

US Participation in Developing an ISO Energy Management System Standard Stakeholders Meeting

Hosted by
US Department of Energy and the American National Standards Institute
Location: US Department of Energy
1000 Independence Ave, SW Room 8E-089 Washington, DC 20585
Tuesday, July 10, 2007

Meeting Summary

Key Points:

- A total of 48 people participated in the meeting, either in person or via conference phone;
- The meeting participants affirmed that they would like to move forward with an application for US leadership for the development of an ISO Energy Management Standard;
- There were no significant objections to moving forward with the proposal, only questions concerning the cost of the leadership and participation in the Technical Advisory Group (TAG);
- Concerning the proposal and justification documents, most comments addressed important details such as metrics, development timelines, coordination with ANSI revision, and cost to the user;
- Ed Pinero of the Office of the Federal Environmental Executive stated that the Administration would like the US to have an active role in shaping an ISO Energy Management Standard;
- John Mizroch, Doug Kaempf, and Paul Scheihing of the Department of Energy would like to see the US move forward in a leadership role for the development of an ISO Energy Management Standard. Mr. Mizroch expressed a particular interest in partnering with China for this effort; and
- Steven Cornish of the American National Standards Institute explained that, should the US decide to seek leadership, there is an excellent chance that we would be successful in obtaining it.

Next Steps:

- Any comments on the draft proposal or justification by the ISO Technical Management Board (TMB) are due by July 13th
PROPOSAL http://www1.eere.energy.gov/industry/pdfs/iso_tsp_energy_mgt.pdf
JUSTIFICATION: http://www1.eere.energy.gov/industry/pdfs/energy_mgt_guide72js.pdf
- Any public comments to the proposal or justification are due by July 20th to Steven Cornish at scornish@ansi.org
- Based on those comments, the ANSI Council will determine by September 12th if the proposal and justification should be moved forward to ISO.
- The next step at ISO is the approval of documentation by ISO Strategic Advisory Group on Management Systems (SAG-MSS) which will take 30 days

- The decision whether to move forward with proposal for US leadership will require an ISO membership vote. This process should be completed and a final decision reached by the TMB by February.

Issues Related to the ISO Energy Management Standard to Be Addressed:

- The approach to metrics in the standard needs to focus on the process and be flexible to allow for differences among companies and countries;
- The objective of a key performance indicator (KPI) is to define metrics for energy management purposes, not to meet national policy goals;
- The standard and supporting guidance should avoid prescriptive targets, such as for the use of renewable energy;
- Justification document needs to address the potential connections with ISO 14001 and ISO 9001 family of documents more clearly, especially in the area of metrics;
- It will be important to keep the cost for accessing the standard low, especially for small and medium-sized companies;
- The US needs to move forward with completion of revisions to the existing ANSI Management System for Energy (MSE 2000:2005) to accommodate the timetable for launching the certified plant initiative under Superior Energy Performance (SEP) in 2010. Using the typical three-year development timetable, work on the ISO energy management standard will not be completed until late 2011. Every effort should be made to normalize the content of the ANSI and ISO standards as soon as possible so that companies that use the ANSI standard used for plant certification do not have to make major changes in order to later adopt the ISO standard; and
- The cost of in time and travel for participants in the TAG (see attached estimates).

July 10, 2007 Detailed Meeting Summary

9:30 am ***Welcome and Introductions- Doug Kaempf, Program Manager, Industrial Technology Program, US Department of Energy***

Mr Kaempf welcomed the participants. Stated that the main purpose of the meeting today is to address two questions: why an international energy management standard? and why now?

He stressed the importance of industrial energy efficiency (30% of US energy, 70% of China energy) and its impact on security of energy supply. DOE has developed three basic pathways to serve the primary goal of enhancing US competitiveness. Those are assessment tools, research and development support of new technology and deployment strategies. He noted that energy management was an effective tool for increasing US industrial competitiveness. Mr. Kaempf recognized that the meeting included a broad representation from ANSI, others with experience developing ISO and US standards, DOE, EPA as well as representative of industry, associations, and others.

He then introduced the next two speakers: Ed Pinero and John Mizroch and invited the meeting participants to introduce themselves.

9:40 am ***US interest in an International Organization for Standardization (ISO) Energy Management Standard - Edwin Pinero, Office of the Federal Environmental Executive***

Mr. Pinero stated that pursuing US leadership for an ISO energy management standard is consistent with and supported by this Administration as a consensus voluntary standard process. He gave other examples of the Administration's use of voluntary standards in such as Executive Order 13423. The Executive Order calls out EMS (ISO 14001) in the executive order, the forest service planning rule legislation calls for an EMS (ISO 14001). Specifically Mr. Pinero stated that the Administration believes that integrating energy management into a logical management system that is in line with where the Administration wants to go and it is supported by several supporting standards already in place such as the ISO 14020 series on Eco-labeling, the ISO 14040 series on Life Cycle, 14064 on Greenhouse gases etc which are in line with policy related issues.

One of the attractive points to this approach is it comes with conformity assessment which provides a transparent and logical way to verify what is on the table. It provides for verification without drawing on federal inspectors. Mr Pinero stated that he is familiar with the process as a member of the Technical Committee responsible for the development of ISO 14001 (TC207). The Technical Management Board (TMB) of ISO will decide if this proposal for Energy Management goes to TC 207 or more likely has its own technical committee and he stated that he will most likely join that committee.

Mr. Pinero further stated that the US should seek an active role in the development of the ISO standard on energy management. He stated that industry, government, trade association, and NGOs were all involved in TC 207. He recognized that the participants in this meeting might form the beginning of the Technical Advisory Group (TAG) for energy management. He further recognized that a commitment of time and resources would be required for the US to lead this effort. <http://www.whitehouse.gov/ceq/> <http://www.ofee.gov/>

9:55 am *US DOE energy efficiency strategy and collaboration with developing countries- John Mizroch, Principal Deputy Assistance Secretary, Office of Energy Efficiency and Renewable Energy, USDOE.*

Mr. Mizroch expressed excitement at the prospect of undertaking an ISO energy management standard. Energy security and climate change issues are the two main areas of focus for himself and the Assistant Secretary, Andy Karsner.. These have been addressed through the advance energy initiative– announced by the President and energy efficiency is key part of that initiative.

Mr. Mizroch provided an example of plans to apply DOE’s “Save Energy Now” principles and tools in China. He stated that the strong support from Ed Pinero and James Connaughton of the Council on Environmental Quality (CEQ) makes DOE’s efforts to address energy issues much more effective. He stated that there is an important opportunity to significantly impact climate change through more energy efficient manufacturing. He invited the participants to put all ideas on the table. He stated that DOE considers the US and China as partners in this effort.

10:10 am *Purpose of Meeting – Paul Scheihing, Technology Manager, Industrial Program USDOE.*

Mr Scheihing noted that copies of the presentation and proposal and justification were available for in-person attendees and , for those the phone, via the website <http://www.superiorenergyperformance.net/> .

He stated that the meeting is an official step in the ANSI process to submit a proposal for a new technical committee and new standard. The purpose of the meeting is to seek input, comments, and opinion on proceeding with this process. He reviewed the ways in to offer comments-via meeting participation or via email to Steven Cornish of ANSI directly at scornish@ansi.org by close of business on Friday, July 20, 2007.

10:20 am *Government/Industry Collaboration to achieve improved industrial energy intensity - Paul Scheihing, USDOE*

Copy of Presentation--

http://www.superiorenergyperformance.net/pdfs/ISO_07-10-2007_meeting.pdf

Mr. Scheihing reviewed the importance of industry at 47% of world energy use and increasing. He noted that the International Energy Agency has identified energy efficiency as representing 2/3 of the potential to reduce greenhouse gas emissions over the next 23 years.

A Q&A concerning carbon and carbon credits ensued. Mizroch stated that it will be addressed but that the scheme or combination of schemes had not yet been identified. The approach is currently voluntary and technology-focused, but there are policy discussions. It is complex issue that requires good data. The ability to model these data is improving rapidly. He recommended reading the McKenzie report.

Mr. Scheihing presented the current status of US industry and emphasized that the US is trying to make DOE’s industrial energy efficiency tools available to developing countries, such as China. He also noted that industry has limited fuel choices and that .the volatile nature of fuel prices impact budget processes for many organizations.

A discussion of the need for tax incentives to overcome the 12 month payback hurdle and how industries in other countries (example Japan) accept much longer paybacks followed.

Mr. Scheihing provided an overview of the Superior Energy Performance (SEP) initiative, undertaken by DOE, the Environmental Protection Agency (EPA), ANSI, the National Institute of Standards and Technology (NIST), and US industry. The goal is to accelerate industrial energy efficiency and make it more attractive for plants to undertake energy efficiency projects. SEP's stretch goal is to reduce industrial energy intensity by 25%- 8.4 Quads by 2017. Scheihing presented the vision for an energy efficient US industrial sector, driven by the ANSI/ISO energy management standard and a certification program for energy efficiency. The goal is to be a world leader in energy efficiency and to also drive this efficiency throughout the global corporate supply chain.

The program has three types of activities-

- Save Energy Now Corporate Partners- voluntary agreements with 100 large corporations to reduce their energy intensity by at least 25% over 10 years. Corporations would be required to report energy intensity improvements and would receive targeted assistance;
- Save Energy Now Partner Plants-designed to introduce energy management principles into as many US plants as possible through widespread access to basic educational resources and outreach; and
- Certified Plant (ANSI-accredited), which would require compliance with the ANSI energy management standard, use of system assessment protocols to identify system energy efficiency improvement opportunities, and independent verification of energy savings. Another potential part of this would be the creation of certified expertise in market place

A discussion followed concerning branding the program with the Save Energy Now title and logo. DOE currently brands its tools and training under Save Energy Now. If a company commits to an energy intensity reduction goal of 25% DOE will put resources behind it as a partnership to reduce risk for new technology and promote technology advancement - Saving Energy Now will be supporting those goals by rewarding those who make larger commitments. A certified plant will be one that is doing "all the right things"- companies are not going to reach the 25% goal through best practices. DOE will maintain the commitment to a multi-agency coordination. Both DOE and EPA agree that more work is needed to better integrate program activities between Save Energy Now and ENERGY STAR.

10:40 am ***Overview of ANSI Management System for Energy (MSE) 2000:2005 – William Meffert, Georgia Institute of Technology, ANSI Developer***

Copy of Presentation--

http://www.superiorenergyperformance.net/pdfs/MSE_2000_GATECH.pdf

Mr. Meffert noted that the existing ANSI energy management standard MSE 2000:2005 was developed by staff at the Georgia Tech Enterprise Innovation Institute with practical experience in industrial and commercial facilities and as ISO auditors.. He provided an overview why was MSE developed, the structure and organization of the standard and, implementing the standard and using it as a template as the US contemplates moving forward toward international standard status.

MSE grew out of an observed need to engage management to ensure savings are sustained and continuously improving. The existing standard has both a technical and managerial component

based on the PLAN-DO-CHECK-ACT (PDCA) cycle. The leading issue in energy management is how to develop key performance indicators or KPIs. He acknowledged EPA's work in establishing KPIs for certain sectors through the ENERGY STAR program. Meffert noted that from a practical view point the system needs to work with other management standards to allow for integration, providing for compatibility and should be voluntary. Meffert noted that the Swedish representative at the EEMODS conference in June 2007 stated that ISO 14001 environmental management program participating companies who also adopted an energy management standard were surprised to find more energy savings. For smaller organizations, an incremental approach is necessary due to resource needs and staffing issues.

GaTech is undertaking a revision of the standard. Interested stakeholders can provide input through comments or more active participation through the MSE Consensus board. Happening in parallel is the formation of the US Technical Advisory Group (TAG) to provide input to an international effort in this area through ISO. Mr Meffert stated that the world will develop an energy management standard, whether the US takes a lead role or not. The U.S. TAG will provide input to the standard; the real question is - does US want to also lead by being the Secretariat? If not, the Europeans are ready to lead this effort through the European Committee for Standardization (CEN).

A discussion followed concerning how to obtain a copy of ANSI MSE 2000:2005, likely international acceptance of MSE 2000:2005; and whether there was value in revising the ANSI version if there is going to be an ISO version. Denmark based their standard on MSE 2000, and Ireland and Sweden based their standards on Denmark's, so there are a lot of common features. The Chinese are currently developing an energy management standard using MSE 2000:2005 as a model.

There was also a discussion on the need to coordinate revisions to the ANSI standard and development of the ISO standard. It is assumed that the work of revising the ANSI energy management standard and the US work of the TAG for the ISO energy management standard could be one process under the TAG. If the US decides to pursue the Secretariat, ANSI would be the US representative and decide how this leadership should be handled in the US. Since Georgia Tech is the ANSI developer for MSE 2000:2005, it is expected that Georgia Tech would also provide oversight for the TAG and make recommendations for the Secretariat Chair. The Secretariat and Chair are international roles – it promotes your country as leader in the field. In terms of prospect of getting role, we feel that it is good if we submit the proposal –the way the process works tends to favor the proposer.

The United Nations Industrial Development Organization (UNIDO) has issued to ISO a position statement on the need for an energy management standard. ISO has decided to move into this field. If the US does not lead, someone else will. We will need a US TAG and will also need to determine if we want to lead this effort. The proposal and justification were provided informally to other groups ANSI works with for two reasons – early insights from the other members of the TMB and to serve notice that ANSI is interested in bringing this subject forward. ANSI will not approach China until a final decision is made by ANSI Council concerning US leadership; only then can a decision be made about joint leadership. However, the relationship between ANSI and its Chinese counterpart is excellent. Informal inquiries by others would seem to support their interest in such a partnership. It will also be important to find a leadership role for CEN- perhaps in a key subcommittee.

11:20 am *How ANSI works with ISO and US Stakeholders - Steven Cornish, ANSI*

Copy of Presentation

http://www.superiorenergyperformance.net/pdfs/ANSI-ISO_Presentation_2007-07-10_EM_Meeting.pdf

Steven Cornish provided background on ANSI. ANSI has a number of roles relative to ISO– it takes forward proposals to ISO and provides a neutral forum to discuss those proposals – such as the one under discussion. ANSI provides access to ISO and accredits the TAGs. There are 150 member countries to ISO-75% from developing countries; for these countries, the member to ISO is often from the government. ANSI has a strong position in ISO and is consistently ranked in the top 5 countries and thus has permanent seats on the ISO council and on the TMB. The ISO TMB is the group that develops the rules, coordinates work, and introduces new work. Cornish is one of the twelve (12) members of the TMB.

Mr. Cornish explained that the bulk of leadership in US is provided through stakeholders and experts who lead ISO committees and TAGs. Participation is done through TAGs, consensus bodies that are accredited by ANSI. Membership is open to any stakeholder who is affected; costs associated with travel and time are the responsibility of participating members. The work of the U.S. TAG would include recommendations on who should serve in leadership roles, whether to take an active participant or observer role, initiate new work items, and provide representation for the US in meetings, and determine the position on the voting documents for US. Mr. Cornish noted that the meeting participants could fine-tune the draft proposal and justification through public comment.

http://www.ansi.org/news_publications/news_story.aspx?menuid=7&articleid=1509&source=whatsnew060707

ISO guide 72 was developed in response to a US desire to prevent and address concerns about proliferation of management system standards (MSS). Cornish stated that the justification is the result of guide requirements to provide supporting evidence for the proposal. TMB members are quite surprised that the US is submitting a proposal for an MSS considering the US position on the need for guide 72 to prevent proliferation.

Cornish stated that the majority of input received from TMB is that they see this as a distinct and separate issue although Canada did feel it was a subset of 14001 (TC207) – Each country has their own adoption of standards, and in several of the countries including the US they have adopted both for example MSE and ISO 14001 demonstrating that it is a separate and distinct subject.

Cornish further stated that public input is being solicited via the written comments process that concludes July 20th and this public meeting. ANSI will work with the proposers after we receive all the comments to see how they want to fine tune-the material. This material will then be sent to ANSI's governance group who will make the decision on support for ANSI to submit this to ISO. If they choose to support it then it is sent to ISO. The next meeting of the ANSI Council is September 12, 2007. It should be possible to determine, either at that meeting or before through correspondence, if this proposal will be moved forward to ISO. Once the ANSI Council approves this and moves it forward to ISO there is a process at ISO that the proposal and justification go through. First, the Strategic Advisory Group on Management Systems (SAG-MSS) – will review the documentation from the Council to determine if the documentation is

sufficient to move forward. They have 30 days in which to perform this review. It is not to make a determination or judgment on the content but rather to ensure that the informational requests have been met and the documents are fully developed to move forward. The documents then go out to the membership for a 3 month vote after which the member countries will report and then TMB will then decide based on vote.

A discussion ensued on coordination between revisions to ANSI MSE 2000:2005 and development of the ISO energy management standard. It is anticipated that development of the ISO energy management standard will be expedited because 1) there is substantial alignment among the existing energy management standards and 2) UNIDO is supporting an informal working group of countries with existing energy management standards that is scheduled to meet in the fall to jump start the harmonization process. CEN is part of that group. There are similar concerns in Europe – where they have begun to review their separate standards and combine them into one CEN document. They are also aware of the potential issues if they move to a CEN document and then to an ISO document. By the time the standard reaches the stage of DIS (Draft International Standard), the content is substantially done. The DIS review stage that follows requires a 5 month vote and FDIS (Final Draft International Standard) requires an additional 2 months.

Additional discussion followed on the role of registration and the cost to the users of the accessing the standard. Approaches to contain these costs include site licenses. Companies using the standards would not be required to register with ISO unless they choose to.

12:20 pm *Next Steps for Developing a US Position- Paul Scheihing, USDOE and Steven Cornish, ANSI*

Paul Scheihing and Steven Cornish then invited the meeting participants to develop a consensus concerning what action should be taken in regards to the Energy Management System proposal and justification.

Comments and questions in *italics*

- *From the position of small and mid-size business we need take a look at metrics and what that might mean in order to preempt or protect US position. Possibly include this in the Guidelines*
- *It is important to keep the metrics guidelines flexible due to the variability from company to company and country to country.*
- *We may want to take a look at how renewable energy fits into the whole strategy and avoid prescriptive approaches in the standards guidance*
- *TC207 went into a great deal of discussion on metrics; there are several documents in the ISO 14000 family that may be helpful to leverage in this process. TC 207 also addressed the metrics issue for ISO 14001 by committing to process approach and agreeing not to have levels. Suggest that the proposal be cognitive of the 9000 and 14000 families of standards and the value of those supporting documents.*
- *TC 207 was established specifically in their charter not establish levels –to use the process approach.*
- *We need to state that the objective of a KPI is to define metrics for energy management purposes, not to meet national policy goals.*

Conclusion: Justification document needs to address the potential connections with ISO 14001 and ISO 9001 family documents more clearly.

- *We need to be more specific in definitions- about what we mean- for example, the definitions about energy related to intensity have different meaning on the demand and supply sides.*
- *What is the typical cost/time commitment required for volunteers to participate in the TAG?*

Answer: ANSI to provide a ballpark estimate of travel costs and time (attached).

TAG Administrative costs can vary widely – typically range from \$30,000 to over \$50,000 for a committee developing a single standard. DOE has agreed to support these administrative costs, at least initially

- *Will you move forward with US standard for the plant certification project if timelines do not match up for the ISO process?*

(Answer-DOE): Yes

- *Concern about compliance audit for smaller business due to costs. This is a potential barrier that will prevent small and mid companies from doing this.*
- *Many organizations have implemented the ISO 9001 and/or ISO 14001 standard without going for registration since the main benefit is the methodology used not the registration.*

(Answer-LBNL): We also expect that to be true of users of the ISO energy management standard.

- *Should this proposal incorporate some sense of the fact that we are going to place an importance on the journey and not registration?*

(Answer-GaTech): The current justification indicates that registration is not required.

Addendum: Based on data from several registrars the current cost for small organizations to register to the ISO 14001 standard (small defined as 150 persons or less) has been over three years (3yrs) is in the range of \$9,995 to \$11, 500. The price is determined based on the number of days for the audits, the complexity of the operations, and the size of the facilities being audited. For mid-size to larger organizations the price of the audits had been based on the same factors and can be estimated based on \$1,200 per audit day per auditor needed for the audit.

- *One of the key issues involved in this process is the implementation of the standard and the training necessary to implement. It does not matter if we get this approved unless key groups adopt it and move it forward through there supply chain.*
- *DOE fully intends to provide training on how to implement.*

Wrap up- What is our Consensus?

- DOW supports this proposal and will participate
Affirmation around the room and phone was confirmed.
- Should the US pursue a leadership role?
Affirmation from those in the room and on the phone
- Who at this time thinks they may be interested in TAG membership?
DOW, SCRI, Kaeser, NEMA , NIST

Final Statement - for those on the phone, please email Paul Scheihing that you were listening along with your contact information.

12:30 pm Adjourn

For Reference:

http://www1.eere.energy.gov/industry/newsandevents/news_detail.html?news_id=11013
<http://www.superiorenergyperformance.net/>

ATTACHMENT (FROM ANSI)- Estimate for US TAG member Time/Travel Commitment

Below is a table that outlines the estimated time commitment for U.S. individuals participating in the standards development activities of ISO (International Organization for Standardization). Participation in ISO is coordinated via ANSI-accredited U.S. Technical Advisory Groups (US/TAGs) that correspond to specific ISO technical committees. US/TAGs serve as the consensus body for development of all US positions into ISO.

Commitment Level*	TAG Meetings (domestic)	PC working group meeting (some Int'l)	PC Meetings (some Int'l)	Prep time and Document Review	Estimated Total**
General TAG member	2 meetings per year – (4 days total)	None required	None required	2 days per year	6 days per year
General TAG member plus delegate to int'l meeting	2 meetings per year – (4 days total)	None required	1-2 each year (5-8 days per year)	4 days per year	13-16 days per year
General TAG member, delegate to int'l meeting, plus working group expert	2 meetings per year – (4 days per year)	1-2 meeting per year (2-4 days per year)	1-2 each year (5-8 days per year)	6 days per year	17-22 days per year
General TAG member, delegate to int'l meeting, plus working group convener	2 meetings per year – (4 days per year)	1-2 meeting per year (2-4 days per year)	1-2 each year (5-8 days per year)	8 days per year	19-24 days per year

* Commitment Level:

- **General TAG member** – participates in TAG meetings and reviews draft standards and other committee related information
- **General TAG member plus delegate to int'l meeting** - participates in TAG and international meetings and reviews draft standards and other committee related information
- **General TAG member, delegate to int'l meeting, plus working group expert** - participates in TAG and international meetings, participates in international working group meetings as an individual expert, and reviews draft standards and other committee related information
- **General TAG member, delegate to int'l meeting, plus working group convener** - participates in TAG and international meetings, participates in international meetings as an working group convener (leader of working group), and reviews draft standards and other committee related information

** Estimated Total is the total amount time estimated to participate actively in the TAG and international activities per year. This includes attendance at meetings, review of meeting materials, and review of draft standards