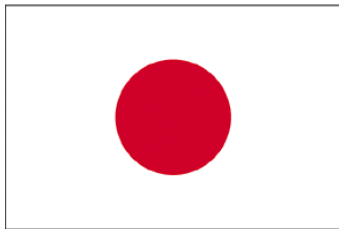


EMAK9 : The 9th Workshop of Energy Management Action Network (EMAK9) under IPEEC

Session-3 Panel Discussion and Wrap-up



November 21st, 2018

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International Cooperation Division

The Energy Conservation Center, Japan (ECCJ)

Panel Discussion : Procedure

1. Panelists : All the Presenters

2. Panel Discussion – Procedure

(Step-1) Brief by Moderator : Points of Session-1 / Session-2

(Step-2) Comments / Opinions / Suggestions by the Panelists

(Step-3) Discussion including Q&A

Initiation among the Panelists

Open Discussion among All Participants

3. Summary and Wrap-up by Moderator

(Step-1) Brief Points of Keynote / Sessions -1 and -2

1. Keynotes

- 1) Outline / Objective and Goal of EMAK and EMAK9**
- 2) Importance and Effectiveness of Energy Management in the Policy and Law to Promote EC**

2. Japan – Brazil EC Cooperation Project

- 1) Outline and Outcomes of the Project Such as Showcase EnMS and EC Best Practices Established by the Project Effectiveness of the EnMS for EC Proven by the Results**
- 2) EC Programs by MDIC / MME / CNI Tied or Harmonized with the Project Considering to Utilize Its Outcomes**

3. Advanced EnMS and Best Practices in EC Measures and Technologies Controlled under EnMS Established by Japanese – Brazilian and Chilean Companies with Policies with Goals to Contribute to the Sustainable Development

(Step-2) Comments / Suggestions etc. by Panelists

(Step-2) Provision of Comments / Aspects by Panelists

(1) Requirements and Challenges to Improve EnMS ?

(2) Possible Solutions and Way Forward

Panelists from Companies

- In Companies to Sustain EC Promotion
(Including Suggestions / Requirements for Government)**

Panelists from Public Organizations

- In Government to Establish Policy and Legal Framework to
Disseminate EnMS and to Enhance EC Promotion by
Companies (Including Support for Companies)**

(Step-3) Discussion

Discussion and Opinion Exchange (Including Q&A)

(1) Way Forward of EMAK

- 1) Next Actions and Subjects etc. to Tackle to Promote Energy Conservation under EMAK**
- 2) Future Network**

(2) Future Direction of Possible Cooperation with Japan

- 1) Areas and Subjects**
- 2) Expected Experiences and Resources of Japan**
 - Policy and Legal Framework**
 - Best Practices in Energy Management, Technology and Equipment etc. to Promote EC**
 - Capacity Development and P-P Partnership, etc.**

3. Summary and Wrap-up

Summary : Points of Discussion (1)

1. Challenges and Issues to Establish EnMS and EC Promotion

The Following Were Raised by the Panelists & Participants.

- 1) Large Gaps of EE Level and Variance among Companies
- 2) Lack of Capabilities of Practitioners Including Lack of Competent Consultants to Outsource
- 3) Insufficient Mindset and Awareness to Change Behavior (Including Company Policy to Prioritize “Production”)
- 4) Hard Efforts to Achieve EC and Environmental Targets for Group or Holding Companies beyond Single Enterprises
- 5) Requirement for Governments to Establish Targets with Policy and Measures Matched with National Conditions
- 6) Negative Factors to Motivate EC Such as Cheap Energy Prices (Especially for Residential Sector)

Summary : Points of Discussion (2)

2. Possible Solutions

The Following Were Suggested by the Panelists & Participants.

- 1) Develop / Disseminate More Functional EnMS with Better Quality by Continuing Improvement in The Existing EnMS
- 2) Identify and Prioritize Actions under EnMS to Improve Mindset and Awareness for Enhancing EC Promotion
→ System to Provide Information of Effective EC Measures with Merits of EC to Motivate (Best Practices)
- 3) Enhance Education and Training to Give Knowledge with Practical Opportunity to Experience Actions Using Developed EM Tools Including the “Action Guide”
- 4) Improve Government Policy and National Programs for EC Including System to Technically and Financially Support Companies

Summary and Way Forward : Future EMAK

1. Way Forward of EMAK – Next Subjects etc. to Promote EC

1-1. Next Actions

- 1) Enhance Creation of Showcased Functional EnMSs Proven by Realized Effective Practices / Measures / Technologies**
 - ← Required Cooperation by Companies with Incentives under a Common Policy (Inc. Solution of Finance)
- 2) Standardize EnMS / Upgrade and Integrate Unit EnMSs**

1-2. Future Network among Stakeholders

- 1) Expand and/or Create P-P Networks for Cooperation**
- 2) Develop Platform / Programs / Procedures with Measures (*) to Share Best Practices for Systematic Dissemination**
 - (*) System and Procedure for Dissemination**
 - Database to Compile Information / Guidelines etc.
- 3) Connect National Networks in Each Region**

Way Forward : Policy to Contribute to Realizing SDGs



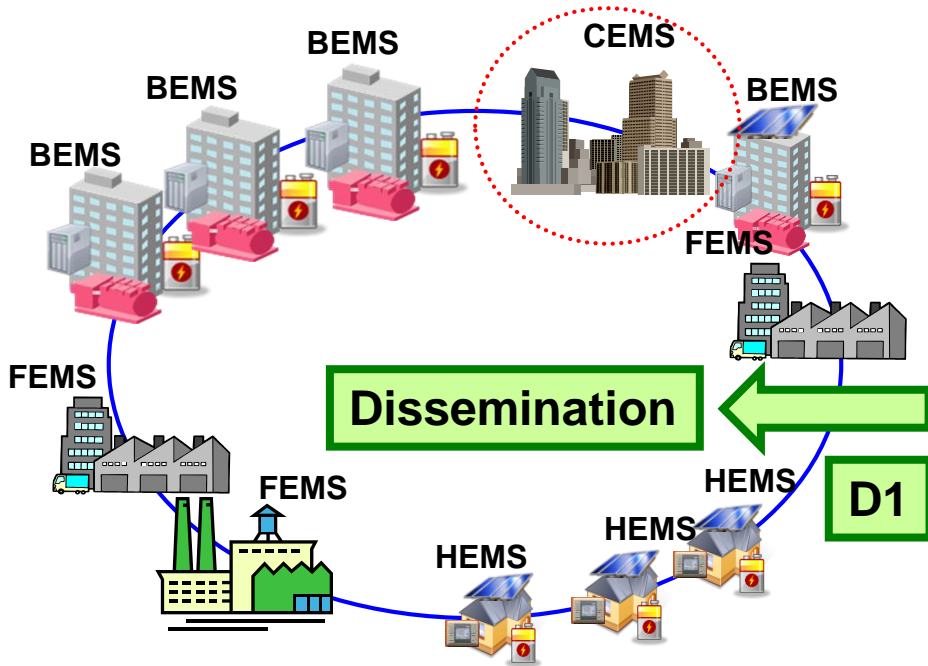
Realization of Energy Related 6 Goals among the 17 Goals



Point : Systemized Approach through Establishing EnMS



Way Forward : Disseminate / Upgrade & Integrate EnMS



With Systematic Management of Operation in Each Factory / Building

Smart System

- EnMS : Energy Management System
- EE&C : Energy Efficiency and Conservation
- CEMS : Community Energy Management System
- BEMS : Building Energy Management System
- FEMS : Factory Energy Management System
- HEMS : Home Energy Management System

Policy/Law System to Promote EE&C

Outcomes Of the Project

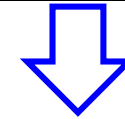
Upgrade Integrate

D2

Advanced Technology

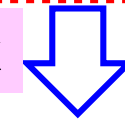
Step - 1 Build Foundation

- Establish EnMS for Each Factory / Building (Inc. "Management Standard" etc.)
- Implement Good EM Practices & introduce Effective Equipment / Technologies under EnMS



Step - 2 Establish / Manage Single Systems

- Systematized Individual Management by FEMS, BEMS



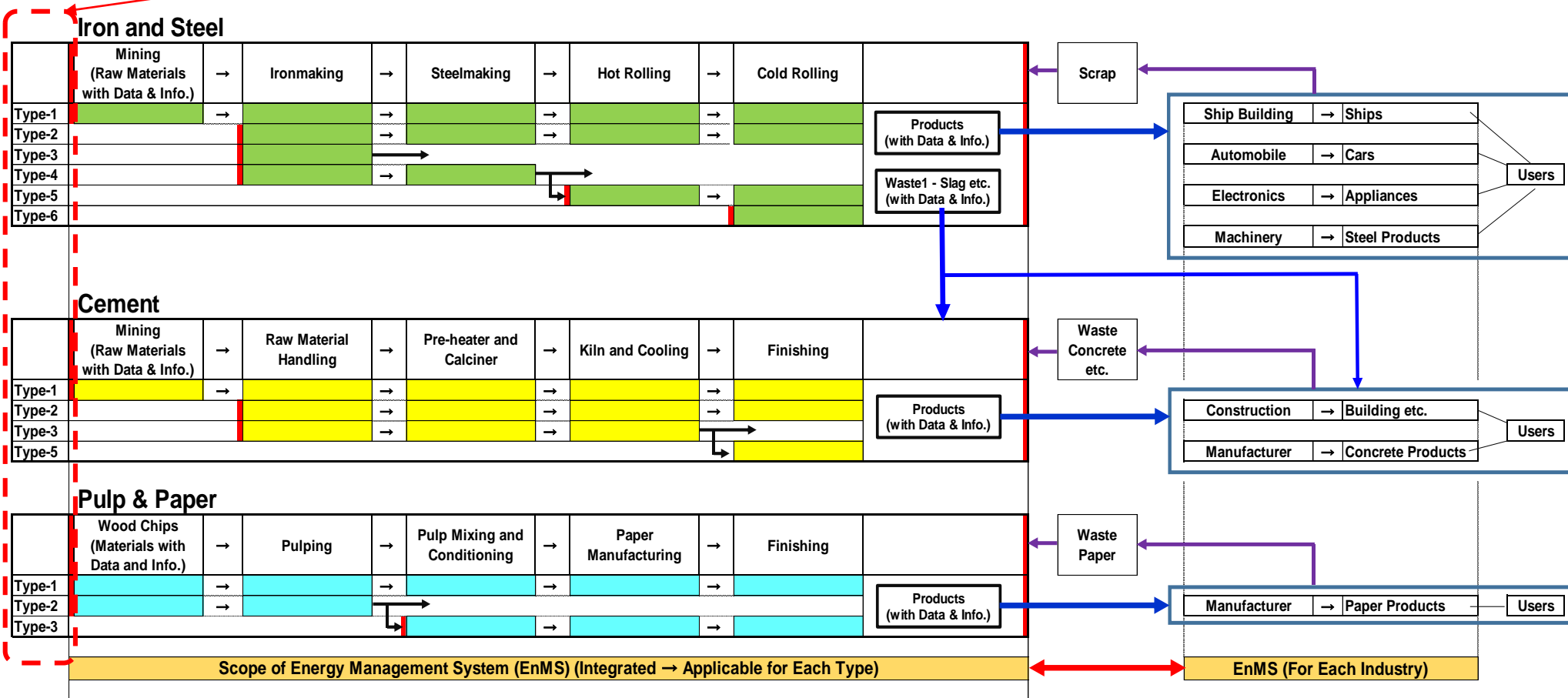
Benchmark Innovation

Step - 3 Integrate Systems

- Integrated Management Sys. Supply Chain / Community

Upgrade & Integrate EnMS (Basis for “Supply Chain”)

Type of Business Scope of Companies (Including Subsidiary Companies etc.)

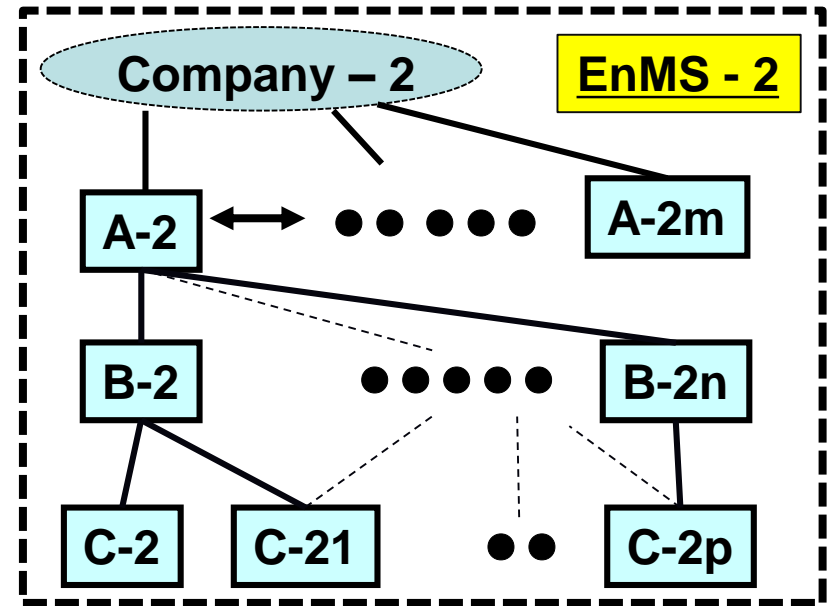
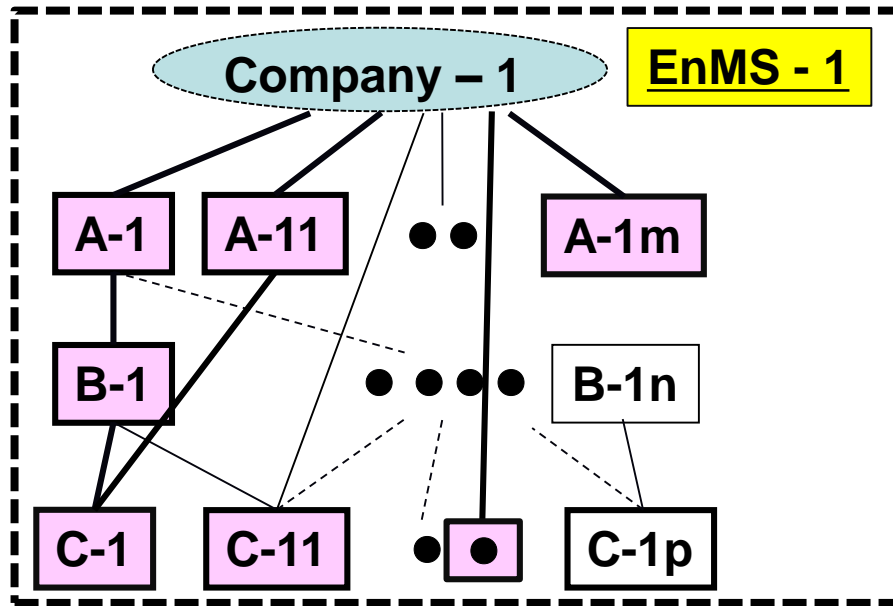


Point : Process Based EnMS – Common Basis of Each Industry

Upgrade & Integrate EnMS Consistent in Business

Typical Business Structures : Complexity of “Supply Chain”

- 1. Business Partnership or Independent
- 2. Subsidiary / Affiliated Companies



Structure of Procurement and Business Hierarchy

EnMS to Realize Effective and Consistent Management

Way Forward : Immediate Issues - Possible Solutions

Issues Raised : Weak Awareness on EE&C (SMEs and People)
→ Requirement to Improve Mindset / Change Human Behavior



Possible Solutions

1. Matters for Top Management
 - (1) Policy to Commit EE&C and Environmental Protection
 - (2) Provision of
 - Required Resources (Manpower and Budget etc.)
 - Incentive and Merits to Motivate People to Take Actions
2. Training and Education to Get Knowledge / Know-how for
 - (1) Finding and Proposing Measures to Improve
 - (2) Understanding How to Realize / Evaluate Improvements
3. Establish System and Procedure to Share Best Practices



Important Elements of EnMS to Realize / Improve

Summary and Way Forward : Japan's Contribution

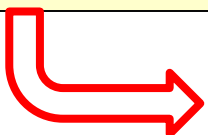
2. Future Direction of Possible Cooperation with Japan

2-1. Potentiality Related to EMAK Program

- (1) Continued 1) Creation of Upgraded Showcases, and
2) Expansion of International Network through EMAK**
- (2) Develop Information System to Share Showcases of EnMS
with Best Practiced EM and EC Measures / Technologies**

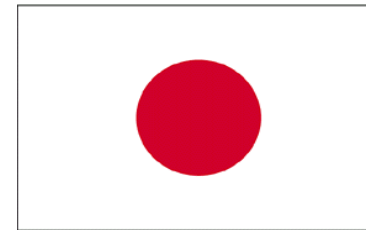
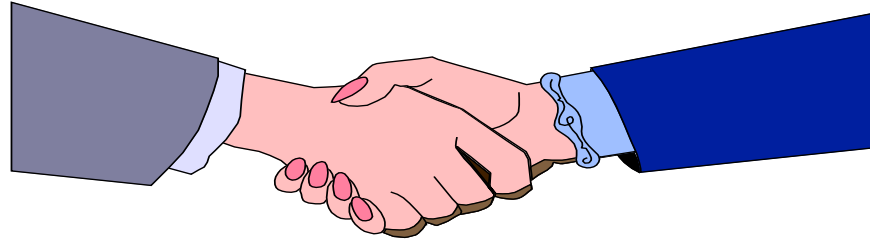
2-2. Theme / Areas Based on Resources Established by Japan

- (1) Policy and Legal Framework
Regulation Tied with Support System for EC Promotion**
- (2) P-P Partnerships with Joint Programs**
- (3) Cumulated Best Practices in EM and EE&C under Policy**
- (4) Proven Effective Measures and Technologies Advanced, etc.**
- (5) Capacity Development Related to the Above**



Next Discussion : Specifics - What and How to ?

Thank you very much



For More Information

[The Energy Conservation Center, Japan \(ECCJ\)](http://www.eccj.or.jp)

<http://www.eccj.or.jp>

[Asia Energy Efficiency and Conservation Collaboration Center \(AEEC\)](http://www.asiaeec-col.eccj.or.jp/index.html)

<http://www.asiaeec-col.eccj.or.jp/index.html>

[Japanese Business Alliance for Smart Energy Worldwide](http://www.jase-w.org/english/top/)

<http://www.jase-w.org/english/top/>