



18<sup>th</sup> Joint EIONET and UN ECE Task Force on Emission Inventories and Projections Meeting;

11<sup>th</sup>-12<sup>th</sup> May 2017, Krakow, Poland

## Reporting of Member States under the new EU National Emission Ceilings Directive



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# Why does it matter?

EU urban population exposed to harmful levels of air pollutant concentrations in 2012–2014, according to:

	EU limits/target values	WHO guidelines
PM <sub>2.5</sub>	8–12 % 	85–91 % 
PM <sub>10</sub>	16–21 % 	50–63 % 
O <sub>3</sub>	8–17 % 	96–98 % 
NO <sub>2</sub>	7–9 % 	7–9 % 
BaP	20–24 % 	88–91 % 
SO <sub>2</sub>	<1 % 	35–49 % 



# The European Union's Clean Air Policy Package

The Package includes a Clean Air Programme for Europe, updating the 2005 Thematic Strategy on Air Pollution in order to set new objectives for EU air policy for 2020 and 2030.

**The main legislative instrument to achieve the 2030 objectives of this programme is [Directive 2016/2284/EU](#) (NECD) on the reduction of national emissions of certain atmospheric pollutants (entered into force on 31 December 2016).**

- 2010 (Annex I) emission ceilings remain applicable until 31 December 2019 and Annex II ceilings will be repealed from 01 July 2018;
- New emission reduction commitments for 2020 and 2030;
- New NECD transposes the reduction commitments for 2020 taken by the EU and its Member States under the revised Gothenburg Protocol.

# New NECD: Reporting of inventories and

EU Member States report (inter alia):

- ✓ Each year emission inventory information for past years (“CLRTAP pollutants”), and
- ✓ Every two years emission projections for SO<sub>2</sub>, NO<sub>x</sub>, NH<sub>3</sub>, NMVOC, PM<sub>2.5</sub> and, if available, black carbon (BC). The projections shall cover the years 2020, 2025, 2030.

Reporting deadlines:

- ✓ Emission inventories – **15/02/2017** and every year thereafter;
- ✓ Emission projections – **15/03/2017** and every two years thereafter.



# Six reporting obligations under the new NECD

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## Reporting obligations : DG ENV (EC)-European Commission, Directorate General Environment [pollution]

Show reporting obligations

Country: Any country or territory

Issue: Air pollution

Organisation: DG ENV (EC) - European Commission, Directorate General Environment

☐ Include terminated obligations

11 items found, displaying all items.1

Reporting obligation	Legislative instrument	Report	Date
<a href="#">EU Registry on industrial sites</a>	<a href="#">Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions (integrated pollution prevention and control)</a>	DG ENV (EC)	
<a href="#">Integrated emission management techniques applied in mineral oil and gas refineries under IED</a>	<a href="#">Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions (integrated pollution prevention and control)</a>	DG ENV (EC)	
<a href="#">MS implementation of IED (Annex II Decision 2012/795/EU)</a>	<a href="#">Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions (integrated pollution prevention and control)</a>	DG ENV (EC)	
<a href="#">National Emission Ceiling Directive (NECD) - Informative Inventory Report (IIR)</a>	<a href="#">Directive (EU) 2016/2284 of the European Parliament and of the Council of 14 December 2016 on the reduction of national emissions of certain atmospheric pollutants, amending Directive 2003/35/EC and repealing Directive 2001/81/EC</a>	DG ENV (EC)	
<a href="#">National Emission Ceiling Directive (NECD) - Large point source (LPS) emissions data by source category (GNFR)</a>	<a href="#">Directive (EU) 2016/2284 of the European Parliament and of the Council of 14 December 2016 on the reduction of national emissions of certain atmospheric pollutants, amending Directive 2003/35/EC and repealing Directive 2001/81/EC</a>	DG ENV (EC)	
<a href="#">National Emission Ceiling Directive (NECD) - National air pollution programmes</a>	<a href="#">Directive (EU) 2016/2284 of the European Parliament and of the Council of 14 December 2016 on the reduction of national emissions of certain atmospheric pollutants, amending Directive 2003/35/EC and repealing Directive 2001/81/EC</a>	DG ENV (EC)	2019-07-01
<a href="#">National Emission Ceiling Directive (NECD) - National air quality indicators</a>	<a href="#">Directive (EU) 2016/2284 of the European Parliament and of the Council of 14 December 2016 on the reduction of national emissions of certain atmospheric pollutants, amending Directive 2003/35/EC and repealing Directive 2001/81/EC</a>	DG ENV (EC)	2017-15
<a href="#">National Emission Ceiling Directive (NECD) - National air quality indicators</a>	<a href="#">Directive (EU) 2016/2284 of the European Parliament and of the Council of 14 December 2016 on the reduction of national emissions of certain atmospheric pollutants, amending Directive 2003/35/EC and repealing Directive 2001/81/EC</a>	DG ENV (EC)	2017-01
<a href="#">National Emission Ceiling Directive (NECD) - National air quality indicators</a>	<a href="#">Directive (EU) 2016/2284 of the European Parliament and of the Council of 14 December 2016 on the reduction of national emissions of certain atmospheric pollutants, amending Directive 2003/35/EC and repealing Directive 2001/81/EC</a>	DG ENV (EC)	2017-15
<a href="#">Sectoral Emissions from Industrial Processes – BAT conclusion presentation</a>	<a href="#">Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions (integrated pollution prevention and control)</a>	DG ENV (EC)	2017-09-30
<a href="#">Waste incineration and solvent emissions under IED</a>	<a href="#">Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions (integrated pollution prevention and control)</a>	DG ENV (EC)	2017-09-30

**Overview**

## National Emission Ceilings Directive (NECD 2016/2284/EU)

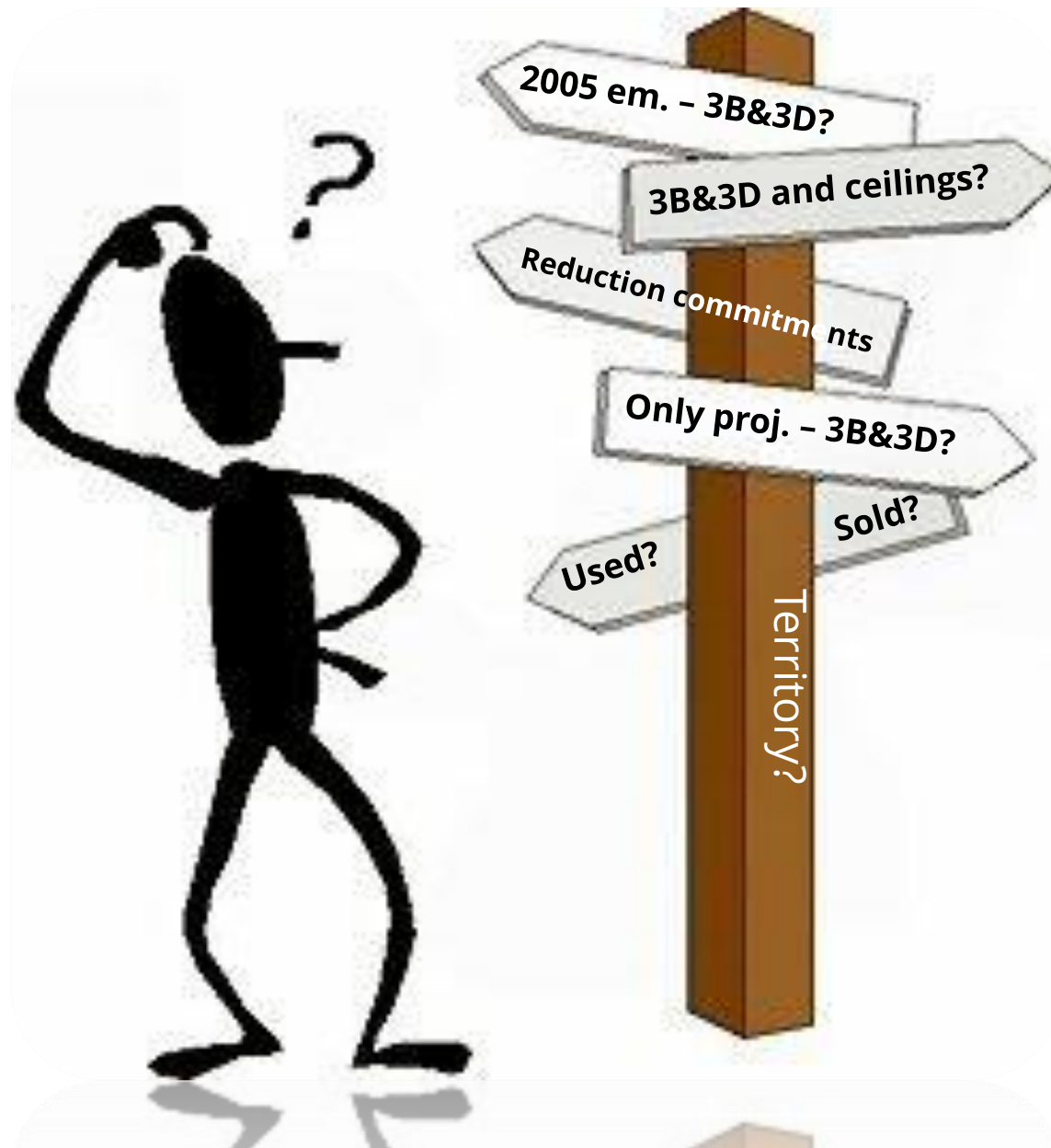
### Envelopes and subcollections

- A. National emission inventories
- B. Informative Inventory Report
- C. National gridded data of emissions
- D. Large point source (LPS) emissions data
- E. Projected emissions
- F. National air pollution control programmes

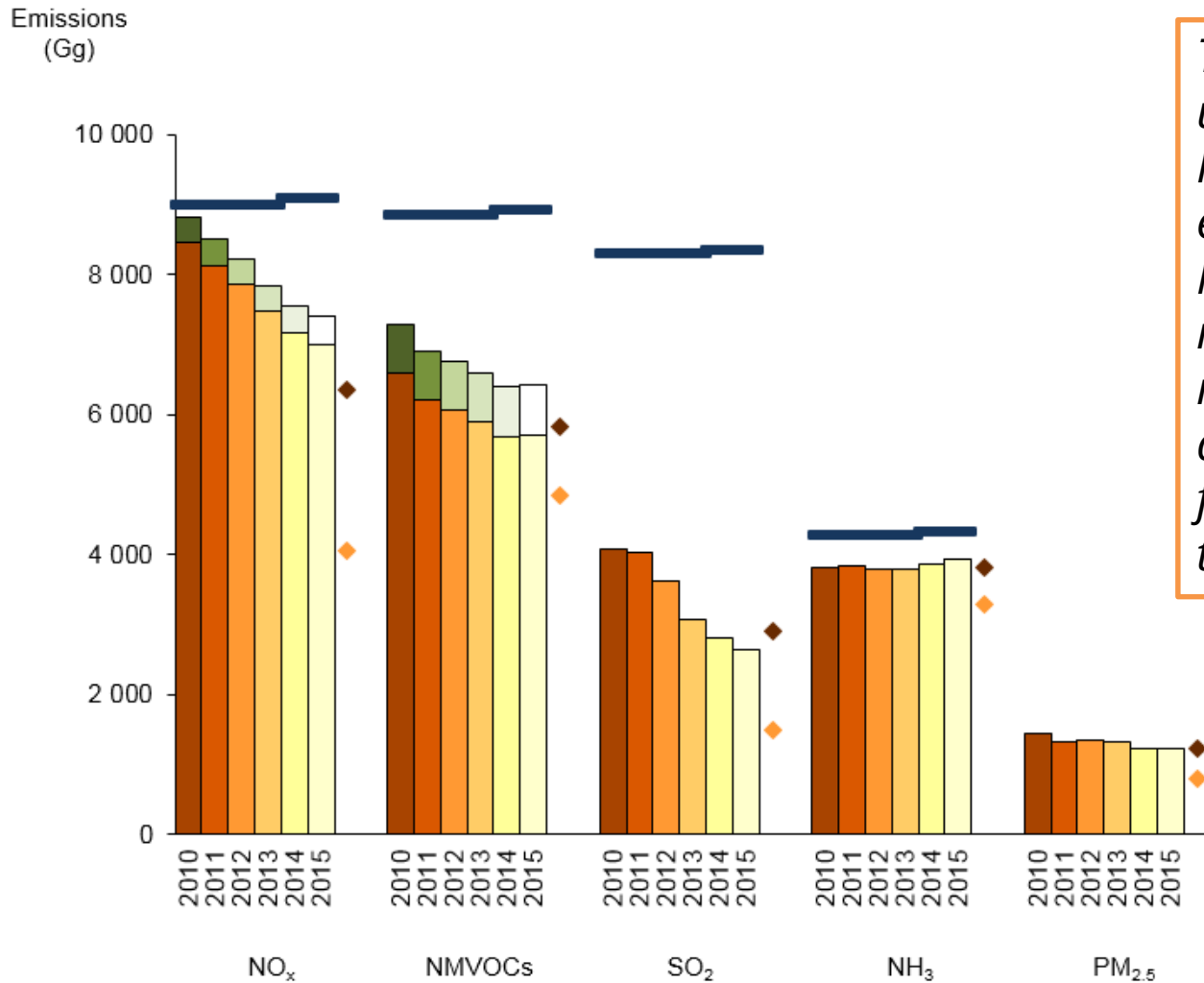
**Addressed in this presentation:**

- National emission inventories, main pollutants
- Projected emissions

# Interpretation of the new NECD



# EU progress in meeting emission ceilings and 2020, 2030 reduction commitments



*The GAINS analysis underlying the proposed NECD targets (TSAP16) excluded the NO<sub>x</sub> and NMVOC emissions from two main agricultural activities: manure management and agricultural soils (3B & 3D)-from base year 2005 to the target year 2030.*

The distance to ceilings was calculated based on **unadjusted** emissions.



# Adjustment of emission inventories under the new NECD

- Member States (MS) wishing to adjust their data must first notify the European Commission (EC), by 15 February each year, and subsequently submit a range of documentation (by 15 March each year) for review by the Commission.
- In 2017, adjustment applications were submitted by nine Member States: Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Luxembourg and Spain.
- Following a review of these applications by the EC, and if approved, the number of MS exceeding one or more emission ceilings in 2015 would decrease from ten to four, with emissions from Belgium, Denmark, Finland, France, Ireland and Luxembourg now being below all of their respective ceilings. Austria would be very close to meeting all its ceilings.



# Progress for NOx emissions

	reported emissions vs. 2010 ceilings						WM proj. vs. reduction commitments	
Member State	NO <sub>x</sub>							
	2010	11	12	13	14	15	2020	2030
Austria	✗	✗	✗	✗	✗	✗	✓	✓
Belgium	✗	✗	✗	✗	✗	✗	✓	✓
Bulgaria	✓	✓	✓	✓	✓	✓	✓	✓
Croatia					✓	✓	✓	✓
Cyprus	✓	✓	✓	✓	✓	✓	✗	✗
Czech Republic	✓	✓	✓	✓	✓	✓	✓	✓
Denmark	✗	✗	✗	✓	✓	✓	✓	✓
Estonia	✓	✓	✓	✓	✓	✓	✓	✓
Finland	✗	✗	✓	✓	✓	✓	✗	✗
France	✗	✗	✗	✗	✗	✗		
Germany	✗	✗	✗	✗	✗	✗	✓	✓
Greece								
Hungary	✓	✓	✓	✓	✓	✓		
Ireland	✗	✗	✗	✗	✗	✗		
Italy	✓	✓	✓	✓	✓	✓	✓	✓
Latvia	✓	✓	✓	✓	✓	✓		

	reported emissions vs. 2010 ceilings						WM proj. vs. reduction commitments	
Member State	NO <sub>x</sub>							
	2010	11	12	13	14	15	2020	2030
Lithuania	✓	✓	✓	✓	✓	✓	✗	✗
Luxembourg	✗	✗	✗	✗	✗	✗	✗	✗
Malta	✗	✓	✗	✓	✓	✓		
Netherlands	✗	✗	✓	✓	✓	✓	✓	✓
Poland	✓	✓	✓	✓	✓	✓	✓	✓
Portugal	✓	✓	✓	✓	✓	✓	✓	✓
Romania	✓	✓	✓	✓	✓	✓	✓	✓
Slovakia	✓	✓	✓	✓	✓	✓	✓	✓
Slovenia	✗	✗	✗	✓	✓	✓	✗	✗
Spain	✗	✗	✗	✓	✓	✓	✓	✓
Sweden	✗	✓	✓	✓	✓	✓	✓	✓
United Kingdom	✓	✓	✓	✓	✓	✓	✗	✗
✓	13	15	16	20	21	21	16	16
✗	13	11	10	6	6	6	6	6

WM = with measures



European Environment Agency



# Progress for NMVOC emissions

	reported emissions vs. 2010 ceilings						WM proj. vs. reduction commitments	
Member State	NMVOCs							
	2010	11	12	13	14	15	2020	2030
Austria	✓	✓	✓	✓	✓	✓	✗	✗
Belgium	✗	✓	✓	✓	✓	✓	✓	✓
Bulgaria	✓	✓	✓	✓	✓	✓	✗	✗
Croatia					✓	✓	✓	✓
Cyprus	✓	✓	✓	✓	✓	✓	✗	✗
Czech Republic	✓	✓	✓	✓	✓	✓	✓	✗
Denmark	✗	✗	✗	✗	✗	✗	✓	✓
Estonia	✓	✓	✓	✓	✓	✓	✓	✓
Finland	✓	✓	✓	✓	✓	✓	✗	✗
France	✓	✓	✓	✓	✓	✓		
Germany	✗	✗	✗	✗	✗	✗	✓	✓
Greece								
Hungary	✓	✓	✓	✓	✓	✓		
Ireland	✗	✗	✗	✗	✗	✗		
Italy	✓	✓	✓	✓	✓	✓	✗	✗
Latvia	✓	✓	✓	✓	✓	✓		

	reported emissions vs. 2010 ceilings						WM proj. vs. reduction commitments	
Member State	NMVOCs							
	2010	11	12	13	14	15	2020	2030
Lithuania	✓	✓	✓	✓	✓	✓	✗	✗
Luxembourg	✓	✓	✗	✗	✓	✗	✗	✗
Malta	✓	✓	✓	✓	✓	✓		
Netherlands	✓	✓	✓	✓	✓	✓	✓	✓
Poland	✓	✓	✓	✓	✓	✓	✗	✗
Portugal	✗	✓	✓	✓	✓	✗	✓	✗
Romania	✓	✓	✓	✓	✓	✓	✓	✗
Slovakia	✓	✓	✓	✓	✓	✓	✗	✗
Slovenia	✓	✓	✓	✓	✓	✓	✓	✗
Spain	✓	✓	✓	✓	✓	✓	✗	✗
Sweden	✓	✓	✓	✓	✓	✓	✓	✓
United Kingdom	✓	✓	✓	✓	✓	✓	✓	✗
✓	21	23	22	22	24	22	12	7
✗	5	3	4	4	3	5	10	15

WM = with measures



# Progress for SO<sub>2</sub> emissions

	reported emissions vs. 2010 ceilings						WM proj. vs. reduction commitments	
Member State	SO <sub>2</sub>							
	2010	11	12	13	14	15	2020	2030
Austria	✓	✓	✓	✓	✓	✓	✓	✓
Belgium	✓	✓	✓	✓	✓	✓	✓	✓
Bulgaria	✓	✓	✓	✓	✓	✓	✓	✓
Croatia					✓	✓	✓	✓
Cyprus	✓	✓	✓	✓	✓	✓	✓	✓
Czech Republic	✓	✓	✓	✓	✓	✓	✓	✗
Denmark	✓	✓	✓	✓	✓	✓	✓	✗
Estonia	✓	✓	✓	✓	✓	✓	✓	✗
Finland	✓	✓	✓	✓	✓	✓	✓	✓
France	✓	✓	✓	✓	✓	✓		
Germany	✓	✓	✓	✓	✓	✓	✓	✗
Greece								
Hungary	✓	✓	✓	✓	✓	✓		
Ireland	✓	✓	✓	✓	✓	✓		
Italy	✓	✓	✓	✓	✓	✓	✓	✓
Latvia	✓	✓	✓	✓	✓	✓		

	reported emissions vs. 2010 ceilings						WM proj. vs. reduction commitments	
Member State	SO <sub>2</sub>							
	2010	11	12	13	14	15	2020	2030
Lithuania	✓	✓	✓	✓	✓	✓	✗	✗
Luxembourg	✓	✓	✓	✓	✓	✓	✓	✓
Malta	✓	✓	✓	✓	✓	✓		
Netherlands	✓	✓	✓	✓	✓	✓		
Poland	✓	✓	✓	✓	✓	✓	✓	✗
Portugal	✓	✓	✓	✓	✓	✓	✓	✗
Romania	✓	✓	✓	✓	✓	✓	✓	✗
Slovakia	✓	✓	✓	✓	✓	✓	✓	✗
Slovenia	✓	✓	✓	✓	✓	✓	✓	✗
Spain	✓	✓	✓	✓	✓	✓	✓	✗
Sweden	✓	✓	✓	✓	✓	✓	✓	✓
United Kingdom	✓	✓	✓	✓	✓	✓	✓	✗
✓	26	26	26	26	27	27	20	9
✗	0	0	0	0	0	0	1	12

WM = with measures



# Progress for NH<sub>3</sub> emissions

	reported emissions vs. 2010 ceilings						WM proj. vs. reduction commitments	
Member State	NH <sub>3</sub>							
	2010	11	12	13	14	15	2020	2030
Austria	×	×	×	×	×	×	×	×
Belgium	✓	✓	✓	✓	✓	✓	✓	×
Bulgaria	✓	✓	✓	✓	✓	✓	✓	✓
Croatia					✓	✓	✓	✓
Cyprus	✓	✓	✓	✓	✓	✓	✓	✓
Czech Republic	✓	✓	✓	✓	✓	✓	×	×
Denmark	×	×	×	×	×	×	×	×
Estonia	✓	✓	✓	✓	✓	✓	×	×
Finland	×	×	×	×	×	×	×	×
France	✓	✓	✓	✓	✓	✓		
Germany	×	×	×	×	×	×	×	×
Greece								
Hungary	✓	✓	✓	✓	✓	✓		
Ireland	✓	✓	✓	✓	✓	✓		
Italy	✓	✓	✓	✓	✓	✓	✓	×
Latvia	✓	✓	✓	✓	✓	✓		

	reported emissions vs. 2010 ceilings						WM proj. vs. reduction commitments	
Member State	NH <sub>3</sub>							
	2010	11	12	13	14	15	2020	2030
Lithuania	✓	✓	✓	✓	✓	✓	×	×
Luxembourg	✓	✓	✓	✓	✓	✓	×	×
Malta	✓	✓	✓	✓	✓	✓		
Netherlands	×	×	✓	✓	✓	✓		
Poland	✓	✓	✓	✓	✓	✓	✓	×
Portugal	✓	✓	✓	✓	✓	✓	✓	✓
Romania	✓	✓	✓	✓	✓	✓	✓	×
Slovakia	✓	✓	✓	✓	✓	✓	✓	×
Slovenia	×	✓	✓	✓	✓	✓	✓	✓
Spain	×	×	×	×	×	×	×	×
Sweden	×	×	×	×	×	×	×	×
United Kingdom	✓	✓	✓	✓	✓	✓	×	×
✓	18	19	20	20	21	21	10	5
✱	8	7	6	6	6	6	11	16



# Progress for PM<sub>2.5</sub> emissions

	WM proj. vs. reduction commitments	
Member State	PM <sub>2.5</sub>	
	2020	2030
Austria	✓	✗
Belgium	✓	✓
Bulgaria	✗	✗
Croatia	✓	✓
Cyprus	✓	✓
Czech Republic	✓	✓
Denmark	✓	✗
Estonia	✓	✓
Finland	✓	✓
France		
Germany	✓	✗
Greece		
Hungary		
Ireland		
Italy	✓	✗
Latvia		

	WM proj. vs. reduction commitments	
Member State	PM <sub>2.5</sub>	
	2020	2030
Lithuania	✗	✗
Luxembourg	✗	✗
Malta		
Netherlands		
Poland	✓	✗
Portugal	✓	✗
Romania	✓	✗
Slovakia	✗	✗
Slovenia	✓	✗
Spain	✓	✗
Sweden	✓	✓
United Kingdom	✗	✗
✓	16	7
✗	5	14

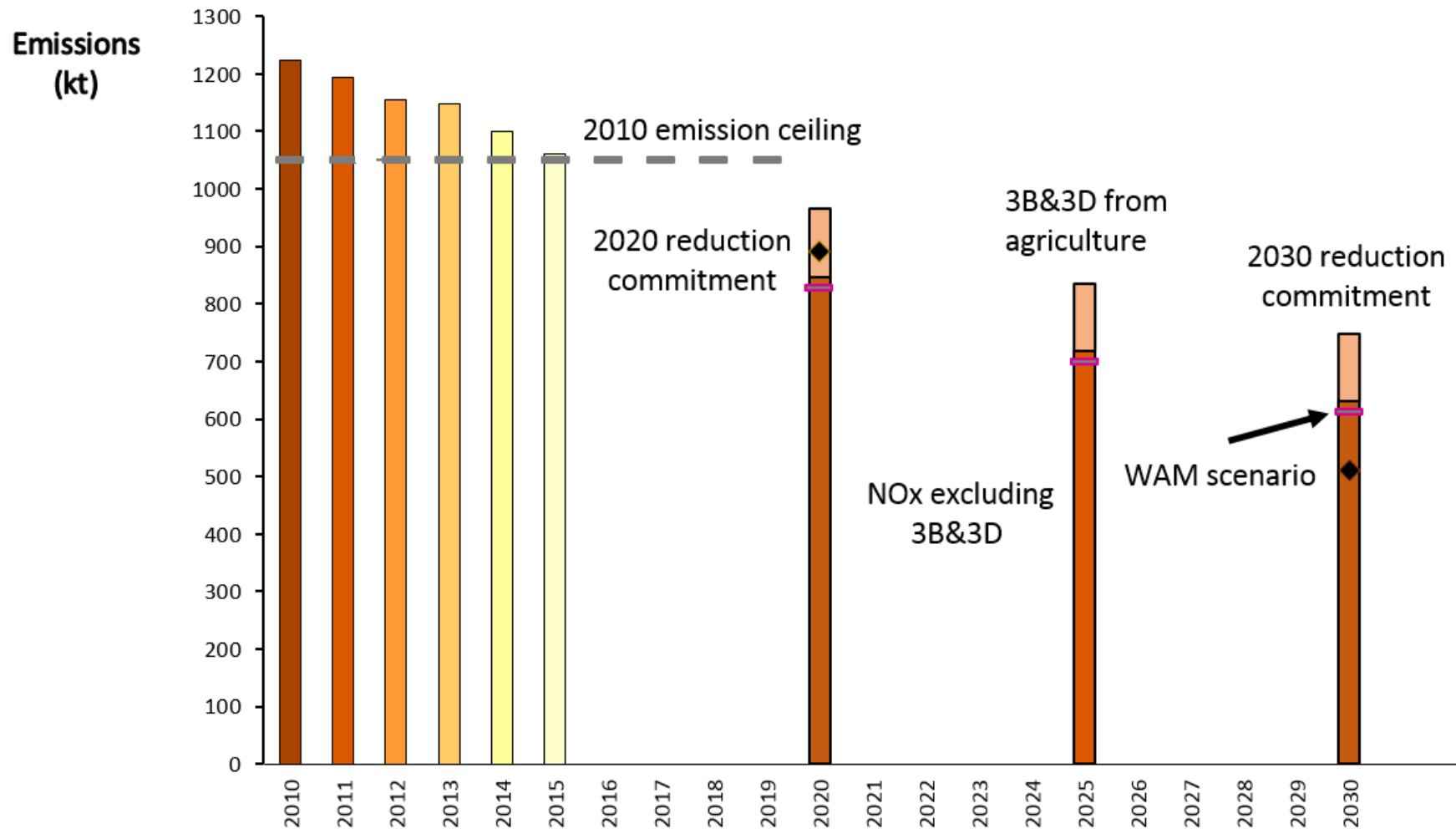
Germany, Croatia, Lithuania and Romania submitted “with additional measures” scenarios (WAM).

WM = with measures

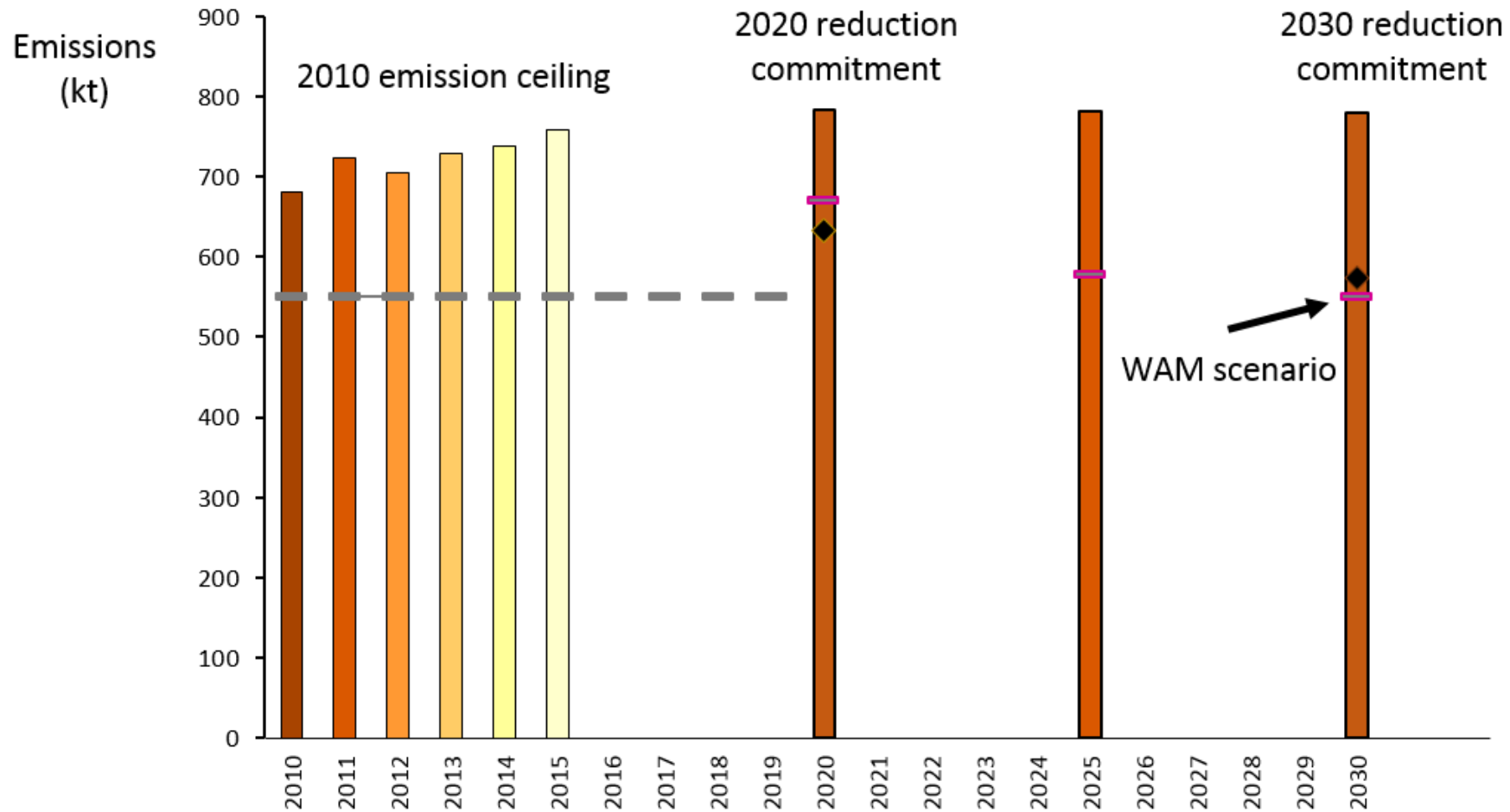




# NOx emissions and projections for Germany



# NH<sub>3</sub> emissions and projections for Germany



# Challenges!

- The greatest effort will be required for Member States to achieve their reduction commitments for primary PM<sub>2.5</sub> and NH<sub>3</sub> emissions by 2030 (WAM?).
- National Pollution Control Programmes: Member States will also have to focus on the Directive's health (and environmental) objectives, i.e. strive for achieving air quality levels in line with the WHO guideline.



# Thank you!



Thanks also to the  
ETC/ACM colleagues at  
UBA Vienna!

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