



U.S. Department of Energy
**Energy Efficiency
and Renewable Energy**

Bringing you a prosperous future where energy
is clean, abundant, reliable, and affordable

Federal Energy Management Program

Closing Remarks and Future Directions

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Annex 46: Holistic Assessment Tool-Kit on Energy Efficient Retrofit Measures for Government Buildings



International Energy Agency
**Energy Conservation in
Buildings and Community
Systems Programme**

Purpose of Annex and DOE/FEMP Support:

Share/disseminate best practices and new technologies

- ESPC contracting
- Designs
- Testing
- Standards and Labeling
- Calculation and Assessment Techniques
- ECM technologies

Other Benefits:

- Improved modeling and assessment for advanced ECMs
- Assist facilities to meet their energy efficiency goals



Examples of Application of ANNEX 46 Results

- Provide building/site managers with a menu of options for efficiency projects
 - Ensure that site managers know about additional technologies
 - Give them basic information about the technologies to use as a “filter” to evaluate proposed projects
 - Increase awareness of these technologies so that site personnel can raise the question “why not” if these are not included in project proposals.
- Include information on costs and savings to provide “reality check”
- Get more advanced technologies included in government energy efficiency projects



Annex 46 Recap:

Holistic Assessment Tool-Kit on Energy Efficient Retrofit Measures for Government Buildings (EnERGO)



International Energy Agency
**Energy Conservation in
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Help develop **procedures** (such as project design and financing), **technologies**, and **evaluation guidelines** to help the government sector identify appropriate energy and water conservation measures, implement them, and maintain them.

Subtask A: method for energy analysis and technology assessment for government energy and facility managers. [*Energy assessment and analysis methodology/protocol and a tool "Energy Assessment Guide for Energy Managers and ESCO's"*]

Subtask B: identify energy efficiency technologies and offer guidance to facilitate design of government energy saving projects. [*Database of "Energy Saving Technologies and Measures for Government Building Retrofits" with examples of best practices*]

Subtask C: guidance to obtain the best possible results from an ESPC. [*Best Practice Guidelines for Innovative Energy Performance Contracts*]

Subtask D: puts the information from subtasks A, B and C in a toolkit form to make it easier for facility managers to access and apply it. [*IT-Toolkit "EnERGo"*]



“Thank You” for Technical Support

Morad Atif, Chair ECBCS, National Research Council Canada

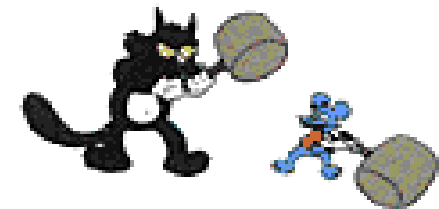
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Spirit of Cooperation



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Conclusions & Next Steps

- The Annex will help US facilities “push the envelope” of energy efficiency. Sufficiently efficient is no longer enough; we must be aggressive to meet EO 13423 & 13514.
- An extensive body of information from Annex 46 is available:
 - ECM templates
 - Case studies
 - ESPC guidance
 - Calculation/assessment techniques
 - Descriptions of energy efficiency programs
- These reference materials will be of value to energy managers, ESCOs and other officials in developing state-of-the-art energy efficiency projects for their buildings
- Development of equipment simulation has contributed to numerous improvements in EnergyPlus
- Annex 46 results will be adapted for posting on FEMP website or will be linked from FEMP Website



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