

Experience with introducing efficient use of energy in The Netherlands

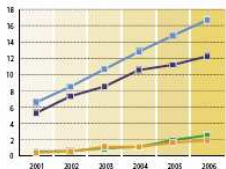
The LTA approach as a means to save energy

Efficient use of energy 07, Ljubljana, Slovenia, October 2nd 2007
Ronald Vermeeren



Overview

- **Policy:** Dutch policy on and instruments for energy efficiency and renewable energy
- **Instruments:** The voluntary LTA programme for industries and service providing companies
- **Energy Management:** Energy Management as obligatory part of the LTA programme





Policy: Drivers for Energy Policy

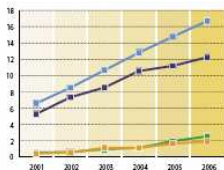
- **Increasing prices of Oil and Gas:**
 - 77,62 US Dollar per Barrel (25th September)
- **Supply security:**
 - EU depends for 80-95% on import of oil and gas in 2020 (BAU)
- **Climate change:**
 - Global warming due to CO₂ emissions





Policy: Ambitions and Targets (2020)

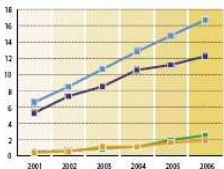
- **Governmental Policy:**
 - Presented with budgets on “Prinsjesdag” (September 18)
- **“Cleaner and more Efficient”**
 - 2 % energy efficiency improvement per annum
 - 20 % sustainable energy in 2020
 - 30 % carbon dioxide emissions reduction in 2020 (ref. 1990)





Policy: Ambitions and Targets (2050)

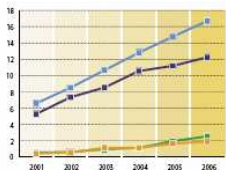
- **Energy transition:** A sustainable energy house hold in 2050
 - **Green energy:** biomass, waste heat (30% in 2050)
 - **Sustainable mobility:** e.g. alternative fuels (30% emission reduction)
 - **Chain Efficiency:** Smart production chain from fabric to consumer
 - **New (clean) gas:** An efficient and innovative gas economy (natural gas, bio gas, hydrogen, CO₂ storage)
 - **Sustainable electricity:** E-rodution with wind, solar and biomass
 - **Build environment:** Energy neutral buildings





Policy: Instruments

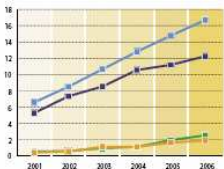
- **Convenants:**
 - LTA agreement's
 - Benchmark Covenant
- **Fiscal and Financial instruments:**
 - Credit Guarantees for SME's;
 - Energy Investment Allowance
- **Information and education:**
 - Energy Centre for SME's (70.000 businesses, 100 PJ)





Policy: Instruments

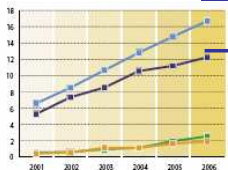
- **Subsidies:**
 - Electricity Generation Act (MEP) for renewable energy projects
 - Energy Research Strategy (EOS) for Research
 - New Energy Research (NEO) for new ideas (proof of principle)
- **Standardization and labelling:**
 - Conform EU Directives (ECO Design, EESD)
- **Emission Trading:**
 - For large manufacturing and energy production companies





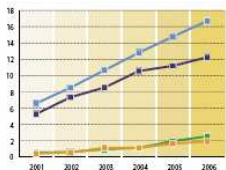
Long Term Agreements (LTA-2): Introduction

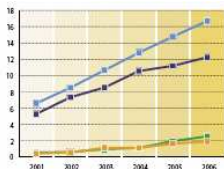
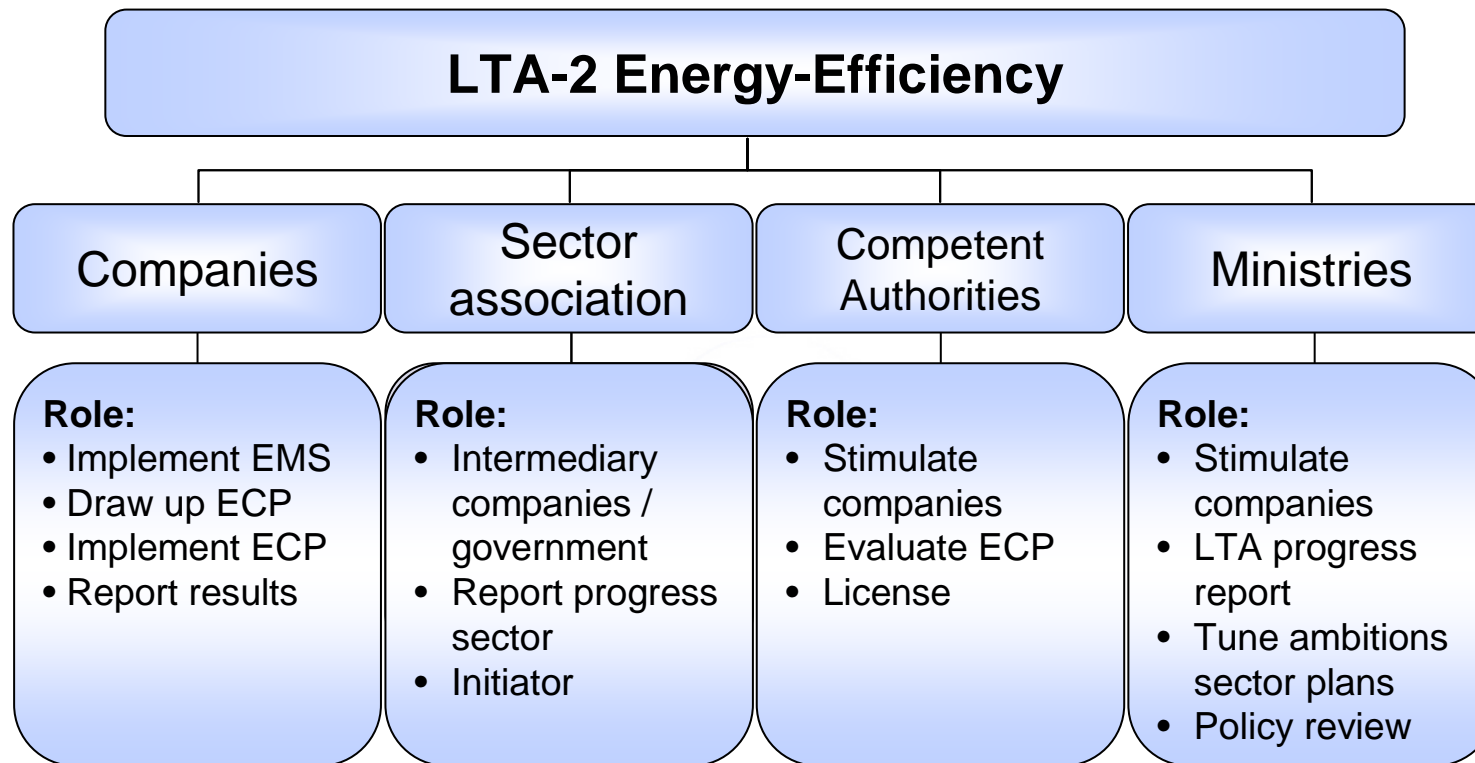
- **2nd Long Term Agreement (2001 – 2012) with Dutch Industries:**
 - Per sector (80% of energy use and > 1 PJ)
 - Negotiated voluntary agreement between
 1. Branche organizations (and it's member companies);
 2. Ministry of Economic Affairs;
 3. Municipal and Provinces Associations (VNG and IPO)
 - SenterNovem facilitates partners in the covenant
- **Benchmark covenant for companies > 0,5 PJ:**



Only monitoring: top 10 of world in energy efficiency

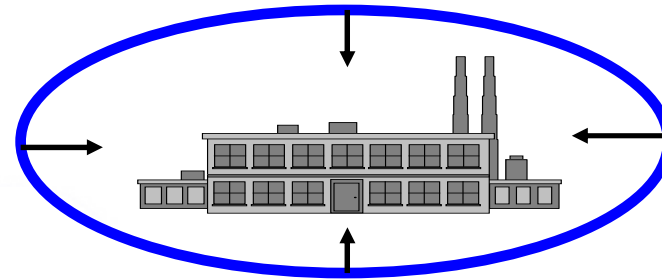
Long Term Agreements: Organization





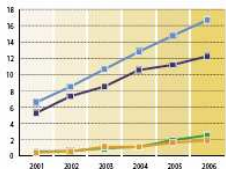
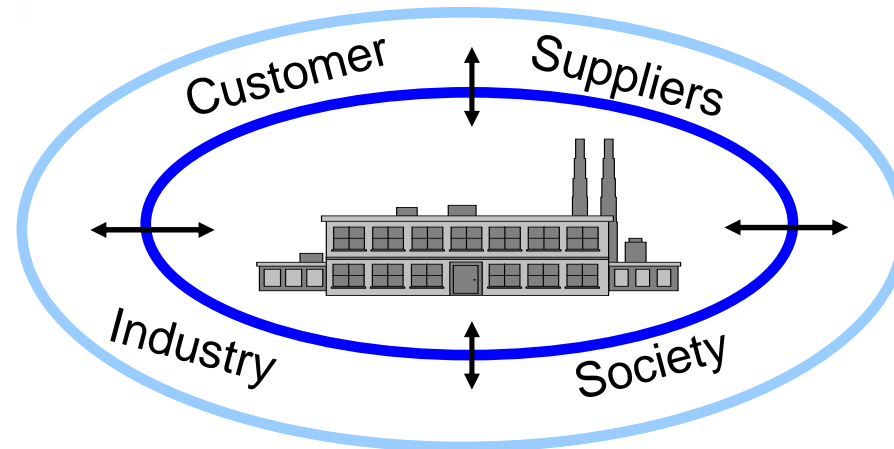
Long Term Agreements: Scope

LTA-1: Energy Efficiency



LTA-2: Life Cycle Efficiency

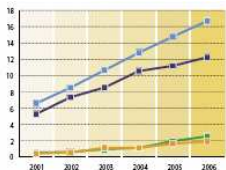
- Renewable energy
- Chain efficiency
- Sustainable production



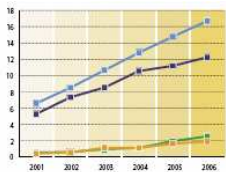


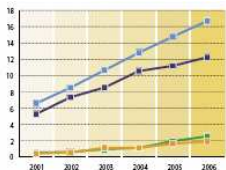
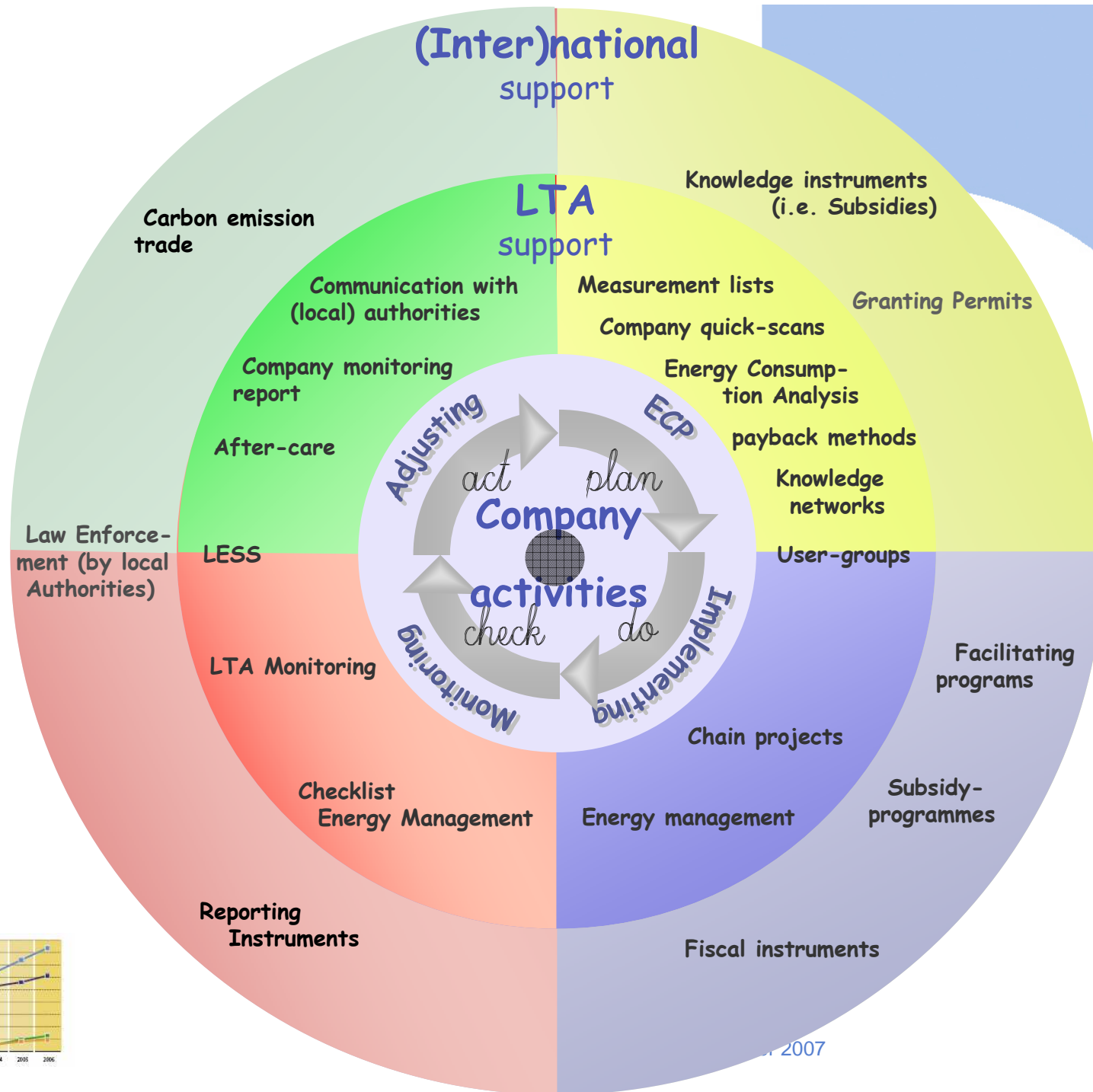
Long Term Agreements: Sectors involved

- Asphalt production
- Banks and insurance companies
- Carpet
- Chemical
- Coarse ceramics
- Coffee roasting
- Dairy
- Fine Ceramics
- Foundries
- Flourmills
- Laundry
- Margarines, fat and oils
- Meat processing
- Non ferrous metals
- Non branche related (e.g. Schiphol airport)
- Oil and Gas production
- Potato processing
- Refrigeration and cold storage
- Rubber and plastic
- Sand and limestone
- Surface treatment
- Tank storage
- Textile
- University hospitals
- Vegetable and fruit processing



Long Term Agreements: Facilitation

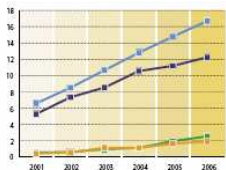
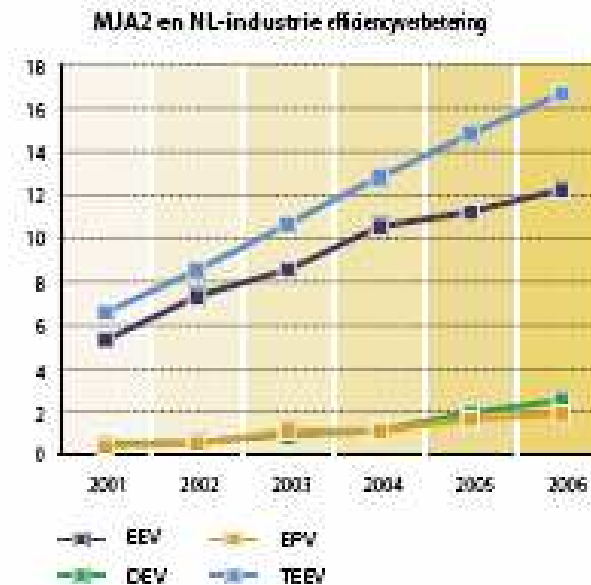




Long Term Agreements: Results

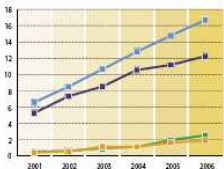
- Energy Efficiency improvement non LTA-2 companies:
 - Autonomously: 0.7 %
 - Policy driven: 0.3 %
 - **Total:** 1.0 %

- Energy Efficiency improvement LTA-2 companies:
 - **Total:** 2.1 %



Long Term Agreements: The near future

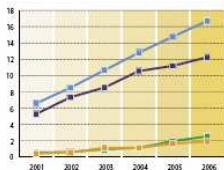
- **New Governmental Policy:** “Cleaner and more Efficient”
 - 2 % energy efficiency improvement per annum
 - 20 % sustainable energy in 2020
 - 30 % carbon dioxide emissions reduction
- **LTA-approach:**
 - Intensification LTA-2 for companies for remaining period (till 2012)
 - Facilitation also for Benchmark companies
 - Instruments made available also for non LTA companies





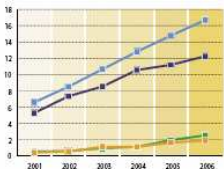
Energy Management: Instruments in LTA2

- **The Energy Management Reference List:**
 - An overview of specifications that shall be met within the organisation (**only 11/2 A4!**)
- **The Energy Management Guideline:**
 - Explanatory notes to the reference list on how the specifications from the reference list can be implemented in practise
- **The Check List**
 - A 'self assessment' tool to see on what level the energy management is implemented within the organisation

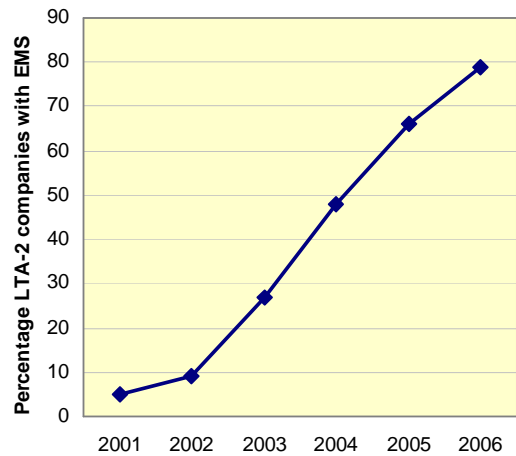


Energy Management: Instruments in LTA2

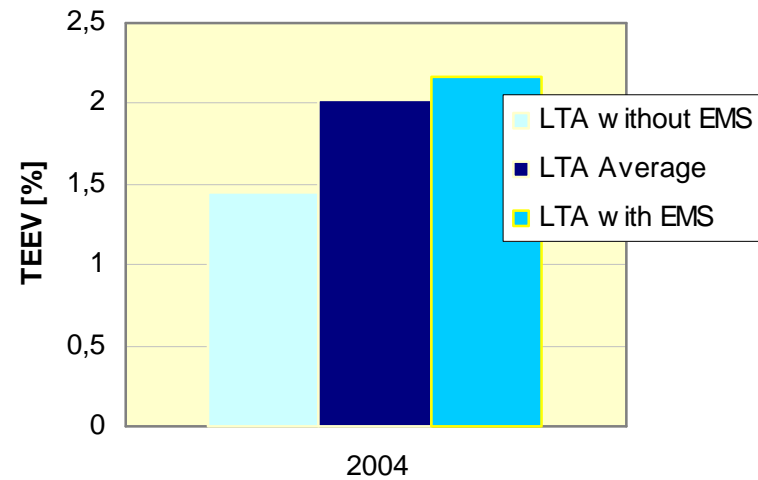
- **Linking list:**
 - Reference list between EMS and other management systems like ISO 9000, ISO 14001 and HACCP
- **Websites for energy management:**
 - General information:
<http://www.senternovem.nl/Energiezorg/english/index.asp>
 - Online support for LTA-companies to implement EMS (in Dutch):
www.mijnenergiezorg.nl



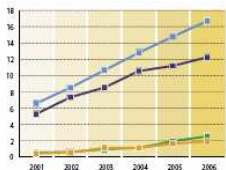
Energy Management: Results



LTA-companies with EMS



Relation EEI and EMS





Energy Management: Practical Case

Sara Lee Douwe Egberts:

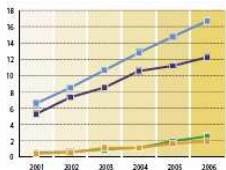
- More details later this afternoon: *"Experience of a multinational company with efficient use of energy, what results they achieved?"*
- By Mr. Bert Daemen of Sara Lee – Douwe Egberts
- *"EMS pays off"*



Energy Management: Developments in LTA-2

Making Energy Management structural:

- After implementation of the system attention for operation of energy management and auditing
- Assistance with Energy Monitoring
- User groups on Energy Management and Good House Keeping

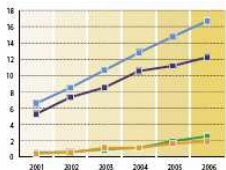




Energy Management: The EU BESS Project

Considering:

- Energy efficiency in the “forgotten group” of **SME’s**
- Reluctance in **SME’s** to focus on energy management and to invest in energy efficiency measures
- Resources in **SME’s** are limited and info about opportunities and possibilities & tools are scattered





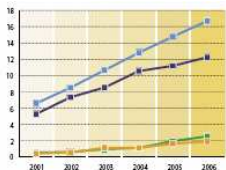
Energy Management: The EU BESS Project

Idea of BESS:

- SMEs can benefit from a European approach and sector information on EE possibilities

Pillars of BESS:

- Benchmarking possibilities to trigger companies
- Implementation of energy management to secure continuous attention for energy improvements.

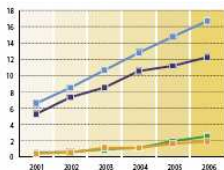
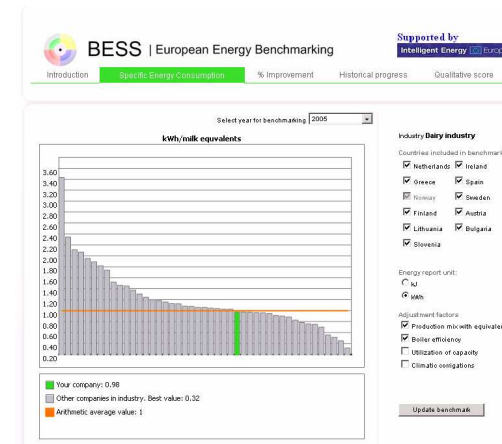




Energy Management: The EU BESS Project

Some results:

- Energy management and energy benchmark applications for SME's
- E-learning tool how to implement Energy Management

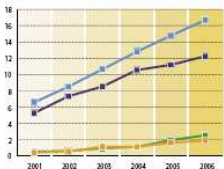




Energy Management: European perspective

- **Development of a European Standard:**
 - Based on Dutch, Irish, Danish and Swedish standards
 - Referred to in EESD and IPPC (Ref. Energy Efficiency)
 - Applicable for all sizes of companies
 - Can be aligned with ISO 14001 and other quality systems
 - **Active mid 1010**

Near future: World Wide ISO standard on Energy Management!



Thank you very much for your attention!

- **More information can be found about:**

- Energie Management: www.senternovem.nl/Energiezorg/english/index.asp
- LTA: www.senternovem.nl/lta
- BESS: www.bess-project.info

All in English!

- **Or contact Ronald Vermeeren:**

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