



**Asia-Pacific  
Economic Cooperation**

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**2015/SCSC/WKSP2/007**

Session: 3

## **Steel Industry's Challenge Against Climate Change: Cooperative Sectoral Approach (Part 2)**

Submitted by: Japan



**Multilateral Recognition Arrangement Readiness in  
ISO 50001: Workshop for Organization and Internal  
Auditors  
Bangkok, Thailand  
6-9 April 2015**

# APEC-ISO50001 Bangkok Workshop

## Steel industry's challenge against climate change Cooperative Sectoral Approach

Wednesday/Thursday 8-9 April 2015

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Japan Iron and Steel Federation (until June 2013)

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### 4-DAY WORKSHOP TRAINING FOR INTERNAL AUDITORS (6-9 APRIL 2015)

Training agenda	Activities	Topics	Remarks
<b>Day-1</b> Mon 6 April	Requirement of ISO50001	Introduction/energy ISO50001 Requirements of ISO50001	
<b>Day-2</b> Tue 7 April	Application to Energy system Requirement of management system Requirement of ISO50003	Application of Energy system Competencies for third party certification auditors	
<b>Day-3</b> Wed 8 April	<ul style="list-style-type: none"> <li>•Energy audit and its benefit</li> <li>•ISO50001 and with other ISO standard, ISO14004</li> <li>•Case study with energy audits</li> </ul> <p><b>Group exercise 4:</b> Expected competences for internal auditors.</p> <p><b>Group exercise 5:</b> Developing the internal audit plan.</p> <p>Output sharing.</p>	<ul style="list-style-type: none"> <li>•Energy audit and its benefit</li> <li>•<b>Energy Audits and its benefit with using ISO50001 and ISO14004</b> (9:00~11:15).</li> </ul> <p><b>Presentation:</b></p> <ul style="list-style-type: none"> <li>•Energy Audits and its benefit with using ISO50001 and GHG reduction(11:15-12:00).</li> <li>•What is the expected or required competency for internal auditors? How to identify the personnel in the organization and train the potential internal auditors: qualification, education, working experiences(13:00~14:00 discussion and presentation by group 14:00~15:00).</li> <li>•<b>Developing the internal audits plan for the case study, steel industry</b> (15:15~17:00).</li> <li>•Presentation by each group(16:15~17:00).</li> </ul>	<p>①日本における省エネ法(温対法)及び自主行動計画の中でのPDCA実施 ～各主体の役割⇒事務局による内部監査機能と主要な経験能力など</p> <p>②それらによる、改善実績(ベネフィット) ～世界最高水準のエネルギー効率の維持発展(鉄鋼だけでなく、経団連・・・)</p> <p>③事業所のエネルギー効率(CO2原単位、排出量)の算定方法比較、鉄鋼事例としてのISO14004(国際比較の尺度として・・・)</p> <p>～アクションに結びつく指標定義(算定方法: 算定式、境界、変換係数)</p> <p>④省エネルギー対策(および環境対策)技術の世界共通リストと地域条件へのカスタマイズ(鉄鋼事例と考える方の汎用性) ～具体的な推奨アクション・導入技術</p>
<b>Day-4</b> Thu 9 April	<p>Sectorial approach with ISO50001</p> <p><b>Group exercise 6:</b> (group discussion)</p> <p>Closing remarks.</p>	<ul style="list-style-type: none"> <li>•Sector activity of ISO50001 and its benefit</li> <li>•<b>When the organization will develop the ISO50001 activities across the group company or sector activity, what point will be relevant.</b></li> </ul>	<p>⑤各社の活動と業界共通の活動、温暖化対策における連携 ～連携して活動することの意義とそのPDCA(GOVERNANCE)</p>

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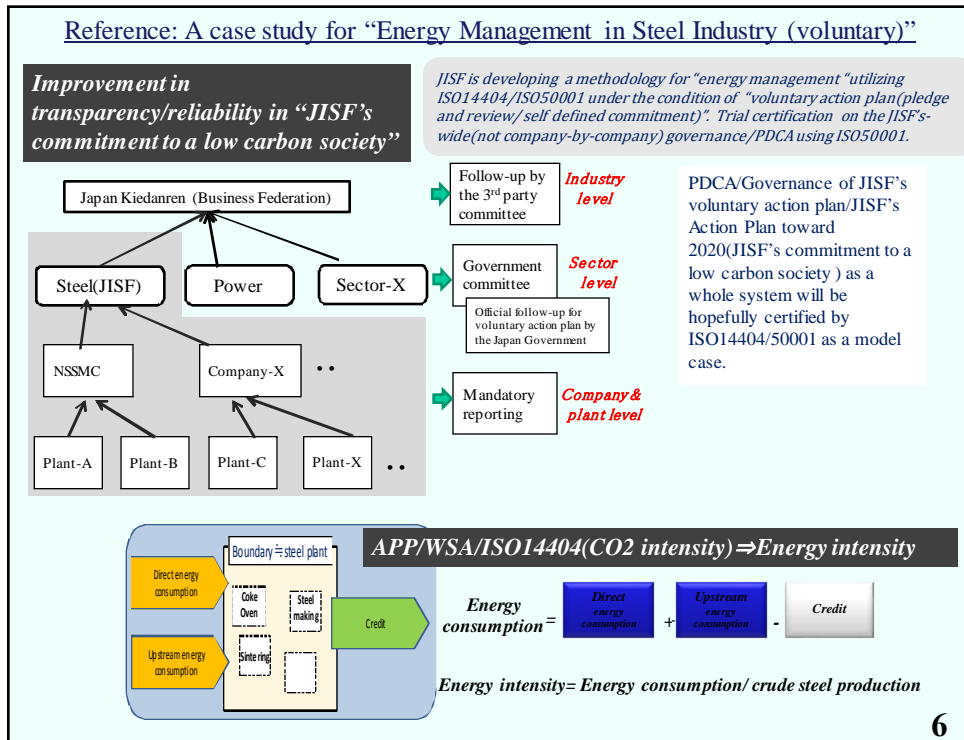
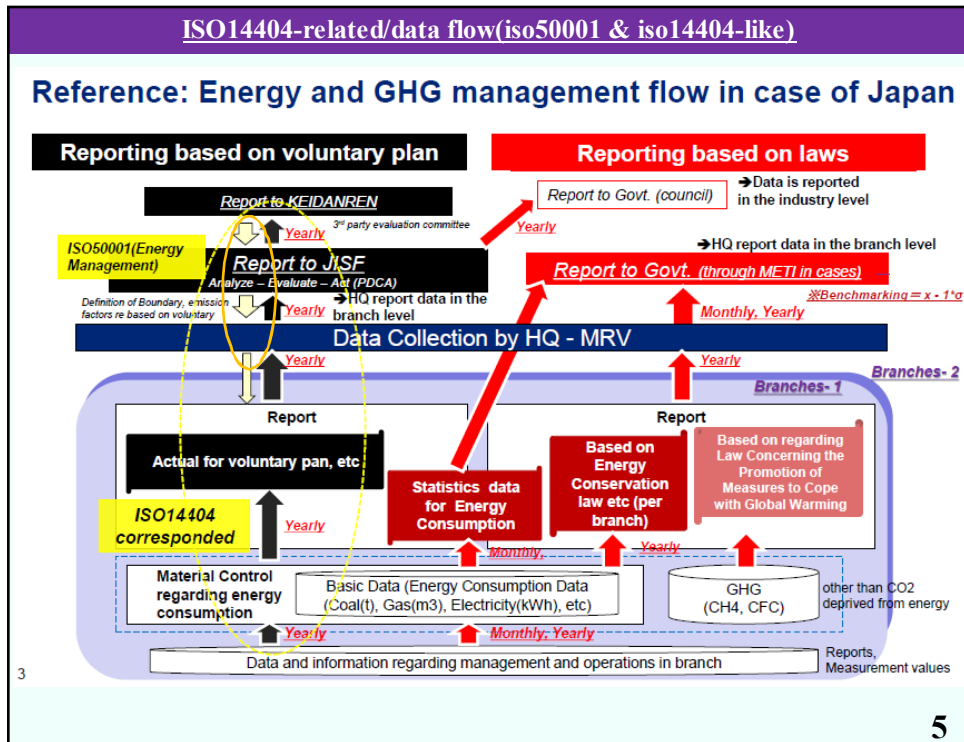
## Contents (iso50001 related)

1. Energy Audits and its benefit with using **ISO50001 and ISO14404**
2. Developing **the internal audits plan** for the case study, steel industry
3. When the organization will develop the ISO50001 activities across the group company or **sector** activity, what point will be relevant
4. Other issues related to the agenda above.
  1. Introduction/steel in general
  2. Background information
    - Climate negotiation/national schemes
    - National action during KyotoI(2008-2012)
  3. A Commitment to a Low Carbon Society
    - Phase- I (2020)
    - Phase- II (2030)
  4. Energy Management in APP/GSEP
    - Cooperative Sectoral Approach in APP/GSEP
    - Technology Full List and Customized List
  5. ISO and Steel Industry
    - ISO14404 (calculation methodology for CO2 intensity of steelworks)
    - ISO50001 (certification of Energy Management for JISF's action program)
    - ISO14040/44+a (LCI calculation methodology of steel-products)
  6. Other issues
    - Benchmarking in energy saving law in Japan
    - Data Flow (measurement/reporting/verification)
    - JCM

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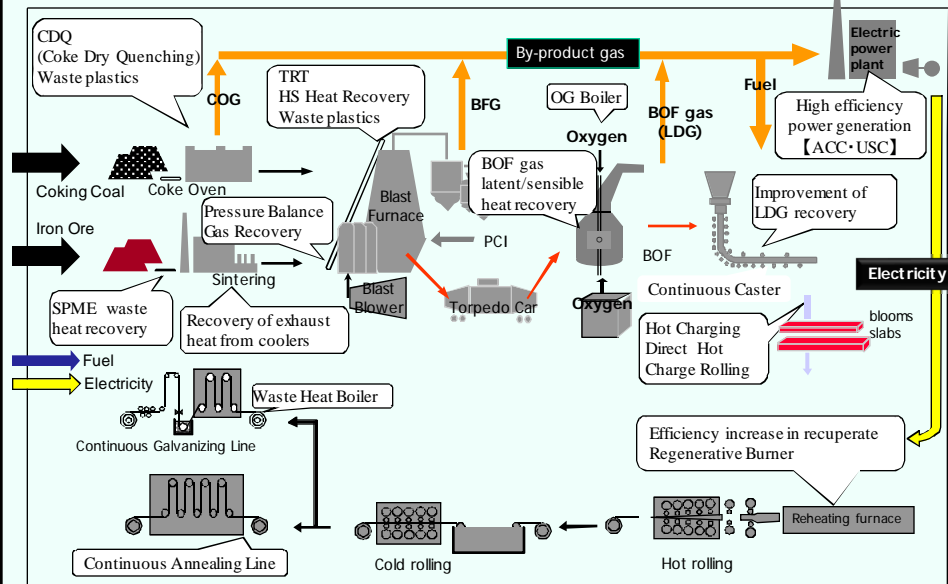
**3. When the organization will develop the ISO50001 activities across the group company or **sector** activity, what point will be relevant**

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## Energy – Saving Technologies in Integrated Steel Works

### Step 3 Increase energy recovery from waste heat and pressure



N.NAKANO

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## Technology driven CO2 reduction

## 3. Technology, S+3E

$$\text{CO2 Emission} = \frac{\text{Energy Consumption}}{\text{GDP}} \times \frac{\text{CO2 Emissions (} - \text{CO2 Sequestered)}}{\text{Energy Consumption}} \times \text{GDP}$$

	Energy Efficiency (technology driven)	CO2/Energy CO2 Emissions (CO2 Sequestration)
Mitigation technologies	-Energy saving technologies	-Increase of $\gamma$ in $CxHy$ (coal to natural gas etc) -Renewable (bio-mass, solar, wind, geo, tidal --) -Nuclear
Energy consumption	↓	→
CO2 emissions	↓ <i>State-of-the-art technologies +</i>	↓ <i>Some State-of-the-art + R&amp;D</i>
Cost change	↓	↑

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### Question- 3

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*Lecture on Cooperative Sectoral Approach/Climate Change, Tokyo Institute of Technology by Teruo OKAZAKI on Wednesday 16 January 2013*

