



## Energy audits and energy efficiency

**A**n original, highly interactive, technically focused, completely hands-on, practice-oriented 10-day workshop on Energy Audits and Energy Efficiency was organized by the APO and National Productivity Council (NPC), India, at its vast campus in Chennai housing the Centre of Excellence for Training in Energy Efficiency (CETEE; [www.cetee.in](http://www.cetee.in)), 2–11 June. The objective was to provide an opportunity for industry managers and professionals to understand the practical methodology and major components of energy audits, reduce energy consumption, and improve energy performance in organizations. At the outset, NPC Director General Harbhajan Singh stated, “We would be keen to organize more programs for energy auditors sponsored by APO member countries. We would also be happy to partner in their economic growth with efficiency in energy consumption.” Twenty-four energy professionals from 14 APO members read about, listened to, and acted upon/performed components of energy efficiency, enabling them to remember the practical aspects forever in line with Aristotle’s advice: “One must learn by doing, for though you think you know it, you are not certain until you try.”



*Participants observing and assessing combustion furnace burner performance.*

There are significant differences between the theory and practice of energy audits and management. APO experience in training in the field showed that while participants understood the theoretical concepts, it was more challenging to translate theory into practice and reap the benefits in the form of energy savings. Generally, a new energy engineer works under an experienced energy auditor for at least three years before auditing independently. Energy-efficient technologies and practices are being increasingly adopted worldwide, although more needs to be done, especially in the Asia-Pacific where growing energy demand, emerging environmental issues, and increased stress on aging energy infrastructure are evident. The CETEE is a world-class, hands-on training center in the NPC conceived to bridge the gap between energy efficiency theory and practice. This facility was built and handed over to Indian energy auditors after extensive training by Japanese experts. Most equipment was provided under an Indo-Japanese aid project. Industrial-scale models of energy equipment such as compressors, fans, pumps, furnaces, boilers, lighting systems, heat exchangers, energy-efficient motors, etc. are available so that trainees can conduct trials and see the resulting energy savings. They can then suggest similar measures in sites where they conduct energy audits.

The participants worked on various equipment and filled in detailed worksheets based on actual measurements while analyzing energy performance. Despite summer heat of up to 43°C, their work at the CETEE was marked by passionate intensity.

Chief Electrical Inspector for the Government of Tamil Nadu S. Appavoo inaugurated the workshop and praised the APO for “bringing Asia to Chennai” and introducing the CETEE to the APO family. “Right away, I will start sharing the knowledge gained with all heads of divisions in my company, record energy usage within the organization, and put energy efficiency measures in place. I will also disseminate knowledge to other organizations for multiplier effects,” pledged Indonesian participant Isep Gojali. Farshad Yahyazadeh Elizee from IR Iran commented, “Everything in the workshop was handled very professionally and I will never forget my experience here.” Sri Lankan participant G.A.I Mihindukulasuriya summed up his experience succinctly: “Truly an excellent training workshop.”



*Hands-on diagnosis of pump systems.*

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