



European
Commission

Joint Research Centre

the European Commission's in-house science service



ec.europa.eu/jrc

Concerted Action Meeting on the EED CT1

Evaluation of NEEAPs

Marina Economidou

Renewables and Energy Efficiency Unit
Institute of Energy and Transport

Luxembourg
21/10/2015

Joint
Research
Centre

National Energy Efficiency Action Plans 2014

POLICY MEASURES

EE TARGETS

2020 targets
(Art. 3)

Additional
targets (e.g.
specific sectors)

Primary & final
energy savings
under the ESD
and EED

CROSS SECTORAL

Energy
Efficiency
Obligation
Scheme (Art. 7)

Energy audits &
management
systems (Art. 8)

Metering &
billing (Art. 9-
11)

Consumer
information &
training (Art.
12&17)

Energy Services
(Art. 18)

Other horizontal
measures (Art.
19-20)

BUILDING SECTOR

Renovation
Strategy (Art.4)

Other building-
related
measures

PUBLIC SECTOR

Central
government
(Art. 5)

Other public
buildings (Art.
5)

Public
procurement
(Art. 6)

INDUSTRY TRANSPORT

Measures
& savings in
industry &
transport
sectors

ENERGY SUPPLY

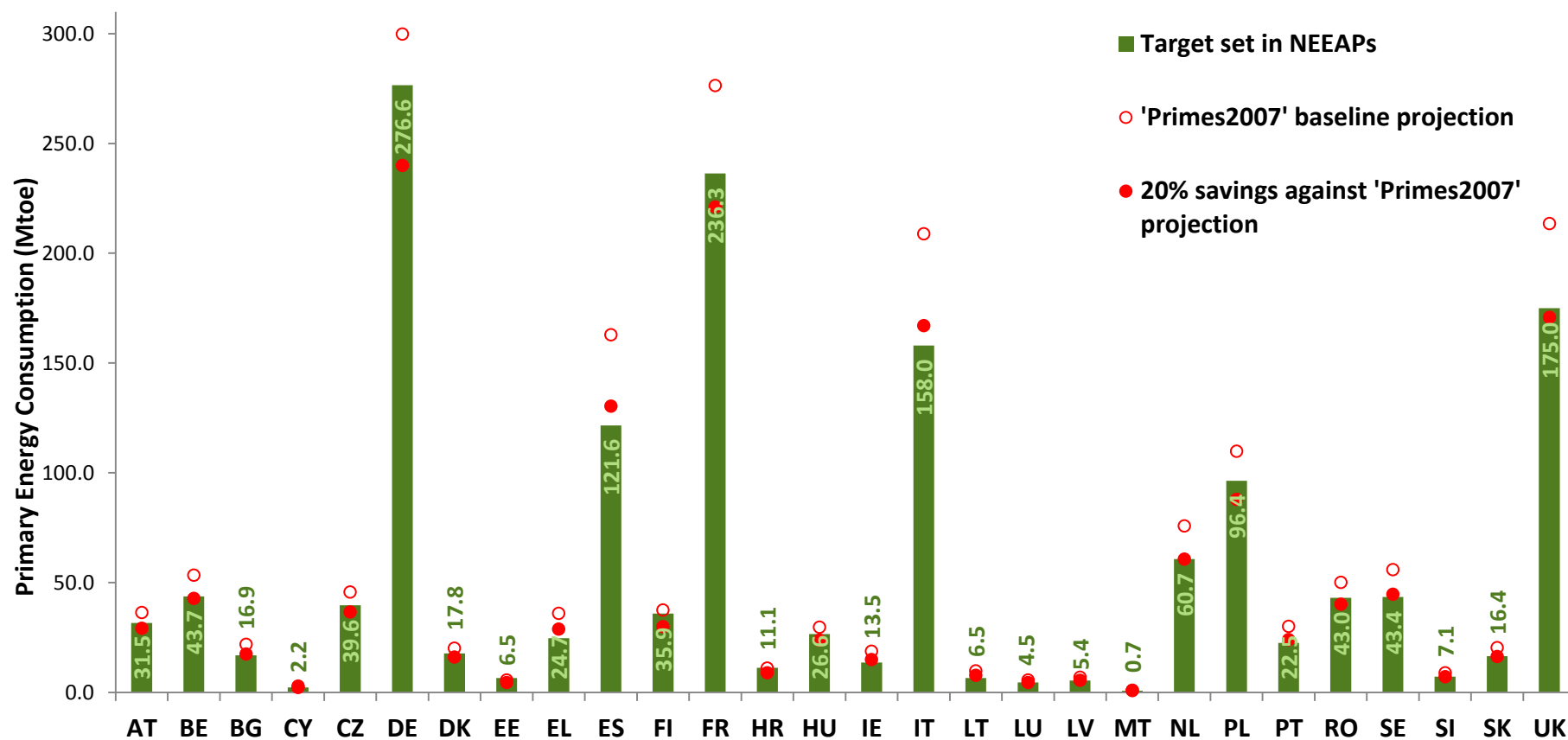
Promotion of
efficient heating
& cooling (Art.
14)

Metering &
billing (Art. 9-
11)

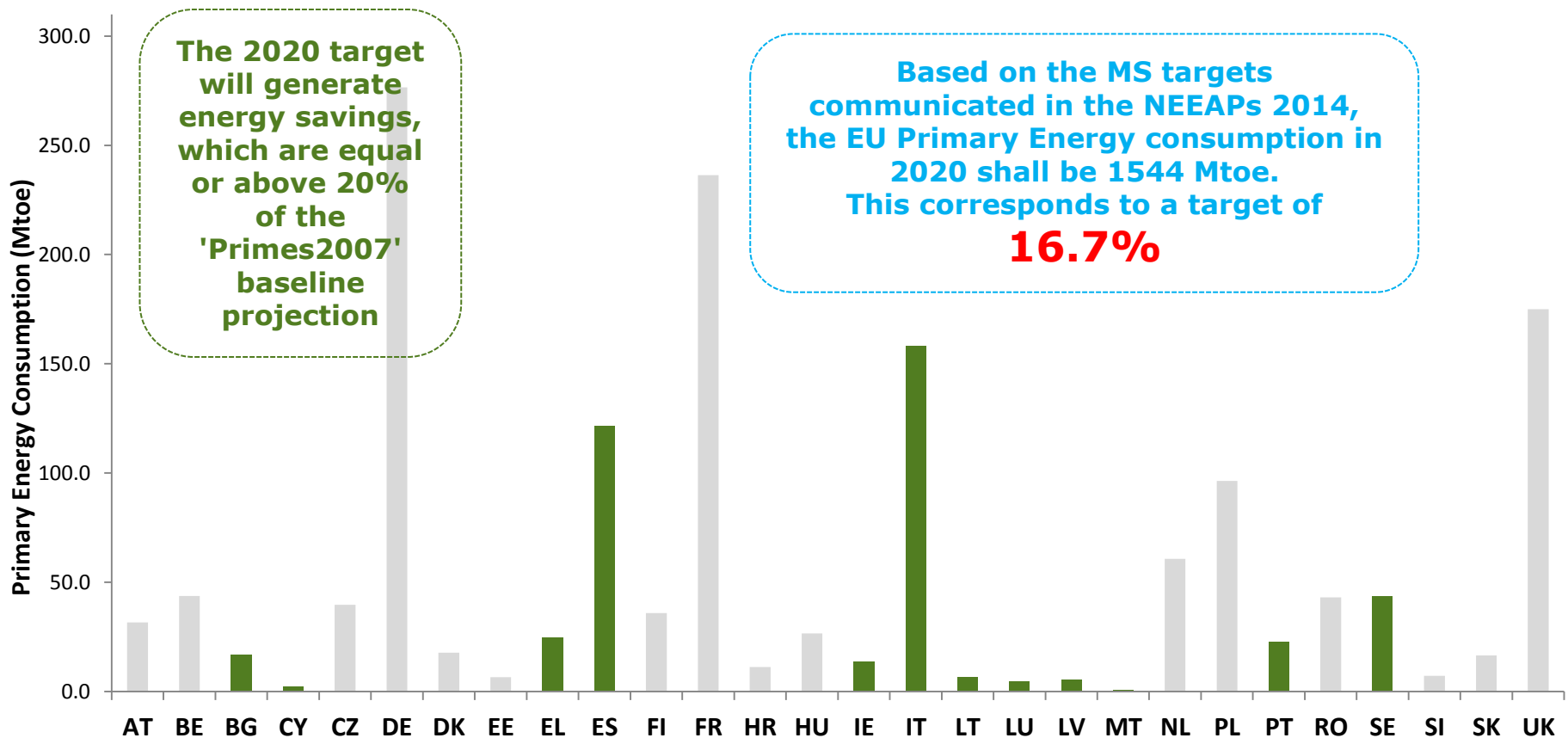
Energy
transformation,
transmission,
distribution and
demand
response (Art.
15)

**Most Member States have used this
template for their NEEAP reports -
exceptions include Germany, France
and Portugal**


Energy Efficiency Targets



Energy Efficiency Targets



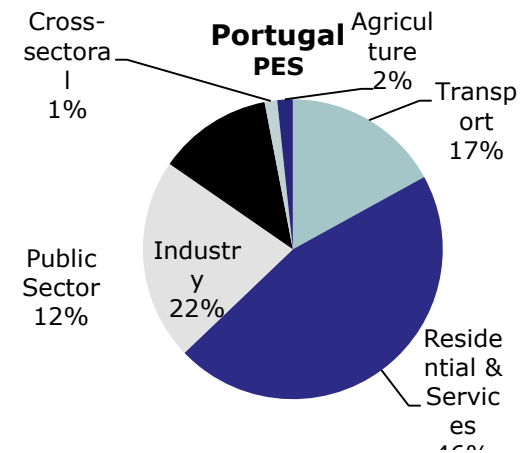
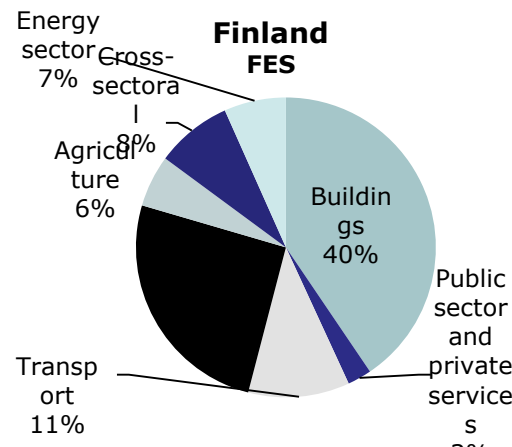
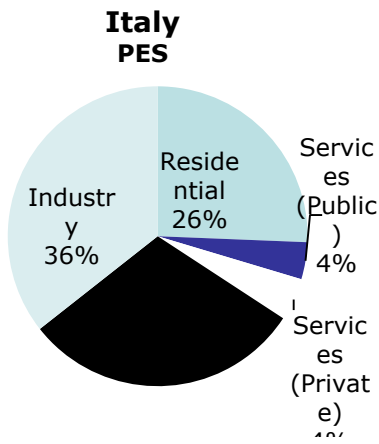
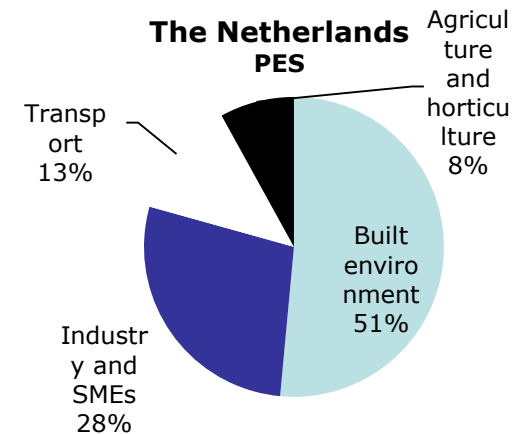
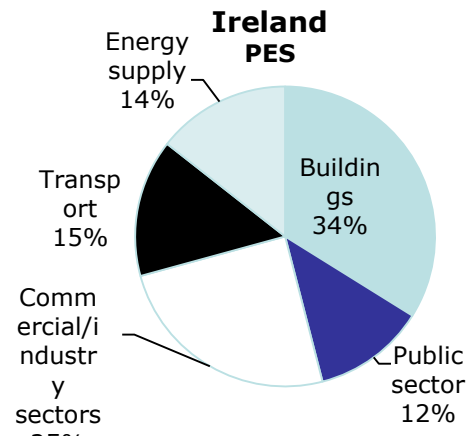
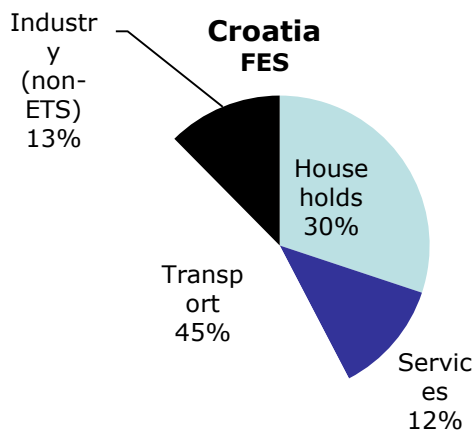
Energy Efficiency Targets

 Included in NEEAP 2014
  Not included in NEEAP 2014
  Translated NEEAP not available

	AT	BE	BG	CY	CZ	DE	DK	EE	EL	ES	FI	FR	HR	HU	IE	IT	LT	LU	LV	MT	NL	PL	PT	RO	SE	SI	SK	UK
PEC																												
PES																												
BAU-P																												
FEC																												
FES																												
BAU-F																												
EI																												

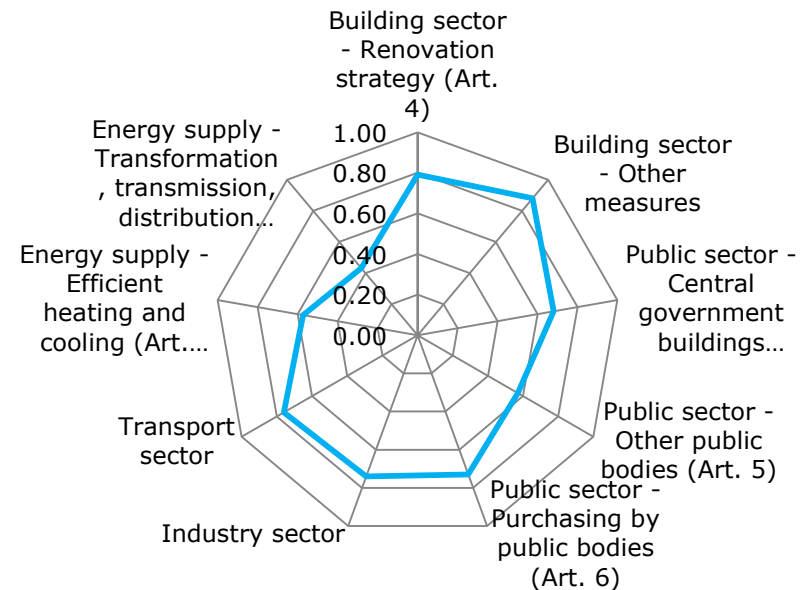
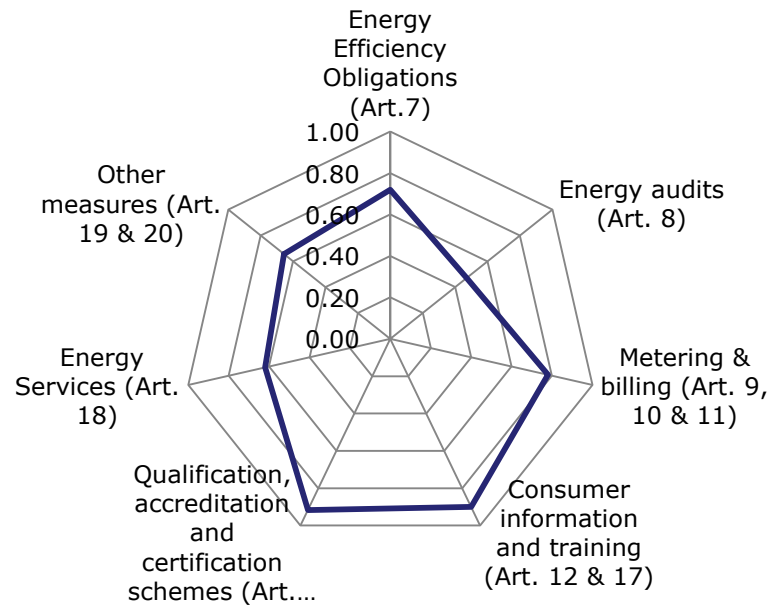
PEC: Primary energy consumption, PES: Primary Energy Savings, FEC: Final Energy Consumption, FES: Final Energy Savings, EI: Energy Intensity, BAU: Baseline

2020 energy savings by sector (examples)



Energy Efficiency Measures

Compulsory element check based on template adopted by the EC
2013/242/EU



Do we know the savings by measure?

	AT	BE	BG	CY	CZ	DE	DK	EE	EL	ES	FI	FR	HR	HU
Breakdown of Art.3 savings by measure	No	Only by groups of measures	Only by groups of measures	Only by groups of measures	Yes	No	No	No	No		Yes	Only for major measures	Yes	
Breakdown of Article7 savings by measure	Partial *	Yes	Partial	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	
	IE	IT	LT	LU	LV	MT	NL	PL	PT	RO	SE	SI	SK	UK
Breakdown of Art.3 savings by measure	Yes	Yes***		Yes	No	Partial	No	No	Yes		No	No	Yes	No**
Breakdown of Article7 savings by measure	Yes	Yes		No	Only for some measures	Yes	No	No	Yes		Partial	Partial	Yes	Yes

Notes:

Partial The savings are available for some and not all measures

* All Article7 measures except the obligation scheme

** The savings of the measures contributing to the ESD target for the year 2020 are provided instead.

*** For transport-related measures, the savings are reported for groups of measures.

Policy matrices (examples)

	AUSTRIA					
	RES	SER	IND	PU	TRA	SUP
Regulatory						
Financial & fiscal						
Information & awareness						
Qualification, training & QA						
Market-based						
Voluntary agreements						
Infrastr. investments						
Other						

	CZECH REPUBLIC					
	RES	SER	IND	PU	TRA	SUP
Regulatory						
Financial & fiscal						
Information & awareness						
Qualification, training & QA						
Market-based						
Voluntary agreements						
Infrastr. Investments						
Other						

	BULGARIA					
	RES	SER	IND	PU	TRA	SUP

	GERMANY					
	RES	SER	IND	PU	TRA	SUP

Reporting of policy measures (examples)

	General information	Implementation details	Achieved/ expected impact	Calculation methodology & assumptions	Monitoring & verification
AT	Category; Duration; Target groups; Measure description; Further information (Web-page)	Geographical scope; Budget and financial resources	Final energy savings per year; Cumulative final energy savings (2014-2020)	Method, Materiality, Additionality, Double-counting	
HR	Category; Timeframe; Objective/outline; Target sector	Implementing authority	Expected cumulative savings (2014-2016); Expected cumulative savings (2014-2020)	Method for calculating energy savings; Calculation methodology for energy savings; Life cycle of the measure; Assumptions for estimating savings	Monitoring and verification protocols; Revision protocols; Authorities supervising the implementation
FI	Timeline; Target groups; Affected forms of energy	Financing and Budget; Description of measure; Parties responsible for the implementation	Energy savings for 2010, 2016 and 2020	Assessment of impacts on energy consumption incl. calculation, premises & assumption, baseline data	Impact Assessment
IE	Category; Timeframe; Objective/outline; Aim/brief description; Target end use; Target group	List and description of energy saving actions substantiating the measure; Budget and financial resource; Implementing body	Savings achieved in 2012; Expected energy savings in 2016; Expected impact on energy savings in 2020	Method for monitoring/measuring the resulting savings; Assumptions; Overlaps, multiplication effect, synergy	Monitoring authority

Calculation methodology & assumptions

- Various calculation methodologies have been reported (e.g. deemed savings, engineering estimates) with varying degree of detail.
- Information with regards to additionality, double-counting etc. is sometimes specified (e.g. Austria, Czech Republic) but generally lacking
- Baselines and assumptions are not always clear
- Impact of energy saving measures is mostly expressed in terms of energy savings, CO₂ savings or impact in terms of created jobs is rare

Monitoring & verification

- In accordance with Annex V(1) EED, the following calculation methods may be used for Art. 7 measures & Art. 20(6):
 - a. Deemed savings (ex-ante)
 - b. Metered savings (ex-post)
 - c. Scaled savings (engineering estimates)
 - d. Surveyed savings
- References to the specific measurement methods are made, but in many cases no or little details on methodology for calculating generated savings, baselines used and independent verification of the savings are given

Methods for calculating impact of Art. 7 measures

	AT	BE	BG	CY	CZ	DE	DK	EE	EL	ES	FI	FR	HR	HU	IE	IT	LT	LU	LV	MT	NL	PL	PT	RO	SE	SI	SK	UK
Deemed savings																												
Metered savings																												
Scaled savings																												
Surveyed savings																												

Based on RICARDO report "Study evaluating the national policy measures and methodologies to implement Article 7 of the Energy Efficiency Directive"

Observations & recommendations

- Effects of free riders and rebound effects are not clearly stipulated
- Significant differences observed in engineering and deemed savings estimates by MSs
- Energy savings generated by each measure is not always quantified
- Clearer definition of additionality is required and distinction between materiality and additionality
- More guidance is needed in order to allow establishing a level playing field in relation to:
 - how policy measures are to be reported
 - how energy savings generated by measures have to be calculated

Thank you



iet.jrc.ec.europa.eu/energyefficiency/
marina.economidou@ec.europa.eu