(stamp)
Beo Čista Energija d.o.o. Belgrade
No.: 152/2019
Date: 03.10.2019
Belgrade

Republic of Serbia
Ministry of Environmental Protection
No.: 353-02-1302/2019-03
Date: 30.09.2019
Belgrade

Pursuant to Article 5a of the Law on Ministries (Official Gazette of the RS, nos. 44/14, 14/15, 54/15 and 96/15 – other law, 62/2017), Articles 18 and 24 of the Law on Environmental Impact Assessment ("Official Gazette of the RS", nos. 135/04, 36/09), Article 136 (1) of the Law on General Administrative Proceedings ("Official Gazette of the RS", no. 18/16), and Article 23 (2) of the Law on Public Administration ("Official Gazette of the RS", nos. 79/05, 101/07 and 95/10 and 99/14), at the request of the project developer, "Beo Čista Energija" d.o.o., Belgrade, the Ministry of Environmental Protection hereby issues the following

D E C I S I O N

1. Approval is hereby granted for the Environmental Impact Assessment Study for the project of construction of the cogeneration plant using municipal waste and landfill gas "Vinča" on cadastral plots 981/1, 987/2, 988, 968/1, 969/3, 969/4, 2693/1, 992/2, 967/2, 966/1, 967/1,992/1, 990/3, 991/3, 990/1, 991/6, 991/2, 991/1, 1005/1, 994/1, 995/3, 996/10, 1015/3, 1014/3, 1013/4, 1013/10, 1005/3, 1013/8, 1013/6, 990/4, 990/5, 1008/8 and parts of cadastral plots: 1008/3, 2693/5, 989/2, 965/1, 1108/3, 2693/4, 966/2, 966/2, and 993 of Cadastral Municipality of Vinča, in the territory of Municipality of Grocka, City of Belgrade.

2. The project developer is obliged to implement the environmental measures specified in the Impact Assessment Study referred to in point 1 of this Decision (Chapter 8 of the relevant Study).

3. The project developer is obliged to comply with other requirements and approvals issued by the competent authorities and organizations in accordance with separate law.

4. The project developer is obliged to implement an environmental monitoring program – monitoring system (Chapter 9 of the relevant Study).

5. The project developer is obliged to commence the implementation of the project within two years from the date of receipt of this Approval Decision. The Decision and the Study shall be an integral part of the technical documentation required for obtaining the permit or approval for commencing the project.

6. The costs of proceedings shall be specified in a separate Decision.

R E A S O N I N G

The project developer, “Beo Čista Energija” d.o.o. Belgrade, on 20 June, 2019, filed to the Ministry of Environmental Protection an application for approval of the Environmental Impact Assessment Study for the project of construction of the cogeneration plant using municipal waste and landfill gas “Vinča” on cadastral plots: 981/1, 987/2, 988, 968/1, 969/3, 969/4, 2693/1, 992/2, 967/2, 966/1, 967/1,992/1, 990/3, 991/3, 990/1, 991/6, 991/2, 991/1, 1005/1, 994/1, 995/3, 996/10, 1015/3, 1014/3, 1013/4, 1013/10, 1005/3, 1013/8, 1013/6, 990/4, 990/5, 1008/8 and parts of cadastral plots: 1008/3, 2693/5, 989/2, 965/1, 1108/3, 979/1, 2693/4, 966/2, 966/2, and 993 of Cadastral Municipality of Vinča, in the territory of Municipality of Grocka, City of Belgrade, undertaken by company “Dvoper” d.o.o., Belgrade.

The Environmental Impact Assessment Study was undertaken entirely in compliance with the Decision on scoping of the Environmental Impact Assessment Study of the project of construction of the cogeneration plant using municipal waste and landfill gas “Vinča” on cadastral plots: 981/1, 987/2, 988, 968/1, 969/3, 969/4, 2693/1, 992/2, 967/2, 966/1, 967/1,992/1, 990/3, 991/3, 990/1, 991/6, 991/2, 991/1, 1005/1, 994/1, 995/3, 996/10, 1015/3, 1014/3, 1013/4, 1013/10, 1005/3, 1013/8, 1013/6, 990/4, 990/5, 1008/8 and parts of cadastral plots: 1008/3, 2693/5, 989/2, 965/1, 1108/3, 979/1, 2693/4, 966/2, 966/2, and 993 of Cadastral Municipality of Vinča, in the territory of Municipality of Grocka, City of Belgrade, number 353-02-815/2018-03 dated 9 May 2019.

Pursuant to Article 20 of the Law on Environmental Impact Assessment, public review (“*public consultation”)* was provided, a presentation was organized and a public debate was conducted with regard to the relevant Study – as advertised in the daily newspaper “Politika” on 28 June 2018 and at the official Ministry’s website http://www.ekologija.gov.rs/obavestenja/procena-uticaja-na-zivotnu-sredinu/. Public review was arranged at the premises of the Ministry of Environmental Protection and the Municipal Administration of the Municipality of Grocka. The public debate was held on 23 July 2019 at the Municipal Administration headquarters of the Municipality of Grocka.

The public debate, in addition to delegates from the Ministry of Environmental Protection and from the local self-government - the City of Belgrade and the Municipality of Grocka, representatives of the project developer and experts who undertook the Study, was also attended by members of the public concerned – representatives from the “Centre for Ecology and Sustainable Development” from Subotica, Citizens' Associations “Right to the City” (*Pravo na grad*) and “Let's Not Drown Belgrade” (*Ne da(vi)mo Beograd*), the Bird Protection and Study Society of Serbia, media representatives and other citizens.

Representatives from the Citizens' Association “Right to the City”, “Let's Not Drown Belgrade”, and the “Centre for Ecology and Sustainable Development” from Subotica raised a number of comments regarding potential air pollution by waste organochlorine gases such as dioxins and furans during the operation of the relevant plant, the lack of expert capacity to monitor these substances and keep them within legally allowed limits, the use of diesel fuel and calculation of waste gas emissions, groundwater pollution, the amount of municipal waste required for the operation of the plant and its proportion to total waste generated annually in the City of Belgrade, the cost of the entire project, and finally, the compliance of this project with the IPPC Directive of the European Union and the national law implementing this Directive.

During the course of the public consultation, the following entities submitted comments/objections to the relevant Environmental Impact Assessment Study:

- Centre for Ecology and Sustainable Development, Subotica
- Citizens’ Association “Right to the City” from Belgrade,

- Citizens' Association "Let's Not Drown Belgrade",
- The Bird Protection and Study Society of Serbia,
- Petar Denčić from Belgrade.

Pursuant to Articles 22, 23 and 24 of the Law on Environmental Impact Assessment, in the Decision no: 353-02-1299/2019-03 dated 03.07.2019, a Technical Committee was established with the task of reviewing this Environmental Impact Assessment Study, supporting documentation and opinions submitted by authorities, organizations and public concerned.

After the meeting held on 16 August 2019, the Technical Committee compiled the Evaluation Report for the relevant Study, stating that it was not undertaken entirely in accordance with the Law on Environmental Impact Assessment ("Official Gazette of the RS", nos. 135/04, 36/09) and the Rulebook on the Scoping of the Environmental Impact Assessment Study ("Official Gazette of the RS", no. 69/05). At the meeting it was concluded that the relevant Study shall be corrected and supplemented in accordance with the submitted opinions, i.e. comments/objections from the public concerned.

After submitted the supplemented and revised Study on 20 September 2019, the Technical Committee held its second working meeting on 27 September 2019. Before the meeting, members of the Technical Committee analyzed all parts of the Study which were amended in detail, as follows:

1. Deliver Location Requirements with the electronic seal.

Location Requirements with electronic signature are annexed to the Study.

2. The Requirements obtained in the process of drafting the Amendments to the Detailed Regulation Plan of Vinča Sanitary Landfill are attached to the Study. It is necessary to submit the Requirements obtained for design and connection in the process of obtaining Location Requirements. Please attach the Requirements so that the electronic signature of the responsible organization is visible.

The Requirements obtained for design and connection in the process of obtaining Location Requirements with electronic signature are attached to the Study.

3. Deliver a positive decision of the Review Committee on acceptance of the project.

Review Committee's decisions on project acceptance are attached to the Study.

4. Data on the distance of vulnerable facilities within this project from Belo Brdo, Veteranska Villa and other archeological sites is missing, although the table lists a number of other facilities and their distance.

Belo Brdo archeological site is 3km away from the Vinča landfill complex, to the southeast. The precise location of Veteranska Villa was neither specified by the competent Institute for Immovable Cultural Goods, as stated in the Study – page 11 of the Study.

5. Revise Chapter 2.5 – Climate characteristics with meteorological data using new, current maps.

Chapter 2.5 has been amended to comply with comment – page 23 of the Study.

6. Was heat energy needs analysis of surrounding facilities in surrounding settlements conducted, as well as technical solutions and cost-effectiveness of heat transport given the distance of the settlement?

It is not the subject of the environmental impact assessment. The Study does not examine economic cost effectiveness of the project and its parts.

7. What data (the source CEEFOR was stated) was used to determine the existing quantity of landfill biogas? Is this an estimate or investigation?

The quantity of landfill gas was obtained by modeling. The graphs show production of biogas from the "old" and the "new" landfill. The following graphs show for each landfill (old and new) the collection and production of biogas estimated by SIMCET software.
Figure 45 – Production and collection of biogas from the "old" landfill, in the Study
Figure 46 - Production and collection of biogas from the "new" landfill, in the Study

Old landfill:
- *Biogas production reaches the maximum value of flow of 5500 Nm^3/h (with 50% of CH4) in 2020, and then logarithmically decreases, reaching the value close to zero in 2060;*
- *From 2020 to 2035, biogas flow ranges between 1900 Nm^3/h and 300 Nm^3/h with average flow of about 830 Nm3/h.*

New landfill:
- *Apart from the production at the beginning (2390 Nm^3/h in 2022), biogas production reaches the maximum value of flow of 2070 Nm^3/h (with 50% of CH4) in 2050, and then logarithmically decreases to 300 Nm3/h in 2056, and close to zero in 2090;*
- *From 2020 to 2053, biogas flow ranges between 300 Nm^3/h and 1400 Nm^3/h with average flow of about 1000 Nm^3/h – pages 114, 115 of the Study*

8. Was it prepared – proposed schedule of consumption of existing quantities of municipal waste as a fuel which is already in the landfill, with using newly arrived quantities of waste once the incineration plant is commissioned?

The project does not propose the use of waste from the existing landfill to be rehabilitated, recultivitated and closed. For newly arrived quantities of waste, which are to be treated in the EfW plant, a temporary sanitary landfill for municipal waste is proposed, as described in a separate study: New landfill with accompanying facilities.

9. In mechanical treatment of municipal waste, in its pre-treatment or post-treatment, is dust which occurs treated as potentially explosive (since part of starting raw materials is certainly of organic origin) and appropriate dust extraction systems and equipment must be in compliance with EU ATEX directives (2014/34/EU – regarding equipment and 1999/92/EU – regarding workers/owners), and the Rulebook on equipment and protection systems intended for use in potentially explosive atmospheres ("Official Gazette of the RS", no.1/13)?

There is no ATEX zone in the waste reception area. Dust occurring from loading operations in the reception bunker, and in the bunker itself, is maintained at a low level as continuing air exhaust from these areas is proposed for waste incineration process in the boiler plant. Thus, it is ensured that the waste bunker is always under negative pressure and there is no emission of dust and odors to the surrounding area.

In post-treatment of waste streams from waste incineration process, there is a recommendation for ATEX zone in the activated carbon system (a part of the System for reduction of organic pollutant emission from flue gases), which will be addressed in detail in the subsequent phase of project design documentation development, which will establish and address all ATEX zones in the plant, in keeping with valid legal regulations.

10. In the textual documentation and drawings of the Study, please indicate all dust extraction systems (that is, industrial ventilation and filtration system), which are used to control the

impact of plant emitters on the ambient air. For example: Flue gas treatment system for the EfW plant, ash transport, slag transport, material separation, etc.

At the end of Chapter 3.6.2, the following text has been added:
Dust extraction system – industrial ventilation and filtration
In the waste reception phase, the reduction of dust emission to the environment is provided by primary exhaust of air from the waste bunker, which is transported to the boiler plant, for the needs of burning waste.

Duct which occurs in the waste incineration process in the EfW plant shall be extracted from the system by means of bag filters. Dust is then collected from storage under the bag filter in silos through the enclosed transport system. Reduction of dust emission from incinerator bottom ash (IBA) is performed using water sprinkler system.

The Study and its annexes contains P&I diagrams showing combustion air system, IBA system and bag filter system – page 120 of the Study.

11. Is there a duct extraction system for treatment and dispatch of the bottom ash from the combustion chamber of the EfW plant, as there are several transferring places from conveyor, sieve, mixer...? If the duct extraction system is not proposed, please specify the reason. If it is proposed, please specify its technical characteristics.

Cooled incinerator bottom ash is extracted using a wet extractor below the boiler grate, so there is no dust emission. The extractor is also equipped with a vapor extraction system, thus providing exhaust of any particles in the zone of discharging bottom ash on lower transporters. When the bottom ash is deposited in the IBA zone prior to final disposal, dust emission is controlled by water spraying.

The figures show the IBA system and central vacuum system of the plant. The figures are provided in the Study and its annexes – pages 122, 123 of the Study.

12. Specify technical characteristics of each dust extraction system (industrial ventilation and filtration system) required for the evaluation of validity of the Study in part describing the control of impact of plant emitters on the ambient air. The following characteristics of each of the systems shall be in particular specified:
    a. Total capacity, that is, flow of exhaust air (m^3/h),
    b. List of all places – sources of pollution where exhaustion from processing equipment is carried out, with proposed air quantity to be exhausted (m^3/h),
    c. Proposed dust extractor (filter) with its filter are (m^2),
    d. What type of filter elements is proposed (bags, patrons, packages)?
    e. What is the method applied to empty the filter from collected dust and what is further manipulation with it?
    f. Exhaust fan: capacity (m^3/h), total pressure (Pa) and power (kW).

There are two sources of emission of particulate matter from the EwF plant: from the waste reception bunker and during waste reception, and from the stake after flue gas treatment. Dust emission from the waste reception area is mitigated by primary air suction which is transported to the boiler plant for waste incineration process. Dust emission form the stake is mitigated by comprehensive flue gas treatment system (more specifically bag filters). Dust emission from the stake is continuously monitored by the continuous emission monitoring system. Detailed technical characteristics of the comprehensive filter-ventilation system are an integral part of the extensive project design documentation and cannot be shown in this extent in a study. For illustration

purpose, a table showing Dust extraction system with bag filter is provided, as well as extracts from the part of the technical documentation in annexes to the Study – page 124 of the Study.

13. What are guarantees that the proposed dust extractors (filters) in each of the mentioned system will treat pollutants to below limit values as prescribed by the Law (20 mg/m3)? What are specific technical-technological measures proposed in dust extraction systems?

Particulate matter emission is monitored, in accordance with the monitoring plan and legal regulations, and it is guaranteed that the emissions will be below 10 mg/Nm^3 according to the EPC Contract. This is in compliance with the EU Directive on Waste Incineration. As far as the BEP plant, the guaranteed dust emission is 100 mg/Nm^3 according to the PPP Contract.

Guarantees that the proposed dust extractors (filters) in each of the mentioned system will treat pollutants to below limit values as prescribed by legislation are regular monitoring of pollutant emissions from the plant, monitoring reports which are, in accordance with regulations, communicated to the competent authorities and control by the competent authorities for control and supervision (inspection service).

The proposed dust extraction systems are by themselves specific technical-technological measure intended for reducing pollutant emissions from the plant – page 125 of the Study.

14. Does in the NOx control building, control of other gases and particles should and may be in place (page 48)?

DeNOx building includes only the urea storage and injection system which is used to neutralize NOx separated during waste incineration. The actual removal of NOx occurs only in a furnace – boiler plant. Therefore, the DeNOx building includes only urea detection – page 49 of the Study.

15. Data is missing, from where raw water is obtained (page 64)?

Pages 74 and 95 of the Study contain the answer to the given comment, in subtitles:
"Technical water line"
As raw water for various uses in the Functional unit 1/1, potable water from the public Belgrade water supply system will be used".
"Water supply"
The facilities within the plant do not have connection to the public water supply system. The Functional unit 1 will be supplied with water through internal connection to the water supply system of the entire landfill complex in Vinča, which is connected to the Belgrade water supply system.
The Study describes in detail the origin and use of raw water.

16. In the overview showing generated waste treatment technologies, there is no data about what is done and how used saturated activated carbon is treated (page 103)? Define measure for preventing the adverse environmental impact which involves regular replacement of filter filling, in particular filters with activated carbon on the EfW plant and oxidizing catalytic converter on the BEP plant.

In the EfW plant, spent activated carbon injected in the form of powder is collected together with residues in APCr silo. APCr is then stabilized and disposed to the landfill for residues produced after waste treatment in the EfW plant (which is the subject of other project, i.e. other impact assessment study). In the BEP plant, activated carbon is disposed into big big-bags - page 107 of the Study.

Chapter 8.4 proposes following measures:

- *The project developer is obliged to regularly replace filter filling, in particular of activated carbon filters in the EfW plant and catalyst converter on the BEP plant.*

- *Filter filling shall be replaced by equipment supplier or authorized repair service provider.*
- *Used (contaminated) activated carbon shall be temporarily stored in hazardous waste storage on the Operational platform (which is the subject of other project, i.e. other impact assessment study), until its delivery to operators possessing appropriate permit for this type of waste management.*

17. It is stated that the project developer is obliged to contact the competent Ministry for determining the obligation about the type of SEVESO document. The legislation prescribes: that the project developer himself determines, based on the type and quantity of dangerous substances, what document he shall develop, and inform the competent authority thereabout.

The mentioned obligation in Chapter 73. has been amended to read:
"The project developer is obliged, based on prior notification about the type and quantities of dangerous (Seveso) substances and chemicals which are present or may be found in the plant, to contact the Ministry for determining the obligation of the type of SEVESO document to be drafted for the relevant plant." Page 252
The same measure is given in Chapter 8.4.

18. Is blockage of the main process plant proposed in case of an accident or failure in appropriate duct extraction system (for example, cracking of filter element in the filter, halt in the dust extractor, etc.) Specify what is done and how.

Bag filters are designed into 8 compartments: If in the dust collection/transport system, halt/accident is identified, or if exceeding output concentrations are detected in the continuous emission monitoring system, then the compartment where the problem occurred, can be isolated with dumpers (for example, penetration of bag filter or clogged duct collector). The load of the EfW plant can be reduced to adjust flue gas flow after closing one or more compartments of the bag filter – page 532 of the Study.

19. Is monitoring and further treatment proposed not only for emission exceeding, but also for the incident itself and how?

The following has been added in Chapter 9.2:

Monitoring in case of accident and post-accident monitoring
- *All performances of the plant and the detection and alarm system in case of accidents are registered in DCS and signaled to operators in the plant.*
- *Monitoring of main environmental factors during the accident duration is mandatory.*
- *After accident, compile a report on the accident occurred with obligatory measures to prevent the occurrence of the same or similar accident*
- *Depending on the scope and effects of the accident, conduct post-monitoring of environmental factors affected by the accident.*
- *The project developer is obliged to provide funds for remediation of accident and consequences caused by the accident, in accordance with developed design of remediation of accident consequences – page 277 of the Study*

20. Although it is estimated that solidificate will be non-hazardous waste, please add the following measure: Characterize solidificate, and define final disposition according to established waste character. The same applies to stabilized bottom ash from EfW plant combustion chamber.

The following measures have been added in Chapter 8.4:

- *Characterize solidificate, and define final disposition according to the established waste character.*

- *Characterize stabilized bottom ash from the boiler plant (IBA) and define final disposition according to the established waste character.*

21. Specify procedure for replacing filter units for gas treatment from the BEP plant and bag filters for flue gas treatment.

Bag filters in the EfW plant shall be replaced during planned overhaul - filter bag replacement. Three filters for landfill gas in the BEP plant use activated carbon: the filter is filled with activated carbon from the top, while spent activated carbon is removed through the bottom. The absorption rate is monitored, and when adsorption rate falls below 80%, it must be refilled. The procedure involves discharge of 50% of filter filling height and refilling to 100% so the filling top would fall to the silo bottom. This ensures full utilization of absorption properties of activated carbon filling - page 125 of the Study.

The following measures have been added in Chapter 8.4:

- *Replace bag filters in the EfW plant during planned overhaul – filter bag replacement.*
- *Three filters for landfill gas in the BEP plant use activated carbon: the filter is filled with activated carbon from the top, while spent activated carbon is removed through the bottom. The absorption rate is monitored, and when adsorption rate falls below 80%, it must be refilled. The procedure involves discharge of 50% of filter filling height and refilling to 100% so the filling top would fall to the silo bottom.*

  Excerpt from offer submitted by "Teknogrup" providing additional details is attached.

22. These factors point to the toxic potential of one PCDD or PCCF congener in relation to the toxic effect of 2,3,7,8-TCDD (Tetrachlorodibenzodioxin), which is a congener with the highest toxicity. The Industrial Emissions Directive (IED) sets I-TEFs for 17 PCDD/PCDF congeners, including 2,3,7,8-TCDD [24, EU 2010], [49, CEN2006].
    If there is a need to cover dioxin-like PCB, it is recommended to use unit ng WHO-TEQ/m3, which is toxic equivalent according to the World Health Organization (WHO-TEFc, which is also called toxic equivalency factor of the World Health Organization), in addition to I-TEF, also includes toxic equivalency factors for 12 dioxin-like PCB. The another difference between the two concepts is that WHO-TEQ differs from I-TEF in several PCDD/PCDF [50, Van der Berg et al.2006], [51, CEN 2010].
    At the EfW plant's emitter - stack, continuous monitoring/sampling of dioxins and furans in flue gases is proposed. In addition, samples of flue gases will be analyzed by an accredited laboratory in keeping with the monitoring program. The contractor guarantees performances of the EfW plant for the stated parameters as max up to 0.1 ng(1-TEQ/m^3) as defined by the EU Directive on Waste Incineration /page 274 of the revised Directive.

Comments submitted by Citizens Association "Right to the City / Let's Not Drawn Belgrade:

1. There is no logical justification for the decision that rehabilitation and energy utilization of landfill gas from the existing landfill are examined by the same Study as the EfW plant, as these are two different projects. It would be more meaningful to have one study covering the EfW plant, namely the incinerator, and new landfills as it is planned for waste from the incinerator to be disposed at the new landfill.

The answer stating that the landfill rehabilitation is not the subject of the Environmental Impact Assessment Study is accepted. The scope of a study is defined by the Location requirements,

technical documentation developed at Preliminary Design level (PD) and the scope of future construction permits, pursuant to the Law on Planning and Construction and the Law on Environmental Impact Assessment Study.

The Law on Planning and Construction allows projects to be implemented in phases. Accordingly, in order to obtain the requirements and approvals from holders of public powers, two environmental impact assessment studies were undertaken, as well as the Existing Landfill Rehabilitation and Remediation Project. According to the legislation, public consultation and presentation of the Environmental Impact Assessment Study of the EFW plant and new landfill with accompanying facilities were provided. The Study presents technical solutions and appropriate protection measures in terms of reducing potential emissions from this complex.

2. The Study does not include power stations and transmission lines, nor the wastewater treatment plant. Without these elements, the incinerator and landfill gas fired power plant cannot operate! The Study must include all facilities closing the technological process and are necessary for its functioning.

The answer stated that the project boundaries have been defined by project design documentation developed within the Preliminary Design, as stated in the answer to the previous comment. The mentioned line facilities represent connection facilities, as water supply and sewage networks, electricity and other, and they are the subject, or not, of other studies, pursuant to legal regulations and decisions issued by competent authorities.

Transmission lines and power stations are also part of other detailed regulation plans (two individual detailed regulation plans), followed by strategic environmental impact assessment studies and they are not sited on the cadastral plots of this project. Development and preparation of these detailed regulation plans, strategic environmental impact assessment studies and latter technical documentation and environmental impact assessment (if decided so in legally defined decision-making procedure) are in progress and part of other procedures.

The wastewater treatment system is extensively described and is part of the environmental impact assessment study for the landfill, pursuant to the location requirements and prepared technical documentation. Please look more carefully the text of the Study.

3. On 16 December 2018, the Secretariat for Environmental Protection of Belgrade City Administration announced “Public consultations for environmental and social impact assessment for the Vinča Energy-from-waste plant, construction of the new landfill and remediation of the existing landfill (ESIA)” and public debate scheduled for 20 December 2018 (http://www.beograd.rs/lat/gradskioglasi-konkursi-i-tenderi/1756002-javne-konsultacije-za-procenu-uticaja-na-zivotnu-sredinu-i-socijalna-pitanja-za-postrojenje-Vinča!)
   However, the content of this Study differs significantly from the content of the mentioned ESIA Study. Apart from differing in the subject of the impact environmental assessment (the ESIA covers all proposed facilities within the Vinča complex, given the fact that that is the only right way to determine the impact of works in the Vinča complex on environmental factors), it is obvious that even for those parts considered by this SIA, not all data, that the project developer obtained and examined for the ESIA, are shown. In this way, the public and the Technical Committee of the Ministry of Environmental Protection has been left deprived of some of the crucial information necessary to assess the impact of the proposed works on environmental factors.

The answer stated that the ESIA document is not subject of the environmental impact assessment procedure pursuant to Serbian legislation. The content of ESIA is defined by banks that need to be informed in detail about projects for which they need to decide whether or not they want to fund them. The approval of ESIA document is given by banks and it is not binding for the project developer in terms of the implementation of that project, it only influences whether the given bank will participate in funding the project. On the other hand, the content of EIA documents is defined by the legislation of the Republic of Serbia and as such is not the same document in content as the ESIA study. The approval of EIA documents is given by the Ministry of Environment and further implementation of the project depends on its outcome.

The procedure for this particular ESIA study was initiated earlier and during the procedure it had a large number of reviews and analyses of the document itself with the potential to influence the development of the text and the scope of survey, resulting in many things being amended and adopted on the fly, before the public debate was held for this study.

On the other hand, the procedures for EIA studies started a little later than the procedure for ESIA, but within the legally defined procedure it was not possible to significantly amend the text of the document before the public debate. Therefore, some of the results and information obtained in the meantime were not included in the text for public debate, which has now been corrected in the new version of the document.

4. As the mentioned ESIA document was already the subject of public debate in the procedure conducted by the European Bank for Reconstruction and Development (EBRD), and as in this public debate procedure comments on it were furnished, to which the project developer provided answers and significantly amended the ESIA document accordingly, it is not clear why here considered Study contains old data.

   Although it is clear that the EBRD procedure does not have to necessarily correspond to RS regulations, we still believe that the aim of presenting the old version of the Environmental Impact Assessment Study is only to hassle the public in terms of additional time loss on writing the same comments on the Study content, for which the project developer already agreed that they would be changed, supplemented or correctly presented.

As in the previous answer, the ESIA is not subject of the environmental impact assessment procedure according to Serbian legislation.

5. The Environmental Impact Assessment Study does not contain requirements issued by public companies based on which it is possible to determine with certainty that the technology described is in compliance with regulations. Namely, the attachments of the Study contain requirements issued during the development of the Detailed Regulation Plan of “Vinča” Sanitary Landfill (“Official Journal of City of Belgrade”, no.86/18), but not requirements acquired for obtaining Location Requirements of the Ministry of Construction, Transport and Infrastructure, number: 350-02-0085/2019-14 dated 25 April 2019.

The answer stated that requirements and approvals were obtained in early and mid-2019, and they are attached to the Studies. If an inadvertent error has occurred, it will be corrected.

6. The Study describes the existence of and resettlement plans for the informal settlement located on the existing landfill body. However, this settlement was resettled more than 6 months ago! The aim of the Environmental Impact Assessment Study is to analyze and describe the impact on the population before these impacts are realized, not after. On the other hand, given that the Study does not contain data on the resettlement process, resettlement results and current living conditions of the resettled population, it is clear that this

is a carelessness of the project developer to really assess the impact of the proposed project on the affected population.

The answer stated, as it is stated in the Study, that the City of Belgrade is responsible for resettlement of Roma families to free the space for construction of proposed facilities, as well as to inform and provide assistance to the affected population. The Assembly of the City officially adopted the Resettlement Action Plan which obligates the City to fulfill all requirements defined by legal regulations, but also requirements put before the City by international financial institutions (IFIs) which will participate in financing the project.

According to the latest information obtained by the City, the relocation status is following:
All families which meet the requirements laid down by the Law on Housing and Building Maintenance were provided adequate housing support and placed in already built apartments of the City of Belgrade in accordance with the Resettlement Plan for households living in the informal settlement located at the landfill site, and for income restoration of collectors of secondary raw materials (waste pickers) at the Vinča landfill. To individuals not having personal documents, the City of Belgrade provided assistance in obtaining them. Persons older than 16 years were provided assistance in obtaining an identity card. Parents were assisted in obtaining birth certificates for children below 16 years of age. Prior to the resettlement, all children below 14 years of age were enrolled in preparatory preschool program and primary school, in accordance with mandatory preschool and primary education as defined by positive regulations of RS. School attendance is regularly monitored in cooperation with school principals, teachers and the Secretariat for Education. After resettlement, all medical records of the persons covered by the project were transferred to primary health care centers at new locations. Those not having medical records were provided assistance in registering and obtaining records in primary health care centers.

Families are work-engaged at the Vinča landfill as collectors, they pay costs of housing from their own income. Prior to the resettlement, families were informed on costs of using apartments, that is, households were presented that they will be obliged to pay rent (unless they move to their own apartment or house) and costs of bills, but also that the City will help them through subsidies to settle these costs, and that the City will help them in obtaining personal documents, enrolling children in schools, healthcare, social protection and finding a job:

The City of Belgrade, the city of Šabac and the municipality of Vladimirovci will provide assistance the persons covered by this project in restoring and improving their income through the following measures:

- *Seasonal job offers;*
- *Job offers in city utility companies;*
- *Job offers through public work programmes;*
- *Job offers in cooperation with the NES (development and implementation of individual employment plans, job search training, and courses of retraining and adult education, job opportunities available, mediation in finding employment, entrepreneurship incentive and development services, special programs for individuals belonging to vulnerable and harder-to-employ groups)*
- *Offering assistance in employment and self-employment within available programs and projects of NGOs and other organizations (e.g. IPA 2016 EU Support for Roma Inclusion – Strengthening local communities for Roma inclusion, funded by the European Union and implemented by the Permanent Conference of Towns and Municipalities, in cooperation with local governments throughout Serbia);*
- *Offering adult education and craft training courses;*

- *Offering jobs during the construction phase of the project, at the Vinča landfill, and later during the operational phase of the new landfill;*
- *Offering jobs involving collection and sorting of secondary raw materials at other locations where PUC Gradska Čistoća operates (e.g. at sites of future recycling centers)*

Since the families were relocated from the informal settlement next to the Vinča landfill in September 2018, the Working Group has been monitoring the implementation of the Resettlement Plan for at least two years after resettlement in cooperation with all other organizational units involved in the implementation of the Resettlement Plan.

7. The Study does not contain requirements issued by Belgrade Institute for Protection of Cultural Monuments, i.e. it contains a letter of the Institute dated 23 March 2018 in which the Institute makes reference to the requirements of the Institute P 2249/14 dated 23 July 2014 to be used for amendments to the Detailed Regulation Plan of "Vinča" Sanitary Landfill. However, these requirements are not attached to the Study.

The answer stated that the Requirements of the Belgrade Institute for Protection of Cultural Monuments were obtained on 29 March 2019, under number 350-02-00104/2019-14 and are attached to the Study.

8. The Study does not contain all mandatory parts as stipulated by the Rulebook on Scoping of the Environmental Impact Assessment Study ("Official Gazette of the RS", no.89/05). It is particularly important to note here that the Study does not contain the copy of the map showing cadastral plots on which the proposed development is to be built, with drawn-in disposition of all facilities.

The answer stated that the copy of the map showing cadastral plots is attached to the Study.

9. The Study does not contain all attachments listed in the section "List of technical documentation" on page 247 of the Study, making it impossible to verify the information listed in the content of the Study.

The answer stated that the list of technical documentation includes the list of all design volumes, technical and planning documentation, which were used to describe the plants and define the impacts and measures provided for by the project, which were cited as the source of information in the Study. Law does not provide for to make available complete technical and planning documentation for review in the process of undertaking the impact assessment study, but an excerpt from the project with main details, based on which is possible to see what is the subject of the study. The complete technical documentation is submitted to the authority responsible for issuing the construction permit.

10. The Study does not examine any alternative solutions for waste management in a way which meets the aim of this environmental impact assessment procedure. The Study must examine at least one alternative solution for waste treatment not involving incineration, for example, recycling + MBT + new landfill for stabilized waste.

The statement is not true. A study is undertaken for a precisely defined project based on a Preliminary Design (PD) developed in accordance with specially issued location requirements for the elaboration of technical documentation and connection for a specific Schematic Design, issued by the competent authorities (Article 12 of the Law on Environmental Impact Assessment, ".the request referred to in paragraph 2 of this Article shall be enclosed with the following documentation: 2) preliminary design, i.e. excerpt from preliminary design ... 4) requirements and approvals of other competent authorities and organizations obtained in accordance with a separate law ..") . Therefore, pursuant to the Law on Planning and Construction, it is not possible

to consider several completely different project solutions at this level of development of technical documentation.

What can be done only is to describe alternative solutions which were considered at previous levels of technical documentation preparation, which has been done in this Study, or to present alternative measures which may be implemented, as defined in Article 2 of the Law on Environmental Impact Assessment "environmental impact assessment means a prevention measure of environmental protection, based on the elaboration of a Study, and conducting of public consultations and analyses of alternative measures, with the aim of collecting data, and forecasting adverse effects of specific projects on the environment and human health, flora and fauna, soil, water, air, climate and landscape, material and cultural resources and cumulative effects of these factors, and of determining and proposing measures that may be implemented to prevent, reduce or offset such adverse effects, having in mind the feasibility of these projects (hereinafter: impact assessment)".

Alternative solutions are described in Chapter 4 of the Study.

11. The Study does not present basic data on the quantity and composition of municipal waste collected annually in Belgrade and quantities projected for the future, which is the main starting data in assessing the impact of the proposed facilities on the environment. Annex IV to Directive 2011/92/EU, as amended by Directive 2014/52/EU, which is binding for Serbia starting from 1 January 2019, requires to be included: "(c) a description of the main characteristics of the operational phase … for instance, energy demand and energy used, nature and quantity of the materials and natural resources used…". Since in the incineration plant is planned to incinerate natural resources, the Study must be supplemented with the description of waste composition and quantity.

The answer stated that starting data on estimated waste quantity generated and collected in the relevant territory has been given as part of tendering documentation and defined within the Study developed by company FICTHTNER. The comment is not true; it is not proposed in the EfW plant to incinerate any natural resources.

12. The facilities analyzed in this Study should be compared against the new BREF standard which was adopted in the EU on 17 June 2019, and not with the 2006 document, as the project developer did. Considering the fact that project is planned to be funded by financial institutions EBRD, EIB and IFC, it must comply with the newest BREF standard. In addition, it cannot be considered justified to build a plant which does not comply with the latest standards on environmental protection and protection of human health.

The answer stated to see the answer defined in agreement with EBRD:

"The current project (design) fulfills the requirements for emission limit values defined under the Emissions Directive (IED) 2010/75/EU. At the time of undertaking ESIA/EIA documents, the officially adopted BREF for waste incineration was the BREF document adopted in August 2006, and the same version is still in force. All installations falling under the Industrial Emissions Directive 2010/75/EU should comply with the requirements of the official documents adopted by the European Commission. Therefore, in ESIA/EIA documents, comparisons have been made with the only currently valid and obliging emission limit values from waste incineration, that is, the 2006 BREF. Theoretically, if in the coming period, including the period after the EfW plant is built, other document defining emission limit values/BREF comes into force, the project will, if not

(claimed by nobody) inevitably be complied with the new requirements which the Government of the Republic of Serbia decides to transpose and adopt as criteria defined in Serbian legislation.

The proposed energy-from-waste plant includes technological solutions and design which were developed in a way to enable possible necessary changes and adjustments in line with possible new BREF requirements, as may be transposed in Serbian legislation".

13. The Study does not contain data on annual diesel fuel quantity required for the operation of the plant.

The response stated that the annual diesel fuel quantity required for the operation of the plant (mobile equipment within the entire complex in Vinča) should be around 475 m^3/annually. Also, according to the management and maintenance plan, around 300 m^3 of additional fuel can be used in the EfW plant.

14. The Study does not contain expected emissions of harmful substances produced after treatment, but only limit values.

The answer stated to see Tables 17 an d18 of the Study.

15. What is expected cost for households of this project?

This issue is not the subject of this Study.

16. "Nearby the existing landfill (to the north) there is an informal settlement consisting of huts without basic infrastructure (water supply, sewer...)." "In the north part of the proposed landfill complex, immediately next to the existing landfill fencing, there is an informal settlement. Families living in this informal settlement collect and sort secondary raw materials, and then sell them to purchasers... The Action Plan provides for the resettlement of families living in the informal settlement located at the Vinča landfill site, as described in detail in Chapter 5.1!"

The Study describes the existence of and resettlement plans for the informal settlement located on the existing landfill body. However, this settlement was resettled more than 6 months ago! The aim of the Environmental Impact Assessment Study is to analyze and describe the impact on the population before these impacts are realized, not after. On the other hand, given that the Study does not contain data on the resettlement process, resettlement results and current living conditions of the resettled population, it is clear that this is a carelessness of the project developer to really assess the impact of the proposed project on the affected population.

As this is repeated comment, please see the answer to the comment no. 7.

17. In the answer from EBRD, we got information that: "The nearest free-standing structure in the Vinča settlement based on orthographic analysis is at a distance of 1050 m (SE from the existing landfill, near the cemetery)." On the other hand, measurement using available tools (GIS, Belgrade Land Development Public Agency) shows that this distance is less than 1000 m. This has been also confirmed by IFC consultant, in the document Environmental and Social Scoping Study for the Belgrade EfW Project in Serbia (Fichtner, April 2007) where it is clearly stated that the distance between the Vinča landfill and the nearest settlement is only 800 m.

The Study has been amended to comply with the observed fault.

18. Precisely specify the distances of the proposed complex (not only the existing landfill) from pumping stations, the distance from the boundary of water supply source protection and protection measures for water areas from the impact of the project. Specify the distance of the planned complex from the boundary of the alluvial plain zone which is affected by high

level of groundwater and surface water/floodplains (Master Plan of Belgrade, Map 7 – Water and water areas) and protection measures for water areas from the impact of the project.

The answer made reference to the attached requirements issued by "Belgrade Waterworks and Sewerage".

19. The Study only copies data for the period 2000 - 2015, and shows them aggregately, without drawing conclusions of actual importance for this Study. How does the Study relate to the post-2105 period which witnessed increasing oscillations in maximum and minimum values of the analyzed climate characteristics?

The answer stated that Chapter 2.5 of the Study has been supplemented with new data. When the Study was undertaken, much data for later years was not publicly available.

20. The diagram of mean monthly air temperatures for Belgrade weather station (for the period 2000-2015) does not show data mentioned in the name of the diagram. View of average temperatures is missing, by month, for each year between 2000 and 2015, which would show a trend of temperature increase.

The answer stated that Chapter 2.5 of the Study has been supplemented with new data. When the Study was conducted, much data for later years was not publicly available.

21. Also, average monthly temperature in October cannot be lower than in November. We already commented this during the public consultations which EBRD made available for public review and we hoped that the project developer would correct this novice mistake.

The response stated that Chapter 2.5 of the Study has been supplemented with new data. When the Study was conducted, much data for later years was not publicly available.

22. "…According to the Climate Atlas of Yugoslavia for the 1931-1960 period, the annual number of foggy days in Belgrade is 39. ... Source: Ecological Atlas of Belgrade, City Institute for Health Protection Belgrade, 2002)."
    Data in the Study must be relevant and current. Neither the 1931-1960 period nor 2002 is current, nor they provide exact overview of the situation regarding smog in Belgrade, which is worsening. The Study should be supplemented with current information on smog in Belgrade.

The response stated that Chapter 2.5 of the Study has been supplemented with new data. When the Study was conducted, much data for later years was not publicly available.

23. There is no drawing showing position of each of the individually listed natural protected area. There is no drawing showing distances between the proposed facilities and each of the individually listed protected natural area. The distance of the proposed complex in Vinča from the boundary of ecological network area of particular ecological importance "Confluence of the Sava and the Danube rivers" which is also declared as an international IBA (important bird area, RS017IBA) is inaccurate! If there were a map with precisely drawn in boundaries of protected areas, it would be clear that the distance of the proposed complex from the boundary of the IBA is 180m (one hundred eighty meters), and not 9 km as specified in the Study. This information was presented in the response of EBRD to the comments on the ESIA Study prepared by the project developer for bank loan approval process.

The Study has been revised to comply with this comment, and current data has been entered in.

24. Data on health status must be supplemented with the impact assessment of pollution source in air, water and soil on the population health? Also, it must be supplemented with a comparative analysis of Serbian population health and population of the region and the EU, more specifically, with the incidence and mortality rate of most common diseases, in order to

have a clear insight into the population health status. For example, Serbia is on the 18th place in Europe in cancer incidence, but it holds the 2nd place in cancer mortality rate (Serbian Medical Society, 2017). Unless supported by the above additional analysis, data presented in the Study cannot be considered relevant data for actual impact assessment of the proposed development on the health of population of Belgrade and Serbia.

The answer stated that all available data on health is shown in the Study.

25. "Waste combustion plant is designed for continuous operation with a fuel of minimum calorific value (MCV) ranging from 6,000 kJ/kg to 12,000 kJ/kg and for combustion of solid municipal waste."
    What is the current calorific value of municipal waste in Belgrade? How much it will be when the effective separate collection system of plastics, paper and biodegradable waste introduced? Supplement the Study with this data which may be of key relevance for the analysis of auxiliary diesel fuel quantity which will be required for the plant operation.

It is estimated that calorific value of municipal waste in Belgrade ranges between 7,500 kJ/kg and 8,500 kJ/kg. These values are also consistent with experiences of other countries with similar standard of living. It is important to mention that the EfW plant is designed to receive significantly higher spectrum of municipal waste and that the waste crane includes several cycles of waste mixing to get homogenized before reaching the grate.

In this phase, it is not possible to determine the exact impact of waste separation and recycling, as it depends on applied waste collection guidelines. Waste separation may either reduce total quantity of municipal waste by removing materials having higher calorific values (plastics, fabrics, etc….) or increase by removing materials having lower calorific values (organic waste, glass, cans, etc.). Experiences in other countries which underwent the same policy changes show that municipal waste remain quite stable before and after the changes, as both previously mentioned impacts cancel each other out. Regardless of good practice, the plant has been designed with a very high range of operation in order to manage any future variations in municipal waste.

Auxiliary diesel fuel is required only for plant start up and shut down to bring the furnace to such a high temperature as to burn hazardous gases from waste. Once the plant starts operating, waste is enough to maintain fire. It is expected to have maximum 1 cold start and 6 regular (hot) starts every year, representing maximum fuel consumption of 40m + 6 x 24m = 184 tons of fuel. This value is less than 0.3% of energy combusted in the EfW plant, while 97.7% of energy will be generated from waste.

26. "All waters, polluted and unpolluted, from this part of the landfill complex, are discharged into internal channeling systems which are at the border of Functional unit 1 connected to appropriate systems of the other part of the landfill complex, such as the Leachate treatment plant and the Waste (sanitary-foul) water treatment plant. The mentioned plants are subject of other project."
    The mentioned plants must be covered by this Study because the plants examined by this Study cannot operate without the wastewater treatment system.

The answer stated that the Impact Assessment Study for the EfW plant describes the wastewater treatment system as inseparable part of the overall system at the complex, but details about it were not provided in the Study as the system itself is not covered by the Construction Permit for the EfW plant, but the Construction Permit for the landfill. Detailed description of the wastewater collection and treatment system is given in the Impact Assessment Study for the landfill.

27. Table 17: Are these values before treatment? If so, are these post-treatment values shown in nm^3 for 30 min or 24-hour average? Table 18 shows only limit values, but not expected values. Supplement the Study with expected emission values at the exit from the stack into the atmosphere? If the values specified in Table 17 are after treatment, they are not in compliance with the 2006 BREF values.

The answer pointed to Table 17 – it is about expected values of flue gas quality parameters before treatment process – input design parameters, and Table 18 – it is about maximum expected emission values.

28. Pollutant emission limit values are not in compliance with the new BREF document on waste incineration which was adopted in June 2019. This pertain to all mentioned substances, except for CO and TOC. This means that the technology applied to the waste incineration plant in Vinča will be outdated even before it is even built! What is the reason of using this outdated technology? Is it simply cheaper for the operator? Where is the population health in all of this, as in this way it will be exposed to excessive pollution?

    Why build a plant which, at the time of construction, is already not in compliance with the best available techniques? Legal obligations set minimum, not maximum requirements, and it is not clear why the new standards, when already available and adopted, are not complied with? This behavior poses additional obligations for the developer, and does not provide maximum protection to the population. Even opposite.

The answer stated that the current project (design) fulfills the requirements for emission limit values defined under the Emissions Directive (IED) 2010/75/EU. At the time of undertaking ESIA/EIA documents, the officially adopted BREF for waste incineration was the BREF document adopted in August 2006, and the same version is still in force. All installations falling under the Industrial Emissions Directive 2010/75/EU should comply with the requirements of the official documents adopted by the European Commission. Therefore, in ESIA/EIA documents, comparisons have been made with the only currently valid and obliging emission limit values from waste incineration, that is, the 2006 BREF. Theoretically, if in the coming period, including the period after the EfW plant is built, other document defining emission limit values/BREF comes into force, the project will, if not (claimed by nobody) inevitably be complied with the new requirements which the Government of the Republic of Serbia decides to transpose and adopt as criteria defined in Serbian legislation. The proposed energy-from-waste plant includes technological solutions and design which were developed in a way to enable possible necessary changes and adjustments in line with possible new BREF requirements, as may be transposed in Serbian legislation".

29. "After mixing and completed reaction, tank trucks will transport stabilized APCr to the new inert waste landfill, outside of planning unit KP1t, within the Vinča landfill complex, which is not the subject of this Study. The newly designed inert waste landfill is the subject of another project – New landfill with accompanying facilities in Vinča".
    Since the EfW plant cannot operate without provided landfill for by-products of waste incineration in the EfW plant, the landfill for incineration residues must be included in this Study. After all, if this landfill is covered by another study, what is the reason for not presenting the conclusions of that study in this Study?

The comment is relevant, the mistake was made in the text of the Study and the text has been amended. Stabilized APCr is not transported to the inert waste landfill, but to the landfill intended for residues from the EfW plant.

30. Table 19 should show the compliance of proposed technologies and facilities with the BAT Conclusions adopted in June 2019, not with the 2006 document. For some points in the right

column, comment whether it is complied with BREF or not, or is it applicable or not, is missing. For some points, conclusions are obvious from the text, but for some are not, therefore this table should be supplemented and conclusions specified.

The answer to this comment is part of the answer for the previous comment.

31. What is gross electrical efficiency, and what is gross energy efficiency of the plant?

The answer stated that gross electrical efficiency of the plant is 25.9%, while gross heat efficiency is 21.6% (from heat energy exported to the central heating plant Konjarnik). Total energy efficiency is 47.5% in total.

32. "Flue gases emissions must meet all requirements in terms of limit values, as prescribed by Directive EU 2010/75/EC on Industrial Emissions (IED)" – we assume that this refers to Annex V of Directive. The question is whether flue gases emissions comply with the limit values specified in adopted BAT Conclusions from June 2019?

The answer to this comment is part of the answer for the previous comment.

33. It is not clear why the Study does not examine any non-incineration alternative, with rehabilitation of the existing non-sanitary landfill, the construction of new landfill and MBT plant. Separate collection, recycling and composting can be combined with MBT for residual waste, after which treated waste may be disposed at the new landfill. This solution can help avoid the so-called "lock-in", that is, the situation in which investment of (public) money into a large plant prevents in the future the change of public policies in the field of waste management. Examine at least one non-incineration solution and compare results and overall impact with the solution proposed in this Study.

The answer stated that one of alternative methods of municipal solid waste management is its energy utilization by thermal procedure. Valid legal regulations do not prohibit the application of the mentioned method, of course, with defined restrictions and appropriate measures of environmental protection, human safety and health, as well as for any other technical solution. The Study shows, among other things, technical solutions for reduced green gas emissions.

On the other hand, a study is undertaken for a precisely defined project based on a Preliminary Design (PD) developed in accordance with specially issued location requirements for the elaboration of technical documentation and connection for a specific Schematic Design, issued by the competent authorities (Article 12 of the Law on Environmental Impact Assessment, ".the request referred to in paragraph 2 of this Article shall be enclosed with the following documentation: 2) preliminary design, i.e. excerpt from preliminary design ... 4) requirements and approvals of other competent authorities and organizations obtained in accordance with a separate law ..") . Therefore, pursuant to the Law on Planning and Construction, it is not possible to consider several completely different project solutions at this level of development of technical documentation.

What can be done only is to describe alternative solutions which were considered at previous levels of technical documentations preparation, which has been done in this Study, or to present alternative measures which may be implemented, as defined in Article 2 of the Law on Environmental Impact Assessment "environmental impact assessment means a prevention measure of environmental protection, based on the elaboration of a Study, and conducting of public consultations and analyses of alternative measures, with the aim of collecting data, and forecasting adverse effects of specific projects on the environment and human health, flora and fauna, soil, water, air, climate and landscape, material and cultural resources and cumulative effects of these factors, and of determining and proposing measures that may be implemented to

prevent, reduce or offset such adverse effects, having in mind the feasibility of these projects (hereinafter: impact assessment)".

Alternative solutions are described in Chapter 4 of the Study.

34. Data on compounds analyzed from the sample SS5 and the sample SS10 is missing in Table.

The answer stated that these are sediments and they are covered by the part dealing with surface water and sediments.

35. It is missing the explanation about two selected soil samples SS3 and SS6 which will be analyzed for the presence of polychlorinated dibenzodioxin (PCDDS) and polychlorinated dibenzofuran (PCDF). If the samples SS3 and SS6 correspond to the measuring points of Surface soil 3 and Surface soil 6, there is a need for an additional explanation why these two measuring points were selected to be tested for the presence of highly carcinogenic compounds in soil, as these two sampling points are the furthest from the existing landfill body, that is, the source of pollution.

The answer stated that a representative of Egis company, accredited for soil sampling, sampled soil at points SS3 and SS6* for the analysis on polychlorinated dibenzodioxins PCDDs and polychlorinated dibenzofurans PCDF, and the analysis was conducted by internationally accredited laboratory Alcontrol (now Sinlab). These points were selected based on logical reasoning that is was important to determine the concentration in soil which is the closest to agricultural land and on the path of dispersion in their direction. It is not logical to take samples next to the landfill body.*

36. The answer of EBRD to previous comments states that SS3 and SS6 were selected as sampling points due to their location with respect to prevailing winds and seclusion from roads and other activities, but it is still not clear why the sampling points were not closer to the landfill. It seems to us that this is an avoidance of responsibility for measuring PCDD and PCDF, in particular after the great fire, having in mind that incineration of waste in open fields is one of the major sources of PCDD and PCDF.

The answer to this comment is part of the answer for the comment no. 36.

37. Compare the position of SS3 and SS6 with the prevailing winds map.

The answer to this comment is part of the answer for the comment no. 36.

38. Since it is stated that "the sampling was conducted on 29 March 2018 by "Anahem" laboratory from Belgrade, at 10 measuring points – 7 for soil and 3 for sediment. Samples were analyzed to establish physical-chemical and micro-biological parameters by the same laboratory, while detection of asbestos, at 5 out of 10 points, was conducted by laboratory Institute "Mol" from Stara Pazova, who and within what investigation sampled polychlorinated dibenzodioxins and dibenzofurans on 15 March?

The answer to this comment is part of the answer for the comment no. 36.

39. For PM10, NOx and Benzene there is no space for annual emission increase! It is utterly irresponsible to approve the construction and build a new source of pollution with the current values of pollutants not being reduced. Whose responsibility is it and what plan will be applied if benzene levels from vehicles is not reduced?

The answer stated that air quality is not the same as emissions to air.

Therefore, as part of the Study, comprehensive air quality model was developed to assess the actual impact of the facilities given the site topography, daily weather conditions, and calculation of all pollutant sources, such as traffic on the site – Each performed dispersion modelling program lasted 5 days.

The model was based on the current design which complies with the valid Industrial Emissions Directive (IED) 2010/75/EU in terms of emission limit, that is, currently applicable legal regulations.

At the time of EIA and Preliminary Design development, the officially adopted BREF for waste incineration was from August 2006; and the same version is still effective.

Results of this modeling show that:

- *All Serbian standards in the field of air quality are complied with (including SO_2 / NO_2 / Dust – PM10 / CO / Benzene / Metals, such as lead)*
- *Concentrations of air pollutants are:*
  - *Significantly below Serbian standards on air quality:*
- *Concentration of SO_2 = 42 times less than Serbian standard*
- *Concentration of Pb = 33 times less than Serbian standard*
  - *And/or with marginal contribution compared with very high baseline value*
- *NO_2 – 9% of additional contribution compared with baseline value*
- *PM10 = <1% of additional contribution compared with baseline value*

Therefore, new BAT standards will not affect the above conclusions.

As regards benzene emissions from vehicles, emission per vehicle will automatically reduce, as new vehicles manufactured will use advantages of new/better technologies; even if EURO 5 and 6 thresholds won't be introduced with the same speed as in the EU countries, mechanical effect of car renewal will result in less polluting cars in Belgrade.

40. Waste management: "Stabilized material will be in a solid form, thus preventing release to air and the process will bind heavy metals, thus preventing penetration of substances into soil and water environment."

The answer to this comment is part of the answer for the comment no. 42.

41. Here it should be described where it will be taken, and how concrete erosion will be prevented. Concrete-stabilized ash is not permanently stabilized, it is expected after several years to start releasing compounds into soil and water.

Stabilization of APC residues is recognized in the EU as the best available technique (BAT) since BREF for Waste Management exists.

Stabilization of APC residues with hydraulic binder was developed in France 1993 and confirmed for application by Regulation from 31 December 1992 / 1 April 1995 and it is applied at 5 locations in France to enable the acceptance of APC residues (also for all hazardous particulate waste) at landfills. This stabilization process has been applied at 13 locations in total in France since 1 April 1998.

This process involves reducing the solubility of waste (soluble fraction) to the threshold set under valid regulation and crystalizing salts and heavy metals in a stable form for a long-term period.

Up to date, more than 10 MT of waste has undergone this procedure, and almost 5 MT of APC residues has been stabilized and stored over almost 25 years.

42. Rehabilitation of the old landfill is not part of this project, therefore reduced emission of methane from the landfill cannot be seen as an advantage of this project. The project developer needs to decide what the subject of this Study is, because it is irresponsible to juggle with positive effects of one process, and ignore (cumulative) effects when it suits him.

Rehabilitation of the old landfill is not part of this Study, but extraction and utilization of landfill gas after having passed previously built degassing wells ("biotrns") is.

43. What are the assumptions for avoided emissions? They are very high, so it seems to be assumed that coal would be an alternative, and they are the same until 2075. It cannot expect for coal to be an alternative all way until 2075 because at the EU level it is planned to reduce emissions from the energy sector to zero by 2050. This comparison is unrealistic and harmful.

The answer stated that it is free interpretation and not relevant for the Study.

44. The new BAT Conclusions on Waste Incineration requires monitoring of following emissions to air: continuously of NOx, NH_3, SO, SO_2, HCl, HF, dust, Hg, and TVOC, with N_2O and Benzo[a]pyrene once every year and As, Cd, Co, Cr, Cu, Mn, Ni, Pb, Sb, Tl, V, PBDD/F, and dioxin-like PCBs once in every six months. The Study states that only NOx, SO_2 and dust will be monitored. The operation of the plant, if its construction approved, should be monitored in accordance with the BAT Conclusions.

The answer stated that monitoring will be completely organized in keeping with legal regulations, and regularly controlled by inspection, in a way all other industrial facilities are controlled in the country.

The monitoring plan will be also defined in detail in documentation which will be prepared for obtaining IPCC permit, and then approved by the Ministry after trial period and prior to issuing of the Exploitation Permit.

45. How is it planned to monitor dioxin and furan emissions, as in Serbia there is no laboratory conducting such analyses?

The answer stated that monitoring of dioxin and furan emissions will be carried out in keeping with legally defined obligations, by applying standard procedure of sampling and analysis. At this moment, in Serbia, there are laboratories accredited for sampling, but not for determining the concentration of these compounds in gases. According to regular practice in Serbia and EU (representatives of cement industry in Serbia which use waste as alternative fuel also implement this practice), samples will be taken by accredited laboratories and then, in a standard defined way, will be sent to an accredited laboratory abroad which will conduct analysis and deliver an official report. This situation is not uncommon in many countries.

Also, this does not mean that some of laboratories in Serbia won't be accredited in future. Laboratories undergo an accreditation process every year, and the scope of accreditation is not the same every time.

46. The new BAT Conclusions require to test water from FGC every month and ashes once every three months, in order to check whether waste is completely incinerated. The Study does not mention any of these requirements!

The answer to this comment is part of the answer for the comment no. 45.

47. How is it proposed to prevent diffuse dust emissions during extraction and storage of incineration ash?

The answer stated that dust created during the EfW process (that is, in the furnace / boiler) is extracted using bag filters. Dust is then collected from storage under the bag filters into silos for

residues through enclosed residue transport system. Hot, burnt out bottom ash is discharged from the lower end into a water-filled ash discharger, where it is quenched at 80-90°C, thus enabling to extract bottom ash without dust and without odor. In IBA zone for treatment and storage (outside), water is sprayed over the bottom ash if becomes dry due to weather conditions to avoid spreading of dust.

Comments submitted by Bird Protection and Study Society of Serbia

1. The Institute for Nature Conservation of Serbia states in its issued Decision that the scope of amendments to the Plan does not cover important ecological areas and ecological corridors of international importance of the ecological network of the Republic of Serbia. However, the mentioned Plan for which the Decision has been issued actually falls into a bird important area, that is, the area of ecological network "Confluence of the Sava and the Danube rivers (RS017 IBA)", that is, parts of the following plots 2669/2, 2669/11, 512/2, 512/3, 513/2, 512/1, 514/4, 513/1, 538/1, 538/3, 538/4, 539/1, 539/2, 538/2, and 2670/3. At the same time, the Plan itself states that the area of the ecological network "Confluence of the Sava and the Danube rivers (RS017 IBA)" is covered by its scope (Section 3. Legal and planning basis, page 5). The Decision issuing authority disregarded this, and for this reason the document does not contain, but should have requirements that would prescribe obligations to determine the properties of the site with regard to strictly protected and protected species, particularly since such conditions are prescribed for other aspects of natural values in point 3), stating the obligation to determine the geological, hydrogeological and hydrographic properties of the site. Likewise, in analogy with point 30), which stipulates that if the contractor, during works, encounters geological-paleontological documents or mineralogical-petrological structures, which are presumed to have the property of a natural good, the contractor is obligated to inform the Ministry of Environmental Protection and take appropriate measures, we consider that it is also necessary to stipulate such an obligation in the case of finding strictly protected species when undertaking the environmental impact assessment study. The basis for this is in the Law on Nature Protection ("Official Gazette of the RS", nos. 36/2009, 88/2010, 91/2010 - corr., 14/2016 and 95/2018 - other law), which states in Article 4 (1) 27) that protected natural goods include strictly protected wild species.

The comment is not addressed to the organization which undertook the Study, but to the organization which issued the requirements.

2. In addition, the planning basis – the General Regulation Plan of the building area of the local self-government unit – Unit XX, Municipalities of Grocka, Palilula, Zvezdara and Voždovac – (settlements: Kaludjerica, Leštane, Boleč, Vinča and Ritopek) – Text ("Official Journal of the City of Belgrade", no.66/17) states that its scope include Environmental unit Vinčanska pond - (recorded natural good), which is part of the ecological network area, with an area of about 71.0 ha, as visible in the drawing as well, where the area of the ecological network in the scope of Amendments to the Detailed Regulation Plan of "Vinča" Sanitary Landfill is even larger than the area on the above listed plots on which the "Confluence of the Sava and the Danube rivers (RS017 1VA)" is sited. Among the acts listed in the legal basis in the decision issued by the Institute for Natural Conservation of Serbia there is no Regulation on Ecological Network ("Official Gazette of the RS", no. 102/2010), which is the reason why the Decision

does not contain requirements specifying protection measures for the ecological network, i.e. protection measures for the protection zone listed in Annex 3 to the Regulation.

The comment is not addressed to the organization which undertook the Study, but to the organization which issued the requirements.

3. In view of the above mentioned, we consider it necessary for the INCS to issue a supplemental decision on requirements, which would constitute a framework for mandatory site investigations (pursuant to the Law on Environmental Impact Assessment and the Rulebook on Scoping of the Environmental Impact Assessment Study), in order to appropriately collect data on natural values of the area - protected species as protected natural goods, ecosystems being part of the ecological network, on which the project can have an impact (either this or its next phase, which is not the subject of the study, falls into the area of the ecological network) in the environmental impact assessment study of the project, as well as to propose measures to prevent, reduce or offset effects.
   Also, we consider unacceptable and contrary to the Law on Environmental Impact Assessment the practice that data on the site, environmental factors, potential impacts, etc. which would be substantially complementary to the study, is collected after the completion of the environmental impact assessment process.

The comment is not addressed to the organization which undertook the Study, but to the organization which issued the requirements. Site investigations have been carried out from the end of 2017 to the present and the Study was created in accordance with investigation conclusions. Some investigation results were not included in the text of the Study which was made available for public consultation only for the reason the document was in the procedure and it was not possible to amend it, with the scope of investigations presented in that version of the document being in accordance with the requirements specified in the legislation of the Republic of Serbia. The Study has been supplemented with information that was not presented in the first version of the document.

4. The listed plots and the drawings in the Study (in several places, starting from the front page) do not coincide, so it is not clear whether the omitted plots (referring to the communal path leading to the Vinča pond) are part of the project or not, though the Study states that they are part of the Detailed Regulation Plan on the basis of which the requirements were obtained from the INCS. Whichever of these two cases is, particularly given the phase of the project involving the construction of retaining structure and lagoons and water treatment plant, it is necessary to present the impact on nearby important ecological areas since the impacts do not end at theoretical boundaries of the area covered by the plan.

The plots listed in the studies are plots defined by the Location Requirements and represent the only plots on which the facilities defined by the projects, for which a building permit will be issued and for which these two environmental impact assessment studies have been undertaken, will be built. The rehabilitation of the existing landfill is not the subject of the environmental impact assessment study and the problem of rehabilitation is solved through the Existing Landfill Rehabilitation Project, according to the legislation of the Republic of Serbia. The said Rehabilitation Project was approved by the Ministry of Environment in July 2019.

5. The research cited in the Study conducted by the Bird Protection and Study Society of Serbia (BPSSS) refers to only one-day field visit to the existing landfill and its surroundings in spring 2018 and as such it cannot be considered sufficient to show “baseline state” for the purposes of the environmental impact assessment study, as BPSSS, which developed the report, responsibly claims. The report (as it is titled) is preliminary and should serve as an outline of

a project task that would be implemented following what BPSSS, as a member of BirdLife International, considers good practice for assessing the impact of large projects, especially when it comes to ecological network sites or protected species for which the same sites are designated as such. Since the proposed research was not conducted and there is no data in the Study in support of other bird research at all, and it concerns only a small fragment of the annual, i.e. seasonal changes of the ornithofauna at the Vinča landfill, "which together with the nearby areas of the ecological network is known as one of the largest aquatic bird gathering sites in Serbia (and among larger seagull gathering sites in the region), BPSSS considers this partial presentation to be an example of erroneously or incompletely established factual situation and as such constitutes the basis for challenging a possible decision approving the study.

The answer stated that for the purpose of conducting the environmental impact assessment study, in the aforementioned wider area of the Vinča landfill, bird monitoring was carried out throughout one calendar year, within 4 campaigns. Relevant ecological data on locally distributed species and specificities associated with the subject area was collected.

Preliminary research was conducted in April 2018 (Bird Research at the Vinča Landfill, Preliminary Report, Bird Protection and Study Society of Serbia, Novi Sad, April 2018, authors M. Šćiban, N. Stanojević). It was followed by several studies: in September / October 2018 (Bird study at the landfill and its surroundings Vinča, Belgrade during the bird migration from September to October 2018, October 2018, League for Ornithological Action of Serbia, author: D. Simić) and December 2018 (Bird study at the Vinča landfill and its surroundings in Belgrade in December 2018, January 2019, League for Ornithological Action of Serbia, author: D. Simić). In October 2018, the available literature and field data were summarized in the Review of previous bird observations at the Vinča landfill and surrounding areas (published by Dragan Simić, League for Ornithological Action of Serbia).

Monitoring of bird populations continued during May and June 2019 (Study of Bird Breeding at the Vinča landfill in Belgrade in the period May-June 2019, Preliminary Report, July 2019, D. Simić, M. Raković).

A summary of the results of these studies is presented in the supplemented Study.

6. For these reasons, we are of opinion that the Study cannot be approved, that the Study failed to fulfill the obligation to conduct comprehensive research of all aspects of the environment on the site (the time period of one year was available for that), and to collect data on the current state, failed to present the actual cumulative impact with other projects or phases of implementation of the same project even when a request for screening (determining whether the study is required) or scoping of the study was made, as well as alternative solutions in case the impact on aspects of natural values observed during this new research is not acceptable (the possibility that the study does not even take into consideration), and if so, presents precise measures to prevent, reduce and offset effects, for which other parties concerned will have the possibility of timely access and opinion.

The stated view is false and represents a personal view on the need to reject the study, and it was created by unilaterally observing the issues without essential understanding of the technical solutions and mutual relation of all described environmental factors, stated measures and legislation defining the next phases in implementation and operation of an infrastructure project in accordance with legal regulations governing environmental protection and planning and construction.

Comments submitted by “Center for Ecology and Sustainable Development”, Subotica

1. In our opinion, it is not possible to separate the impact assessment of the power plant and the landfill, as they are interconnected, the energy-from-waste plant is proposed to be fueled by waste, but also to produce bottom ash (ash and slag) which will be disposed into the landfill body, thus creating permanent and massive pollution effects with bottom ash. The issue of protecting the ash from scattering and polluting the environment has not been successfully solved even in EPS plants in Kolubara, Kostolac and Obrenovac ash disposal sites, and we see no good reason why it would be considered possible to solve this issue here in a more favorable way.

The answer stated that the Law on Planning and Construction allows projects to be implemented in phases. Accordingly, in order to obtain requirements and approvals of holders of public powers, two environmental impact assessment studies have been undertaken, as well as the Project of the existing (old) landfill body rehabilitation and remediation. In keeping with legal regulations, public consultation and presentation of the Environmental impact assessment study of the power plant and new landfill with accompanying facilities were carried out. The Study shows technical solutions and appropriate protection measures from the aspect of reducing air pollution caused by diffuse emitters from the relevant complex.

2. In our opinion, it is unacceptable to start designing the plant applying the old BAT document from 2006, since Serbia, as a member of the Energy Community of South East Europe is obliged to apply latest BAT precisely because the plant when this BAT becomes effective still does not have permits required to consider the design process completed.

The answer stated that the current project (design) meets the requirements in terms of emission limit values defined under the Emissions Directive (IED) 2010/75/EU. At the time of preparing ESIA/EIA documents, the officially adopted BREF for waste incineration was the BREF document adopted in August 2006, and the same version is still effective. All installations falling under the Industrial Emissions Directive 2010/75/EU should comply with the requirements of an official document adopted by the European Commission. Therefore, in the ESIA/EIA documents, comparisons were made with the only currently valid and obliging emission limit values from waste incineration, namely the 2006 BREF. Theoretically, if in the coming period, including the period after the EfW plant is built, other document defining emission limit values/BREF becomes effective, the project will, if not (which nobody states) inevitably be complied with the new requirements which the Government of the Republic of Serbia decides to transpose and adopt as criteria defined through Serbian legislation.
The proposed energy-from-waste plant includes technological solutions and design choice which were designed in a way to enable possible necessary changes and adjustment in line with potential future new BREF requirements, which may be transposed in Serbian legislation.

3. We think that alternative scenarios were not properly assessed and that an attempt to present the need for incinerator as inevitable cannot actually be considered valid especially when theoretically proposed required quantity of waste (over 340,000t per year) is taken into account, implying that this plant will, instead of solving the issue of emissions from the landfill, actually produce significant additional amount of greenhouse gases, thus affecting the immediate environment with dangerous gas and other emissions and establishing technology in conflict with climate targets as well.

One of alternative methods of municipal solid waste management is its energy use by thermal procedure. Valid legal regulations do not prohibit the application of the mentioned method, of course, with defined restrictions and appropriate measures of environmental protection, human

safety and health, as well as for any other technical solution. The Study shows, among other things, technical solutions for reducing green gas emissions.

On the other hand, an environmental impact assessment study is undertaken for a precisely defined project based on a Preliminary Design (PD) developed in accordance with specially issued location requirements for the elaboration of technical documentation and connection for a specific Schematic Design, issued by the competent authorities (Article 12 of the Law on Environmental Impact Assessment, ".the request referred to in paragraph 2 of this Article shall be enclosed with the following documentation: 2) preliminary design, i.e. excerpt from preliminary design ... 4) requirements and approvals of other competent authorities and organizations obtained in accordance with a separate law ..") . Therefore, based on the Law on Planning and Construction, it is not possible to consider several completely different project solutions at this level of development of technical documentation.

What can be done only is to describe alternative solutions which were considered at previous levels of technical documentation preparation, which has been done in this Study, or to present alternative measures which may be implemented, as defined in Article 2 of the Law on Environmental Impact Assessment "environmental impact assessment means a prevention measure of environmental protection, based on the elaboration of a Study, and conducting of public consultations and analyses of alternative measures, with the aim of collecting data, and forecasting adverse effects of specific projects on the environment and human health, flora and fauna, soil, water, air, climate and landscape, material and cultural resources and cumulative effects of these factors, and of determining and proposing measures that may be implemented to prevent, reduce or offset such adverse effects, having in mind the feasibility of these projects (hereinafter: impact assessment)".

Alternative solutions are described in Chapter 4 of the Study.

4. In our opinion, it is necessary to start establishing such a waste management plan which will respect the so-called waste hierarchy, by closing the landfill currently operating in Vinča, provide complete landfill gas exhaustion from this landfill, and at the same time start solving the separation of recyclable and compostable waste in the future, thereby eliminating need for waste incinerator. We also think that this plant (energy-from-waste plant) will endanger the national goals of EU accession due to distorted strategic orientation towards recycling, reducing waste disposal. This project will, in our opinion, artificially generate the need for waste import as it was already several time repeated during the public debate on the necessity of this project.

The answer stated that this project is not in collision with the National Waste Management Strategy nor principles of waste hierarchy. Primary selection and secondary separation of municipal solid waste is under competence of local government. The project and the Environmental Impact Assessment Study do not state the need for importing municipal or any other waste.

In the study, Chapter 3.2 states as follows:

This statement is not correct. Please see Chapter 3.2. of the EIA Study for the landfill:
Waste Management Hierarchy (Waste Management Law):

- *Prevention*
- *Preparing for reuse*
- *Recycling*
- *Other recovery operations (recovery for energy production, etc.);*
- *Disposal.*

Prevention of waste generation in the City of Belgrade is conducted through activities defined at the national level, and is reflected in, primarily, through applying the principle of cleaner production concept, circular economy, defining by-products, end-of-waste status, and other. Intense efforts have been made to raise the population awareness about the importance of prevention for over 10 years.

Preparing for reuse and recycling start with relatively well-organized primary selection system which operates in the City of Belgrade. Primary selected secondary raw materials are collected through a wide network of secured and placed collection dumpsters in the city of Belgrade. Primary selected secondary raw materials are transported to existing municipal waste collection centers where secondary separation is carried out at the separation line (Ada Huja, New Belgrade).

Decision of the Mayor of Belgrade no. 501-4180/16-G dated 17 June 2016 determined locations for establishing new waste collection centers - recycling centers and transfer stations. The City of Belgrade budget for 2019 allocated funds for the procurement of equipment and equipping of two more recycling centers with a separation line and other necessary equipment. Recycling centers also collect special types of waste pursuant to the Law.

The 2019 Budget also provided for the procurement of additional dumpsters for the separate municipal waste collection system (paper, plastic, metal, glass, mixed municipal waste), additional underground dumpsters, numerous machinery and vehicles for waste collection and collection of sorted secondary raw materials, roll-off dumpsters, baling presses with a capacity of 100 t, with the aim of upgrading the existing system and expanding the coverage of the territory with a waste collection service.

Procurement contracts are made between suppliers and PUC "Čistoća". This construction project of new landfill and other facilities also proposes the installation of a construction waste treatment line.

Other recovery operations (energy recovery from waste, etc.). The landfill is to be built at the site where the existing landfill is already located at which the entire amount of collected mixed municipal waste is disposed. Instead of such a solution, the project involves a modern energy-from-waste plant, as well as a biogas plant using landfill gas from the body of existing and new mixed municipal waste landfill.

In the future, in the City of Belgrade, only amount of mixed municipal waste remained after primary and secondary waste selection, recovery and treatment at construction waste treatment plants, energy recovery from waste and energy recovery from landfill gas, as well as after separation of green waste from the maintenance of green spaces and cutting down of trees done by PUC "Zelenilo" at special locations, will be disposed.

5. Due to extreme risk of air pollution from this plant, we consider that it is not acceptable to propose only periodic air quality measurements.

The statement is not true. The Environmental Impact Assessment Study proposes continuous, control and periodic measurements of air quality, in keeping with valid legal regulations.

6. We think that it is necessary to determine the danger from ash which will be produced and since this ash is a necessary by-product of this plant operation, it is not acceptable to adopt this study until it shows in detail amounts, dispersion models and potential effects of bottom ash content on the environment and health.

The answer stated that dispersion modeling of particulate matter was carried out and presented in the Environmental Impact Assessment Study. Bottom ash from the EfW plant shall be disposed into newly designed cells in keeping with valid legal regulations and EU Directives.

7. We think that benefits of reducing GHG have been overstated given that there is much greater potential for savings in the case of establishing the waste reduction system, composting, and, in general, the principle of cyclic approach to resources.

Benefits from GHG reduction are not overstated and they have global importance. The relevant project is not inconsistent with the establishment of the waste reduction system and principles of circular approach to resources.

8. The issue of measurement and protection from dioxins and furans has not been adequately addressed in the Study.

The answer is given in Chapter 3.2.6.1. of the Study.

9. Given the enormous adverse impact this plant could have on national EU accession process, we believe that better solution is to use landfill gas with closing the old landfill and establishing such a Waste regulation system which will not allow Serbia to practically forever rely on burning municipal waste with simultaneous uncontrolled production of dangerous bottom ash.

This statement is not true. The project proposes the extraction of landfill gas from the existing landfill body and its valorization, including the closure of the landfill.

Suggestions regarding subchapters containing description and status of flora and fauna, biodiversity, natural goods of particular importance, (protected) rare and endangered plant and animal species and their habitats and vegetation, the impact assessment of the project on the living world, natural values and protected natural goods have been accepted in the Study. The mentioned parts are a little better addressed in the revised Study, scientific names of plants and birds are revised, IBA (Important Bird Area) "Confluence of the Sava and the Danube rivers", RS0171BA, which is an integral part of the Serbian ecological network, is more adequately described.

<u>Comments submitted by Petar Denčić from Belgrade</u>

1. General aspect: 1. Sustainable development: the project represents an activity sitting at the bottom of the waste management hierarchy. The proposed project adversely affects the following sustainable development goals:

This statement is not true, given that Chapter 3.2 of the Study for the landfill project contains:

Waste Management Hierarchy (Law on Waste Management):

- *Prevention*
- *Preparing for reuse*
- *Recycling*
- *Other recovery operations (recovery for energy production, etc.);*
- *Disposal.*

Prevention of waste generation in the City of Belgrade is conducted through activities defined at the national level, and is reflected in, primarily, through applying the principle of cleaner production concept, circular economy, defining by-products, end-of-waste status, and other. Intense efforts have been made to raise the population awareness about the importance of prevention for over 10 years.

Preparing for reuse and recycling start with relatively well-organized primary selection system which operates in the City of Belgrade. Primary selected secondary raw materials are collected through a wide network of secured and placed collection dumpsters in the city of Belgrade. Primary selected secondary raw materials are transported to existing municipal waste collection centers where secondary separation is carried out at the separation line (Ada Huja, New Belgrade).

Decision of the Mayor of Belgrade no. 501-4180/16-G dated 17 June 2016 determined locations for establishing new waste collection centers - recycling centers and transfer stations. The City of Belgrade budget for 2019 allocated funds for the procurement of equipment and equipping of two more recycling centers with a separation line and other necessary equipment. Recycling centers also collect special types of waste pursuant to the Law.

The 2019 Budget also provided for the procurement of additional dumpsters for the separate municipal waste collection system (paper, plastic, metal, glass, mixed municipal waste), additional underground dumpsters, numerous machinery and vehicles for waste collection and collection of sorted secondary raw materials, roll-off dumpsters, baling presses with a capacity of 100 t, with the aim of upgrading the existing system and expanding the coverage of the territory with a waste collection service.

Procurement contracts are made between suppliers and PUC "Čistoća". This construction project of new landfill and other facilities also proposes the installation of a construction waste treatment line.

Other recovery operations (energy recovery from waste, etc.). The landfill is to be built at the site where the existing landfill is already located at which the entire amount of collected mixed municipal waste is disposed. Instead of such a solution, the project involves a modern energy-from-waste plant, as well as a biogas plant using landfill gas from the body of existing and new mixed municipal waste landfill.

In the future, in the City of Belgrade, only amount of mixed municipal waste remained after primary and secondary waste selection, recovery and treatment at construction waste treatment plants, energy recovery from waste and energy recovery from landfill gas, as well as after separation of green waste from the maintenance of green spaces and cutting down of trees done by PUC "Zelenilo" at special locations, will be disposed.

2. Quality education – numerous generations have been educated for environmental preservation and resource protection, that recycling is the way to achieve it, and incineration in this case provides justification for a negative attitude of the population towards their environment.

The answer to this comment is given in the answer for the comment 1.

3. Affordable and clean energy – it is proposed to subsidize energy generation, which transfers the cost of production to all citizens. Generating energy from waste is considerably more expensive compared to other forms of energy generation.

Not the subject of the Study.

4. Industry, innovation and infrastructure – the project development includes CO_2 emission in the air and contribution to the climate change, thus affecting economic and social development in Serbia. The project negatively affects the innovation process as it puts pressure on the economy in terms of increasing production inputs.

The answer stated that the impact on climate change is presented for the entire project proposed at the site of Vinča landfill complex and it covers all relevant facilities, as follows:

- *Cogenerated plant using municipal waste and landfill gas*
- *New landfill*
- *Existing waste landfill after its closure, remediation and recultivation.*

Please view the following chapters of the Study:

- *Chapter 6.3 – Impact of the project on climate change of the Study*
- *Chapter 6.4 – Other potential risks and impacts (Impact of the project on climate change) of the Study for the landfill*

Those chapters clearly explained and demonstrated that:

"The project will positively affect greenhouse gas emission, owing to generation of electricity and heat energy and major reduction of CO_2 emission from the old landfill."

5. Sustainable cities and communities- the project affects the pollution of the city and the creation of jobs which will not negatively affect resources.

Covered by the Study, Chapter 5.1 and other chapters

6. Responsible production and consumption – the project will contribute to a decline in economic activity due to consumption of non-renewable resources, the impression of further indivisibility and inefficiency of production processes and competitiveness on the market.

If we accept the definition that sustainable energy is providing energy that that meets the needs of the present without compromising the ability of future generations to meet their own needs, which is replenishable within a human lifetime and causes no long-term damage to the environment.

Considering the nature of municipal waste and the conclusion from the EIA Report showing that demonstrated technology and solution will be applied with limited impact on the environment, we confirm that the proposed projects provide sustainable energy solutions for the population of Belgrade thanks to electricity and heat these projects generate.

Also, see the answer to the comment no. 1.

7. Climate action – available solutions which are affordable and adjustable enable communities to move forward cleaner and greener energy. The project with its negative impact, primarily on climate, moves the city away from acceptable economic models.

The answer to this comment is part of the answer for the comment no. 4.

8. Sustainability: the project is not complied with the EU commitment defined in the EU Action Plan for the Circular Economy. The Study takes as an example EU Directives which are basis for national legislation as well. These EU Directives are being amended and adjusted to the requirements specified in the EU Action Plan for the Circular Economy which involve major reductions in waste generation, 100% of recyclable plastics by 2030 and full application of the

waste management hierarchy. The Waste Management Strategy of Serbia mentions "establishment of economic instruments and mechanisms necessary in order to ensure the system for investments into long-term sustainable activities". Serbia, as a candidate country for EU membership, will have to adjust to the requirements of the Circular Economy. The proposed project represents an activity form the domain of linear economy.

This statement is not true.

The National Waste Management Strategy 2010-2019 (2010) and Proposal of Waste Management Strategy 2015-2030 (planned for 2016) establish the framework for final waste reduction and sustainable waste management. The Proposal of Waste Management Strategy 2015-2030 proposes following targets:

- *Reduce disposal of biodegradable waste at landfills by 25% by 2022, 50% by 2026 and 65% by 2030;*
- *Achieve at least 60% of reuse and 55% of recycling of packaging waste by 2025;*
- *Achieve at least 50% of recycling of municipal waste by 2030;*
- *Improve the specific waste streams management system (waste tires, used batteries, waste oils, waste vehicles) to achieve 4 kg per capita of separately collected waste vehicles by 2019 and at least 45% of batteries and accumulators by 2016.*

The Energy-from-waste plant is planned for 340.000 t/y, covering only 67% of projected residual waste or compared to a total solid waste quantity of 750.000 t/g, including waste to be recycled and composted, only 45% of the projected waste in 13 municipalities covered by the project for Belgrade. As there is no plan for other waste in power plants in Serbia at this moment, this proposed project does not hinder the capability for Serbia to achieve the above mentioned target of 50%. More importantly, achieving this target highly depends on the separate collection system which is out of the project scope. Achieving the collection rate will be subject to establishing an adequate collection system by the municipality which is out of the scope of this project and these EIA studies. According to the PPP Contract, there is no concept of minimum guaranteed tonnage to be delivered by the City.

The City of Belgrade is currently conducting a procedure for selecting a consultant to develop Local Waste Management Plan 2021-2030, in order to continue establishing the system and organization for managing municipal, inert and non-hazardous waste in a manner which ensure minimum risks and dangers for the environment and conditions for waste generation prevention, reuse and recycling of waste, use of useful properties of waste, disposal, if other adequate solution does not exist, as well as raising awareness about waste management.

Also, the Ministry of Environment is in the process of drafting the Waste Management Strategy 2020-2029.

Also, see the answer to the comment no.1.

9. Special aspects:

Adverse impact on soil, groundwater, watercourses and their self-purification ability. Load generated in the old landfill body remains to negatively affect the environment by continuing to use the landfill for gas extraction.

This statement is not correct at all, namely the truth is completely opposite of what is stated. The Study clearly defines that one of the project major benefits is control and improvement of the

quality of effluent currently discharged into the environment, in keeping with all legally defined standards, and above.

The existing landfill body will be rehabilitated according to the Existing Landfill Rehabilitation and Recultivation Project which was approved by the Ministry in July 2019; landfill gas will be in a controlled way extracted from the body of the old and new landfill, and used, surplus of leachate will be in a controlled way extracted, all leachate will be treated by the wastewater treatment system prior to discharge into the environment.

10. Incineration residues, particularly their most toxic components, represent a new load on the environment and hard-to-solve ecological problems. The new (sanitary) landfill proposed on the Vinča site, immediately next to the old landfill, represents an additional load which will be impossible to control due to unrehabilitated old landfill.

The statement is not correct. Please see a part of the text describing mutual position and relation between the existing and the new landfill, but also the project of construction of sanitary landfill with all elements of protection from external impacts.

11. Geological and hydrogeological investigations state not enough collected data over a longer period of time. The map is hydrogeologically unsuitable for the project.

As regards the comment that the soil is unsuitable for the project, the situation is actually opposite as low water permeability of the soil is extremely suitable for the development of the proposed infrastructure involving the New Landfill.

An important parameter for the Vinča landfill is the permeability of soil beneath the landfill bottom which can modify the infiltration rate. Infiltration values have been measured within old and recent studies conducted on periphery of the site at several locations upstream and downstream of the landfill. Based on geotechnical investigations carried out on periphery of the disposal site, maximum and minimum permeability values are 10-8 and 10-9 m/s, respectively. Permeability can be further reduced by taking into account a clogging phenomenon that is often observed on surfaces of ponds. Another phenomenon is the possible and probable saturation of the soil with water beneath the landfill bottom, which prevents further infiltration and thus creates an artificially reduced permeability value.

The shown data is part of the "Geological - geotechnical study for engineering and construction of the new landfill and rehabilitation of the existing solid municipal waste landfill Vinča" (ENERGOPROJEKT HIDROINŽENJERING a.d. Beograd, December 2017) and other mentioned technical documents the results of which are impossible to show all in the environmental impact assessment study, but they are certainly attached to it as required documentation in the procedure of obtaining construction permit and represent basic data in design development. Their content and results are certified with signature and seal of responsible persons; so it is a little irresponsible to make arbitrary criticism without thorough inspection of the content of these studies and project documentation in the entirety.

12. The project will adversely impact on water supply to the population of Vinča settlement, which are supplied with drinking water from the Danube River, into which wastewater from the project site will be discharged.

The answer to this comment is part of the answer to the comment no. 9. Also, see the requirements issued by the Public Utility Company "Belgrade Waterworks and Sewerage", issued in the integrated procedure, no. V-163/2019 dated 13 March 2019 and no. V-2016/2019 dated 26 March 2019.

13. Leachate and seepage from the landfill have a direct contact with the Ošljanska pond which is a part of the special importance area “Confluence of the Sava and Danube rivers”.

The statement is not true. Once the proposed project is completed, only treated leachate with quality in compliance with valid Serbian regulations will be discharged directly into the Ošljanski creek.

14. Proposed remediation of the terrain will affect other neighboring areas, primarily IBA. Due to the mobility of the fauna, loads can be put on other ecosystems. No genetic studies on flora and fauna situation is mentioned.

The answer is provided in Chapters 5.5 and 6 in both Studies.

15. The project will have negative effects on the population health. Belgrade stands out in Serbia by the highest mortality rate, due to primarily industrial facilities and traffic. The project will have an increasing effect on these two types of pressure.

The Study concluded that project’s impacts are not expected to be of such magnitude they could cause significant cumulative effects. It is demonstrated in detail in Chapters 6 and 7of the Study.

16. The project is of unlimited period and does not contain provisions on action after the decommissioning.

    Conclusion: numerous negative effects at the given site and project unsustainability for a longer period represents a basis for negative evaluation of the Study.

In developing documents for obtaining the integrated permit (IPPC), pursuant to the Law on Integrated Environmental Pollution Prevention and Control, the project developer shall develop and submit a Plan of environmental protection measures after the termination of operation and closure of the plant. An integrated permit is compulsory and obtaining the Exploitation Permit for using the plant and landfill is conditioned on this permit, pursuant to the legislation of the Republic of Serbia.

On the basis of the above stated, the Technical Commission concluded that the reasoned comments from the previous Report on Study Review were accepted, namely, the Study was supplemented and amended to comply with the given comments. In this regard, the relevant Environmental Impact Assessment Study contains all the elements based on which it can be evaluated the suitability of proposed measures to prevent, reduce or offset potential adverse effects of the project on the current state of the environment in and around the site during the project implementation, in the event of accidents, and upon decommissioning of the project, as well as environmental impact monitoring programme.

The Decision and the relevant Environmental Impact Assessment Study represent an integral part of the technical documentation, in keeping with Article 18 of the Law on Environmental Impact Assessment (“Official Gazette of the RS”, no. 135/04).

This Decision is final in the administrative proceedings.

Legal remedy: This Decision may not be appealed against. The project developer and the public concerned may initiate administrative proceedings by lodging an appeal to the competent court within 30 days after receipt of this Decision, that is, from the day of its publication in the public media outlets.

MINISTER

Goran Trivan

Deliver to:

- Project developer
- Bird Protection and Study Society of Serbia, 6/43 Partizanskih baza Str., 2100 Novi Sad,
- Centre for Ecology and Sustainable Development, 15/13 Korzo Str., 24000 Subotica,
- Citizens' Association “Right to the City” (*“Pravo na grad”),* 36 Bulevar Arsenija Čarnojevića, 11070 Belgrade,
- Citizens' Association “Let's Not Drown Belgrade” (“*Ne da(vi)mo Beograd”*), 106 Cvijićeva Str., 11000 Belgrade,
- Petar Denčić, from Belgrade, 316 Bulevar Kralja Aleksandra, 11050 Belgrade,
- Sector for Environmental Monitoring and Prevention
- Archive