
**QUESTIONS-ANSWERS BOOK
REGARDING COMPLEX
(CONSOLIDATED) SAFETY UPGRADE
PROGRAM OF POWER UNITS OF
NUCLEAR POWER PLANTS OF UKRAINE
(CCSUP) AND ECOLOGICAL
ASSESSMENT OF CCSUP**

Questions-Answers Book Addendum: 2019



**SE NNEGC “ENERGOATOM”
Complex (Consolidated) Safety Upgrade Program of Power Units
of Nuclear Power Plants of Ukraine**



The present document, “The Questions–Answers Book regarding the Complex (Consolidated) Safety Upgrade Program of the Operated Power Units of Nuclear Power Plants and CCSUP Environmental Assessment. Addendum to the Questions–Answers Book: 2019» developed by SE NNEGC “Energoatom” to perform the CCSUP Environmental and Social Action Plan (ESAP) and the Stakeholder Engagement Plan (SEP).

The document is the fourth addendum to the initial Questions–Answers Book published in 2011. Three previous addendums to it are kept available by the links

http://energoatom.kiev.ua/en/actvts-16/integrated_security_program-161/p/questions_answers_book_addendum_2015-4982 ;

http://energoatom.kiev.ua/en/actvts-16/integrated_security_program-161/p/questions_answers_book_addendum_2016-4025;

http://energoatom.kiev.ua/en/actvts-16/integrated_security_program-161/p/ccsup_and_ccsup_ea_questions_answers_book_addendum_2017-2085

http://www.energoatom.com.ua/en/actvts-16/integrated_security_program-161/p/the_questions_answers_book_regarding_the_complex_consolidated_safety_upgrade_program_of_the_operated_power_units_of_nuclear_power_plants_and_ccsup_environmental_assessment_addendum_to_the_questions_answers_book_2018-45035

Similar to the initial Questions–Answers Book and the previous addendums, this document provides personified questions, proposals and comments in the original language received in written or oral form with a reference to the summarized questions and professional answers systemized by topical areas and set out in the Ukrainian and English languages (in the Ukrainian and English versions of the document, accordingly).

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1. List of acronyms

| | |
|--------|--|
| NPP | Nuclear power plant; |
| CP | Cooling pond; |
| SP | Set capacity; |
| SNF | Spent nuclear fuel; |
| PH | Public hearings; |
| SINRSU | State Inspectorate for Nuclear and Radiation Safety of Ukraine; |
| EA | Ecological Assessment; |
| SAR | Safety analysis report; |
| ZNPP | Zaporizhzhya nuclear power plant; |
| DC | Decommissioning; |
| MZ | Monitoring Zone; |
| MM | Mass-media; |
| CF | Capacity factor; |
| PC | Public consultations; |
| CCSUP | Complex (Consolidated) Safety Upgrade Program of Power Units of Nuclear Power Plants of Ukraine; |
| NCRE | National Committee for regulating energy market; |
| NGO | Non-governmental organizations; |
| ESAP | Environmental and Social Action Plan of CCSUP |
| PPR | Planned-prophylactic repair; |
| RAW | Radioactive wastes; |
| RNPP | Rivne nuclear power plant; |
| RP | Reactor plant; |
| SSNF | Storage for spent nuclear fuel; |
| FS | Feasibility Study; |
| TPP | Thermal power plant; |
| KhNPP | Khmelnitsky nuclear power plant; |
| SUNPP | South-Ukrainian nuclear power plant |

2. List of incoming correspondence / measures

| No request | Received (date) | Organization / Measure | Respondent | Address / Holding place |
|------------|-----------------|--|------------|---|
| 48 | 31.10.2019 | Briefing on CCSUP and its ESAP | | Kiev, Simyi Prahovyh str., 6, "SE NNEGC "Energoatom" |
| 49 | 26.11.2019 | Public meeting on CCSUP and ESAP realization issues, t. Energodar | | Energodar town, Tsentralna str, 6, SS ZNPP cultural and business center |
| 50 | 27.11.2019 | Public meeting on CCSUP and ESAP realization issues, t. Yuzhnoukrainsk | | Yuzhnoukrainsk town, Shevchenko ave., 8a, S SUNPP information center «Impuls» |
| 51 | 29.11.2019 | Public meeting on CCSUP and ESAP realization issues, t.Varash | | Varash town, Maydan Nezalezhnosti, 5, SS RNPP information center «Polissya» |
| 52 | 30.11.2019 | Public meeting on CCSUP and ESAP realization issues, t. Netishyn | | Netishyn town, Lisova st., 6, SS KhNPP information center |

3. Personalized questions, suggestions and comments

| No | No request | Personalized questions, suggestions and comments | General. No |
|-----|--------------------|---|-----------------------|
| 501 | 48 | Який вітсоток виконання КЗПБ? | 32.13 |
| 502 | 48 | Який стан на сьогодні реалізації КЗПБ? | 32.13 |
| 503 | 48 | Деньги (кредитные ЕБРР и Евратом) уже выделены? | 31.32 |
| 504 | 48 | Який стан виконання кредиту? | 31.33 |
| 505 | 48 | Какие основные мероприятия КСПБ? Что самое дорогое, сложное? | 31.34 |
| 506 | 48 | На скольких энергоблоках (проводится замена электротехнического оборудования)? | 32.14 |
| 507 | 48 | Локализация (говорилось что более половины поставщиков украинские) – это кредитная часть? | 31.35 |
| 508 | 48 | Какие сложности в реализации кредитов? | 31.36 |
| 509 | 48 | Возможно ли дополнительное продление программы со стороны кредиторов? | 32.15 |
| 510 | 48 | Может ли быть такое что кредитные деньги не успеете потратить? | 31.37 |
| 511 | 48 | Что изменилось в подходах ЕБРР по сравнению с предыдущим кредитом? | 31.38 |
| 512 | 48 | Есть ли такая презентация в интернете (НТР КСПБ 2019, роздана журналистам)? | 29.23 |
| 513 | 48 | На ноябрь прошлого года выполнение КСПБ было 60%, как сейчас? | 32.13 |
| 514 | 49 | По жилью – дом... на Казацкой, 12. Он должен был (быть) построен и сдан в эксплуатацию в 2014 году. Только жители заселились (наши работники атомной станции) только в этом году. Вообще, первоначально этот дом должен (был) быть социальным. Социальное жилье должно быть для работников. Но кто-то решил на этом погреть руки, решили сделать (платным). Так я вам скажу – эти пять лет, сколько мы не стучались во все двери, не могли определить, а какая же стоимость будет жилищной площади – квадратный метр?.. И вот только в прошлом году принято было Постановление Кабинета Министров № 3131 по принятию в эксплуатацию. Ну, заселили, почему только в этом году? | 33.32 |
| 515 | 49 | Второй дом – 155а – это по Воинам-интернационалистам, точно такой же монолитный, должен (был) быть построен. Там всего лишь «выгнали» три этажа. Со специалистами говорил, они говорят: «Мы будем разбирать, потому что по срокам, всё это дело, конечно, ушло». | 33.33 |
| 516 | 49 | Следующий дом – 91/2...по Строителей, 1 – крышу не «выгнали», я обращался и в управление капитального строительства и наше ПКП. «Да мы уже устали делать проекты, менять». Дом сам по себе уже рушится, его надо укреплять. И просчитали – это будет баснословная цена при продаже этих квартир работникам станции, больше цена квадратного метра будет, чем в Киеве... Но вроде бы сказали, что НАЭК обязуется этот дом все-таки ввести в эксплуатацию... Значит, у нас что получается, что на балансе все эти находятся у НАЭКа, так как атомная станция не имеет статус юридического лица, кто должен финансировать? – НАЭК. | 33.33 |
| 517 | 49 | Дальше идем по жилому фонду – еще вторая очередь сдачи наших коттеджей. Тоже заморожена. Заезжаешь на Казацкую, с левой стороны разбиты эти недостроенные коттеджи... | 33.33 |
| 518 | 49 | Следующее у нас идет – это социальные объекты: это детский садик КЗ в районе 7 школы; это храм Свято-Богуславский и дом милиции или полиции - сейчас дом правосудия, которые тоже должны были сдать давно. И он идет в постановлении Кабинета Министров, все здесь отмечено (эти объекты). Мне отвечают на этот вопрос: «В связи с тем, что НАЭК отказался финансировать в 2014 году, перенесли эту программу строительства этих объектов на 2017 - 2018 гг.» А воз и ныне там. Уже, (как) говорится, на пороге 2020 год. | 30.14 |
| 519 | 49 | В 2002 году - вот у меня на руках Акт по приемке СХОЯТ первой очереди. Все комиссии подписаны, вышел указ по этому поводу, все было вроде нормально. Были общественные слушания, сказали, что да, по программе СХОЯТ мы будем строить объекты. Ну, и затишье... Все в 2014 году нам обещали финансирование... Вот я задаю вам вопрос: представители НАЭК, когда мы все-таки получим, какой-то результат в этом плане? | 30.9 |
| 520 | 49 | Ежемесячно, атомная станция продает электроэнергию, берется 1%. И распределение идет: 30% от этой суммы идет в областной бюджет; 55% - в районный и 15% - для городов-спутников... Имея 1,5 миллиарда городского бюджета мы не можем ничего сделать. | 30.19 |
| 521 | 49 | И вопрос к вам, как представителям НАЭК: все-таки, когда вы повернетесь лицом к г. Энергодару, ЗАЭС? Почему молодежь уезжает? Да потому, что сами видите – жилье, никакое не строится, те ребята, какие приезжают с других городов, они здесь не задерживаются. | 33.33 |
| 522 | 49 | ...В г. Вараш есть Центр. Центр, где дети могут спокойно его посещать, чтобы родители элементарно могли сходить в больницу, либо чтобы родители могли выйти на работу, чтобы выйти из сложных ситуаций, потому что есть мамы, которые не могут работать (дети – взрослые или маленькие). В Вараше этот Центр работает очень хорошо. И мы бы хотели, чтобы у нас тоже такой центр открыли. Даже вот: территория садика, которая в 7-ом микрорайоне стоит давно, а он мог бы функционировать: и рабочие места, и дети социально-защитенными будут. Мероприятия проходили бы как реабилитация, обучение элементарное. | 33.34 |

| No | No request | Personalized questions, suggestions and comments | General. No |
|-----|--------------------|---|-----------------------|
| 523 | 49 | Вот смотрите, взять тот же дом по правосудию. Это, каким надо быть хозяином, чтобы построить здание, установить окна и на этом остановиться. Теперь эти окна потихоньку - если так наблюдать, – они потихоньку там исчезают. Почему это? И наша милиция находится, прокуратура – это вообще доходит до какого-то непонятного слова, – прокуратура берет в аренду здание скорой помощи. В итоге выселяют скорую помощь, прокуратура не заходит в это здание, здание стоит, скорая помощь находится там где-то непонятно где... | 30.14 |
| 524 | 49 | Также взять с домами. Тот дом, который около «Таврии» - бывшего магазина, а сейчас «Сельпо», - извините, его скоро разбирать надо будет. Это как затратить деньги, т.е. выбросить просто-напросто Компании. | 33.33 |
| 525 | 49 | В свое время, 5 лет городская власть предыдущая, в том числе и бывший работник атомной станции, настоящий работник атомной станции, бывший городским головой, протянули резину, не выделили землю атомной станции для строительства объекта такого, как городское кладбище... Теперь у нас, извините, но у нас уже хоронить негде. | 33.35 |
| 526 | 49 | Посмотрите, у нас от атомной станции нету члена исполкома. От атомной станции нету члена исполкома!.. И получается, что у нас как бы нету, у атомной станции с местной властью какой-то конкретной связи. Потому, что все-таки трудовой коллектив атомной станции, все-таки большой. Самый большой на полуострове. | 35.19 |
| 527 | 49 | обратите внимание – около Днепровки, когда будете выезжать, с правой стороны. Ну, честно говоря, стыдно за этот знак, который... мало то, что он ночью он не освещен (ну почему-то не хватает...). Вот сейчас по городу солнечные батареи ставят у нас,.. светильники горят. А там он не освещен. Как бы стыдно вообще-то, для такой, как бы самой крупной в Европе (станции) иметь вот такую рекламку... Я уже не говорю о подъездной дороге, которую, в принципе, можно сделать – все-таки самая крупная в Европе АЭС. | 35.20 |
| 528 | 49 | Бюджет города миллиардный и только вчера я искупался за три года горячей водой, которая была около 40 градусов, а то - холодная. Платим мы по СНиП, а отпускают - по нулям. Приходят проверять – денег нету, документации нету, все разбежались. Ни прокуратура, ни область, ни станция, ни хрена не делают. | 33.36 |
| 529 | 49 | у нас в городе еще по проекту заложили укрытия для персонала и населения от критических ситуаций на станции. Сделали все подземные работы, забетонировали, только осталось начинить и пустить в дело. Все это спускается на тормозах. Теперь, когда построили еще одно сухое хранилище, да и сейчас еще строят хранилище, для текущих отходов... Уже, кажется, хранилищ достаточно у нас на душу населения. Это здание, которое стоит, над ним бизнесмены строят многоэтажку... если бизнесмен, который поглотил это убежище, его доведет до конца, как залог, – это хорошо. А если он поглотит его, мы теряем все. Значит, персонал временно как-то будет спасаться, а город изолирован. | 19.17 |
| 530 | 49 | Вот социальные вопросы: гнилые подвалы, гнилые крыши, лифты не работают. | 33.37 |
| 531 | 49 | Чи існують якісь заходи, які не були включені в список заходів КЗПБ, але потребують також реалізації? | 6.15 |
| 532 | 49 | Стосовно ролі Держатомрегулювання: якийсь контроль з боку цього органу виконуються? Контроль за Програмою, за виконанням? | 32.16 |
| 533 | 49 | Як відображається залучення коштів на реалізацію Програми КЗПБ - чи відображається це на тарифах, умовах для пересічних споживачів електроенергії? | 31.22 |
| 534 | 50 | У мене питання щодо транскордонних консультацій про оцінку впливу на навколишнє середовище заходів з КЗПБ на Южно-Українській станції, чи завершені вони, і в яких країнах проводилися, з якими країнами вони проводилися? | 27.2 |
| 535 | 50 | У мене фінансове питання. Заходи КЗПБ реалізуються за рахунок донорських коштів ЄБРР і власних коштів Компанії. Ви сказали, що донорських коштів витрачено 120 млн. євро і в основному вони спрямовані на закупівлю обладнання. Скільки власних коштів витратила Компанія і на що вони спрямовуються? | 31.39 |
| 536 | 51 | Всегда ли проводилась (оценка) целесообразности замены отдельных элементов оборудования?.. Проводили достаточное (обоснование) о том, что по этой причине были отказы, или... проводились какие-то исследования, что это оборудование надо заменить? | 5.12 |
| 537 | 51 | ...Перед персоналом имеется задолженность даже по 4-му блоку (Ровенской АЭС)... Возьмите: школа, так сказать, не продленная; теперь значит, детская поликлиника; теперь конструкция и расширение очистных сооружений; сдача дорог в районе Юбилейном. Вот эти вопросы, как-то не нашли свое отражение... в тех мероприятиях, которые проводились в социальной сфере... И планируется ли вообще в дальнейшем выполнение... социальной сферы в том объеме, в котором хотя бы предусматривалось для блока № 4? | 30.10 |
| 538 | 52 | ...Чи будуть громадські слухання присвячені оцінюванню інциденту на турбогенераторі першого енергоблоку, що стався в серпні цього року (2019 р.)? | 29.24 |
| 539 | 52 | ...Ми всі знаємо, що наша електромережа зараз підключена до російської електромережі. І ми зараз беремо якийсь вітсоток електроенергії з Росії. У мене питання до керівництва НАЕК «Енергоатом»: як ми так будемо купляти в Росії цю електроенергію, то чи буде будуватися тоді третій і четвертий блоки? | 34.32 |
| 540 | 52 | ...Ми за жовтень місяць получили за опалення нашого будинку, я маю на увазі - нашого будинку, дуже велику суму грошей, за 10 днів. Значить, коли я цим питанням зайнялась, то оказывається, що наш виконком підняв ціни на теплову енергію в 1,5 рази. | 33.25 |

| No | No request | Personalized questions, suggestions and comments | General. No |
|-----|--------------------|--|-----------------------|
| | | У мене питання: чи знає про це наша атомна станція, чи вони узгодили це питання? Чи може це робить виконком без відома нашої атомної станції? | |
| 541 | 52 | ...Я вчора дзвонила на Запорізьку атомну і там інші цифри. Інші цифри і набагато менше ніж наші. У нас стало 224,6 за Гкал, то у них стало 185. Як воно вже рахується? Якщо ми вже в НАЕК то чому у нас такі розрахунки, а в них такі розрахунки? | 33.25 |
| 542 | 52 | ...Сьогодні у нас є така манія, у наших всіх людей, - весь час користуватися смартфонами, гаджетами. Був час, коли на атомній станції забороняли з собою приносити мобільні телефони, їх залишали на прохідній. Сьогодні, наскільки я знаю від людей, які працюють на станції, всі сидять в смартфонах, де б не були, на яких би робочих місцях. І це настільки страшно, тому що ми розуміємо, що це захоплює - людина може в якійсь момент не відреагувати на якусь ситуацію... Ми користуємося гаджетами і смартфонами, але ж тут такий об'єкт, де не можна цього дозволяти. Я думаю, що треба обмежити користування. | 28.8 |
| 543 | 52 | В нас такі чутки - теж в Славуті поширюються, оскільки зміцнюється наша база в Цвітосі, там добудовується сховище і т.д., - пішли чутки, що будуть вивозити туди відпрацьовані радіоактивні відходи. Ну я розумію, що це неможливо, це не буде, але ж ми хотіли б, щоб ви розповіли про те, де будуть діватися відпрацьовані радіоактивні відходи на нашій станції, розповіли докладніше... | 12.4 |
| 544 | 52 | Комплекси переробки радіоактивних відходів уже є на кожній атомній станції, так? | 12.5 |
| 545 | 52 | Ми тут говорили за постачання електроенергії з Росії. А що була така необхідність Україні купувати в Росії? Чого, чого, а електроенергії у нас вистачає. | 35.21 |
| 546 | 52 | Якою є загальна кількість працівників, тобто, персоналу ХАЕС, і наявність вакансій, серед нього? І наскільки перевищує штатний розпис ця наявність? Це перше запитання. Середня заробітна плата теж персоналу. Перш за все, цікавить Хмельницька АЕС. | 33.38 |
| 547 | 52 | ..Перспектива... виготовлення власного ядерного палива для атомних електростанцій. Це питання колись, якось стояло так гостро, актуально, сьогодні за це навіть не згадують чомусь, дивно. | 34.33 |
| 548 | 52 | Я б хотів задати питання по процесу ремонту обладнання. Як буде фінансуватися більш механізована праця, зменшення фізичної праці для того, щоб більш точно викорінити механічні роботи в процесі ремонту? | 11.3 |
| 549 | 52 | Як вираховується середньомісячна зарплата по станції? Чи покадрово, чи в «общему і цілому»? | 33.39 |
| 550 | 52 | Останнім часом соцмережі гудуть про землетрус в Україні до 8 балів. Наскільки наша АЕС безпосередньо, і всі АЕС, які є в Україні, захищені від цього? | 21.4 |
| 551 | 52 | І таке запитання – фізичний захист ХАЕС і інших атомних електростанцій? Мається на увазі тероризм і так далі. Міжнародний в тому числі. На якому рівні, да... В тому числі і з повітря... | 18.2 |
| 552 | 52 | Ми в місті так саме проводимо ці плани евакуації: чи частково, чи повністю відпрацьовуємо, по крайній мірі, документально. У нас виникла ситуація на останніх тренуваннях штабних, коли була ситуація розіграна, що цистерна перевертається, хімічні речовини розливаються, аміак, так при в'їзді у Нетішин. Якщо, наприклад, наші пожежники забезпечені хімізаційними комбінезонами, то поліція, на жаль, не захищена, а поліція найперша виїжджає, поліція і медична установа. Чи буде, наприклад, це питання підніматися на рівні Енергоатому для того, щоб забезпечити саме дані структури, такими хімізаціями? Тому що ми в місті знаходимося, безпосередньо, ядерної енергетики і ситуації можливі будь-які. | 19.18 |
| 553 | 52 | Чому в нас в пожежній частині не закуповують "куб-життя"? Це - надувний матрац, який надувається буквально за 2-3 хвилини і першим ділом при пожежі йде спасіння людей, життя, а потім вже гасіння пожежі. У нас в жодній частині немає цих кубів. Чи буде проведено обстеження цих закупівель? | 16.1 |

4. List of thematic areas

| No of area | Name of area |
|------------|---|
| 1 | EA organization |
| 2 | PC process organization |
| 3 | Legislative issues of the project, feasibility study and CCSUP EA expertise |
| 4 | Completeness of the EA materials |
| 5 | Goals of CCSUP |
| 6 | Completeness of CCSUP |
| 7 | ZNPP operation |
| 8 | RNPP operation |
| 9 | KhNPP operation |
| 10 | SUNPP operation |
| 11 | Investigations, experiments and equipment testing, planned prophylactic and capital repairs |
| 12 | Rad-wastes management |
| 13 | Spent nuclear fuel management |
| 14 | Nuclear safety |
| 15 | Radiation safety |
| 16 | Fire protection safety |
| 17 | General industrial safety |
| 18 | Physical protection |
| 19 | Emergency readiness |
| 20 | General issues on environmental impact assessment |
| 21 | Geological conditions and seismic impacts |
| 22 | Assessment of impacts on social environment |
| 23 | Assessment of impacts on atmospheric environment |
| 24 | Assessment of impacts on aquatic environment |
| 25 | Assessment of impacts on flora and fauna |
| 26 | Assessment of mutual impacts of power units and technogenic environment |
| 27 | Issues of NPPs impacts in transboundary context |
| 28 | Human resources coverage and human factor |
| 29 | Work with public, informing the population |
| 30 | Social-economic risk compensation |
| 31 | Financial-economic aspects of CCSUP implementation |
| 32 | Technical aspects and progress of CCSUP implementation |
| 33 | Other social-economic issues |
| 34 | Other nuclear energy issues |
| 35 | Other issues not connected to the CCSUP elaboration and implementation |

5. Generalized questions, suggestions, comments and answers to them

(1) EA organization

| General. No | Generalized questions, suggestions, comments | Answers |
|-------------|--|---------|
| | <i>No requests</i> | |

(2) PC process organization

| General. No | Generalized questions, suggestions, comments | Answers |
|-------------|--|---------|
| | <i>No requests</i> | |

(3) Legislative issues of the project, feasibility study and CCSUP EA expertise

| General. No | Generalized questions, suggestions, comments | Answers |
|-------------|--|---------|
| | <i>No requests</i> | |

(4) Completeness of the EA materials

| General. No | Generalized questions, suggestions, comments | Answers |
|-------------|--|---------|
| | <i>No requests</i> | |

(5) Goals of CCSUP

| General. No | Generalized questions, suggestions, comments | Answers |
|-------------|--|---|
| 5.12 | Was it necessary to substantiate the expediency of each CCSUP equipment replacement measure? | Yes. Expediency for each CCSUP equipment replacement measure is justified, in particular, in a measure card. The set of CCSUP documents (summary of CCSUP measures, their lists by types of power units, as well as cards of each CCSUP measure) is published in their original language at the SE NNEGC Energoatom official website: http://www.energoatom.com.ua/ua/actvts-16/integrated_security_program-161/p/komplekt_dokumentiv_z_kzppb-4913 . The consolidated measures of the CCSUP passed an nuclear and radiation safety review and international review RISKAUDIT experts. |

(6) Completeness of CCSUP

| General. No | Generalized questions, suggestions, comments | Answers |
|-------------|---|--|
| 6.15 | Are measures planned at ZNPP that were not included in the CCSUP, but | Yes, there are modernization measures planned and implemented at ZNPP outside the CCSUP. These include, in particular, a number of measures to improve |

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| | also need to be implemented? | the efficiency of nuclear power plants, some measures to extend the operation of power units, not safety related, and others. |
|--|------------------------------|---|

(7) ZNPP operation

| General. No | Generalized questions, suggestions, comments | Answers |
|-------------|--|---------|
| | <i>No requests</i> | |

(8) RNPP operation

| General. No | Generalized questions, suggestions, comments | Answers |
|-------------|--|---------|
| | <i>No requests</i> | |

(9) KhNPP operation

| General. No | Generalized questions, suggestions, comments | Answers |
|-------------|--|---------|
| | <i>No requests</i> | |

(10) SUNPP operation

| General. No | Generalized questions, suggestions, comments | Answers |
|-------------|--|---------|
| | <i>No requests</i> | |

(11) Investigations, experiments and equipment testing, planned prophylactic and capital repairs

| General. No | Generalized questions, suggestions, comments | Answers |
|-------------|---|--|
| 11.3 | How is the reduction of manual labor during NPP repair work stimulated? | Clause 2.4 of the Collective Agreement [103] stipulates, in particular, the following: "Direct SE NNEGC Energoatom efforts and funds to increase efficiency and development of production, encourage productivity, introduction of new technologies, rational and economical use of labor, material and production resources ... ". Appropriate incentives for employees are provided by the Regulations on bonuses. |

(12) Rad-wastes management

| General. No | Generalized questions, suggestions, comments | Answers |
|-------------|---|---|
| 12.4 | What will be with radwaste after its storage at the NPP site? | Under the current legislation, operational radwaste, radwaste from spent fuel reprocessing and radwaste from decommissioning of NPP power units will be moved for a long-term storage and / or disposal to a specialized radwaste management company. |

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|------|---|--|
| 12.5 | Are radwaste processing facilities available at each operating NPP? | Yes. Such complexes were made at each NPP in advance, before commissioning of its first power unit. Over time, these complexes were expanded and supplemented with new equipment. In particular, as of today these complexes have been modernized at ZNPP and RNPP. The addition of new installations to the KhNPP and SUNPP complexes is ongoing. |
|------|---|--|

(13) Spent nuclear fuel management

| General. No | Generalized questions, suggestions, comments | Answers |
|-------------|--|---------|
| | <i>No requests</i> | |

(14) Nuclear safety

| General. No | Generalized questions, suggestions, comments | Answers |
|-------------|--|---------|
| | <i>No requests</i> | |

(15) Radiation safety

| General. No | Generalized questions, suggestions, comments | Answers |
|-------------|--|---------|
| | <i>No requests</i> | |

(16) Fire protection safety

| General. No | Generalized questions, suggestions, comments | Answers |
|-------------|--|---|
| 16.1 | Why are the fire brigades in the satellite cities of the NPP not equipped with a pneumatic rescue device "cube of life"? | Logistics of fire brigades in NPP satellite cities is not SE NNEGC Energoatom responsibility, so this question in the "Questions and Answers Book" will be forwarded to public authorities and local governments of NPP satellite cities. |

(17) General industrial safety

| General. No | Generalized questions, suggestions, comments | Answers |
|-------------|--|---------|
| | <i>No requests</i> | |

(18) Physical protection

| General. No | Generalized questions, suggestions, comments | Answers |
|-------------|--|---|
| 18.2 | In some Ukrainian regions, a martial law was imposed in 2018, among others, in Zaporizhzhia and Mykolaiv | According to the Law of Ukraine "On Security of Nuclear Installations, Nuclear Materials, Radioactive Waste, Other Sources of Ionizing Radiation" [34] and other normative legal acts, the existing NPPs of Ukraine shall |

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| | <p>regions, where ZNPP and SUNPP are situated. What has been done at those and other NPPs to decrease the risk of their purposeful or accidental damage?</p> | <p>be guarded to minimize a possibility of sabotage, theft or any other illegal seizure of nuclear material, radioactive waste, other sources of ionizing radiation, and strengthen nuclear weapons non-proliferation regime. In particular, organizational, legal and engineering measures are taken to maintain the continuous operation of NPP security systems, to ensure a reliable protection of NPPs by the military units of National Guard of Ukraine and non-departmental paramilitary security services. Interaction with the subjects of the state physical protection system has been organized.</p> |
|--|--|---|

(19) Emergency readiness

| General. No | Generalized questions, suggestions, comments | Answers |
|-------------|--|--|
| 19.17 | <p>Why in Energodar the shelter for the civilian population in case of an accident at ZNPP isn't completed?</p> | <p>The issue of construction of shelters for civilians in case of natural or man-made emergencies is beyond the competence of NNEGC "Energoatom", so as part of the "Questions and Answers Book" it will be forwarded to public authorities and local governments of Energodar.</p> |
| 19.18 | <p>Is it SE NNEGC Energoatom responsibility to provide the police and medical institutions of NPP satellite cities with special overalls and other chemical defense equipment in case of their personnel involvement in emergencies related to the NPP operation outside the NPP site?</p> | <p>No. Providing personnel of police and medical institutions of NPP satellite cities with special overalls and other chemical defense equipment is not SE NNEGC Energoatom responsibility, so this question in the "Questions and Answers Book" will be forwarded to state authorities and local governments of NPP satellite cities.</p> |

(20) General issues on environmental impact assessment

| General. No | Generalized questions, suggestions, comments | Answers |
|-------------|--|---------|
| | <p><i>No requests</i></p> | |

(21) Geological conditions and seismic impacts

| General. No | Generalized questions, suggestions, comments | Answers |
|-------------|--|--|
| 21.4 | <p>Are domestic nuclear power plants designed for an</p> | <p>No. Most of the safety systems of Ukrainian NPPs are designed for a design basis accident of magnitude 6 on</p> |

| | | |
|--|---|---|
| | earthquake of magnitude 8 on the Richter scale? | the Richter scale. An earthquake of magnitude 8 has a very low probability for the areas of Ukraine's NPP and can be considered only as a starting point for a hypothetical beyond design basis accident. |
|--|---|---|

(22) Assessment of impacts on social environment

| General. No | Generalized questions, suggestions, comments | Answers |
|-------------|--|---------|
| | <i>No requests</i> | |

(23) Assessment of impacts on atmospheric environment

| General. No | Generalized questions, suggestions, comments | Answers |
|-------------|--|---------|
| | <i>No requests</i> | |

(24) Assessment of impacts on aquatic environment

| General. No | Generalized questions, suggestions, comments | Answers |
|-------------|--|---------|
| | <i>No requests</i> | |

(25) Assessment of impacts on flora and fauna

| General. No | Generalized questions, suggestions, comments | Answers |
|-------------|--|---------|
| | <i>No requests</i> | |

(26) Assessment of mutual impacts of power units and technogenic environment

| General. No | Generalized questions, suggestions, comments | Answers |
|-------------|--|---------|
| | <i>No requests</i> | |

(27) Issues of NPPs impacts in transboundary context

| General. No | Generalized questions, suggestions, comments | Answers |
|-------------|--|--|
| 27.2 | Have cross-border consultations been conducted on the environmental impact assessment of the CCSUP implementation? | No. The location of the existing NPP sites and the expected level of environmental impacts assessed in 2011 during the first environmental assessment of the CCSUP implementation concluded that detailed information and consultation with neighboring countries on possible impacts in the transboundary context was |

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| | | not required. The repetition of this assessment in 2016 and the actual reduction of risks achieved at that time due to implementation of some of the CCSUP measures confirmed this conclusion. Both times the EA Reports were published in English and Ukrainian on the SE NNEGC Energoatom official website for public and other stakeholders. |
|--|--|---|

(28) Human resources coverage and human factor

| General. No | Generalized questions, suggestions, comments | Answers |
|-------------|--|---|
| 28.8 | It is proposed to restrict or prohibit the use of gadgets and smartphones on the NPP site due to prevent the loss of vigilance by personnel. | Such a ban is already in place in places of particularly sensitive electronic equipment. These places have video cameras, which, in particular, allow staff behavior monitoring. In other areas it is allowed to use mobile devices, as it does not affect the technological processes. |

(29) Work with public, informing the population

| General. No | Generalized questions, suggestions, comments | Answers |
|-------------|---|---|
| 29.23 | Is "The Non-Technical Summary of Implementation of CCSUP, CCSUP ESAP and CCSUP SEP - 2019" published on the Internet? | Yes. This document was published on 28.10.2019 at the following address http://www.energoatom.com.ua/uploads/NTR%202019-ua.pdf |
| 29.24 | Are there any public hearings planned regarding the incident that occurred at KhNPP Unit 1 in August 2019? | No. Information about the incident was published on official websites of SNRIU, KhNPP and SE NNEGC Energoatom. Current legislation does not require public hearings on incidents at nuclear power plants that did not have negative consequences and did not pose a threat to the population, personnel or environment. |

(30) Social-economic risk compensation

| General. No | Generalized questions, suggestions, comments | Answers |
|-------------|--|---|
| 30.9 | SS NNEGC "Energoatom" does not fulfil in full scope its obligations for financing the social infrastructure facilities envisaged by the construction design of the Spent Nuclear Fuel Dry Storage Facility (SNFDSF) at ZNPP. | Indeed, the construction of part of the social infrastructure facilities provided for by the ZNPP dry spent nuclear fuel storage facility construction project remains unfunded. The company regularly included relevant funds into the SE NNEGC "Energoatom" tariff requests, but the state regulatory body - the National Energy And Utilities Regulatory Commission, did not take them into account in the tariff. |
| 30.10 | SE NNEGC "Energoatom" has not fully met its obligations to finance social infrastructure facilities provided for by the KhNPP power unit 2 and RNPP power unit 4 completion projects. Do these unfulfilled obligations of SE NNEGC Energoatom remain relevant? Will these obligations be maintained in case of corporatization of the Company? When is their fulfillment expected? | Indeed, construction of a part of the social infrastructure objects, provided for in the projects of K2/R4 completion, remains not sufficiently financed. These unfulfilled non-industrial construction obligations envisaged by these projects shall remain in force. These obligations will be retained for the Successor in the event of any reorganization of the Company and, in particular, its corporatization. The Company regularly included relevant funds in its SE NNEGC Energoatom tariff requests. However the tariff as set by the National Energy And Utilities Regulatory Commission in recent years took into account only the minimum costs for non-industrial construction, mainly a limited housing construction. Real improvement of the situation is expected after a transition from the state regulation of the market (a mechanism of imposing special obligations) to the real market tariff. |
| 30.14 | SE NNEGC "Energoatom" has not fully met its obligations to finance social infrastructure facilities provided for by the Resolution of the Cabinet of Ministers of Ukraine "On Ensuring Completion of Construction and Commissioning of Zaporizhzhya NPP as a Whole" No282 dated 13.03.2002. Do these unfulfilled obligations of SE NNEGC "Energoatom" remain relevant? Will these obligations be maintained in case of corporatization of the Company? When is their fulfillment expected? | Indeed, the construction of part of the social infrastructure facilities provided for by the Resolution of the Cabinet of Ministers of Ukraine "On Ensuring Completion of Construction and Commissioning of Zaporizhzhya NPP as a Whole" 282 dated 13.03.2002 remains underfunded. These unfulfilled non-industrial construction obligations envisaged by these projects shall remain in force. These obligations will be retained for the Successor in the event of any reorganization of the Company and, in particular, its corporatization. The Company regularly included relevant funds in its SE NNEGC Energoatom tariff requests. However the tariff as set by the National Energy And Utilities Regulatory Commission in recent years took into account only the minimum costs for non-industrial construction, mainly a limited housing construction. Real improvement of the situation is expected after a transition from the state regulation of the market (a mechanism of imposing special obligations) to the real market tariff. |

| | | |
|-------|---|---|
| 30.19 | Why the funds for social and economic compensation of risk to the population are not fully mastered in Energodar? | SE NNEGC "Energoatom" timely and in full pays the statutory fee for social and economic compensation of risk to the population at 1% of the volume of NPP electricity sold. The distribution of these funds, their timely direction and monitoring over their intended use are beyond the competence of the Company and its public administration body. Questions to the central state authorities regarding the observance of the procedure, timing and scope of such funds shall come from local public authorities and local self-government bodies. Their competence also includes a timely mastering of allocated subventions. Therefore, this specific question will be forwarded to the authorities and local governments as part of the "Questions and Answers Book". |
|-------|---|---|

(31) Financial-economic aspects of CCSUP implementation

| General. No | Generalized questions, suggestions, comments | Answers |
|-------------|--|---|
| 31.22 | Are interest rates of EBRD and Euratom loans taken into account in SE NNEGC Energoatom tariff and, accordingly, tariffs for users? | According to the Law of Ukraine "On the Electricity Market", fixed SE NNEGC Energoatom electricity tariffs are no longer set starting 01.06.2019. The Energoatom's financial activities are planned based on forecast price and scope of electricity generation. To calculate the NPP electricity price components the cost of servicing and repaying the EBRD and Euratom loans is, in particular, considered. Electricity tariffs for users of different categories are set in accordance with current legislation, in particular, tariffs for population are regulated through the mechanism of special obligations on the electricity market and the tariffs for other consumers are determined depending on their selected markets - based on bilateral agreements and / or on organized market segments. |
| 31.32 | Have all loan funds been provided for CCSUP implementation as of the end of the 3rd quarter of 2019? | No, the loan funds are provided in the manner prescribed by the Loan Agreements, at SE NNEGC Energoatom requests for advance payments to Suppliers and to pay their work. As of the end of the 3rd quarter of 2019, this process is ongoing. |
| 31.33 | To what extent have the loan funds received for CCSUP implementation been disbursed as of the end of the 3rd quarter of 2019? | As of the end of the 3rd quarter of 2019, about 325 million euros out of 600 million euros provided by the Loan Agreements, which is about 54%, were used for advance payments to Suppliers and to pay their work. |
| 31.34 | Which CCSUP measures are the most costly and difficult to implement? | Such CCSUP measures include, in particular, measure 14301 "Modernize safety control systems with UKTZ replacement "; measure 14105 "Modernize reactor building safety related normal operation systems "; |

| General. No | Generalized questions, suggestions, comments | Answers |
|-------------|---|--|
| | | measure 14106 " Modernize turbine hall safety related normal operation systems"; measure 14404 "Modernize control system of standby diesel generators"; measure 16205 "Implement a forced containment depressurization system ". |
| 31.35 | When using the loan funds to implement the CCSUP is localization of equipment suppliers in Ukraine planned? | No. Suppliers are selected through an open tenders under the EBRD procedure. Companies of any country have the right to participate in the tenders to implement contracts using the loan funds. |
| 31.36 | What difficulties have arisen in the use of the loan funds to implement the CCSUP? | For several years, the main problem was a delay in letting SE NNEGC "Energoatom" access to the loan funds by the Lenders. After it had been solved, the main difficulties were associated with a long iterative procedure of technical documentation approval by all the contract entities – Suppliers, NPPs, SE NNEGC "Energoatom", EBRD. In 2019, the Lenders suspended a next tranche of the Euratom loan due to the delay in adoption of a bill to restore the independence of SNRIU as a state regulatory body for nuclear and radiation safety. Another problem is lack of SE NNEGC Energoatom own funds necessary for design, installation and purchase of auxiliary equipment. |
| 31.37 | Is it possible to use incompletely the provided loan funds to implement the CCSUP? | Yes. The Loan agreements provide for such a possibility, in particular, due to a CCSUP completion delay not agreed by the Lenders. |
| 31.38 | What changes in the EBRD's approaches have occurred in lending for CCSUP measures compared to lending for KhNPP-2 / RNPP-4 safety measures? | The EBRD's approach to lending for CCSUP measures has not changed compared to lending for KhNPP-2 / RNPP-4 safety measures. |
| 31.39 | How much of SE NNEGC Energoatom own funds was spent on CCSUP implementation as of 30.09.2019? For what purposes were these funds used? | As of 30.09.2019, SE NNEGC Energoatom spent about 795 million euros of its own funds for CCSUP implementation. These were spent both for to procure equipment and to pay design, installation, etc. |

(32) Technical aspects and progress of CCSUP implementation

| General. No | Generalized questions, suggestions, comments | Answers |
|--------------------|---|---|
| 32.13 | What part of the CCSUP measures (percentage) was implemented at the end of the 3rd quarter of 2019? | As of the end of the 3rd quarter of the year 2019, out of 1295 CCSUP measures, 897 measures or 69.3% were implemented. |
| 32.14 | How many power units are expected to replace electrical equipment? | Partial replacement of electrical equipment is planned at all 15 power units of the existing NPPs of Ukraine. |
| 32.15 | Could the Lenders agree a change in the CCSUP completion date? | Yes. SE NNEGC Energoatom sent a request to the Lenders on 27.05.2019 to agree a new CCSUP completion date in the year 2023, approved by Resolution of the Cabinet of Ministers of Ukraine 390 on 08.05.2019. |
| 32.16 | Does the SNRIU monitor the implementation of the CCSUP? | Yes. For each nuclear and / or radiation safety enhancement measure, approval of its implementation report by the SNRIU is an indicator of its completion. For other measures (for example, fire safety enhancement), a report is approved by the relevant authorized body of state supervision, which must be reported to the SNRIU. The SNRIU monitors the CCSUP implementation during inspections, when approving a start of each individual power unit after an outage, upon renewal of operating licenses, and when reviewing SE NNEGC Energoatom quarterly and annual reports of the CCSUP implementation progress. |

(33) Other social-economic issues

| General. No | Generalized questions, suggestions, comments | Answers |
|--------------------|---|---|
| 33.25 | Can SE NNEGC "Energoatom" influence the planned increase of tariffs for water, heat and electricity for the population living within the 30-kilometer monitoring area around an NPP? | No. These tariffs are set beyond the competence of NNEGC Energoatom. According to the current legislation, tariffs for heating, centralized water supply and sewerage for the population are set by local governments while the electricity tariff is regulated through a mechanism of imposing special obligations on the electricity market, which is set by the Cabinet of Ministers of Ukraine. |
| 33.32 | Why was the commissioning of Energodar, 12 Kazatska Street residential building delayed for several years and the provision of housing to ZNPP employees turned out to be paid, although it was originally planned as a "social" housing? | The housing transfer procedure by public sector business was finalized only in 2018 by adoption of the Law of Ukraine № 2516-VIII on 04.09.2018. It provides for "transfer of housing to employees ... by sale." |

| General. No | Generalized questions, suggestions, comments | Answers |
|--------------------|---|---|
| 33.33 | Why is SE NNEGC Energoatom extremely limited in meeting its obligations to NPP employees in housing construction? | The Collective Agreement [97] stipulates the following: "The scope of housing construction and commissioning in NPP satellite towns shall be set based on available funding and considering the funds from the electricity and heating tariff for the planned year, in agreement with the trade union committee of SE NNEGC Energoatom. Accordingly, SE NNEGC Energoatom plans the funds for housing construction in next year draft investment programs submitted annually to the National Energy And Utilities Regulatory Commission for its approval. However, the tariff approved by the Commission in recent years has taken into account only the minimum costs of non-industrial construction, mainly for a very limited housing construction. Real improvement of the situation is expected after a transition from the state regulation of the market (a mechanism of imposing special obligations) to the real market tariff. |
| 33.34 | We propose to establish Energodar complex rehabilitation center similar to Z.A. Matvienko Center for Comprehensive Rehabilitation of Persons with Disabilities in Varash. | This issue goes beyond the CCSUP and ESAP and does not fall within the competence of NNEGC "Energoatom". So it will be forwarded to the public authorities and local governments of Energodar as part of the "Questions and Answers Book". |
| 33.35 | Why aren't there areas for a new cemetery in Energodar? | This issue goes beyond the CCSUP and ESAP and does not fall within the competence of NNEGC Energoatom. So it will be forwarded to the public authorities and local governments of Energodar as part of the "Questions and Answers Book". |
| 33.36 | In a number of Energodar residential buildings there is systematic lack of hot water supply. | This issue goes beyond the CCSUP and ESAP and does not fall within the competence of NNEGC Energoatom. So it will be forwarded to the public authorities and local governments of Energodar as part of the "Questions and Answers Book". |
| 33.37 | Wet basements, bad roofs and non-functioning elevators are there in a number of residential buildings in Energodar. | This issue goes beyond the CCSUP and ESAP and does not fall within the competence of NNEGC Energoatom. So it will be forwarded to the public authorities and local governments of Energodar as part of the "Questions and Answers Book". |
| 33.38 | What is the number of employees, their average salary and the number of open positions at Khmelnitsky NPP as of 30.09.2019? | As of 30.09.2019, the registered number of full-time KhNPP employees is 5,212, their average salary in January-September 2019 is UAH 24,580, the number of available open positions is 30. |
| 33.39 | How is the average monthly salary at NPP calculated? | The average monthly salary in SE NNEGC Energoatom and NPP is calculated by categories of employees and in |

| General. No | Generalized questions, suggestions, comments | Answers |
|--------------------|---|---|
| | Are there data on employee categories? | general. In general, SE NNEGC Energoatom employees are divided into the following categories according to their professional characteristics: managers, professionals, technical staff, specialists, skilled workers, and simplest professions. |

(34) Other nuclear energy issues

| General. No | Generalized questions, suggestions, comments | Answers |
|--------------------|---|---|
| 34.32 | Is construction of KhNPP power units 3 and 4 real given electricity import from the Russian Federation? | This issue goes beyond the CCSUP, ESAP and CCSUP SAP. It looks like the plans of forthcoming domestic construction in the energy sector are becoming more relevant in the presence of expensive electricity imports compared to its domestic generation. |
| 34.33 | What are the prospects for domestic nuclear fuel production? | This issue goes beyond CCSUP, ESAP and CCSUP SAP. It should be noted that the amount of nuclear fuel use at Ukrainian NPPs is considered insufficient to deploy its economically viable production, and nuclear fuel global demand is and will remain quite limited. Besides, the volume of domestic uranium ore production is no more than needed in Ukraine, and deployment of a full technological cycle of nuclear fuel production for VVER reactors is impossible due to Ukraine's renunciation of isotopic enrichment of uranium. |

(35) Other issues not connected to the CCSUP elaboration and implementation

| General. No | Generalized questions, suggestions, comments | Answers |
|--------------------|--|--|
| 35.19 | Why is there no ZNPP representative in the Energodar city executive committee? | This issue goes beyond the CCSUP and ESAP and does not fall within the competence of NNEGC Energoatom. So it will be forwarded to the local governments of Energodar as part of the "Questions and Answers Book". |
| 35.20 | We proposed to illuminate the ZNPP symbols and repair the section of the road at the entrance to Energodar | This issue goes beyond the CCSUP and ESAP and does not fall within the competence of NNEGC Energoatom. So it will be forwarded to the public authorities and local governments of Energodar as part of the "Questions and Answers Book". |
| 35.21 | Why is electricity imported to Ukraine from Russia in the presence of a surplus of domestic generating capacity? | This issue goes beyond CCSUP, ESAP and CCSUP SAP. It looks like in the absence of legal restrictions, additional customs burden on imported products or, conversely, tax preferences for the users of domestic products, electricity imports could be economically attractive to domestic users at a cost less than the price of its own electricity generation. |

6. List of references

- 1 The Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management, ratified by the Law of Ukraine No 1688-III of 20.04.2000 http://zakon2.rada.gov.ua/laws/show/995_335
- 2 Nuclear Safety Convention, ratified by the Law of Ukraine No 736/97-BP of 17.12.1997; http://zakon1.rada.gov.ua/laws/show/995_023
- 3 Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters (Aarhus Convention), ratified by the Law of Ukraine N 832-XIV of 06.07.1999 http://zakon4.rada.gov.ua/laws/show/994_015
- 4 Convention on Environmental Impact Assessment in a Transboundary Context (Espoo Convention), ratified by the Law of Ukraine No 534-XIV of 19.04.1999 http://zakon1.rada.gov.ua/laws/show/995_272
- 5 The Law of Ukraine "On Environment Protection", No 1264-XII of 25.06.1991 <http://zakon4.rada.gov.ua/laws/show/1264-12>
- 6 The Law of Ukraine "On the Use of Nuclear Power and Radiation Safety", No39/ 95-BP of 08.02.1995 <http://zakon2.rada.gov.ua/laws/show/39/95-вп>
- 7 The Law of Ukraine "On Radioactive Waste Management", No 255/ 95-BP of 30.06.1995 <http://zakon4.rada.gov.ua/laws/show/255/95-вп>
- 8 The Law of Ukraine "On Licensed Activity in the Field of Nuclear Power Use" No1370-XIV of 11.01.2000 <http://zakon1.rada.gov.ua/laws/show/1370-14>
- 9 The Law of Ukraine "On Protection of a Person From the Impact of Ionizing Radiation", No15/ 98-BP of 14.01.1998 <http://zakon2.rada.gov.ua/laws/show/15/98-вп>
- 10 The Law of Ukraine "On Environmental Expert Assessment", No45/ 95-BP of 09.02.1995 (The law has expired on the basis of the Law No. 2059-VIII dated 23.05.2017)
- 11 The Law of Ukraine "On procedure of Decision-Making on Location, Design, Construction of Nuclear Installations and Radioactive Waste Management Facilities of National Significance", No 2861-IV of 08.09.2005 <http://zakon3.rada.gov.ua/laws/show/2861-15>
- 12 ДГН 6.6.1.-6.5.001-98 Radiation Safety Norms of Ukraine (HPBY-97), approved by the decree of Chief State Sanitary Doctor of Ukraine No 62 of 01.12.1997 <https://zakon.rada.gov.ua/rada/show/v0062282-97>
- 13 ДСП 6.177-2005-09-02 Basic sanitary rules to ensure radiation safety of Ukraine, approved by the Order of the Ministry of Health of Ukraine No54 of 02.02.2005 <http://zakon1.rada.gov.ua/laws/show/z0552-05>
- 14 ДГН 6.6.1.-6.5.061-2000 Radiating Safety Norms of Ukraine. Amendments: Radiation protection from the sources of a potential exposure (HPBY-97/Д-2000), approved by the resolution of the Chief State Sanitary Doctor of Ukraine No 116 of 12.07.2000 <https://zakon.rada.gov.ua/rada/show/v0116488-00>
- 15 SCN (DBN) A.2.2-3-2004 The composition, development, coordination and approval of project documentation for construction. State Construction Service of Ukraine, 2004 (Eliminated on the basis of DBN A.2.2-3: 2014 from 06.04.2014 <https://zakon.rada.gov.ua/rada/show/v0163858-14>)
- 16 ДБН А.2.2-1-2003 Composition and the content of materials of Environmental Impact Assessment (IAE) during design and construction of enterprises, buildings and facilities, approved by the Order of Derzhbud of Ukraine (State Construction Agency) No 214 of 15.12.2003
- 17 СПАС-88, ПНАЕ Health regulations for design and operation of nuclear power plants
- 18 НП 306.2.141-2008 General provisions of nuclear power plants safety, approved by the SNRIU Order No162 of 19.11.2007 <http://zakon1.rada.gov.ua/laws/show/z0056-08>

- 19 НП 306.2.144-2008 The requirements of security when choosing a placement site of power plant. SNRCU 2008. <https://zakon1.rada.gov.ua/laws/show/z0467-08>
- 20 IAEA document №50 -C -S. Safety Manual. Safety of nuclear power plants - Siting Nuclear Power Plant.
- 21 CoM Order "On Approval of the Energy Strategy of Ukraine for the Period Up To 2030 No 1071-p of 24.07.2013 (has expired on the basis of the CM Decree No. 605-p dated 18.08.2017)
- 22 Order of the Cabinet of Ministers of Ukraine "Concerning the preparatory measures to build new power units of KhNPP" № 281-p dd 21.07.2005.
- 23 Order of Ministry of Energy "Concerning the preparatory measures for the construction of power units № 3 and 4 of KhNPP" № 425 dd 22.08.2005.
- 24 Order of the Cabinet of Ministers of Ukraine "Concerning the approval of a plan for 2006-2010 for implementation of the Energy Strategy of Ukraine until 2030" № 436-p dd 27.07.2006.
- 25 Order of the Cabinet of Ministers of Ukraine "Concerning the priority measures for the construction of power units No 3 and No 4 of Khmelnytsky NPP" № 118 dd 18.02.2009.
- 26 IAEA document No 50-SG-S1. Safety Manual. Incorporation of earthquakes and the phenomenon resulting from it while siting the nuclear power plants, Vienna. IAEA, 1994.
- 27 SNIP 2.04.02-84 Water supply. External networks and constructions (expired on the basis of the Order of MinregionBud dated 04.08.2013, No. 133)
- 28 Order of board of Ministry of fuel and energy of Ukraine "Approval of decision on the choosing the type of reactor facility for construction of power units No 3 and No 4 of Khmelnytsky NPP" №4.1 dd 13.10.2008.
- 29 НП 306.5.02/3.017-99. Requirements to the quality provision program at all phases of lifecycle of nuclear facilities (expired on the basis of the Order of Minpyrody dated 29.02.2012 No. 109)
- 30 НП 306.5.02/2.069-2003. Safety requirements and conditions (licensing conditions) while designing the nuclear facility or storage of radioactive wastes (expired on the basis of the Order of SNRIU No 14 from 02.05.2014)
- 31 ДСТУ ISO 10005:2007. Quality management systems. Quality systems management.
- 32 Law of Ukraine "Concerning the fire protection" № 3745 dd 17.12.1993. (lost the validity on the basis Code NO 5403-VI (5403-17) of 02.10.2012)
<http://zakon2.rada.gov.ua/laws/show/3745-12>
- 33 The Law of Ukraine "On Labour Protection", No 2694-XII of 14.10.1992
<http://zakon4.rada.gov.ua/laws/show/2694-12>
- 34 The Law of Ukraine "On Physical Protection of Nuclear Facilities, Nuclear Materials, Radioactive Waste, Other Sources of Ionizing Radiation", No2064-III of 19.10.2000
<http://zakon2.rada.gov.ua/laws/show/2064-14>
- 35 The Law of Ukraine "On Regulation of Issues Related to Nuclear Safety", No 1868-IV of 24.06.2004 <http://zakon4.rada.gov.ua/laws/show/1868-15>
- 36 НД 306.2.02/1.004-98. General clauses of safety provision while decommissioning NPPs and investigative nuclear facilities. Ministry of ecology and safety, 1998.
- 37 The concept of nuclear power plants decommissioning, approved by the Ministry of Energy and Coal Industry of Ukraine on 12.05.2004 (the new version was approved by the Ministry of Fuel and Energy Order No. 798 of 10.12.20015)
- 38 0.ПРО.5797.ПН-08 Decommissioning concept for power units VVER-1000 of "Khmelnitsky NPP", Kiev "Energoatom", 2008.
- 39 ГН 6.6.1.1-130-2006 Permissible levels of radionuclides ¹³⁷Cs and ⁹⁰Sr in the food and drinking water. Hygienic standard. <https://zakon.rada.gov.ua/laws/show/z0845-06>

- 40 COY HAEK 004:2011 Ecological assessment of nuclear power units. General requirements to the composition and content of assessment materials, SE NNEGC Energoatom, Kyiv, 2011 http://energoatom.kiev.ua/ua/actvts-16/nuclear-88/radiation_safety-89/ecology-91/p/standart_dp_naek_energoatom_.ekologicna_ocinka_energoblokiv_aes-4946
- 41 Consolidated safety upgrade measures for operating power units with reactors of VVER and RBMK types. CM-88 and CM-90
- 42 Safety upgrade program for NPPs with nuclear facilities VVER-1000, 440, 1994.
- 43 Priority safety upgrade works program for NPPs with nuclear facilities VVER-1000, VVER-440, 1994.
- 44 Safety upgrade measures consolidation for operating power units of NPPs of Ukraine with reactors of VVER-1000 (320) type, 1999.
- 45 Priority safety upgrade measures program for power units of NPPs of Ukraine, 1999.
- 46 Complex program for modernization and safety upgrade for power units of nuclear power plants, approved by the Decree of the Cabinet of Ministers of Ukraine dd 29.08.2002. №504-p.
- 47 Safety upgrade concept for operating power units of nuclear power plants, approved by the Order of the Cabinet of Ministers of Ukraine dd 13.12.2005. № 515-p.
- 48 Program for modernization and safety upgrade of NPPs with nuclear facilities VVER -1000 (B-320), part 2 (KhNPP-2) and part 3 (RNPP-4) for 2004-2009.
- 49 ПМ-Д.0.05.174-08. Program for radioactive wastes treatment. "Energoatom", Kiev. SE NNEGC "Energoatom", 2008 (in 2016 it was replaced by the document PM-D.0.18.174-16)
- 50 The Law of Ukraine "On National Target Ecological Program of Radioactive Waste Management", No 516-VI of 17.09.2008 <http://zakon4.rada.gov.ua/laws/show/516-17>
- 51 Environmental and Social Policy, EBRD, 2008
- 52 The Law of Ukraine "On Civil Responsibility for Nuclear Damage and Its Financial Security" No 2893-III of 13.12.2001 <http://zakon2.rada.gov.ua/laws/show/2893-14>
- 53 CoM Resolution "Issues of creation, accumulation and use of financial reserves for nuclear facilities decommissioning" No 594 of 27.04.2006 <http://zakon4.rada.gov.ua/laws/show/594-2006-n>
- 54 Decree of the Cabinet of Ministers of Ukraine "Concerning the approval of Order of setting the normative of fine for the natural environmental pollution and collection of this fine" №303 dd 01.03.1999 (has expired on the basis of the resolution of the CMU dated December 27, 2010, No. 1236)
- 55 Order of President of Ukraine № 585/2011 "Concerning the decision of the National Security and Defence Council dd 8th April 2011 "Concerning the safety upgrade of the operating nuclear power plants of Ukraine"
- 56 The CoM Resolution "On Approval of the Procedure to Hold Public Hearings in Nuclear Power Use and Radiation Safety", No1122 of 18.07.1998 <http://zakon0.rada.gov.ua/laws/show/1122-98-n>
- 57 CoM Resolution "On Approval of the Procedure to Involve the Public into Discussion of the Issues Regarding Decision-Making, Which May Have Impact on the Environment", No 771 of 29.06.2011 <http://zakon4.rada.gov.ua/laws/show/771-2011-n>
- 58 SCN (DBN) B.1.2-4-2006 "Engineering-technical measures of civil protection (civil defence)", 2006.
- 59 Non-technical Summary of Environmental and Social Action Plan, SE NNEGC "Energoatom", Kyiv, 2015 http://energoatom.kiev.ua/ua/actvts-16/integrated_security_program-161p/netehnicne_rezume_planu_ekologicnih_ta_social_nih_zahodiv-4909

- 60 Environmental and Social Action Plan. Complex Consolidated Safety Upgrade Program of Power Units of Nuclear Power Plants of Ukraine http://energoatom.kiev.ua/ua/actvts-16/integrated_security_program-161/p/plan_ekologichnih_ta_social_nih_zahodiv_kompleksna_zvedena_programa_pidvisenn_a_bezpeki_energoblokiv_atomnih_elektrostantsij_ukraini.-4893
- 61 CoM Order "On Approval of Complex (Consolidated) Safety Upgrade Program of Power Units of Ukrainian Nuclear Power Plants" No 1270 of 07.12.2011 (with changes, the last one was approved by CoM Order No 356 of 21.08.2014) <http://zakon4.rada.gov.ua/laws/show/1270-2011-n>
- 62 CoM of Ukraine Resolution "On Amendments to Complex (consolidated) Safety Upgrade Program of Power Units of Nuclear Power Plants of Ukraine " No 776 of 30.09.2015. <http://zakon5.rada.gov.ua/laws/show/776-2015-n>
- 63 The Law of Ukraine "On ratification of Guarantee agreement (Ukraine: Complex (Consolidated) Safety Upgrade Program of Power Units of Nuclear Power Plants) between Ukraine and European Bank For Reconstruction And Development" No1267-VII of 15.05.2014 <http://zakon5.rada.gov.ua/laws/show/1267-18>
- 64 The Law of Ukraine "On ratification of Guarantee agreement Between Ukraine as Guarantor and the European Atomic Energy Community as Lender in relation to the EUR 300,000,000 (three hundred million Euros) loan facility agreement dated 7 August 2013 between the State Enterprise National Nuclear Energy Generating Company "Energoatom" and the European Atomic Energy Community for the implementation of the Complex (Consolidated) Safety Upgrade Program of Power Units of Nuclear Power Plants" No1268-VII of 15.05.2014 <http://zakon2.rada.gov.ua/laws/show/1268-18>
- 65 CoM Order "On Approval of the Energy Strategy of Ukraine for the Period Up To 2030 No 1071-p of 24.07.2013 (has expired on the basis of the CM Decree No. 605-p dated 18.08.2017)
- 66 The Law of Ukraine "On Cabinet of Minister of Ukraine" No 794-VII of 27.02.2014. <http://zakon5.rada.gov.ua/laws/show/794-18>
- 67 CoM of Ukraine resolution "On regulations approval for Cabinet of Minister of Ukraine" No 950 of 18.07.2007. <http://zakon3.rada.gov.ua/laws/show/950-2007-n>
- 68 Branch agreement between Ministry of energy and coal industry of Ukraine and Trade-union of nuclear energy and industry workers for 2015-2016, of 30.01.2012. (with changes and additions of 25.11.2014.)
- 69 The Law of Ukraine "On Spent Nuclear Fuel Management about Siting, Design, And Construction of Centralized Storage of Spent Nuclear Fuel of VVER Type Reactors of National Nuclear Power Plants" No 4384-VI of 09.02.2012 p. <http://zakon5.rada.gov.ua/laws/show/4384-17>
- 70 Minenergovugillya of Ukraine Order "On Functions of Nuclear Facility Operator Assignment about Centralized Storage of Spent Nuclear Fuel of VVER Type Reactors of National Nuclear Power Plants" No 284 of 04.04.2014. <http://document.ua/pro-pokladennja-funkcii-ekspluatuyuchoyi-organizaciyi-jadern-doc190168.html>
- 71 Environmental Assessment (EA) Report. Main report. Complex (consolidated) Safety Upgrade Program of Power Units of Nuclear Power Plants: Environmental Assessment, SE Energoatom, Kyiv, 2012
- 72 The Law of Ukraine "On charitable activity and charitable organizations" No 5073-VI of 05.07.2012. <http://zakon5.rada.gov.ua/laws/show/5073-17>
- 73 Collective agreement of SE NNEGC Energoatom for 2015, approved by the resolution of the labour group conference of 12.03.2015
- 74 Information and analytical survey of the materials "Khmelnystka NPP. Feasibility study of power units 3, 4 construction", Kyiv, SE "NNEGC "Energoatom", 2011.

- 75 The Law of Ukraine "On siting, design and construction of power units No 3 and 4 of Khmel'nitsky nuclear power plant" No 5217-VI of 06.09.2012 (expired on the basis of the Law of Ukraine No. 697-VIII dated 16.09.2015)
- 76 Scoping of next Environmental Assessment of the "Complex (Consolidated) Safety Upgrade Program of power units of Nuclear Power Plants of Ukraine"
http://energoatom.kiev.ua/en/actvts-16/integrated_security_program-161/p/report_on_scoping_the_next_ccsup_environmental_assessment-4008
- 77 Loan agreement (Ukraine: Complex (Consolidated) Safety Upgrade Program of Power Units of Nuclear Power Plants) between SE NNEGC «Energoatom» and EBRD of 25.03.2013
- 78 Loan Facility Agreement in connection to the Complex (consolidated) Safety Upgrade Program of Power Units of Nuclear Power Plants between SE NNEGC «Energoatom» and Euratom of 07.08.2013
- 79 Non-technical summary: Implementation of Complex (consolidated) Safety Upgrade Program of Power Units of Nuclear Power Plants and CCSUP Environmental and Social Action Plan: 2015, http://energoatom.kiev.ua/ua/actvts-16/integrated_security_program-161/p/netehnicne_rezume_realizacii_kompleksnoi_zvedenoj_programi_pidvisenna_bezpeki_energoblokiv_atomnih_elektrostantsij_ta_planu_ekologicnih_ta_socialnih_zahodiv_kzpb-4636
- 80 Stakeholder Engagement Plan, SE NNEGC "Energoatom", Kyiv, 2015
http://energoatom.kiev.ua/ua/actvts-16/integrated_security_program-161/p/plan_zaluchennja_zatckavlenih_storn-821
- 81 Public Discussion of CCSUP Implementation was Held at Ukrainian NPPs
http://energoatom.kiev.ua/ua/actvts-16/integrated_security_program-161/p/na_ukraskih_aes_vdublis_publchn_obgovorennja_pitan_realzats_kzpb-574
- 82 Corrected investment program of SE NNEGC "Energoatom" on 2016 (agreed by NKREKP)
http://energoatom.kiev.ua/ua/actvts-16/investment-164/p/skorigovana_investicijna_programa_naek_energoatom_na_2016_rik_shvalena_nkrekp-4042
- 83 Medium-term investment program of SE NNEGC "Energoatom" on 2016 – 2020.
http://energoatom.kiev.ua/ua/actvts-16/investment-164/p/seredn_ostrokovja_investicijna_programa_naek_energoatom_na_2016_2020_rr.-4661
- 84 The Law of Ukraine "On Electricity", No 575/97-BP of 16.10.1997
<http://zakon4.rada.gov.ua/laws/show/575/97-bp>
- 85 NERC Resolution "Methodology for the Formation, Calculation and Setting of Tariffs for Electric and Heat Generated at Nuclear Power Plants" No. 990 of 01.08.2017
<http://zakon0.rada.gov.ua/laws/show/v0990874-17> (before - NKRE Resolution "Concerning the approval of the Order of tariff calculation for electricity and heat energy which produced at HP, TPP and NPP", No 896 of 12.10.2005, expired on 01.08.2017)
- 86 NKRE Resolution "Concerning the approval of the Procedure of revision and approval the tariff for licensees on electricity and heat energy production" No 898 of 12.10.2005 (expired on 01.08.2017)
- 87 SE NNEGC "Energoatom" has held a briefing on public consultations concerning the scope of the next CCSUP Environmental Assessment http://energoatom.kiev.ua/ua/actvts-16/integrated_security_program-161/p/energoatom_proviv_briefing_sodo_konsul_tacij_z_gromads_kistu_stosovno_obsagiv_cergovoi_ekologicnoi_ocinki_kzpb-2332
- 88 Implementation of the Complex (Consolidated) Safety Upgrade Program of Power Units of Ukrainian Nuclear Power Plants during the II Quarter, 2016
http://energoatom.kiev.ua/files/file/ntr_ccsup_2016_2_en.pdf

- 89 SE NNEGC "Energoatom" has held a briefing on public consultations concerning the scope of the next CCSUP Environmental Assessment http://energoatom.kiev.ua/ua/actvts-16/integrated_security_program-161/p/energoatom_proviv_brifing_sodo_konsul_tacij_z_gromads_kistu_stosovno_obsagiv_cergovoi_ekologicnoi_ocinki_kzpb-2332
- 90 ПМ-Д.0.18.606-14 Program of works with spent nuclear fuel after reaching of final term of storage in the SFDSF of Zaporizhzhya NPP, Kyiv, SE NNEGC "Energoatom", 2014.
- 91 Report of ecological assessment of Complex (Consolidated) Safety Upgrade Program of Power Units of Ukrainian Nuclear Power Plants during 2012–2016 (final), SE "NNEGC "Energoatom", 2017, http://www.energoatom.kiev.ua/files/file/ea_report_ccsup_2016_final_june2017.pdf
- 92 Complex (Consolidated) Safety Upgrade Program of Power Units of Ukrainian Nuclear Power Plants-Report summary for a wide audience, Kiev, SE "NNEGC "Energoatom", 2011, http://energoatom.kiev.ua/ua/actvts/integrated_security_program/38711-proekt_zvtu_pro_ekologchnu_otcnku_rezyume_zvtu__rozrahovane_na_shiroku_auditoryu/
- 93 Non-technical summary: Implementation of Complex (consolidated) Safety Upgrade Program of Power Units of Nuclear Power Plants and CCSUP Environmental and Social Action Plan, Kiev, SE "NNEGC "Energoatom", 2015 http://energoatom.kiev.ua/ua/actvts-16/integrated_security_program-161/p/netehnicne_rezume_realizacii_kompleksnoi_zvedenoi_programi_pidvisenna_bezpeki_energoblokiv_atomnih_elektrostancij_ta_planu_ekologicnih_ta_social_nih_zahodiv_kzpb-4636
- 94 Non-technical summary: Implementation of CCSUP Environmental and Social Action Plan (as of end of 2016), Kiev, SE "NNEGC "Energoatom", 2017, http://energoatom.kiev.ua/en/actvts-16/integrated_security_program-161/p/nontechnical_summary_implementation_of_ccsup_environmental_and_social_action_plan_at_the_end_of_2016-3937
- 95 Non-technical summary: Implementation of CCSUP, CCSUP Environmental and Social Action Plan and CCSUO Stakeholders Engagement Plan (as of 31.09.2017), Kiev, SE "NNEGC "Energoatom", 2017 http://energoatom.kiev.ua/en/actvts-16/integrated_security_program-161/p/non_technical_summary_implementation_of_ccsup_ccsup_environmental_and_social_action_plan_and_ccsup_stakeholder_engagement_plan_as_of_30.09.2017-3712
- 96 Environmental and Social Action Plan. Complex Consolidated Safety Upgrade Program of Power Units of Nuclear Power Plants of Ukraine http://energoatom.kiev.ua/ua/actvts-16/integrated_security_program-161/p/plan_ekologicnih_ta_social_nih_zahodiv_kompleksna_zvedena_programa_pidvisenna_bezpeki_energoblokiv_atomnih_elektrostancij_ukraini.-4893
- 97 Collective agreement of SE NNEGC Energoatom for 2015, approved by the resolution of the labour group conference of 12.03.2015
- 98 COY HAEK 023:2014 Radiation Safety Assurance. Procedure to set the sizes of sanitary protection zone of NPPs, SE NNEGC Energoatom, Kyiv, 2014
- 99 Order of President of Ukraine "On corporatization of enterprises" No 210/93 of 15.05.1993
- 100 Resolution of the CM of Ukraine "On Approval of the Energy Strategy of Ukraine for the Period till 2035 "Safety, Energy Efficiency, Competitive Ability" No 605-p of 18.08.201, <https://zakon.rada.gov.ua/laws/show/605-2017-%D1%80>
- 101 CoM Order "On making changes to Complex (Consolidated) Safety Upgrade Program of Power Units of Ukrainian Nuclear Power Plants" No 924 of 07.11.2018 <https://zakon.rada.gov.ua/laws/show/924-2018-%D0%BF>

- 102 Investment program of SE NNEGC “Energoatom” on 2019, approved by the NERCAP resolution No 1904 of 12.12.2018 <http://www.nerc.gov.ua/index.php?id=37381>
- 103 Collective agreement of SE NNEGC Energoatom for 2015, approved by the resolution of the labour group conference of 12.03.2015