



# The Energy Community's decision to implement Chapter III of the Industrial Emissions Directive 2010/75/EU and its implications for new coal power plants in the Western Balkans, Moldova and Ukraine

Briefing on the Decision of the Energy Community Ministerial Council  
D/2013/06/MC-EnC adopted on 24 October 2013

April 2014



The purpose of this briefing is to provide a basic overview of the decision of the Energy Community Ministerial Council adopted on 24<sup>th</sup> October 2013 and its implications for development and future operation of large combustion plants. Due to the decision to implement Chapter III, Annex V, and Article 72(3)-(4) of Directive 2010/75/EU, new energy capacities shall be planned and realised with the recently introduced legal requirements taken into consideration.

Therefore, new large combustion plants, i.e. those which were permitted after 1 July 1992 shall comply with the emission limit values introduced in Annex V of Directive 2010/75/EU pursuant to Article 30, Chapter III of Directive 2010/75/EU as of 1 January 2018. Accordingly, the emission limit values set forth in Part 1 or Part 2 of Annex V shall be applied on the basis of the date when the permit for the combustion plant in question has been granted.

## **Frank Bold**

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# Summary

Due to the decision to implement Chapter III, Annex V, and Article 72(3)-(4) of Directive 2010/75/EU, new combustion plants in the Energy Community countries have to be planned with the new requirements taken into consideration.

Currently, there are a number of investments in new combustion plants in progress which would not comply with the new requirements if they are realised as planned. It follows, that these combustion plants would be in breach of the *acquis on environment* after 1 January 2018, in other words by the time they start operation.

In order to avoid possible 'regret investments', national authorities as well as investors shall ensure that investments in new capacities, as well as in cases of retrofitting of existing capacities, are planned and permitted in a manner compliant with the conditions pursuant to Chapter III, Annex V of Directive 2010/75/EU<sup>1</sup>.

## 1. Legal Framework

On 24<sup>th</sup> October 2013, the Energy Community Ministerial Council adopted *Decision D/2013/06/MC-EnC on the implementation of Chapter III, Annex V, and Article 72(3)-(4) of Directive 2010/75/EU*<sup>2</sup> hereinafter referred to as the 'Decision on the implementation of Directive 2010/75/EU' and *Decision D/2013/05/MC-EnC on the implementation of Directive 2001/80/EC of the European Parliament and of the Council of 23 October 2001 on the limitation of emissions of certain pollutants into the air from large combustion plants*<sup>3</sup>, hereinafter referred to as the 'Decision on the implementation of Directive 2001/80/EC'.

Directive 2001/80/EC had already been an integral part of the *acquis communautaire on environment* under the Energy Community Treaty, hereinafter referred to as 'the Treaty', with the deadline for the implementation set on 31<sup>st</sup> December 2017. Nevertheless, the Treaty had not provided specific details for implementation, therefore, the Decision on the implementation of Directive 2001/80/EC introduced specific dates for the implementation of Articles 4(3), 4(4) and 4(6) thereof.

By adoption of the Decision on the implementation of Directive 2010/75/EU the existing *acquis* applicable to large combustion plants was extended and updated in line with the developments in the European Union, where the Industrial Emissions Directive 2010/75/EU sets forth a binding framework for specific industrial activities - among others, for the operation of large combustion plants. Directive 2001/80/EC will be replaced by Directive 2010/75/EU with effect from 1 January 2016 in the EU.

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<sup>1</sup> Moreover, the Contracting Parties which have transposed Directive 96/61/EC concerning integrated pollution prevention and control and established the European reference documents (BREFs) as the baseline for the permitting of large combustion plants, shall, according to their national legislation follow the requirements of application of the best available techniques and related standards on thermal efficiency and emission limit values.

<sup>2</sup> Available at: <http://www.energy-community.org/pls/portal/docs/2386186.PDF>.

<sup>3</sup> Available at: <http://www.energy-community.org/pls/portal/docs/2386185.PDF>.



On the basis of the Decision on the implementation of Directive 2010/75/EU, Chapter III, Annex V, and Article 72(3)-(4) of Directive 2010/75/EU shall be inserted into the Treaty, to Chapter III, the Acquis on Environment. Chapter III of Directive 2010/75/EU is a successor of Directive 2001/80/EC and updated the minimum binding requirements for combustion plants.

As to the timeframe for implementation of these legal provisions, the Decision on the implementation of Directive 2010/75/EU lays down the following deadlines. Chapter III, Annex V, and Article 72(3)-(4) of Directive 2010/75/EU shall be implemented *from 1 January 2018 for new plants. For existing plants*, the Contracting parties shall endeavour to implement these provisions within the shortest possible period, in particular in cases of retrofitting existing plants<sup>4</sup>.

## Definition of new and existing plants

The distinction between *new* and *existing plant* is a key provision for the implementation of the Decision on the implementation of Directive 2010/75/EU. These terms are not defined in the Decision on the implementation of Directive 2010/75/EU nor in Directive 2010/75/EU itself.

It can be concluded however, that the definitions from Article 2, para.9 of Directive 2001/80/EC as modified by the Decision on the implementation of Directive 2001/80/EC are to be used as a basis for the interpretation of terms 'new' and 'existing' plant for the following reasons.

The Decision on the implementation of Directive 2001/80/EC introduces definitions of *new* as well as *existing plants* which shall be used *for the purposes of the Energy Community*<sup>5</sup>, i.e. these definitions are not limited only to the Decision on the implementation of Directive 2001/80/EC but provide a general guideline for interpretation.

Moreover, the Decision on the implementation of Directive 2010/75/EU and Decision on the implementation of Directive 2001/80/EC were adopted with the same intent - that is to amend and update the requirements for large combustion plants in line with the developments in the EU while taking into consideration the specific situation in the Energy Community.

As Chapter III of Directive 2010/75/EU is a successor of Directive 2001/80/EC which introduces these definitions, these terms shall be used consistently for the purposes of the Energy Community in order to ensure consistent application of the relevant acquis on environment, i.e. also for the purpose of implementation of the Decision on the implementation of Directive 2010/75/EU<sup>6</sup>.

The general notion of coherence and integrity of the law, which requires that legal norms do not conflict with each other and shall be interpreted in conformity in order to ensure effective application of law, shall be also noted in this regard.

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<sup>4</sup> Article 1, para.2 of Decision on the implementation of Directive 2010/75/EU.

<sup>5</sup> Article 1 of Decision on the implementation of Directive 2001/80/EC.

<sup>6</sup> In this regard see the Judgements of the European Court of Justice in cases Case C-513/99 *Concordia Bus Finland*, para.91" *In those circumstances, there is no reason to give a different interpretation to two provisions which fall within the same field of Community law and have substantially the same wording.*" and in Joined Cases C-165/09 to C-167/09, *"Inasmuch as the provisions have the same wording and must therefore be interpreted in the same way"*.



Moreover, the Contracting Parties agreed specifically on the modifications to the cut-off dates<sup>7</sup> for the definitions concerned to better reflect the specific situation in the Energy Community area. In case there is a specific intention to introduce different definitions for the purpose of the Decision on the implementation of Directive 2010/75/EU, the Contracting Parties could propose further alterations to these general definitions.

The definitions are as follows,

*A 'new plant' means any combustion plant for which the original **construction licence** or, in the absence of such a procedure, the original **operating licence** was granted **on or after 1 July 1992**;*

*An 'existing plant' means any combustion plant for which the original **construction licence** or, in the absence of such a procedure, the original **operating licence** was granted **before 1 July 1992**.*

It follows that Chapter III, Annex V, and Article 72(3)-(4) of Directive 2010/75/EU shall apply *from 1 January 2018* to combustion plants for which the original construction licence or, in the absence of such a procedure, the original operation licence was granted *on or after 1 July 1992*, i.e. *new plants*.

As a consequence, the emission limit values applicable for the combustion plants falling under the definition of 'new plant' shall be established in accordance with the categories defined in Chapter III, Article 30 of Directive 2010/75/EU.

Therefore, combustion plants for which the original construction or operating licence was granted on or after 1 July 1992 are divided into 2 sub-categories pursuant to Article 30, para.2 and 3 of Directive 2010/75/EU: Firstly, installations for which a permit was granted before 7 January 2013, or installations for which operators submitted a complete application for a permit before that date, provided that such plants are put into operation no later than 7 January 2014. Permits of these installations shall include conditions ensuring that emissions into air from these plants do not exceed the emission limit values set out in *Part 1 of Annex V of Directive 2010/75/EU*.

The second sub-category covers installations for which a permit was granted after 7 January 2013, provided that these were put into operation after 7 January 2014. These combustion plants shall comply with the emission limit values set out in *Part 2 of Annex V of Directive 2010/75/EU*.

The '*permit*' pursuant to Article 30 para.2 and 3 of Directive 2010/75/EU shall mean '*a written authorisation to operate all or part of an installation or combustion plant, waste incineration plant or waste co-incineration plant*'. It follows that the authorisation to operate all or part of the installation shall be the licence granted at a very late stage of the permitting process and it shall build on the previous decisions granted for the installation in question. As already noted, the permit shall include conditions ensuring that emissions into air from the plant do not exceed the emission limit values set out in relevant part of Annex V.

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<sup>7</sup> The original definitions used in Directive 2001/80/EC are as follows, Article 2, para.9 '*new plant*' means any combustion plant for which the original construction licence or, in the absence of such a procedure, the original operating licence was granted on or after 1 July 1987; Article 2, para.10 '*existing plant*' means any combustion plant for which the original construction licence or, in the absence of such a procedure, the original operating licence was granted before 1 July 1987.



'Existing plants' are any combustion plants for which the original construction licence or, in the absence of such a procedure, the original operating licence was granted before 1 July 1992 and for these, the timeframe for compliance with Chapter III, Annex V of Directive 2010/75/EU will be specified by 31 December 2015. Nevertheless, according to the Decision on the implementation of Directive 2010/75/EU, for existing plants 'the Contracting Parties shall endeavour to implement the provisions of Chapter III and Annex V *within the shortest possible timeframe, in particular in the case of retrofitting*'.

As the provisions laying down the new emission limit values become binding only from 1 January 2018, the *retroactive effect*, i.e. the situation when a legal act is having effect on subjects in the time before it was adopted, which is forbidden in general, is *excluded*<sup>8</sup>. The provision provides only an effect for the future and does not regulate legal relationships or duties to the past. The limitation provided by the cut-off dates concerned defines only the categories of subjects which are obliged to comply with the new requirements from 2018, thus the protection of legal certainty and the restriction of the retroactive application of the legislation are ensured in this case. In general, the legal system is constantly evolving and it is not possible to prevent currently valid standards from being amended in the future. The *acquis* on environment is not an exception in this regard.

## 2. Overview of the requirements stemming from the Decision on the implementation of Directive 2010/75/EU

Chapter III of Directive 2010/75/EU introduces special provisions for combustion plants. It shall apply to combustion plants with a total rated thermal input equal to or greater than 50 MW, irrespective of the type of fuel used. The requirements for combustion plants are provided in detail with the technical parameters laid down in Annex V.

### Emission limit values introduced by Annex V of Directive 2010/75/EU

Article 30, Emission limit values, lays down the minimum binding requirements for permits of all combustion plants concerned not to exceed the emission limit values set out in Annex V. Specific requirements differ in line with the date on which the operators of the plants applied for the permit or on the basis of the start of operation of these plants. Part 1 of Annex V introduces less strict emission limit values for combustion plants which were granted a permit before 7 January 2013 or combustion plants for which a complete application for a permit was submitted before that date, provided that such plants were put into operation no later than 7 January 2014. For all combustion plants which are not covered by the previous provision, the permits shall include conditions ensuring that these plants do not exceed the emission limit values set out in Part 2 of Annex V.

The emission limit values set out in Parts 1 and 2 of Annex V as well as the minimum rates of desulphurisation set out in Part 5 of Annex V shall apply to the emissions of each common stack in relation to the total rated thermal input of the entire combustion plant<sup>9</sup>. An overview of the emission limit values is provided below.

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<sup>8</sup>See, for instance Judgement of the European Court of Justice in Case 74/74 CNTA v Commission, para.32.

<sup>9</sup>Article 30, para.4 Directive 2010/75/EU.



## Part 1, Annex V<sup>10</sup>

| Total rated thermal input (MW) | 50-100            | 100-300 | > 300 |
|--------------------------------|-------------------|---------|-------|
| SO <sub>2</sub>                | 400               | 250     | 200   |
| NO <sub>x</sub>                | 300 <sup>11</sup> | 200     | 200   |
| Dust                           | 30                | 25      | 20    |

## Part 2, Annex V<sup>12</sup>

| Total rated thermal input (MW) | 50-100            | 100-300 | > 300             |
|--------------------------------|-------------------|---------|-------------------|
| SO <sub>2</sub>                | 400               | 200     | 150 <sup>13</sup> |
| NO <sub>x</sub>                | 300 <sup>14</sup> | 200     | 150 <sup>15</sup> |
| Dust                           | 20                | 20      | 10                |

## Assessment of Carbon Capture and Storage readiness

Article 36 of Chapter III Directive 2010/75/EU<sup>16</sup> sets forth the requirement for the Contracting Parties to ensure that operators of all combustion plants with a rated electrical output of 300 megawatts or more for which the original construction licence or, in the absence of such a procedure, the original operating licence, is granted after the entry into force of Directive 2009/31/EC of the European Parliament and of the Council of 23 April 2009 on the geological storage of carbon dioxide, i.e. after 25 June 2009, have assessed whether the combustion plant is ready for geological storage of carbon dioxide, so-called 'CCS readiness'<sup>17</sup>. The contracting Parties shall ensure that the operators have assessed whether the following conditions are met:

- (a) suitable storage sites are available,
- (b) transport facilities are technically and economically feasible,

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<sup>10</sup> Emission limit values (mg/Nm<sup>3</sup>) set for combustion plants using solid or liquid fuels with the exception of gas turbines and gas engines.

<sup>11</sup> 450 mg/Nm<sup>3</sup> in case of pulverised lignite combustion.

<sup>12</sup> Emission limit values (mg/Nm<sup>3</sup>) set for combustion plants using solid or liquid fuels with the exception of gas turbines and gas engines.

<sup>13</sup> 200 mg/Nm<sup>3</sup> in case of circulating or pressurised fluidised bed combustion.

<sup>14</sup> 400 mg/Nm<sup>3</sup> in case of pulverised lignite combustion.

<sup>15</sup> 200 mg/Nm<sup>3</sup> in case of pulverised lignite combustion.

<sup>16</sup> Previously Article 9a of Directive 2001/80/EC introduced by Directive 2009/31/EC. Available at: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CONSLEG:2001L0080:20090625:EN:PDF>.

<sup>17</sup> As an example of the guidance for conducting the CCS assessment, UK Carbon Capture Readiness (CCR) A guidance note for Section 36 Electricity Act 1989 consent applications can be provided, available at: [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/43609/Carbon\\_capture\\_readiness\\_guidance.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/43609/Carbon_capture_readiness_guidance.pdf).



(c) it is technically and economically feasible to retrofit for carbon dioxide capture.

If these conditions are complied with, the competent authority shall ensure that suitable space on the installation site is set aside for the equipment necessary to capture and compress carbon dioxide. The competent authority shall determine whether the conditions are met on the basis of the assessment carried out by the operator as well as on the basis of other available information, in particular concerning the protection of the environment and human health.

For the purpose of the application in the Energy Community countries, this requirement is introduced for new combustion plants as defined in the Decisions of the Energy Community, specifically, for those for which the original construction licence or in the absence of such procedure, the original operating licence was granted after 25 June 2009. To comply with the Decision on the implementation of Directive 2010/75/EU, the operators of these combustion plants shall carry out the CCS readiness assessment prior to 1 January 2018. The relevant national authorities shall ensure that the assessment is carried out and that all relevant information is taken into consideration.

As the outcome of the assessment would have an impact on the installation site, ie. a suitable space has to be set aside for the equipment in case of a positive assessment, in general, the assessment shall be included as soon as possible in the permitting process and prior to the issuing of a construction permit for the combustion plant in question.

### 3. Comparison of the proposed technologies of particular projects with the legally binding standards applicable from 2018

Currently, there are a number of investments in large combustion plants foreseen in the Energy Community countries. In order to ensure their compliance with the new requirements introduced by the Decision on the implementation of Directive 2010/75/EU, the relevant national authorities involved in the permitting process as well as the investors should consider the proposed technologies and the capability of these technologies to meet the applicable emission limit values.

The relevant authorities shall ensure that during the permitting procedure leading to an operating permit being granted, they assess and verify that not only are the proposed emission limit values in line with the new requirements from Annex V of Directive 2010/75/EU but also that the proposed technologies and pollution control equipment are sufficient to ensure compliance with the new limits. Complex information on the expected emissions, proposed emission limit values, and assessment of the abatement techniques which shall ensure compliance with the emission limits as well as monitoring provisions shall be considered and included in the permit conditions.

The currently available information on the projects in progress shows that the majority of the projects do not reflect the new emission limit values introduced by new acquis on environment and would be in breach with the legal requirements as of 1 January 2018, i.e. by the time when they start operating. Furthermore, the projects for which the new emission limit values are introduced, e.g. in the case of Ugljevik III lignite power plant, Republika Srpska, Bosnia and Herzegovina (see section below for more details), do not include sufficient information on the technology which would ensure that the emission limits will be met.





## Additional obligations with regard to the integrated pollution prevention and control regulation stemming from the national legislation

Notwithstanding the fact that Directive 96/61/EC concerning integrated pollution prevention and control<sup>18</sup> (hereinafter 'the IPPC Directive') is not included in the obligatory Energy Community acquis on environment, the Energy Community Treaty, Article 14 acknowledges the importance of the rules established therein and according to the Treaty the Contracting Parties shall endeavour to implement it. It follows that Contracting Parties which have transposed the IPPC Directive shall reflect the additional requirements in the permitting procedures for large combustion plants stemming from their national legislation. In particular, Contracting Parties which have introduced the concept of the "best available techniques" (BAT) with the EU Best Available Techniques reference documents<sup>19</sup> (BREF) established as the baseline for the permitting and for the assessment of the administrative authorities into their national legislation, shall take into consideration also the obligations stemming therefrom.

In addition to the emission limit values required under Chapter III and Annex V of Directive 2010/75/EU, national authorities as well as the project developers shall apply BAT standards set forth in the BREF documents, in particular with regard to thermal efficiency. Contracting Parties with established reference to EU BREF documents shall also note the process of preparation of the new BREF document for large combustion plants which is currently under revision and which is expected to be finalised in 2015.

On the basis of a preliminary analysis, the following Contracting Parties have established national specific requirements for application of BAT and the thresholds introduced in the EU BREF: Albania, Kosovo, Macedonia, Montenegro, Serbia and partly Bosnia and Herzegovina (in the Federation of BiH entity).

### **Banovici lignite power plant, Federation of Bosnia and Herzegovina, Bosnia and Herzegovina, 300 MWe**

|                       | <b>Part 2 Annex V<br/>2010/75/EU</b><br>mg/Nm <sup>3</sup> | <b>Environmental<br/>permit</b><br>mg/Nm <sup>3</sup> |
|-----------------------|--|---|
| <b>SO<sub>2</sub></b> | 200 - CFB  | Does not include ELVs                                 |
| <b>NO<sub>x</sub></b> | 150  | Does not include ELVs                                 |
| <b>Dust</b>           | 10   | Does not include ELVs                                 |

The Federation of Bosnia and Herzegovina has transposed the IPPC Directive with reference to BAT and BREF introduced into the legislation, therefore, the authorities shall assess also the data provided on the thermal energy efficiency. The proposed net thermal efficiency for Banovici power plant is 38.61% which is lower than the relevant 2006 LCP BREF reference to >40%.

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<sup>18</sup> Codified by Directive 2008/1/EC of the European Parliament and of the Council of 15 January 2008 concerning integrated pollution prevention and control

<sup>19</sup> Best Available Techniques reference documents, see: <http://eippcb.jrc.ec.europa.eu/reference/>.



**Tuzla 7 lignite power plant, Federation of Bosnia and Herzegovina, Bosnia and Herzegovina, 450 MWe**

|                       | <b>Part 2 Annex V<br/>2010/75/EU<br/>mg/Nm<sup>3</sup></b> | <b>EIA statement<br/>Maximum allowed<br/>mg/Nm<sup>3</sup></b> |
|-----------------------|--|--|
| <b>SO<sub>2</sub></b> | 150  | 200  |
| <b>NO<sub>x</sub></b> | 200 <sup>20</sup>  | 200  |
| <b>Dust</b>           | 10   | 30   |

**Pljevlja II lignite power plant, Montenegro, 220 MWe**

Note: EIA process is not completed.

|                       | <b>Part 2 Annex V<br/>2010/75/EU, mg/Nm<sup>3</sup></b> | <b>Technologies<br/>proposed in the<br/>preliminary bid of<br/>China's CMEC,<br/>mg/Nm<sup>3</sup></b> |
|-----------------------|---|--|
| <b>SO<sub>2</sub></b> | 200 - CFB   | 200  |
| <b>NO<sub>x</sub></b> | 150   | 200  |
| <b>Dust</b>           | 10  | 30   |

As Montenegro has transposed the IPPC directive and the relevant legislation refers to BAT, the authorities shall also consider thermal energy efficiency. The proposed net thermal efficiency for offers for Pljevlja II vary between 37.18% and 39.4% which is lower than the relevant 2006 LCP BREF reference to >40%.

**Stanari lignite power plant, Republika Srpska, Bosnia and Herzegovina, 300 MWe**

|                       | <b>Part 2 Annex V<br/>2010/75/EU<br/>mg/Nm<sup>3</sup></b> | <b>Environmental permit<br/>mg/Nm<sup>3</sup></b> |
|-----------------------|--|---|
| <b>SO<sub>2</sub></b> | 200 - CFB  | 400   |
| <b>NO<sub>x</sub></b> | 150  | 650   |
| <b>Dust</b>           | 10   | 100   |

As Republika Srpska in Bosnia and Herzegovina has transposed the IPPC Directive and the relevant legislation refers to BAT, the authorities shall also consider thermal energy efficiency. Currently, the proposed net thermal efficiency for Stanari power plant is approx. 34% which is much lower than the relevant 2006 LCP BREF reference to >40%.

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<sup>20</sup> Emission limit value for pulverised coal.



### Ugljevik III lignite power plant, Republika Srpska, Bosnia and Herzegovina, 2x300MWe

|                       | <b>Part 2 Annex V<br/>2010/75/EU,<br/>mg/Nm<sup>3</sup></b> | <b>Environmental<br/>Permit<br/>mg/Nm<sup>3</sup></b> |
|-----------------------|---|---|
| <b>SO<sub>2</sub></b> | 200 - CFB   | 200   |
| <b>NO<sub>x</sub></b> | 150   | 150   |
| <b>Dust</b>           | 10  | 10  |

In this case, the EIA documentation<sup>21</sup> does not provide the information on the assessment of likelihood of the proposed technology meeting the new emission limits for SO<sub>2</sub>, NO<sub>x</sub>, or dust. The expected emission concentrations are stated in the documentation, nevertheless, these are copied upper limits from Part 2 Annex V of Directive 2010/75/EU and there is a lack of assessment whether the proposed pollution control equipment can ensure compliance with these limits. As Republika Srpska in Bosnia and Herzegovina has transposed the IPPC directive and the relevant legislation refers to BAT, the authorities shall also consider thermal energy efficiency. Currently, the proposed net thermal efficiency for Ugljevik power plant is approx. 34% which is much lower than the relevant 2006 LCP BREF reference to >40%.

### Kostolac B3 lignite thermal power plant, Serbia, 350 MWe

As Serbia has transposed the IPPC directive and the relevant legislation refers to BAT, the authorities shall also consider thermal energy efficiency. Currently, the proposed net thermal efficiency for Kostolac B3 is 37.3%, which is much lower than the relevant 2006 LCP BREF reference to >42-45% for pulverised lignite.

### Kolubara B lignite power plant, Serbia, 2x350 MWe

|                       | <b>Part 2 Annex V<br/>2010/75/EU, mg/Nm<sup>3</sup></b> | <b>EIA 2012<br/>mg/Nm<sup>3</sup></b> |
|-----------------------|---|---------------------------------------|
| <b>SO<sub>2</sub></b> | 150   | 200                                   |
| <b>NO<sub>x</sub></b> | 200 <sup>22</sup>                                       | 200                                   |
| <b>Dust</b>           | 10  | 25                                    |

As noted above, Serbia has transposed the IPPC directive and the relevant legislation refers to BAT, thus the authorities shall also consider thermal energy efficiency. The proposed net thermal efficiency for Kolubara B is unclear. The 2012 EIA<sup>23</sup> states 40% while the announcement of the contract signing states 37% net efficiency<sup>24</sup>. Both are lower than the relevant 2006 LCP BREF reference to 42-45% for pulverised lignite combustion.

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<sup>21</sup> Republika Srpska Vlada, Ministarstvo za prostorno uređenje građevinarstvo i ekologiju: Rješenje o odobravanju Studije uticaja na životnu sredinu, 10.07.2013, i Akcionarsko društvo PROJEKT, Banja Luka: Studija uticaja na životnu sredinu za nove blokove termoelektrane Ugljevik 3 Konačna verzija, May 2013.

<sup>22</sup>Emission limit value for pulverised coal.

<sup>23</sup> Energoprojekt Entel a.d. I Rudarski Institut Beograd: JP "Elektroprivreda Srbije" Beograd, TE "Kolubara B" Procena uticaja na životnu sredinu za projekat izgradnje prve faze TE "Kolubara B", 2x350 MW, Studija – Deol, May 2012, (p.1-4-11).

<sup>24</sup> <http://www.eps.rs/eng/article.aspx?lista=novosti&id=1>.