

Rules of Implementation for the Joint Crediting Mechanism (JCM) for Existing Projects

The Government of Japan and the Government of the Kingdom of Thailand (hereinafter referred to individually as a “government” and collectively as “both governments”) hereby establish the rules of implementation for the existing projects started and identified by both governments as follows:

A. Terms and Definitions

1. For the purposes of these Rules of Implementation, the following definitions apply:

- (a) “**Authorization**” is a process specified by each government to authorize the use of credits issued from emission reductions and removals achieved by a project that are realized on or after 1 January 2021 towards the achievement of a nationally determined contribution of Japan, and other international mitigation purposes as appropriate, consistent with the guidance on cooperative approaches, referred to in Article 6, paragraph 2 of the Paris Agreement (hereinafter referred to as “the guidance”);
- (b) “**Corresponding adjustment**” is an adjustment to avoid double counting consistent with the guidance;
- (c) “**Crediting period**” is the period in which verified GHG emission reductions or removals attributable to a JCM project, as applicable, may result in the issuance of credits from that JCM project;
- (d) “**DCCE**” is Department of Climate Change and Environment under the supervision of the Minister of Natural Resources and Environment, the Government of the Kingdom of Thailand;
- (e) “**GHGs**” are carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulphur hexafluoride (SF₆) and nitrogen trifluoride (NF₃);
- (f) “**Guidance**” is relevant decisions of the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement (CMA) in relation to cooperative approaches referred to in Article 6, paragraph 2, of the Paris Agreement;
- (g) “**JCM credits**” are credits issued in the JCM registry of Japan for verified GHG emission reductions or removals, as applicable, attributable to a JCM project;
- (h) “**JCM project**” is a GHG emission reductions or removals project activity under

the JCM;

- (i) “**Joint Committee**” is a committee established by paragraph 5 of the Memorandum of Cooperation on the Joint Crediting Mechanism between the Government of Japan and the Government of the Kingdom of Thailand;
- (j) “**Methodology**” is a method for calculating and monitoring emission reductions or removals achieved by a project;
- (k) “**PDD**” is a project design document prepared by a project participant(s) of the JCM project, which sets out in detail the project;
- (l) “**Special account for the JCM**” is the account in the Thai registry for credits to be internationally transferred to the JCM registry of Japan;
- (m) “**Sustainable development and safeguards assessment report**” is a document prepared by the project participant(s), containing information relating to the possible contribution to the Sustainable Development Goals, negative impacts of the project and their mitigation measures;
- (n) “**Sustainable development and safeguards monitoring report**” is a document prepared by the project participant(s), containing information relating to the contribution to the Sustainable Development Goals and, where applicable, negative impacts of the project and their mitigation measures taken;
- (o) “**Thai registry**” is the Thailand Carbon Credit Registry System administered by TGO;
- (p) “**TGO**” is the Thailand Greenhouse Gas Management Organization (Public Organization) under the supervision of the Minister of Natural Resources and Environment, the Government of the Kingdom of Thailand;
- (q) “**Validation**” is the process of independent evaluation of a proposed JCM project by a third-party entity against the validation guidelines as developed by the Joint Committee on the basis of the PDD;
- (r) “**Verification**” is the periodic independent review and *ex post* determination of monitored GHG emissions reductions or removals for a specific monitoring period of a JCM project conducted by a third-party entity.

2. These Rules of Implementation describe standards which are requirements to be met except those paragraphs which include terms “should” and “may” as defined in paragraph 3 below.

3. The following terms apply in these Rules of Implementation:

- (a) “Should” is used to indicate that among several possibilities, one course of

action is recommended as particularly suitable;

- (b) “May” is used to indicate what is permitted.

B. Scope and Applicability

4. Credits are issued based on the quantified amount of GHG emission reductions or removals achieved by the contribution of project participants in the implementation of JCM projects during the crediting period.

5. The existing projects started and identified by both governments to which these Rules of Implementation are applicable are those listed in Appendix to these Rules of Implementation. A project which started operation on or after 1 January 2013 is eligible for consideration as the JCM project by both governments.

6. Each JCM project selects the crediting period which is either a fixed period of 10 years, or a renewable period of five (5) years which may be renewed twice at the maximum.

7. The applicable period for issuance of credits covers GHG emission reductions or removals from JCM projects occurred until 31 December 2030. Both governments may consider possible extension of the above-mentioned period and reach a decision by 2030.

C. Joint Committee

8. For the purpose of implementing the JCM for existing projects, the Joint Committee may develop or modify the guidelines necessary for the implementation of the JCM for existing projects, including, but not limited to:

- (a) guidelines for the development of methodologies;
- (b) methodologies;
- (c) guidelines for the designation as a third-party entity;
- (d) guidelines for the validation;
- (e) monitoring guidelines;
- (f) guidelines for the verification of GHG emission reductions or removals;
- (g) forms for PDD, percentage of credit allocation, request for registration of JCM projects, monitoring report, request for verification of emission reductions or removals, etc.

9. Unless otherwise specified in these Rules of Implementation, the guidelines developed by the Joint Committee established by paragraph 4 of the Bilateral Cooperation on

the Joint Crediting Mechanism for the Low Carbon Growth Partnership between Japan and the Kingdom of Thailand apply mutatis mutandis to the implementation of the JCM for existing projects under these Rules of Implementation in so far as and to the extent that is not in conflict with these Rules of Implementation.

10. The Joint Committee designates the third-party entities for the implementation of the JCM for existing projects. The third-party entities designated by the Joint Committee established by paragraph 4 of the Bilateral Cooperation on the Joint Crediting Mechanism for the Low Carbon Growth Partnership between Japan and the Kingdom of Thailand prior to the effective date of these Rules of Implementation are the third-party entities for the purpose of these Rules of Implementation.

11. On the basis of a request for registration of a JCM project submitted by project participants, the Joint Committee decides the percentage of credit allocation of the project and registers the JCM project which was validated by the third-party entity.

12. On the basis of a request for notification to each government for issuance of credits submitted by project participants, the Joint Committee notifies both governments to issue the credits which were verified by the third-party entities.

D. Third-party Entities

13. A third-party entity that is designated by the Joint Committee:
- (a) On the basis of requests from project participants, validates the project as described in a PDD prepared by the project participants, in line with the guidelines for the validation as developed by the Joint Committee, and informs the validation result to the project participants;
 - (b) On the basis of requests from project participants, verifies GHG emission reductions or removals achieved by the JCM project as described in the monitoring report prepared by the project participants, in line with the guidelines for the verification of GHG emission reductions or removals as developed by the Joint Committee, records the verification result in a verification report and sends the report to the project participants.

E. Project Participants

14. Project participants:
- (a) Prepare a draft methodology and submit the draft to the Secretariat for its review before the Joint Committee for its approval;

- (b) Prepare a sustainable development and safeguards assessment report by filling in a sustainable development and safeguards assessment report form and submit the report to the Secretariat for review;
- (c) Prepare a draft PDD and submit the draft to a third-party entity for validation and notify the Joint Committee;
- (d) Submit the PDD that was validated by the third-party entity and the percentage of credit allocation form to the Joint Committee for its registration of the JCM project;
- (e) Implement the JCM project and conduct monitoring in line with the PDD;
- (f) Prepare a sustainable development and safeguards monitoring report by filling in sustainable development and safeguards monitoring report form for each monitoring period and submit the report to the Secretariat for an evaluation;
- (g) Prepare a monitoring report and send the report to a third-party entity for verification;
- (h) After the registration of the project, the project participants prepare and submit a progress report to update the current status of the project to the Secretariat annually through the project lifetime or the end of the crediting period, whichever comes first. The project participants use the template of a monitoring report for preparing the progress report;
- (i) Submit a verification report prepared by the third-party entity to the Joint Committee, and request notification to each government for issuance of credits.

F. Development of Methodologies

15. The proposed methodology, after its completeness being checked as applicable, goes through public comment process. After the public comment process, the proposed methodology is reviewed by the Secretariat before Joint Committee approval.

16. The Joint Committee decides to either approve or reject the draft methodology, taking account of, among other things, inputs received and notifies the result to each government or project participant, as applicable. The Joint Committee makes publicly available the relevant information on the approved methodologies through a website.

G. Designation of Third-party Entities

17. Upon receiving an application for designation as a third-party entity submitted by a

candidate, the Joint Committee designates a third-party entity in line with the guidelines for the designation as a third-party entity and makes publicly available the relevant information on the designated third-party entity through a website.

18. The Joint Committee may suspend or withdraw the designation of a third-party entity if it has found fraud, malfeasance or incompetence of the entity.

H. Validation

19. Project participants go through validation of their proposed JCM project.

20. The third-party entity, in line with the guidelines for the validation as developed by the Joint Committee, validates the proposed JCM project as described in the PDD and notifies the result of the validation to the project participants.

I. Review of Sustainable Development and Safeguards Assessment Report

21. The project participants fill in the sustainable development and safeguards assessment report form and submit the report to the Secretariat in line with the project cycle procedures.

22. By the end of the reviewing period, the Secretariat notifies the project participants if potential negative impacts of the project on sustainable development are identified and an appropriate action plan is not described.

J. Registration

23. Registration is the formal acceptance by the Joint Committee of a validated project as a JCM project.

24. Project participants of a JCM project consult among themselves and with both governments the percentage of credit allocation among the project participants of Japan, the project participants of the Kingdom of Thailand, the Government of Japan and the Government of the Kingdom of Thailand respectively, taking into consideration their respective contribution to GHG emission reductions or removals by the project and, where applicable, any principles and guidelines stipulated by each government.

25. Project participants submit the PDD, which was validated by the third-party entity, validation report, positively reviewed sustainable development and safeguards assessment report and percentage of credit allocation form to the Joint Committee and request for registration.

26. Both governments may request additional evidence and quantified information relating to the respective contributions, including contribution to investment in the project, to the project participants for the purpose of their consideration of the percentage of credit allocation referred to in paragraph 24 above.

27. In case project participants of the proposed project receive financial support for the project from the Government of Japan, the Government of the Kingdom of Thailand, acting through TGO, may request additional evidence and quantified information relating to the respective contributions, including contribution to investment in the project, to the Government of Japan for the purpose of its consideration of the percentage of credit allocation referred to in paragraph 24 above.

28. Project participants, where necessary, request the Government of the Kingdom of Thailand, acting through TGO, to open an account in the Thai registry.

29. The project participants may submit an authorization request to the Government of the Kingdom of Thailand, acting through DCCE.

30. Based on the request in line with paragraph 29 above, the Government of the Kingdom of Thailand, acting through DCCE, considers and may provide authorization for the credits to be generated from the JCM project, which will be internationally transferred for use toward the achievement of Japan's nationally determined contribution as per the percentage of credit allocation described in paragraph 31 below.

31. Upon receiving the request for registration from project participants, the Joint Committee decides the percentage of credit allocation, registers the project, notifies each government of the registration and makes publicly available the relevant information on the JCM project through a website.

32. After the registration of the project, project participants prepare and submit a progress report to update the current status of the JCM project to the Secretariat annually until the end of the operational lifetime of the JCM project or the end of the crediting period, whichever comes first.

K. Monitoring

33. Project participants implement a JCM project and monitor GHG emission reductions or removals by the JCM project based on the PDD as well as results of corrective actions preventing negative impacts and contribution to the Sustainable Development Goals.

L. Verification

34. Project participants prepare a monitoring report and request a third-party entity for verification.

35. The third-party entity, in line with the guidelines for the verification of GHG emission reductions or removals as developed by the Joint Committee, verifies the amount of GHG emission reductions or removals on the basis of the monitoring report submitted by the project participants, prepares a verification report and sends the report to the project participants which requested verification.

M. Evaluation of Sustainable Development and Safeguards Monitoring Report

36. The project participants fill in the sustainable development and safeguards monitoring report form and submit the report to the Secretariat in line with the project cycle procedures.

37. By the end of the evaluation period, the Secretariat notifies the project participants if negative impacts of the project on sustainable development are identified without appropriate description on the corrective action.

N. Registry

38. The Government of Japan establishes and maintains the JCM registry of Japan consistent with the guidance.

39. The Government of the Kingdom of Thailand, acting through TGO, establishes and maintains the Thai registry, including the special account for the JCM, consistent with the guidance.

40. The Government of Japan and the Government of the Kingdom of Thailand, acting through TGO, each records the credits, measured in metric tonnes of carbon dioxide equivalent (tCO₂e), in line with the methodologies and metrics assessed by the Intergovernmental Panel on Climate Change.

O. Issuance of Credits

41. Project participants submit an issuance request form including credit allocation based on the percentage of credit allocation decided in paragraph 31, verified monitoring report, verification report, positively reviewed sustainable development and safeguards monitoring report, and, where applicable, other required documents, to the Joint Committee for the issuance of credits.

42. The Joint Committee conducts a completeness check on the request, including for allocation of the credits among the project participants, and notifies each government of the result.

43. In line with the result in paragraph 30, the Government of the Kingdom of Thailand, acting through DCCE, considers and approves fulfillment of authorizations.

44. The Government of the Kingdom of Thailand, acting through TGO, issues credits in the special account for the JCM in the Thai registry and, when applicable, a holding account in the Thai registry according to the issuance request form.

45. The Government of the Kingdom of Thailand, acting through TGO, immediately cancels the credits in the special account for the JCM in the Thai registry and, without delay, notifies the Government of Japan.

46. When the Government of Japan confirms the cancellation of the credits in the special account for the JCM in the Thai registry, the Government of Japan issues the corresponding amount of credits in a holding account(s) of the JCM registry of Japan.

47. The Government of Japan provides authorization for the credits described in paragraph 46 above, consistent with the guidance, completing the first international transfer of mitigation outcome described in the guidance.

P. Use of Credits

48. JCM credits may be used towards the achievement of Japan's nationally determined contribution, while ensuring that double counting is avoided on the basis of corresponding adjustments.

49. Each government may authorize part of JCM credits for use for other international mitigation purposes, as appropriate.

50. The Government of the Kingdom of Thailand, acting through DCCE, applies a corresponding adjustment to the JCM credits as well as the credits issued in the Thai registry and authorized for the use for other international mitigation purposes.

Q. Transparency

51. Each government takes necessary measures to ensure transparency in the implementation of the JCM, including in governance, consistent with the guidance.

52. The Joint Committee makes the information on development of methodologies, registration, issuance of credits, use of credits, and relevant documents publicly available.

53. The Government of Japan and the Government of the Kingdom of Thailand, acting

through TGO, each make non-confidential information in their respective registries publicly available consistent with the guidance and provide a publicly accessible user interface through the Internet that allows interested persons to query and view it.

54. The information referred to in paragraph 53 above includes up-to-date information on entities that have holding accounts in their respective registries.

55. Each government promptly makes the relevant information on the authorization publicly available, including but not limited to the project title, the name of a legal entity acquiring JCM credits, credit serial numbers, and the status of authorization by each country.

Appendix: List of existing projects referred to in paragraph 5 of Attachment 2

No.	Project title	Project Participants
1	Energy Saving at Convenience Stores with High Efficiency Air-Conditioning and Refrigerated Showcase	<ul style="list-style-type: none"> - FamilyMart Co., Ltd. - Central FamilyMart Co., Ltd.
2	Introduction of Solar PV System on Factory Rooftop	<ul style="list-style-type: none"> - Pacific Consultants Co., Ltd. - InterAct, Inc. - Siam Steel International Plc.
3	Reducing GHG emission at textile factory by upgrading to air-saving loom	<ul style="list-style-type: none"> - Toray Industries, Inc. - Luckytex (Thailand) Plc. - Toray International, Inc.
4	Energy Saving for Semiconductor Factory with High Efficiency Centrifugal Chiller and Compressor	<ul style="list-style-type: none"> - Sony Semiconductor Corp. - Sony Device Technology (Thailand) Co., Ltd.
5	Installation of Co-Generation Plant for On-Site Energy Supply in Motorcycle Factory	<ul style="list-style-type: none"> - Nippon Steel & Sumikin Engineering Co., Ltd. - NS-OG Energy Solutions (Thailand) Ltd. - NS Plant Designing Corp.
6	Installation of High Efficiency Air Conditioning System and Chillers for Semiconductor Factory	<ul style="list-style-type: none"> - Sony Semiconductor Manufacturing Corp. - Sony Device Technology (Thailand) Co., Ltd.
7	Energy Saving for Air-Conditioning in Tire Manufacturing Factory with High Efficiency Centrifugal Chiller	<ul style="list-style-type: none"> - Inabata & Co., Ltd. - Bridgestone Tire Manufacturing (Thailand) Co., Ltd.
8	Introduction of High Efficiency Ion Exchange Membrane Electrolyzer in Caustic Soda Production Plant	<ul style="list-style-type: none"> - AGC, Inc. - AGC Chemicals (Thailand) Co., Ltd.
9	Introduction of LED Lighting to Sales Stores	<ul style="list-style-type: none"> - Fast Retailing Co., Ltd. - UNIQLO (Thailand) Co., Ltd.
10	Introduction of High Efficiency Chilled Water Supply System in Milk Factory	<ul style="list-style-type: none"> - TEPIA Corporation Japan Co., Ltd. - CP-Meiji Co., Ltd.

No.	Project title	Project Participants
11	Introduction of 12MW Power Generation System by Waste Heat Recovery for Cement Plant	- NTT Data Institute of Management Consulting, Inc. - Siam City Power Co., Ltd.
12	Introduction of Co-generation System to Motor Parts Factory	- Denso Corp. - Siam Denso Manufacturing Co., Ltd.
13	Introduction of Energy Saving Refrigerator and Evaporator with Mechanical Vapor Recompression in Amino Acid Producing Plant	- Kyowa Hakko Bio Co., Ltd. - Thai Kyowa Biotechnologies Co., Ltd.
14	Introduction of 3.4MW Rooftop Solar Power System to Air-conditioning Parts Factories	- Sharp Corp. - SNC Former Plc. - SNC Pyongsan Evolution Co., Ltd. - SNC Creativity Anthology Co., Ltd. - Ultimate Parts Co., Ltd. - Infinity Parts Co., Ltd.
15	Introduction of 2MW Rooftop Solar Power System for Power Supply in Factory	- Finetech Co., Ltd. - Siam Brothers Corp., Ltd.
16		- Finetech Co., Ltd. - Thai Merry Co., Ltd.
17	Introduction of Energy Efficient Refrigeration System in Industrial Cold Storage	- Kanematsu Corp. - Better Foods Co., Ltd.
18	Introduction of Heat Recovery Heat Pumps to Food Processing Factory	- CPF Japan Co., Ltd. - CPF (Thailand) Plc.
19	Introduction of 5MW Floating Solar Power System on Industrial Water Reservoir	- TSB Co., Ltd. - TSB Bangkok
20	Introduction of 30MW Rooftop Solar Power System to Large Supermarkets	- Sharp Corp. - Impact Electronics Siam Co., Ltd. - Impact Solar Ltd.
21	Introduction of High-efficiency Boiler System to Rubber Belt Plant	- Bando Chemical Industries Ltd. - Bando Manufacturing (Thailand) Ltd.

No.	Project title	Project Participants
22	Energy Saving by Air-Conditioning Control System in Precision Parts Factories	<ul style="list-style-type: none"> - Yuasa Trading Co., Ltd. - Nidec Copal Co., Ltd. - Nidec Precision Co., Ltd. - Panasonic Automotive Systems Asia Pacific (Thailand) Co., Ltd.
23	Introduction of Biomass Co-Generation System to Food Factory	<ul style="list-style-type: none"> - Fuji-Foods Corp. - Thai Foods International Co., Ltd.
24	Introduction of Gas Co-generation System and Absorption Chiller to Fiber Factory	<ul style="list-style-type: none"> - The Kansai Electric Power Co., Inc. - Kansai Energy Solutions (Thailand) Co., Ltd.
25	25MW Rooftop and Floating Solar Power Project in Industrial Park	<ul style="list-style-type: none"> - Tokyo Century Corp. - Tisco Tokyo Leasing Co., Ltd. - Impact Solar Ltd.
26	Introduction of 3.4 MW Rooftop Solar Power System in Technical Center and Office Buildings	<ul style="list-style-type: none"> - Toyota Motor Corp. - Toyota Daihatsu Engineering & Manufacturing Co., Ltd. (TDEM)
27	Introduction of Biomass Boiler to Cooking Oil Factory	<ul style="list-style-type: none"> - TEPIA Corporation Japan Co., Ltd. - Thanakorn Vegetable Oil Products Co., Ltd.
28	Introduction of 0.8MW Solar Power System and High Efficiency Refrigerator to Food Factory	<ul style="list-style-type: none"> - Kanematsu KGK Corp. - Thai Delmar Co., Ltd.
29	Introduction of 37 MW Solar Power System and High Efficiency Melting Furnace in Vehicle & Engine Factory	<ul style="list-style-type: none"> - Toyota Motor Corp. - Toyota Motor Thailand Co., Ltd. - Siam Toyota Manufacturing Co., Ltd. - Toyota Daihatsu Engineering & Manufacturing Co., Ltd.
30	Efficiency Improvement of Co-generation System by Installation of Heat Exchanger in Fiber Factory	<ul style="list-style-type: none"> - Nippon Steel Engineering Co., Ltd. - NS-OG Energy Solutions (Thailand) Ltd.

No.	Project title	Project Participants
31	Introduction of 8.1MW Rooftop Solar Power System in Motorcycle Factory and Fiber Factory	- Kansai Electric Power Co., Inc. - Kansai Energy Solutions (Thailand) Co., Ltd.
32	Introduction of Energy Saving Centrifugal Chillers to Machinery Factory	- Kansai Electric Power Co., Inc. - Kansai Energy Solutions (Thailand) Co., Ltd.
33	Introduction of 5MW Rooftop Solar Power System to Aluminum Building Materials Factory	- Sumitomo Mitsui Finance and Leasing Co., Ltd. - Tostem Thai Co., Ltd. - SMFL Leasing (Thailand) Co., Ltd.
34	Introduction of 2.6MW Rooftop Solar Power System to Semiconductor Factory	- Kansai Electric Power Co., Inc. - Kansai Energy Solutions (Thailand) Co., Ltd.
35	2.7MW Solar Power Project with Blockchain Technology in Chiang Mai University Town Community	- Inabata Co., Ltd. - Thai Digital Energy Development Co., Ltd.
36	Introduction of 2MW Rooftop Solar Power System to University	- Shizuoka Gas Co., Ltd. - VNET Power Co., Ltd., - VNET SG Power Co., Ltd.
37	Introduction of 32MW Rooftop and Floating Solar Power System to Factories	- Shizen Energy, Inc. - Constant Energy Singapore Holding Pte. Ltd. - Solar Floating CE6 Co., Ltd.
38	Introduction of High Efficiency Once Through Boiler to Garment Factory	- Osaka Gas Co., Ltd. - Osaka Gas (Thailand) Co., Ltd. - Parfun Textile Co., Ltd.
39	35MW Solar Power and Storage Battery Project in Suphanburi Province	- Kanematsu KGK Corp. - Blue Solar Farm 1 Co., Ltd.
40	Introduction of 23MW Rooftop Solar Power System to Tire Factories	- Sharp Energy Solution Corp. - Deestone Corp., Ltd. - Siam Truck Radial Co., Ltd. - Deestone International Co., Ltd. - Svizz-One Corporation Co., Ltd. - Deerubber Co., Ltd. - Deestone Ltd.

No.	Project title	Project Participants
41	Introduction of High Efficiency Boiler, High Efficiency Chiller, and Solar PV System to Textile Factory and Food Factory	- The Kansai Electric Power Co., Inc. - Kansai Energy Solutions (Thailand) Co., Ltd.
42	Introduction of 2MW Rooftop Solar Power System to Non-ferrous Metal Factory	- The Kansai Electric Power Co., Inc. - Kansai Energy Solutions (Thailand) Co., Ltd.
43	Introduction of 1.3MW Solar Power System to Food Factory (JCM Eco Lease Scheme)	- Tokyo Century Corp. - PRIMAHAM (THAILAND) Co., Ltd. - PRIMAHAM FOODS (THAILAND) Co., Ltd. - TISCO Tokyo Leasing Co., Ltd.
44	Introduction of 0.13MW Solar Power System to Auto Parts Factory (JCM Eco Lease Scheme)	- Tokyo Century Corp. - Nichias (Thailand) Co., Ltd. - TISCO Tokyo Leasing Co., Ltd.
45	Introduction of Gas Co-generation System and 22MW Rooftop Solar Power System to Tire Factory	- The Kansai Electric Power Co., Inc. - Kansai Energy Solutions (Thailand) Co., Ltd.
46	Introduction of ORC Waste Heat Recovery Power Generation System to Flat Glass Factory	- AGC Inc. - AGC Flat Glass (Thailand) Plc.
47	Energy Supply Project by 4.0MW Rooftop Solar Power System to Parts and Tools Factories	- The Kansai Electric Power Company, Inc.
48	Energy Supply Project by 2.9MW Rooftop Solar Power System to Metal Factories and Refrigerating Warehouse	- Osaka Gas Co., Ltd.
49	Energy Supply Project by 1MW Rooftop Solar Power System to Metal Recycling and Automotive Parts Factories	- Marubeni Corp. - Marubeni Green Power Asset (Thailand) Co., Ltd.
50	Thermal Energy Supply and Methane Avoidance Project Utilizing Biomass Mixed with Biogas from Wastewater in Fruit Processing Factory	- Dole Japan, Inc.

No.	Project title	Project Participants
51	Introduction of 1.6MW Solar Power System to Plastic Bottles and Cosmetics Factories (JCM Eco Lease Scheme)	- Tokyo Century Corp.
52	Project on Introduction of Scheme for Fluorocarbons Recovery and Destruction with Utilization of Existing Waste Incineration Plant	- Dowa Eco-System Co., Ltd.
53	Low-carbon Operation for Power Grid Utilizing Online Voltage-var(Q) Optimal Control (OPENVQ) with ICT	- Hitachi, Ltd. - Electricity Generating Authority of Thailand (EGAT)