



Session E: Demand-side Management & Culture

Some notes on the Directive 2006/32/EC on energy end-use efficiency and energy services

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Energy Service Directive – Intention

Directive 2006/32/EC of the European Parliament and of the Council on energy end-use efficiency and energy services

- **Entry into force:** 17 May 2006
- **Period:** 1 January 08 – 31 December 2016
- **Purpose:** enhancing the **cost-effective improvement of energy end-use efficiency** in the Member States
- **Target:** **9 %** of end-energy consumption by 2016
- **Energy:** **end-energy** - all energy sources, also renewable energy sources

Overview

1. ESD- Intention

2. ESD- Example

3. ESD- Aspects

4. Conclusion

Energy Service Directive – Intention

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1. ESD- Intention

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- **Target groups:**
 - providers of energy efficiency improvement measures
 - energy distributors
 - Distribution system operators
 - retail sales companies
 - final customers (not in Directive 2003/87/EC)
 - armed forces

- **Implementation:** by measures as **white certificates, monetary funds, voluntary agreements...**

- **Monitoring:** **harmonised model** (bottom-up)
that will be presented by the Commission before January 2008

Energy Service Directive – (Upper) Austria

Overview

1. ESD- Intention

2. ESD- Example

3. ESD- Aspects

4. Conclusion

➤ **Energie Star 2010 –Programm**

- **Aim:** Implementation of ESD in Upper Austria
- **Participants:** 3 energy retail sales companies (electricity & gas)

- **Task of Energy Institute:** Collection & quantification of energy efficiency measures taken in 2006

➤ **Implementation of ESD in Austria**

- **Target:** 22.3 TWh by end of 2016
- **Method:** Voluntary agreements

- **Task of Energy Institute:** Collection & quantification of energy efficiency measures taken in Austria by energy companies including early actions

Energy Service Directive - Aspects

Overview

1. ESD- Intention

➤ Reasons for **confusion** are the annexes I-IV of ESD

➤ **Intentions** of ESD are not clear

2. ESD- Example

➤ **Timing** of ESD is not constructive

3. ESD- Aspects

➤ **Annex I: *Methodology for calculating the national indicative energy savings target***

4. Conclusion

➤ Early action not earlier than 1995 or 1991 if justifiable !?

➤ Energy savings must be verifiable/measurable/estimable

➤ What about information campaigns?

➤ What about energy audits?

Energy Service Directive - Aspects

Overview

1. ESD- Intention

➤ **Annex II:** *Energy content of selected fuels for end-use (conversion table)*

➤ **Footnote (3):** For conversion of electricity savings a co-efficient of 2,5 or a different coefficient is applicable.

2. ESD- Example

➤ **Problem:** Any other co-efficient than 1 brings primary energy production into the field.

3. ESD- Aspects

➤ **Annex III:** *Indicative list of examples of eligible energy efficiency improvement measures*

4. Conclusion

➤ (g) domestic generation of **renewable energy sources**, whereby the amount of purchased energy is reduced

- no direct connection to energy efficiency

➤ (l) high-efficiency cogeneration (e.g. combined heat and power appliances

- again a reference to primary energy production

Energy Service Directive - Aspects

Overview

1. ESD-
Intention
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- Ad **Annex III**: *Indicative list of examples of eligible energy efficiency improvement measures*
 - **Renewable energy sources:**
 - Example: Solar energy
 - Installing solar thermal power plant (STPP) is **not an energy efficiency measure!** Just another form of energy production.
 - Energy efficiency can only be enhanced when STPP installation is combined with f.e. building isolation, ...

Energy Service Directive - Aspects

Overview

1. ESD- Intention

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- **Annex IV:** *General framework for measurement and verification of energy savings*
 - According to ESD the Commission will develop a harmonised bottom-up model before January 2008
 - EMEEES (“Evaluation and Monitoring for the EU Directive on Energy End-Use Efficiency and Energy Services”)
 - EU-funded project that started in November 2006
 - EMEEES assists Commission in developing harmonised calculation methods
 - Results shall be presented in May 2008
 - Interesting for EEAP 2011 not for now

Energy Service Directive – Open Questions & Conclusion

Overview

1. ESD- Intention

- How to agree on voluntary agreements without knowing how much an energy efficiency measure is worth?

2. ESD- Example

- Are savings in primary energy creditable, if yes - all of them?

3. ESD- Aspects

- How to deal with renewable energy sources and their role in reaching energy efficiency targets?

4. Conclusion

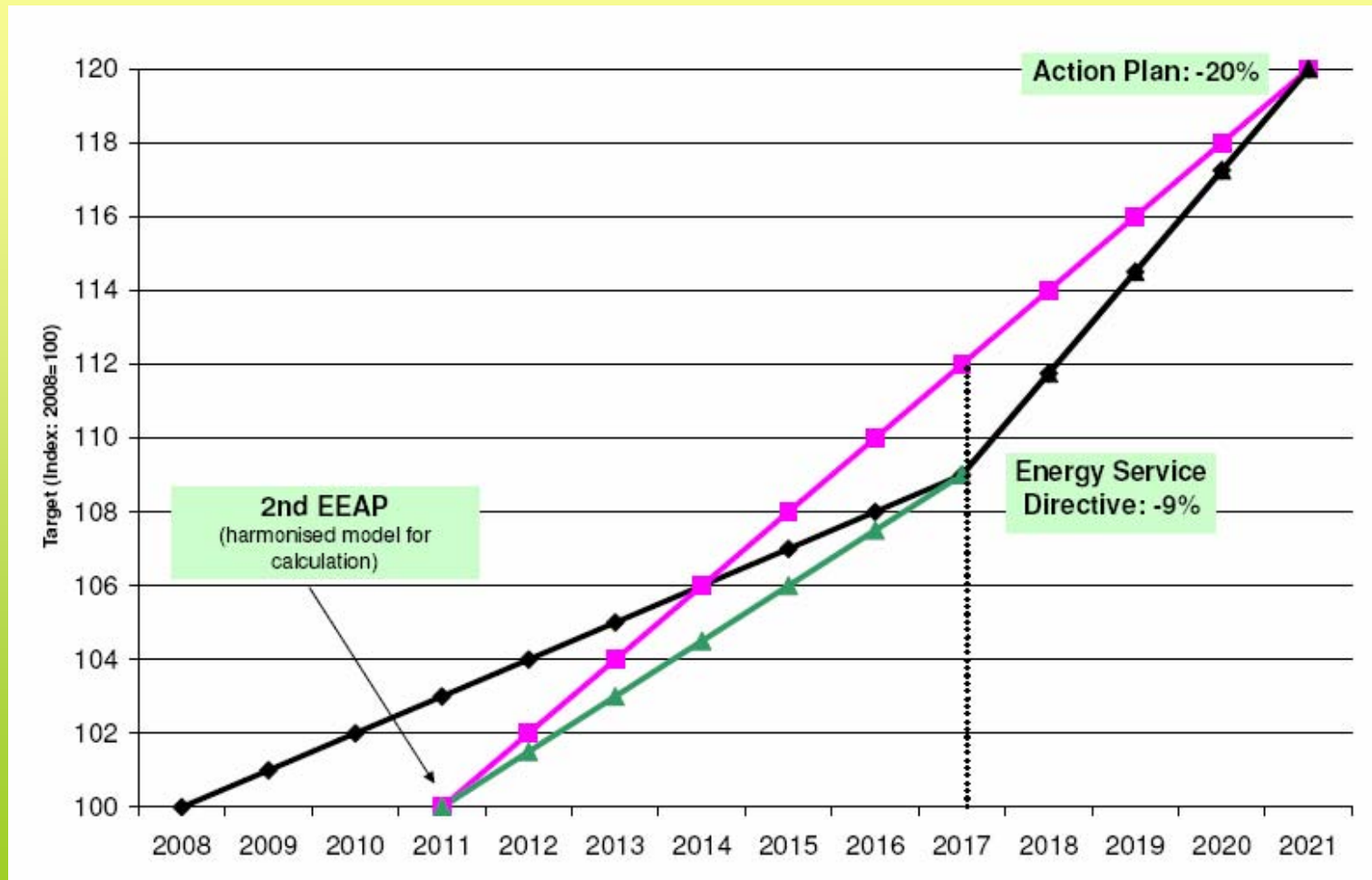
- What about soft measures? Which part do they play in energy efficiency policy if they are not quantifiable?

Energy Service Directive – Open Questions & Conclusion

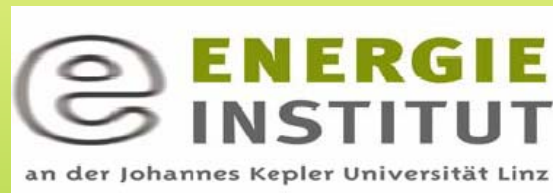
Overview

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➤ ESD and Action Plan: **Failure of ESD = Failure of Action Plan !?**



**Thank you for your
attention!**



Energy Service Directive - Aspects

Overview

1. ESD- Intention

- **Example:** Methodology developed for quantifying energy audits in Upper Austria

2. ESD- Example

- **3** types of audits

3. ESD- Aspects

	Duration	Where? & How?
<i>Low quality</i>	< 30 min	phone, e-mail, ...
<i>Medium quality</i>	30 – 60 min	with client personally
<i>High quality</i>	> 60 min	with client personally & at clients dwelling

4. Conclusion

- Number & type of audits were collected and quantified using **ESCAPE** (Energy Savings Calculator and Program Evaluator)
- ESCAPE was developed at the Energy Institute
 - Allows fast & simple calculation of energy savings of specific energy efficiency measures

Energy Service Directive - Aspects

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Energy Audits

Programm - Name & short description:	<input type="text" value="Energy audits in households in Linz - replacement of white ware"/>		<input type="button" value="RESET"/>
Company ID & reporting year:	<input type="text" value="-- - 06"/>	Project ID:	<input type="text" value="0001"/>
Energy source targeted by audit:	<input type="text" value="Electricity & Heat"/>		
Target group:	<input type="text" value="Private Households in detached houses"/>		
Intensity of audit:	<input type="text" value="high quality"/>		
Marketing measure(s):	<input type="text" value="credits, direct installation"/>		
Marketing instrument(s):	<input type="text" value="audit, personal contact"/>		
Number of audits:	<input type="text" value="130"/>	Audits	
Lifetime of measure:	<input type="text" value="12"/>	Year(s)	
Costs of audit (total):	<input type="text" value="unavailable"/>	€	
Average consumption of energy source targeted by audit per household:	<input type="text" value=""/>	kwh	Expected yearly energy savings: <input type="text" value=""/>
Data sources:	<input type="text" value="Data was collected by energy consultants of company"/>		

Estimated TOTAL savings of energy audit(s):	<input type="text" value="2,340,000"/>	kWh
Estimated YEARLY savings of energy audit(s):	<input type="text" value="234,000"/>	kWh