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

Session-3  Panel Discussion and Wrap-up

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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
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
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)
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
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

Source: “Sustainable Development Goals – The United Nations”
Way Forward: Disseminate / Upgrade & Integrate EnMS

Policy/Law System to Promote EE&C

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

Step – 3  Integrate Systems

- Integrated Management Sys.
- Supply Chain / Community

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

Outcomes Of the Project

Upgrade Integrate

D1

D2

Advanced Technology

Dissemination

With Systematic Management of Operation in Each Factory / Building

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

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

Iron and Steel
- Mining (Raw Materials with Data & Info.) → Ironmaking → Steelmaking → Hot Rolling → Cold Rolling
- Scrap

Cement
- Mining (Raw Materials with Data & Info.) → Raw Material Handling → Pre-heater and Calciner → Kiln and Cooling → Finishing
- Construction → Building etc.

Pulp & Paper
- Wood Chips (Materials with Data and Info.) → Pulping → Pulp Mixing and Conditioning → Paper Manufacturing → Finishing
- Waste Paper

Scope of Energy Management System (EnMS) (Integrated → Applicable for Each Type)

Point: Process Based EnMS – Common Basis of Each Industry

Applicable for Companies with Various Types of Business
Upgrade & Integrate EnMS Consistent in Business

Typical Business Structures: Complexity of “Supply Chain”

1. Business Partnership or Independent
   - Company – 1
     - Primary: A-1, A-11
     - Secondary: B-1
     - Tertiary: C-1, C-11
   - EnMS - 1

2. Subsidiary / Affiliated Companies
   - Company – 2
     - Primary: A-2
     - Secondary: B-2
     - Tertiary: C-2, C-21
   - EnMS - 2

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
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
  Asia Energy Efficiency and Conservation Collaboration Center (AEEC)
  http://www.asiaeec-col.eccj.or.jp/index.html
  Japanese Business Alliance for Smart Energy Worldwide
  http://www.jase-w.org/english/top/