



Energy Consumption in European Air Conditioning Systems and the Air Conditioning System Inspection Process

FINAL Summary Slide - EIE/07/132

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Project team



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Austrian Energy Agency

Austria



**Association pour la Recherche et
le Développement des Méthodes et
Processus Industriels - ARMINES**

France



**Building Research
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HARMONAC Final Outputs



- 42 Case Studies, 394 Field Trials in 8 Member States provide information on how AC systems consume energy. Searchable in an online database.
- 143 Energy Conservation Opportunities (ECOs) found, 52 detailed.
- **Average** energy savings potential for individual AC systems = 35 – 40%
- Majority of savings from Operational issues, component cleaning, and replacement with more efficient hardware
- Measured and modelled potential energy savings from AC systems = 0.7% of EU Primary Energy Use (8 MTOE, 93.04 TWh, 18.31 Mtonnes CO₂)
- Estimated potential energy savings using current Inspection approach = 0.26% of EU Primary Energy Use (3 MTOE, 34.89 TWh, 6.87 Mtonnes CO₂)
- “Missing” energy savings due to system design, uneconomic to upgrade working existing systems, and inadequate operational performance data
- 6 Tools and a Teaching Package produced to assist Inspection Process
- 3 AC Inspection Methodologies to illustrate options
- Project information helped shape the recast EPBD in this area
- September 2007 to August 2010
- Project website: www.harmonac.info