

Article 7 EED

Experiences and challenges

Workshop on Articles 7, 8 and 16 of the European Union Energy Efficiency Directive (EED) with focus on industry



UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION

Austrian Energy Agency (AEA)

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Overview Article 7

Article 7 triggers final energy savings

Energy efficiency obligation schemes for energy distributors and/or energy providers

or

Alternative policy measures incl. energy efficiency national fund (Article 20)

- Target equivalent to **new savings of 1,5% each year** of the annual energy sales to final customers
- Transport can be opted out for the target calculation
- Measures must be realised among **final customers**
- Expressed in final or primary energy



Some further provisions

Flexibility to reach the target (max. 25%)

- Increasing target over time (from 1% 2014 to 1,5% in 2020)
- Exclude energy sales volumes to ETS sectors
- Allow savings in primary energy to be counted
- Take into account early actions (from 1.1.2009)

Optional provisions

- Include social aims
- Count savings from third parties

Publish energy savings annually



The alternatives to obligation schemes

Equivalence to 1,5% savings target

Examples

- Taxes
- Financing schemes
- Regulations
- Voluntary agreements
- Standards and norms
- Labeling schemes
- Training and education
- Energy efficiency national fund (Article 20)

Most EU Member States use mixes of obligation schemes and alternatives.



Article 7 and Annex V – main principles

1. Savings have to be additional
2. Savings have to be demonstrably material
3. Double counting has to be avoided
4. Independence of monitoring and verification
5. Lifetime of savings has to be taken into account
6. Penalties for non-compliance



Activities must be **demonstrably material** to the achievement of the **additional savings**

- MS **must show** (i.e. demonstrably) that a certain party has contributed (i.e. material) to a specific action/energy efficiency measures
- **Additionality:** Savings have to go beyond minimum requirements in EU regulations

Solutions in Member States:

- Subsidies paid out only upon presenting an invoice
- Agreement of collaboration between provider and end-user
- The contribution is individualized and intended for the final customer
- Calculation of savings: Baseline setting to reflect additionality



Demonstrably material and additionality

Central question to ask:

What measures and savings would have happened anyway?



Demonstrably material in the **French** Energy Efficiency Obligation Scheme

- The **bill** serves as proof that an energy efficiency measure was implemented.
- The obligated party should have had a "**leading role**" in the delivery of the measure, i.e. must have contributed to the energy saving (directly or indirectly).
- The incentives that can count as a contribution include financial incentives, advice and extended guarantees.
- The contribution to the energy saving must have been **individualised** and intended for the final consumer and the contribution must have been made **before execution** of the energy efficiency measure.
- The "leading role" played by the obligated party must be documented in writing by certificates from installers and consumers.



Double counting

Member States shall ensure that **no double counting of energy savings** is made, when the impact of policy measures or individual actions overlaps

- Double counting can occur within one policy measure (e.g. boiler replacement is being subsidized by different funding bodies)
- Double counting can occur between different policy measures (e.g. boiler is replaced after energy audit was carried out – where to attribute the savings?)



Double counting – what helps?

Rules of policy schemes

- On eligibility
- On required data

Data collection on implemented projects and funding institutions – this can be a challenge

Administration of this data in central database reduces the risk of double counting



Croatia developed a system for monitoring, measuring and verification of energy savings



- The system is used by all governmental bodies, companies that implement energy efficiency service contracts and bodies that co-finance energy efficiency measures.
- The monitoring and verification platform is a web tool that is administered by one national administrator.
- Double counting is avoided through a bylaw which lays down who is responsible for monitoring and verification, who has to enter data, what information is needed, when and how the data on energy savings shall be entered into the platform and how these savings are attributed to the implementing parties.
- The information submitted is double checked by an administrator.
- The platform is equipped with an “alarm system”, reporting potential risk of double counting of measures or individual actions.



Monitoring and verification | Key issues

- Independent verification of a statistically significant proportion and representative sample
- Ensure that quality standards for products, services and installation of measures are maintained
- Administrators
Energy agency | Ministry | Regulator | Third party (non-governmental)



Monitoring and verification | Success factors

- Standardised report procedures and reporting templates
- Clear definition of eligible measures
- Clear definition of evaluation and documentation requirements
- Use default evaluation values for standard measures (especially in households) and use the deemed savings approach in all possible cases
- Performing checks on paper files instead of on-site as much as possible
- Introduction of a paperless process
- Automation of the monitoring process (e.g. use of databases)
- Clear and transparent rules adequately communicated to all actors



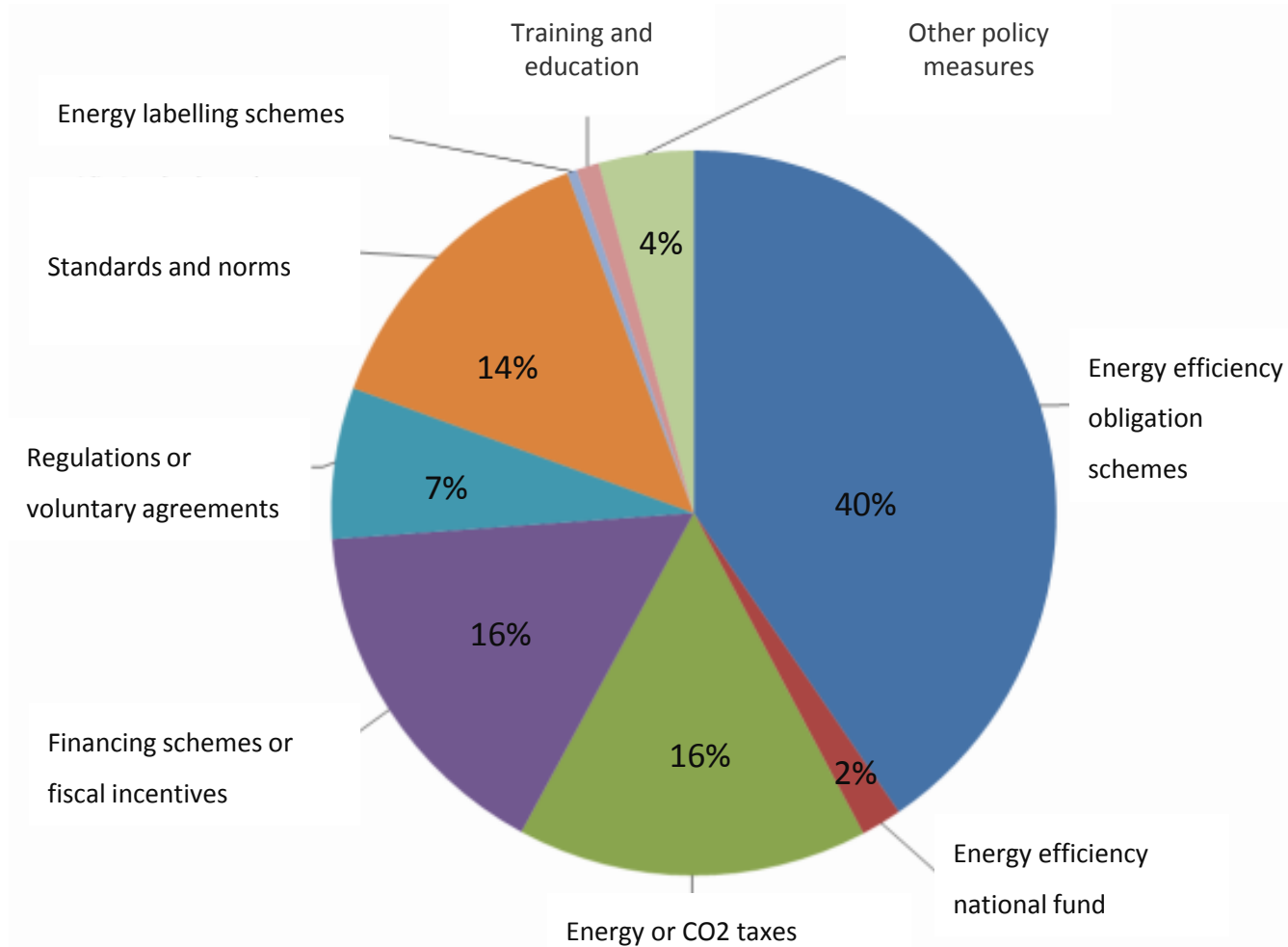
Implementation of Article 7 in Member States

Implementation of Article 7 in EU Member States



- **EEO scheme only**
4 countries: Bulgaria, Denmark, Luxembourg, Poland
- **Combination of EEO schemes & alternative measures**
14 countries: Austria, Belgium, Croatia, Estonia, France, Greece, Ireland, Italy, Latvia, Lithuania, Malta, Slovenia, Spain, UK
- **Alternative measures**
9 countries: Czech Rep., Cyprus, Finland, Germany, Netherlands, Portugal, Romania, Slovakia, Sweden

Variety of different categories of measures for Article 7 – Member States' plans



Overview of alternative measures in some Member States

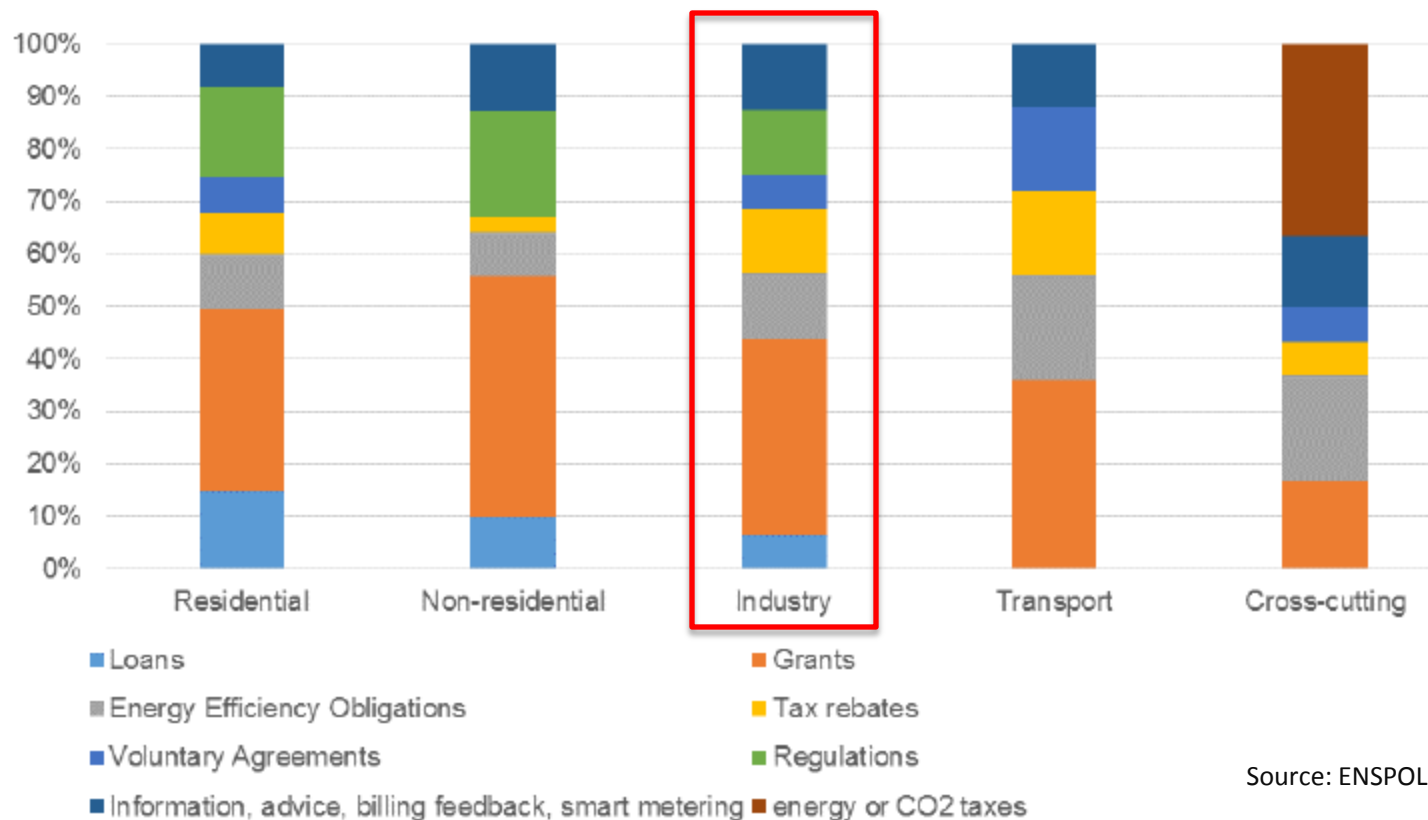
	EEOs	Energy/ CO ₂ taxes	Subsidies, grants & loans	Fiscal (tax rebate)	EE Fund	Regulation & standards	Information , education & Training	Vol. Agreement	Other measures	Sum of alternatives
Austria	New	2	5						1	8
Italy	Existing		1	1						2
France	Existing	2	2	1	1		1			7
Germany		4	7			3	2			16
Greece			14	1		2	1			18
Sweden		1								1
Spain	New	1	6		1		2			10
Netherlands		2	8	4		3	4	10		30
UK	Existing	2	6			7		2		17

Source: ENSPOL

- Heavy reliance on alternative measures in Article 7 implementation
- Challenge of overlaps



Types of Article 7 policies per sector



Source: ENSPOL



Policy choices in Member States

- Alternative measures rather target higher cost measures (e.g. deep renovations, solid wall insulations)
- EEOS and voluntary agreements rather target low-cost measures
- EEOS are comparable to subsidies in their effect
- Taxes, information programs and standards and norms complement other policies
- Purchase subsidies are used a lot and combined with other policies
- Regulations are combined with other instrument types
- In some Member States standards and norms go beyond EU requirements and can be used for Article 7



Importance of EEOS in EED implementation in Member States

“Energy Efficiency Obligation Schemes (EEOS) are the **most important type of policy measure** adopted by MS **in terms of energy savings** – 40% of the expected cumulative energy savings across all MS are expected to be generated from the implementation of EEOS, far more than any other type of policy measure”.

[Ricardo AEA et al., February 2015 – DG ENER]

Reasons:

- Uncertainty in achieving targets with existing instruments
- New realities in energy markets difficult to capture with existing schemes
- Lack of public finances, leaving more power to the market to self-finance



Learnings from energy efficiency obligation schemes (EEOS)

- Now an important instrument in the European policy mix
- Flexible instrument: Adaptability to national circumstances and policy priorities
- Differences in schemes: e.g. number and type of obligated parties, eligible sectors/projects, monitoring, fund raising mechanism, metrics for target setting...
- Important: Learning period: start with low target, and growing targets over the years
- EEO help to raise the profile of energy efficiency
- Helps to realise cost-effective measures → what happens when low-hanging fruits are harvested?
- Can EEOS mobilise investment in deep renovations?
- Impacts on energy process often difficult to determine (lack of transparency)



Examples from Member States

White certificate scheme in Italy

- Scheme was introduced in 2004 and adapted a number of times since then (learnings)
- White certificates (tradable) are issued by the authority for implemented energy efficiency measures/projects
- Obligated parties: Electricity and gas distributors having more than 50,000 final customers
- Obligated parties have to deliver an amount of energy savings/certificates each year from measures proportional to the energy they distribute



White certificate scheme in Italy

Parties eligible to submit projects for accruing white certificates are:

- Electricity and gas distributors with more than 50,000 final customers (“obligated parties”) and their controlled companies
- Non-obligated energy distributors
- Companies operating in the sector of energy services (ESCOs)
- Companies or organisations having an energy manager or an ISO 50001 certified energy management system in place.



White certificate scheme in Italy

In 2015 64% of White Certificates were issued in the industrial sector

- 51% Industrial Heat: Generation or heat recovery for cooling, drying, burning, melting
- 11% Industrial Efficiency: Efficient dry systems (motors, etc.), automation and power factor measures
- 5% Industrial Generation: Electricity generation from renewable sources, heat recovery or cogeneration
- 33% Other than the above, for the energy optimisation of production processes and plant layout designed to achieve lasting energy consumption reduction normalised by quantity and quality of production



Energy efficiency agreements in Finland

INDUSTRIES ENERGY EFFICIENCY AGREEMENT

INDUSTRY

Energy Intensive Industry | Food and Drink Industry | Chemical Industry | Technology Industry | Wood Product Industry | Industry - General

ENERGY SECTOR

Energy Production | Energy Services

SERVICE SECTOR

Commerce Sector | Hotel and Restaurant Sector | Motor Trades & Repairs | Services – General

- Long tradition in Finland – 1st scheme started in 1997
- Sectoral voluntary agreements – no obligation
- Seen as a flexible tool and as an alternative and complementary instrument for regulations and taxes
- Target: to improve energy efficiency and save energy costs in companies
- Value added: fulfill energy efficiency requirements by environmental authorities



Energy efficiency agreements in Finland

Energy audits and energy efficiency investments (including conventional technologies) **are subsidised by the Government**

Target: introduce **continuous improvement** in energy efficiency in companies → increases motivation of companies to join the agreements

To achieve the quantitative savings targets, the participants have to:

- Organize and **plan** the implementation of measures
- Analyse and detect potentials to increase energy efficiency
- Implement cost-effective energy efficiency improvement measures
- Take energy efficiency into consideration in planning and purchasing
- Train the staff and provide communication on energy efficiency matters
- Report annually



Conclusions – Article 7

- Different implementation options but uniform rules
- Multiple challenges with regards to technical and monitoring and verification requirements
- Use existing experiences from EU Member States – no need to reinvent the wheel



Further information on Article 7 implementation in Member States

- Knowledge sharing platform triggered by the ENSPOL project
www.article7eed.eu/
- Notifications on the website of DG ENER
<https://ec.europa.eu/energy/en/topics/energy-efficiency-directive/obligation-schemes-and-alternative-measures>
- Study of the European Parliamentary Research Service
[www.europarl.europa.eu/RegData/etudes/STUD/2016/579327/EPRS_STU\(2016\)579327_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/STUD/2016/579327/EPRS_STU(2016)579327_EN.pdf)
- Study commissioned by the European Commission
www.cedelft.eu/publicatie/study_evaluating_the_national_policy_measures_and_methodologies_to_implement_article_7_of_the_energy_efficiency_directive/1620
- Study by the Coalition for Energy Savings
<http://energycoalition.eu/sites/default/files/20150520%20Coalition%20for%20Energy%20Savings%20-%20Article%205%20analysis%20Report.pdf>



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