

# The European Commission's science and knowledge service

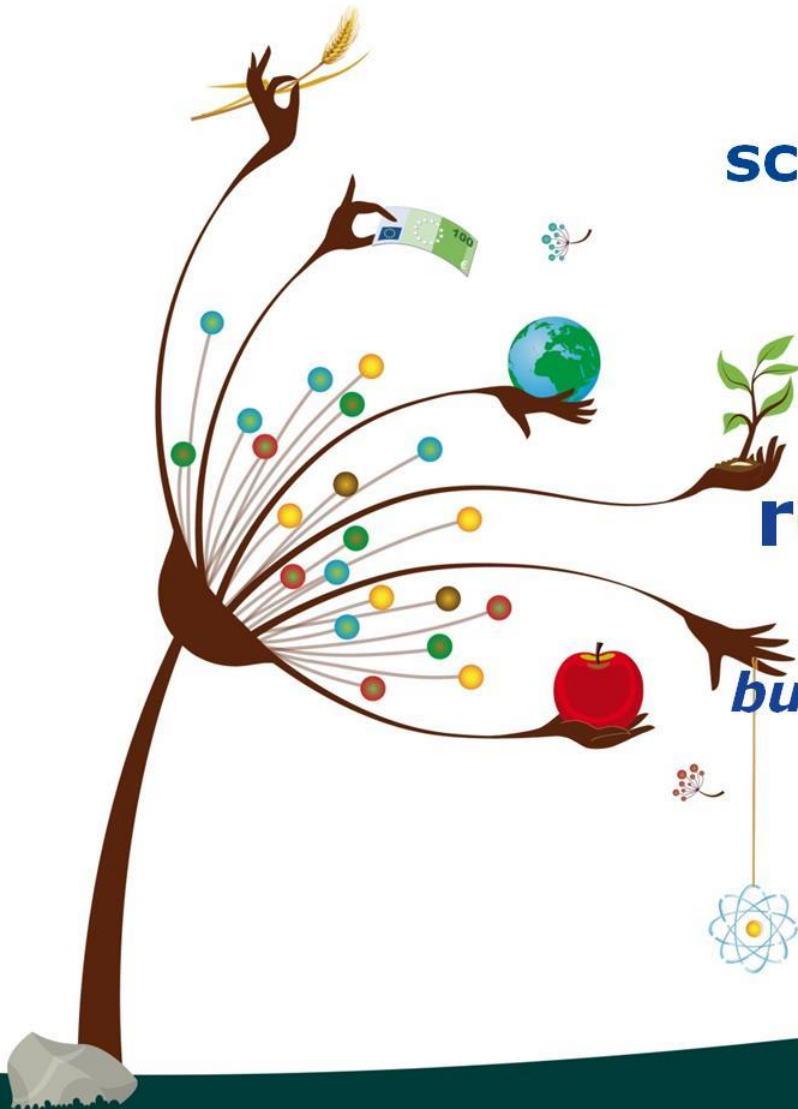
Joint Research Centre

## The drawing up and review of the EU BREFs:

*Stakeholders' engagement for  
building consensus on issues related  
to industrial emissions*

**Serge Roudier**

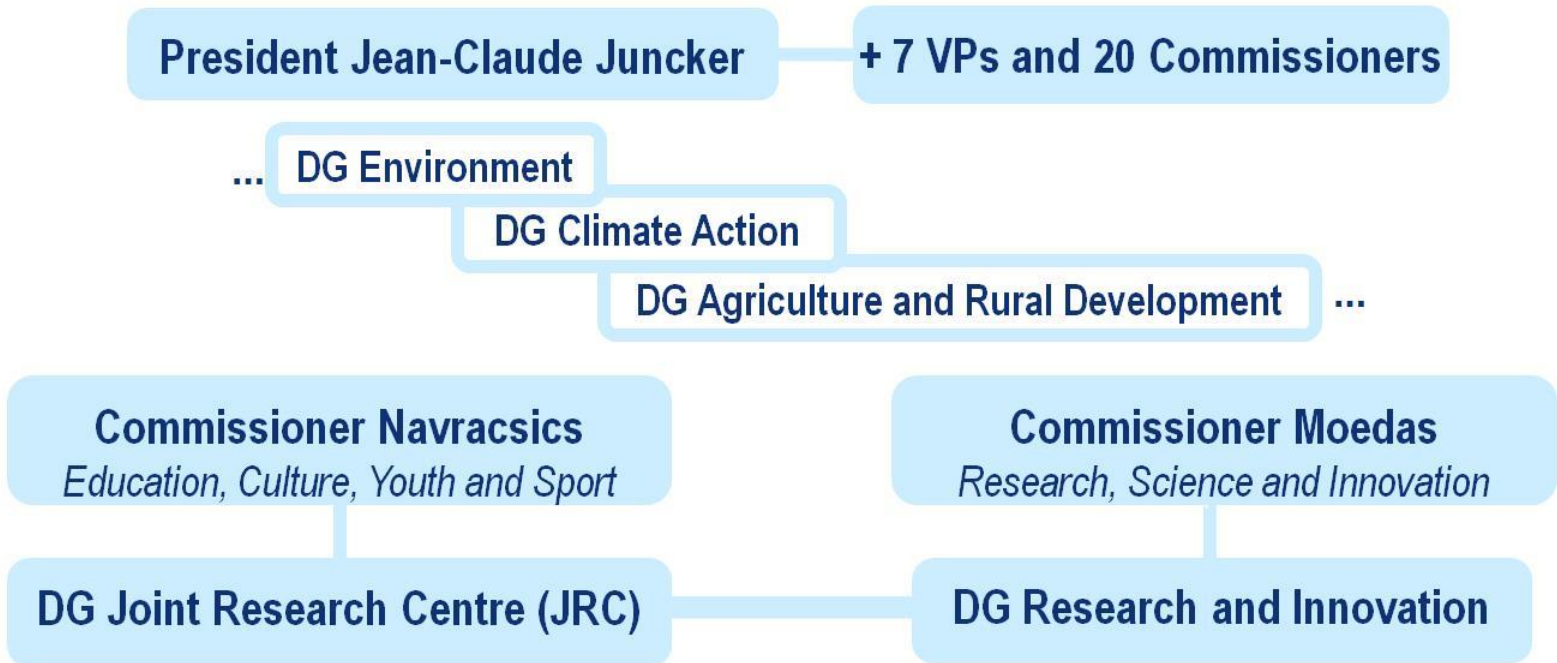
**Head of the European IPPC Bureau**







# The JRC in the Commission



Science for Policies

Policy for Science

→ JRC is the in-house science  
service of the European  
Commission



# EU regulatory framework on industrial emissions

**IED** (2010/75/EU)  
**Directive on Industrial Emissions**

**1 EU legislation**

**Use of Best Available  
Techniques (BAT)  
described in the BAT reference  
documents (BREFs)**

**32 BREFs**



**Permits and Emission  
Limit Values (ELVs)  
based on BAT**

**~ 50 000 (agro)industrial installations**



## Annex I to the IED

Wide range of industrial activities listed:

- **Energy industries**
- **Production and processing of metals**

- **Mineral industries**

Cement, Lime, Glass, Ceramics

- **Production of chemicals**

- **Waste management industries**

Several recovery or disposal operations

Incineration

- **'Other' industries:**

Pulp and paper, Textile processing,

Tanning of hides and skins,

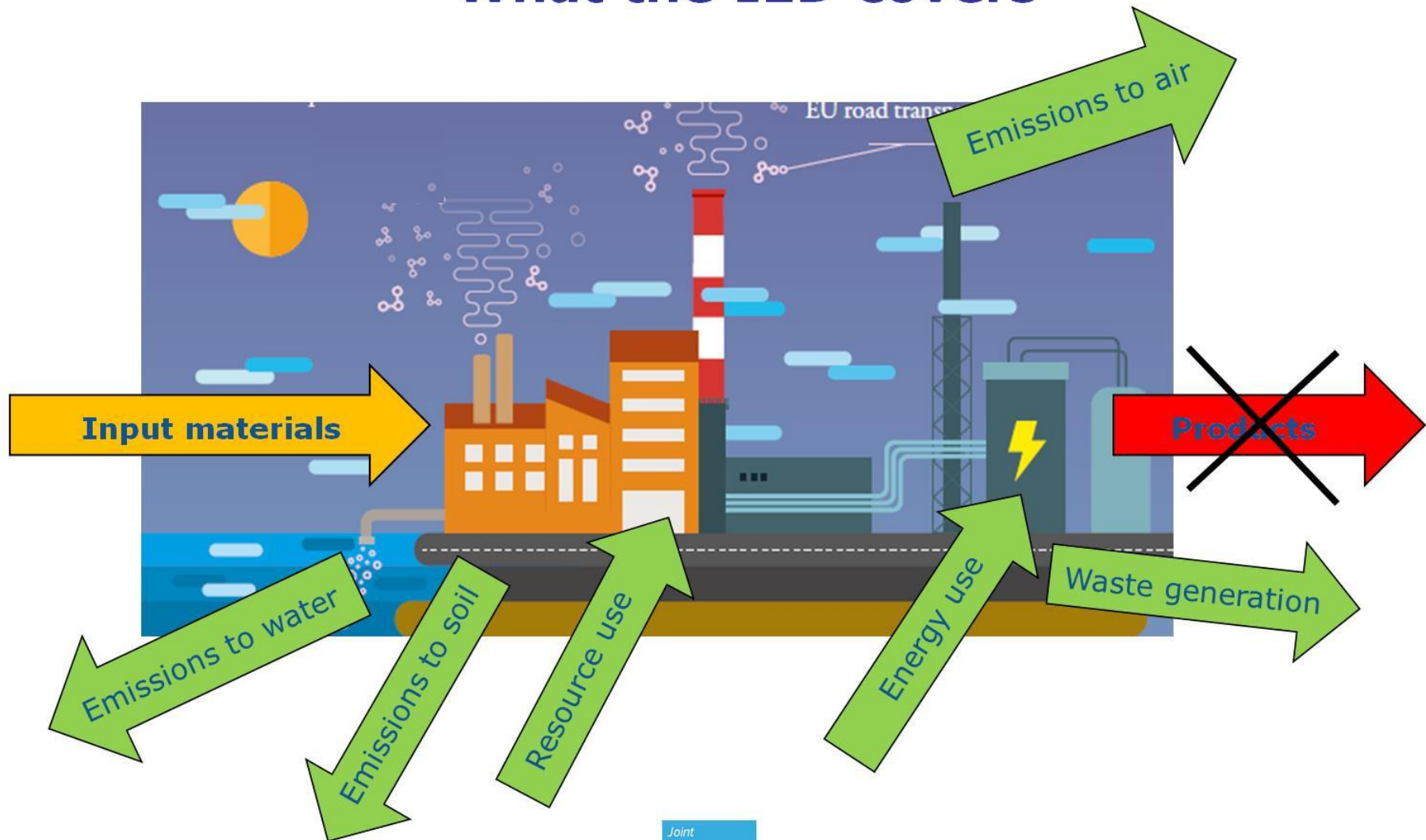
Intensive farming of pigs and poultry, Slaughterhouses and animal by-product processing, Food drink and milk processing, Surface treatment using organic solvents







# What the IED covers





## Best Available Techniques (BAT)

### Best

Most effective in achieving a **high general level of protection** of the environment as a whole

### Available

Developed on a scale to be implemented in the relevant industrial sector, **under economically and technically viable conditions**, advantages balanced against costs

### Techniques

The **technology** used *and* the way the installation is **designed, built, maintained, operated and decommissioned**



## Products and impact

### 32 BREFs

Best Available  
Techniques (BAT)  
reference documents  
(300-1300 pages each)

Cooperation with  
~ 2100 industry experts



### BAT conclusions

Consensual incl. industry  
Voted on by Member States  
Published in the OJ

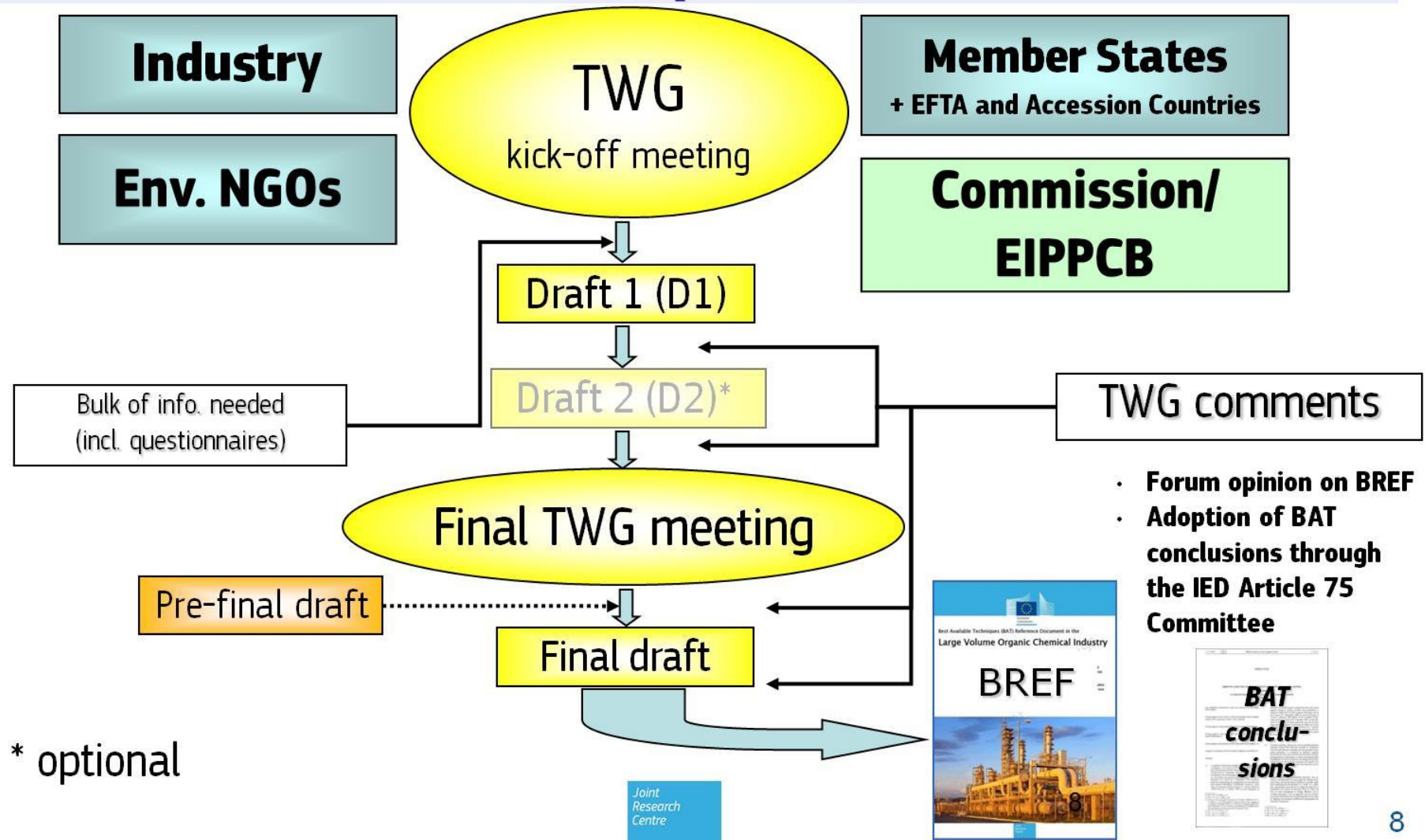


- **Driver** for improved environmental performances
- **Binding legal effects**
- **Level playing field**





# Sevilla process

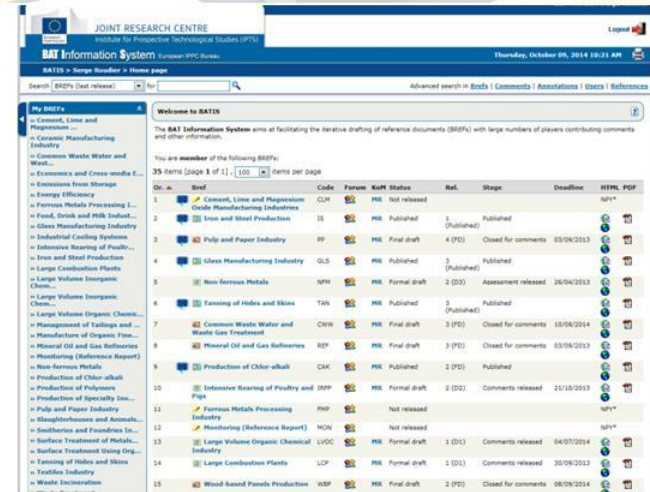




## Working method – JRC Dir. B EIPPCB-led process

- Bottom-up consensus-based approach from beginning to end
- For each BREF the techno-economic basis is researched, checked and validated with all relevant stakeholders (~80 to 230 experts: ~ half from industry)
- 2 large Technical Working Group meetings (3 to 7 days) with stakeholders are held to kick-off and conclude the work (up to 140 participants)
- Commenting rounds on draft BREFs (1000 – 8500 comments to respond to)
- TWG subgroups on complex issues
- Transparency: BATIS and publication of BREFs and BAT conclusions on the EIPPCB website

<http://eippcb.jrc.ec.europa.eu>

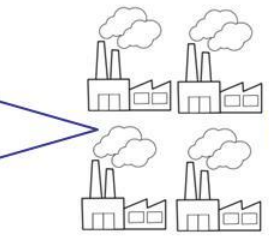


Doc. n°	BREF	Code	Format	KAT Status	Ref.	Stage	Deadline	HTML	PDF
1	Consent, Limit and Regulation	CLP	PDF	Not released					
2	Iron and Steel Production	IS	PDF	Published	3 (Published)	Published			
3	Pulp and Paper Industry	PP	PDF	Final draft	4 (FC)	Closed for comments	03/06/2013		
4	Glass Manufacturing Industry	GLS	PDF	Published	5 (Published)	Published			
5	Non-ferrous Metals	NFM	PDF	Formal draft	2 (FC)	Assessment released	26/04/2013		
6	Tanning of Hides and Skins	TAN	PDF	Published	3 (Published)	Published			
7	Common Waste Water and Waste Gas Treatment	CWW	PDF	Final draft	3 (FC)	Closed for comments	10/06/2014		
8	Mineral Oil and Gas Refineries	ROP	PDF	Final draft	3 (FC)	Closed for comments	03/06/2013		
9	Production of Chlor-alkali	CAL	PDF	Published	2 (FC)	Published			
10	Intensive Rearing of Poultry and Swine	IRPS	PDF	Formal draft	2 (FC)	Comments released	21/10/2013		
11	Non-ferrous Metals Processing	NFM	PDF	Not released					
12	Monitoring (Reference Report)	MOR	PDF	Not released					
13	Large Volume Organic Chemical Industry	LVO	PDF	Formal draft	3 (FC)	Comments released	04/07/2014		
14	Large Combustion Plants	LCP	PDF	Formal draft	3 (FC)	Comments released	30/06/2013		
15	Wood-based Panels Production	WBP	PDF	Final draft	2 (FC)	Closed for comments	08/06/2014		





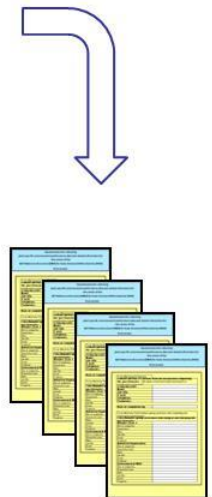
1. Installations in the EU



2. Selection of 'well-performing plants'



3. Design questionnaire



4. Collect plant-specific data

Decisions taken are based on evidence

Industry actively participates in each step



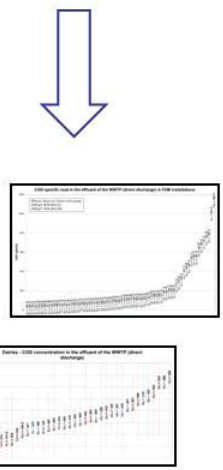
7. BREFs and BAT conclusions



6. Experts' meeting(s)



5. Processing and analysis of data/info.





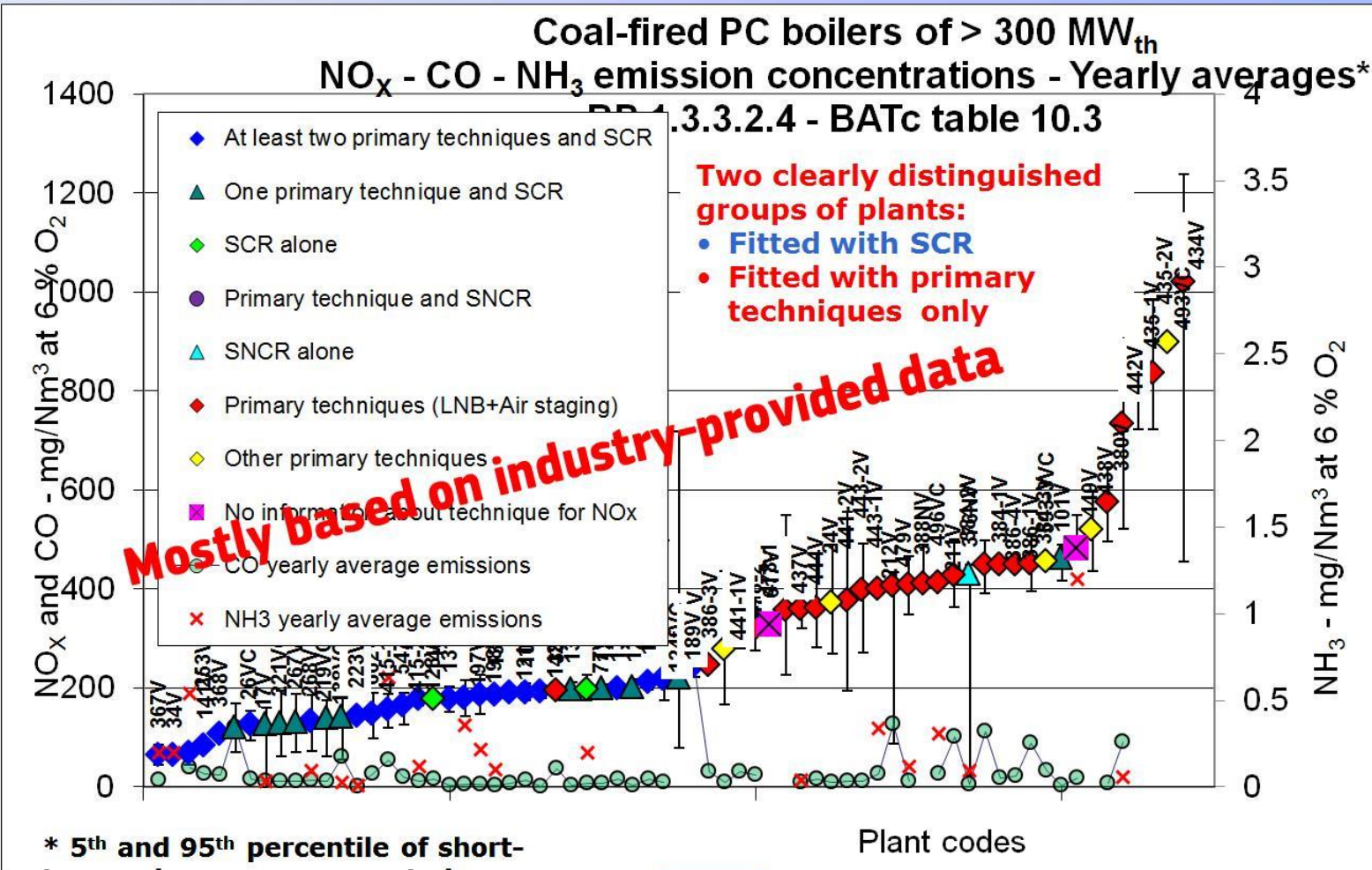
**Environmental Aspects of  
Industrial Development**  
**6 – 7 June 2018, St Petersburg**







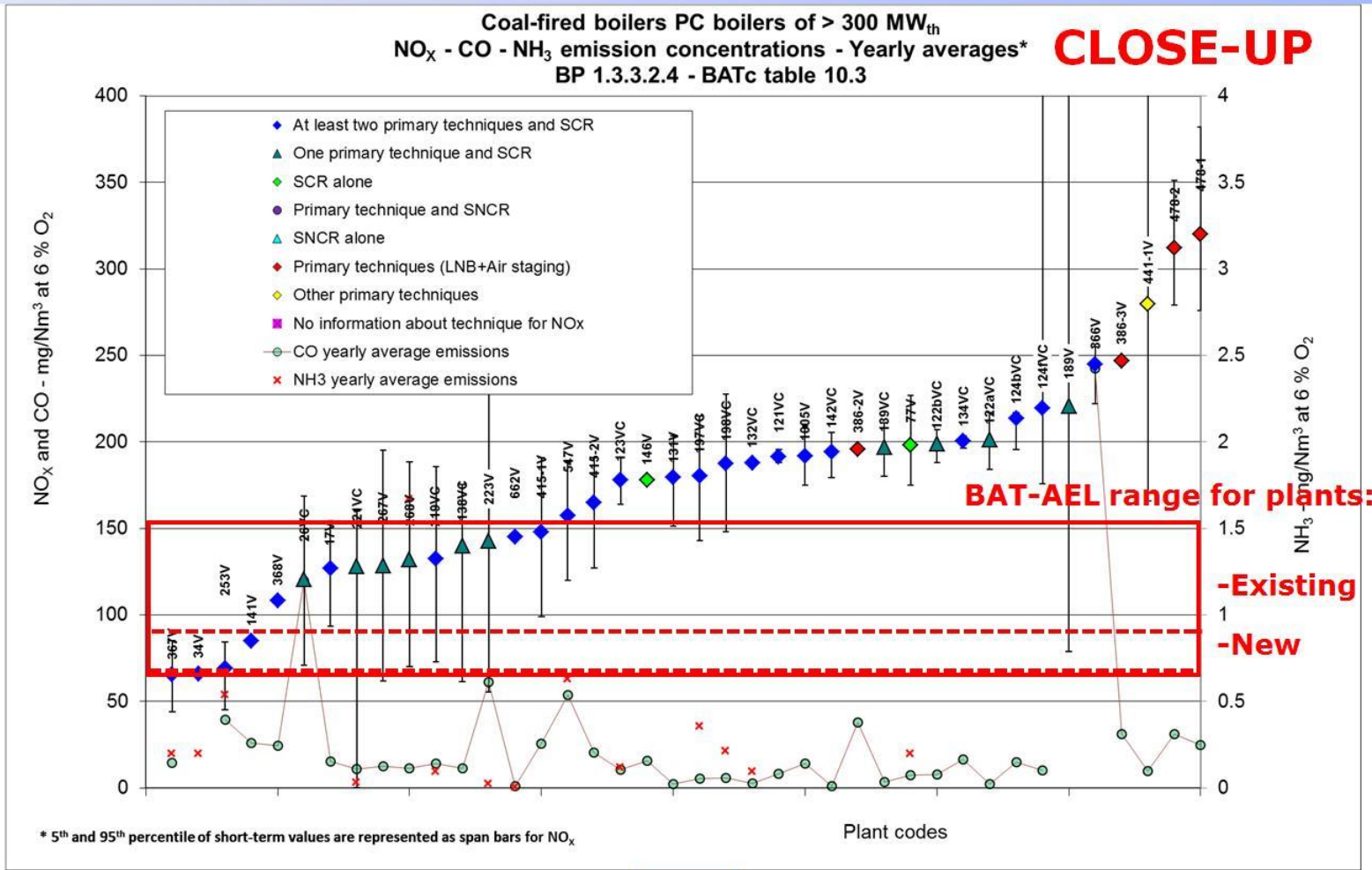
# NO<sub>x</sub> emissions from coal-fired PC boiler >300 MW<sub>th</sub>







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## **State of play concerning BREF reviews**

### **13 BAT conclusions already published:**

- Iron and Steel (IS); Glass (GLS); Tanning of Hides and Skins (TAN); Cement, Lime and Magnesium Oxide (CLM); Chlor-Alkali (CAK); Pulp, Paper and Board (PP); Refining of Mineral Oil and Gas (REF); Common Waste Water and Waste Gas Treatment/Management Systems in the Chemical Sector (CWW); Wood-Based Panels (WBP); Non-ferrous Metals (NFM); Intensive Rearing of Poultry and Pigs (IRPP); Large Combustion Plants (LCP); Large Volume Organic Chemicals (LVOC)

### **1 BAT conclusion soon to be adopted:**

- Waste Treatment (WT)

### **7 (B)REFs being worked upon:**

- Monitoring of Emissions (ROM); Food, Drink and Milk (FDM); Waste Incineration (WI); Surface Treatment using Organic Solvents/Wood Preservation with Chemicals (STS); Ferrous Metals Processing (FMP); Common Waste Gas Treatment in the Chemical Sector (WGC); Textiles (TXT)





## **Take aways**

- Highly participatory, fact-based process + consensus
- Process evolved and matured over 20 years
- Still facing several challenges
  - Involvement of equipment suppliers
  - Confidentiality issues
  - Access to economic information
- Consensus that the process is fit for purpose
- Results as good as the information and efforts invested