



19-01-2015

Technical Workshop on Climate-Energy Policy Approaches for the Industrial Sector BELGIUM

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IEA – Paris – January 16. 2015

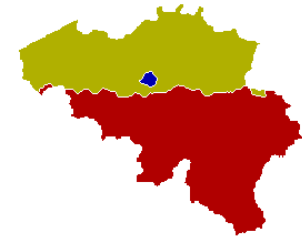
Explaining Belgium

Federal issues



- » Security of supply
- » Nuclear issues
- » Production and transmission / transport of energy
- » Distribution and transport tariffs
- » Energy statistics and balances
- » Offshore wind energy

Regional issues



- » *Promotion of the efficient use of energy*
- » New and renewable energy sources
- » Non-nuclear energy R&D
- » Market regulation for the distribution
- » Distribution of energy
- » Recovery of waste energy from industry or other uses
- » Regional energy statistics and balances

Explaining Belgium

- » Some key energy figures

Final energy consumption	Mtoe	Belgium	Flanders	Wallonia	Brussels
Total	2012	36.6	22.9	11.7	2.0
<i>Industry</i>		13.3	9.2	4.0	0.1
Total	2020	35.0			
<i>Industry</i>		10.9			

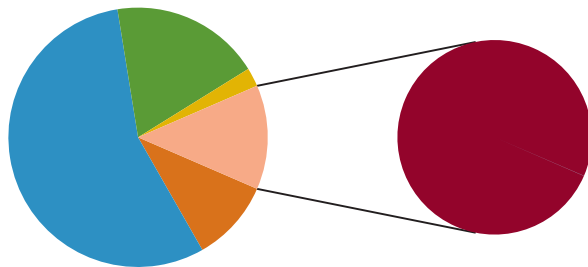
- » Industrial consumption in Belgium
 - » 70% in Flanders – Harbour of Antwerp. Ghent
 - » 30% in Wallonia – declining steel industry
 - » Shrinking in Brussels Capital Region

Industrial climate / energy policy - Flanders

Flemish Energy Efficiency Action Plan

Savings 2020 (44.7 TWh)

- Buildings
- Energy
- Transport
- Agriculture
- Voluntary agreements
- Others



Measures in industry

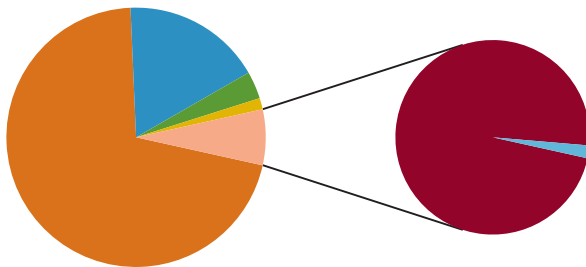
- » Mean
 - » Voluntary agreements
- » Other
 - » Incentives to make new industrial estates carbon neutral
 - » Covers only electricity consumption
 - » Ecology premium
 - » Also for some energy saving measures
 - » Subsidies issued by distribution grid operators
 - » Tax reduction (federal measure)
 - » Green loans
 - » Support to cogeneration
 - » Not industry specific

Industrial climate / energy policy - Wallonia

Walloon Energy Efficiency Action Plan

Savings 2020 (12.0 TWh)

- Buildings
- Energy
- Transport
- Horizontal
- Voluntary agreements
- Subsidies to industry

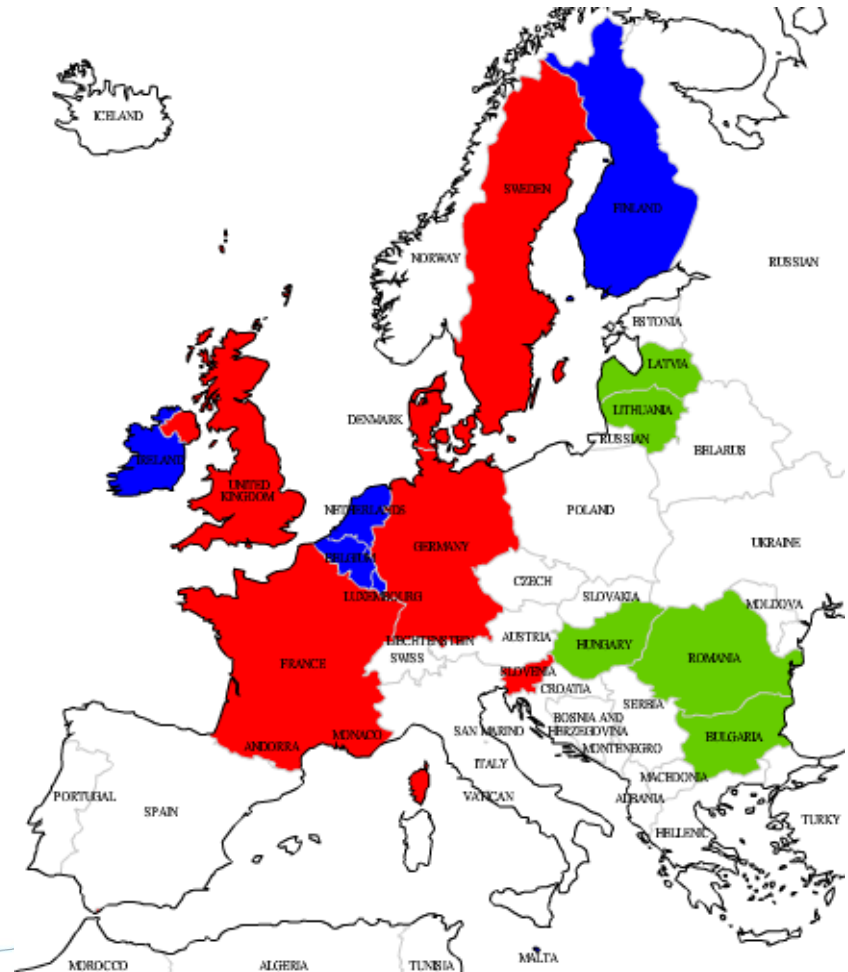


Measures in industry

- » Mean
 - » Voluntary agreements
- » Other
 - » Facilitators
 - » Subsidies
 - » Smart metering: pilot phase

Voluntary agreements on energy efficiency in industry

- » Important policy instrument in the field of industrial energy efficiency
- » Currently operational in 11 EU Member States
 - » Stopped
 - » Operational
 - » New
- » As well as in the EU in other continents



Voluntary agreements on energy efficiency in industry

- » Some history of voluntary agreements on industrial energy efficiency in the EU

	NL	MT	FI	IE	DE	SE	DK	FR	LU	UK	BE	SO	BG	RO	CZ	HU	LT	LV
1990	X																	
1995	X	X	X	X	X	X	X											
2000	X	X	X	X	X	X	X	X	X									
2005	X	X	X		X	X	X		X	X	X	X						
2010	X	X	X	X	X	X			X	X	X		X	X				
2015	X	X	X	X					X		X		X	X	X	X	X	X

Voluntary agreements on energy efficiency in industry - FLANDERS



	Benchmarking Covenant	Auditing Covenant
Political acceptance	Part of Flemish Climate Action Plan 2002-2005: focus on continuous improvement of energy efficiency in industry <ul style="list-style-type: none"> • No absolute emission cap • No equal relative emission reduction target for each company 	
Duration	2002 – 2012 (prolonged until end of 2014)	2005 – 2013 (prolonged until end of 2014)
Target group		

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	Benchmarking Covenant	Auditing Covenant
Obligations	<p>Determining benchmark (world's leading edge) for each installation</p> <ul style="list-style-type: none"> • Method 1: comparison and benchmark of process installations. get to top10% most efficient installations • Method 2: comparison and benchmark of regions. get to lowest average • Best practice: get to best practice + 10% • Auditing: implement all energy savings with IRR > 15% 	<p>Determine economic feasible energy saving options by auditing:</p> <ul style="list-style-type: none"> - 1st phase (2005-2009): implement all energy saving measures with IRR > 15% - 2nd phase (2008-2012): implement all energy saving measures with IRR > 13.5%

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	Benchmarking Covenant	Auditing Covenant
Compensation for participation	<ul style="list-style-type: none"> No additional measures or policies on energy efficiency or GHG reduction: nor from Flemish, federal or EU level Free emission allowances under EU ETS Reduction in electricity and gas taxes Exclusivity in ecology premium scheme 	<ul style="list-style-type: none"> No additional measures or policies on energy efficiency or GHG reduction: nor from Flemish, federal or EU level Reduction in electricity and gas taxes Priority in ecology premium scheme
Administration	Benchmarking Covenant Verification Office: reports to Benchmarking Covenant Commission	Auditing Covenant Verification Office: reports to Auditing Covenant Commission

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2012	Benchmarking Covenant		Auditing Covenant	
	Number of participants	Primary energy consumption (PJ)	Number of participants	Primary energy consumption (PJ)
Refineries	6	180.3		
Steel works				
Chemical	54	229.7	57	10.6
Pulp and paper	4	17.1		
Food	33	24.8	74	15.5
Technology	20	29.0	39	6.8
Ceramics	20	6.4		
Textile	17	7.2	25	3.8
Wood	5	5.1		
Others	13	8.0	19	2.8

Average primary energy consumption varies between:

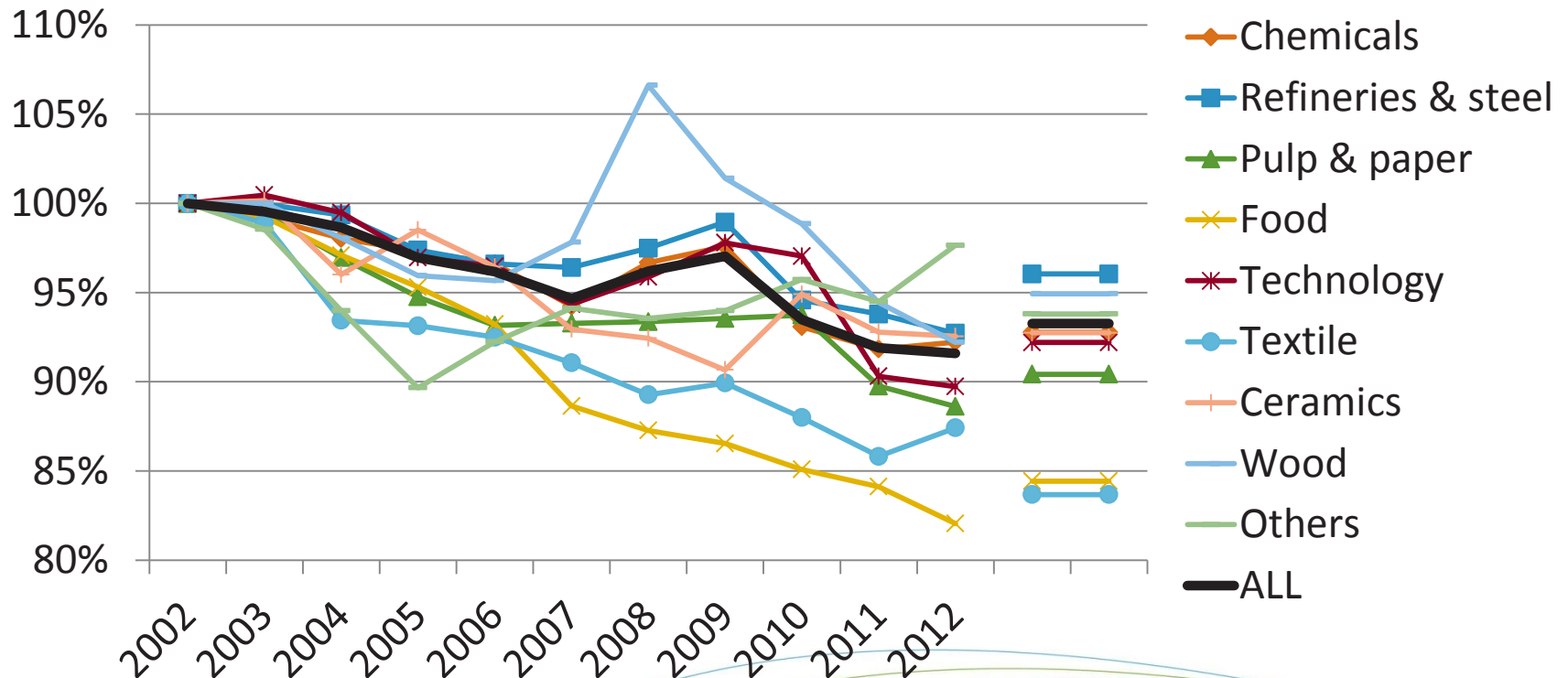
- Benchmarking covenant: 0.3 – 30 PJ
- Auditing covenant: ~0.2 PJ

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» Benchmarking covenant: improvement of **0.84% / annum**

Evolution in Energy Efficiency Index Comparison with benchmark in 2012

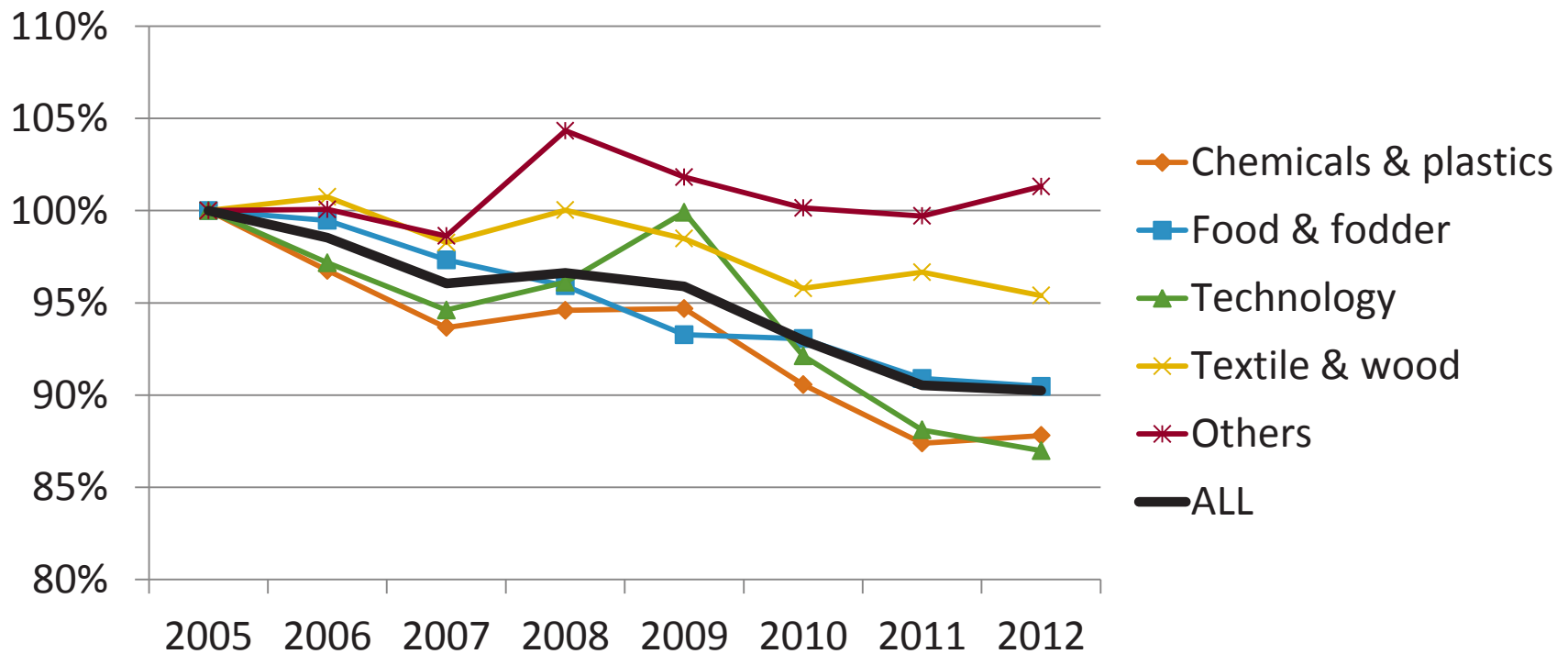


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» Benchmarking covenant: improvement of **1.4% / annum**

Evolution in Energy Efficiency Index (2005: 100%)



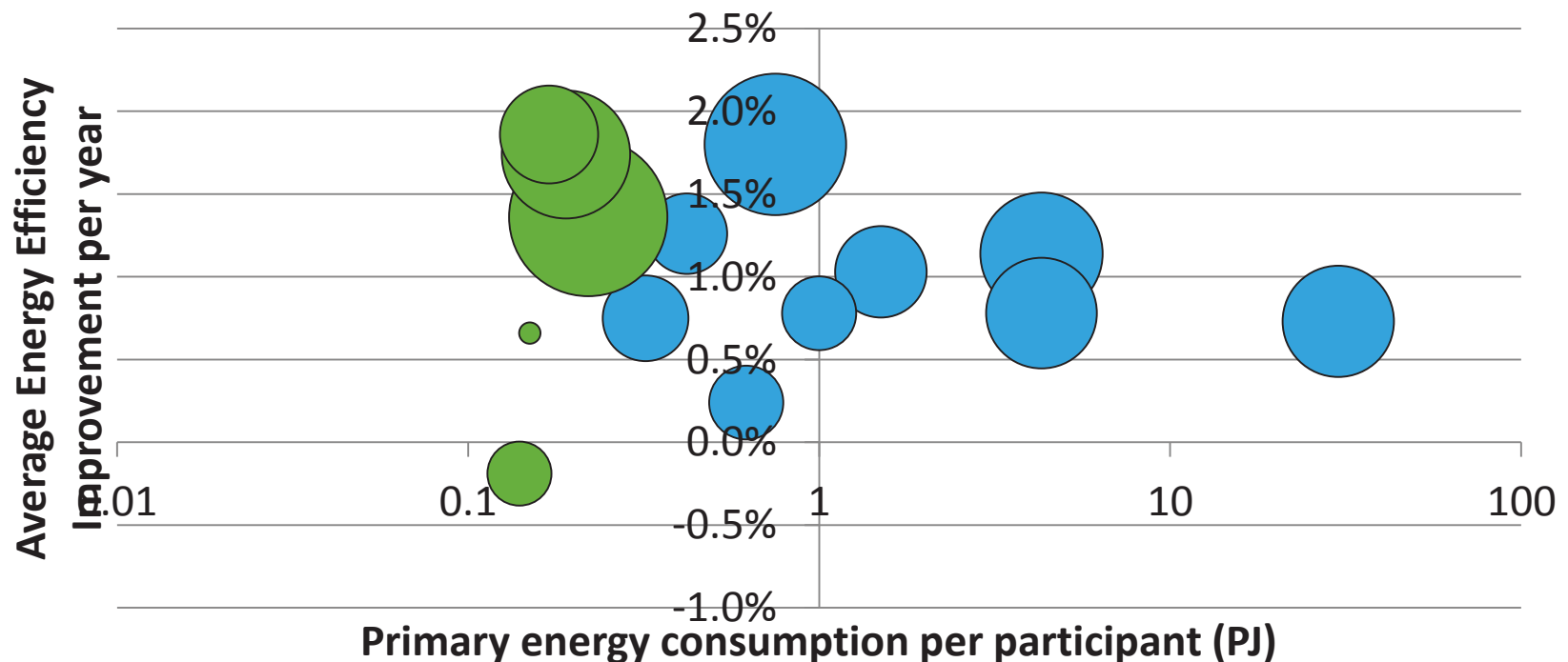
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Data suggest

- » the less energy-intensive \Rightarrow the higher the improvement in energy efficiency
 - » Take this into account when designing a voluntary agreement (and its related benefits to the participants)

Blue: benchmarking – Green: auditing covenant



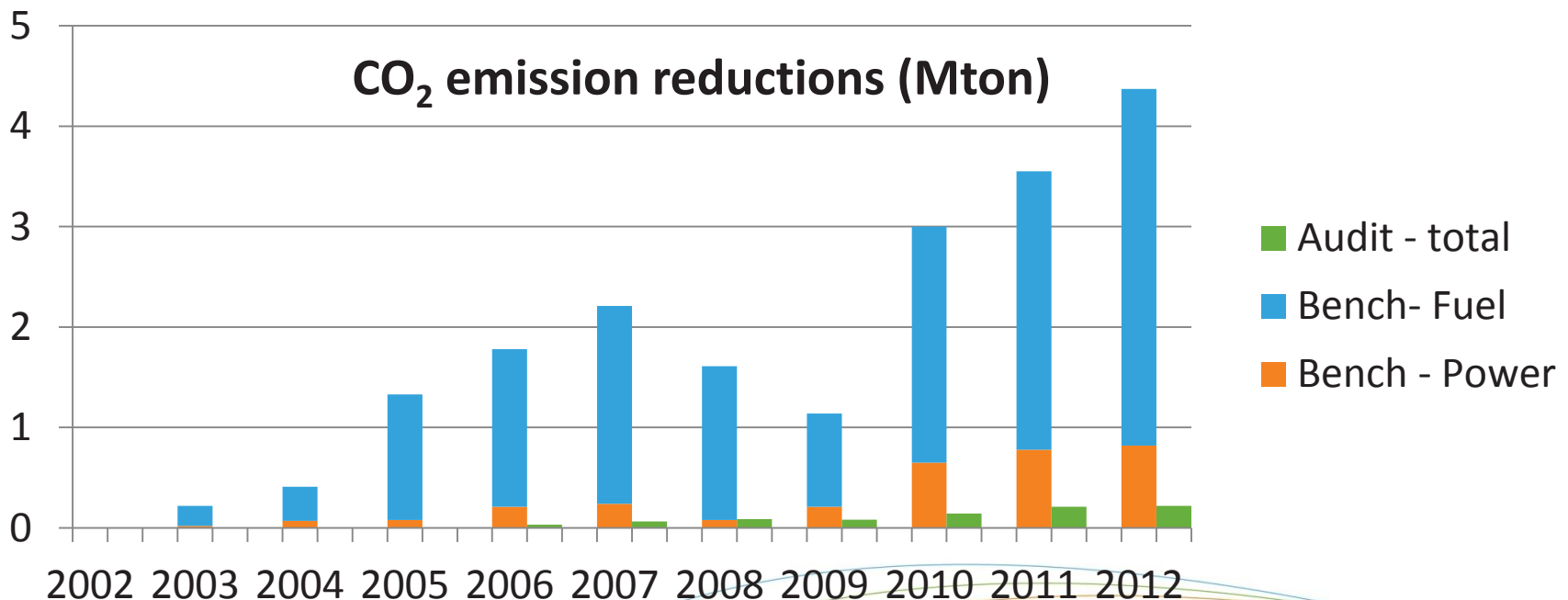
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Realised primary energy savings:

- » benchm cov.: 46.6 PJ – auditing cov.: 4.3 PJ – total: 50.9 PJ = 14.1 TWh
- » Expected saving by 2010 (only non-ETS activities): 7.2 PJ – 2.0 TWh

CO₂-emission reduction: 4.6 Mton CO₂ reduced by 2012



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Energy Governance Agreements succeed the covenants

» No more benchmarking – only auditing

Benchmarking Covenant

- Installation specific target



Energy Governance Agreement

- Commitment to implement all measures with IRR > 14%

Auditing Covenant

- Commitment to implement all measures with IRR > 15% (13.5%)



Energy Governance Agreement

- Commitment to implement all measures with IRR > 12.5%

» New:

- » Annual recalculation of feasibility of energy saving measures with actual energy prices
- » Mandatory feasibility study for CHP – connection to district heating grid
- » Obligation to implement energy management scheme
- » Obligation to inform employees council

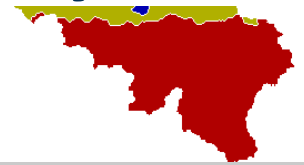
Voluntary agreements on energy efficiency in industry - WALLONIA



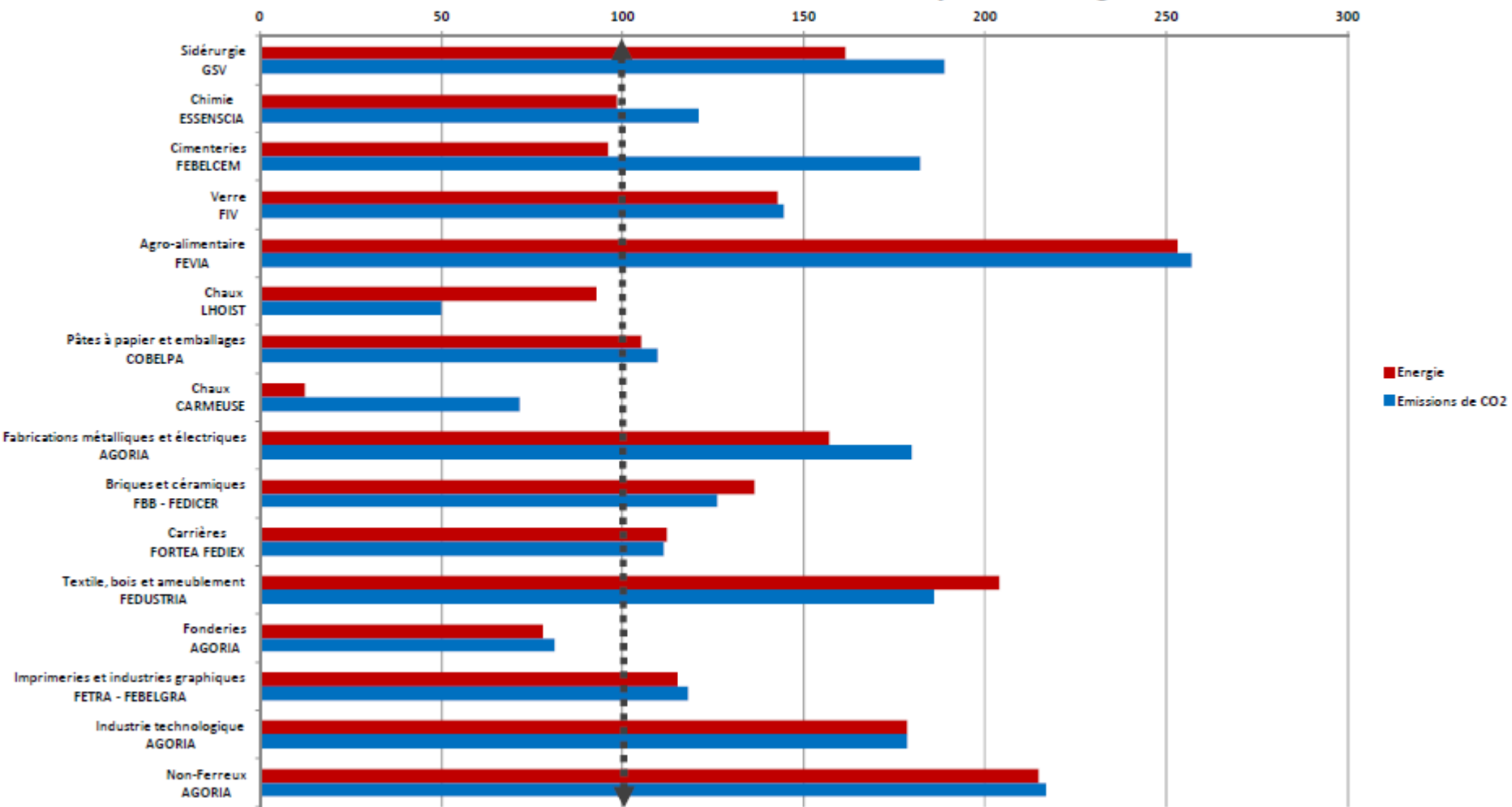
Sector agreements

- » Covers
 - » 16 sectors
 - » 173 companies
 - » 203 production sites
 - » 90% of industrial energy consumption
- » Results
 - » Energy efficiency improvement: 16.5%
 - » Primary energy savings: 28 PJ = 7.9 TWh
 - » CO₂ reduction: 19.3% or 2.2 Mton CO₂
- » 1st generation: 2003-2013
- » 2nd generation: 2014-2020

Voluntary agreements on energy efficiency in industry - WALLONIA



Ecarts entre les résultats sectoriels 2010 et les objectifs contraignants 2010





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Thanks for your attention – Any questions ?

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