

---


## ENVIRONMENTAL CONCERNS OF ELECTRICITY PRODUCTION IN ENERGY COMMUNITY CONTRACTING PARTIES

**21th OSCE ECONOMIC AND ENVIRONMENTAL FORUM**

4-5 February 2013, Vienna


---



1



### THE COMMUNITY – A LOOK AT THE MAP

Status: February 2013



 CONTRACTING PARTIES     EUROPEAN UNION     OBSERVERS

---

2

## ▶▶ BASIC ELEMENTS



### ▶▶ TREATY ESTABLISHING THE ENERGY COMMUNITY

■ signed in October 2005; entered into force on 1 July 2006

#### ■ Contracting Parties

▶ European Community (after Lisbon Treaty: European Union)

▶ 9 Contracting Parties: Albania, Bosnia & Herzegovina, Croatia, Macedonia - FYR of, Moldova, Montenegro, Serbia, Ukraine, UNMIK/Kosovo\*

■ **15 EU MS** as Participants (since 1 March 2009): AT, BG, CZ, CY, FR, DE, EL, HU, IT, NL, PL, RO, SK, SI, UK

■ **4 Observers:** Armenia, Georgia, Norway, Turkey

#### ■ Content

▶ implementation of the Treaty – *acquis* → no dynamic adjustment to EU *acquis* – requires Ministerial Council Decision

▶ deadlines

▶ institutional framework

3

## ▶▶ THE COMMON LEGAL FRAMEWORK



1) **Title II: Implementation of the *acquis communautaire***  
(only regarding Network Energy)

→ *acquis* of the Energy Community

→ **geographic scope:** Contracting Parties

▶ Gas

▶ Electricity

▶ Environment

▶ Competition

▶ RES

▶ Generally Applicable Standards of the European Community

2) **Title III: Mechanism for Operation of Network Energy Markets**

→ **geographic scope:** Contracting Parties and Participants

3) **Title IV: Single Energy Market**

→ **geographic scope:** Contracting Parties

▶ Free movement of goods

▶ Import/ export to and from third countries

▶ Mutual assistance in case of disruption

4

## ▶ INSTITUTIONS



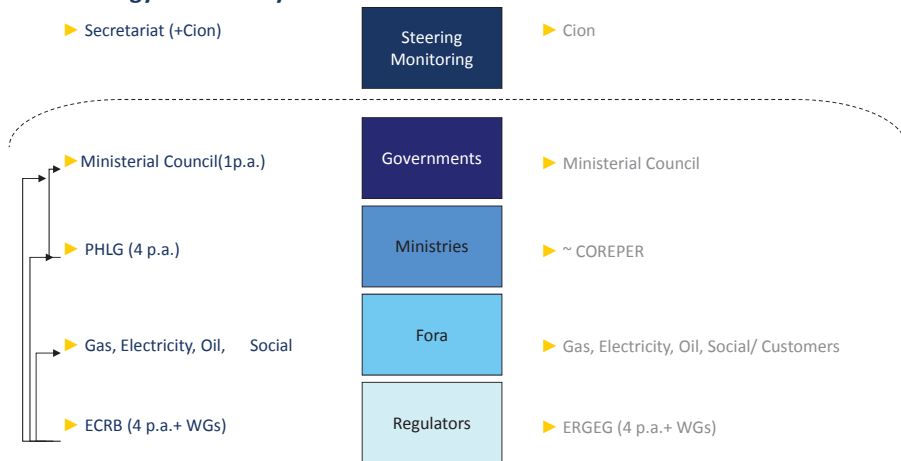
*compared to EU-structure*

### ■ Energy Community

▶ Secretariat (+Cion)

### ■ EU

▶ Cion



5



## Energy Community Treaty

Implementation of environmental acquis

6

## LEGAL FRAMEWORK – DETAILS



Title II: "ACQUIS of the EnC"

geographic scope: Contracting Parties

### ■ Environment

- ▶ Directive 85/337/EEC on the assessment of the effects of certain public and private projects on the environment (as amended by Council Directive 97/11/EC and Directive 2003/35/EC) – after entry into force (**Environmental Impact Assessment Directive**)
- ▶ Directive 1999/32/EC relating to a reduction in the **sulphur content of certain liquid fuels** – as of 1 January 2012
- ▶ Directive 2001/80/EC on the limitation of emissions of certain pollutants into the air from large combustion plants – as of 1 January 2018 (**LCP Directive**)
- ▶ Art. 4(2) Directive 79/409/EEC on the **conservation of wild birds** – after entry into force
- ▶ Endeavour to accede: Kyoto Protocol; Council Directive 96/61/EC concerning integrated pollution prevention and control
- ▶ Construction and operation of new generating plants – after the entry into force of the Treaty and with compliance on the *acquis on environment*

7



## Large Combustion Plant Directive 2001/80/EC

HAS TO BE IMPLEMENTED  
TILL DEC 31, 2017

8

---

## LCP Directive 2001/80/EC

- Rated thermal input  $\geq 50$  MW
- Solid, liquid and gaseous fuels
- Aims to reduce emissions of **SO<sub>2</sub>, NO<sub>x</sub> and dust** to protect human health and environment
  - ❖ emission limit values (concentrations) which are **fuel / capacity / age** dependent
- Three distinct groups of plants
  - ❖ **existing**: permitted before 1 July 1987
  - ❖ **“new”**: permitted before 27 Nov 2002
  - ❖ **“new new”**: permitted after 27 Nov 2002



---

9

---

## LCP Directive 2001/80/EC

- Techniques for pollution prevention and reduction are **available and mature**
  - ❖ **SO<sub>2</sub>**: low S coal, flue gas desulphurisation (dry/wet)
  - ❖ **NO<sub>x</sub>**: combustion modifications, SNCR, SCR
  - ❖ **dust**: electrostatic precipitators, bag filters

**LCP Dir emission limit values can easily be achieved by applying the Best Available Techniques (BAT)**

**→ EU has moved on: Industrial Emissions Directive (IED) 2010/75/EU sets stricter ELV based on BAT from 1/1/16**



---

10

## ELEMENTS OF FLEXIBILITY



- Two main ways of implementation:
  - 1) Art. 4(1) and (2) in connection with Annexes III to VII – compliance with individual emission limit values
  - 2) Art. 4(6) - preparation of a National NERP
- Art. 4(4) - Limited lifetime derogation (opt-out)
  - Temporary exemption for meeting the emission level values
  - Limited in time
  - Plant has to shut down at the end of the derogation period → security of supply has to be strictly considered
- Art. 5(1) – Peak load plants

If a plant only operates a limited amount of hours every year, it may be subject to less stringent emission limit values
- Annex III, Part A – Desulphurization rate (for solid fuels)

Where the emission limit values cannot be met due to characteristics of the fuel (coal with high S-content)

11

## LCP Directive 2001/80/EC



- **Emission reductions**  
mainly due to LCP Directive implementation  
in **2020 vs 2005** (GAINS, PRIMES BL)

	SO <sub>2</sub> (kt/y)	NO <sub>x</sub> (kt/y)	PM 2.5 (kt/y)
Albania	9 (47%)	3 (14%)	1 (11%)
Bosnia/Herzegovina	181 (80%)	13 (37%)	7 (35%)
Croatia	43 (68%)	22 (32%)	5 (26%)
Macedonia, FYR of	85 (85%)	12 (38%)	6 (46%)
Serbia	363 (80%)	74 (45%)	19 (28%)

12

## LCP Directive 2001/80/EC



### ■ Health impacts 2020 vs 2000 (GAINS, PRIMES BL)

	Loss in average life expectancy (months)		Years of life lost	
	2000	2020	2000	2020
Albania	5.7	2.8	800 000	400 000
Bosnia/Herzegovina	6.2	2.9	1 400 000	700 000
Croatia	8.1	4.2	2 000 000	1 000 000
Macedonia, FYR of	6.2	2.7	600 000	300 000
Serbia	7.6	3.6	4 100 000	1 900 000

13

## CHALLENGES AND POSSIBLE SOLUTIONS



- Power and heat generation facilities located in the Energy Community region are, generally speaking, in a bad condition
- Main reasons: maintenance delay / lack of investment over the last two decades
- Remaining 5 years until deadline seems to be a long time but it is short considering the related investment cycle
- Current financial environment is not very supportive
  
- Secretariat's support
- Study on a plant-by-plant analysis about to be launched (see later)
  
- Environmental Task Force to continuously monitor progress until the deadline (and possibly beyond)

14

**SCOPE**

- Main objective: to support governments, decision-makers, privately and publicly owned energy companies, private and public investors in their efforts to make Contracting Parties capable to meet their commitments under the Energy Community Treaty (ECT) by the deadline foreseen (end 2017).
  
- Options:
  - modernization of large combustion plants;
  - change of fuels ;
  - replacing plants by new capacities.

The consultant is expected to develop a scenario for each option.

**SPECIFIC OBJECTIVES**

- Accurate assessment of the investment needs on a plant-by-plant basis to meet the requirements of the LCP Directive in all Contracting Parties.
  
- Different scenarios for the individual plants in order to achieve compliance with the emission limit values of the LCP Directive, their technical feasibility/limitations and their costs (at a generic level, i.e. by using cost ranges or factors) shall be identified.
  
- Realistic investment need scenario at plant and Contracting Party level, taking into account the different modernisation options explored as well as the alternative scenario of replacing capacity (by either fossil fired plants or renewable energy sources).
  
- To examine the potential and the costs involved for achieving compliance with the emission limit values of Annex V of Directive 2010/75/EU on industrial emissions.



**TIMELINE**

- Deadline for submission of tenders: 22 November 2012
- Latest date to award contract: 11 December 2012
- Expected date of commencement of service: 12 December 2012
- Duration of study: 30 September 2013

**THANK YOU FOR YOUR ATTENTION!**

**CONTACT**

Energy Community Secretariat  
Web: [www.energy-community.org](http://www.energy-community.org)

CONTRACTING PARTIES    EUROPEAN UNION    OBSERVERS