



Data and indicators for tracking progress of the EU energy efficiency policies

***- framework, governance,
status, challenges -***

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EU Policy - "Energy Efficiency First"

Clean Energy for All Europeans Package (30/11/2016)

THE RIGHT REGULATORY FRAMEWORK FOR POST – 2020



Energy Union Governance



Energy Efficiency (Energy Efficiency Directive, Energy Performance of Buildings Directive)



Renewables (Revised Renewable Energy Directive)



New Electricity Market Design (including Risk Preparedness)



Energy prices and costs report



Energy Efficiency Directive

- Binding 32.5% energy efficiency target for 2030



Eco-design Working Plan 2016-2019

- List of new product groups;
- Contribution to circular economy objectives;



Energy Performance of Buildings

- Supportive of renovation;
- Smarter – ICT, smart buildings;
- Simpler;



European
Commission

EU energy and climate targets



Greenhouse Gas Emissions

2020	2030
-20%	≥-40%



Renewable Energy

2020	2030
20%	≥32%



Energy Efficiency

2020	2030
20%	≥32.5%



Climate in EU-funded programmes 2014-2020

2020	2030
20%	25%



Interconnection

2020	2030
10%	15%



CO2 from :

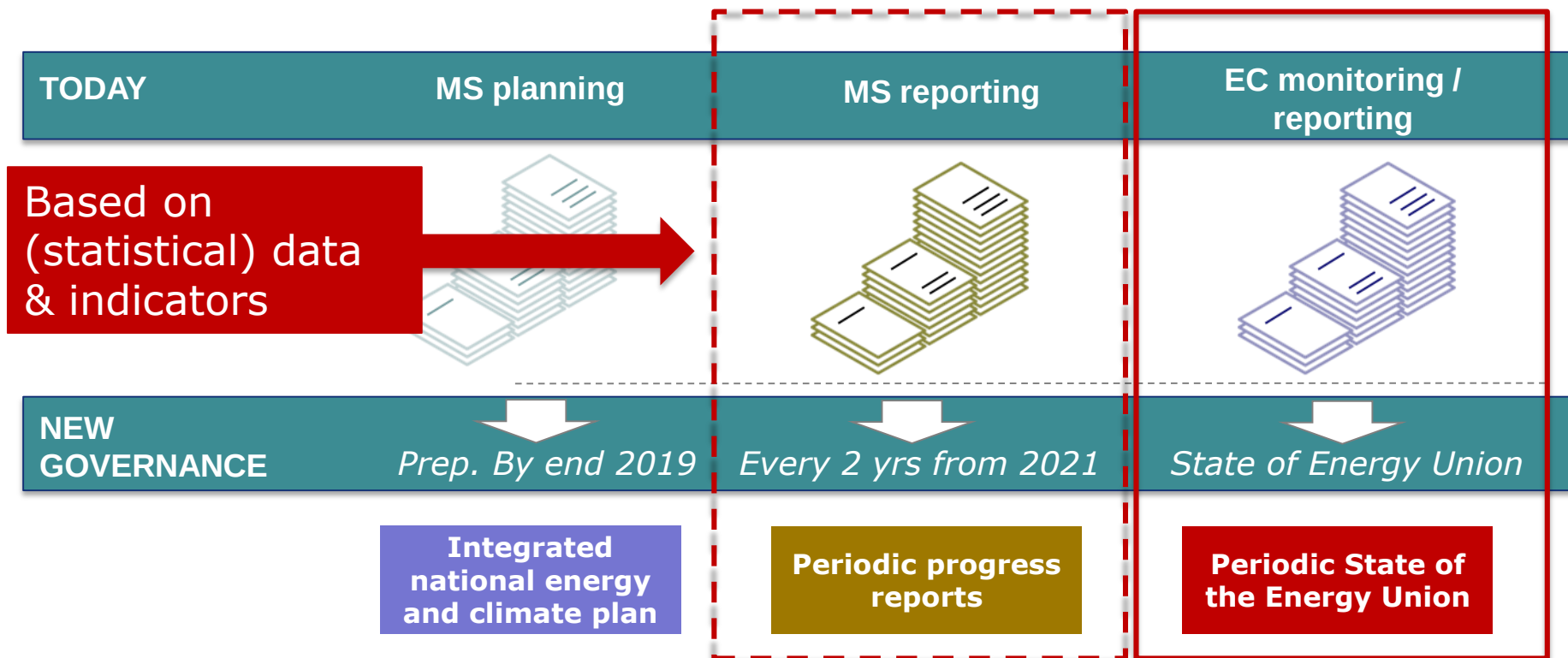
Cars	Vans	Lorries
2030		
-37.5%	-31%	-30%



EU Energy and Climate Governance

Energy Union Governance Regulation 2018/1999

STREAMLINING AND INTEGRATION OF ENERGY AND CLIMATE PLANNING AND REPORTING



Synchronised with the Paris Agreement's review cycle

Energy Union monitoring framework

key indicators

- **A limited set, relevant** for the energy and climate policies across the five dimensions including energy efficiency
- **Taking into account the existing indicators & practices** (i.e. current annual EC energy efficiency progress reports)
- As much as possible **based on officially recognised data and updated periodically**
- **To allow individual and comparative meaningful assessments on trends and levels**



A set of 25 main indicators and several accompanying ones across the 5 dimensions based on data from Eurostat, EEA, ENER, CLIMA, JRC, ACER ...

Energy Union indicators web-tool:

<https://ec.europa.eu/energy/en/data-analysis/energy-union-indicators>

Energy Union indicators by dimension

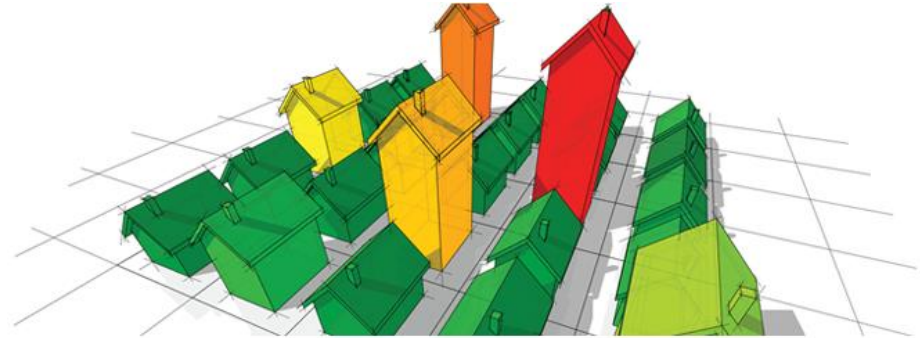
Security of supply	Internal market	Energy efficiency	Decarbonisation & Renewables	Research & Competitiveness
Import dependency	Electricity interconnections	Primary energy consumption	GHG emissions	R&I investment on Energy Union priorities
Import dependency on: Natural Gas Crude oil and NGL Hard coal	Market concentration-el.	Primary energy intensity	ETS vs ESD emissions LULUCF emissions Sectorial GHG emissions	Total and private R&I investments
Supplier concentration index	Market shares: main power capacities main power generation	Final energy consumption	Effort sharing emissions-gap interim target	Patents on Energy Union priorities
Import dependency on: Natural Gas Crude oil and NGL Hard coal	Market concentration-gas	Energy intensity-industry	Effort sharing emissions-gap to 2020 target	LCOE Renewables Turnover EU Renewables
N-1 rule for gas	Market share main gas suppliers	Energy cons/m2 - residential	GHG intensity	Real Energy Unit Cost - manufacturing
	Wholesale prices-electricity and gas	Energy/capita-residential	GHG per capita GHG power&heat CO2 emissions new cars	Electr. & gas prices-industry
	Switching rate-electricity and gas	Energy consumption transport	Renewable energy (RES) share	
	MPI-retail electricity and gas	Share public transport	RES transport RES electricity RES heating&cooling Fossil fuels avoidance by RES GHG avoidance by RES	Cohesion funds on low-carbon energy and transport
	Smart meters- hshds electricity and gas	Passenger/ton-km		Covenant of Mayors
	Energy affordability	Energy intensity-services		
	HICP-energy Inability keep home warm Hshld electr. & gas prices			
	Taxes on main fuels			

Additional data and indicators

- At Eurostat (through a DG ENER mandate under the EED):
 - Ongoing annual data collection on (efficient) CHP: by technology: capacities, production, primary savings, fuel mix
available at: <https://ec.europa.eu/eurostat/web/energy/data>
 - Annual data collection on district heating and cooling (DH&C): by technology, heat capacity & output, networks, consumers' type
to kick-off in 2020
- Decomposition analysis of JRC and Odyssee

EU Building Stock Observatory (BSO)

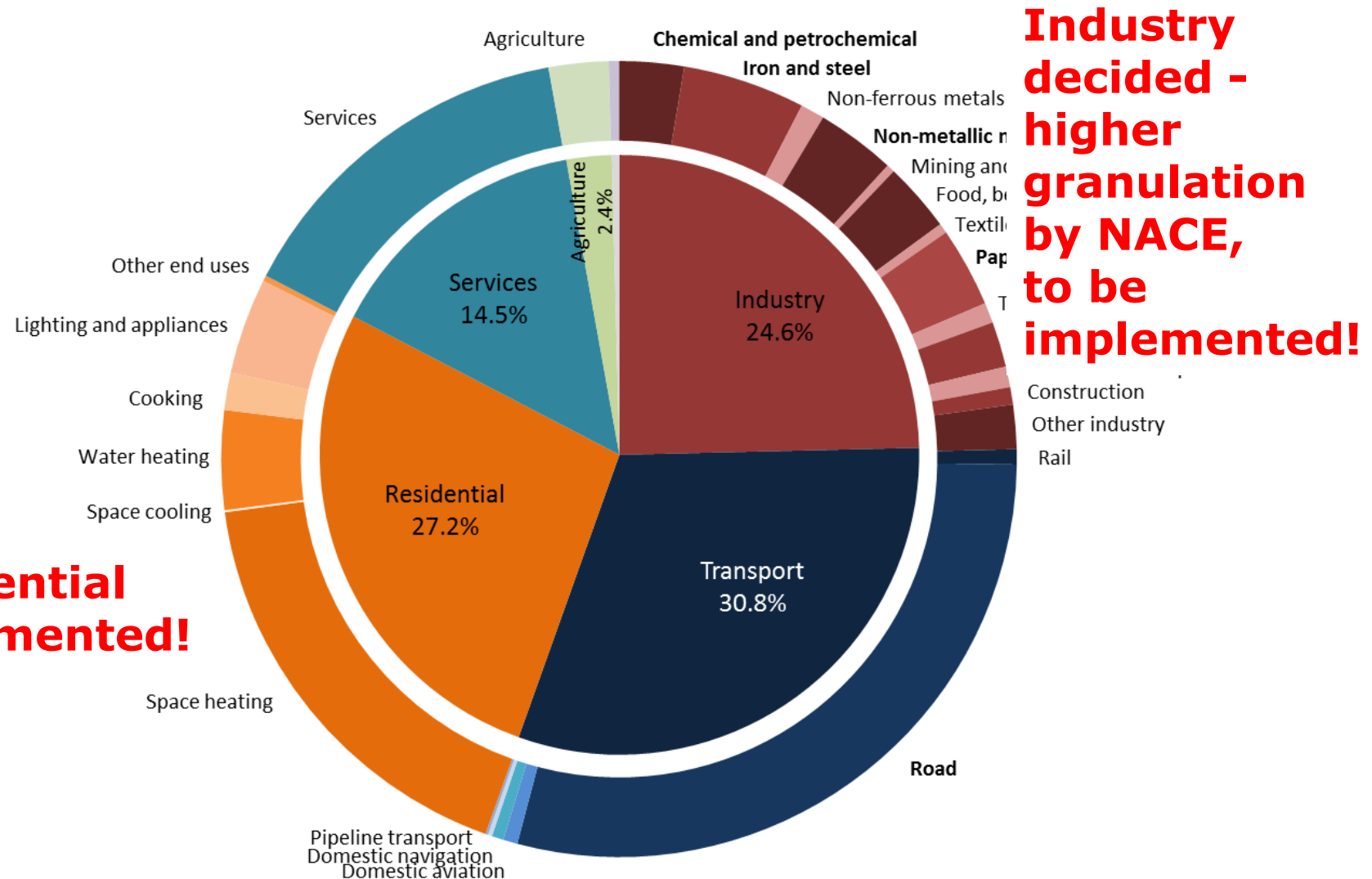
- Building stock characteristics
- Technical systems
- Certification
- Financing
- Energy poverty and social



- Important data gaps still exist (notably on renovation)
- Vary sources are used: Eurostat, national reports, others
- BSO currently under maintenance / facelift / update

Available at: <https://ec.europa.eu/energy/en/topics/energy-efficiency/energy-performance-of-buildings/eubuildings>

Further disaggregation of energy consumption in final sectors at Eurostat



Further disaggregation of energy consumption in services and transport

- Eurostat ongoing TFs
- Proposed approaches by DG ENERGY (and DG MOVE on transport):

☐ **On services:**

- By type of buildings (offices, public offices, education, healthcare, hospitality wholesale etc)
- By end-use type (space and water heating, cooling, ventilation, lighting, equipment etc)

☐ **On transport:**

- By passengers and freight
- By type of transport mean (e.g. busses and coaches, passengers cars 2-wheelers etc)
- By fuel

Challenges

- **Agreement on new statistical data collections at EU level**
 - MS stats capabilities not at the same level, budgetary & staff limitation
- **Timeliness, continuity and quality of data**
 - More than one year time-lag of energy & climate statistics (but early estimates will fill the gap and the collection process may speed-up)
 - Disruption of some data collection
 - Data not coming from official reporting are often disputed
- **Filling the data gaps**
 - Data gaps on buildings renovation but also on others
 - Access to micro data from national (e.g. administrative, EPC databases...) or third parties (e.g. projects, on/off collection...)
 - Exploratory statistics & modelling

Thank you!



**Energy efficiency
first!**

**Accelerating towards
a 2030 objective of**

32.5%

