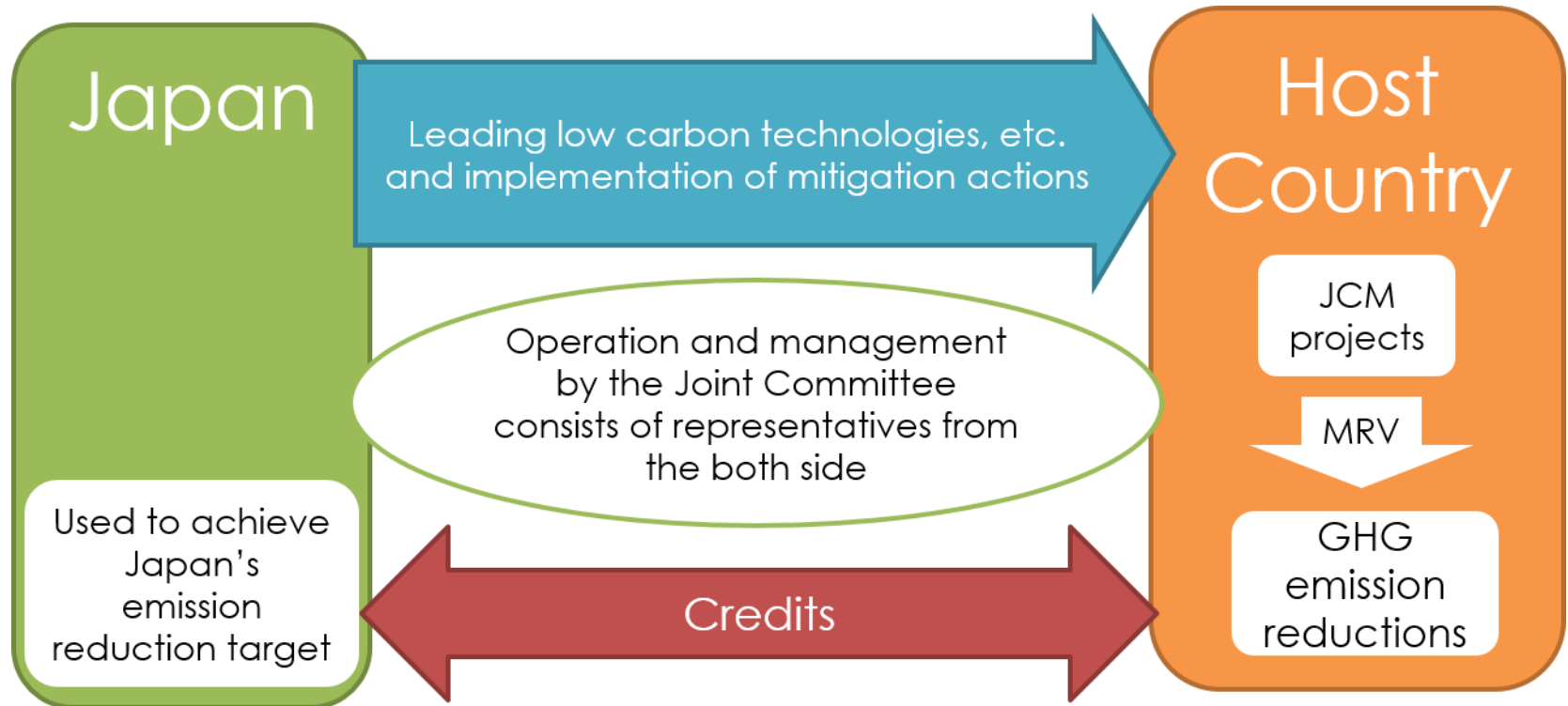




Thailand Greenhouse Gas Management Organization (Public Organization): TGO was established in 2007 as a public organization under the Ministry of Natural Resources and Environment. In October 2015, the cabinet assigned TGO to be JCM secretariat.

Joint Crediting Mechanism: JCM

- ✚ Implement jointly by both country
- ✚ Promote to diffuse leading low carbon technologies, products, etc.
- ✚ Evaluating GHG emission reductions by measurement, reporting and verification (MRV)

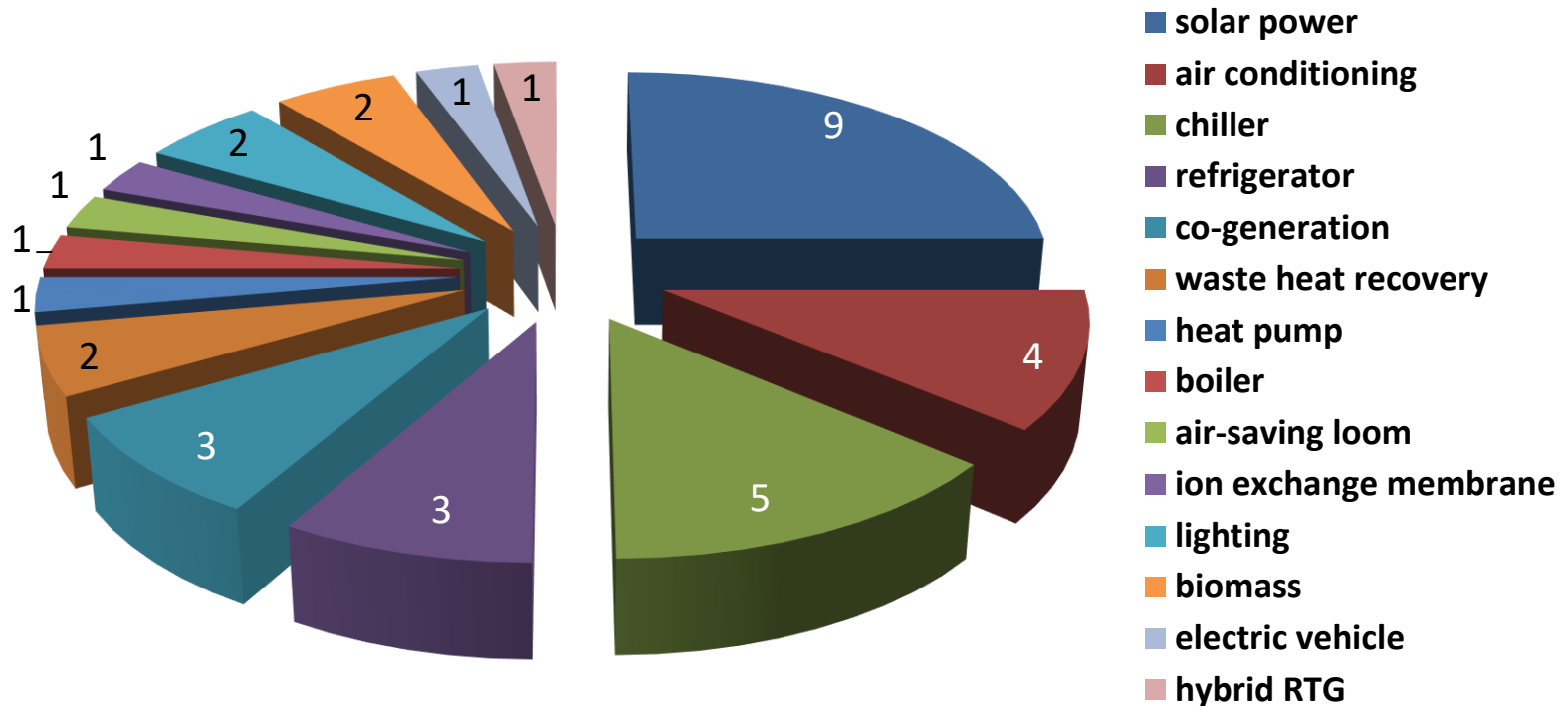


Bilateral Cooperation on the JCM for the Low Carbon Growth Partnership between Japan and the Kingdom of Thailand, 19th November 2015



Project type	Number of projects	GHG reduction (tCO ₂ /y)
energy demand	19	88,802
energy industries	11	85,294
	30	174,096

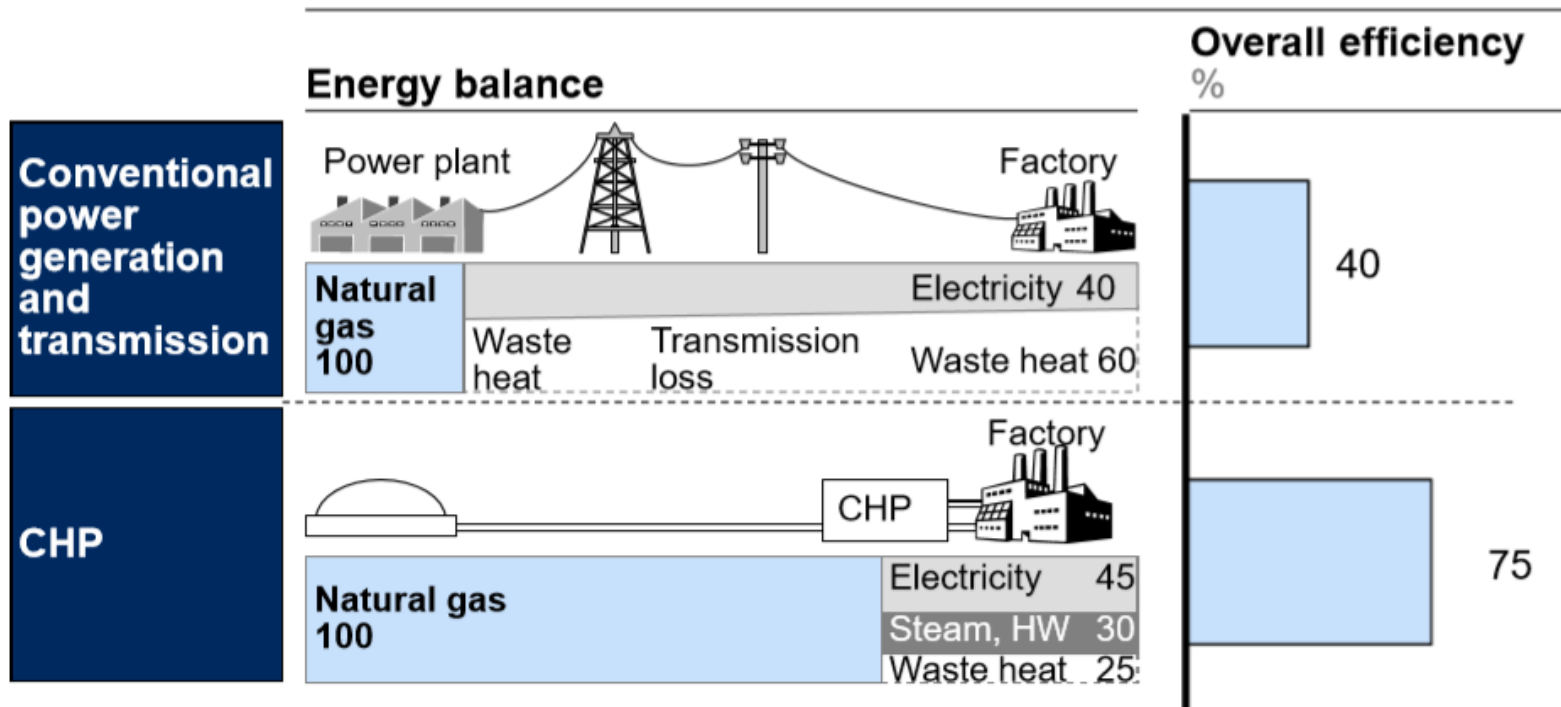
number of project categorized by technology



JCM Model Projects: co-generation

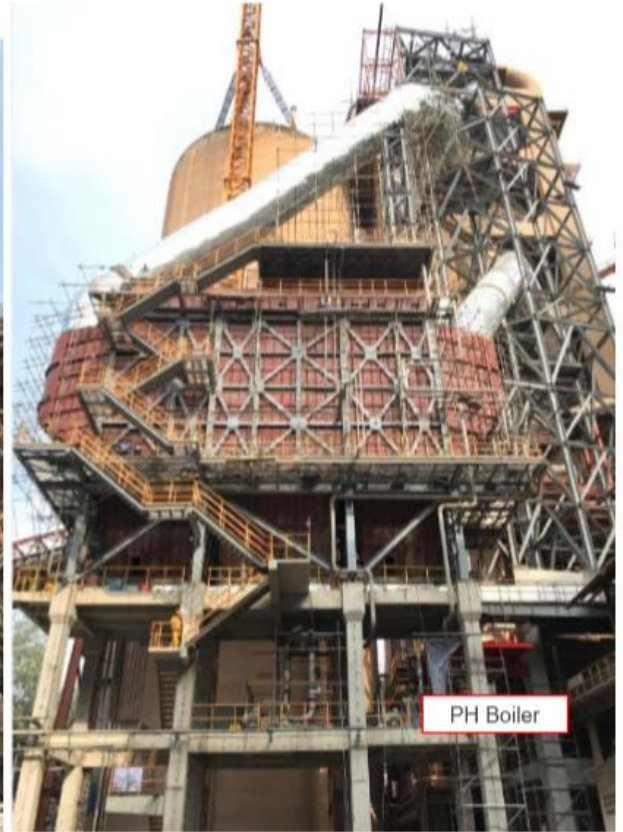
CHP attains highly efficient energy use by the maximum use of waste heat generated in power generation process.

Schematic illustration



- Cost reduction caused by energy saving
- CO2 emission reduction

JCM Model Projects: waste heat recovery from cement factory





Approved Methodologies (9 methods)

ID TH_AM	Title	Latest version	Date of approval
001	Installation of Solar PV System	1.0	23 Aug 2016
002	Energy Saving by Introduction of Multi-stage Oil-Free Air Compressor	2.0	21 Aug 2017
003	Energy Saving by Introduction of High Efficiency Inverter Type Centrifugal Chiller	1.0	21 Aug 2017
004	Installation of energy saving air jet loom at textile factory	1.0	21 Aug 2017
005	Energy Saving by Introduction of High Efficiency Non-Inverter Type Centrifugal Chiller	2.0	14 Jan 2019
006	Installation of Displacement Ventilation Air Conditioning Unit in the Cleanroom of Semiconductor Manufacturing Factory	1.0	21 Aug 2017
007	Power Generation by Waste Heat Recovery in Cement Industry	1.0	20 Apr 2018
008	Introducing heat recovery heat pumps with natural refrigerants for the food manufacturing industries	1.0	14 Jan 2019
009	Installation of gas engine cogeneration system to supply electricity and heat	1.0	14 Jan 2019

Third Party Entity (5 companies)

Company name	Designated date	1. Energy industries	2. Energy Distribution	3. Energy demand	4. Manufacturing industries	5. Chemical industry	6. Construction	7. Transport	8. Mining/mineral production	9. Metal production	10. Fugitive emissions from fuels	11. Fugitive emissions from production and consumption of halocarbons and sulphur hexafluoride	12. Solvent use	13. Waste handling and disposal	14. Afforestation and reforestation	15. Agriculture
Lloyd's Register Quality Assurance Limited (LRQA)	23 Aug 2016	○ ●	○ ●	○ ●				○ ●						○ ●		
Bureau Veritas Certification Holding SAS (BVC)	23 Aug 2016	○ ●	○ ●	○ ●	○ ●	○ ●	○ ●	○ ●	○ ●	○ ●	○ ●	○ ●	○ ●	○ ●	○ ●	○ ●
Japan Quality Assurance Organization (JQA)	21 Aug 2017	○ ●		○ ●	○ ●	○ ●					○ ●			○ ●	○ ●	
Japan Management Association (JMA)	21 Aug 2017	○ ●	○ ●	○ ●											●	
EPIC Sustainability Services Private Limited (EPIC)	10 Dec 2018	○ ●	○ ●	○ ●	○ ●	○ ●	○ ●	○ ●	○ ●	○ ●	○ ●	○ ●	○ ●	○ ●	○ ●	○ ●

Registered Projects (6 projects)

Project Title	Expected Greenhouse Gas Emission Reduction (tCO ₂ eq/year)	Date of approval
Introduction of Solar PV Systems on Rooftops of Factory and Office Building	440	21 Aug 2017
Reducing GHG emission at Textile Factory of Luckytex (Thailand) Public Company Limited by Upgrading to Air-saving Loom	253	20 Apr 2018
Installation of High Efficiency Air Conditioning System and Chillers in Semiconductor Factory	3,327	20 Apr 2018
Energy Saving for Semiconductor Factory with High Efficiency Centrifugal Chiller and Compressor	324	20 Apr 2018
Introduction of 3.4MW Rooftop Solar Power System to Air-conditioning Parts Factories	1,071	14 Jan 2019
Power Generation by Waste Heat Recovery in Cement Industry	29,206	2 Aug 2019
Total	34,621	

Credit Issuance (3 project)

Project Title	Thai side	Japanese side
Introduction of Solar PV Systems on Rooftops of Factory and Office Building	149	151
Installation of High Efficiency Air Conditioning System and Chillers in Semiconductor Factory	1,202	1,202
Energy Saving for Semiconductor Factory with High Efficiency Centrifugal Chiller and Compressor	57	58



Thailand's GHG Mitigation goal

Pre - 2020

Nationally Appropriate Mitigation Action (NAMA)



“Thailand will reduce GHG emission 7 – 20 percent in Energy and Transport sectors by 2020”



Renewable Energy



Energy Efficiency



Biofuel



Sustainable transport systems

Nationally Determined Contributions :NDC)



“Thailand intends to reduce its greenhouse gas emissions by 20 percent from the projected business-as-usual (BAU) level by 2030. The level of contribution could increase up to 25 percent subject to adequate international support”



Energy



Transport



Industry



Waste



Agriculture



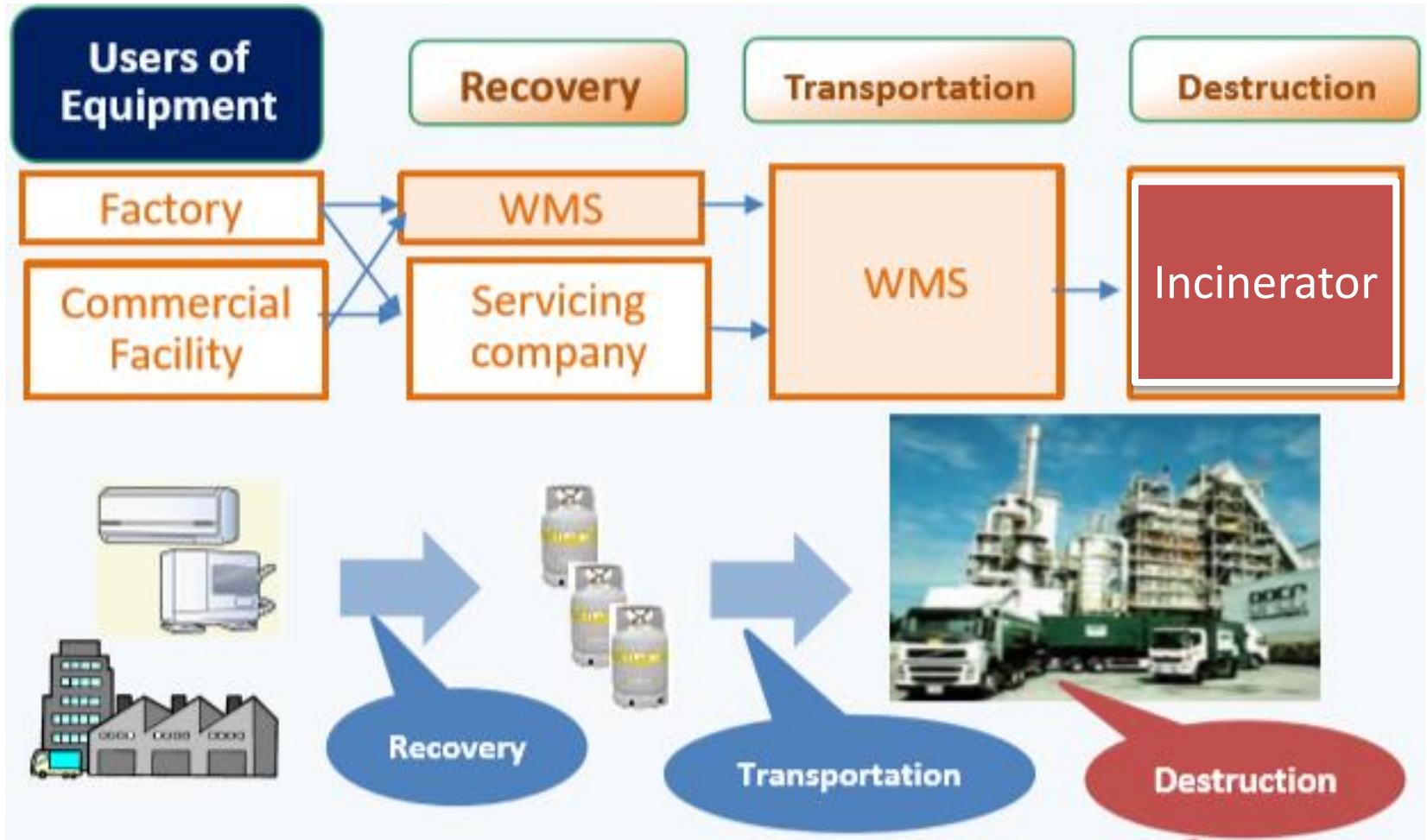
Thailand's GHG mitigation plan

Activities	Emission reduction MtCO ₂		% of contribution*
	NDC (2030)	JCM (2019)	
Renewable energy -- biomass	64.94	0.036	0.06/2+
Renewable energy -- solar	4.93	0.052	1.06/2+
Energy conservation in factory and building	5.86	0.085	1.45/2+

* At least 50% of credits must be allocated to the Japanese side.

JCM F-gas Recovery Destruction Model Project

Project on Introduction of Scheme for Fluorocarbons Recovery and Destruction with Utilization of Existing Waste Incineration Plant



Seminar & Workshop (18 events)

Title of Meeting	Co-organizer	Date
JCM capacity building in Thailand	Institute for Global Environmental Strategies (IGES)	6 th Nov 2015
		25 th Jan 2016
		22 nd Aug 2017
31 st Jan 2019		
A training for JCM TPE		26-27 th Jan 2016
Workshop on writing PDD		5 th Sep 2019
JCM Implementation in Thailand	Global Environment Centre Foundation (GEC)	30 th Sep 2016
		11 th Sep 2018
Japan-Thailand Joint Crediting Mechanism (JCM)	Ministry of Economy, Trade and Industry (METI)	12 th Sep 2019
		6-7 th Jul 2016
Developing JCM Projects in Thailand	Asian Development Bank (ADB)	17 th Oct 2017
		27 th Sep 2016
Opportunities and Development of JCM for the private sector (give information of the MOEJ funding for FY 2016 – First call)	Thailand Greenhouse Gas Management Organization (TGO)	7 th Apr 2016
		5 th Oct 2016
		7 th Apr 2017
		10 th Apr 2018
		5 th Apr 2019

Ready Thailand to Combat Climate Change

Thailand Greenhouse Gas Management Organization (Public Organization): TGO

The Government Complex, Ratthaprasasanabhakti Bldg., 9th Fl., 120 Chaengwattana Rd.,
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