



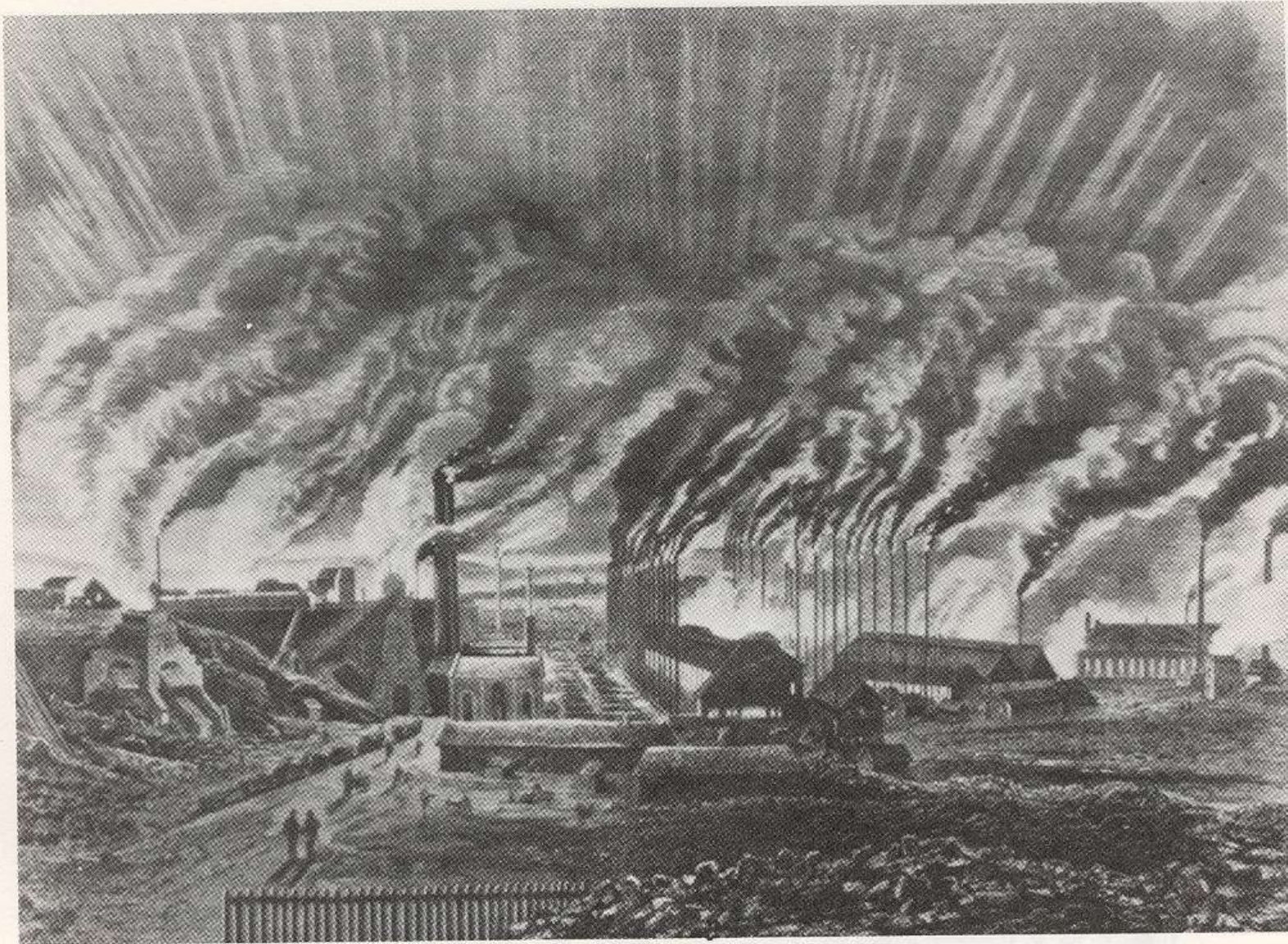
INTEGRISANO SPREČAVANJE ZAGADJENJA U REPUBLICI SRBIJI – PRIMENA IED I NEKE

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KADA JE POČELO ZAGADJENJE VAZDUHA?



- ❖ Industrijska revolucija
- ❖ Sagorevanje uglja za proizvodnju pare za pokretanje mašina
- ❖ Dim i pepeo iz peći i elektrana
- ❖ Početak izrade propisa i tehničkih rešenja (skruberi i sl.)



4000
3200
2400
1600
800
0

Smoke (micrograms per cubic metre)

Fig. 1-4. Engraving (1876) of a metal foundry refining department in the industrial Saar region of West Germany. Source: The Bettmann Archive, Inc.

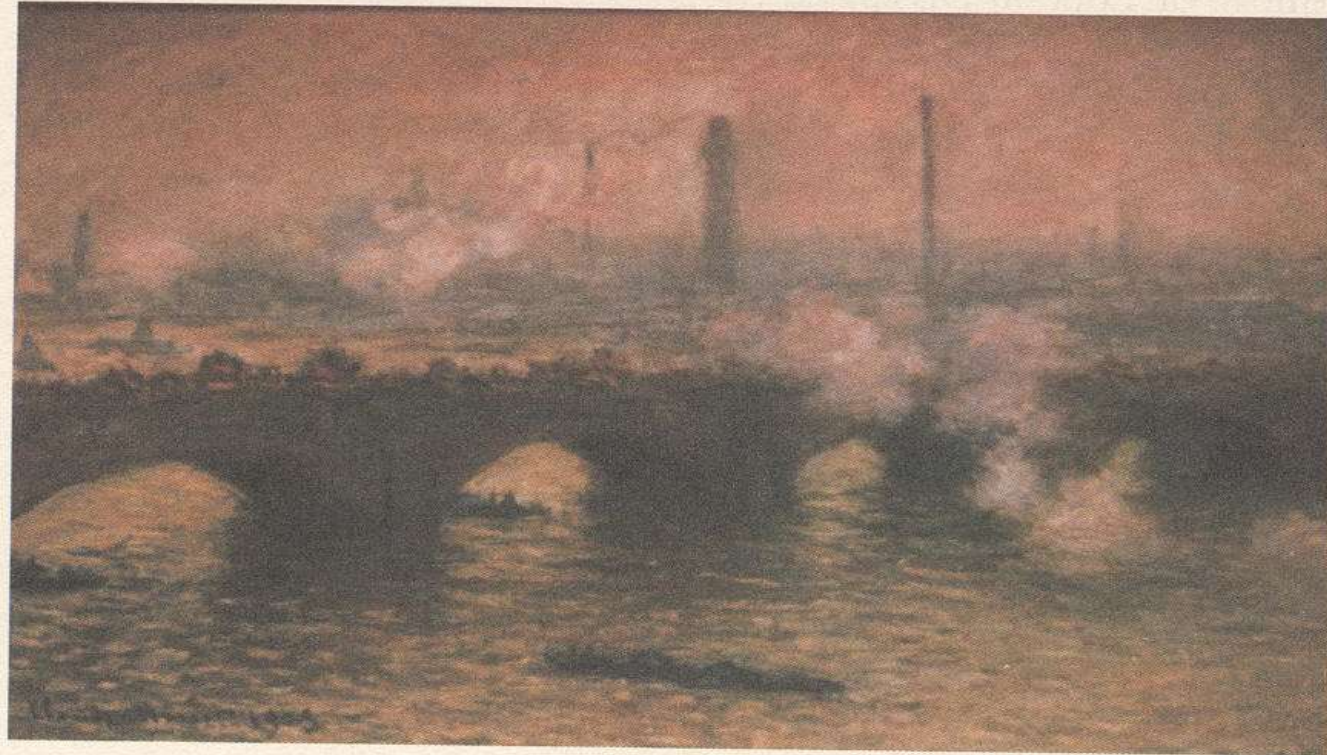
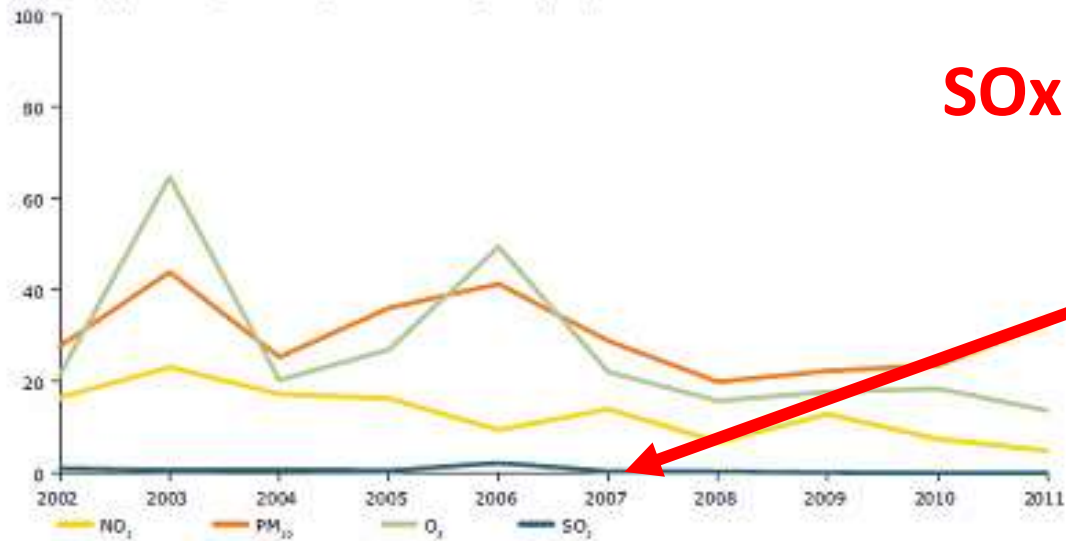


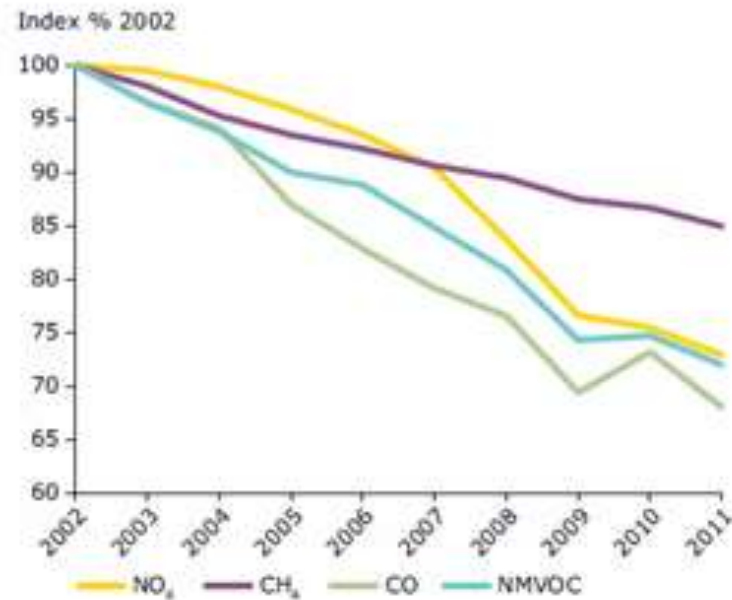
Figure 1.1: Claude Monet; 1903; "Waterloo Bridge, Gray Day," from the Chester Dale Collection. Reproduced with permission from the National Gallery of Art, Washington, DC. Note the horse buses crossing the bridge.

% of urban population exposed to air pollution exceeding EU air quality standards

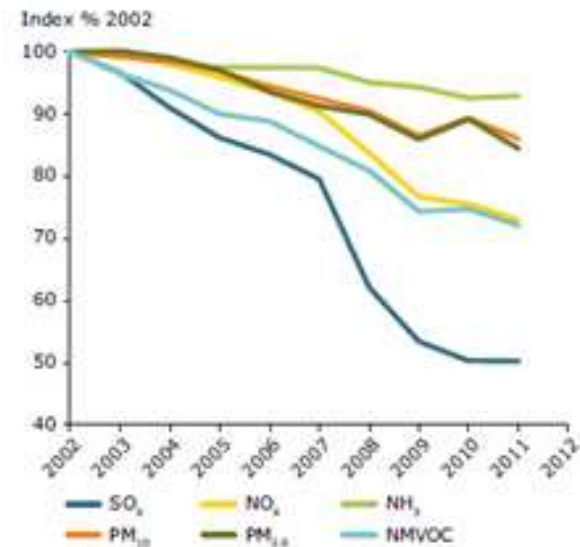


SO_x (још од 90тих незнатан)

EU Emissions of O₃ precursor gases



EU Emissions of primary PM and of PM precursor gases



И поред значајног напретка, ниво загађења ваздуха и даље има велики утицај на здравље људи

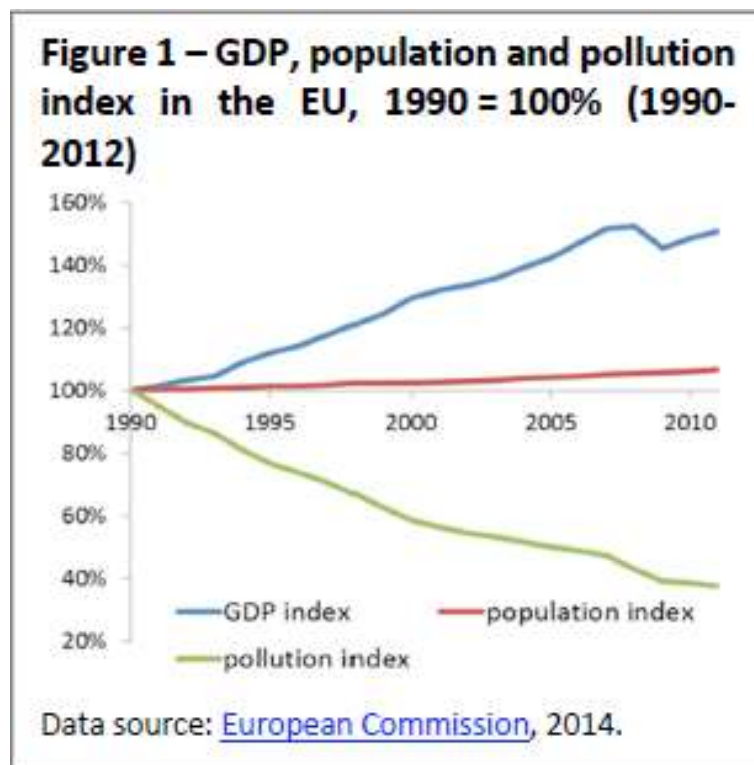
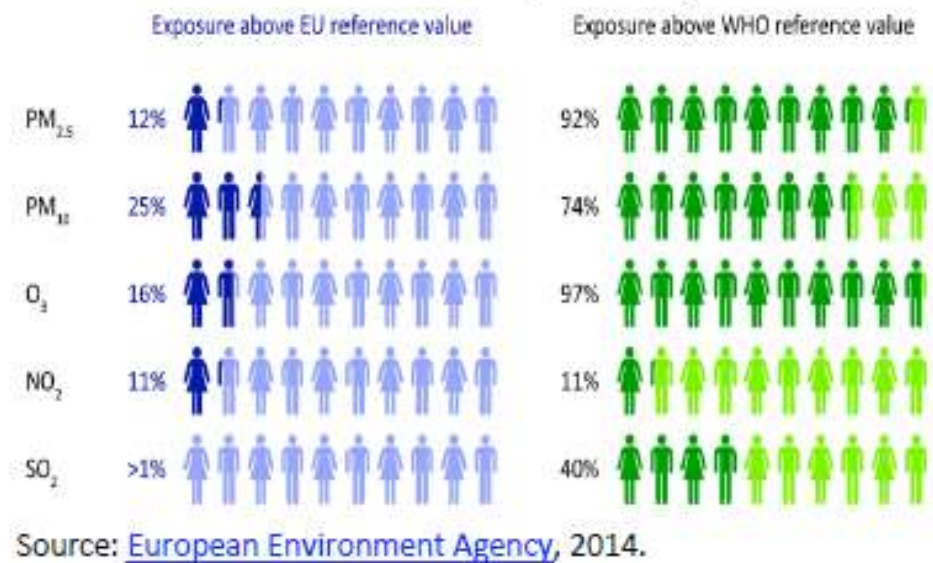


Figure 2 – Percentage of the urban population in the EU28 exposed to air pollutant concentrations above EU and WHO reference levels (2010-12)



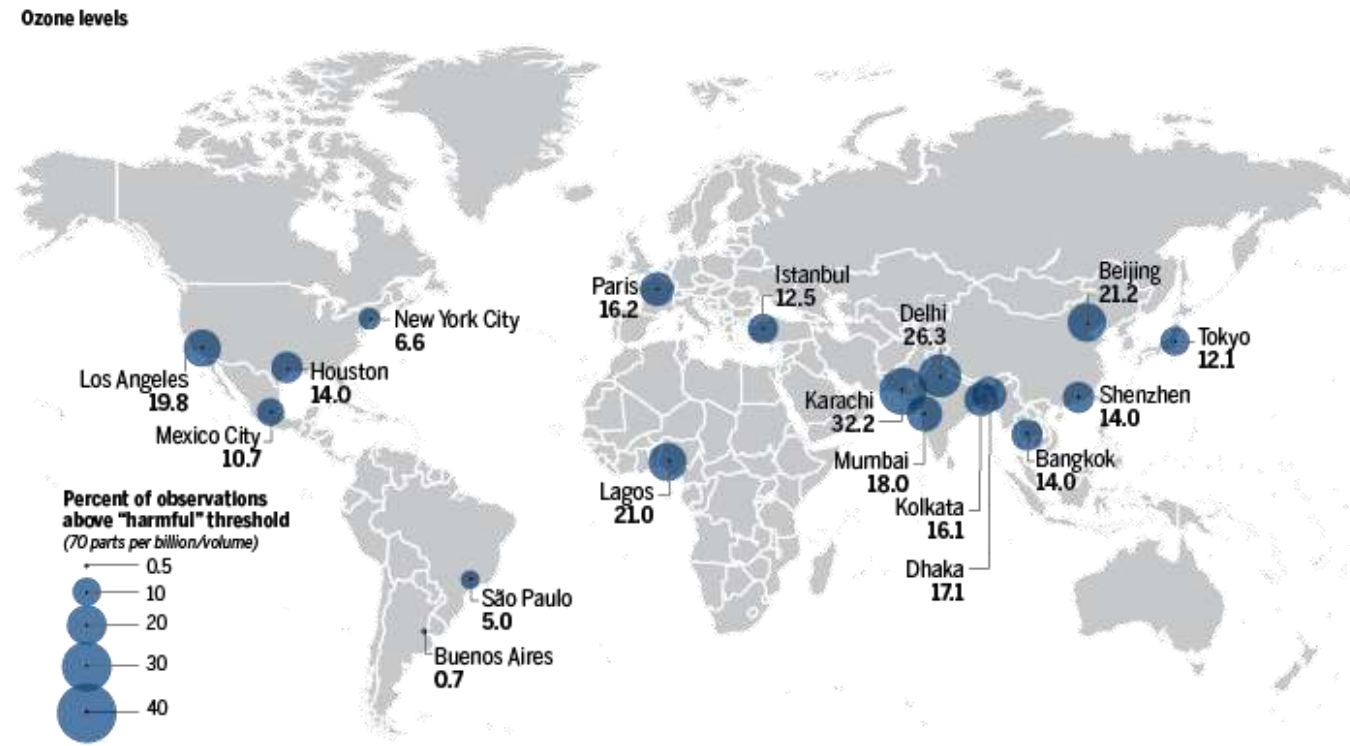
Процена је да су у току 2011. године PM_{2.5} и озон били узрок 430.000 и 16.000 превремених смртних исхода (EU28), као и да загађење ваздуха повећава ризик од разних оболења (респираторна, кардиоваскуларна, карциноми), са краткотрајним, акутним и дуготрајним, хроничним ефектима

London exceeds annual air pollution target in just five days

One site in Brixton has already surpassed hourly limits for nitrogen dioxide concentrations 24 times so far this year, according to data from King's College London's Air Quality Network- *Independent*, 6.1.2017.

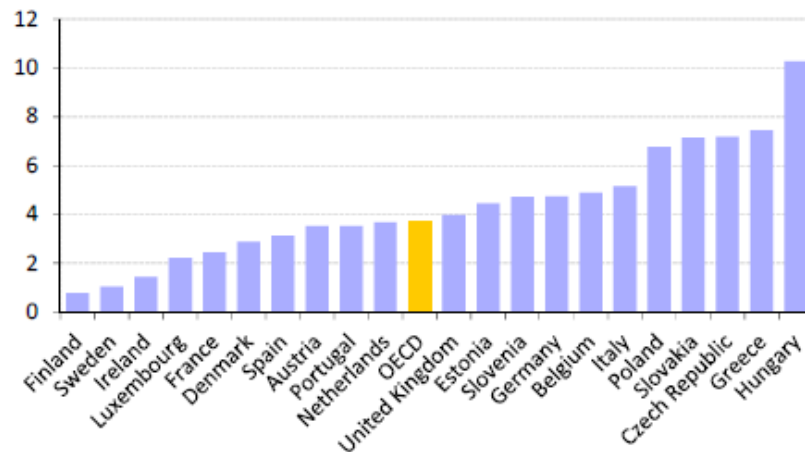
Four of world's biggest cities to ban diesel cars from their centres

Paris, Madrid, Athens and Mexico City will ban the most polluting cars and vans by 2025 to tackle air pollution – *The Guardian*, 2.12.2016.



- ЕУ Комисија процењује да здравствени трошкови који су последица загађења ваздуха износе 390 до 940 милијарди еур годишње (укљ. €15 млрд у изгубљеним радним данима, €4 млрд за здравствену заштиту, €3 млрд за изгубљене приносе усева и €1 млрд од штете на објектима)
- Земље ОЕЦД – 1.500 млрд еур годишње
- Зато је донета нова НЕЦ директива са циљевима за 2020. и 2030. годину (SO₂, NO_x, NMVOCs, NH₃, PM_{2.5}, CH₄)
- Процењено је да ће њена примена коштати око 2,2 to 3,3 млрд еур годишње.
- Ступила је на снагу, а обавеза транспоновања је до 1.7.2018.

Figure 3 – Estimated cost of air pollution as % of GDP (2010)



Data source: [OECD](#), 2015.

Figure 4 – Proposed reduction targets in EU28, compared to 2005

	2020	2030
SO ₂	-59%	-81%
NO _x	-42%	-69%
NMVOC	-28%	-50%
NH ₃	-6%	-27%
PM _{2.5}	-22%	-51%
CH ₄	/	-33%

Data source: [Commission proposal](#), 2013

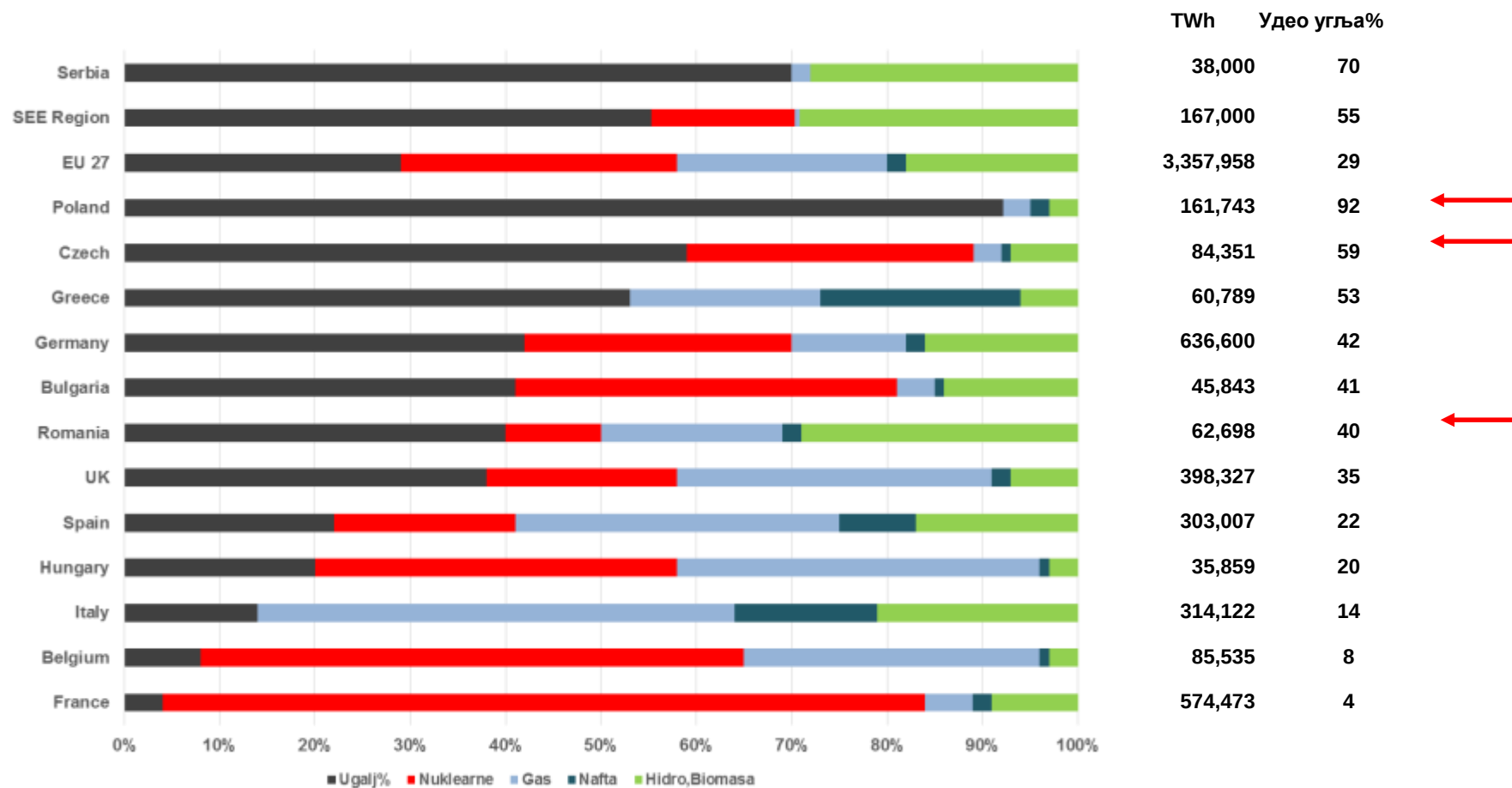
ЕЦ процењује да су користи знатно веће – најмање €40 млрд годишње и око 40.000 нових радних места као резултат ноце политике у области заштите ваздуха

Национални парламенти – коментари и примедбе

- Парламенти 15 земаља анализирали су предлог нове директиве.
- Три су изразила одређену забринутост –
- Чешки сенат и Комора делегата (законодавни одбор) у вези конкурентности компанија,
- Пољски сенат да су захтеви сувише високо постављени и много коштају
- Румунски одбор у вези са применом мера на малим фармама са захтевом за одређене олакшице.

Пажња – врло мало примедби !!

Структура производње електричне енергије из угља у неким земљама ЕУ, Југоисточне Европе и Србије



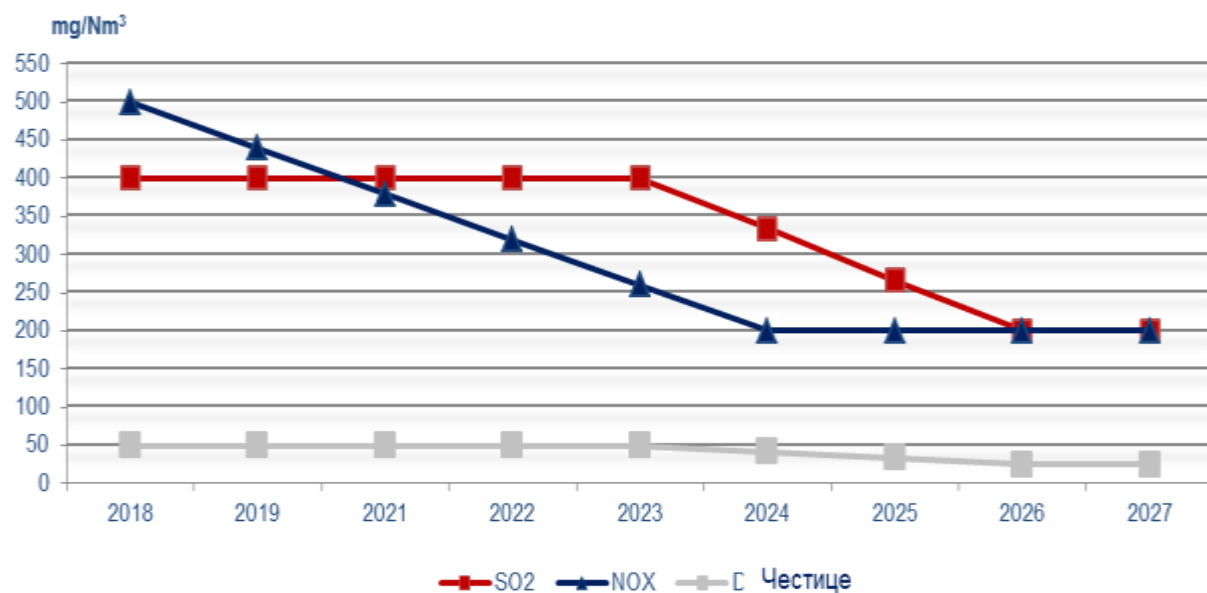
Пажња – ко се једини бунио??!!

2005 - potpisan Ugovor o osnivanju
Energetske zajednice;
2006 - ratifikovala ga Skupština
Srbije

Potpisnice ugovora su
Evropska komisija (EU) i
Albanija,
Bosna i Hercegovina,
Hrvatska,
Bivša Jugoslivenska Republika
Makedonija,
Srbija,
UMNIK,
Crna Gora ...

Moldavija,
i Ukraina



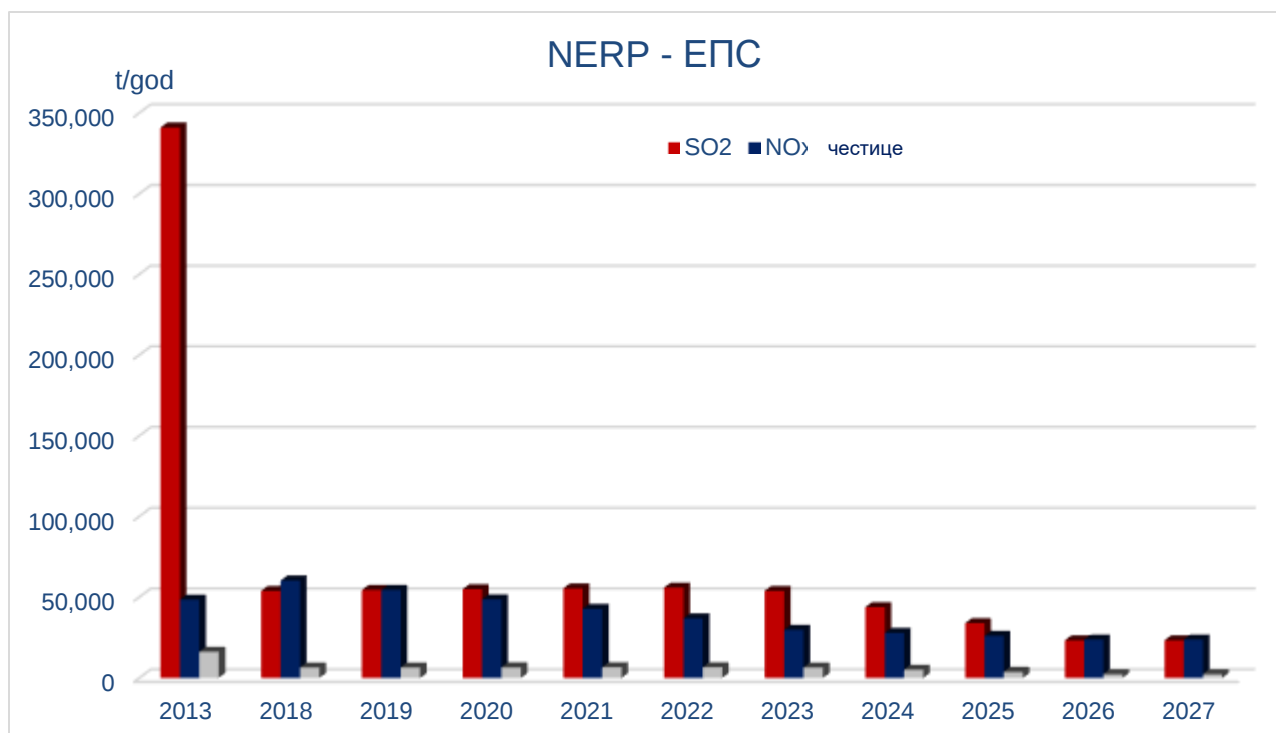


Важеће регулативе ЕУ - у делу који се односи на ограничење емисија загађујућих материја сумпор диоксида, азотних оксида и прашкастих материја у ваздух су:

- Директивом о великим ложиштима 2001/80/ЕЗ (LCP) до 2024
- Директивом о индустријским емисијама 2010/75/ЕУ (IED) до 2027

- NERP – дефинише укупан износ емисија на националном нивоу до потпуног усаглашавања са Директивом за сваку годину важења NERP-а - „балон“ - у случају да нека од постројења, применом мера у периоду важења NERP-а емитују ниже вредности од прописаних остаје простора за рад постројења на којима нису примењене мере за смањење емисија.
- Opt – out
 - У периоду важења NERP-а (од 2018 – 2023. према LCPD) омогућен је рад постројења на коме нису примењене мере за смањење емисија, у укупном трајању од 20 000 сати
- Ступио на снагу 1.1.2018.

	SO ₂ (t/god)	NO _x (t/god)	ПМ (t/god)
Остварене просечне емисије 2013.	341,058	49,966	16,399
Просечне емисије које би се оствариле у периоду 2008-2012. да су примењене мере за смањење емисија према LCPD на свим постројењима ЕПС-а	56,239	61,062	6,645
Просечне емисије које би се оствариле у периоду 2008-2012. да су примењене мере за смањење емисија према IED на свим постројењима ЕПС-а	23,383	23,751	2,365



ДСИП и преговори са ЕЦ

- Оштрије него НЕРП
- Проблем топлана – локалних самоуправа
- Индустијске енергане и примена нове МЦПД

IED JE NAJVAŽNIJI EU INSTRUMENT ZA REGULISANJE EMISIJA IZ AGRO – ENERGETSKOG – INDUSTRIJSKOG SEKTORA/POSTROJENJA

Posle IED nema vise novih GVE – samo novcane nadoknade, kao kod GHG

I kroz EnZ nam dolazi i IED i NEC brže nego što smo mislili

U sve je uključena i klima i OIE i EE

RAZVOJ IPPC PRISTUPA

**Direktiva 96/61/EC of 24 September 1996
concerning integrated pollution prevention and control**

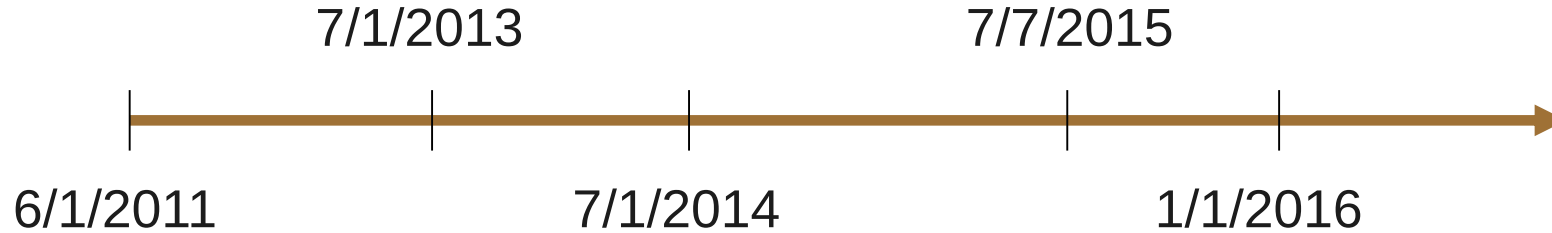


**Direktiva 2008/1/EC of 15 January 2008
Codified version**



**Directive 2010/75/EU of 24 November 2010
On industrial emissions (integrated pollution prevention and control)
(Recast)**

IED TIMELINE



- Stupila na snagu IED
- MS (zemlje članice) potpuno transponovale IED i i odmah se primenjuje za nova postrojenja
- Sva postojeća postrojenja koja su bila ranije predmet IPPC, WI, SE and TiO₂ Directives moraju da zadovolje zahteve IED.
Postojeća LCP i dalje ne moraju (poglavlje III, Annex V).
- Postojeća postrojenja koja obuhvataju i neke nove aktivnosti (npr. U oblasti insineracije, zaštite drveta i sl.) moraju da zadovolje zahteve IED
- Postojeća LCP moraju da zadovolje zahteve Chapter III and Annex V
 - **Transitional flexibilities:**
 - TNP: - 30/6/2020
 - Limited life time derogation: - 31/12/2023
 - Small isolated systems: - 31/12/2022
 - District heating: - 31/12/2019



OPERACIONA ŠEMA IED

**Sprečavanje i kontrola zagađivanja
iz industrijskih aktivnosti**



IED



Primena BAT



Dozvole su zasnovane na BAT i GVE



IED POGLAVLJE III - LCP

- ❖ 50 MW_{th} i veća
- ❖ Od 1.1.2016. zamenila LCP direktivu i primenjuje se bez obzira na odredbe BATc
- ❖ Pravilo agregacije – sve što je na jednom dimnjaku, a veće od 15MW_{th}
- ❖ GVE u aneksima, sa određenim olakšicama za ODG
- ❖ Fleksibilna primena – privremena odlaganja:
 - ❖ Tranzicioni nacionalni plan (kod nas već ušao u NERP) do 30.6.2020.
 - ❖ Opt-out do 31.12.2023.
 - ❖ Mali izolovani sistemi – sistemi sa potrošnjom do 3000GWh i snabd manje od 5%
 - ❖ Sistemi daljinskog grejanja manji od 200 MW_{th}

POGLAVLJE II - BAT ZAKLJUČCI – DO DANAS



Commission Implementing Decisions published in Official Journal:

1. **GLS:** manufacture of glass (2012/134/EU)
2. **IS:** iron and steel production (2012/135/EU)
3. **TAN:** tanning of hides and skins (2013/84/EU)
4. **CLM:** production of cement, lime & magnesium oxide (2013/163/EU)
5. **CAK:** production of chlor-alkali (2013/732/EU)
6. **PP:** production of pulp, paper & board (2014/687/EU)
7. **REF:** refining of mineral oil & gas (2014/738/EU plus 2014/768/EU)
8. **CWW:** Common waste water and Waste Gas Treatment (2016/902/EU)
9. **WBP :** Wood-based Panels production (2015/2119/EU)
10. **NFM :** Non-Ferrous Metals Industries (2016/1032/EU)
11. **LCP:** Large Combustion Plants (2017/1442/EU)

Forthcoming BREFs / BAT conclusions:

- IRPP (Intensive Rearing of Poultry or Pigs)

Ongoing 5 BREF reviews: Food Drink and Milk (FDM), Large Volume Organic Chemicals (LVOC), Surface treatment using organic solvents (STS), Waste Incineration (WI) and waste Treatment (WT)

RAZLIKA IED, ENERGETIKA (POGL III) I BAT CONCL. (PREMA POGL II)



GVE za sve TE >1000 MWth

	BAT AELs (mg/Nm ³)		IED CHAP III (Annex V) (mg/Nm ³)
	Yearly average	Daily average or average over the sampling period	
SO ₂	130	205	200
NO _x	175	220	200
CO	< 30-100 (¹)	-	-
Dust	8	14	20

GVE za sve TE > 300 MWth a manje od 1000

	BAT AELs (mg/Nm ³)		IED CHAP III (Annex V) (mg/Nm ³)
	Yearly average	Daily average or average over the sampling period	
SO ₂	130	205	200
NO _x	175	220	200
CO	< 30-100 (¹)	-	-
PM	12	20	20

GVE za sve TE > 100 MWth a manje od 300

	BAT AELs (mg/Nm ³)		IED CHAP III (Annex V) (mg/Nm ³)
	Yearly average	Daily average or average over the sampling period	
SO ₂	200	250	250
NO _x	180	210	200
CO	140	-	-
PM	14	25	25



INSINERACIJA OTPADA- POGL IV

- u RS preneti stara Direktiva o insineraciji otpada 2000/76
- WI u IED se odnosi na insineraciju i ko-insineraciju čvrstog i tečnog otpada
- Uvedeni novi postupci kao termički tretman – gasifikacija i piroliza
- **važna odredba koje se odnosi na gasifikaciju i pirolizu:** ne odnosi se na gasove koji ne izazivaju emisije veće od sagorevanja prirodnog gasa
- Ako su piroliza ili gasifikacija termički tretman otpada, onda se i one i dalje sagorevanje produkata tretira kao insineracija

Postoje izuzetci kao i u ranijoj direktivi

Izveštavanje – posebne odredbe za postrojenja manja od 2t/h

PRILOG I - NEKE DRUGE VAŽNE ODREDBE

IED – OBUHVATA I PRESTANAK AKTIVNOSTI (ART. 22)

Baseline report

- Required where relevant hazardous substances are used or produced
- Contains information on the state of soil and groundwater contamination by hazardous substances
- Criteria for content to be established in COM guidance

Site closure / remediation

- Once activity stops operating: operator assesses the state of soil and groundwater contamination and compares with baseline report
- Where significant pollution: operator shall take necessary measures so as to return the site to the “baseline” state
- Where significant risk to human health and the environment: operator shall take necessary actions aimed at the removal, control, containment or reduction of relevant hazardous substances, so that the site ceases to pose significant risk

IED – ENVIRONMENTAL INSPECTIONS (ART. 23)

environmental inspection plan at national, regional or local level covering all installations

routine environmental inspections, incl. frequency of site visits

- Frequency: determined on the basis of risk appraisal of installations, but minimum yearly (highest risk) up to 3-yearly (lowest risk)
- Criteria: potential/actual impacts, compliance track, EMAS, ...
- If inspection has identified important case of non-compliance: additional site visit within 6 months

Non-routine environmental inspections

- serious environmental complaints, serious environmental accidents, incidents and occurrences of non-compliance,
and before granting/reconsidering/updating permit

Following each site visit: **report** to be notified to operator concerned within 2 months and made publicly available within 4 months of site visit

IED – ACCESS TO INFORMATION (ART. 24)

The competent authority shall make available to the public via the **Internet** the following information:

- the content of the decision, including a copy of the permit and any subsequent updates;
- the reasons on which the decision is based;
- where a derogation is granted in accordance with Article 15(4), the specific reasons for that derogation based on the criteria laid down in that paragraph and the conditions imposed

VEZA SA DRUGIM INSTRUMENTIMA 1

1. Veza sa zagadjenjem vazduha na nacionalnom nivou:

- Direktiva o kvalitetu vazduha (+ 4th daughter directive)
- NEC Direktiva

2. Veza sa tačkastim izvorima emisije

- Stacionarni izvori => IED
- Mobilni izvori (saobraćaj)

3. Veza sa odredbama ugovora o pridruživanju (transiciona odlaganja i prelazni granični nivoi)

Environmental quality standards for the purposes of Ambient Air Quality Directive 2008/50/EC

- Article 18 IED

Environmental quality standards

Where an environmental quality standard requires stricter conditions than those achievable by the use of the best available techniques, additional measures shall be included in the permit, without prejudice to other measures which may be taken to comply with environmental quality standards.

- Issue of Transitional National Plans (Article 32 IED)

VEZA SA DRUGIM INSTRUMENTIMA 2

Slučajevi preliminarne odluke u NEC Directive u odnosu na IPPC Directive (Joined Cases C-165/09 to C-167/09)

The IPPC Directive must be interpreted as meaning that, when granting an environmental permit for the construction and operation of an industrial installation, MS are not obliged to include among the conditions for grant of that permit the national emission ceilings for SO₂ and NO_x laid down by the NEC Directive, whilst they must comply with the obligation arising from that Directive to adopt or envisage, within the framework of national programmes, appropriate and coherent policies and measures capable of reducing, as a whole, emissions of inter alia those pollutants to amounts not exceeding the ceilings laid down in Annex I.

VEZA SA DRUGIM INSTRUMENTIMA 3

- Intermediate emission ceilings for large combustion plants, laid down in the Accession Treaty (applicable for BG, LT, PL and RO, during the period of transitional derogations)
- E-PRTR Regulation: reporting!
- Environmental Impact Assessment Directive (2011/92/EU): possible coordinated approach, stipulated by both directives

PRILOG II - OSNOVNI POJMOVI I OSNOVNO O IPPC I IED

IED JE NAJVAŽNIJI EU INSTRUMENT ZA REGULISANJE EMISIJA IZ AGRO – ENERGETSKOG – INDUSTRIJSKOG SEKTORA/POSTROJENJA

Covers around 50,000 installations which are required to operate in accordance with permits issued by MS competent authorities.

Permit conditions are to include:

- emission limit values (ELVs) for all relevant pollutants - Annex II
- ELVs based on the use of the Best Available Techniques (BAT)

Posle IED nema vise novih GVE – samo novcane nadoknade, kao kod GHG

THE EUROPEAN INDUSTRIAL EMISSIONS DIRECTIVE 1/3

Key instrument for minimising emissions and consumptions from most industrial activities

General framework:

- **The purpose is to prevent (minimise) pollution**
- **Achieve a high level of protection for the environment as a whole**
- **Installations must be operated according to an **integrated permit** issued by competent authorities, containing **emission limit values** based on **Best Available Techniques (BAT)****

THE EUROPEAN INDUSTRIAL EMISSIONS DIRECTIVE 2/3

➡ It amends existing legislation concerning industrial emissions:

- **IPPC directive**
- **Large Combustion Plants (LCP) Directive 2001/80/EC**
- **Waste Incineration Directive 200/76/EC**
- **Directive on VOC emissions from solvents 199/13/EC**
- **Directives related to the titanium dioxide industry 78/176, 82/883 and 92/112**
- **European Pollutant Release and Transfer Register (E-PRTR) Regulation 166/2006**

THE EUROPEAN INDUSTRIAL EMISSIONS DIRECTIVE 3/3

➡ The driving forces of the new Industrial Emissions Directive:

- **Prevent emissions at source or, where that is not practicable, reducing emissions from industrial activities**
- **Implement the Best Available Techniques (BAT)**
- **Assure compliance enforcement and environmental improvements**
- **Provide a level playing field in the European Union by aligning environmental performance requirements for industrial installations**

THE INTEGRATED POLLUTION PREVENTION AND CONTROL SYSTEM

- ➡ It should protect the environment as a whole, avoiding shifting pollution from one environmental medium to another
- ➡ The control system is addressed to prevent or reduce:
 - **air emissions**
 - **water emissions**
 - **production of waste**
 - **energy consumption, noise emissions, consumption of natural resources, etc.**
- ➡ It should ensure:
 - **protection of the soil and ground water**
 - **return of the industrial site to the initial state upon cessation of activities**
 - **appropriate management of the waste generated by the installation**

CATEGORIES OF ACTIVITIES COVERED

➤ Activities covered by the IPPC Directive 96/61/EC (six main categories):

- **Energy industry**
- **Production and processing of metals (ferrous, non-ferrous, surface treatment)**
- **Mineral industry (cement, lime, magnesium, asbestos, glass, ceramic products)**
- **Chemical industry (organic, inorganic, fertilisers, pharmaceutical products, plant protection products, biocides, explosives)**
- **Waste management (disposal, recovery, landfills, storage)**
- **Other activities (e.g. pulp and paper, tanning of hides, intensive rearing of poultry and pigs, slaughterhouses, production of food products, surface treatment of substances)**

➤ In general, threshold values are given for the activities falling under the scope of the Industrial Emissions Directive.

- **Production capacities or outputs (e.g. tonnes/h; tonnes/day; m³/day, thermal input in MW, number of animals, etc.)**

➤ It covers about 50000 installations (industrial and agricultural)

NEW SECTORS COVERED BY THE INDUSTRIAL EMISSIONS DIRECTIVE (IED)

➤ Extension of activities already covered:

- Wood-based panels (strand board, particleboard, fibreboard) with production capacity exceeding 600 m³ per day
- Production of food from animal and vegetable raw materials, both in combined and separate products with a specified finished production capacity.

➤ New activities:

- Capture of CO₂ streams from installations covered by the IED
- Preservation of wood and wood products with chemicals, with a production capacity exceeding 75 m³
- Independently operated treatment of waste water not covered by Directive 91/271/EEC (concerning urban waste-water treatment)

THE BASIS TO DETERMINE BEST AVAILABLE TECHNIQUES

➡ Article 13(1) of Industrial Emissions Directive 2010/75/EC:

■ “In order to draw up, review and, where necessary, update **BAT reference documents**, the Commission shall organise an exchange of information between Member States, the industries concerned, non-governmental organisations promoting environmental protection and the Commission”

➡ The exchange of information should address:

- the performance of installations and techniques in terms of emissions and consumptions, etc.
- the techniques used, associated monitoring, economic and technical viability, etc.
- best available techniques and emerging techniques identified after considering all the issues concerned

BREF I BAT CONCLUSIONS

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

Best available techniques Reference document (BREFs) developed under the IPPC Directive and the IED		Code	Adapted/Published Document	Formal draft (*)	Meeting report	Estimated review start (**)
	Ceramic Manufacturing Industry	CER	BREF (06.2007)			
	Common Waste Water and Waste Gas Treatment/ Management Systems in the Chemical Sector	CWW	BATC (04.2016) BREF			
	Common Waste Gas Treatment in the Chemical Sector	WGC			MR (09.2017)	Drawing up started
	Emissions from Storage	EFS	BREF (07.2006)			
	Energy Efficiency	ENE	BREF (02.2009)			
	Ferrous Metals Processing Industry	FMP	BREF (12.2001)		MR (11.2016)	
	Food, Drink and Milk Industries	FDW	BREF (08.2006)	DS (01.2017)	MR (10.2014)	
	Industrial Cooling Systems	ICS	BREF (12.2001)			
	Intensive Rearing of Poultry or Pigs	IRPP	BATC (07.2017) BREF			
	Iron and Steel Production	IS	BATC (03.2012) BREF			
	Large Combustion Plants	LCP	BATC (07.2017) BREF			
	Large Volume Inorganic Chemicals - Ammonia, Acids and Fertilisers	LVIC-AAF	BREF (08.2007)			
	Large Volume Inorganic Chemicals - Solids and Others Industry	LVIC-S	BREF (08.2007)			
	Manufacture of Glass	GLS	BATC (03.2012) BREF			

	Manufacture of Organic Fine Chemicals	OFC	BREF (08.2006)			
	Non-ferrous Metals Industries	NFI	BATC (06.2016) BREF			
	Production of Cement, Lime and Magnesium Oxide	CLM	BATC (04.2013) BREF			
	Production of Chlor-alkali	CAR	BATC (12.2019) BREF			
	Production of Large Volume Organic Chemicals	LVOG	BATC (12.2017) BREF			
	Production of Polymers	POL	BREF (05.2007)			
	Production of Pulp, Paper and Board	PP	BATC (09.2014) BREF			
	Production of Speciality Inorganic Chemicals	SIC	BREF (08.2007)			
	Refining of Mineral Oil and Gas	REF	BATC (10.2014) BREF			
	Slaughterhouses and Animals By-products Industries	SA	BREF (05.2003)			30.17/2018
	Smelteries and Foundries Industry	SF	BREF (05.2005)			
	Surface Treatment Of Metals and Plastics	STM	BREF (08.2006)			
	Surface Treatment Using Organic Solvents (including Wood and Wood Products Preservation with Chemicals)	STS	BREF (08.2007)	DS (10.2017)	MR (11.2015)	
	Tanning of Hides and Skins	TAN	BATC (02.2013) BREF			
	Textiles Industry	TET	BREF (07.2002)			Review started
	Waste Incineration	WI	BREF (08.2006)	DS (09.2017)	MR (01.2015)	

BREF — BAT CONCLUSIONS — ENERGETSKI SEKTOR



JRC SCIENCE FOR POLICY REPORT

Best Available Techniques (BAT) Reference Document for Large Combustion Plants

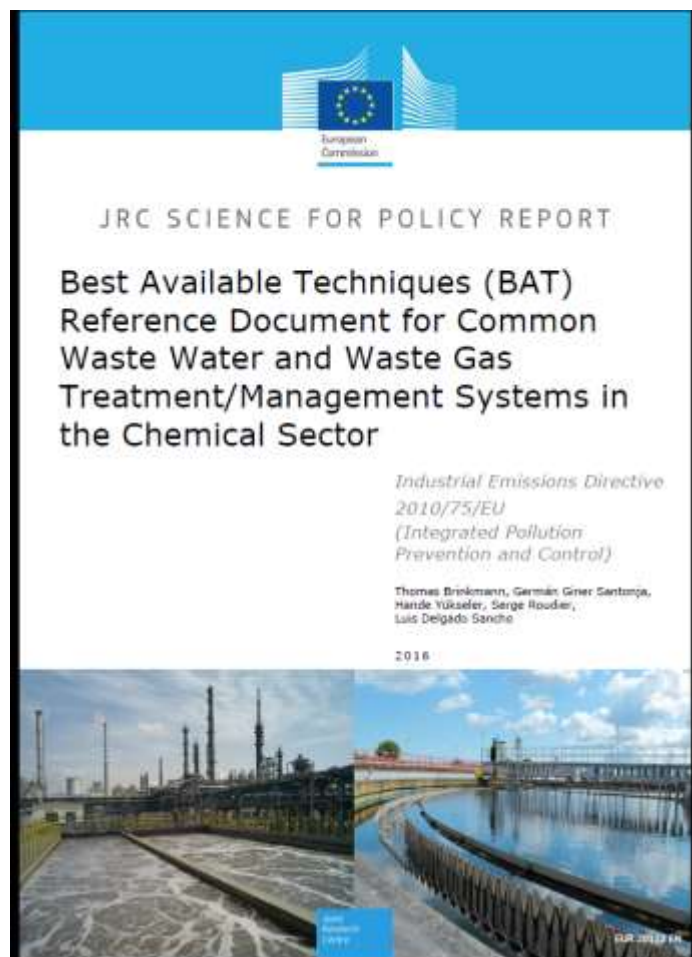
*Industrial Emissions Directive
2010/75/EU
(Integrated Pollution
Prevention and Control)*

Thierry Lecomte, José Félix Ferreira de la
Fuente, Frederik Neuwahl, Michele Carrova,
Antoine Pinasseau, Ivan Jankov,
Thomas Brinkmann, Serge Roudier,
Luis Delgado Sancho

2017



BREF — BAT CONCLUSIONS — DRUGI SEKTORI



9.6.2016



Official Journal of the European Union

L 152/23

DECISIONS

COMMISSION IMPLEMENTING DECISION (EU) 2016/902

of 30 May 2016

establishing best available techniques (BAT) conclusions, under Directive 2010/75/EU of the European Parliament and of the Council, for common waste water and waste gas treatment/management systems in the chemical sector

(notified under document C(2016) 3127)

(Text with EEA relevance)

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions (integrated pollution prevention and control) ⁽¹⁾, and in particular Article 13(5) thereof,

Whereas:

- (1) Best available techniques (BAT) conclusions are the reference for setting permit conditions for installations covered by Chapter II of Directive 2010/75/EU. The competent authorities should set emission limit values which ensure that, under normal operating conditions, emissions do not exceed the emission levels associated with the best available techniques as laid down in the BAT conclusions.
- (2) The forum composed of representatives of Member States, the industries concerned and non-governmental organisations promoting environmental protection, established by Commission Decision of 16 May 2011 ⁽²⁾, provided the Commission with its opinion on the proposed content of the BAT reference document on 24 September 2014. That opinion is publicly available.
- (3) The BAT conclusions set out in the Annex to this Decision are the key element of that BAT reference document.

BREF — BAT CONCLUSIONS — DRUGI SEKTORI



8.3.2012

EN

Official Journal of the European Union

L 70/63

COMMISSION IMPLEMENTING DECISION

of 28 February 2012

establishing the best available techniques (BAT) conclusions under Directive 2010/75/EU of the European Parliament and of the Council on industrial emissions for iron and steel production

(notified under document C(2012) 903)

(Text with EEA relevance)

(2012/135/EU)

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions (integrated pollution prevention and control) (*), and in particular Article 13(5) thereof,

Whereas:

(1) Article 13(1) of Directive 2010/75/EU requires the Commission to organise an exchange of information on industrial emissions between it and Member States, the industries concerned and non-governmental organisations promoting environmental protection in order to facilitate the drawing up of best available techniques

(4) In accordance with Article 14(3) of Directive 2010/75/EU, BAT conclusions are to be the reference for setting the permit conditions for installations covered by Chapter 2 of that Directive.

(5) Article 15(3) of Directive 2010/75/EU requires the competent authority to set emission limit values that ensure that, under normal operating conditions, emissions do not exceed the emission levels associated with the best available techniques as laid down in the decisions on BAT conclusions referred to in Article 13(5) of that Directive.

(6) Article 15(4) of Directive 2010/75 provides for derogations from the requirement laid down in Article 15(3) only where the costs associated with the achievement of emissions levels disproportionately outweigh the environmental benefits due to the geographical location, the local environmental conditions or the technical character-

BREF — BAT CONCLUSIONS — DRUGI SEKTORI



JRC SCIENCE AND POLICY REPORTS

Best Available Techniques (BAT) Reference Document for the Refining of Mineral Oil and Gas

*Industrial Emissions Directive
2010/75/EU
(Integrated Pollution
Prevention and Control)*

Pascal Barthe, Michel Chaugny, Serge Roudier,
Luc Delgado Sancho

2015



L 307/38

EN

Official Journal of the European Union

28.10.2014

DECISIONS

COMMISSION IMPLEMENTING DECISION

of 9 October 2014

establishing best available techniques (BAT) conclusions, under Directive 2010/75/EU of the European Parliament and of the Council on industrial emissions, for the refining of mineral oil and gas

(notified under document C(2014) 7155)

(Text with EEA relevance)

(2014/718/EU)

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions (integrated pollution prevention and control) (*), and in particular Article 13(5) thereof,

Whereas:

- (1) Article 13(1) of Directive 2010/75/EU requires the Commission to organise an exchange of information on industrial emissions between it and Member States, the industries concerned and non-governmental organisations promoting environmental protection in order to facilitate the drawing up of best available techniques (BAT) reference documents as defined in Article 13(1) of that Directive.
- (2) In accordance with Article 13(2) of Directive 2010/75/EU, the exchange of information is to address the performance of installations and techniques in terms of emissions, expressed as short- and long-term averages, where appropriate, and the associated reference conditions, consumption and nature of raw materials, water consumption, use of energy and generation of waste and the techniques used, associated monitoring, cross-media effects, economic and technical viability and developments therein and best available techniques and emerging techniques identified after considering the issues mentioned in points (a) and (b) of Article 13(2) of that Directive.

ZA NEKE SEKTORE SAMO BREF



EUROPEAN COMMISSION

Integrated Pollution Prevention and Control
Reference Document on
Best Available Techniques in the Smitheries and
Foundries Industry
May 2005

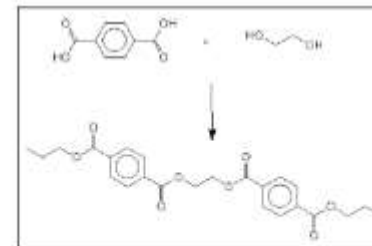


EUROPEAN COMMISSION

Reference Document on
Best Available Techniques in the Production of

Polymers

August 2007



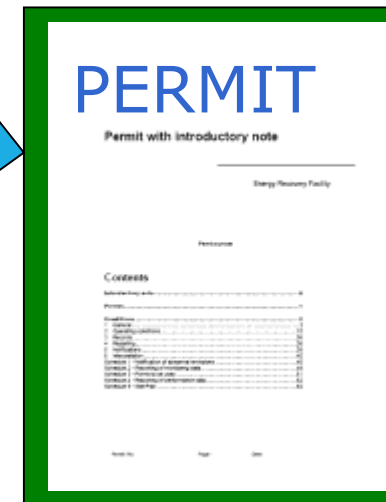
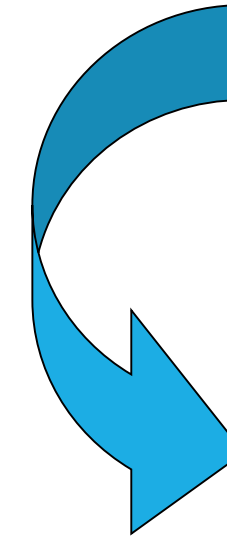
ROLE OF BAT CONCLUSIONS IN PERMITTING

a) BAT conclusions are the reference for setting permit conditions

b) Within 4 years, permits should contain emission limit values (ELVs) for polluting substances (Annex II)

c) *Topics (depends on sector) covered among others :*

- Water use / reuse
- Waste water management
- Emissions to soil and groundwater



ŠTA SADRŽE BREF/BAT CONCLUSIONS

DECISIONS COMMISSION IMPLEMENTING DECISION (EU) 2017/1442 of 31 July 2017 establishing best available techniques (BAT) conclusions, under Directive 2010/75/EU of the European Parliament and of the Council, for large combustion plants (notified under document C(2017) 5225) (Text with EEA relevance)

Prvi problem – ne pokrivanje cele oblasti direktive ili dela direktive

These BAT conclusions concern the following activities specified in Annex I to Directive 2010/75/EU:

1.1: Combustion of fuels in installations with a total rated thermal input of 50 MW or more, only when this activity takes place in combustion plants with a total rated thermal input of 50 MW or more.

1.4: Gasification of coal or other fuels in installations with a total rated thermal input of 20 MW or more, only when this activity is directly associated to a combustion plant.

5.2: Disposal or recovery of waste in waste co-incineration plants for non-hazardous waste with a capacity exceeding 3 tonnes per hour or for hazardous waste with a capacity exceeding 10 tonnes per day, only when this activity takes place in combustion plants covered under 1.1 above.

SADRŽAJ BREF/BAT ZAKLJUČAKA/1

1. OPŠTI BAT ZAKLJUČCI

- 1.1. Sistemi upravljanja životnom sredinom
- 1.2. Monitoring
- 1.3. Opšta karakteristike životne sredine i sagorevanja
- 1.4. Energetska efikasnost
- 1.5. Potrošnja vode i emisije u vodu
- 1.6. Upravljanje otpadom
- 1.7. Emisija buke

2-4. BAT Zaključci za sagorevanje čvrstih goriva, odredjnih/fosilnih tečnih goriva, prirodnog gasa – kotlovi, motori, gasne turbine,

Problem – energetska efikasnost – dosta visok zahtev za postojeća postrojenja

Problem - Emisije SO_x, NO_x, čestica, teških metala, žive, N₂O i CO u vazduh – niže vrednosti od onih u IED za postrojenja za sagorevanje

SADRŽAJ BREF/BAT ZAKLJUČAKA/2

Ostali BAT zaključci

4.2. BAT Zaključci za sagorevanje procesnih gasova iz industrije gvoždja i čelika

4.3. BAT Zaključci za sagorevanje gasovitih i/ili tečnih goriva na pomorskim platformama

5. BAT ZAKLJUČCI ZA UREĐAJE NA VIŠE VRSTA GORIVA

5.1. BAT Zaključci za sagorevanje procesnih goriva iz hemijske industrije

6. BAT ZAKLJUČCI ZA KO-SAGOREVANJE OTPADA

7. BAT ZAKLJUČCI ZA GASIFIKACIJU

Ostala poglavlja Odluke o BAT Zaključcima

8. OPIS TEHNIKA

8.1. Opšte tehnike

8.2. Tehnike za povećanje energetske efikasnosti

8.3. Tehnike za smanjivanje emisija NO_x i/ili CO u vazduh

8.4. Tehnike za smanjenje emisija SO_x, HCl i/ili HF u vazduh

8.5. Tehnike za smanjenje emisija čestica, metala uključujući živu i/ili PCDD/F u vazduh

8.6. Tehnike za smanjenje emisija u vodu