

UNIDO Survey on MSE in Industry

Scope of the Survey in Industry

- B. Energy Management Practices
- C. Perceived Needs for Increased Efficiency & Energy Management
- D. Existing and Perceived Barriers to Energy Management System Standard (MSE) Implementation
- E. Conformity Assessment
- F. How to Best Support Industry with Implementation of MSE
- G. Recommendations to ISO Project Committee 242 – Energy Management



Survey Pilot in Singapore

Objectives of the Pilot

- To test the Survey and in particular its questionnaire
- To collect and present preliminary data for the 1st meeting of ISO/PC 242



Survey Pilot in Singapore

Modalities of execution

- Partnership with the Standards, Productivity and Innovation Board (SPRING) and the National Environment Agency of Singapore
- Use of existing National Climate Change Committees platform
- Size, sector and management system standards certification as key criteria for enterprises/respondents selection
- Duration of execution: 3-4 weeks



National Climate Change Committee (NCCC)

- On 1 Apr 2001, the Ministry of the Environment and Water Resources (MEWR) re-structured the IACEE, expanded its scope and renamed it the National Energy Efficiency Committee (NEEC).
- With the announcement of Singapore's plan to accede to the Kyoto Protocol in 2006, the NEEC expanded its scope to cover climate change issues and was renamed the National Climate Change Committee (NCCC).
- NCCC is chaired by Senior Parliamentary Secretary, Ministry of the Environment and Water Resources; secretariat support is provided by the National Environment Agency.



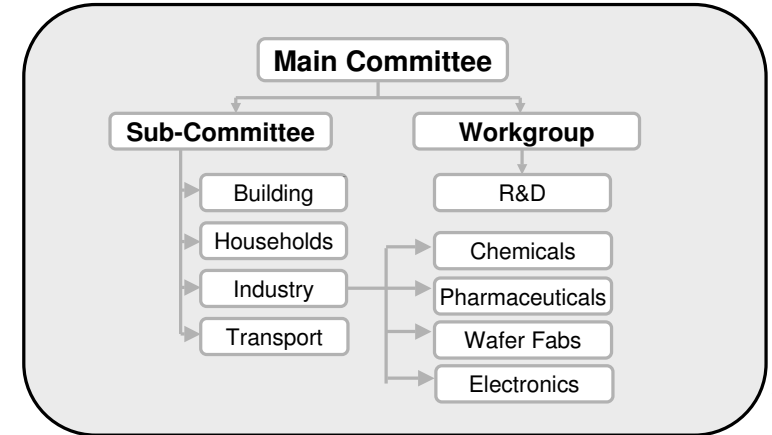
Terms of Reference of NCCC

- To address climate change by:
 - Raising awareness within the people, private and public sectors on the impacts of and opportunities from climate change, and the actions they can take to mitigate emissions
 - Promoting greater energy efficiency and the use of less energy-intensive carbon sources in key sectors
 - Building competency in Singapore to better respond to climate change such as through promoting research and development of low-carbon technologies
 - Understanding Singapore's vulnerability to climate change and facilitating the adaptation actions needed



Structure

- The NCCC Main Committee is assisted in its work by four sub-committees and five workgroups



National Mirror Committee (NMC) on Energy Management

- NMC on Energy Management formed in July 2008.
- Parked under one of SPRING's eight existing standards committees – Management Systems Standard Committee
- Representation from Industry associations, Government agencies and Academia
- Working Group on Energy Management (WG-EM) appointed
 - 6 from industry, 3 from government agencies, 2 from academia plus Secretary from SPRING



Targeted Companies

- Industry sector
 - Chemicals
 - Pharmaceuticals
 - Electronics
 - Wafer fabs
 - Food manufacturing
 - Textile manufacturing



NCCC Industry Workgroups

- Under the NCCC Industry Sub-committee, industry specific workgroups were set up to focus on developing energy efficiency programmes for the energy-intensive manufacturing industries – chemicals, pharmaceuticals, wafer fabs and electronics industries.

Workgroup	No. of member companies	Surveys solicited from	Responses from
Chemicals	9	7	4
Pharmaceuticals	11	11	7
Electronics	12	12	8
Wafer Fabs	9	7	4
Total	41	37	23

- Member companies are represented by their Energy Managers, Environmental Managers, Facilities Managers or representatives with similar functions.



SPRING's Role in Survey

- Coordinated survey for companies in the Food and Textiles Manufacturing sectors
- Companies selected by Industry Development Officer in charge of Food Manufacturing and Textile Manufacturing according to criteria set by UNIDO.

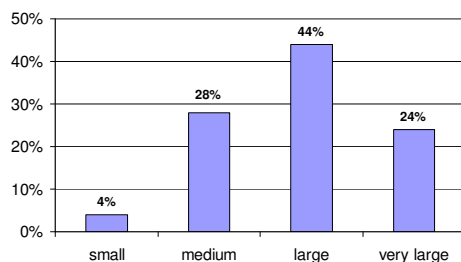
Industry Group	Survey solicited from	Responses from
Food Manufacturing		3
Textiles Manufacturing		1
Total	10	4



Survey Pilot in Singapore

Some initial results

Composition of surveyed enterprises



Number of surveyed enterprises = 27

Size of enterprises

- Small : less than 50 employees
- Medium : more than 50 & less than 250
- Large : more than 250 & less than 2,500
- Very large: more than 2,500

Industrial sectors

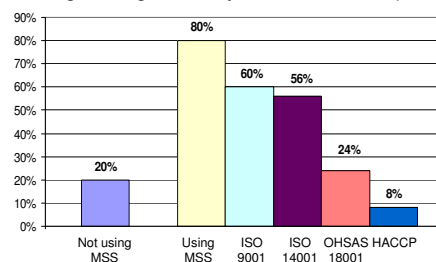
- Petrochemicals
- Electronics
- Pharmaceutical
- Food & beverages
- Textile
- Wafer fabrication



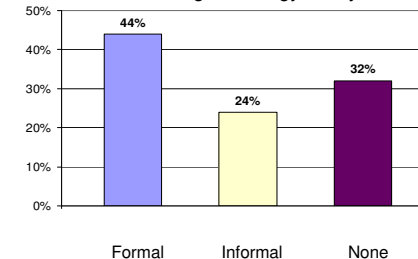
Survey Pilot in Singapore

Some initial results – cont.

Using Management System Standards (MSS)



Having an Energy Policy



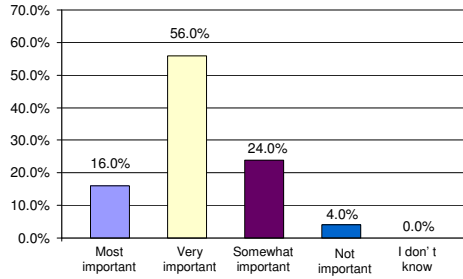
OHSAS 18001 – Occupational Health and Safety Management System
 HACCP – Hazard Analysis and Critical Control Point (Food and Pharma Safety)



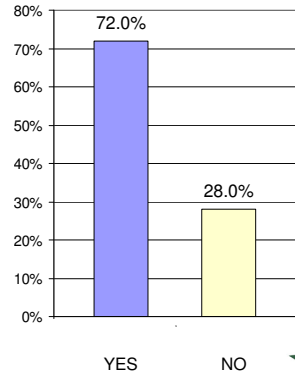
Survey Pilot in Singapore

Some initial results – cont.

How important is energy consumption reduction for your top management?



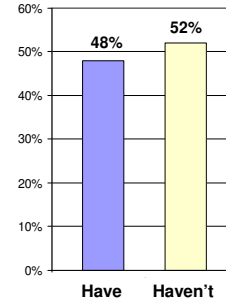
Has a person been assigned responsibility for energy management in your company?



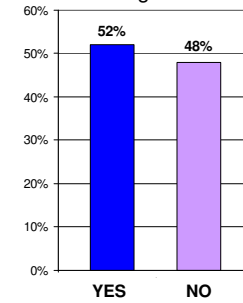
Survey Pilot in Singapore

Some initial results – cont.

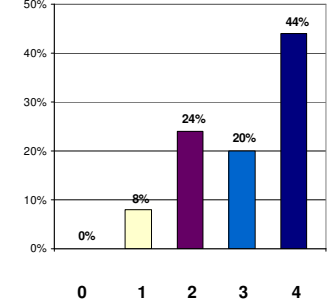
Energy performance indicators



Annual energy reduction targets



Should the new ISO 50001 deal with energy performance indicators?



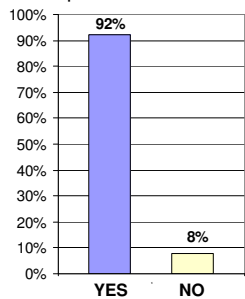
0 = NOT TO BE part of the Standard;
4 = TO BE part of the Standard and very important



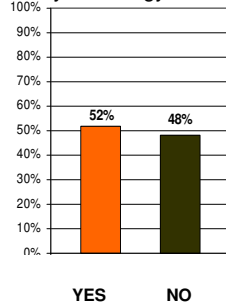
Survey Pilot in Singapore

Some initial results – cont.

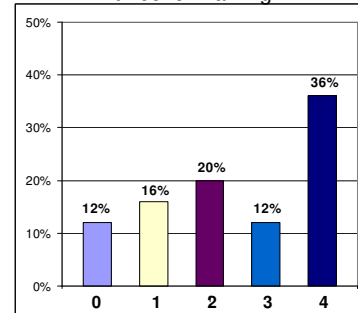
Can energy benchmarks help to be more EE?



Would you make available your energy data?



Should the new ISO 50001 deal with benchmarking?



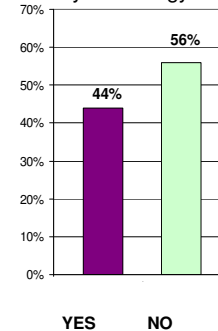
0 = NOT TO BE part of the Standard;
4 = TO BE part of the Standard and very important



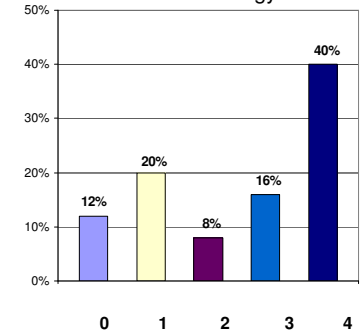
Survey Pilot in Singapore

Some initial results – cont.

Carry out energy audits



Should the new ISO 50001 deal with definition of an energy baseline?



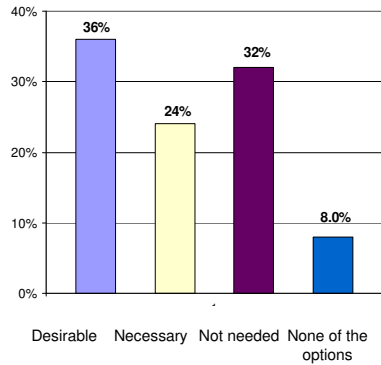
0 = NOT TO BE part of the Standard;
4 = TO BE part of the Standard and very important



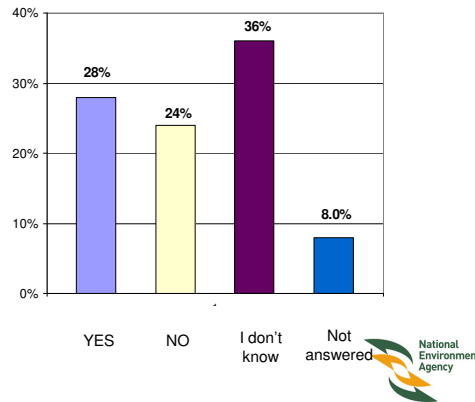
Survey Pilot in Singapore

Some initial results – cont.

Do you think that certification to ISO 50001 would be desirable, necessary or not needed?



Do you think that certification would assist adoption and implementation of the new ISO MSE?

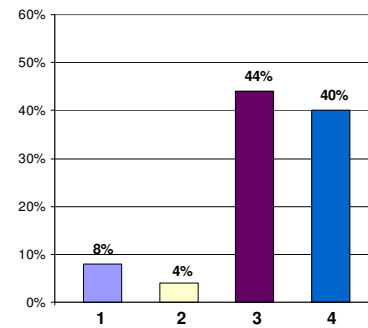


Survey Pilot in Singapore

Some initial results – cont.

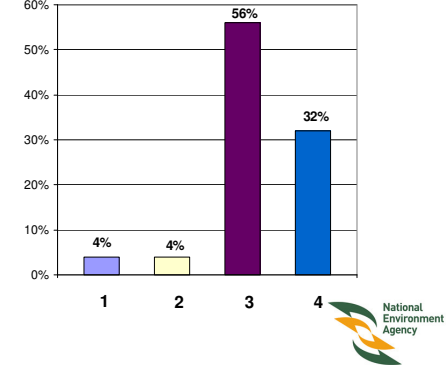
Which supporting policies, measures and tools do you think would be useful in facilitating adoption of MSE by your company, and to what extent?

Industrial sector energy benchmarks



- 1 = Not useful
- 2 = Quite useful
- 3 = Useful
- 4 = Very useful

IEE networks of experts

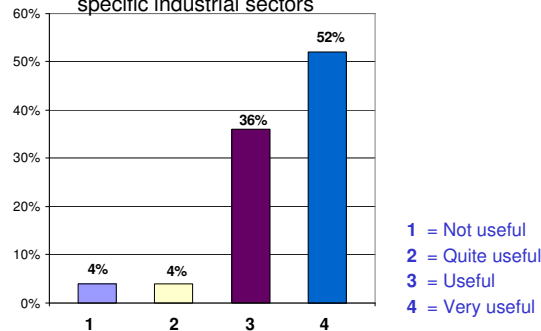


Survey Pilot in Singapore

Some initial results – cont.

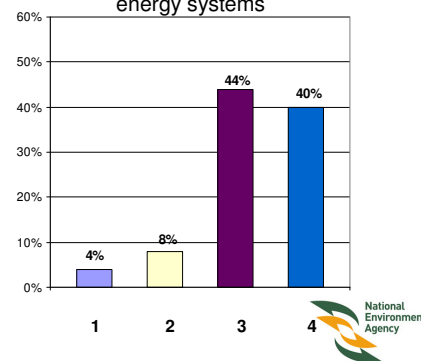
Which supporting policies, measures and tools do you think would be useful in facilitating adoption of MSE by your company, and to what extent?

EE implementation toolboxes tailored to specific industrial sectors



- 1 = Not useful
- 2 = Quite useful
- 3 = Useful
- 4 = Very useful

EE implementation toolboxes for different energy systems



Thank you for your attention!

