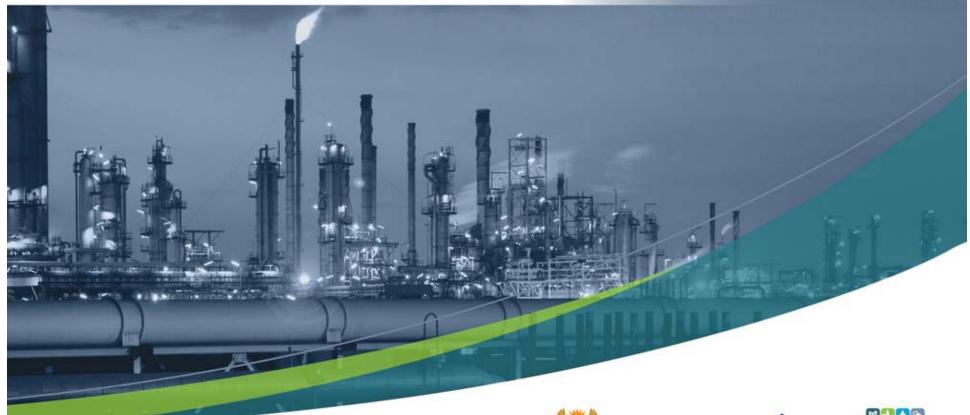
Training of ISO 50001 certification auditors in South Africa









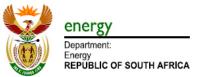




Industrial Energy Efficiency Project

- The project is a joint collaboration between
 - The Government, represented by the dti, the DoE
 - The Government of Switzerland, represented by SECO
 - UK Department of International Development
- The project is implemented by NCPC-SA

















UNIDO/ NCPC IEE Project

Project objective	To reduce GHG emissions and enhance competitiveness of industry through improved energy efficiency and the transformation of the market for industrial energy efficiency products and services.
Project components:	
Policy and institutional support	Development and establishment of: ✓ National Energy Management Standard compatible with ISO 50001 ✓ Capacitation of management system auditors for ISO 50001 ✓ National IEE Monitoring, Verification and Benchmarking Programs ✓ IEE Best-Practice Information, Dissemination and Recognition Programs ✓ Incentives for IEE and other
Capacity-building	 ✓ Energy Management Systems (EnMS) Expert Training ✓ System Optimization (SO) Expert Training (steam, pumps, compressed air,) ✓ Development and provision of tools to assist industry in developing and implementing EnMS and system optimization projects ✓ Training of industry energy managers and engineers
Pilot IEE projects	✓ Implementation of pilot EnMS and SO projects in selected enterprises



EnMS training offered by the NCPC-SA

- SA Govt. identified the need for EnMS training
 - Mandated the NCPC to offer EnMS training
- Training offered on EnMS at the following levels:
 - 1 day: Introduction to EnMS
 - 2-day: Advanced EnMS training
 - 12 months: Expert Level EnMS training + Exam
 - 5-day: ISO 50001 Auditor Training + Exam
- 35 courses offered to-date, nationally
- Total of 869 candidates registered



Candidate Selection

- Training was developed with support from SAATCA (Southern African Auditor and Training Certification Authority)
 - Aligned to SAATCA's CRT 6.20 Energy
 Management System Auditor
- Academic education and work experience
- Atleast 2 years Management systems experience (related to ISO 14,001 and ISO 9,001) in Southern Africa
- Successfully completed SAATCA certified courses: ISO 19011 and ISO/IEC 17021



Development Needs addressed by the training

- ISO 50001 fairly new standard in SA,
 - July 2011
 - SA was first to adopt the standard as a national standard
- Number of organisations are implementing EnMS for certification (10 organisations linked to NCPC)
- Capacity creation:
 - Certification audit of an EnMS against ISO/SANS 50001



EnMS knowledge and skill addressed

- Conducting a certification audit for ISO 50001:
- 1. Technical grasp of Energy Performance improvement
 - Candidates were given an understanding of;
 SEU's, EnPI's, Baselining, Operational Control etc. from an auditing perspective
- 2. Management Systems skills
 - Candidates were trained on auditing the management system side of ISO 50001, e.g.
 Documentation and record control, Roles and responsibilities matrix, etc.



Deploying and administering the Auditor Training

- UNIDO funded the development of all training material
- Developers and facilitators of the training:
 - 1. Deann Desai [USA],
 - expert for the U.S. Technical Advisory Group for Technical
 Committee 242
 - 2. Wendy da Cruz [SA],
 - +25 years experience in Management System auditing in SA.
 Served as SAATCA committee Chair for EnMS and EMS
 - 3. Hemant Grover [SA],
 - +13 years experience in EM in SA. BEng, registered CEM, registering as CMVP and CREP. SA TC 242 committee member and convenor for ISO 50002



Deploying and administering the Auditor Training...cont.

- Logistics and training administration was done by the skills development department.
- Classroom based training,
 - Lecturing, case studies, group discussions and group exercises (technical and MS oriented)
- Exam on last day,
 - Each facilitator marked the exam







Outcomes from the training

- October 2012
 - 12 candidates registered
 - 9 passed the exam
- April 2013
 - 25 candidates registered
 - 20 passed
- In total 29 auditors passed exam on EnMS
- A number of requests for more such courses
 - Mercedes Benz SA internal auditors will be trained (Feb 2014)



Lessons learnt

- Most candidates had strong Management System auditing skills, but rather weak on technical skills,
 - Deepen an understanding of the technical aspect
 - Pre-2-day advanced EnMS course to boost technical learning
 - Practical exposure to technical system, HVAC, boiler, compressor to acquaint learners with systems



Resources available for the training program

- NCPC aimed to capacitate other training providers (SABS) to create sustainability of the auditor training for ISO 50001
- Knowledge and experience of the developers and facilitators may be shared
- Copyrights for the training material are held by UNIDO,
 - Requests for training material may be routed to UNIDO



CASE STUDY Johnson Matthey-SA success

- JM commenced EnMS implementation, 2012
 - Completed stage 2 certification
- EnMS Implementing consultant (Wendy) qualified EnMS expert
 - Facilitator for ISO/ SANS 50001 lead auditor training
- Project manager (Hemant) lead auditor facilitator
 & qualified EnMS expert
- Certification MS auditor (Peter) qualified lead auditor (IEEP training)
- Technical assistance provided by (Moses) qualified EnMS expert



Thank You!

Hemant Grover BEng, MEM, CEM

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