STANDPOINT of "Kozloduy NPP - New Build" Plc.

in compliance with Art.3 Item 8 of the Convention on Environmental Impact Assessment in a Transboundary Context (Espoo) on the proposals, recommendations, opinions and objections as a result of the publih hearings held on the

Environmental Impact Assessment Report (EIAR) of the Investment Proposal:

CONSTRUCTION OF A NEW NUCLEAR UNIT OF THE LATEST GENERATION AT THE KOZLODUY NPP SITE

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I.	**QUESTIONS ANNEX No 2, according Romanian MECC Letter №3035/AK/05.12.2014**		
1.	Dolj County Council	**Chapter 11: Transboundary impact**, per Chapter 11.2.2 WIND POTENTIAL, which states the following: "*As evident from these maps, in the area around Kozloduy NPP the predominant average wind speeds are not higher than 3.7 m/s, which means that the potential of the wind field to spread pollutants over long distances is low.*" Upon presenting the maps and without any explanation of the method for their interpretation, it is concluded "*that there are no climatic prerequisites for transboundary pollution.*" At the same time, a conclusion is made in the **Non-Technical Summary** document, that "*because of the prevalence of low velocities of the wind (within the interval of 2 m/s to 5 m/s) the potential of the Wind field to carry pollutants to long distances is low, i.e. there is no immediate danger for trans-border pollution of the territories of Romania*." Please clarify: a) The different conclusions contained in the two documents.	a) Meteosim Truewind[1], a company working in the field of renewable energy sources has studied wind power parameters on the territories of Bulgaria and Romania as regards the assessment of their wind potential. Figure 11.2.3 of **Chapter 11 – Transboundary**

[1] http://windtrends.meteosimtruewind.com/wind_anomaly_maps.php?zone=RBG

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			Impact shows the maps of the mean wind-speed fields for 2008, 2009, 2010 and 2011, developed on basis of this data. As seen from these maps, the prevailing mean wind speeds in the region around Kozloduy NPP are no higher than 3.7 m/s, which means that the potential of the wind field to carry pollutants at long distances is low. The **Non-Technical Summary** provides in short form the detailed climatic analysis in the region of Kozloduy NPP, developed under **Chapter 3 – Description and analysis of the components and factors of the environment and of the material and cultural heritage, which will be greatly affected by the investment proposal and their interaction.** The EIAR describes that up to 1997 the climatic characteristics of the region was based on data, defined by the statistics of the regular climatic measurements by Kozloduy Station, carried out in the period 1970 – 1982 and by the Lom Station. After 1997, real meteorological data are used, obtained by three meteorological stations, corresponding to class III, united in an automatic meteorological monitoring system. The first of them has been mounted on the off-site radiation monitoring area (representative for the region of monitoring) and the other two are located in the Blatoto area and in the Village of Hurlets. Based on the data from these stations for the last 3 years, the wind roses have been constructed, which show that the prevailing local winds are of low wind speeds – from 2 m/s to 5 m/s. Therefore, both the integral characteristics of the wind field on the territories of Romania and Bulgaria, and the local wind roses for the region of the NPP show the same results – winds with low potential to carry pollutants to long distances. (As seen by the quotes in the question, the conclusions of both documents are identical, i.e. due to the low mean annual wind speeds (*in the interval of 2 m/s to 5 m/s*), the potential of the wind field for carrying pollutants to long distances from the region of

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		b) What is meant by the term "immediate risk?" c) The analysis of this environmental factor, which might cause a risk (albeit not immediate), is incomplete and is not substantiated with enough facts, whereas only data gathered from different sources have been presented.	Kozloduy NPP is low.) b) In the **Non-Technical Summary,** on basis of the above it is concluded that … "Because of the prevalence of low velocities of the wind (within the interval of 2 m/s to 5 m/s) the potential of the Wind field to carry pollutants to long distances is low, i.e. there is no immediate danger for trans-border pollution of the territories of Romania" (the expression "immediate danger" is used, and not "immediate risk"). c) As explained in point a) the data from the different sources show the same trend, which is a proof of the accuracy of the conclusion, that is that this factor does not hold immediate danger for the territory of the Republic of Romania.
2.	Dolj County Council	**Chapter 11: Transboundary Impact**, as per Chapter 11.2.4 LAND AND SOILS, which states the following: "*The information on soils, provided by Romania, does not make any mention of contamination of their lands due to the operation of the existing capacities of Kozloduy NPP – neither within the 30-km, nor within the 100-km impact zone*." The same study aims at the *"Identification of the potential transboundary environmental impact on the territory of another country or countries, as a result of the realization of the investment proposal for building a new nuclear unit of the latest generation at the Kozloduy NPP site."* Therefore, we believe that the analysis in Chapter 11.2.4 LANDS AND SOILS has not been reviewed. The same chapter then states the following: *Due to the specific meteorological conditions and the direction of the winds in the region, the potential for pollution to the soils on the territory of the Republic of Romania as a result of the operation of the NPP is smaller than the one for the region within the territory of the republic of Bulgaria. The conducted analysis on the radiological condition of the soils within the 30-km zone around the NPP within the Bulgarian territory suggests*	1. The radiation status of the soils in the NPP area (including in the 30 km SZ and at the benchmarking points up 100 km from the Plant) has been monitored in a systematic and in-depth manner from the commissioning of the Plant to date. Soil samples are tested with sophisticated sensitive methods, well established in radiation control practice (HPGe – gamma-spectrometry, LSS - liquid scintillation spectrometry, low background radiometry, etc.). These methods enable the registration of background activity levels. The target of the analysis is the technogenic activity of nuclides typical of NPP operations (Cs-137, Cs-134, Sr-90, etc.). The long-term observations of soils in the Bulgarian stretch of the 30 km and 100 km zone demonstrate low levels of Cs-137 and Sr-90 activity, which are typical of the global fallout after nuclear tests (1950's-1960's) and after the Chernobyl accident in 1986. During the past 10 years, registering Cs-134 is practically impossible due to its short half-life, however a comparison of Cs-134/ Cs-137 activities definitively confirms the Chernobyl origin of the contaminations. In the most recent years, 2009-2013, the residual activity of Cs-137 in the soils in the area varies between <0.42 to 54 Bq/kg, while that of Sr-90 is respectively 0.22 to 3.9 Bq/kg. Even with the highly sensitive tests,

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		that during normal operation there would be no impact on land use and agriculture on the territory of the Republic of Romania. We believe that no actual and specific analysis of the aforementioned aspects performed, but only a comparison has been made, the conclusion of which *"The established values for the contents of the two most biologically hazardous radionuclides, Sr-90 and Cs-137, do not demonstrate any contribution resulting from the operation of the nuclear power plant"* is irrelevant to the proposal subject of the study.	which are carried out by the internal monitoring and by the State radiation control authorities – the MoEW and the National Radiation Protection Centre (NRPC) – the monitoring has not detected any measurable impact from the operation of Kozloduy NPP on the soils within the 30 km and the 100 km zone on Bulgarian territory. According to MoEW data, the technogenic activity of soils in Northwest Bulgaria (including Kozloduy) is one of the lowest in the country. Although official data from the Romanian side is not available, there are no reasons whatsoever to anticipate significant differences in the radiation status of soils in the Romanian part of the 30 km and 100 km zone of Kozloduy NPP. These data, together with the conclusions, are examined in point 3.3.2.2.3 "Lands and soils polluted with radionuclides". There are no registered impacts from the long years of operation of Kozloduy NPP on soils in the area. Having regard to microclimate characteristics of this geographic region and the low levels of the releases from Kozloduy NPP, radiation impacts on the soils in the Romanian stretch of the 30 km and 100 km zones cannot be expected. The conclusions on the radiation status in the territory of Bulgaria can well be applied to the relevant territory of Romania. 2. The assessment of the transboundary impact in the EIA of the New Nuclear Unit (NNU) and that of the cumulative effect includes all sources of above-background irradiation from facilities at the site of Kozloduy NPP. The reported maximum of 0.00356 mSv/a is below the "negligible radiation" dose of 0,01 mSv/a and is hundreds of times below that of the Natural Radiation Background (NRB) and the regulatory limit. The similar population density in the Bulgarian and Romanian parts of the 30 km zone means that it is legitimate to interpolate the relevant data for the collective doses as well. These assessments of the maximum individual effective dose and of the collective doses for the population in the 30 km zone of Kozloduy NPP include all intake pathways (including the food-chain path – water, soils and foods – Chapter 11.4.2.1 and Chapter 4 p. 4.11.) from the existing facilities at the site (Units 5-6, Spent Fuel Storage

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			Facility, Dry Spent Fuel Storage Facility Decommissioning of units 1-4) and from the future projects (Plasma Melting Facility, National Disposal Facility for Low and Intermediate Level Radioactive Waste (NDF), NNU (EUR)). This dose produces the cumulative effect of the above-background irradiation of the population in the area. The background irradiation is formed by the NRB (2.33 mSv/a), which is similar for Bulgaria and Romania and includes all components of the natural background: space radiation, exposure to radionuclides in the Earth crust, radon. The Earth crust irradiation component includes, *inter alia*, the contribution of the fallout after the Chernobyl accident, which is an integral component thereof. The NBR data is analysed and consolidated on regular basis by the UN Scientific Committee on the Effects of Atomic Radiation (UNSCEAR), taking into account all global changes in the formation of the NRB exposure across the various regions of the world. 3. The absence of additional above-background exposure from the operation of Kozloduy NPP is further confirmed in a straightforward manner by the regular tests for corporal activity carried out by the NRPC, which is the State sanitary control authority. The most recent screening for technogenic radionuclide levels in the population (mainly children) living in settlements within the 30 km SZ, carried out by a mobile scanner for full-body (in-vivo) measurements, was performed by the NCRP in 2012-2013. The screening exercise encompassed nearly 180 children from municipalities adjacent to NPP – Kozloduy, Mizia and Oryahovo. No intake of techogenic radionuclides has been detected in the measured persons to date. The results are representative for the region and confirm the results from the radioecological monitoring, namely that there is no measurable impact from the operation of Kozloduy NPP on the radioenvironmental status and on the health of the population. This fact proves directly the lack of any transmission of technogenic radioactivity in the food chain.
3.	Dolj County	The document **Non-Technical Summary,** Chapter 3.2.1 SURFACE	With regards to the assessment by the states around the Danube river of

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	Council	WATERS, states with regards to the river Danube, that *"Its state is moderately ecological, while from the chemical aspect it is bad."* Please explain this statement.	the threat to the ecological state of its waters as a result of the increased impact by human activities along the banks and the transport traffic, as well as the need to ensure further preservation of many protected zones and habitats, which were under the influence of its waters, in 1992 a decision was taken to set up an International Commission for the Protection of the Danube River (ICPDR). As per the Bulgarian legislation (the Waters Act) and the EC Water Framework Directive WFD 2000/60/EC, the Danube River Basin Management Plan (RBMP) has been developed. An expert analysis has been performed on the characteristics of the river basin and the ecological status of all water bodies–rivers in our country belonging to this river basin, including the Bulgarian section of the Danube river, as per the requirements of the Waters Act and the Directive. This analysis in the RBMP has defined our section of the river as river category with a name DanubeRWB01 and code BG1DU000R001, and type R6, with a moderate ecological status/potential and bad chemical status. This is a national document, which is in force until the end of 2015 and which is updated every six years. A program of measures has been developed and is implemented for reaching a good chemical status and good ecological potential/status within the next planned periods to 2021 and 2027, as per the requirement of the national normative document and the European Water Directive. The Competent body for the preparation of the RBMP is the body defined by the Law as water basin management body – that is the Water Management Basin Directorate in Pleven. Further information on RBMP can be found on the Internet site of the Basin Directorate – www.bd-dunav.org, where the plan is published. Such a plan has been prepared by the ICPDR for the International Danube River Basin and the other competent bodies in the rest of the countries of the Danube Basin also develop such documents.
4.	Dolj County Council	In the document **Non-Technical Summary,** Chapter 3.2.1.2, it is stated that: *„There is an evident trend of steady decrease of the use of the Danube River for technical purposes and this is indicative of the lack of direct impact on the quantitative status of the river"*, as well as	

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		that *„Where necessary, the permits issued in accordance with the Waters Act for intake and water use facility for discharge upon decision of the competent authority will be modified, if during the construction and operation of the Investment proposal it would not be possible to keep up all parameters and conditions set down."* a) Precisely in the conditions of a decrease of water intake from the Danube River for technical purposes, the direct impact on the river of the use foreseen in the present proposal is not indicated; b) As regards the second statement, no details are given for the conditions that my lead to the impossibility for keeping up all parameters and conditions set down, for which there is to a certain degree a large possibility for this to happen. Please explain in what way **at this point in time** you can maintain these parameters and conditions and indicate the measures that are undertaken for this purpose.	a) According to the national legislation – the Environmental Protection Act and the Waters Act, each activity related to the use of a water resource is subject to a permitting regime. This regime foresees procedures for issuing permits for water intake and for use of discharge of waste waters into the water bodies – rivers. The permits are issued by the Competent bodies defined by the Law on basis of submitted documents containing the specific parameters for the requested intake, accompanied by detailed technical and project documentation of the investment proposal, comprising a hydrological part, water management studies for the availability of the requested water volumes, map material, data on purifying facilities, quantity and composition of the waste waters, typical for the respective activity priority and other specific polluting substances and their concentrations, data on the primary holder of the permits, the Environmental Impact Assessment (EIA) decision and other information that is defined by the Waters Act and by the competent authority. b) In the currently valid permits of Kozloduy NPP Plc, all permitted parameters for water intake and discharge are described, as well as the conditions under which the water resource is to be used. The control and monitoring of the competent authorities **at the present moment** have not established any violations of the requirements set out in the permit documents. The necessity of future amendments to these documents will be decided by the competent authorities in the next phase of design, when the detailed technical decisions for the specific type of reactor will be developed. After the decommissioning of units 1 to 4, there is freely available volume of water, which is more than what would be

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			required by the new unit. Even the slightest change in the permitted parameters, usage scheme and conditions in the regime currently in force will be subject to an assessment. The Waters Act defines the cases when amendments are made to an issued permit document that is currently in force and when a new one is required, whereas the competent authority observes the provided procedures.
5.	Dolj County Council	**Chapter 11: Transboundary Impact**, respectively Chapter 11.2.8 BIOLOGICAL DIVERSITY, in relation to Chapter 11.3.5.3 IMPACT FROM THE IMPLEMENTATION OF THE NNU ON TARGET SPECIES IN THE PROTECTED AREAS FROM NATURA 2000 IN THE ROMANIAN PART OF THE 30 KM SURVEILLANCE ZONE (SZ): considering the large number of protected species observed in the region of the investment proposal, as well as the fact that the territories at hand are part of protected areas administered by the Dolj County Council, we would like to note the following: - The Administrator of the protected areas has not been informed by the competent institutions with regards to this question;	- **The Environmental Impact Assessment in transboundary context** was carried out in accordance with the procedure set out in the applicable Bulgarian legislation, in particular Article 98(1) of the Environment Protection Act and Article 25 of the Regulation on the conditions and procedure for performance of EIAs, and in accordance with the Convention on Environmental Impact Assessment in Transboundary Context (the Espoo Convention). By the date of the EIAR, in accordance with Article 3 of the Convention on EIA in Transboundary Context (Espoo), the competent authority of the state of origin, i.e. the Minister of Environment and Water of the Republic of Bulgaria, has notified the Republic of Romania, which is an affected state due to the location of the Investment proposal. The entire EIA documentation is translated in English and the following EIAR parts are translated in Romanian – Annex I: Non-technical summary and Chapter 11: Transboundary impact, while Romania has itself translated in Romanian Chapter 5: Cumulative effect. The documentation described has been provided to the competent authority for the Espoo procedure, namely the

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			Romanian Ministry of Environment and Climate Change, which has the prerogatives to distribute the information to the institutions concerned within the territory of Romania.
		- The ubiquitous conclusion, according to which *"No significant negative impact[2] is expected from the implementation of the NNU on the target invertebrate animals, fish, amphibians, reptiles and mammals within the protected area due to the absence of air, water and soil pollution by harmful emissions, as well as due to the absence of any radioactive, noise and light pollution,"* has been artificially derived since the impacts may be both direct – during the construction, and indirect – during the operation period. It is known that any human activity has potential impact on biodiversity, especially when speaking of an activity, for which the possibility of radioactive pollution exists during the operational period, but also during the construction process, as well as any other activity. It is hard to believe, considering that even the construction of a holiday accommodation may have an impact on biodiversity, that a nuclear power plant would have *no significant negative impact,* as claimed by you.	- The conclusion about the absence of significant negative impact from the implementation of the NNU on Natura 2000 protected areas and sites both in Bulgaria and Romania within a radius of 30 km is based on conclusions and findings of surveys carried out on the individual environmental components, which are subject to evaluation and are justified by the relevant experts in the EIAR: - Air, water and soil pollution with harmful emissions; - Noise and luminous pollution; - Radioactive contamination; - Other. This information is enhanced by data from the regular environmental monitoring – radiation and non-radiation – carried out during the recent years and by independent measurements undertaken by the biodiversity team in order to determine the natural radiation background and the radioactivity of the air in the 30 km surveillance zone around Kozloduy NPP, and also in all Romanian zones that are subject to evaluation – ROSPA0023 „Jiu River-Danube River Confluences", ROSCl0045 „Corridor of Jiu River", ROSPA00l0 „Bistret river" and ROSPA 00135 „Sands of Dabuleni" – using portable dose meter "Radioscope" Massag Sensoric GmbH, Basel, Switzerland. The measured intensity of the gamma-radiation equivalent dose was in the range of 0.10 to 0.19 μSv/h, which is similar to the measurements obtained during the recent years. This suggests that the background level will remain in the same bounds both during the construction,

[2] This is the English translation, and also as cited in the letter. The bulgarian text of the EIAR formulates „significant negative impacts" (note by translator).

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			operation and decommissioning phases. The entire information is presented in Chapter 11: Transboundary Impact (Figure 11.4 29 and Table 11.4 2/Table 11.4 3). As concerns the direct and indirect impacts on biodiversity on Romanian territory during the construction of the NNU, these do not apply at all since the distance is relatively large, while the impacts will be contained only within the boundaries of the construction site. After the commissioning of the new unit and during the operational phase, the only impact expected is minor thermic load on the water of Danube River, which does not exceed the regulatory limit of 3°C and does not reach the Romanian bank. This provides ground for the conclusion that the implementation of the NNU project will not produce significant negative impacts on biodiversity in protected territories and Natura 2000 areas in Romania.
6.	Dolj County Council	**Chapter 11: Transboundary Impact**, respectively Chapter 11.3 11.3 -ASSESSMENT OF THE POTENTIAL TRANSBOUNDARY IMPACT ON THE ROMANIAN PART OF THE 30 KM SURVEILLANCE ZONE FROM THE IMPLEMENTATION OF A NNU: *"During the realization of the activities envisaged in the project, both during the construction stage and during the operation and decommissioning stages, no direct impact is expected on any environmental components and factors in the Republic of Romania.* *The proximity of the alternative sites for the deployment of a NNU to the Danube River, which also serves as the state border between the Republic of Bulgaria and the Republic of Romania, determines the possibility for indirect environmental impact on the territory of the neighboring Romania via the potential transfer of pollution as a result of the implementation of the investment proposal."* Same comment as in the previous points. No analysis is performed of	A detailed analysis of the potential impacts with regards to all factors and components of the environment and the human health is performed in the EIAR, **Chapter 4. Description, analysis and evaluation of potential significant impacts on population and environment in radiation or non-radiation aspect as a result of the implementation of the investment proposal, use of natural resources, emissions of harmful substances during normal operation and emergency situations, generation of waste and causing of discomfort**. As per Bulgarian Regulation on the conditions and procedure of performing environmental impact assessments from 2006, art. 14 (1), p. 4, the assessment of the significance of the impacts includes their description as direct and indirect; cumulative; short-, medium- and long-term; permanent and temporary; positive and negative, local, transboundary, etc. impacts on humans and the environment, as a result of the construction and operation of the investment proposal. The identified potential impacts are described in Table 4.13-1 of Chapter 4,

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		any impact, regardless of how insignificant it is.	where all assessments are underlined, which means that these are elements for which **no impacts are expected** or elements, for which **insignificant negative impacts from the realization of the investment proposal are expected**. **Chapter 11: TRANSBOUNDARY IMPACT** summarizes these assessments.
7.	Dolj County Council	**Chapter 11: Transboundary Impact**, respectively Chapter **11.3.2** 11.3.2 SUMMARY ASSESSMENT OF THE PROBABILITY FOR RADIOACTIVE POLLUTION RESULTING FROM THE IMPLEMENTATION OF THE NNU ON ATMOSPHERIC AIR *"The conducted model-based and mathematically based assessments indicate that the additional radiation exposure of the population within the 30 km zone due to the operation of the NNU is negligible and that no transboundary impact is expected."* Do you consider that the mathematical assessments are sufficient, as grounds for this essential issue that concerns the construction and operation of the new nuclear unit, namely dose exposure of the population within the zone of operation of the facility? Additionally, in Chapter *11.3.2.3* RADIOBIOLOGICAL EFFECTS AND RADIATION RISK FOR THE REFERENCE INDIVIDUAL a conclusion is made that "*There is no risk of the development of deterministic effects for the population within the 30 km zone of Kozloduy NPP."* It is also claimed that *"The probability for the occurrence of radiation-induced cancer for the whole population is respectively: $1.06x10^{-7}$ for the existing nuclear capacities + AP-1000; $7.43x10^{-8}$ for the existing nuclear capacities + AES BBEP-1000/B466 and $1.07x10^{-7}$ for the existing nuclear capacities + EUR-based maximum release limits, and the probability for the occurrence of hereditary diseases is respectively: $3.86x10^{-9}$ for the existing nuclear capacities + AP-1000; $2.7x10^{-9}$ for the existing nuclear capacities + AES BBEP-1000/B466 and $3.88x10^{-9}$ for the existing nuclear capacities + EUR-based maximum release limits."*	Once a certain facility is built and placed in operation, the assessment of its environmental impact is made on the basis of real measurements of specified parameters that are subject to control. The environmental impact assessment of a facility that is planned to be built is made by using modeling tools and mathematical estimations. This approach is used widely in the entire world for most diverse purposes. In present days, the level of sophistication of computer technology and mathematics enables the development of software applications for a variety of stimulations. Chapter 7 of the EIAR provides information about the predictive methodologies used. The data obtained from the modeling exercise must be confirmed at a later stage of the licensing procedure. If the expected data is not confirmed, new technical solutions will be sought. The assessment of the radiobiological impacts and of the radiobiological risk from radioactive releases for a reference specimen is made with the application HeConEmpPop (Health consequences for employees and population). The modeling tool formalises the methodology for assessment of the radiobiological effects and of the radiation risk in accordance with ICRP Publication 103, The 2007 Recommendations of the International Commission on Radiological Protection. The output from the modeling tool is risk assessment for tissue reactions (deterministic effects), radiation-induced cancer and congenital diseases (for detailed information on this issue see Chapter 4, p. 4.11.1.3.1.1). The deterministic effects are those occurring from exposure to a high

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		This issue is insufficiently grounded in order to make such a conclusion, giving numerical data without interpreting it. We believe that the conclusion *"The probability for the occurrence of radiation-induced cancer for the whole population is respectively: 1.06x10^{-7} ..."* is unpersuasive and does not present correct information for the larger part of the public interested in these problems, regardless of the degree of their awareness and knowledge.	dose (absorbed dose 1÷2 Gy), which causes death to a large number of cells and irreversible injuries to the affected organ. The restrictions, in the form of annual effective dose 1mSv for the population and 20 mSV for the personnel, ensure the avoidance of deterministic effects. The cumulative radiation impact on the population from the existing facilities at the site and from all new facilities the construction of which is planned is below 10 μSv per annum. This value is significantly lower than the established limits and thus provides sufficient grounds to assert that the risk for development of deterministic effects is absent. Stochastic effects are those caused by the injury of a single cell. In most cases this does not change the functioning of the tissue, but may trigger a malignant process. The term "genetic risk" signifies the likelihood of harmful genetic defects occurring in the offspring of a population exposed to radioactive exposure. The approach to determining personnel and population exposure limits is established on the basis of the research work carried out by the UN Scientific Committee on the Effects of Atomic Radiation (UNSCEAR) and is further elaborated in the recommendations of the International Commission on Radiation Protection (ICRP). Then, the limits scientifically justified by the ICRP become part of the basic radiation protection requirements of the International Atomic Energy Agency (IAEA), the Directives of the European Commission and the domestic legislation of the individual Member-States. The exposure limits are determined on the basis of scientifically justified risk, acceptable to society. The scale of publicly acceptable risk has the following levels: • Extremely high risk level – 10^{-2}; • Very high risk level – 10^{-3} – 10^{-2}; • Moderate risk level – 10^{-4}; • Very low risk level – 10^{-5};

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			• Negligible risk – 10^{-6}. A risk level lower than $0{,}5.10^{-6}$ (corresponding to 10 μSv exposure per year) is considered negligible, since it is as little 0.5% of the exposure to the natural radiation background.
8.	Dolj County Council	According to the EIA (Environmental Impact Assessment) Directive, it is necessary to study other alternative sites for the investment proposal. The present study only looks at alternatives within one and the same site. Does that mean that no other region has been found on the territory of Bulgaria, where this project can be implemented without affecting the territory of a neighboring country?	The procedure on Transboundary EIA is regulated at both an international legislation level by the Espoo Convention, and at European level – by Directive 2011/92/EC on EIA, amended with Directive 2014/52/EC of thE European Parliament and the Council, regarding the assessment of the impact on some public and provate environmental projects. Both the EIA Directive and the Espoo Convention contain a number of conditions regarding the contents of EIA reports, one of which is a description of reasonable alternatives considered by the Contracting Entity and the rationale for the selected choice. In fulfilling these rqeuirements, the EIA report (2013, Chapters 2.1-2.4) describes the alternatives that were taken into account with regards to location (Chapter 2.1), alternatives considered for the adjacent infrastructure accompanying construction works and operation (Chapter 2.2), alternatives to the construction of a new nuclear unit (Chapter 2.3) and the zero alternative (Chapter 2.4). In the context of the above, four alternative options/sites have been considered for the location of the new nuclear unit. Chapter 2.1 of the EIA report looks at the four alternative sites for the construction of the NNU. As can be seen from the provided maps, this regards potential sites, located at the territory or in proximity of the existing Kozloduy NPP. The rationale for this is that the logic behind the implementation of the investment proposal is the successful use of all of Kozloduy NPP's capacity, including existing infrastructure and experienced, highly qualified personnel. In addition, at the very initial selection of the site for construction of the power plant, in the mid-60's of the 20th century, two fundamental conditions have been satisfied: - the site to be located in a region of the calmest possible tectonic

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			and seismic conditions, which also provides stable soil base; - to have a large water basin or river in proximity of the site, as a large amount of water is needed for the operation of the Power Plant. The selection of the site for the construction of Kozloduy NPP was assigned to the Research Directorate of Energoproekt, with the help of the Geological institute, other institutes of the Bulgarian Academy of Sciences and Russian consultants. This selection has taken into account that the territory of Bulgaria consists of two different parts in relation to tectonics. Southern Bulgaria falls in the Alpine-Himalayan Orogeny, where the mountain formation processes have ended several million years ago. In this part of the country, the selection conditions are much more complex, due to the high seismicity and the absence of large water sources. In Northern Bulgaria which is part of the Moesian Platform, the selection conditions are far better, due to the calm tectonic conditions and the availability of large water sources. The site selection was performed over whole territory of the country, analyzing all possible locations. On this basis, 12 alternative sites were defined. After examination of the geological and hydrological information for these locations, the sites in Southern Bulgaria and along the Black Sea coast were eliminated, leaving only several sites along the Danube River. A more detailed analysis of the Danube bank shows that the region of the town of Kozloduy is most suitable for the construction of an NPP, due to the following reasons: - the region is located in the calmest part of the Moesian Platform , where the folding tectonic processes and the formation of big faults have ended around 200 million years ago; where there have been no active faults established and the seismicity is among the lowest in Bulgaria;

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			- the site is located in the non-floodable terrace of the Danube River and there are good geomorphological conditions for the creation of water-supply canals; - the soil base is composed of terrace sediments, covered by loess with thickness 10-12 m, which may be excavated or improved using different technical resources; - there are no landslides, karst, river erosion, high levels of ground water and other processes of geological hazard. The 40-year long, free-of-accidents operation of the Nuclear Power Plant, without any engineering-geological and hydrological problems, is the greatest proof for the appropriateness of the selection of its location. In this sense, considering alternative sites on, and in close proximity of, the territory of the existing Power Plant is completely grounded. These are precisely the reasons that in its Decision (Protocol No 14 from 11 April 2012), the Council of Ministers of the Republic of Bulgaria defined the construction of a new nuclear unit on the territory of, or in proximity to, the Kozloduy NPP.
9.	Dolj County Council	Within the 30 km surveillance zone, there are 32 settlements in the Dolj and Olt Counties (circa 75,000 inhabitants) in Romania and 45 settlements in Bulgaria (circa 65,000 inhabitants), while within the 100 km zone, there are 743 settlements in Romania and 546 in Bulgaria. The International norms impose that such projects be located in more thinly populated regions, where no hospitals, zones for tourism and relaxation are located in proximity – so that the evacuation of citizens in an emergency situation can be ensured in an exceptionally short time. Have these issues been considered in the development of the assessment?	According to the requirements of the Bulgarian legislative system and the IAEA (International Atomic Energy Agency) guidances, a nuclear power plant is to be located on territories with medium population density, not exceeding 100 people per km^2, calculated over the whole period of operation of the NPP. For this purpose, present-day demographic studies were carried out for both the territory of Bulgaria and that of Romania. Based on the studies and analyses performed, the following findings and conclusions may be drawn: • The demographic potential within the 100 km, respectively the 30 km zone around the site of Kozloduy NPP is low;

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			• Within 100 km around Kozloduy NPP, the population in 2013 was about 1.933 million people, of which 767 thousand people in Bulgaria and 1.166 million people in Romania; • Within the 30 km zone, due to the sparse settlement network and the lack of large cities, the population is much smaller – around 140 thousand people (65 thousand people on the territory of Bulgaria and 75 thousand people on the territory of Romania); • The mean population density within the 100 km zone is around 60 people/km^2 and around 50 people/km^2 within the 30 km zone, which is significantly lower than the limiting condition of 100 people/km^2, per the Bulgarian regulatory base and the IAEA guidances for locating an NPP; Additional analysis was carried out on the trends for future change in the population in the region, which concluded that the Northwest planning region is the most underdeveloped region of the country in economic and urbanistic terms. The size of the population within the 100 km area is diminishing. This is typical both for the Bulgarian and the Romanian parts of the area. For the period from 1977/1985 to 2011, the decrease is significant – around 20%, while for the last decade alone it is 15%. The prospective change in the population size, based on the assessment prognoses of the United Nations (UN) for the countries extending to 2050 shows that the size of the population in Bulgaria will decrease by around 20%, and that of Romania by 13.5% compared to 2012. Respectively, this forecast can be transposed to the studied area. By applying this trend for calculation of the prospective size of the population within the 100 km zone in 2050, it will amount to 1,622 thousand people, of which 614 thousand in Bulgaria and 1,008 thousand people in Romania. In most of the settlements within the 30 km zone around Kozloduy NPP, the population size is declining (around 2% mean annual decline for the last 10 years). This trend will continue, which directly affects the

No	Name / Organization	Written or verbal suggestions, recommendations, opinions and objections as a result of public hearings of the EIA report	Opinion and motives of the Contracting Entity "Kozloduy NPP - New Build" EAD
			population density.
10.	Dolj County Council	If we take into account for potential danger of such a project, we believe that a detailed risk analysis must be performed (including for the cases, when the possibility of emergence of risks is very low), whereas we are interested in what actions would need to be taken by the Romanian side as a result of this analysis. Also, the respective actions should be reflected in financial terms (logistics, personnel and preparation, means of cooperation and information, etc.).	The assessment of the environmental risk in the case of accidents (including major accidents involving nuclear fuel damage) is made in Chapter 6 of the EIAR. The analyses made (including, *inter alia*, benchmarking against EUR's limited impact criteria) demonstrate that the deterministic and probabilistic criteria in respect of the occurrence and consequences of design basis and major accidents, laid down in the national legislation and in the IAEA manuals, are met. This should be confirmed at the technical design approval stage. In fact, the type and scope of emergency-response activities and the resources required for these activities depend on the consequences of incidents or accidents rather than on their frequency. The analyses have established that there is a need for a minor correction of the existing Precautionary action zone (with provisional radius 2 km and centre between Units 5 and 6 – see Fig. 6.1-12) – this will also be modeled, analysed and fine-tuned at a later stage, however it will not affect in any way the impacts on Romanian territory. No change is expected in the Urgent protective action planning zone, the radius of which is 30 km around Kozloduy NPP. Therefore it can be concluded that the investment proposal for construction of a NNU at the site of Kozloduy NPP will not lead to a change of the existing IGSU system, described below, and that of the local authorities in the counties included the external emergency plan of Romania, and does not require additional action to change the existing procedures for notification and for application of public protection measures. The emergency planning and the emergency response organisation in the Republic of Romania are described in the 6th National Report as per the Convention on Nuclear Safety of 2013. Romania has put in place a

No	Name / Organization	Written or verbal suggestions, recommendations, opinions and objections as a result of public hearings of the EIA report	Opinion and motives of the Contracting Entity "Kozloduy NPP - New Build" EAD
			National Nuclear Accident Response Plan, which includes action plans in the case of general radiation accident at NPP Cernavoda and impacts from Kozloduy NPP. In addition to the territory around NPP Cernavoda, three other emergency planning zones for nuclear risk are defined: - Impact zone of Kozloduy NPP; - Impact zone of the research reactor VVR-S in Bucharest – Măgurele; - Impact zone of the research reactor TRIGA in Pitești – Mioveni. For each of the three nuclear risk zones, there are plans of the local authorities (at county level) for them to intervene in the case of nuclear accident. The county-level nuclear accident response plans are approved by the Romanian Inspectorate General of Emergencies (ISGU). The plans define the external organisations and their responsibilities in the case of accident with the nuclear facilities, which may produce impacts beyond the site of each plant. The main responses of the external organisations are defined as well as the levels of intervention in applying population protection measures in each emergency planning zone. The Romanian External emergency plan sets out the responsibilities, means and methods for alerting the population in the affected areas to the emergency and for notification the regulator and the other state and local authorities concerned.
11.	Dolj County Council	What are the studies and research underlying the assessment of the impact on the health status of the population? Has the cumulative effect of the investment proposal been taken into account, as well as the impact of the: - operation of the old power plant in Kozloduy and activities	- For the purpose of assessing the cumulative effect, an analysis has been made of the dose load on the population in the 30 km zone of

No	Name / Organization	Written or verbal suggestions, recommendations, opinions and objections as a result of public hearings of the EIA report	Opinion and motives of the Contracting Entity "Kozloduy NPP - New Build" EAD
		carried out on this site;	Kozloduy NPP from aerosol and liquid radioactive releases to the environment at all operating states of: the existing facilities at the site of Kozloduy NPP (Units 5 and 6, Spent Fuel Storage Facility and Dry Spent Fuel Storage Facility); the facilities of Specialised Enterprise RAW-Kozloduy and the future activities for: decommissioning of Units 1 to 4, including the Size Reduction and Decontamination Workshop (SRDW); the Plasma Melting Facility (PMF), the National Disposal Facility for Low and Intermediate Level Radioactive Waste (NDF) - Radiana site and the NNU. According to the NDF Environmental Assessment Report, there are no releases of radioactive material into the atmosphere and to the discharged water at all operating states. The assessment of the risk to the population from the radioactive releases includes: • Assessment of the individual and collective doses to the population; • Assessment of the radiobiological effects and of the radiation risk. The following routes of impact are taken into account in assessing the external and internal exposure of the population in the area: • External exposure to a radioactive cloud; • External exposure resulting from deposits on the land surface; • Internal exposure by inhalation; • Internal exposure during consumption of radioactive contaminated foodstuffs. The assessment of external and internal exposure from liquid releases takes into account the following routes of impact: • Presence in the waters of Danube River - external exposure during swimming and boating;

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			• Contact with coastal sediment at the Danube River - external exposure due to bottom sediments and presence on the beach; • Ingestion of products (fish) from Danube water - internal exposure due to consumption of fish; • Presence in areas irrigated by Danube water - external exposure; • Ingestion of vegetable products irrigated with Danube water (fruits, vegetables, etc.) - internal exposure; • Ingestion of meat and milk from livestock that uses drinking water from the Danube - internal exposure; • Ingestion of meat and milk from animals fed with animal feeds irrigated with water from the Danube - internal exposure; • Consumption of drinking water - internal exposure. The radiation risk assessments are in the following scope: • Risk of radiation-induced cancer for the entire population and for persons in working age; • Risk for congenital diseases for the entire population and for persons in working age; • Risks and damage to certain tissues for the entire population; • Risks of congenital diseases for the first generation and for two generations; • Risks of congenital diseases of the reproductive part of the population evaluated for two generations with the first generation exposed before the second one; • Risks of congenital diseases of the reproductive part of the population, estimated in the first generation after exposure.
		- natural (cosmic) radiation background; - dose exposure of part of the population as a result of medical	- The cumulative impact assessments were made with reference to the requirements set out in the *Regulation on the basic radiation protection standards* (BRPS), which defines the limits of personnel

No	Name / Organization	Written or verbal suggestions, recommendations, opinions and objections as a result of public hearings of the EIA report	Opinion and motives of the Contracting Entity "Kozloduy NPP - New Build" EAD
		examinations;	and population exposure to ionizing radiation. The approach to determining personnel and population exposure limits is established on the basis of the research work carried out by the UN Scientific Committee on the Effects of Atomic Radiation (UNSCEAR) and is further elaborated in the recommendations of the International Commission on Radiation Protection (ICRP). Then, the limits scientifically justified by the ICRP become part of the basic radiation protection requirements of the International Atomic Energy Agency (IAEA), the Directives of the European Commission and the domestic legislation of the individual Member-States. These Directives are reflected in the Bulgarian legislation. As concerns the question of whether the dose exposures from medical examinations have been taken into account, we have to clarify that Article 6 of the above cited Regulation reads: *(1) The sum total of the doses received from all activities must not exceed the dose limits set out in the Regulation for professionally exposed persons (personnel), interns, students and for anyone from the population.* *(2) The principle in paragraph 1 shall not apply to medical exposure.* Moreover, the Regulation does not prescribe medical dose exposure limits, but in each individual case it must be proven that the overall dose for the exposed person and for the public will be greater than the anticipated overall damage. For these reasons, the doses received from medical examinations are not considered in this assessment.
		- consequences of the Chernobyl accident in 1986?	- The contribution of the atmospheric nuclear tests during the "cold war" period and of the Chernobyl accident in 1986 to the radioactivity of soils and other environmental components is part of

No	Name / Organization	Written or verbal suggestions, recommendations, opinions and objections as a result of public hearings of the EIA report	Opinion and motives of the Contracting Entity "Kozloduy NPP - New Build" EAD
			the formation of the Natural Radiation Background (NRB, average values 2.33 mSv/a for Bulgaria and 2,42 mSv/a for the world). Population exposure is the result of the so-called Background exposure (NRB) and the regulatory limits set in IAEA, ICRP and Euratom documents, namely 1 mSv/a for Above-background exposure (excluding medical exposure). The potential penetration of radioactivity via the food chain from soils affected by the Chernobyl accident is an element of and is included in the background exposure. The long-term analyseis of soils, vegetation and crops in the area of Kozloduy NPP, of cow milk produced in the area and of fish from the Danube after the discharge of the warm canal of the NPP, have demonstrated the absence of transmission of technogenic activity in the food chain. The low (background) levels of technogenic activity in the environment mean that it is practically impossible to make a direct assessment of the additional dose exposure of the population in the 30 km zone. This is made by mathematical modeling methods, well-established in practice, which are based on the EU-approved methodology CREAM (Consequences of Releases to the Environment Assessment Methodology) Radiation Protection 72 – Methodology for assessing the radiological consequences of routine releases of radionuclides to the environment). This methodology is based on a conservative assessment (without any underestimation of the risk) and is adapted to the specific geographic and hydrological conditions in the area. The results are verified each year by independent evaluations of the State supervisory authority for health aspects, namely the National Radiation Protection Center under the Ministry of Health. The data inputs include real releases to the atmosphere and to the hydrosphere, meteorological and hydrological data, demographic data and statistical indicators reflecting the consumption of air, drinking water and food, as well as data about the amounts of electricity produced.
		In this sense, what is the degree of tolerance of the human organisms	Provided that we have correctly interpreted “the degree of tolerance of the human organisms to the doses” as the margin available before the

No	Name / Organization	Written or verbal suggestions, recommendations, opinions and objections as a result of public hearings of the EIA report	Opinion and motives of the Contracting Entity "Kozloduy NPP - New Build" EAD
		to the doses?	impact reaches levels dangerous to human life, we can offer the following answer: The impacts that are dangerous to human life and have proven lethal effect are the deterministic effects, which occur from high dose exposure (absorbed dose 1÷2 Gy), which causes death to a large number of cells and irreversible injuries to the affected organ. The restrictions, in the form of annual effective dose 1mSv for the population and 20 mSV for the personnel, ensure the avoidance of deterministic effects. The cumulative radiation impact on the population from the existing facilities at the site and from all new facilities the construction of which is planned is below 10 μSv per annum. This value is significantly lower than the established limits and thus provides sufficient grounds to assert that the risk for development of deterministic effects is absent.
12.	Dolj County Council	In Romania, and Dolj County in particular, the studies for inventarisation of the flora and fauna species and the establishment of their conservation status within the Natura 2000 protected areas are still in progress. This is why we believe that an ordinary observation of the species described in the Natura 2000 forms, performed in 2013 and presented in the examined report, cannot provide grounds a conclusion such as: *"The investment proposal does not pose negative impact on the species and habitats in the natural habitats on the territory of Dolj County"*[3] Such a statement should be based on much more arguments.	The Romanian Ministry of Environment and Climate Change declared by its letter (outgoing reference No 3672/RP/18.10.2012) that the Republic of Romania will participate in the transboundary environmental impact assessment procedure for this project. For the purposes of the assessments and for the sake of their objectivity, reports were provided by Romanian colleagues (PD Dr. Ionuț, Ștefan IORGU and Dr. Grigore DAVIDEANU), who had also taken part in joint field surveys to assess protected areas included in the European ecological network NATURA 2000 in Romania and the condition of the target biological species. Observations were also carried out in characteristic habitats beyond the boundaries of the protected areas, near large marshes and micro-dams on the left bank in the territory of Romania. Three reports were provided from the Romanian side: 1. **First Report -** ROMANIA: ROSPA0010, ROSPA0023, ROSPA0135, ROSCI0045 - author PD Dr. Ionuț, Ștefan IORGU 2. **Second Report -** *Preparation a Report for the Protected Species*

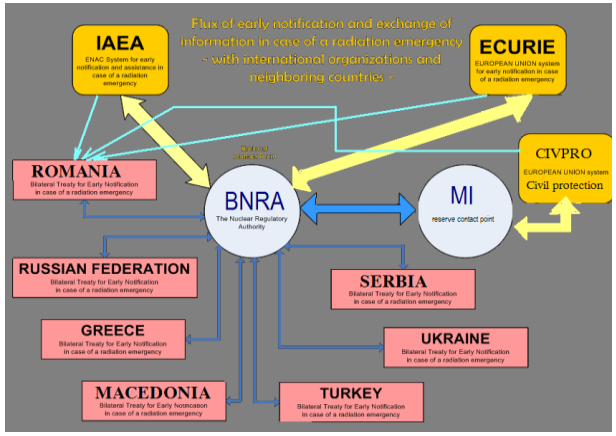
[3] No such quote has been found in the original Bulgarian (respectively English) text of the report (note by translator).

No	Name / Organization	Written or verbal suggestions, recommendations, opinions and objections as a result of public hearings of the EIA report	Opinion and motives of the Contracting Entity "Kozloduy NPP - New Build" EAD
			From Special Conservation Areas in Romania: ROSPA0010, ROSPA0023, ROSPA0135, ROSCI0045 in connection of Investment proposal for Building a New Nuclear Unit of the Latest Generation at the Kozloduy NPP Site - author PD Dr. Ionuţ, Ştefan IORGU 3. **Fish Fauna Report** – author Dr. Grigore DAVIDEANU -The conclusion about the absence of significant negative impact from the implementation of the NNU on Natura 2000 protected areas and sites both in Bulgaria and Romania within a radius of 30 km is based on conclusions and findings from surveys carried out on the individual environmental components, which are subject to evaluation and are justified by the relevant experts in the EIAR: *- Air, water and soil pollution with harmful emissions;* *- Noise and luminous pollution;* *- Radioactive contamination;* *- Other.* This information is enhanced by data from the regular environmental monitoring – non-radiological and radiological – carried out during the recent years and by independent measurements undertaken by the biodiversity team in order to determine the natural radiation background and the radioactivity of the air in the 30 km surveillance zone around Kozloduy NPP, and also in all Romanian zones that are subject to evaluation – ROSPA0023 „ Jiu River-Danube River Confluences", ROSCl0045 „ Corridor of Jiu River", ROSPA00l0 „Bistret river" and ROSPA 00135 „ Sands of Dabuleni" – using portable dose meter "Radioscope" Massag Sensoric GmbH, Basel, Switzerland. The measured intensity of the gamma-radiation equivalent dose was in the range of 0.10 to 0.19 μSv/h, which is similar to the measurements obtained during the recent years. This suggests that the **background level will remain in the same bounds both during the construction, operation and decommissioning phases.** The entire information is presented in Chapter 11: Transboundary Impact (Figure 11.4 29 and Table 11.4 2/Table 11.4 3).

No	Name / Organization	Written or verbal suggestions, recommendations, opinions and objections as a result of public hearings of the EIA report	Opinion and motives of the Contracting Entity "Kozloduy NPP - New Build" EAD
			As concerns the direct and indirect impacts on biodiversity on Romanian territory during the construction of the NNU, these do not apply at all since the distance is relatively large, while the impacts will be contained only within the boundaries of the construction site. After the commissioning of the new unit and during the operational phase, the only impact expected is minor thermic load on the water of Danube River, which does not exceed the regulatory limit of 3°C and does not reach the Romanian bank. This provides ground for the conclusion that the implementation of the NNU project will not produce significant negative impacts on biodiversity in protected territories and Natura 2000 areas in Bulgaria and Romania.
13.	Dolj County Council	The protected natural sites Coridorul Jiului, Confluenta Jiu-Dunare and Bistret are areas inhabited by a large diversity of migrant birds. In your assessment, we find no details on the impact of the Kozloduy NPP site on the birds' migratory routes: the height of the ventilation stacks, the construction materials used, the size of the buildings, aerial cable grids, etc. are just some of the elements that may cause negative impact on the bird species.	The implementation of the NNU project will not include construction of new cable grids, new long-distance power lines, new water towers or similar facilities, which typically pose problems with migratory birds, which equally provides grounds to make the assessment that the implementation of the project will not have impact on bird migration. As concerns bird migration routes, there is fragmented evidence of the existence of a migratory route, which goes in the valley of Jiu River and continues, after crossing the Danube River, in the valley of Tsibritsa River and above the Zlatiata plateu. This migratory route was studied to a certain extent during spring and autumn migration in the area of Zlatiata plateu (Michev et al., 2012). The Kozloduy NPP site is more than 20 km westward from it. There is no evidence of bird crashes, including of migratory birds, into the existing ventilation stacks and tall buildings of Kozloduy NPP. **References:** • Michev, T. M., L. A. Profirov, N. P. Karaivanov, B. T. Michev. 2012. Migration of Soaring Birds over Bulgaria. - Acta zool. bulg., 64 (1), 2012: 33-41. • http://www.acta-zoologica-bulgarica.eu/downloads/acta-

No	Name / Organization	Written or verbal suggestions, recommendations, opinions and objections as a result of public hearings of the EIA report	Opinion and motives of the Contracting Entity "Kozloduy NPP - New Build" EAD
			zoologica-bulgarica/2012/64-1-033-041.pdf
14.	Dolj County Council	According to INES – The International Nuclear Event Scale, an instrument for the timely and detailed notification of the public in view of their safety with regards to events, related to radiation sources, the public and media need to be informed in case Level 2 events (called an Incident). Considering the location of the site in Bulgaria, a country that may have its own regulations for the management of such information, how will the timely provision of information to the Romanian public in such cases be ensured?	The process of notification in case of a nuclear or radiological emergency with possible impact on the territory of other countries is strictly regulated in the Bulgarian legislation, especially with regards to Romania, both in terms of procedures for information flow and periodical provision of additional information. The following regulatory documents apply: • Convention on Early Notification in case of a Nuclear Accident (SG. No. 12/1988); • Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency; (SG. No. 13/1988); • Act on Safe Use of Nuclear Energy (SG. No. 63/2002); • Agreement between the Government of the Republic of Bulgaria and the Government of Romania on Early Notification of a Nuclear Accident and Exchange of Information on Nuclear Facilities, effective January 1, 1998; • Regulation on emergency planning and emergency preparedness in case of nuclear and radiation emergencies (SG, No. 94/2011); • National (off-site) emergency plan in case of an accident at Kozloduy NPP (latest version 2012) • Emergency plan of the Bulgarian Nuclear Regulation Agency (BNRA), latest version 2013; • Onsite emergency plan in case of an accident at Kozloduy NPP, latest version 2013 The procedure for information flow which is implemented in case of a nuclear or radiological emergency with possible impact on Romanian territory is summarised below: BNRA as a regulatory body has specific duties which can be summarised as follows: • performs the functions of a central body and contact point for

No	Name / Organization	Written or verbal suggestions, recommendations, opinions and objections as a result of public hearings of the EIA report	Opinion and motives of the Contracting Entity "Kozloduy NPP - New Build" EAD
			notification in case of an emergency and provide assistance in accordance with the Convention on Early Notification of a Nuclear Accident and Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency; • provides information to other countries and international organizations, including through the notification systems EC-ECURIE and IAEA-USIE; • in case of an accident, notifies and periodically informs international organisations, neighbouring countries as well as countries which could be affected, through the countries' contact points • Gathers and processes the incoming data that characterise the emergency, makes predictions for its development and the consequences for the population and issues the results to the National Headquarters for Coordination and Control / Council of Ministers, and to other countries In case of an emergency, the information about the accident which the BNRA provides to the international organisations contains the following data, dependent on the situation and possibilities, and if this information does not threaten the national security; • time and place of occurrence of the emergency; • estimated or identified reason for the emergency and a prediction of its development in terms of radioactive release to the environment; • general characteristics of the released radioactive substances, including the possible physical or chemical form, actual amounts, composition and other characteristics of the release; • information about the meteorological and hydrological conditions and forecasts; • the results from the radiological monitoring and analyses of foodstuffs, forages and drinking water; • measures, undertaken or planned, for protecting and notifying the population;

No	Name / Organization	Written or verbal suggestions, recommendations, opinions and objections as a result of public hearings of the EIA report	Opinion and motives of the Contracting Entity "Kozloduy NPP - New Build" EAD
			• predictions for the dispersion of the radioactive substances released to the environment and their deposition. The emergency plans define the time limit for notifying the neighbouring countries. The maximum time is set at 2 hours after the time of occurrence of the accident. The information between Bulgaria and Romania is flowing to different channels (see fig.1): • from BNRA to the CNCAN; • from BNRA to IAEA (through USIE) and CNCAN; • from BNRA to EC (through WebECURIE) and MoI of Romania; • from MoI of Bulgaria to the MoI of Romania based; • from MoI of Bulgaria to the EC Civil Protection and to MoI of Romania; • from MEA of Bulgaria to the MEA of Romania. Such procedures may be subject to further discussions and agreement between the competent authorities of Bulgaria and Romania.  **Fig. 1** Information flow from the Republic of Bulgaria to the Republic of Romania in case of a nuclear or radiation emergency

No	Name / Organization	Written or verbal suggestions, recommendations, opinions and objections as a result of public hearings of the EIA report	Opinion and motives of the Contracting Entity "Kozloduy NPP - New Build" EAD
15.	Dolj County Council	Are there any clauses envisaged in the decision authorizing the implementation of the investment proposal concerning guarantee measures by the project Contract Entity, such as compensations in case of impact on private property, financial losses to farmers as a result of the implementation of the project, lawsuits filed by the persons that are considered affected, measures for remediation of the environment, etc.? Do these guarantee measures also concern Romania?	The liability for nuclear damage is regulated through the Vienna Convention on Civil Liability for Nuclear Damage (hereinafter the Vienna Convention) and the Safe Use of Nuclear Energy Act (hereinafter SUNEA), which implements the Convention within the domestic legal order of Bulgaria. According to article I.1(c), the term 'operator' means in relation to a nuclear installation, "the person designated or recognized by the Installation State as the operator of that installation'. This provision is incorporated in the Bulgarian legal order through the SUNEA and the Regulation for the Procedure for Issuing Licenses and Permits for Safe Use of Nuclear Energy. Under article 129(1) of SUNEA, the Council of Ministers of Bulgaria determines the licensee who, within the meaning of the Vienna Convention, is an operator of the nuclear installation, and the type and conditions of the financial security covering the liability of the operator for nuclear damage. The Regulation for the Procedure for Issuing Licenses and Permits requires the operator of the installation to obtain a permit for commissioning of a nuclear facility, while the availability of financial guarantee, covering civil liability for nuclear damage is one of the indispensable conditions for obtaining such permit. The legal order, which regulates civil liability for nuclear damage, is based on several major principles. The liability is absolute[4] and lies exclusively with the operator of the installation. The liability is limited in relation to amount and the time, during which a person may raise a claim for compensation for damage caused by nuclear incident. The operator is legally required under the Convention and the SUNEA to maintain an insurance or other form of financial guarantee for the period of the operation of the nuclear installation (Article 132(2) of SUNEA). In case that the financial guarantee of the operator is not enough to cover the amount of the claims brought by the affected persons, article 133 of the SUNEA requires the state to pay the admitted

[4] There is only one exception from the rule of absolute liability of the operator under the Vienna Convention – when the nuclear incident is directly due to an act of armed conflict, hostilities, civil war or insurrection (article 4(3)(a).

No	Name / Organization	Written or verbal suggestions, recommendations, opinions and objections as a result of public hearings of the EIA report	Opinion and motives of the Contracting Entity "Kozloduy NPP - New Build" EAD
			claims for compensation up to the limit established by article 132(1) of the SUNEA. The SUNEA also requires the state to cover any damage, due to a nuclear incident, which is directly caused by a severe natural disaster of an extraordinary character. One should bear in mind that, nuclear damage according to the Vienna Convention covers only loss of life, any personal injury or loss of, or damage to, property which arises out of or results from the radioactive properties or a combination of radioactive properties with toxic, explosive or other hazardous properties of nuclear fuel or radioactive products or waste, or any other loss or damage so arising or resulting if and to the extent that the law of the competent court so provides. Article XIII of the Vienna Convention requires the Convention and the relevant national legislation, which applies in accordance with it, to be applied without any discrimination based on nationality, domicile or residence. In the explanatory text of the IAEA to the Vienna Convention, this provision is interpreted as giving access to justice to the victims not present on the territory of the Contracting State, on which territory the nuclear incident has occurred, as long as the nuclear damage occurs within the geographical limits of the Convention.[5] Therefore, when damage occurs as a result of nuclear incident on the territory of a Contracting Party to the Vienna Convention and this damage has a transboundary character, the persons concerned, who are nationals of other Contracting Parties to the Convention, have the right to file a claim for nuclear damage before the competent court in the state where the nuclear incident had occurred. In addition, article 134 of the SUNEA further supports the conclusion of IAEA in regards to the right to compensation for nuclear damage, suffered on the territory of a State Party to the Convention.[6]

[5] The 1997 Vienna Convention on Civil Liability for Nuclear Damage and the 1997 Convention on Supplementary Compensation for Nuclear Damage – Explanatory Texts, IAEA International Law Series No.3, p.53 <http://www-pub.iaea.org/MTCD/Publications/PDF/Pub1279_web.pdf>

[6] Article 134 of the SUNEA: "Any nuclear damage caused within the territory of a State which is not a Contracting Party to the Vienna Convention shall be compensated solely pursuant to an international treaty which has been ratified, promulgated and has entered into force and to which the Republic of Bulgaria is a party, or on the principle of reciprocity."

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16.	Dolj County Council	The provided documentation does not reference the quoted bibliographical sources (only one source is cited), mainly with regards to the chapter devoted to biological diversity, there is also no reference to the persons who prepared the documentation and their expertise in the respective fields.	The Impact Level Assessment Report (ILAR) provides, inter alia, details about experts and bibliographic sources. Furthermore, for the purposes of the assessments and for the sake of their objectivity, reports were provided by Romanian colleagues (PD Dr. Ionuț, Ștefan IORGU and Dr. Grigore DAVIDEANU), who had also taken part in joint field surveys to assess protected areas included in the European ecological network NATURA 2000 in Romania. Three reports were provided by the Romanian side**:** - **First Report –** ROMANIA: ROSPA0010, ROSPA0023, ROSPA0135, ROSCI0045 – author PD Dr. Ionuț, Ștefan IORGU - **Second Report -** *Preparation a Report for the Protected Species From Special Conservation Areas in Romania: ROSPA0010, ROSPA0023, ROSPA0135, ROSCI0045 in connection of Investment proposal for Building a New Nuclear Unit of the Latest Generation at the Kozloduy NPP Site – author PD Dr. Ionuț, Ștefan IORGU* - **Fish Fauna Report** – author Dr. Grigore DAVIDEANU The competence of the independent experts involved in the production of the ILAR is determined in Art. 7, paragraph 4 and Article 9, paragraph 1, sub-paragraphs 4-7 and paragraph 3 of the *Regulation on the terms and procedure for assessment of the compatibility of plans, programmes, projects and investment proposals with the preservation targets and objectives in protected areas*. The requirements to the experts set out in the *Regulation* are as follows: - University degree at Master level; - At least two years of working experience in the relevant professional field; - Must be actively engaged or have experience in research and/or expert activities, including development of the assessment reports, provision of written consultations, environmental analyses and other in the area of preservation of the habitats and species included in Annexes 1 and 2 of the Biological Diversity Act;

No	Name / Organization	Written or verbal suggestions, recommendations, opinions and objections as a result of public hearings of the EIA report	Opinion and motives of the Contracting Entity "Kozloduy NPP - New Build" EAD
			- Must have knowledge of the applicable Bulgarian and European environment-protection legislation and ability to reference and accommodate these requirements and the available methodological documents in the assessments referred to in Article 7(4); - Absence of private interest in the implementation of the investment proposal examined in the compatibility assessment procedure; - Must not be related parties, in the meaning of the Commercial Act, with the Contracting Entity; – Must not have relations with the Contracting Entity or with the competent authority that may give rise to reasonable doubts about their impartiality. The experience and expertise of all independent experts who took part in the production of the EIAR and of the ILAR by far exceeds the requirements set out in the law. In addition, they are recognized scientist - professors and doctors working in Bulgarian and international teams from research institutions and universities. The competence of the independent experts working on EIAs in Bulgaria is set out in the Art. 83 of the Environment Protection Act (EPA). An integral part of the EIA documentation submitted to the competent authority – the Ministry of Environment and Water of the Republic of Bulgaria – is a set of all necessary documents confirming the educational background and the required working experience in a certain field as evidence of expert capacity. The names of the EIAR and ILAR developers are provided in Annex 5 and their expert credentials are provided in Annex 5-2, in Bulgarian language, since it is on the basis of these documents that the Bulgarian MoEW decides whether the experts involved in the EIAR and ILAR satisfy the requirements of the Bulgarian legislation. The Bulgarian MoEW has assessed positively the quality of the EIAR,

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			which confirms that the aforesaid regulatory requirements are met.
17.	Association "Pro Democratia" /APD/ Club Craiova	**We demand that the representatives of the Bulgarian authorities clarify whether during the operation of the Nuclear Power Plant in Kozloduy, for the period 2011-2014, there have been any problems, incidents and/or accidents.** We demand that the response be accompanied by an official document (in Romanian and English languages) prepared by the Bulgarian authorities, which would include a list of the problems, incidents and/or accidents, their description, the reasons, consequences to the personnel that maintains the Nuclear Power Plant in Kozloduy (number of employees who needed medical attention, number of employees who have been evacuated from the Power Plant's perimeter or who have not been given access to the Power Plant's perimeter), the measures that were put in place and how these measures were implemented. We demand that the response be accompanied by copies of the official documents, provided by the management of the Kozloduy NPP to the Bulgarian authorities, to the Romanian authorities and to the competent European institutions with regards to the respective problems, incidents and/or accidents.	The reporting of any incidents at Kozloduy NPP is regulated in the legislation and is based on the requirements of the *Regulation on the conditions and procedure for notification to the Nuclear Regulatory Agency of events at nuclear facilities and sites with sources of ionizing radiation.* The Regulation defines the various categories of events from the perspective of their relevance to safety (excursions from normal operation, incidents and accidents), the procedure, the time-limits and the method of notification. The notification form and the requirements to the content of the information provided are also defined. The main objectives are to identify the safety relevance (what could have happened), what regulatory requirements have been breached and the consequences in terms of radiation protection. According to the Regulation, the relevance/importance of an event in terms of safety and radiation protection according to the INES scale of the IAEA is initially defined by the license holder, but the final assessment is made by the NRA Chair on the basis of the same scale. The International Nuclear Events Scale is developed by the IEAE as a tool for prompt and coordinated public notification about the safety relevance of events related to sources of radiation. To ensure correct classification to the INES scale, the IAEA the has developed a manual with stringent criteria for evaluation of the safety relevance/importance of the events. The events are classified in seven levels, according to the scale: - Levels 4–7 are termed "accidents" - Levels 1–3 are termed "incidents" Events that are related to safety but are not important to safety are

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			classified as “Under the scale/Level 0”. Events that are irrelevant to safety, as concerns radiation or nuclear safety are not classified by the scheme. The events are assessed against criteria, described in the manual, in terms of their impact on three different areas: - impact on the population and on the environment; - impact on radiation barriers and controls of the facilities; - impact on the deep defense. Events classified on the basis of the two criteria – population/environment impact and radiation barriers/control – are described as events of “real consequences” for the population, environment and facilities: Levels 4 to 7 relate to higher levels of real consequences for the population, environment and facilities. Weakening of the deep defense includes, in the general case, events without real consequences, wherein the envisaged accident protection measures did not work as expected. - Level 1 includes only disruption of the deep defense; - Levels 2 and 3 include more serious disruption of the deep defense or lower levels of real consequences for NPP personnel and facilities.

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			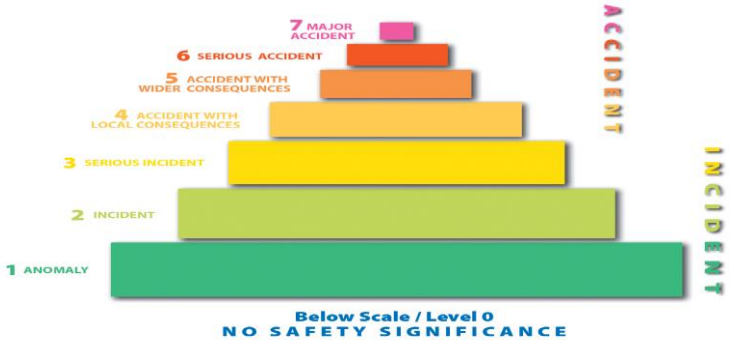 The International Nuclear Events Scale (INES) User Manual, edition 2008, IAEA, is available at the NRA website: http://www.bnra.bg/en/nuclear-facilitie/kozloduy/unit4/nuclear-facilitie/npp-events/. During the period 2011 – 2014, events classified as Level 1 or higher of the INES **have not occurred** at Kozloduy NPP. In the same period, Kozloduy NPP has reported events classified as **Level 0/Under the [INES] scale**. The distribution by year is as follows: **Year** | **2011** | **2012** | **2013** | **2014 As at 08.12.2014** Events at Units 5 and 6 | 6 | 12 | 12 | 2 Events at Units 1-4 | 1 | 1 | - | - General plant facilities | 0 | 0 | 1 | 0 Total number of events reported to the NRA | 7 | 13 | 13 | 2 All these reported events are not relevant to safety and have no

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			consequences for the personnel or the environment. Furthermore, we are providing to you electronic copies of the Sixth national report of the Republic of Bulgaria under the Convention on Nuclear Safety, the annual reports of the Nuclear Regulatory Agency for 2011, 2012 and 2013 and description of the events reported to the NRA in 2011, 2012, 2013 and 2014, in Bulgarian and English language.
18.	Association "Pro Democratia" /APD/ Club Craiova	**We demand that the representatives of the Bulgarian authorities clarify whether the reactor of type AP-1000, problems in the design and/or operations of which have been reflected in the international press, remains the first choice of purchase in the process of modernization of the Nuclear Power Plant in Kozloduy.** We demand that the response be accompanied by technical reports or any other type of official technical documentation (in Romanian and English language), prepared by the Bulgarian authorities during the analysis of the problems in the design and/or operation of the reactors of type AP-1000 and the recommendations regarding the impact of these problems in the use of reactor of type AP-1000 in the process of modernisation of the Nuclear Power Plant in Kozloduy.	As answered during the public hearing in Craiova, a preliminary agreement was signed with Westinghouse in August, as reflected in the Bulgarian and international media. The agreement defines the conditions and parameters of a potential participation by Westinghouse as a shareholder in the Project Company. The shareholders' agreement itself has not entered into force, because an approval by the Bulgarian Government is pending, which is not a fact as of the present moment. The shareholders' agreement is not a contract for the construction of the new power plant. According to the requirements of the Act on Safe Use of Nuclear Energy (ASUNE), in Bulgaria a nuclear power plant can be constructed with a decision of the Council of Ministers, following a proposal of the Minister of Energy. The EIA report considers on equal basis different reactor models and all of them are potential options for realization up until the moment of signing a specific contract for the construction of the power plant.
19.	Association "Pro Democratia" /APD/ Club Craiova	**We recommend that the studies and technical reports, prepared by the Bulgarian authorities with regards to the impact that the modernization and the operation of the Nuclear Power Plant in Kozloduy will have on the population and the environment, be subjected to a counter-expertise performed by independent experts, assigned by the competent European institutions, in order to ensure real guarantees with respect to safety in the modernization and operation of the Nuclear Power Plant in**	The EIA procedure for the investment proposal for building a new nuclear unit of the latest generation at the Kozloduy NPP site is performed in observance of the Environmental Protection Act (EPA) and the Regulation on the conditions and procedure for performance of EIAs, by which the relevant European legislation.are fully transposed. According to the requirements of the EPA, the procedure for impact assessment is performed at the earliest stage of the activities related to

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		Kozloduy. We demand a response by the Bulgarian authorities that expresses their position with regards to this recommendation.	the investment proposal. According to the requirements of the EPA and the Regulation on the conditions and procedure of performing environmental impact assessments, the EIA report is prepared by a team of independent experts who possess the required qualifications and proven expertise in the analysis of environmental components, including human health protection, the established knowledge in the field of the environmental legislation, and who are not personally interested by the realization of the investment proposal, are not members of ecological expert councils, nor have any labour employment relations with the Contracting Entity or the Competent body. The team leader and the team of highly qualified experts are responsible for the completeness, up-to-date content, authenticity and objectivity of the contents and conclusions made in the EIA report. In case of damage as a result of non-execution of the aforementioned obligations and responsibilities, the experts bear responsibility before the law. According to the Bulgarian legislation, no additional counter-expert assessment of the EIA report is required. The experts, who participated in the preparation of the EIA report, possess the necessary qualifications and meet the normative requirements indicated in the EPA, which is confirmed by the positive assessment of the report's quality given by the Ministry of Environment and Water (MOEW). The EIA procedure is just the first stage of the regulatory regime applied to the construction of such sites. Subsequently, a licensing procedure in the field of safe use of nuclear energy shall be held for the specific model selected. In case a decision is made to construct a new unit, all technical aspects

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			related to safety will be examined by the Bulgarian nuclear regulator as a fundamental part of the licensing process. Without the project's approval, including the independent safety assessment by competent European institutions, the Nuclear Regulation Agency will not grant permission for the construction of the new unit. This approach is implemented regardless of the specific reactor model.
20.	Association "Pro Democratia" /APD/ Club Craiova	**We recommend that the Romanian representative authorities refuse to express and issue any form of consent, permit approval, etc. with regards to the modernization and operation of the Nuclear Power Plant in Kozloduy before the Bulgarian authorities present an integrated plan and guarantees related to safety, which have been approved by the competent European institutions in this field, in the process of decommissioning the old reactors, of construction of new reactors and installations and the storage in maximum safety conditions of the radioactive waste obtained in the process of modernization and operation of the Nuclear Power Plant.** We demand an official response from the Romanian authorities (representatives of the Romanian Government, through the Ministries and/or national agencies that have powers in this field), which should express their position with regards to this recommendation.	The recommendation is addressed to the Romanian authorities.
21.	Association "Pro Democratia" /APD/ Club Craiova	**We recommend that the Romanian representative authorities prompt an official consultation with the Romanian citizens in the near-Danube counties directly affected by the operations of the Nuclear Power Plant in Kozloduy (Mehedinti, Dolj, Olt, Teleorman), by organizing local referendums in these counties through the County Councils, on the ground of Act No 3/2000, where the citizens shall give an answer "YES" or "NO" to the question: "Do you agree for the Nuclear Power Plant in Kozloduy,**	The recommendation is addressed to the Romanian authorities.

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		Bulgaria, to continue to operate?". We demand an official response from the Romanian authorities (representatives of the Romanian Government, through the Ministries and/or national agencies that have powers in this field), which expresses their position with regards to this recommendation.	