

material efficiency schools energy saving
consumers industry transport carbon dioxide
wood chips traffic properties public sector
recycling biomass renewable energy solar energy climate change
energy efficiency energy auditing
service sector hydro power wind energy cooperation

New broad energy efficiency agreement scheme – lessons learnt to make it even better than before

eccee 2009 Summer Study, 1–6 June 2009, La Colle sur Loup, France
Ulla Suomi, Motiva Oy, Finland

heat pump environment municipal sector construction



ENERGY EFFICIENCY
agreements

Overview of the presentation

- Energy Conservation Agreements 1997-2007
 - Evaluation
 - Basis for the new agreement scheme
- Energy Efficiency Agreements 2008-2016
 - New scheme
 - Cornerstones and new features in the agreements
- Monitoring and reporting
 - Important elements in the agreements
 - New monitoring system
- Role in national climate and energy strategies
 - Central tool to implement the Energy Services Directive (ESD)

Energy Conservation Agreements 1997-2007

- Covered approx. 60% of Finland's total energy consumption
- Industry, energy-sector, municipalities, property and building sector
 - Energy savings achieved at the end of 2007:
total energy savings 9 TWh/a (electricity 1.8 TWh/a (20%),
heating + fuels 7.2 TWh/a (80%), approx. 3 million tons of CO₂
 - Energy savings achieved represent over 2% of the Finnish total energy consumption 2007 and over 3% of the greenhouse gas emissions
- Other agreement sectors:
 - transport sector, oil heated buildings, housing properties
 - energy savings concerning boiler replacements over 1.1 TWh/a at the end of 2007

Evaluation of the Energy Conservation Agreements 1997-2007

- Objectives:
 - quantify the impact and results of the agreement scheme
 - produce perspectives and suggestions for possible future development
- Summary of the main results and findings for the future development :
 - simple and functional agreements structure and voluntary participation positive
 - the importance of the commitment of the whole organisation essential
 - energy efficiency is a continuous process not a project
 - subsidies for energy audits and energy efficiency investments important carrots
 - image benefits important – more publicity for the scheme
 - concrete numerical targets for energy savings - also including obligations for measures concerning e.g. training or operational models not so easy to define the absolute savings
 - personal expert help/energy advise seen important especially in non-energy intensive areas
 - differences between agreement sectors
 - different kind of needs e.g. in various sized organisations
 - comprehensive monitoring system reveals the results

Energy Efficiency Agreements 2008-2016



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Ministry of Employment and the Economy:

- **Finnish Industries** with own action plans for:
 - **energy intensive industry**, **energy production** (under the scope of emission trading scheme)
 - **sme's in industry**, **private service sector companies**, **energy services companies** (under the scope of Energy Services Directive)
- **Municipal sector** own agreements for:
 - **bigger and smaller municipalities and joint municipalities**
- **Oil sector**
 - Distribution of heating and transport fuels including oil heated buildings

Ministry of Traffic and Communication:

- **Transport sector**
 - Goods transport and logistics 2008-2016, Public transport 2008-2016

Ministry of Environment:

- **Housing properties** Energy Conservation Agreement 2001-2012
 - Negotiations going on to update the agreement on the period 2010-2016 according to the evaluation made for that agreement in 2008

Ministry of Agriculture and Forestry:

- **Agriculture**
 - Negotiation phase for an agreement for farms going on
 - Target to start totally new energy efficiency agreement in autumn 2009

Cornstones and new elements in the new agreement scheme

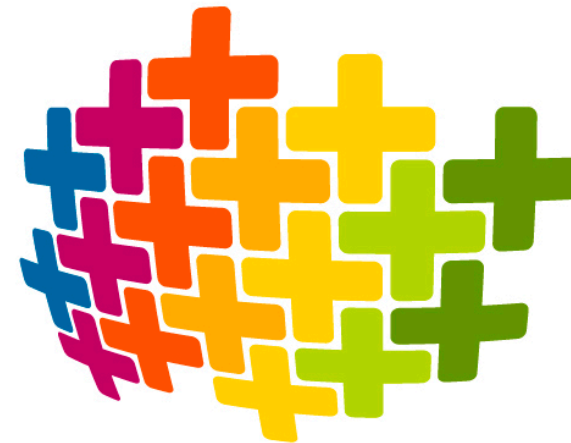


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- Sector specific issues tried to be better taken into account
- Target setting on agreement level and on company/community level
- Continuous improvement the basis for all agreements
- Commitment of the whole organisation to energy efficiency and the organisation of the responsibilities emphasised
- Integration of the energy efficiency as a natural part of the companies and communities management and/or environmental systems
- Procurement processes closely linked to the agreements in all sectors
- Promotion of innovative activity also cited in agreements
- Joining the agreement and implementing it is a way to full fill the energy efficiency obligations connected to the environmental permit
- Energy advise piloted in some agreement areas (sme's) 2009

Own image for agreements 2008-2016

- To be used in general communication related to the Energy Efficiency Agreements
- Companies and communities can use the image in their own communication showing the commitment to the energy efficiency work
- Image can not be used to market separate products
- Own colours for different agreement sectors



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Monitoring and reporting



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- Central role to reveal the results as in the previous scheme
- Development project for the new monitoring system started in 2007
 - Concerns agreements under the responsibility of Ministry of Employment and the Economy
 - Target to save resources both on administration and on organisational level
 - Target to serve at the same time ESD bottom up monitoring requirements
 - More flexible and easier to use – number of reporters increasing
 - Allows more flexibly modifications and sector specific features
 - Enables more easily the generation of feedback and summary data for joined organisations, associations and ministry
 - Development costs to build up the system 2007-2009 over 0,4 million euros – development continues also in year 2010
- New internet based monitoring system taken into use during spring 2009
 - Now including 14 reporting areas, about 1 000 users
 - First results via new system will be analysed during summer and reported in the beginning of autumn 2009 – delay compared to the target for reporting

Annual reporting for organisations joined to the agreements



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- Data collection is divided into quite similar main categories in all agreements on site/community level
- Reported issues reflecting the targets and obligations:
 - **General issues** (name of the organisation, contact information, name and contact information for the appointed person responsible of the energy efficiency agreement)
 - **Energy consumption data** (transferred electronically in some areas from the statistics gathered from other organisations)
 - **Energy efficiency improvement measures and there impacts** (follow-up of the implementation of the measures proposed in the energy audits and other measures which can also be reported)
 - **Continuous improvement** (divided in several subcategories: management systems and the organisations action plan, energy consumption monitoring, training and communication, design and procurement, logistics)
 - Innovation ideas
- Feedback data (to be mainly developed during 2009–2010)

Annual reporting for companies and communities – an example of a reporting window



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Energy efficiency improvement measures

General Energy consumption Continuous improvement Innovation ideas

Yleinen Energiatiedot Energiakatselmukset ja toimenpiteet Jatkuva parantaminen Innovaatioidut

Johtamisjärjestelmät ja tehostamissuunnitelma Energiankulutuksen seuranta Koulutus ja viestintä Suunnittelu ja hankinnat Logistiikka

Management systems and the action plan Energy consumption monitoring Training and communication Design and procurement Logistics

Management system	Status	Certified		
<input type="checkbox"/> ISO14001	<input type="text"/>	<input type="checkbox"/>	Is energy efficiency integrated to the management system?	<input type="text"/>
<input type="checkbox"/> EMAS	<input type="text"/>	<input type="checkbox"/>	Is Energy Efficiency System (EES) in use in the company?	<input type="text"/>
<input type="checkbox"/> ISO9001	<input type="text"/>	<input type="checkbox"/>	Is the promotion of the renewables included in the management system ?	<input type="text"/>
<input type="checkbox"/> Not in use				
<input type="checkbox"/> Other, what?				
<input type="text"/>	<input type="text"/>	<input type="checkbox"/>		

The site's action plan to improve the energy efficiency

The action plan is completed (month+year)

The plan is updated within the follow up year

The responsibilities for the energy efficiency issues are appointed

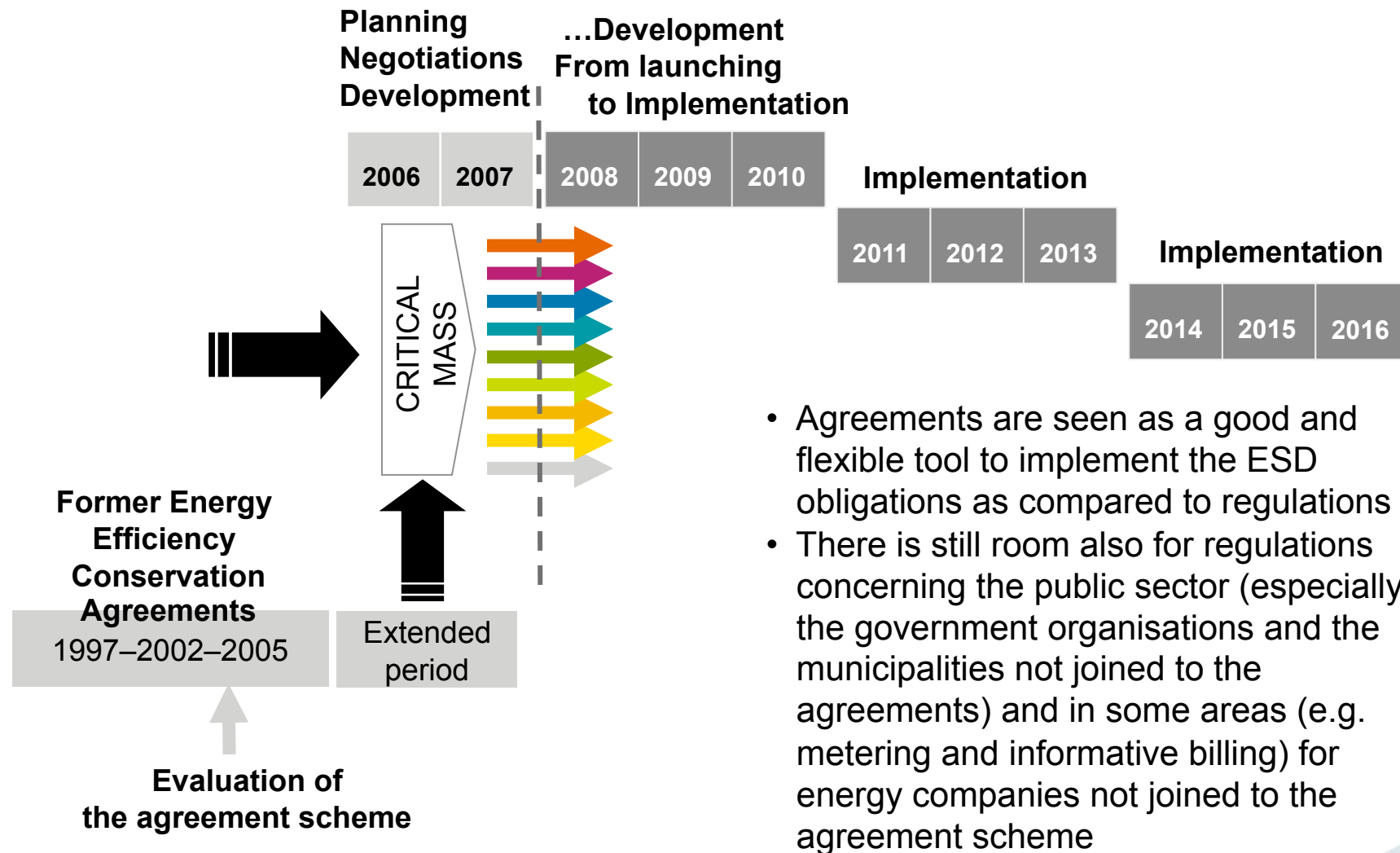
Company level

Site level

Energy Efficiency Agreements 2008–2016 play a central role in ESD implementation



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Role in the national climate and energy strategies

- Energy Efficiency Agreements (Voluntary Agreements) have been part of all national energy policy and strategy papers since 1997
- Also mentioned in the new climate and energy strategy for Finland submitted by the government to the parliament in November 2008
 - Energy Efficiency committee was established 2008 to define concrete energy efficiency measures in different sectors to find out the measures to attain the ambitious targets set in the strategy. The committee will report its results in June – agreements will be among the forwarded measures even many other, also new measures, are needed.
- Monitoring of the results has been crucial for credibility and commitment potential both for agreement scheme as well as for energy audit scheme connected closely to the agreements

More information
www.motiva.fi/en

Thank You 😊