

Am Hof 4, Level 5, 1010 Vienna, Austria

Phone Email Web

+43 (0)1 535 2222 contact@energy-community.org www.energy-community.org

# Opinion 2/16

pursuant to Article 5 of Decision 2013/05/MC-EnC of the Ministerial Council of the Energy Community of 24 October 2013 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

# 1. Introduction

The Large Combustion Plants Directive<sup>1</sup> (hereinafter: "Directive 2001/80/EC") sets emission limit values for three pollutants (sulphur dioxide, nitrogen oxides and dust). The implementation deadline for this Directive expires on 31 December 2017, as established by point 3 of Annex II of the Energy Community Treaty.

According to Article 4(6) of Directive 2001/80/EC, as amended by Article 5 of Decision 2013/05/MC-EnC (hereinafter: "the Decision"),<sup>2</sup> Contracting Parties may opt for the preparation of national emission reduction plans (hereinafter: "NERPs") as an implementation alternative by setting overall ceilings for the conglomerate of combustion plants brought under their scope. Following the submission deadline for NERPs, the Energy Community Secretariat (hereinafter: "the Secretariat") has nine months to analyse the plans and provide comments, if necessary.

On 19 December 2014, the Secretariat issued Policy Guidelines on the preparation of NERPs<sup>3</sup> (hereinafter: "the Policy Guidelines"), advising Contracting Parties on the methodologies to be applied when calculating the emission ceilings for large combustion plants brought under the scope of the plan.

<sup>&</sup>lt;sup>1</sup> 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, OJ L 309, 27.11.2001, p. 1.

<sup>&</sup>lt;sup>2</sup> Decision No. 2013/05/MC-EnC of the Ministerial Council of the Energy Community of 24 October 2013 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> <u>https://www.energy-</u>

community.org/portal/page/portal/ENC\_HOME/DOCS/3546146/0C10A4C6C4BE0DB3E053C92FA8C0584A. PDF



**Energy Community Secretariat** Am Hof 4, Level 5, 1010 Vienna, Austria

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Web

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By the deadline of 31 December 2015,<sup>4</sup> five Contracting Parties, namely Bosnia and Herzegovina, Kosovo\*, Macedonia, Serbia and Ukraine submitted draft NERPs to the Secretariat.

Several rounds of consultations between the Secretariat and the Contracting Parties concerned took place in the first half of 2016. In these consultations, the Secretariat was provided with technical assistance in the framework of the study "Assistance to the Energy Community Secretariat for the Evaluation of the National Emission Reduction Plans submitted under Decision 2013/05/Mc-EnC on the implementation of Directive 2001/80/EC" by Amec Foster Wheeler Environment & Infrastructure UK Limited.

In the present Opinion, the Secretariat summarizes its findings on the draft NERPs submitted by 31 December 2015 and the results of the consultations carried out in the nine-month period established by point (c) of the fifth subparagraph of Article 4(6) of Directive 2001/80/EC, as adapted by Article 5(3) of the Decision.

# 2. The Secretariat's Opinion

#### **Bosnia and Herzegovina** а.

Bosnia and Herzegovina has 5 installations split into 12 combustion plants above 50 MW<sub>th</sub> and hence falling under the scope of Directive 2001/80/EC. The NERP includes 10 of these 12 plants. Table 1 presents the large combustion plants included in the NERP and their respective total rated thermal input.

Plant number	LCP name	Total rated thermal input (MW <sub>th</sub> )
1	TPP Tuzla - 4	600
2	TPP Tuzla - 5	600
3	TPP Tuzla - 6	615
4	TPP Kakanj - 5	330

#### Table 1 Overview of plants included in Bosnia and Herzegovina's NERP

<sup>&</sup>lt;sup>4</sup> According to point (b) of the fifth subparagraph of Article 4(6) of Directive 2001/80/EC as amended by Article 5(2) of the Decision, the deadline for the submission of draft NERPs to the Secretariat was set as 31 December 2015.



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5	TPP Kakanj - 6	330
6	TPP Kakanj - 7	670
7	ICHPP Natron Hayat UKO4	100
8	ICHPP Natron Hayat LUKO4	84
9	TPP Gacko -1	800
10	TPP Ugljevik - 1	800

Bosnia and Herzegovina indicated that for plants 4, 5 and 6 the aggregation rule is applied as these three plants' flue gases are discharged through the same stack. Similarly, plants 7 and 8 share the same stack. The use of the aggregation rule is not mandatory for existing plants that were put into operation before 1992. Therefore, it is at the discretion of Bosnia and Herzegovina as to whether these plants are aggregated in their NERP, provided that the same aggregation is applied to calculate plant contributions to the overall ceilings in 2018 as in 2023.

In the Secretariat's view, the NERP drafted and submitted by Bosnia and Herzegovina is compliant with both the Policy Guidelines and Directive 2001/80/EC subject to having taken into account the comments of the Secretariat.

With regard to plant 8 in the NERP, it was decided that black liquor should be regarded as a liquid fuel and therefore it was necessary to adjust the waste gas flow rate calculated for plant 8 to match the reference oxygen content of the applicable emission limit values (6% to 3%), which Bosnia and Herzegovina confirmed.

## b. Kosovo\*

Kosovo<sup>\*</sup> has 4 large combustion plants above 50  $MW_{th}$  falling under the scope of Directive 2001/80/EC, all of which are included in the NERP. Table 2 presents the large combustion plants included in the NERP and their respective total rated thermal input.

## Table 2 Overview of plants included in Kosovo\*'s NERP

Plant number	LCP name	Total rated thermal input (MW <sub>th</sub> )
1	TC Kosova A3	571



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2	TC Kosova A4	571
3	TC Kosova A5	600
4	TC Kosova B	1695

The emission ceilings in the draft NERP are calculated by Kosovo<sup>\*</sup> according to the Policy Guidelines. However, the draft NERP postpones the timing of its application from 2018-2027 to 2022-2030 which is not in compliance with Directive 2001/80/EC as amended by the Decision. Consequently, the NERP can only be adopted and applied if this shortcoming is corrected by the authorities in the final version of the NERP.

# c. Former Yugoslav Republic of Macedonia

Former Yugoslav Republic of Macedonia has 10 combustion plants above 50  $MW_{th}$  with the NERP covering 8 of these plants. Table 3 presents the plants included in the NERP and their respective total rated thermal input.

Plant number	Name in NERP	Total rated thermal input (MW <sub>th</sub> )
1	REK BITOLA (B1+B2)	1 350
2	REK BITOLA (B3)	675
3	REK OSLOMEJ	375
4	TEC NEGOTINO	630
5	Balkan Energy, Toplana ISTOK	293
6	Balkan Energy, Toplana ZAPAD	182
7	OKTA-Processing plants	102
8	OKTA- Energy production	188

## Table 3 Overview of plants included in FYROM's NERP

Given certain gaps and calculation discrepancies identified, which have been communicated to the authorities of former Yugoslav Republic of Macedonia, the draft NERP submitted to the Secretariat is considered not fully compliant with the Policy Guidelines.



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In order to achieve full compliance with the provisions of the Directive and the Policy Guidelines, the following amendments are to be made in the final version of the NERP:

- The plant contributions were recalculated in the framework of the technical assistance project and verified by the Macedonian authorities. Once recalculations are complete, former Yugoslav Republic of Macedonia must revisetheir calculated annual emissions ceilings to incorporate the updated contributions from plants 4, 5, 6, 7 and 8.
- Former Yugoslav Republic of Macedonia must consolidate the changes and information submitted in separate documents as part of their successive responses during the consultation period with the Secretariat.

# d. Serbia

Out of a total of 19 large combustion plants in the country, the draft NERP submitted by Serbia includes 17. Serbia later added that they also have 27 district heating plants<sup>5</sup> which are not included in the NERP.

Table 4 presents the plants included in the NERP and their respective total rated thermal input.

Plant number (in NERP)	Plant number (numerical)	Plant name	Total rated thermal input (MW <sub>th</sub> )
1.1	1	EPS, Termoelektrana Nikola Tesla A, A1-A3	2,252
1.2	2	EPS, Termoelektrana Nikola Tesla A, A4-A6	2,811
2.1	3	EPS, Termoelektrana Nikola Tesla B, B1-B2	3,635
2.2	4	EPS, Termoelektrana Nikola Tesla B – auxiliary boiler	93

Table 4 Overview of plants included in Serbia's NERP

<sup>&</sup>lt;sup>5</sup> According to conclusion no. 17 of the 9<sup>th</sup> meeting of the Environmental Task Force, "it should be understood that if a district heating plant is designed in a way that its sole purpose is to provide heating to the nearby communities and it is not connected to the grid, it should be considered as not falling under the scope of the LCPD in an Energy Community context. If, however, the district heating plant is connected to the grid and generates electricity at the same time, it could result in its coverage by the LCPD's scope as well as that of the NERP."



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3.2	5	EPS, Termoelektrana Kolubara A, A3 (boiler 1)	147
3.1	6	EPS, Termoelektrana Kolubara A, A3 (boilers 3,4,5)	441
3.3	7	EPS, Termoelektrana Kolubara A, A5	382
4	8	EPS, Termoelektrana Morava	420
5.1	9	EPS, Termoelektrana Kostolac A1	358
5.2	10	EPS, Termoelektrana Kostolac A2	689
6	11	EPS, Termoelektrana Kostolac B, B1-B2	2,155
7	12	EPS, Termoelektrana-Toplana Novi Sad	878
8	13	EPS, Toplana Vreoci Kolubara Prerada	120
9	14	NIS a.d., Energana Novi Sad	98.9
10.1	15	NIS a.d., Atmosferska destilacija II	86.8
10.2	16	NIS a.d., Energana Pančevo	273.7
10.3	17	NIS a.d., FCC	72

Given certain gaps and calculation discrepancies identified, which have been communicated to the authorities of Serbia, the draft NERP submitted to the Secretariat is not fully compliant with the Policy Guidelines.

In order to achieve full compliance with the provisions of the Directive and the Policy Guidelines, the following amendments are to be made in the final version of the NERP:

- District heating plants with the exclusive purpose of heat generation shall be removed from the list of non-NERP plants and instead be included in a separate list.
- Serbia should update Annex 1 of the NERP to make it clear that plant 17 (referred to as 10.3 in the NERP) is no longer included in the NERP.
- Serbia should clarify whether plant 14 (referred to as plant 9 in the NERP) should be included in the NERP. If plant 14 is removed, then the overall ceilings will have to be re-calculated accordingly.
- The original NERP document submitted by Serbia should be updated to consolidate the



*Energy Community Secretariat* Am Hof 4, Level 5, 1010 Vienna, Austria

 Phone
 +43 (0)1 535 2222

 Email
 contact@energy-community.org

 Web
 www.energy-community.org

changes and information submitted in separate documents as part of the responses throughout the consultation period.

Once these amendments are carried out, the NERP prepared by Serbia will meet the requirements of the Policy Guidelines.

## e. Ukraine

Based on Ukraine's request, the Ministerial Council established specific rules for that Contracting Party regarding the implementation of Directive 2001/80/EC at its 2015 meeting.<sup>6</sup> This means that in Ukraine, the option to implement a NERP is extended to end-2028 for sulphur dioxide and dust and end-2033 for nitrogen oxides.

Ukraine lists 231 plants above  $50MW_{th}$ , of which 90 are included in the draft NERP. Table 5 presents the plants in the draft NERP and their respective total rated thermal input.

Plant number (in NERP)	Plant name	$\ensuremath{MW_{th}}\xspace$ as reported in the NERP
1	Zuivska TPP (power units 1, 2,3, 4)	3276.50
2	Luhanska TPP (power units 9,10,11)	1747.60
3	Luhanska TPP (power units 13,14,15)	1747.60
4.1	Kurakhivska TPP (power units 3,4)	1114.50
5.1	Kurakhivska TPP (power units 8,9)	1114.45
6	Myronivska TPP	814.70
7	Zaporizka TPP (power units 1,2,3,4)	3140.25

#### Table 5 Overview of plants included in Ukraine's NERP

<sup>&</sup>lt;sup>6</sup> Decision 2015/07/MC-EnC on amending Decision D/2013/05/MC of 24 October 2013 on the implementation of Directive 2001/80/EC of the European Parliament and of the Council on limitation of emissions of certain pollutants into the air from large combustion plants and on amending Annex II of the Energy Community Treaty.



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Plant number (in NERP)	Plant name	$\ensuremath{MW_{th}}\xspace$ as reported in the <code>NERP</code>
11	Prydniprovska TPP (power units 11,12)	812.00
12	Prydniprovska TPP (power units 13,14)	812.00
13.1	Kryvorizka TPP (power units 1)	768.75
14	Kryvorizka TPP (power units 3,4)	1537.50
15.1	Kryvorizka TPP (power units 6)	801.30
16.1	Kryvorizka TPP (power units 10)	794.10
17.1	Burshtynska TPP (power units 9,10,11,12)	2267.40
19.1	Burshtynska TPP (power units 8)	569.20
21	Dobrotvirska (power units, boilers number 11,12)	889.40
22	Ladyzhynska TPP (power units 1,2,3)	2381.20
23	Ladyzhynska TPP (power units 4,5,6)	2381.20
24	Vuglegirska TPP (power units 1,2,3,4)	3056.00
26	Zmiivska TPP (power units 1,2)	998.00
29	Zmiivska TPP (power units 7,8)	1682.00
30	Zmiivska TPP (power units 9,10)	1636.00
31	Trypilska TPP (power units 1,2,3,4)	2924.00
33	Slovianska TPP (power unit 7)	1965.00
35a	Starobeshivska TPP (power unit 4)	519.00
35b	Starobeshivska TPP (power unit 5)	486.00
37	Starobeshivska TPP (power units 8,9,10)	1458.00
38	Starobeshivska TPP (power units 11,12,13)	1470.00
39.1	Bilotserkivska CHP (1)	686.00
41	Darnytska CHP	670.00



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Phone+43 (0)1 535 2222Emailcontact@energy-community.orgWebwww.energy-community.org

Plant number (in NERP)	Plant name	MW <sub>th</sub> as reported in the NERP
42.1	Darnytska CHP	335.00
51	Kaluska CHP	1328.00
52	Kyivska CHP 5	1296.00
53	Kyivska CHP-5	1919.00
54	Kyivska CHP-6	111.00
55	Kyivska CHP-6	2756.00
56	Kramatorska CHP	418.00
57.1	Kremenchutska CHP (boilers 1-5)	1356.50
73	Odesska CHP (1)	768.00
74	Odesska CHP (2)	349.00
78	Sumska CHP	545.30
79	Kharkivska CHP-5	2262.00
90	Cherkasska CHP-1	303.00
91	Cherkasska CHP-2	758.00
95	Cherkasska KPR	174.00
96	Chernihivska CHP (boiler 1-5)	792.50
118	ST1 (CHP-3) (boiler 1)	116.30
119	ST1 (CHP-3) (boiler 2)	116.30
120	ST1 (CHP-3) (boiler 3)	116.30
121	ST1 (CHP-3) (boiler 4)	93.04
122	ST1 (CHP-3) (boiler 5)	93.04
123	ST1 (CHP-3) (boiler 6)	63.97
124	ST1 (CHP-3) (boiler 7)	63.97
125	ST2 (CHP-2) (boiler 1,2,3)	349.00



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Plant number (in NERP)	Plant name	$\mathrm{MW}_{\mathrm{th}}$ as reported in the NERP
126	ST2 (CHP-2) (boiler 7)	81.41
127	ST2 (CHP-2) (boiler 8)	81.41
128	ST2 (CHP-2) (boiler 9)	75.60
129	ST2 (CHP-2) (boiler 10)	122.12
130	DBH Nyvky (boiler 1)	58.15
131	DBH Nyvky (boiler 2)	58.15
132	DBH Nyvky (boiler 3)	58.15
133	DBH Vidradny (boiler 1)	58.15
134	DBH Vidradny (boiler 2)	58.15
135	DBH Vidradny (boiler 3)	58.15
136	DBH Vidradny (boiler 4)	58.15
137	DBH Borschagivka	465.00
138	DBH Vynogradar	232.60
139	DBH Bilychi	349.00
140	DBH Molod	122.00
141	DBH Voskresenka	349.00
143	DBH Verkon	118.60
144	DBH "PAR" (bolers 4,5,6,7,8,9)	168.60
145	DBH Teremki (bolers 7,8)	93.00
146	DBH Centralna	174.50
147	DBH Minska	93.00
209	Boilerhouse,17, Shakespeare Str., Boiler 5	55.38
210	Boilerhouse, 4, Stoletov Str., Boiler 4	50.39
211	Boilerhouse, 4, Stoletov Str., Boiler 5	56.62



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 Web
 www.energy-community.org

Plant number (in NERP)	Plant name	$\mathrm{MW}_{\mathrm{th}}$ as reported in the NERP
212	Boilerhouse, 4, Stoletov Str., Boilers 6,7	174.14
213	Boilerhouse, 275, Moskovskyi Av, Boiler 1	51.97
214	Boilerhouse, 275, Moskovskyi Av, Boiler 2	54.26
215	Boilerhouse, 275, Moskovskyi Av, Boiler 3	55.42
216	Boilerhouse, 275, Moskovskyi Av, Boiler 4	109.15
217	Boilerhouse, 275, Moskovskyi Av, Boiler 5	119.17
218	Boilerhouse, 3, Energetychna Str., Boiler 1	63.27
219	Boilerhouse, 3, Energetychna Str., Boiler 2	67.62
220	Boilerhouse, 3, Energetychna Str., Boiler 3	68.99
221	Boilerhouse, 3, Energetychna Str., Boiler 4	57.01
222	Boilerhouse, 3, Energetychna Str., Boiler 5	143.10
223	Boilerhouse of PJSC OPZ	106.00

The latest version of Ukraine's NERP submitted to the Secretariat has been significantly improved compared to the version submitted by Ukraine in 2015. In order to finalise the NERP as per the Policy Guidelines, Ukraine shall carry out the following amendments:

- The multi-fuel method shall be used to complete calculations for the multi-fuel plants and include the emission limit values applied for each fuel.
- The abatement measures expected to be fitted before 2018 must be accounted for in the 2018 plant contributions.
- According to the Directive, it is necessary to provide the main fuel type for all non-NERP plants. However, this data is missing in several cases. Therefore, where no quantitative data on fuel consumption is provided for such plants, it would be helpful if the main fuel type could be indicated instead.



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# 3. Conclusions

Considering the exchanges between the Secretariat and the authorities of Bosnia and Herzegovina, the draft NERP is compliant with both the Policy Guidelines and Directive 2001/80/EC.

The draft NERP of Kosovo<sup>\*</sup> can comply with Directive 2001/80/EC and the Policy Guidelines only if its application is in line with Article 4(6) of Directive 2001/80/EC as amended by Article 5(4) of the Decision, i.e. from 2018-2027.

The draft NERPs of former Yugoslav Republic of Macedonia, Serbia and Ukraine can be considered as compliant with both the Policy Guidelines and Directive 2001/80/EC if the recommendations of the Secretariat are implemented in their final version.

Finally, the Secretariat recommends that all Contracting Parties concerned carry out a strategic environmental assessment on the final version of their respective NERPs according to the provisions of Directive 2001/42/EU of the European Parliament and of the Council of 27 June 2001 on the assessment of the effects of certain plans and programmes on the environment.