

COMMENTS BY REVIEWER						RESOLUTION				
Country	Committee	Comm. No.	Para No.	Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
Belgium	NUSSC	3	2,9	126-127	Add '(e.g. in the form of letters exchanged or statements made in technical meetings)'	This text was in SSG-12 and made it more comprehensible. Not clear why example is left out now.			x	The authors felt that statements made in technical meetings may not be sufficient for demonstration of the fulfilment of a set of regulatory requirements; hence this example was removed.
Belgium	NUSSC	5	2.21(a)	202	Mention should be made to financial resources and capabilities of an applicant.	The majority of current SMR vendors applying for a license are start-ups and not big established operators.			x	this is covered by existing text: This should include confirmation that the applicant has the organizational capability, organizational structures, adequacy of resources, competence of managers and staff.
Belgium	NUSSC	9	2.37(b)	367	(e) Changes in the site conditions <b>and status</b> .	Stress the importance of the situation of the site after modifications.			x	this proposal does not align with the format of the list in 2.37.
Belgium	NUSSC	14	3.6(d)	696	As formulated, point (d) operational stage doesn't seem to be part of the site evaluation process.	Clarification			x	language indicates that site evaluation needs to continue throughout the various stages.
Belgium	NUSSC	17	3.21	848	Add part on evaluation of internal/external hazards and assessment of radiological consequences	Not clear why now only mentioning routine releases and their rad. consequences, as results for internal/external hazards could lead to need for design change			x	hazards are noted in 3.9(a)
Belgium	NUSSC	18	3.36(b)	1017	Leave out this part ' (b) The applicant or licensee should have adequate financial capabilities.'	Is evident, but is not a point that should be proven in order to give a license. The financial capabilities cannot be verified by the regulatory body.			x	assurance of adequate financial capabilities is necessary for construction of the installation
Belgium	NUSSC	22	Page 32	Page 32	There's no reference in the text to the footnote.	Editorial			x	footnote reference is 3.57(d)
Belgium	NUSSC	1	2,7	100	[...] steps that provide for early <b>approval or</b> feedback [...]	Approval is a strong and engaging terminology for regulatory bodies, and it is usually not applicable for pre-licensing processes.		"provide for early feedback, and potentially approval."		modified to focus on feedback as the focus.
Belgium	NUSSC	4	2,19	185	Mention to specifying responsibilities of all licensees should be made, in cases where several licensees share common safety related features.	Clarification	x			
Belgium	NUSSC	8	2,26	293	Add safety analysis report	Not clear why a safety analysis report is not mentioned as a minimum of information to be provided in license request		added "preliminary safety analysis report"		
Belgium	NUSSC	2	2,7	105	It should be mentioned that a pre-licensing process doesn't replace the national licensing process and it doesn't provide a certification.	Clarification	x			
Belgium	NUSSC	16	3,13	777	Explanation for "generic site" is given, but not for "generic design".	Provide a definition of "generic design" for sake of clarity.	x			
Belgium	NUSSC	25	3,86	1526	A final decommissioning report is required in paragraph 3.86. An explanation of what is expected in such final decommissioning report should be provided.	Clarification	x			added reference to SSG-47 [28]
Belgium	NUSSC	26	3,87	1532	[...] removal of radioactive material, radioactive waste and <b>spent fuel</b> , and contaminated structures [...]	If spent fuel was stored in an interim storage facility on site, this has to be removed as well.	x			an additional sentence also added at the end of 3.87.
Belgium	NUSSC	6	2.21(o)	245	[...] including a decision to suspend <b>operation the licence</b> , if deemed necessary.	More general formulation, applicable to all stages of an installation lifetime.	x			
Belgium	NUSSC	12	2.43(r)	493	Big importance is placed on safety, but in several other paragraphs mention is made to security. Greater coherence should be provided in the text.	Coherence and clarity	x			added new (m), prior to emergency preparedness
Belgium	NUSSC	24	Appendix I.1	1563	Rephrase the word 'should' in function of what is really required to be submitted to the regulatory body.	The title says 'Examples', suggesting that not everything listed below is mandatory. In fact, it seems that not all listed items are really mandatory to submit to the regulatory body, eg. (d) A prior economic study regarding the necessary financial investments and the expected costs; -> this is not requested in our regulation  (h) The strategy and plans for public involvement in the licensing process; -> is done via the regulations on licensing, so not up to the applicant to define this strategy.		I.1 The following are examples of documents that may be updated by the applicant or licensee and submitted to the regulatory body during the licensing process. The content of these documents may be divided or combined into different documents, as appropriate:		Modified following SSC review
Belgium	NUSSC	15	3.10.	760	Paragraph 3.10 should be moved to the licensing of the construction part.	Consistency and coherence of the text.	x			moved to 3.33 in Approval of the construction of a nuclear installation
Belgium	NUSSC	13	3.2(d)	650	"Very few key hold points [...]" Suggestion is to remove "very few".	As formulated, it gives the impression that the regulatory body is allowed to set only few hold points.	x			
Belgium	NUSSC	27	Appendix II.8(h)	1702	'Proper interface mechanisms and procedures for any activities are outsourced to...'	Word 'are' to be deleted		"activities that are outsourced..."		text edited due to other SSC member comment
Belgium	NUSSC	19	3.36(h)	1031	should <b>be</b> implemented before construction is started	Word 'be' is missing	x			
Belgium	NUSSC	20	3.56(v)	1272	(v) Ageing <b>and obsolescence</b> management;	Obsolescence is an important component of ageing management. This should be added in other parts of the text, where appropriate.	x			
Belgium	NUSSC	21	3.57(c)	1288	[...] should ensure that the maintenance <b>and ageing management</b> programme for SSCs important to safety [...]	Stress the importance of having an ageing management programme in place.	x			
Belgium	NUSSC	23	3.72(c)	1436	Insertion of a § to indicate that 'Post-operational activities could be carried out under the current operating licence or the decommissioning licence.	In the existing SSG-12, these activities are included in the 'decommissioning' section. Without clarification in the new version, it could be interpreted that these activities are not part of decommissioning. It should be noted that, depending on the country, they may also be covered by the decommissioning licence.	x			added to 3.72
Belgium	NUSSC	28	Appendix II.10(a)	1721	Add "(v) radiological impact to the population and environment is reduced as much as possible".	Stress the importance of radiation protection of the population and the environment when the reactor is sited close to densely populated areas.	x			

Belgium	NUSSC	11	2.41(j)	428-435	Leave out this part	How can a future licensee demonstrate in his application that he has adequate financial and human resources, and how would the regulatory body be able to verify this (do we request a view into the applicant's bank data ? Human resources might not be yet there (since no license).		(j) The applicant or licensee should demonstrate in its application for a licence that it has, or will have when necessary, and will continue to maintain:		adequate resources are an important point. Proposed change in (j) to note that it may not be right now.
Belgium	NUSSC	7		284	Re-add <i>Obligations</i> to the title	Not clear why obligations' was left out in the title, while in §2.25 it is still in the text (*recommendations on the general obligations, roles and ...)	x			
Belgium	NUSSC	10		398	Add 'Obligations' to the title	Not clear why 'obligations' was left out in the title, while in §2.41 the text only speaks about obligations and not about roles and responsibilities: 'The applicant or licensee for a nuclear installation has the following obligations:'	x			
Belgium	NUSSC	29		1815	Add section number to the paragraph (II.16).	The paragraph number is missing.	x			
Brazil	NUSSC	1	1,4	30	This new version (rev. 1) supersedes the original version of IAEA Safety Guide no. SSG-12 (2010) ....	There is not a substitution of a document. Just a revision.	x			
Brazil	NUSSC	5	2,11	133-136	Once an application has been accepted and the initial licence has been issued, subsequent licensing process activities and arrangements may be undertaken between the licensee and the regulatory body. These may include requests for carrying out further activities, additional documentation/demonstration including, in some States, the construction of additional facilities on the site.	There is no "initial licence". It is very often the regulator asks for additional demonstrations during the licensing process.	x			
Brazil	NUSSC	2	2/new para.	2/new para.	Enclose three new definitions: (Regulatory) Authority, Regulatory Body and Licensing (Authorization) Process	There should be a distinction between the use of the terms Regulatory Authority a (responsible for the authorization/licence issues) and Regulatory Body, since in some countries these entities are distinct and, even within a single regulatory body, the Authorization function is usually exercised by a higher and usually independent Board. The entire licensing process, which supports the decision to issue a license, is carried out by the staff (the body itself). The licensing process involves (as mentioned in the text) safety assessment, inspections, meetings and correspondence between staff and applicants, which will support the Authority.		x	Separating regulatory body from regulatory authority would cause unnecessary complication.	
Brazil	NUSSC	4	2.8(a)	113	For specific period of time (e.g. 10 years, 40 years, never exceeding the design basis for time limited analysis).	The period of time for a licence shall not exceed the time limited (ageing) analysis and the equipment qualification specifications.		x	this parenthetical is providing examples of time periods that are often used for licences. The proposed addition is listed as a requirement, not as an example.	
Brazil	NUSSC	8	2.28	314	Delete	This paragraph is already encompassed by the proposal for para 2.23.		x	these sections are not redundant, and 2.28 should be retained.	
Brazil	NUSSC	10	2.41(i)	426	New para - The applicant or licensee should have in place a system to control non-compliance and their respective corrective actions.			x	this is covered by 3.55(b)	
Brazil	NUSSC	7	2,23	267	The regulatory framework should establish requirements or conditions (depending on factors such as the nature of the changes, the safety significance and the magnitude of the risks involved) that may require prior review, assessment and approval by the regulatory body of changes or modifications to the site (including a transfer of a licence to another organization), the nuclear installation, the organizational structure of the licensee, procedures, processes or plans for future activities (e.g. decommissioning), at any stage of the life of the nuclear installation.	Inclusion of regulatory requirements or conditions to address the need for prior acceptance of modifications	x			
Brazil	NUSSC	20	3.60(a)	1329	That the nuclear installation adheres to current safety standards, <u>as reasonably achievable</u> , and national regulations	According to the Vienna Declaration, for the existing installations the safety improvements are to be reasonably practicable and achievable.		x	nuclear installations should adhere to the current safety standards.	
Brazil	NUSSC	9	2,28	314	New para. - For each stage of the installation's lifetime, the regulatory body should impose requirements or conditions on what kind of information and reports have to be sent regularly to the regulator and their periodicity.	Regular reports should be sent to the regulator by the licensee.	x		added as para 2.40	
Brazil	NUSSC	3	2,3	79	.... , the licensee is the organization possessing the licence(s) for the pertinent stage(s) of the lifetime of an installation and its activities.	A single licensee does not always have to hold all the required authorizations. The applicant for a design certification may be different from the applicant for a construction license, and even from the applicant for an operating license.	x			
Brazil	NUSSC	11	2,43	455	New item – Identification of the validity period for the licence, if applicable	As stated in para. 2.8(a) and 2.21(j) the validity period for a licence should be stated in the licence itself	x			

Brazil	NUSSC	12	3.2(a)	624	...a licence to construct, commission and operate a nuclear installation has not been filled, and even the specific installation (vendor) is not decided. In this case a plant parameters envelope should be considered to evaluate the adequacy of the site.	Some early site permit are independent of the decision on what design will be selected.		...a licence to construct, commission and operate a nuclear installation has not been filed. Regulatory body approval of the site or sites may be done without the applicant having identified a specific design for the nuclear installation.		modified based on comment from other SSC member
Brazil	NUSSC	13	3.2(b)	635	....except for variations necessary due to site specific characteristics, that can impact (or be impacted by) the design in different ways	The specificities are from the site and not from the requirements.		added "characteristics"		
Brazil	NUSSC	15	3.5	675	...including research into external hazard (natural and man induced) development	The external hazards are not developed. They are determined (by research)		included "identification of" external hazards		
Brazil	NUSSC	16	3,5	680	....the potential impact of the nuclear installation and its activities on the environment and the neighboring population.	The installation can affect environment and people.	x			
Brazil	NUSSC	23	3.75	1461	An updated, detailed final decommissioning plan and its supporting safety assessment is required to be submitted by the licensee to the regulatory body for approval, prior to commencement of <del>dismantling</del> decommissioning activities	Dismantling is not a synonymous of decommissioning. In Brazil the decommissioning phase starts when the operator ends its commercial operation, so the preparatory activities before dismantling (removal of the operational rad waste and all fuel elements, safe enclosure, decontamination) are part of the decommissioning process, and have to be addressed in the decommissioning plan. The same reasoning applies to the para. 3.78, because after the commercial operation the management of the rad waste is made under the Decommissioning Authorization.	x			
Brazil	NUSSC	6	2.21(r)	258	...by regulatory body(ies). Special attention should be paid in case of different regulators being involved, to avoid gap responsibilities.	In case of different regulators for safety, security and safeguard there should be a special attention on the interfaces.	x			
Brazil	NUSSC	19	3.47 & 3.48	1149	Revise the paragraphs	The division between cold and hot commissioning cause some confusion with the statements of the IAEA SSG-28 that uses different stages: cold performance tests, hot performance tests, fuel load & sub-critical tests (all classified as pre- operational tests) and initial criticality & power tests	x			Language modified throughout the current 3.42, 3.43, 3.44, 3.48, 3.50, and 3.51 to align terminology with SSG-28
Brazil	NUSSC	21	3.60(g)	1338	New item – That the site characteristics, such as external events, population and land use surround the facility, remains valid.	The site characteristics may change along the service life of the installation and can cause impact on its safety		added "site characteristics" to 3.61		
Brazil	NUSSC	14	3.2(d)	650	...commissioning and operate stages. <del>Very few</del> <u>Some</u> key hold points....	Very few is a too subjective concept. Moreover, the COL process involves the review by the regulator of the ITAAC - Inspections, Tests, Analyses, and Acceptance Criteria, that could be considered as hold points.	x			
Brazil	NUSSC	17	3.40.	1066	Before the first nuclear material is allowed to be brought onto the site, an <u>initial</u> decommissioning plan, including a waste management plan	The GSR Part 6, para. 7.4, states that The licensee shall prepare and submit to the regulatory body an initial decommissioning plan together with the application for authorization to operate the facility. It makes a distinction between initial and final decommissioning plans.	x			
Brazil	NUSSC	18	3.42(a)	1096	.....a set of well defined operational limits, test acceptance criteria, conditions and procedures, <u>including the associate records</u> ;	The Commissioning Procedures should set the necessary records.	x			
Brazil	NUSSC	22	3.66(d)	1388	Should agree on a <u>basis document, developed by the licensee, that will govern the PSR. This basic document that should include</u> the safety review methodology, the major milestones, cut-off dates, structure of the associated documents and the regulations, standards, guides and operating practices to be used in the review	Along the text, there should be some references to the IAEA SSG-25 that governs the PSR process. If not, some key aspects should be mentioned in this item. SSG-25 is only referenced in an unidentified footnote on page 32.	x			additional clarity with SSG-25 will also be considered following Member State review.
Canada	NUSSC	2	1,3	20	"...may be one or more 'hold points', set by national legislation and/or <u>regulatory requirements.</u> "	For Canada, there is no provision in our national legislation for hold points.	x			
Canada	NUSSC	3	1,3	21	<del>"These Licensing activity at these stages and associated</del> hold points give the regulatory body the power..."	This sentence is too narrow – it gives all the credit to 'hold points'. Other licensing activities also control risks.	x			
Canada	NUSSC	5	1,7	46	"While this Safety Guide focuses on safety at nuclear installations, <u>security and safeguards are also critical considerations and</u> interfaces between safety, security and safeguards aspects need also to be considered..."	When looking at safety, the <u>interfaces</u> with security and safeguards are certainly important, but the sentence is missing the main caveat.	x			
Canada	NUSSC	7	2,5	88	<del>"Licenses and a</del> Authorizations are granted or denied in accordance with the national legal and governmental framework..."	The suggested deletion reduces redundancy. However, a more general comment is that the guide (at least the first few pages) seems to use "licence" and "authorization" interchangeably. Consider stating up front that they effectively mean the same thing, and perhaps refrain from making it look like they are two different things, such as in Line 88.	x			The IAEA reviewed the language in the document and believes it is sufficiently clear and adequately references the IAEA Glossary. License and authorization are not really used interchangeably, eg., licenses or other authorizations.
Canada	NUSSC	14	2,21	196	"Licensing principles should be established in the legal and regulatory <del>and</del> framework. [...]"		x			

Canada	NUSSC	17	2.21 (c)	208	"The regulatory regime (prescriptive, non-prescriptive or goal setting) for the licensing process should be explicitly established by regulation and by the regulatory body."	Not sure the intention of item (c). Canada does not explicitly establish the exact nature of its regulatory regime (prescriptive vs non-prescriptive, etc.) It simply is.		(c) The regulations presenting the licensing and approval processes should explicitly describe the regime to be followed by the applicant in its descriptions and justifications of the safety case in each design area of the licensing process.		That is not what the document implies; it does not suggest identifying which type of the regime it is, but rather states that any type of regime, of which there are these types, should be explicitly established.  (c)The regulatory regulations presenting the licensing and approval processes should explicitly describe the regime (prescriptive, non-prescriptive or goal setting) for the licensing process should be explicitly established by regulation and by the regulatory body to be followed by the applicant in its descriptions and justifications of the safety case in each design area of the licensing process.
Canada	NUSSC	4	Figure 1, and General	Figure 1, and General	Add: " <u>LICENSING OF THE SITE PREPARATION OF A NUCLEAR INSTALLATION</u> " to figure and Section 3 and provide all related requirements and recommendations for this stage of a nuclear installation.	The licensing stages as shown do not suit Canada. We have site preparation as a key stage, and it is distinct from the stages shown (it exists somewhere between site selection/site evaluation and design).  Site preparation could be much more complex than what is mentioned in para. 3.10. It could include deep shaft excavation for reactor installation, site mitigation measures such as mitigation of potential soil liquefaction, shoreline protection and mitigation, among others, and important structures such stormwater management facility and/or high slopes. Therefore, site preparation is considered one of the major licensing stages of a nuclear facility in some Members States. Requirements for and recommendations to licensing of site preparation of a nuclear installation should be specified in this guide.			x	While "site preparation stage" is not precluded, it is not recommended by the IAEA safety guides to be formally licensed. 3.10 is provided to note that there are some areas that a regulatory body should consider defining. Based on other comments, this paragraph has now been moved to 3.33, as part of the Construction section.
Canada	NUSSC	6	1,7	49	"The IAEA Nuclear Security Series covers 49 security issues at authorized installations (e.g., #, Title and [Reference])."	Consider providing specific source (s) for usefulness and completeness.			x	1.7 is intended to provide an overview of the publication. Expanding on the Nuclear Security Series is unnecessary
Canada	NUSSC	13	2,17	164	"[...] These conditions should cover important aspects, such as design, radiation protection, <u>environmental protection</u> , maintenance programmes, emergency planning and procedures..."	Environmental protection is one of the important aspects of a nuclear installation and could be covered by licensing conditions.			x	This is too broad a requirement, different from protection of the environment from ionizing radiation, and it will be formulated as a "should" statement; environmental protection is not mentioned anywhere else in the document.
Canada	NUSSC	25	2,37	373	"Before a licence is granted, the regulatory body should <u>monitor verify that</u> the applicant or licensee <u>to verify that it</u> has, as appropriate: [...]"	Recommended edit since the regulatory body will not necessarily monitor applicants on an ongoing basis, and routine monitoring is not necessarily an effective way to confirm the suitability of the management system (or to verify the other criteria listed in Section 2.37).		x		
Canada	NUSSC	15	2.21 (a)	198	"A facility and/or activity should be authorized only when the regulatory body has confirmed <del>that the facility or activity is going to be used or conducted in a manner that does not pose an undue risk to workers, the public or the environment. This should include confirmation</del> that the applicant has the organizational capability, organizational structures, adequacy of resources, competence of managers and staff, and appropriateness of management arrangements to fulfil its safety obligations as the operating organization of the nuclear installation. This applies to a new licence, licence renewal, and the transfer of a licence."	This example of a principle is very broad and unclear. Recommend this be more concise or separate into more examples, if there are any.			x	The relationship between these two sentences is not that of a statement and an example, but of the total and a part; therefore, the former (the rule) cannot be shortened in the way suggested by combining the beginning of the rule with one of its elements.
Canada	NUSSC	18	2.21 (d)	210	"The licensing of a nuclear installation should be based on predefined documentation..."	Item (d) guides regulatory bodies to identify a specific set of documents that the applicant should submit, but some member states are not that prescriptive for applications. Modification suggested to remove prescriptiveness.			x	Documentation is not the same as documents; documentation is either a process or something much less individual/specific than a document. Even if the regime is less prescriptive, there are still types of documents to be submitted.
Canada	NUSSC	19	2.16/2.21(k)	156, 233	156: "[...] Licence conditions should be incorporated into the licence for a nuclear installation, ..." 233: "(k) The regulatory body should include conditions in the licence, as appropriate."	Redundant; both aren't needed.			x	This is not a redundancy.
Canada	NUSSC	22	2.21 (n)	239	"The analysis approach to safety should be clearly defined, including the use of deterministic and probabilistic methodologies and analytical tools."	Item n) is generally stated, but it should be written in terms of guidance on safety analysis for the regulatory body, the applicant, or both.			x	All statements in that list are general.
Canada	NUSSC	23	2,3	324	"The regulatory framework <u>should shall</u> also empower the regulatory body to make regulatory decisions and to grant, amend, suspend, transfer, or revoke licences, conditions or authorizations, as appropriate."	Recommended modification to reflect that it is imperative for regulatory bodies to make licensing decisions, such as expressed in Requirement 23 of GSR Part 1 (Rev.1).			x	No 'shall' statements in safety guides.
Canada	NUSSC	24	2,35	359-367	Add: " <u>(f) Changes in or modifications to the licensed activities are important to the safety of a nuclear installation</u> "	The regulatory body may request a reassessment of safety at the nuclear installation if such changes or modifications occur as they are important to the safety of the installation.			x	The suggested statement does not work in the list it is amending; it is not clear if any (all) changes will have safety implications, and, if not, the statement should be modified to reflect that.
Canada	NUSSC	28	2.43 (o)	484	"The documentary basis: the documents in support of the application <u>and those prepared and used by the regulatory body in the review and assessment process, which together</u> [that] form the basis for issuing the licence"	The procedures used by the regulatory body to assess the licence application are typically included in the management system of the regulatory body, but not necessarily in the legal and regulatory framework.			x	The reference is not to procedures, but to the outcomes as inputs for the license basis.

Canada	NUSSC	29	3,1	Lines 589-595		The possibility of subdividing licensing steps is noted, but it is not clear if such subdivision would be via distinct hold points within the step or via distinct and separate licences within the step. In the case of Canada, which issues a licence to prepare site (separately from a licence to construct), it is not obvious if such a licence would be considered part of the step for to licence to construct as described in DS539.			x	existing language is intentionally broad to allow for applicability to many States.
Canada	NUSSC	31	3.2 (e)	636	<i>Include discussion on the other possible types of combined licences, if these are considered acceptable, or clarify that what is provided is an example.</i>	Only one type of combined licence is discussed, leading the reader to believe that this is the only accepted practice. Is it possible to have a combined design and construction, or siting and construction?			x	As there are no other current examples from MS to consider for this section, no additional text is going to be added.
Canada	NUSSC	33	3.3 to 3.7	665		Paragraphs 3.3 to 3.7 under Licensing of Siting and Site Evaluation for a Nuclear Installation do not cover site preparation; licence to prepare site should also be included there.			x	While "site preparation stage" is not precluded, it is not recommended by the IAEA safety guides to be formally licensed.
Canada	NUSSC	38	3.34 to 3.40	994	<i>A new section is recommended to cover the activities that are part of a Licence to Prepare Site.</i>	Sections 3.34 to 3.40 under Licensing of the Construction of a Nuclear Installation do not mention the typical activities covered by licence to prepare site in some Member States. It might be reasonable to also describe site preparation activities there, but the logic of Figure 1 and the structure of the document do not allow that site prep would be authorized under a distinct licence.			x	While "site preparation stage" is not precluded, it is not recommended by the IAEA safety guides to be formally licensed.
Canada	NUSSC	40	3.36 (d)	1021	<del>"Planned deviations</del> from the approved design should be fully analysed in relation to the original design intentions and submitted to the regulatory body for assessment and approval."	Clarification			x	This language only refers to planned deviations, for which the licensee is intending to make changes.
Canada	NUSSC	45	Appendix I L1 (e)	1576	"A site evaluation report, including a report on environmental monitoring and radiation monitoring (see paras 3.3–3.10);"	The report should include results from both environmental monitoring and radiation monitoring			x	This will broaden the requirement too much, away from monitoring hazards, for example. The document focuses only on radiation monitoring.
Canada	NUSSC	46	General	General	Add: <a href="#">Annex – Example application of licensing process for a hypothetical nuclear installation</a>	Consider adding an additional informative Annex for the benefit of users, mainly States that are planning a first nuclear installation.  The purpose is to capture the possible form and content of a licensing process for a nuclear installation, and to illustrate by example how practically apply the requirements and guidance in this Safety Standard.			x	This additional section was not in the approved DPP, and we are unable to add something that substantial at this stage.
Canada	NUSSC	8	2,6	98	"The steps of the licensing process <del>should be discrete and</del> should follow a logical order."	Not sure that all steps will be discrete; suggest removing that from the text.	x			
Canada	NUSSC	9	2,7	100	"...processes, for example, steps that provide for early approval or feedback on potential sites..."	Minor change to align with line 101.	x			
Canada	NUSSC	11	2,9	124	"The licensing process involves <u>demonstration of</u> fulfilment of a set of regulatory requirements applicable to a nuclear installation and formal submissions by an applicant. [...]"	This line does not distinguish between requirements for the application for a licence and requirements once the licence is granted. The suggested change is made under the assumption that it is referring to activities prior to granting a licence.	x			
Canada	NUSSC	12	2,9	126	"[...] The licensing process may also include agreements and commitments made between the regulatory body, other authorities and/or the applicant."	To align with Lines 147 to 150.	x			
Canada	NUSSC	30	3,2	621, 622, 653, and 657	<i>Need to define site permits and early site permits. Depending on what is intended for these terms, this may or may not apply well to all Member States.</i>	Under Alternative Regulatory Processes, Sections 3.2 (a) and (d) refer to "early site permits." Site permits themselves are not defined and do not appear in Figure 1. It sounds like a licence to go in and bulldoze the site. The brief description in 3.2 (a) suggests that an early site permit would precede a licence to construct.	x			clarifying text added.
Canada	NUSSC	37	3,15	785		The term 'basic design' should be defined or point to where it is defined. The regulatory body should have a sense of what is considered a basic design in order to determine if the design is sufficiently advanced to be considered acceptable to proceed to construction.		"basic" was removed		to address this and other comments.
Canada	NUSSC	39	3,34	993	<i>This section should include a provision that on-site and off-site emergency plans are implemented prior to radiological/nuclear materials being authorized to be brought on site</i>	Emergency Preparedness is the 5th layer of defence in depth and should also be considered.	x			
Canada	NUSSC	34	3,4	671	"...conditions for the site or to reject a proposed site on the basis of safety concerns and/or environmental impacts. [...]"	A proposed site could be rejected due to its adverse environmental impacts	x			
Canada	NUSSC	35	3,5	678-679	"[...] The site evaluation <del>to be reviewed, assessed and approved by the regulatory body</del> should also consider the potential impact of the nuclear installation and its activities..."	It is stated, as a matter of fact (not a should statement or a shall statement) that "the site evaluation to be reviewed, assessed and approved by the regulatory body should also consider the potential impact of the nuclear installation and its activities..." We don't license site evaluation in Canada, so the notion of the Regulator "approving" the site evaluation does not suit all Member States.	x			
Canada	NUSSC	44	3,58	1303	<i>Include verification that offsite emergency plans are in place and assurance that the offsite authorities can effectively implement public protective actions (if required) for the lifecycle of the nuclear installation.</i>	Emergency Preparedness is the 5th layer of defence in depth and should also be considered.	x			
Canada	NUSSC	42	3,36	1011	Add: "(k) Environmental monitoring equipment should be clearly specified, installed, and tested to monitor the impacts of on-site construction on the environment."	It is important to ensure there are no significant adverse impacts of on-site construction activities on the environment.		Environmental monitoring equipment to monitor the impacts of on-site construction on the environment should be clearly specified, installed and tested		swap the order of the text.

Canada	NUSSC	16	2.21 (b)	206	"The regulatory framework for dealing with authorization requests should be clear, especially the process for applying for a licence or authorization, <u>including the expectations for what will be considered a complete application.</u> "	The regulatory body should have expectations in place for what they consider to be a complete application, including the expected level of facility design to be considered.	x		
Canada	NUSSC	20	2.21 (g)	220	"Nuclear security <u>and emergency preparedness</u> requirements should be predefined and should be considered in the licensing process."	Emergency Preparedness is the 5th layer of defence in depth and should also be considered.	x		
Canada	NUSSC	21	2.21 (h)	222	"A graded approach is required to be taken by the regulatory body when performing reviews, assessments or inspections throughout the authorization or licensing process (see Requirements 26 and 29 of GSR Part 1 (Rev. 1) [1]). Such an approach should be reflected in regulations and <u>or</u> guides."	Item h) states that the regulations should specify how the regulatory body conducts its assessments (in a graded way). Some Member States regulations don't go that far.	x		
Canada	NUSSC	41	3.36 (e)	1024	"Nuclear security measures and <u>conventional emergency response (including fire protection)</u> measures should be implemented."	Emergency Preparedness is the 5th layer of defence in depth and should also be considered.		(e) Nuclear security measures and emergency response (including fire protection measures) should be implemented.	language added.
Canada	NUSSC	27	2.41(h)	424	"The applicant or licensee should implement nuclear security <u>and emergency response</u> measures at the nuclear installation."	Emergency Preparedness is the 5th layer of defence in depth and should also be considered.	x		
Canada	NUSSC	32	3.2 (d)	641	"Combined licence. In such a licensing process, an applicant can apply for a single licence to construct, commission and <u>or</u> operate a nuclear installation."	The general content of the document suggests that there could be distinct licences issued at each distinct licensing step (i.e., for each box in Figure 1). Para. 3.2 (d) describes combined licences as strictly ones that combine construction, commissioning, and operation. However, depending on the regulatory regime, perhaps a combination of two of these steps might be considered a consolidation.	x		
Canada	NUSSC	10	2.7	104-108	"[...] <u>When used, a</u> pre-licensing process should be designed to help minimize duplication of effort through the different steps and, where <u>appropriate possible</u> , allow for some steps to be conducted in parallel. It should also establish a clear division of responsibilities at the various steps, between regulators, vendors and operating organizations <u>and give the public opportunities for early participation.</u> [...]"	As written, the guidance on "pre-licensing" seems to bind the regulator. Given that Line 105 seems to be referring to the licensing steps as shown in Figure 1, Line 106 seems to say that pre-licensing should allow for some licensing steps to be conducted in parallel. However, pre-licensing should not bind, in any way, the process to be used by the authority making the "real" licensing decision later. There are some instances where the information submitted in pre-licensing reviews is not sufficiently advanced to avoid having to re-assess the information upon application submission. Line 108 discusses the importance of early public participation but, as written, it seems to be focused on pre-licensing. Why give the public an early opportunity to participate when no licensing decision will be made? Consider removing this or focus more on disseminating information to the public.		A pre-licensing process should be designed to help minimize duplication of effort through the different steps and, where possible, allow for some steps to be conducted in parallel. When used, it should also establish a clear division of responsibilities at the various steps, between regulators, vendors and operating organizations and could include options for early public information	combination of edits from Canada/NUSSC and other SSC comments.
Canada	NUSSC	43	3.45 (c)	1129	<u>Commissioning a nuclear installation should also include requirements on emergency response organization and offsite emergency plans</u>	Emergency Preparedness is the 5th layer of defence in depth and should also be considered.	x		
Canada	NUSSC	36	3.6 (c)	694	"... continued after the start of <u>site preparation and</u> construction and before the start of operation. [...]"	Sometimes, significant studies and investigations could be performed during site preparation	x		
Canada	NUSSC	26	2.38	382 to 389	This paragraph is vague as to whether it pertains to modifications <u>during</u> licensing activity to proposals that have been made in a licence application, or to modifications to take effect after a licensing decision has been made. In this context, the guidance regarding the regulatory body's approval/agreement of the procedure established to categorize modifications in accordance with their safety significance may need clarifying.	2.38 After granting of the first license (e.g., the construction license), the regulatory body should ensure that proposed modifications are categorized by their safety significance. This categorization should follow an established procedure, which may be subject to agreement or approval by the regulatory body. Modifications that are categorized as significant to safety should be submitted to the regulatory body for review and approval or agreement. The regulatory body should inspect compliance with categorization procedures on a regular basis. Further recommendations related to nuclear power plant operation are provided in IAEA Safety Standards Series No. SSG-71, Modifications to Nuclear Power Plants [10].		Edits to paragraph 2.38 proposed by other SSC members.	
Canada	NUSSC	1	General	General	"Risks" and "Radiation Risks"	Both terms are used interchangeably throughout the standard. Consider checking for accuracy and harmonize as appropriate.	x		Document was checked for consistency, and no changes were made, as the terms were used in the appropriate places.
China	NUSSC	2	3.1	582	(b) Design( <u>which may be included in construction step, depending on national legislation</u> );	Editorial It is suggested to add a note. Design licensing process may not be a necessary separate permit.		x	While a separate permit may not be needed, design of the nuclear installation should occur prior to construction as much as possible.

China	NUSSC	1	2,7	104	A pre-licensing process <b>could should</b> be designed to help minimize duplication of effort through the different steps and, where appropriate, allow for some steps to be conducted in parallel.	Editorial It is suggested to change "should" to "could". It is a recommendation, not a requirement.	x		
China	NUSSC	3	3,13	776	then the regulatory body <b>or the designer</b> should establish a definition of 'generic site' and a definition of 'generic design'.	Editorial It is suggested to add "designer". Sometimes, the hypothetical site conditions are given by the designer, and the regulator will review the site assumptions.		"or the vendor"	for consistency with other text.
ENISS	NUSSC	1	General comment	General comment		In most of countries the licensing process have several stages. The guide should clarify for which stage the presented issues and requirements are valid for a newbuild project. The stages presented in figure 1 in guideline could be used in this clarification.		x	This document is intended to remain at a higher level than what is being proposed by the comment, to provide a broad overview of the licensing process
ENISS	NUSSC	2	General comment	General comment		The control of a future owner of a plant/regulator over the manufacturing of components (for example, RPVs, or other LLMs and modules) before the owner decides to start the construction is to be considered in this guideline. With SMRs being in discussion, a certain vendor can start manufacturing 10-20 RPVs, but before signing a contract.		x	The IAEA does not disagree with the intent of this comment; however, there is insufficient MS experience in this area to be able to include it in the revision to SSG-12 at this time.  Additional language added to Appendix II.18 to note that this is out of scope.
ENISS	NUSSC	3	General comment	General comment		Do all the recommendations in this guide apply to all nuclear installations? If not then there may be a need for more precise guidance.			This guide is meant to be high-level, so that the recommendations apply, for the most part to all nuclear installations
ENISS	NUSSC	4	General comment	General comment		The application of a graded approach would deserve clearer guidance within the document. In addition, there might be variability in how different countries interpret and implement a graded approach which could lead to difficulties and inconsistencies in the frame of the encouraged regulators' cooperation.		x	Use of a graded approach is covered in more detail by other documents, including GSR Part 1
ENISS	NUSSC	5	Figure 1	24	In addition of this also a figure with hold points of modular technology including earlier approval in factories is proposed to be presented, e.g. in appendix II concentrating to SMRs.	SMRs and some newbuilds are looking for possibilities for regulatory review and approval of modules in factories. It is useful to start discussion on these options already now and present the issue in this guideline or refer to other IAEA guidelines.		x	It was decided not to include a figure specific to modular designs at this time, as it was overly complicated for this Guide.
ENISS	NUSSC	6	Figure 1 And Section 3.1	24	It is recommended to have the <i>design</i> before the site-specific design license in figure 1.	When you apply for a site-specific license for one or multiple sites, you will already have information on design that you are going to deploy there. You cannot assume that you can start the construction without some design information and to get the site license. The level of required design information before site license is country-specific.		x	This change would not be broadly apply to all Member States. It is recommended to keep this the same as the 2010 version.
ENISS	NUSSC	7	2,7	108	Delete: "... and give the public opportunities for early participation."	This paragraph concerns pre-licensing and at this stage public participation can be difficult to handle and backfire on the positive effects pre-licensing has on the openness between vendors, the applicant and regulators.	x		
ENISS	NUSSC	8	2,7	109	(including their interactions with security and safeguards <b>as well as with non-nuclear requirements</b> )	It is proposed to include non-nuclear requirements concerning civil works, fire regulations, into this kind of lists later. Various parts of conventional legislation are important for pre-licensing.		x	During the pre-licensing phase, more efforts should be focused on nuclear safety aspects. Additional important non-nuclear requirements can be considered on a case-by-case basis, but they are not suitable for inclusion in SSG-12 at this stage.
ENISS	NUSSC	9	2,17	160	These conditions should cover important aspects, such as design, radiation protection, maintenance programmes, emergency planning and procedures, modifications, the management system, operational limits and conditions, operating procedures, <b>waste management, nuclear security, cybersecurity, safeguards provisions, nuclear liability (insurance), safety analysis, periodic safety review, human and financial resources, fuel management, outages, aging management, safety culture</b> and authorization of personnel.	Some of important conditions more are proposed to be added.	x	These conditions should cover important aspects, <b>including but not limited to</b> design, radiation protection, maintenance programmes, emergency planning and procedures, modifications, the management system, operational limits and conditions, operating procedures, <b>waste management, nuclear security, cybersecurity, safeguards provisions, nuclear liability (insurance), safety analysis, periodic safety review, human and financial resources, fuel management, outages, aging management, safety culture</b> and authorization of personnel.	
ENISS	NUSSC	10	2,17	165	(...) modifications, the management system, Operational limits and conditions, operating procedures, <b>resources</b> and authorization of personnel.	Proposed additional text for consistency with lines 433-435	x		
ENISS	NUSSC	11	2,17	166	(...) when the regulations are revised. <b>License conditions could also include exemptions of nuclear regulations or non-nuclear regulations.</b>	License conditions could also include exemptions of regulations, when existing nuclear or non-nuclear regulations are agreed not to be valid and suitable for a new plant or facility.	x		
ENISS	NUSSC	12	2,18	172	(...) any other legal requirement. <b>The grading of regulations can help in resolving contradictions.</b>	The grading of regulations and license conditions could be useful for helping situations where contradictions are recognised in the level of details and in application of regulations.	x		

ENISS	NUSSC	13	2.21	208	The <del>regulatory</del> regulations presenting the licensing and approval processes should explicitly describe the regime (prescriptive, non-prescriptive or goal setting) <del>for the licensing process should be explicitly established by regulation and by the regulatory body to be followed in descriptions and justifications of safety case in each design area of licensing process.</del>	It shall be considered if only one kind of regulatory regime can be followed in all design and licensing areas.	x		
ENISS	NUSSC	14	2.21	196	Delete "and" before "framework".	Typo.	x		
ENISS	NUSSC	15	2.27	310-313	The basic requirements set out in the preparatory phase should be design-neutral so that several designs may be considered at the beginning of a project to build a nuclear installation. <del>In addition, possible exemptions on local non-nuclear specific rules (e.g. rules for civil works, fire regulations, requirements from environmental permitting) may be managed with regulators in preparatory stage.</del> Nevertheless, detailed and explicit design requirements should be developed during the early phases of the project.	Exemptions on nuclear rules should be mentioned because some non-nuclear rules may have a strong impact on the design, and in some cases be contradictory with nuclear safety.	x		
ENISS	NUSSC	16	2.28	314-320	Pre-licensing interactions (see para. 2.7) with the vendor and the potential licensee are encouraged. These pre-licensing interactions not only benefit the regulatory body, but they also benefit vendors and potential licensees because they allow for early identification and resolution of technical and policy issues that could affect licensing. <del>This is particularly important for non-water-cooled reactors and small modular reactors because they are often first-of-a-kind.</del> A good practice is to include an assessment of safety, security, and safeguards needs in pre-licensing interactions, including the interfaces between each of these areas.	The text will be outdated in a few years when many SMR designs are no longer first-of-a-kind.		This is particularly important for first-of-a-kind installations	to capture the importance of noting FOAK.
ENISS	NUSSC	17	2.32	342	(...) consideration to how and from where it will recruit such staff <del>and find additional external technical support and advice when needed.</del> (...)	The external technical support and advice may be important for a newbuild.	x		
ENISS	NUSSC	18	2.37	373	Before a license is granted <del>for operating a nuclear facility</del> , the regulatory body should ...	Not all requirements below are suitable for earlier license stages.		x	The lists that need to be monitored/verified are related not only to the operation license but also to the construction license. It is recommended to keep it as is.
ENISS	NUSSC	19	2.38	382	<del>Throughout the licensing process. After granting of the first license (e.g. construction licence),</del> the regulatory body should ensure that proposed modifications are categorized by the licensee in accordance with their safety significance. This categorization should follow an established procedure, which should be subject to agreement or approval by the regulatory body. Modifications that are categorized as significant to safety should be submitted to the regulatory body for review and approval or agreement. The regulatory body should inspect compliance with categorization procedures on a regular basis. Further recommendations are provided in IAEA Safety Standards Series No. SSG-71, Modifications to Nuclear Power Plants [10] <del>which applies to the operation phase.</del>	This shall be defined. The text is relevant after CL is granted not before it.  In SSG-71 - item 1.10 it is said that "The modifications made during the design and construction stages of a nuclear power plant are outside the scope of this Safety Guide."		Further recommendations related to nuclear power plant operation are provided in IAEA Safety Standards Series No. SSG-71, Modifications to Nuclear Power Plants [10].	
ENISS	NUSSC	20	2.41 (f)	420	The applicant or licensee should have <del>design capability</del> capability of an <del>informed customer</del> and...	It is not reasonable to require design capability for an applicant/licensee.	x		
ENISS	NUSSC	21	2.43(e)	467	"...inventories of sources..."	Is the intention "...inventory of radioactive substances...?"	x		
ENISS	NUSSC	22	2.44	495	Delete the paragraph	The information is too detailed for a license. For example allowed parameter values are part of technical specifications.		x	This section notes that license conditions may include or refer to...and it is not noted as requirements.
ENISS	NUSSC	23	3.1	582	The licensing process for a nuclear installation will normally include the following steps, depending on national legislation: (a) Siting and site evaluation (which may include the environmental impact assessment); (b) Design; (c) Construction (which may include procurement, manufacturing and construction stages on the site or off the site).	In the construction stage its parts manufacturing and procurement, which could start parallel with design.	x		
ENISS	NUSSC	24	3.15	789	The basic design of the proposed nuclear installation should be such that safety requirements can be met in accordance with <del>the plant states considered in the design basis</del> .	The wording "design basis" as defined in the IAEA glossary seems to be limited to design basis accident, design basis earthquake. Hence AOO, DEC that are essential to the defence in depth concept are not mentioned. See suggestion.		x	According to the chapter 5 of SSR-2/1, "design basis" is not only limited to design basis accident, but also with various plant states.
ENISS	NUSSC	25	3.17	805	At the design stage, it is important to ensure that <del>and</del> SSCs comply with approved...	Remove "and"	x		
ENISS	NUSSC	26	3.17	807	It is also necessary to ensure that construction work at the nuclear installation <del>is</del> can be undertaken in accordance with design specifications...	At the stage of the design license, conduct of the construction work cannot be verified yet.	x		
ENISS	NUSSC	27	3.21 (a)	850	That suitable design basis analyses and <del>beyond design basis</del> design extension analyses, fault tree analyses, and probabilistic safety assessments have been performed, as appropriate:	SSR-2/1 and the IAEA glossary updated, do no longer use the terminology "beyond design basis" that is not appropriate as "there is always a beyond", meaning there is no clear limit to the beyond. Consider revision to be consistent with SSR-2/1.	x		



ENISS	NUSSC	29	3.23	869	3.23 Safety analyses of the design should be performed <b>(or else reviewed) by the licence applicant in accordance with its management system</b> and should be used to specify (or improve) the following:	Safety analyses (or safety analysis) is mentioned in the glossary ( <a href="https://www-pub.iaea.org/MTCD/Publications/PDF/IAEA-NSS-GL0web.pdf">https://www-pub.iaea.org/MTCD/Publications/PDF/IAEA-NSS-GL0web.pdf</a> ) and refers to analysis, that include lots of different types of analyses. Typically these analyses are performed by the vendor, not by the license applicant. Applicant typically reviews these analyses, but in case of SMR designs and considering intelligent customer principle a question arises if this task and task listed below in (a) - (f) can be partially or fully outsourced. <b>Therefore deletion of the reviewer is proposed.</b>	x			
ENISS	NUSSC	30	3.23	869	Requirement to be modified or moved elsewhere in the document.	Many of the listed items are not related to the design license stage and they will be specified only later on for constructions license, during construction or for operating license. As one example "(i) training requirements for personnel" is not needed for a meaningful review of a design license.		Proposal for: (h) Human and organizational factors in the design organization; (i) The training and certification for design personnel;		The listed items are typically related to the design license, and some may be revised as proposals for further consideration.
ENISS	NUSSC	31	3.24	892	The vendor can also be involved in this step, if appropriate. Additionally, the operating organization <b>may shall</b> have an internal process (which could include receipt of independent advice) for review of safety analyses before submissions to the regulatory body to ensure that such analyses are appropriate	Responsibility cannot be transferred to the regulator, the review and first approval is necessary to be done by owner/operator.		changed to "should"		
ENISS	NUSSC	32	3.28	936	Propose to move this text elsewhere in the document: The regulatory body should review, assess and inspect proposals for on-site treatment and storage of radioactive waste, including the management of spent fuel, where appropriate, to ensure that the processed waste and the waste packages will be characterized in a manner compatible with the national strategy for radioactive waste,	This seems very detailed information about the operational handling of radioactive waste, which is not relevant for the design license stage. It should be noted that the applicant of the design license may be different for the licensee at the construction or operating license stage. Typically the future operating organization is the one deciding many aspects of the waste management strategy.		It is suggested to change "should" to "may"		Based on experience, these items are typically required at this stage, but there may be exceptions considering different requirements between countries.
ENISS	NUSSC	33	3.30 (a)	961	The safe transport of radioactive materials to and from the installation, and movement	Missing word.	x			
ENISS	NUSSC	34	3.32	984	Propose to delete this text or move it elsewhere in the document: The application for a licence for design should include proposals for the certification of maintenance personnel,	Certification of maintenance personnel is not a relevant issue to be assessed at the stage of a design license.	x			
ENISS	NUSSC	35	3.33	990	updating the design <b>basis</b> of the nuclear installation	See previous comment the design basis referring to DBA but miss DEC conditions. In this sentence, the entire design should be considered not only DBA.			x	According to the chapter 5 of SSR-2/1, "design basis" is not only limited to design basis accident, but also with various plant states.
ENISS	NUSSC	36	3.34(c)	999	The <b>items important to safety and other design</b> features important to safety,	"design features" is not defined in the IAEA Glossary. It may be better to use the term "item important to safety" here to cover the range of SSC required for AOODBA/DEC...	x			
ENISS	NUSSC	37	3.36(g)	1029	... concrete and required review documentation before <b>final approval of safety relevant part (module) of plant or</b> radioactive material to transportation to site.	The text needs modifications, if the modular manufacturing e.g. in SMR construction is used.				As this is SMR specific, recommend capturing in Appendix II
ENISS	NUSSC	38	3.54	1192	Before operation of a nuclear installation is authorized or licensed, it should be demonstrated that all regulatory requirements are met, based on <b>validation and assessment activities of operating organisation and</b> on inspections and reviews by regulatory body of:	The role of operating organisation in assessments of commissioning results etc shall be larger than regulators.	x			
ENISS	NUSSC	39	3.55(b)(ii)	1215	Processes and procedures for the control of modifications to the nuclear installation, including design modifications and their implementation <b>by graded approach</b> ;	Graded approach is necessary to be used.	x			
ENISS	NUSSC	40	3.56	1248	Include a nuclear safety culture programme in the list	(Comment is self-explanatory)	x			
ENISS	NUSSC	41	3.57	1276	Delete the paragraph	The information is too detailed for a license.			x	The text describes 'as necessary' and it is not recommended to delete this paragraph.
ENISS	NUSSC	42	3.64	1373	Propose add new clause (f): <b>(f) Proposed future operation timescale</b>	It would seem appropriate for the regulatory body to take account of planned future operating plans, e.g. a graded approach may be more appropriate if planned future operation was for a month rather than 10 years.	x			
ENISS	NUSSC	43	3.74 Foot note 8	1486	Decommissioning comprises: the preparation and approval of a detailed decommissioning plan; the actual decommissioning activities; the management of waste arising from these activities; demonstration that the decommissioning end point is achieved; and the updating of all existing safety related documents, as appropriate, including documents on nuclear security and emergency response, safeguards, and the plan for <b>cleanup remediation</b> of the site	"Remediation" in a decommissioning context should be "cleanup" (see the IAEA glossary)	x			
ENISS	NUSSC	44	3.76	1464	The decommissioning stage consists of one or more substages, which may be subject to <b>separate</b> regulatory approval or authorization. Different human resources and competences to those during operation are needed for decommissioning. Furthermore, staff motivation is crucial to maintaining a <b>strong safety culture in an installation that is undergoing decommissioning.</b>	For clarification	x			
ENISS	NUSSC	45	Appendix I I.1	1563	All the following documents should be <b>developed and</b> updated by the applicant or licensee...	Documents need to be created before they can be updated.	x			
ENISS	NUSSC	46	Appendix I I.1 (e)	1572	A <del>draft</del> plan for the project	Propose to delete word "draft"		Replaced with " <b>preliminary</b> ".		
ENISS	NUSSC	47	Appendix I I.1 (l)	1589	A preliminary safety analysis report before authorization to begin construction, which may include information on site evaluation, the <b>overall design basis-including AOO, DBA, DEC.</b>	See previous comment. "Design basis" is not considering DEC, that is an important part of the safety report.			x	According to the chapter 5 of SSR-2/1, "design basis" is not only limited to design basis accident, but also with various plant states.

ENISS	NUSSC	48	Appendix I I.1 (m)	1591	Plans relating to the <b>operating license organization(s)</b> and the application of <b>their</b> management system to all licensing steps;	The list item does not take into account that operating organization may not have been formed yet during the first licensing steps and that the licensee may change during the licensing process.		It is recommended to modify the text to "The preliminary plans".		The proposed modifications would change the original meaning. At this stage, a formal plan cannot be completed; however, reviewing the subsequent plans is still necessary.
ENISS	NUSSC	49	Appx II Title	1620	<b>SPECIFIC GUIDANCE FOR LICENSING OF SMALL MODULAR REACTORS</b>	As in the table of content. This seems more adequate. However, there are recommendations in this appendix which are not specific to SMRs.			x	The content of APP II relates to requirements applicable to SMRs, rather than being restricted to specific requirements for SMRs. Therefore, no modifications are recommended.
ENISS	NUSSC	50	Appendix II	1623	Consider including text on transportable SMRs	Appendix II covers SMRs but does not cover their potential transportation.			x	The IAEA is beginning work on the consideration of transportable SMRs, and it is premature to include it in this document.
ENISS	NUSSC	51	Appx II, footnote 9	1623	the set of characteristics of a project that defines its deployment <del>on the territory, geographically and temporally.</del>	To be deleted or rewritten to clarify the intended meaning		Proposal with simple words: In this Safety Guide, a "deployment model" refers to the features of a project that determine where and when it will be deployed. It also includes aspects related to how the project is managed.		
ENISS	NUSSC	52	Appx II	1643-1646	The licensing process of small modular reactors may also involve additional safety and regulatory considerations, particularly for those reactors that are constructed, commissioned, or decommissioned away from the site.	Safety recommendations in this guide are, for most of them, not so specific to SMR designs. This sentence should be placed line 1626/1627 to complete the general introduction to emphasise a bit more the SMR specifics that require the development of the appendix.	x			
ENISS	NUSSC	53	Appx II	1654	Influence from external stakeholders in relation to small modular reactors	This also applies to large reactors (not only SMRs). Are all the recommendations in this part really specific to SMR?			x	Please refer to the response to Comment No. 49 from ENISS.
ENISS	NUSSC	54	Appx II II.3	1655	These arrangements can lead to one or more organizations being stakeholders of the <b>different stages of development licensee</b> of a small modular reactor. The regulatory body should hold a single licensee responsible for safety for <del>each</del> all stages of the lifetime of the reactor regardless of commercial arrangements. The regulatory body should seek assurances on this licensee's organizational capability to effectively oversee safety considerations at all stages of the lifetime of the small modular reactor	The first introduction of "the licensee" seems to suppose that there is only one licensee, what is expressed by the sentence just after. This sentence allows to consider one licensee per stage. (one for design, one for construction...)? Is it the intent? The second sentence seem to say one Licensee per stage. Is it really the intent to have one Licensee per stage? If yes the relation between the licensees should be discussed (clear responsibility, ways to transfer the responsibility should be discussed). If not see suggestion for clarification.	x			
ENISS	NUSSC	55	Appx II II.3	1657	These arrangements can lead to one or more organizations being stakeholders of the licensee of a small modular reactor	If previous comment not considered: Should this rather be "shareholders"? or stakeholders which have a <b>direct role in the licensee organisation governance</b> ? Shareholders or stakeholders?			x	comment 54 adopted.
ENISS	NUSSC	56	Appx II II.4	1663	To fulfil its responsibilities, a licensee is expected to give an overriding priority to safety. Consequently, licenses should <del>not be under undue influence (financial or other) from external stakeholders that might interfere with its obligations with regard to decisions made provisions in terms of organization and fundings to ensure its obligations regarding any decision that can impact safety in the short and in the long term.</del>	This sentence is vague.  Is the negative form appropriate here in regard to para 3.7 of SF-1 (Since radioactive waste management can span many human generations, consideration must be given to the fulfilment of the licensee's (and regulator's) responsibilities in relation to present and likely future operations. Provision must also be made for the continuity of responsibilities and the fulfilment of funding requirements in the long term.) ?  A positive formulation on the need to provision fundings may be more appropriate. Hence the proposal.  Also, a link with para 2.37 (financial security) 2.41(j) and (k) may be made for consistency.	x			
ENISS	NUSSC	57	Appx II II.8	1692-1693	When <del>the licensee is</del> outsourcing activities, the regulatory body should <del>verify/ensure eonfirm</del> that the licensee will maintain:	The sentence seems to say that the Regulator is "outsourcing activities". See suggestion for clarification.	x			
ENISS	NUSSC	58	Appx II	1707	SITING A SMALL MODULAR REACTOR...	Is it worth to mention a reference to SSR-1 here?	x			
ENISS	NUSSC	59	Appx II II.8	1702	(h) Proper interface mechanisms and procedures for any activities <del>that are</del> outsourced to <del>several many</del> contractors	Not sure to understand. See suggestion for clarification	x			
ENISS	NUSSC	60	Appx II II.10(a) (ii)	1717	Any changes in the adjacent installation, <b>with direct relation to the small modular reactor (e.g. increase of power need, modification of electrical power supply,...) or in any other installation nearby</b> , do not negatively impact reactor safety;	Adjacent installation is a bit vague: is it the installation to which the SMR is "connected/providing power"? Or is this any other installation around? Both have to be considered. It may be worth to distinguish the installation power supplied by the SMR and the other installations around. The power supplied installation has constant interactions to be closely followed. The other installations have to be followed for the risks they may pose as part of their operation or evolution.	x			

ENISS	NUSSC	61	App II	1717	(ii) Any activities or changes to activities in the adjacent installation do not negatively impact reactor safety	Licensing needs to take account of the activities on any nearby industrial plant not simply changes. Indeed, the combination of hazards needs to be considered.	x		
ENISS	NUSSC	62	Appx II II.10(a) (iv)	1720	Where Shared systems are shared between the small modular reactor and the adjacent installation their operation and any change/modification have to be closely followed as part of the small modular reactor safe operation to <del>will</del> maintain the capability to perform their functions under all conditions	To be more precise, in line with previous comment.	x		
ENISS	NUSSC	63	II.11 (a)	1738	A 'certified design' model, where a reactor design is certified by a regulatory body or by several regulatory bodies together.	Collaborative reviews should be acknowledged and promoted.		is certified by a regulatory body or jointly by several regulatory bodies	minor word changes to proposal
ENISS	NUSSC	64	Appx II II.14	1754	A cross reference may be added to develop only additional points and refer to 3.9 for those already described	Para 3.9(a)(iii) is already discussing multi-unit sites.	x		cross-reference added
ENISS	NUSSC	65	II.15 (c)	1798	This may be achieved by direct oversight of manufacturing sites through qualification, certification, or licensing of the off-site facility or activity, or review of the same carried out by a regulator in another State.	Utilization of review carried out by another regulator should be promoted, especially when talking about assessing manufacturing facilities in another country.	x		
ENISS	NUSSC	66	App II	1816 to 1821	In addition, with reactor lifetimes projected to be many decades, it can be assumed that design changes will be needed over the reactor lifetime to cover improvements in design due to operating experience, as well as changes needed to support obsolescence of components (e.g. instrumentation and controls). As such, States need to be able to ensure they are capable of regulatory oversight over the lifetime of the facility.	This text is unclear. It is important to provide clarity on the regulatory cooperation model(s) which is recommended. This potentially impacts the applicant/licensee.		Changed to: As small modular reactors are expected to deploy more standardized designs worldwide, collaboration amongst regulatory bodies in different States may be necessary and regulatory bodies may choose to leverage work that has already been performed in another State. In addition, with reactor lifetimes projected to be many decades, it can be assumed that design changes will be needed over the reactor lifetime to cover, for example, improvements or changes in design due to operating experience, as well as changes needed to support obsolescence of components (e.g. instrumentation and controls). As such, States need to be able to ensure they properly understand and document how leveraged information was used in their decision making process, and also ensure that their documentation is done with enough detail that regulatory oversight capability can be maintained are capable of regulatory oversight over the lifetime of the facility.	changed to emphasize the relevance to leveraging information.
ENISS	NUSSC	67	App II	1815-1821	As small modular reactors are expected to deploy more standardized designs worldwide, collaboration amongst regulatory bodies in different States may be necessary. In addition, with reactor lifetimes projected to be many decades, it can be assumed that design changes will be needed over the reactor lifetime to cover improvements in design due to operating experience, as well as changes needed to support obsolescence of components (e.g. instrumentation and controls). As such, States need to be able to ensure they are capable of regulatory oversight over the lifetime of the facility.	This is not fundamentally different from large reactors. Standardization is also sought for large reactors.	x		Authors want to highlight this aspect for SMRs.
ENISS	NUSSC	28	3.21(b)	852	That there is adequate protection against external and internal hazards, as well as adequate provision/margin against levels of natural hazards more severe than those considered for design, derived from the hazard evaluation for the site.	The lessons learnt from the Fukushima Daichi events seems to be missed, despite a reference to SSR-2/1 where they have been considered. See suggestion. An alternative could be to develop a specific bullet point	x		
Finland	NUSSC	1	2.41	400	Please add a separate bullet "applicant or licensee shall carry out an independent review of the safety assessment before it is submitted to the regulatory body for review" or complement the bullets a) and c) with this issue.	Applicant/licensee is solely responsible for safety and independent review verifies applicant, licensee capacity to be a responsible licensee	x		
Finland	NUSSC	2	2.41	415	(e) The applicant or licensee should submit a procedure or description to the regulatory body 415 of the process for dealing configuration management with including managing modifications, which may be subject to approval by the 416 regulatory body. Alternatively, requirements for dealing with modifications may be 417 established directly in the regulations, and the regulatory body may then perform 418 inspections to verify that the licensee meets such requirements.	Configuration Management is a fundamental part to manage the modifications/ changes of license application, please see 3.33 and Appendix 2. e.g. II.7, II.8, II.13		(e) The applicant or licensee should submit a procedure or description to the regulatory body of the process for configuration management, including managing/dealing with modifications	language added to bullet (e)

Germany	CSS, NUSSC	3	1,7	1,7	While this Safety Guide focuses on safety at nuclear installations, interfaces between safety, security and safeguards aspects need also to be considered and evaluated by the regulatory body during the licensing process. The IAEA Nuclear Security Series covers security issues at authorized installations. <u>Aspect of safeguards are covered by further publications, see e.g. their list in the IAEA Safeguards Glossary 2012 Edition.</u>	Give references in which publications the aspects of safeguards are dealt with.	x			Reference to the IAEA Safeguards Glossary added.
Germany	CSS, NUSSC	2	1,3	20	... Moreover, in a given stage, there may be one or more 'hold points', set by national legislation and regulatory requirements, <u>such as excavation to rock head or formation level, first concrete, installation of major safety significant equipment, fuel on-site, entering commissioning, etc.</u> These hold points give the regulatory body the power to ensure that risks to people and to the environment from nuclear installations and their activities are properly controlled by the persons or organizations responsible for the nuclear installations and their activities	Please give a few examples of "hold points", otherwise Fig.1 is too abstract.  Examples, suggested in this comment, are from SSG-38.	x			
Germany	CSS, NUSSC	8	2,18	172	... In the <u>case</u> event that it is necessary to specify several licence conditions addressing various technical and administrative aspects, it may be useful to <u>group the conditions into categories</u> , such as: ...	As "event" is a fixed term, we suggest a rewording	x			
Germany	CSS, NUSSC	9	2,21	255	(q) Clear conditions should be established for public participation in the licensing process (see paras <u>2.45 – 2.48 2.44-2.47</u> ).	Wrong reference	x			
Germany	CSS, NUSSC	7	2,11	133	Once an application has been accepted and the initial <u>first</u> licence has been issued, subsequent licensing process activities and arrangements may be undertaken between the licensee and the regulatory body.	"Initial licence" is not defined. Can you please provide a definition? Alternative, suggestion is to change to "first licence".	x	"and a license has been issued"	"first" is not necessary	
Germany	CSS, NUSSC	10	2,33	346	The regulatory body is required to establish a management system (see para. 1.7 of IAEA Safety Standards Series No. GSR Part 2 <u>Leadership and Management for Safety</u> [9]).	Please include the title, as this publication is mentioned here for the first time	x			
Germany	CSS, NUSSC	11	2,37	377	(b) Clear procedures for analysing and endorsing any modifications (including temporary modifications) having an impact on safety (see also para. <u>2.37</u> );	Para. is referencing itself, please check	x			reference changed to 2.38
Germany	CSS, NUSSC	12	2,39	394	... Review, assessment and inspections performed by the regulatory body to confirm the existence and the application of such experience feedback should also be considered ( <u>further information is available in SSG-50, Operating Experience Feedback for Nuclear Installations</u> ).	Please insert a reference to SSG-50, "Operating Experience Feedback for Nuclear Installations"	x			reference will be added at the Reference section following Step 8
Germany	CSS, NUSSC	5	2,5	88	Licences and <u>further types</u> of authorizations are granted or denied in accordance with the national legal and governmental framework, and are required to cover all stages of the lifetime of the nuclear installation, namely, <u>which usually include</u> : site evaluation, design, construction, commissioning, operation and decommissioning (see para. 4.29 of GSR Part 1 (Rev. 1) [1]), until the installation is released from regulatory control.	1. According to the definition (IAEA Glossary) authorization could include, for example, licensing (issuing a licence), certification (issuing a certificate) or registration. We suggest to differentiate between the two terms ("authorization" and "licensing") as clearly as possible. If you agree with this comment, please apply all over the text, as para. 2.5 is not the only place, where the terms are mixed up. 2. Para. 4.29 of GSR Part 1 (Rev. 1), dealing with lifetime stages, is using the word "usually". And it's good like this, while the first lifetime stage somewhere else in current Safety Guide and in Fig.1 is referred to as "siting and site evaluation".	x		replaced "namely" with "which usually include"	
Germany	CSS, NUSSC	14	2,52	552	A graded approach to safety assessment should also take account of other relevant factors such as the <u>maturity of the licensee, maturity of technology (see DS537)</u> and complexity and ageing related issues relating to the nuclear installation and its activities.	Account should be taken to the maturity of technology as well. We believe that a reference to DS537 "Safety Demonstration of Innovative Technology in Reactor Designs" might be beneficial.	x			reference will be added at the Reference section following Step 8
Germany	CSS, NUSSC	15	2,52	561	... and the reliability and complexity of <u>structures</u> , systems and components (SSCs) and their accessibility for maintenance inspection, testing and repair.	Please introduce an abbreviation of SSC, as it is missing and is used further along in the text	x			
Germany	CSS, NUSSC	6	2,7	103	... Pre-licensing processes can include early engagement between vendors, licence applicants (or potential applicants) and the regulatory body. This approach may be especially applicable for first-of-a-kind designs <u>and designs with innovative technology</u> that are still in various stages of development (see also para. 2.28).	Please check if this statement is applicable to the designs with innovative technology as well (referring to DS537).	x			
Germany	CSS, NUSSC	17	3,15	785	The <u>base</u> design of the proposed nuclear installation should be such that safety requirements can be met in accordance with the design basis.	Clarification	x			
Germany	CSS, NUSSC	19	3,21	850	(a) That suitable <u>deterministic safety analyses for design basis accidents and design extension conditions</u> design basis analyses and beyond design basis analyses, fault tree analyses, and probabilistic safety assessments have been performed, as appropriate;	Clarification	x			
Germany	CSS, NUSSC	20	3,21	858	(f) That the main safety functions (i.e. <u>reactivity control or criticality issues, cooling aspects and containment integrity (1) control of reactivity; (2) removal of heat from the reactor and from the fuel store; and (3) confinement of radioactive material, shielding against radiation and control of planned radioactive releases, as well as limitation of accidental radioactive releases</u> ) will be fulfilled and that there is adequate reliability of the associated SSCs.	Please put the main safety function in line with SSR-2/1 (Rev. 1), Requirement 4.	x			
Germany	CSS, NUSSC	16	3,12	773	The design stage may include other tasks, such as a 'feasibility study', or a 'pre-licensing' step, depending on the national context (e.g. whether the State already has nuclear installations of the same type <u>or not</u> ).	Please add, as 'feasibility study' is mainly used for new facilities	x	"whether or not the State already has..."		

Germany	CSS, NUSSC	4	1.8 Line 3	55	... Recommendations specific to the various steps of the licensing process are provided in Section 3 <u>Section 4 provides recommendations on the licensing of small modular reactors and highlights key aspects of deployment models that should be taken into account throughout the licensing process.</u> Appendix I provides examples of documents to be submitted to the regulatory body. <del>Appendix II provides recommendations on the licensing of small modular reactors and highlights key aspects of deployment models that should be taken into account throughout the licensing process.</del>	The recommendations, dealing with small modular reactors, are written very well, being both generic and in line with the current state of knowledge and experience, and thus deserve a separate Section, not an Appendix. Is there anything that would speak against this?			x	Since Appendix II is only applicable to certain nuclear installations, it should be kept separate from the body of the document. In addition, inclusion of an Appendix is the format in the approved DPP
Germany	CSS, NUSSC	25	3,78	1476	... In the review, assessment and inspection of the decommissioning plan by the regulatory body, it should be verified that radioactive waste can be managed safely through existing and, as necessary, new <u>transporting routes.</u>	Clarification		x		
Germany	CSS, NUSSC	27	3,81	1489	The progressive and definitive shutdown of <del>systems and components</del> <u>SSCs</u> , important to safety should be adequately planned and managed by the licensee, and the regulatory body should review, assess and inspect for approval this shutdown or parts thereof, as appropriate, as part of the licensing process.	Clarification		x		
Germany	CSS, NUSSC	23	3,61	1361	<u>Recommendations are provided in IAEA Safety Standards Series No. SSG-25, Periodic Safety Review of Nuclear Power Plants [25].</u>	Please remove from the footnote and integrate into the main text			x	full footnote is captured under 3.60. Given that periodic safety reviews are not performed in every State, this reference will be kept in the footnote.
Germany	CSS, NUSSC	24	3,69	1424	The licensee should submit to the regulatory body for authorization the specifications for maintaining the safety, security and safeguards needs of the nuclear installation during long term shutdown <sup>2</sup> , <u>a state, during which the nuclear installation is not in operation, but which is different from refuelling, outage, maintenance, inspection or refurbishment; e.g., a nuclear installation may be in long term shutdown just before its decommissioning, or for economic, political and other reasons.</u> The regulatory body should review, assess and inspect such specifications and may attach conditions.	As the definition of "long term shutdown" is missing within IAEA Safety Standards Series, we would like to suggest incorporating such a definition here within this Safety Guide,			x	definition is captured in footnote
Germany	CSS, NUSSC	1	1.2 New footnote	14	This Safety Guide provides recommendations on meeting the requirements relating to authorization <sup>footnote</sup> by the regulatory body (in particular, Requirements 23 and 24) established in IAEA Safety Standards Series No. GSR Part 1 (Rev. 1), Governmental, Legal and Regulatory Framework for Safety [1].  <u>Footnote: The granting by a regulatory body or other governmental body of written permission for a person or organization (the operator) to conduct specified activities. Authorization could include, for example, licensing (issuing a licence), certification (issuing a certificate) or registration.</u>	As the current Safety Guide operates with both the terms "licensing" and "authorization", we suggest to add an explanation/ definition to "authorization", similar to footnote 5 in GSR Part 1 (Rev. 1). This will make the document more reader friendly.  Alternatively, such a footnote might be included in para 1.1, where "authorization" is mentioned for the first time.			x	
Germany	CSS, NUSSC	28	3,87	1534	.. and IAEA Safety Standards Series No. WS-G-5.1, Release of Sites from Regulatory Control on Termination of Practices [32], <u>under revision as DS542).</u>	Clarification			x	note of the revision is captured in the reference section
Germany	CSS, NUSSC	13	2.43(h)	473	(h) Any limits on operation and use (e.g. dose limits, discharge limits, <u>emergency action levels, limits on the duration of the licence).</u>	What exactly are action levels? Emergency action levels? Please add.		x		
Germany	CSS, NUSSC	18	3.20 New Issue Last Issue	847	<u>Recommendation from SSG-88 "Design Extension Conditions and the Concept of Practical Elimination in the Design of Nuclear Power Plants" should be addressed as well.</u>	Please add reference to the new SSG-88		x		
Germany	CSS, NUSSC	21	3.25(i)(i)	915	(i) Analytical methods and computer codes used in the safety analyses and the verification and validation of such codes in relation to: (i) Radioactive discharges and radioactive releases into the environment, and radiation exposure of workers and the public during normal operation, <u>anticipated operational occurrences</u> , and under accident conditions, including possible events with a very low probability of occurrence;	Clarification		x		
Germany	CSS, NUSSC	22	3.50.	1175	... The regulatory body should review and assess any proposed changes to the <u>operational</u> limits and conditions.	Clarification		x		
Germany	CSS, NUSSC	26	3.80.	1483	As part of the licensing process for a nuclear installation, the decommissioning plan should be reviewed, assessed and inspected by the regulatory body to verify that decommissioning activities can be accomplished safely with a progressive and systematic reduction of radiological hazards ( <u>further recommendations on such a reduction are to find in SSG-90, Radiation Protection Aspects of Design for Nuclear Power Plants</u> )	Reference to newly published SSG-90 may be beneficial.		x		Reference to SSG-90 added
Germany	CSS, NUSSC	29	II.14(e)	1765	(c) When different reactor designs are proposed for a single site, separate licenses should be necessary for each reactor design because of the likelihood of significant differences in construction, operation, commissioning, <del>operation and maintenance and decommissioning</del> <u>introduced by the design.</u>	Typo		x		
Germany	CSS, NUSSC	30	II.14(d)	1771	... For modules that share safety systems, licensees should ensure that safety functions are demonstrated to be available for all modules/units <del>when needed in all cases.</del>	Safety functions must be available constantly.		x		
Germany	CSS, NUSSC	31	II.14(h)	1784	(h) The licensee should implement an emergency plan for the entire site. The licensee should ensure that processes are implemented so that shared personnel or services are available when needed for safety, or security or <u>emergency reasons.</u>	Clarification		x		

Germany	CSS, NUSSC	32	II.15(f)	1812	(f) The licensing process should ensure there are adequate provisions for testing after transport of a reactor module <u>to the deployment site.</u>	Clarification	x			
Germany	CSS, NUSSC	33	II.16	1823	When leveraging information from another regulatory <u>body/bodies</u>	Put in line with II.17	x			
Iran	NUSSC	2	2.5	88	Licences and <u>other kinds of</u> authorizations are granted or denied ...	According to IAEA Glossary (2022); Licence is a form of authorization.	x			
Iran	NUSSC	4	3.10.	586	(f) Decommissioning/ <u>closure</u>	For disposal facilities the term "closure" is used.		(a) Decommissioning (or closure for certain installations)		
Iran	NUSSC	6	3.5	682	The site evaluation should also consider the feasibility of emergency planning efforts, <u>considering geographical and logistical factors (e.g., accessibility for emergency services, population evacuation routes).</u>	In order to complete the content and role of emergency management	x			
Iran	NUSSC	3	2.10.	129	Licence or <u>other kinds of</u> authorizations	According to IAEA Glossary (2022); Licence is a form of authorization.	x			
Iran	NUSSC	5	3.90.	1550	Before termination of the <u>decommissioning</u> license and release of the site from regulatory control	After termination of decommissioning, another license should be obtained for release of the site from regulatory control. So, it's better to clarify it.			x	A separate license may not be needed in all States. It's possible that other forms of approval will be used.
Iran	NUSSC	7	3.85	1525 (New bullet)	(j) <u>EPR plan should be updated</u>	To deal with new radiological hazards	x	(j) Emergency preparedness and response plans.		inclusion of comment from other SSC member
Iran	NUSSC	1	3.45(c)(iii)	1134 (New bullet)	<u>The provisions for fire protection</u>	In the case of nuclear power plants, the applicable fire protection system shall be fully operational before the initial fuel loading in the reactor unit. Likewise, in the case of nuclear installations other than reactors, the applicable fire protection system shall be fully operational before the facility is commissioned. However during pre-commissioning stage, when supplies of hazardous materials arrive at plant site, adequate interim arrangement for fire protection shall be provided for the same	x			
Israel	NUSSC	1	1.3	18	Consider adding: "These stages include the six major stages of the lifetime of an authorized facility as defined in IAEA Safety Glossary [REF*]"  *Reference: [INTERNATIONAL ATOMIC ENERGY AGENCY, IAEA Safety Glossary: Terminology Used in Nuclear Safety and Radiation Protection (2007 Edition), IAEA, Vienna (2007).]	Add reference to define the stages of regulation discussed in the document.	x			
Israel	NUSSC	4	2.21	255	"See paras 2.45-2.48"	The suggested paras are discussing "public participation"	x			
Israel	NUSSC	5	2.26	298	Consider adding: "...wishes to undertake", the main risks associated with the activity and the time duration for the required license;"	Submission of introductory risk assessment and time frame required, within the application of a new license, could significantly benefit and expedite the licensing process for the regulatory body and the operator.	x			
Israel	NUSSC	2	2.20.	192	Consider adding: "For power reactors licensing, <i>the safety analysis report is ...</i> "	The DS is discussing all nuclear installation, and the safety analysis report mentioned here is related mainly to power reactors, and include parts that are not relevant to other installations.		"For nuclear power plants, primarily, the safety analysis report..."		for consistency in language
Israel	NUSSC	3	2.21	208	Consider clarifying, or adding reference describing the 'Regulatory regime: prescriptive, non-prescriptive or goal setting.'	The terms are not defined in the IAEA glossary.		deleted (prescriptive, non-prescriptive or goal setting)		the parenthetical did not add value.
Israel	NUSSC	8	2.38	388	Consider adding: " <i>Further recommendations</i> related to nuclear power plans..."	The document is discussing all nuclear installation and the reference mentioned hereby is related only to nuclear power plans,	x			
Israel	NUSSC	6	2.35	367	Consider adding: "(f) abnormal occurrence related to safety".	Among the conditions mentioned for request of a reassessment of safety in nuclear installation, an occurrence of abnormal event might also cause such request by the regulatory body.		added, "After a safety-significant event or accident."		based on comment from other SSC member
Israel	NUSSC	7	2.37	379	Clarification	Consider clarifying what would be a proof of trustworthiness, by providing a criteria, example or relevant reference.	x			Reference to NST document added to 2.37, which includes guidance on trustworthiness determination
Israel	NUSSC	9	3.1	585	Consider adding: (e) <i>Operation</i> (which may include maintenance, refueling, in-service inspection, extended shutdowns and other associated activities)."	The term "operation" should be clarified to some extent in accordance with IAEA glossary.	x			
Israel	NUSSC	11	3.17	805	"to ensure that the SSCs"	Typo- "and" instead of "the"?	x			
Israel	NUSSC	12	3.36	1035	Consider adding: "Security and safeguards implementations..."	Security might also cause design modifications that interfere with safety.	x			
Israel	NUSSC	14	3.68	1419	Consider writing: "... may decide to renew, amend, suspend or revoke the operating license for the nuclear installation"	Written from best to worse and not vice versa (positivity).	x			
Israel	NUSSC	16	3.83	1497	Consider adding: "...where <i>off-site decommissioning is considered</i> (see Appendix II para. II.15)..."	The term "off-site decommissioning" is partly explained in Appendix II para. II.15 of this document, please consider referring to the appendix.	x			
Israel	NUSSC	10	3.9	725	Consider adding: ...for <i>aircraft crashes</i> and security risks).	Security risks are part of human induced risks describe in this paragraph,	x			
Israel	NUSSC	17	Appendix I, 1.1	1568	clarifying: "provisions for decommissioning"	Consider adding footnote or reference clarifying: "provisions for decommissioning": whether it is design features to facilitate decommissioning, record keeping of construction for the decommissioning stage or other option.		changed to "considerations"		
Israel	NUSSC	13	3.40.	1084	Clarification	Consider clarifying the word "expectations" in this context,	x			changed to information

Israel	NUSSC	15	3,74/ footnote 8	1486	Consider replacing the term "remediation" with "cleanup"	See IAEA glossary- "decommissioning"	x		
Japan	NUSSC	1	1,6	44	This Safety Guide provides recommendations on how the licensing process should be applied at the various stages of the lifetime of a nuclear installation (siting and site evaluation, design, construction, commissioning, operation and decommissioning) until release from regulatory control. <u>Interactions between the regulatory body and the applicant or licensee (including pre-licensing stage) are also discussed to improve safety of installations and/or to define predictability of regulations for innovative applications.</u> Recommendations on the application by a regulatory body of a graded approach to the licensing process are also provided in this Safety Guide.	Clarification for the scope of interactions between the regulatory body and the applicant or licensee (including pre-licensing stage).		"Interactions between the regulatory body and the applicant or licensee (including during pre-licensing) are also discussed."	additional language is sufficient
Japan	NUSSC	4	2,7	99	In developing a licensing process, consideration should be given to 'pre-licensing' processes, for example, steps that provide for early approval or <del>feedback of potential sites and feedback on plant designs, plant construction or operation. Pre-licensing processes can include early engagement between vendors, licence applicants (or potential applicants) and the regulatory body.</del> This approach may be especially applicable for first-of-a-kind designs that are still in various stages of development (see also para. 2.28). A pre-licensing process should be designed to help minimize duplication of effort through the different steps and, where appropriate, allow for some steps to be conducted in parallel. It should also establish a clear division of responsibilities at the various steps, between regulators, vendors and operating organizations and give the public opportunities for early participation. Any such processes should ensure that the most important safety issues (including their interactions with security and safeguards) are dealt with properly in the pre-licensing phase. Further recommendations are provided in para. 3.2. <u>In any case of pre-licensing activities, openness and transparency of the interaction among vendors, licensees and the regulatory body should be made assured through active involvement of the public, in order to achieve common understandings among those interested parties.</u>	(1) Clarification for "feedback of potential sites and feedback". (2) No need for "plant" here. (3) It is beyond a step to have some engagement between regulatory body and licensee prior to formal application. (4) Should be clarified with transparency.		2.7 In developing a licensing process, consideration should be given to 'pre-licensing' processes, for example, steps that provide for early approval or feedback on potential sites and feedback on the design features for construction or operation of nuclear installations. Pre-licensing processes can include early engagement between vendors, licence applicants (or potential applicants) and the regulatory body. This approach may be especially applicable for first-of-a-kind designs and designs with innovative technology that are still in various stages of development (see also para. 2.28). A pre-licensing process could be designed to help minimize duplication of effort through the different steps and, where appropriate, allow for some steps to be conducted in parallel. It should establish a clear division of responsibilities at the various steps, between regulators, vendors and operating organizations and could include options for early public information. Any such processes should ensure that the most important safety issues (including their interactions with security and safeguards) are dealt with properly in the pre-licensing phase. Further recommendations are provided in	The intent of the proposed text has been mostly incorporated, except for (3) and (4). Some States may have pre-licensing engagement with a licensee. Proposal under (4) conflicts with multiple other commenters who noted that active public participation is not necessarily required for pre-licensing.
Japan	NUSSC	5	2,28	314	Pre-licensing interactions (see para. 2.7) with the vendor and the potential licensee are encouraged, <u>with due account taken of transparency and openness to the public.</u> These pre-licensing interactions not only benefit the regulatory body, but they also benefit vendors and potential licensees because they allow for early identification and resolution of technical and policy issues that could affect licensing. This is particularly important for non-water-cooled reactors and small modular reactors because they are often first-of-a-kind. <del>A good practice is to include an</del> <u>An assessment of safety, security, and safeguards needs in pre-licensing interactions may be addressed, including the interfaces between each of these areas. Relevant information and results of this interaction should be made available to the public promptly.</u>	(1) To be transparency and openness to the public is perquisites to licensing process. (2) It is not clear whether this practice is good, because of lack of actual example, and then should be deleted. (3) Especially pre-licensing interactions between regulatory body and the vendor or the potential licensee have to be open to the public.		"Design features and an assessment of safety, security, and safeguards needs, may be addressed"	proposed addition on public engagement conflicts with changes to 2.7 from other SSC members
Japan	NUSSC	9	2,54	571	A graded approach should be applied to emergency preparedness and response requirements (see para 4.19 of GSR Part 7[x]). If a nuclear installation is sited near industrial sites or population centres, the impact of an emergency could have a significant impact on the nearby industrial site or population. Additionally, the impact of size, technology and possible underground siting of the nuclear installation should be assessed.	For the purposes of these safety requirements, assessed hazards are grouped in accordance with the emergency preparedness categories shown in Table 1. The five emergency preparedness categories in Table 1 of GSR Part 7 establish the basis for a graded approach to the application of these requirements and for developing generically justified and optimized arrangements for preparedness and response for a nuclear or radiological emergency.	x		Reference to GSR Part 7 added

Japan	NUSSC	10	3,2	598	<p>The licensing of nuclear installations typically involves discrete steps, as described in this Safety Guide, especially for States that are planning a first nuclear installation. .... Pre-licensing interactions between the applicant and the regulatory body <del>can</del> <u>may</u> be beneficial for such combined licences. The elements of such an alternative licensing process might include the following steps:</p> <p>(a) Early site permits....</p> <p>(b) Certified standard designs....</p> <p>(c) Manufacturing licence. In such a licensing process, an applicant may apply for a licence, to manufacture a nuclear power reactor, notwithstanding that the application for a licence to construct, commission and operate a nuclear installation may not be yet filed. <del>An applicant could be allowed. It would be essential</del> to refer to a certified standard design as part of its application for a manufacturing licence.</p> <p>(d) Combined licence. In such a licensing process, an applicant can apply for a single licence to construct, commission and operate a nuclear installation.....</p> <p>Very few key hold points — such as fuel loading, power increase, addition of <u>another type of installations or</u> modules, or other technical points, as appropriate — may be imposed on the licensee. In such a simplified licensing process, an applicant could be allowed to refer to an early site permit and a standard design certification as part of its application for a combined licence for construction, commissioning and operation of a nuclear installation.</p>	<p>It is not always to be beneficial, as these interactions would be deemed as adhesion between the applicant and the regulatory body.</p> <p>(c) Manufacturing license should be issued based on certified design.</p> <p>(d) Every type of installations may be applied.</p>	<p>"can" changed to "may"</p> <p>it may not be required that the manufacturing license is based on a certified design.</p> <p>"another type of installation or" added.</p>		
Japan	NUSSC	14	3,23	869	<p>Safety analyses of the design should be performed (or else reviewed) by the licence applicant <u>or licensees, using proven code appropriate for purpose</u>, in accordance with its management system and should be used to specify (or improve) the following:</p> <p>.....</p>	<p>(1) Addition of "licensees" corresponds to "(or improve)".</p> <p>(2) At the same time, use of proven code is added as stated in SSG-12 para. 3.22.</p>	x		
Japan	NUSSC	17	3,47	1149	<p>Commissioning of a nuclear installation is <del>expected to be often</del> divided into two main stages: (1) non-nuclear commissioning before the introduction of radioactive material (also called 'cold commissioning' or 'inactive commissioning'); and (2) nuclear commissioning after the introduction of radioactive material (also called 'hot commissioning' or 'active commissioning').</p>	Better expression.	x		
Japan	NUSSC	19	3,49	1163	<p>Nuclear commissioning is a major step in the licensing process performed to confirm that the nuclear installation is safe before proceeding to routine operation. Commencement of nuclear testing should normally require an authorization or additional licence from the regulatory body since it involves the introduction of radioactive material (see <u>para 6.3 of SSR-2/2 (Rev.1), for example Requirement 7 of IAEA Safety Standards Series No. GSR Part 3, Radiation Protection and Safety of Radiation Sources: International Basic Safety Standards (24)</u>).</p>	The message of this paragraph is more related to para 6.3. of SSR-2/2 (Rev. 1).	x		Remove reference to GSR Part 3 [24]
Japan	NUSSC	11	3,5	681	<p>Site evaluation is analysis of those factors at a site that could affect the safety of a facility or activity on that site [2]. This includes site characterization, including external hazard development, and consideration of factors that could affect the safety features of the nuclear installation or its activities and result in a release of radioactive material and could affect the dispersion of such material in the environment. The site evaluation to be reviewed, assessed and approved by the regulatory body should also consider the potential impact of the nuclear installation and its activities on the environment, and a preliminary assessment should be performed to verify that no incompatibilities are foreseen. <del>The site evaluation should also consider the feasibility of emergency planning efforts. The feasibility of planning effective emergency response actions on the site and in the external zone is required to be evaluated (see Requirement 13 of SSR-1).</del></p>	Proper reference as requirement referred to SSR-1 requirement 13.	x		
Japan	NUSSC	15	3,26	924	<p>The regulatory body should ensure that the applicant has verified the adequacy of design parameters and site specific data in relation to safety criteria of the specified design basis (e.g. for protection against hazards, for cooling). <u>In the case of design Designs</u> without substantial operating experience, <u>licensees</u> may have to employ additional features. These features should aim to provide enough margin to overcome uncertainties in the design due to the lack of operating experience. <del>These may include additional instrumentation, start-up control, operational controls, commissioning tests, or controls during early operations.</del></p>	<p>(1) Clarification. "Licensee" is the subject to employ additional features.</p> <p>(2) Examples presented may be seemed as conventional aspects of technology, therefore suggested to show more specific topics to design without substantial operating experience.</p>	<p>(1) added, "the applicant or licensee"</p>		



Japan	NUSSC	12	3,9	739	There are a number of factors that are required to be adequately considered in determining the suitability of the site (see Requirement 4 of SSR-1 [12]). ....To meet the requirements established in SSR-1 [12], the following important factors for the licensing process for nuclear installations are required to be reviewed, assessed and inspected by the regulatory body, applying a graded approach, as appropriate: (a) Factors dealing with the risks for the nuclear installation: (i) – (iv) ..... (v) Where a nuclear installation would provide end-products (e.g. power, heat, electricity, hydrogen) to a nearby industrial or municipal user, the interactions and external hazards between the nuclear installation and end-product users should be evaluated for their safety implications. For example, <u>the arrangement should be implemented so that</u> economic considerations of the end-product user <del>should</del> <u>do not affect safety of the nuclear installation.</u>	Specific recommended practices should be mentioned for user friendliness.	x		
Japan	NUSSC	6	2.30.	324	The regulatory framework should also empower the regulatory body to make regulatory decisions and to grant, amend, suspend, transfer, or revoke licences, conditions or authorizations, as appropriate.	Move this paragraph after para 2.25 as sub-title 'ROLES AND RESPONSIBILITIES OF THE REGULATORY BODY FOR LICENSING OF NUCLEAR INSTALLATIONS'	x		
Japan	NUSSC	18	3,48	1154	Non-nuclear commissioning is performed to ensure, to the extent possible, that the nuclear installation has been constructed, and the equipment has been manufactured and installed, correctly and in accordance with the design specifications. The results of the non-nuclear commissioning should be used to inform the subsequent licensing process. If non-nuclear testing is performed at the manufacturing site, the licensing process should <del>consider check</del> the validity of these tests once the equipment is brought and installed on the operating site.	Better expression.		changed to "assess"	word choice
Japan	NUSSC	21	3,61	1339	Safety reviews should be performed on a periodic basis or when requested by the regulatory body for any of the following reasons: (a) If there are substantial developments in safety standards and guides, practices, and analytical methods, or significant lessons learned from operating experience. (b) To determine the effects of ageing at the installation <del>and (b1) in case of major evidence of changes in external hazards.</del> (c) <del>When a substantial part of the installation, such as a reactor, is replaced.</del> (g) <del>To determine what testing or safety review needs to be done on part of</del> When a nuclear installation that is put into service after a prolonged period of time after testing <del>has been completed.</del>	Bullet (b) includes two different issues, then suggested to divide.  Bullet (c) is activity carried out by licensee and no action may be carried out by regulatory body.  Bullet (g): Prevent duplication. "Safety review" appears in the first paragraph and bullet (g).		change to (b) accepted.  change to (c) not accepted  change to (g) accepted	(c) safety reviews should be performed by the licensee when there are replacement of substantial parts of the installation.
Japan	NUSSC	8	2.41(d)	412	The applicant or licensee for a nuclear installation has the following obligations: ..... (d) The applicant or licensee should exercise control over <u>all of</u> the work of contractors, <u>especially</u> when outsourcing licensed activities, understand the safety significance of this work ('intelligent customer' capability) and take responsibility for its implementation.	The applicant or licensee should always control all of contractors.	x		
Japan	NUSSC	2	1.8. APPENDIX	56	Recommendations on the licensing process, including basic licensing principles, the content of a licence, public participation, and the roles and responsibilities of the regulatory body, applicant and licensee, are provided in Section 2. Recommendations specific to the various steps of the licensing process are provided in Section 3. Appendix I provides examples of documents to be submitted to the regulatory body. <del>Appendix Annex II provides recommendations possible practices</del> on the licensing of small modular reactors and highlights key aspects of deployment models that should be taken into account throughout the licensing process.	Premature to take Member States' practices of recommendations for licensing process in SMR.  Should be taken as annex then change to appendix if there were practices.			x  We understand your perspective; however, the approved DPP included an Appendix on specific guidance for licensing of SMRs. The recommendations included in Appendix II are sufficiently high-level to apply to multiple MS.
Japan	NUSSC	3	2,2	2.2.	A licence is a product of the authorization process, usually covering a particular stage of the lifetime of a nuclear installation. The term 'licensing process' is often used for nuclear installations; it includes all licensing and authorization processes for a nuclear installation and its activities. <u>Licensing Authorization</u> may take different forms, such as certification, granting of a permit, agreement, consent, regulatory approval or granting of another similar regulatory instrument, depending on the governmental and regulatory framework of the particular State.	Better wording.			x  this section is focussed on the broader area of licensing.
Japan	NUSSC	7	2,31	327	The regulatory framework should empower the regulatory body to conduct reviews, assessments and inspections of: (a) The applicant's evidence of and plans to meet regulatory requirements regarding its competence (including the competence of contractors) and capability and the <del>safety case</del> <u>safety analysis report</u> for the nuclear installation and related activities; (b) The descriptions and claims in the documentation of the applicant or licensee; (c) The licensee's compliance with regulations, safety objectives, principles, requirements and criteria, the <del>safety cases</del> <u>safety analyses analysis report</u> , and the conditions of the licence; (d) The continued competence and capability of the licensee (and of its contractors and subcontractors) to meet the actual authorization, licence or <u>regulatory requirements</u> .	For the most of nuclear installations, "safety case" is not used, but "safety analysis report" is commonly used. The same is comment on paras 3.2, 3.46 and II.15.			x  safety case and safety analysis report are not equivalent. Safety case is defined in the IAEA Glossary

Japan	NUSSC	23	Appendix II.1	1623	<p>The characteristics of small modular reactors and their associated deployment models introduce a <u>few number of</u> differences compared to those of land-based large nuclear power plants [5], ranging from factory manufacturing and testing to factory construction, and new programmes for maintenance and decommissioning. <u>However, it should be recognized that those stages such as siting, design, construction, commissioning, operation and decommissioning are six major stages of the lifetime of an authorized facility and of the associated licensing process (see ref [2]), and small modular reactor should also follow this basic stage of its lifetime.</u> For example of <u>differences</u>, the following list shows the potential stages of the lifetime of a small modular reactor, noting that each of these stages might not be needed for all small modular reactor designs:</p> <p>(a) Siting and site evaluation;  (b) Design;  (c) Off-site construction or manufacturing;  (d) Off-site commissioning;  (e) Transport (both to and from facility);  (f) On-site construction;  (g) On-site commissioning;  (h) Operation;  (i) On-site decommissioning;  (j) Off-site decommissioning;  (k) Release from regulatory.</p>	<p>Siting, design, construction, commissioning, operation and decommissioning are normally used to delineate the six basic stages of the lifetime of an authorized facility and of the associated licensing process. SMRs are also required to follow this basic process with some additional tasks in these stages. For example, bullet (d) is one method of “commissioning stage”, and bullet (c) and (f) are also alternative method of construction. In this context, the differences are not so much, compared to those of land-based large nuclear power plants.</p>	<p>"a number of" changed to "some"  additional sentence incorporated</p>	<p>quantifying the number of differences is difficult at this stage.</p>
Japan	NUSSC	16	3.46	1144	<p>There may be some overlap between the construction, commissioning and operation stages in that individual SSCs, or an entire reactor, may already be commissioned or in operation before construction of the entire nuclear installation is complete. The licensee should demonstrate that the safety <u>esse-analysis report</u> considers all potential interactions between collocated units or nuclear installations and their safety implications.</p>	<p>For the most of nuclear installations, safety case is not used, but 'safety analysis report' is commonly used.  The same comment is applied to paras 3.2. and appendix II.15.</p>	<p>x</p>	<p>safety case and safety analysis report are not equivalent. Safety case is defined in the IAEA Glossary</p>
Japan	NUSSC	20	3.56	1245	<p>The following operational programmes should be established by the licensee before operation and implemented throughout the operation of the nuclear installation. The regulatory approach to reviewing, assessing and inspecting such programmes should be graded in accordance with the type of nuclear installation and its activities. Consideration should be given to <u>accommodate individual shared</u> programmes between nuclear installations and installations with multiple modules. The following programmes may be subject to approval by the regulatory body, as appropriate:</p>	<p>Operational programme may be developed by each licensee for each installation respectively, so the concept of shared programmes is questionable.</p>	<p>x</p>	<p>shared programmes are often implemented for many of the operational programmes listed in 3.56.</p>
Japan	NUSSC	27	Appendix II.10	1707	<p>SITING A SMALL MODULAR REACTOR NEAR AN INDUSTRIAL SITE OR POPULATION CENTRE  A small modular reactor can be used for purposes other than electricity production, such as heat production for district heating or industry, hydrogen production or desalination. This may involve installing reactors near another industrial site or a population centre. <u>Especially, it is the most important issue to evaluate the feasibility of planning effective emergency response actions on the site and in the external zone in accordance with requirement 13 of SSR-1.</u> In some cases, part of the nuclear installation might have an interface with the neighbouring industrial site and be separated by a single barrier (e.g. a heat exchanger). In such cases:  (a) Deployment of a small modular reactor near an industrial site may need additional planning and coordination to ensure that:  (i) There are adequate arrangements for emergency preparedness and response;  (ii) Any changes in the adjacent installation do not negatively impact reactor safety;  (iii) Major activities at the industrial site, such as heavy lifting, blasting or excavation do not negatively impact reactor safety;  (iv) Shared systems will maintain the capability to perform their functions under all conditions.  (e) When deploying a small modular reactor near a population centre (e.g. to provide district heating), the licensee <u>should is also required to</u> assess the impact of an emergency on the surrounding population and environment. Size, technology, location, and possible underground siting of the installation, along with remoteness of the community might affect the impact significantly.</p>	<p>It would be the most important issue to evaluate the feasibility of planning effective emergency response actions.  Bullet (e); Assessment of the impact of an emergency on the surrounding population and environment is requirement in installing nuclear reactor near a population centre is requirement.</p>	<p>proposed addition to introductory paragraph not accepted.  Proposed change to (e) accepted</p>	<p>proposed additional text is covered by II.10(a)(i)</p>
Japan	NUSSC	24	Appendix II.2	1647	<p>The <u>recommendations in this Safety Guide practices in this Annex</u> are generally applicable to small modular reactors. This appendix highlights the potential impact of the new deployment models for small modular reactors on the licensing process and provides additional considerations to ensure that regulatory bodies are able to license different types of nuclear installation and have adequate capabilities and resources for their regulatory activities.</p>	<p>It is not so mature enough to describe as recommended practices.</p>	<p>x</p>	<p>this sentence is noting that the recommendations of SSG-12 are generally applicable to SMRs, in addition to other nuclear installations. It is not referring to the recommendations in Appendix II.</p>

Japan	NUSSC	13	3.21(a)	850	In preparing an application for a licence for the design of a nuclear installation, the following should be verified by the licensee: (a) That suitable design basis analyses and <del>beyond design extension conditions basis</del> analyses, <del>fault tree analyses</del> , and probabilistic safety assessments have been performed, as appropriate;	(1) "beyond design basis" should be replaced by "design extension condition", which is used in design for nuclear installations. (2) A "fault tree analyses" is one element of PSA, therefore "fault tree analyses" is suggested to be deleted.	x			
Japan	NUSSC	29	Appendix II.14 (b)	1761	<b>Multiple units/modules or replacement of major components of a small modular reactor at a single site</b> II.14 Some deployment models for small modular reactors could allow for different reactor types or the addition or replacement of reactor units or modules or major components or systems at various times throughout the lifetime of the facility. This may include replacing the entire reactor module when the fuel is spent; replacing an entire reactor assembly, or replacing the entire facility. Additional units/modules may be in close proximity to or sharing the same infrastructure as operating modules. The potential for evolution of design over time could mean differences among the modules installed at a single facility. As such: (a).... (b) A licensing activity that considers multiple modules of essentially the same design at a facility may undergo a single review and safety evaluation by the regulatory body <u>in the case of these modules are applied at the same time. If the licensing timing is different, it should be carefully considered.</u> (c) ...	Some terms make confusion. Please clarify the following terms used in this paragraph; - reactor units - reactor modules - entire reactor module - reactor assembly - entire facility  (b) It depends on the licensing timing, so should be carefully considered.		Terminology modified (reactor assembly was removed), and a reference to TECDOC-1936 was added.		
Japan	NUSSC	30	Appendix II.14 (d) (h)	1767	(d) The licensing process should consider the possibility of incrementally bringing modules/units into and out of service as well as the replacement of modules. This should include how construction, commissioning, operation, and decommissioning of a module might impact the other modules. <del>For modules that share safety systems, licensees should ensure that safety functions are demonstrated to be available for all modules/units when needed. Even in these occasions, fundamental safety function of remaining individual reactors is required to be maintained with their own items important to safety.</del> ... (h) The licensee should implement an emergency plan for the entire site. The licensee should ensure that processes are implemented so that shared personnel or services are available <u>in addition to individual nuclear installation personnel</u> , when needed for safety or security reasons.	Bullet (b): any items to perform safety systems should not be shared with other installations. It is not consist with SSR-2/1 (Rev. 1) requirement 33 and it should be carefully discussed in future.  Bullet (h): in the event of hazardous phenomena, concurrently, dedicated staff for responding such event in each installation is needed.		Change to (b) accepted.  Change to (h) not accepted.		a nuclear installation with multiple units is able to share personnel for certain situations.
Japan	NUSSC	31	Appendix II.15	1786	OFF-SITE CONSTRUCTION, COMMISSIONING, AND DECOMMISSIONING Some deployment models for small modular reactors ( <del>including transportable nuclear power plants</del> ) propose to perform some of the manufacturing, assembly, and commissioning activities at the manufacturing site, possibly prior to the identification of an operating licensee. Some deployment models also propose of off-site decommissioning. For such cases: (a) .... (b) The regulatory body should review, assess, and inspect licensee provisions for the oversight of activities important to safety, including those performed off the site. <del>These provisions, as well as the regulatory body's oversight, should follow a graded approach, that is they should be proportionate to the safety-significance of the systems being manufactured, assembled, and tested off the site. The same level of practices on review, assessment and inspection is applied to small modular reactor as those of conventional power reactors, with some consideration of configuration of reactors.</del> .... (f) The licensing process <u>for transportable nuclear power plants</u> should ensure there are adequate provisions for testing <u>before and</u> after transport of a reactor module.	Among the bullets in this paragraph, features inherent to transportable nuclear power plants is bullet (f) and then suggested to be moved to bullet (f).  Concerning bullet (b), regulatory review, assessment and inspection for existing nuclear reactors should be applied equally to every type of reactor.		parenthetical in the first paragraph removed.  additional text to (b) incorporated, but language on graded approach was retained.		consideration of graded approach should be retained.
Japan	NUSSC	28	Appendix II.11 (b)	1741	<b>Standardized fleet deployment for small modular reactors</b> Possible approaches to fleet deployment of small modular reactors include: (a) A 'certified design' model, where a reactor design is certified by a regulatory body. Once a design is certified, licensing efforts then focus on site-specific aspects and any changes to the certified design. (b) A deployment model where the design may be modified from one plant to the next. For this model, <u>the regulatory body is required to review first-of-a-kind of reactor as same level of assessment as certified design described above, and then its efforts will</u> focus on the differences from one plant to the next for both the design and site-specific aspects.	First-of-a-kind should be assessed as same level as assessment for design certification.	x			
Japan	NUSSC	25	Appendix II.4	1663	To fulfil its responsibilities, a licensee is <del>expected</del> <u>required</u> to give an overriding priority to safety. Consequently, licensees should not be under undue influence (financial or other) from external stakeholders that might interfere with its obligations with regard to decisions that can impact safety.	Better expression.	x			

Japan	NUSSC	26	Appendix II.6	1673	<b>License transfer for small modular reactors</b> During the lifetime of a small modular reactor, for some designs, the licence may be transferred from one organization to another, <del>which would</del> <b>but any transfer of licenses should not</b> impact the <b>basic</b> licensing process. The regulatory body should ensure that there is a process for a licence transfer in which the regulatory body ensures the new licensee is capable of maintaining safety, as well as the arrangements for nuclear security and safeguards. For example: (a) An application by the recipient organization should be submitted to the regulatory body and should demonstrate the applicant's capability and capacity to meet regulatory requirements. <b>This includes any proposals of significant changes in the licensed activities.</b> (b) An application should demonstrate adequate provisions will be implemented to maintain safety, security, and safeguards and identify the responsibilities of both the foregoing licensee and the applicant. <b>This includes any proposals of significant changes in the licensed activities.</b>	(1) Transfer of license might be done in existing installations, and is not unique to SMR.  (2) Bullet (b) describes mainly topics relating to safety, security and safeguards, and second sentence is not related to the topics, and then suggested to move to billet (a).	x		
Japan	NUSSC	22	Appendix I I.1	1563	Appendix I EXAMPLES OF DOCUMENTS TO BE SUBMITTED TO THE REGULATORY BODY I.1 <del>All the</del> <b>The</b> following documents should be updated by the applicant or licensee, as appropriate, and submitted to the regulatory body during the licensing process. The content of these documents may be divided or combined into different documents, as appropriate:  Once an application has been accepted <del>and the initial license has been issued</del> , and subsequent licensing process activities and arrangements may be undertaken between the licensee and the regulatory body. These may include requests for carrying out further activities, including, in some States, the construction of additional facilities on the site.	Removing 'All' in para. I.1 is suggested.	x		
Pakistan	NUSSC	1	2.11	133	3.35 The applicant or licensee should exercise control over the manufacture and assembly of SSC's important to safety, and this process should be reviewed, assessed and inspected, as appropriate, by the regulatory body. The processes for this control, including the control of subcontractors, suppliers and vendors, should be part of the applicant or licensee's management system. <b>Applicants may apply for permission to start manufacturing of long lead equipment before grant of construction license to manage the project schedule after demonstrating compliance with relevant safety requirements.</b>	The term 'initial license' is confusing and does not convey true meaning. It should be defined or removed. As suggested without this term sentence seems logical and more understandable.	x		
Pakistan	NUSSC	2	3.35	1006	This may include specification of, for example, the language, units, <del>methodology</del> and format of the proposed application. <b>The guidelines procedures</b> for applying for a new licence should be published by the regulatory body, together with the address to which the application should be sent.	Guidance regarding permission by regulatory authority to pour concrete in safety structure and manufacturing of long lead equipment before grant of construction license by regulatory authority may be provided. Applicants apply for these permissions to manage the project schedule after demonstrating compliance with safety requirements.	x		added as a footnote to 3.35.
Poland	NUSSC	2	2.27	307	The nature of the review, assessment and inspection by the regulatory body will depend on the type of nuclear installation, its activities and the stage in the lifetime of the nuclear installation, <b>in accordance with the graded approach.</b>	It is not clear to methodology of what the text is referring. Methodology of performing the safety assessment?	x		
Poland	NUSSC	1	2.26	293	Propose to add a bullet on <b>"applicant or licensee shall carry out an independent verification of the safety assessment before it is submitted to the regulatory body for review"</b>	Procedure indicates that is a highly formalized process, some RB may not have procedures published, only guidelines on the website for example.		The procedures or guidelines for applying for a new licence	included both terms for flexibility across different States.
Poland	NUSSC	3	2.34	358	Propose the addition of bullet: <b>"safety analyses of design extension conditions"</b>	To make a connection with graded approach.		and will follow a graded approach commensurate with the radiation risks of the installation, as outlined in GSR Part 1 (Rev.1).	language added based on comment from another SSC member
Poland	NUSSC	5	2.41	400	That suitable design basis analyses, analyses of design extension conditions <del>beyond design basis analyses</del> , fault tree analyses, and probabilistic safety assessments have been performed, as appropriate.	Based on Requirement 21 of GSR Part 4 (Rev. 1)	x		
Poland	NUSSC	8	3.24	892	That the main safety functions (i.e. reactivity control or criticality issues, cooling aspects and confinement of radioactive material <del>containment integrity</del> ) will be fulfilled...	Please verify the compliance of this sentence with Requirement 21 of GSR Part 4 (Rev. 1) and 9.1-9.21 of SSG-2 rev. 1. Those indicate that the independent review by licensee is required not optional.	x		comment accepted. Reference to GSR Part 4 proposed to be added following Member State review.
Poland	NUSSC	10	3.25	923	(a) Safety analyses of postulated initiating events leading to anticipated operational occurrences and design basis accidents, <del>of anticipated operational occurrences and postulated initiating events</del> , which might be caused by:	DEC are considered in the design process of the facility, and should be carefully analyzed	x		
Poland	NUSSC	6	3.21 (a)	850	Before a licence is granted, the regulatory body should <b>monitor</b> the applicant or licensee to verify that it has, as appropriate:	Beyond design basis is an old term, replaced by DEC	x		
Poland	NUSSC	7	3.21 (f)	858	Paragraph <del>2.6</del> <b>Requirement 7</b> of GSR Part 1 (Rev.1)[1] states:	Consistency with the glossary	x		
Poland	NUSSC	9	3.25 (a)	897	Licensing principles should be established in the legal and regulatory <del>and</del> framework.	To include explicitly DBAs not only implicitly	x		
Poland	NUSSC	4	2.37	373	Correction of the incorrect reference	How this monitoring should be included in the regulatory framework? Should this be done in pre-licensing or when assessing the application?			this monitoring should occur after the license application has been submitted.
Republic of Korea	NUSSC	1	2.14	146	Correction of Typo		x		
Republic of Korea	NUSSC	2	2.21	196			x		

Republic of Korea	NUSSC	3	2,34	358	The nature of the review, assessment and inspection by the regulatory body will depend on the type of nuclear installation, its activities and the stage in the lifetime of the nuclear installation, <u>following a graded approach commensurate with the radiation risks of the installation, as outlined in GSR Part 1 (Rev.1).</u>	Suggestion to add to emphasize the importance of the graded approach, which tailors regulatory oversight based on the magnitude of risks posed by the installation as provided in GSR Part 1 (Rev. 1).	x			
Russian Federation	NUSSC	1	2,7	101 - 103	Pre-licensing process can include early engagement between vendors, license applicants (or potential applicants), the regulatory body <b>and its technical and scientific support organization.</b>	Technical and scientific support organizations of regulatory Bodies are essential part of pre-licensing activities in a number of countries using nuclear energy. It is worth to reflect these practices in DS539.			x	Per GSG-13, 3.155, "In undertaking the review and assessment, the regulatory body should not rely solely on safety assessments conducted by the authorized party, nor on those that the regulatory body has commissioned from external consultants or technical support organizations. Instead, the regulatory body should have sufficient full-time staff capable of either performing regulatory reviews and assessments, or evaluating assessments performed for it by consultants."
Saudi Arabia	NUSSC	7	2,52	562	[...] their accessibility for maintenance, inspection, testing and repair. [...]	Editorial. A coma is needed after 'maintenance'.	x			
Saudi Arabia	NUSSC	8	2,53	565	The application of <del>the a</del> graded approach [...]	Terminology/Editorial. As mentioned at the beginning of paragraph 2.53, there is no unique 'graded approach' as the latter depends on many factors.	x			
Saudi Arabia	NUSSC	9	3,17	805	At the design stage, it is important to ensure that <del>and</del> SSCs comply with approved or accepted standards [...]	Editorial.	x			
Saudi Arabia	NUSSC	10	3,19	829	Please consider modifying paragraph 3.19 to extend its application to nuclear facilities other than nuclear power plants, so it reads: <i>The objectives of defence in depth for a nuclear installation are:</i> - to compensate for potential human and component failures; - to maintain the effectiveness of the barriers by averting damage to the plant and to the barriers themselves; - to protect the public and the environment from harm in the event that these barriers are not fully effective.	Editorial.	x			
Saudi Arabia	NUSSC	14	3,22	865	Nuclear installations are required to be designed to in accordance with the relevant [...]	Editorial.	x			
Saudi Arabia	NUSSC	15	3,24	890	Please consider reformulating the 2nd sentence of paragraph 3.24 because the 'may' suggests that the operating organization can optionally perform an independent verification of the safety assessment before its submission to the regulatory body, while this independent verification is required by Requirement 20 of GSR Part 4.  Proposed text:  Additionally, the operating organization, <i>which is required to carry out an independent verification of the safety assessment before it is used by the operating organization or submitted to the regulatory body</i> , may have an internal process (which could include receipt of independent advice) for review of safety analyses before submission to the regulatory body to ensure that such analyses are appropriate	Clarity and consistency with IAEA safety standards.	x			
Saudi Arabia	NUSSC	18	3,28	936	The <del>Proposed</del> proposed arrangements [...]	Editorial.	x			
Saudi Arabia	NUSSC	20	3,34	994	Please consider adding an item concerning a preliminary plan for emergency arrangements.	Missing item.	x			
Saudi Arabia	NUSSC	16	3.25 (a)/1	897	Please consider reformulating the whole paragraph to be consistent with the approach followed for nuclear power reactors in SSR-2/1 (Rev.1).  Proposed text: Safety analyses of anticipated operational occurrences and accident conditions <del>postulated initiating events</del> , which might be caused by failures of SSCs of the nuclear installation or operating errors, and possible failures arising from internal and external hazards.	The formulation in DS537 was not correct for the following reasons: 1- 'anticipated operational occurrences' are themselves 'postulated initiating events'. 2- Although in IAEA publications other than those for nuclear power plants, postulated initiating events can be caused or even be external or internal hazards (see for example Appendix I of SSR-3), the approach followed for NPPs is to consider that the hazards themselves do not represent initiating events but they are associated with loads, which can initiate such events.			(a) Safety analyses of postulated initiating events leading to anticipated operational occurrences and design basis accidents, which might be caused by:	comment addressed by other SSC member comment
Saudi Arabia	NUSSC	24	3,56	1242	Please consider reformulating this paragraph to avoid having 5 lines after 'The following operational programmes ...'.  Proposed text: <i>Operational programmes should be established by the licensee before operation and implemented throughout the operation of the nuclear installation. The regulatory approach to reviewing, assessing and inspecting such programmes should be graded in accordance with the type of nuclear installation and its activities. Consideration should be given to shared programmes between nuclear installations and installations with multiple modules. The following programmes may be subject to approval by the regulatory body, as appropriate:</i>	Clarity.	x			

Saudi Arabia	NUSSC	25	3.72	1440	[...] To facilitate this process, some activities relevant to decommissioning (see paras 3.72-3.85 3.74 -3.86) may be performed after	Editorial.	x				
Saudi Arabia	NUSSC	3	2.21 (i)	226	[...] except for security sensitive <del>and</del> and/or commercial proprietary information.	Editorial.	x				
Saudi Arabia	NUSSC	4	2.41 (d)	414	[...] understand the safety significance of this work (' <b>intelligent informed customer</b> ') [...]	Terminology/Editorial. Consistency with Appendix II, which refers to the IAEA nuclear safety and security glossary.	x				
Saudi Arabia	NUSSC	2	2.5; 2.17	90; 160	[all stages of the lifetime of the nuclear installation, namely <b>siting and site</b> evaluation, design [...] [...] aspects affecting the <b>siting and site</b> evaluation [...]	Terminology. Consistency with para. 1.3.	x				
Saudi Arabia	NUSSC	5	2.50.	541	[...] in determining the scope, extent and level of detail of, and the effort to be devoted to, review, assessment and inspection [...]	Editorial. Comas are needed after 'of 'and before 'review'.	x				
Saudi Arabia	NUSSC	11	3.21 (a)	850		Clarification. 'design basis analyses' and 'beyond design basis analyses' are not clear and come from the previous version of SSG-12, prevailing in a context where beyond design basis accident had a meaning.  Are 'design basis accident analyses' and 'beyond design accident analyses' meant?  If it is the case, 'beyond design basis accident analyses' need to be replaced by 'design extension conditions analyses'.	x			language has been updated properly.	
Saudi Arabia	NUSSC	13	3.21 (f)	858	That the <del>main</del> <b>fundamental</b> safety functions (i.e. <del>reactivity control or criticality issues, cooling aspects</del> <b>heat removal and confinement of radioactive material containment-integrity</b> )	Terminology. Although 'main safety functions' is used in some IAEA publications, it is better to use 'fundamental safety functions'. Also, 'criticality issues' is not a safety function as well as 'cooling aspects'.	x				
Saudi Arabia	NUSSC	17	3.25 (i)	912	Please consider revising paragraph 3.25 (i) by avoiding confusion between safety analyses, including the applied approach, and computer codes by limiting the text to the proposal below:  Proposed text: <i>Analytical methods and computer codes used in the safety analyses and the verification and validation of such codes:</i>	Clarity. As it is, the draft text of paragraph 3.25 (i) confuses between safety analyses and the computer used to perform them. Indeed, how can computer codes be verified and validated in relation to the single failure criterion, redundancy, diversity, etc. ?	x				
Saudi Arabia	NUSSC	19	3.30 (a)	961	The safe transport <del>of</del> radioactive materials to and from the installation, and movement within the installation.	Editorial	x				
Saudi Arabia	NUSSC	21	3.36 (h)	1031	[...] should <b>be</b> implemented before construction is started.	Editorial.	x				
Saudi Arabia	NUSSC	1	General	General	Please consider adding recommendations on personnel (plant manager, control room operators, etc.) approval as well as organizations (inspection organizations, testing organizations) approval.	Such recommendations are missing or are not detailed enough to serve as a guidance for embarking countries.		x		Since this guide covers all nuclear installations, specific guidance on personnel is not realistic.	
Saudi Arabia	NUSSC	23	3.47 – 3.49	1149	Please consider moving paras 3.47 – 3.49 just after paragraph 3.41.	Flow of the text and clarity. This allows understanding the recommendation in item 3.45 (a) (ii) relating to the results of non-nuclear commissioning tests.	x				
Saudi Arabia	NUSSC	6	2.52	552	[...] and complexity and ageing <b>related</b> issues relating to the nuclear installation and its activities.	Editorial.			x	ageing related is appropriate here.	
Saudi Arabia	NUSSC	12	3.21 (b)	852	That there is <b>an</b> adequate protection against external and internal hazards;	Editorial.			x	current language is appropriate	
Saudi Arabia	NUSSC	26	3.90.	1552	[...] (see para. 3.4 of GSR Part 6 1552 [19]).	Editorial.	x				
Saudi Arabia	NUSSC	22	3.45	1111	Please consider adding a paragraph related to the integrity of the design that needs to include maintaining a formally designated entity that has overall responsibility for the continuing integrity of the installation design throughout its lifetime, and managing the interfaces and lines of communication with the responsible designers and equipment suppliers contributing to this continuing integrity.	The proposed paragraph is important because the operational experience feedback in some Member States showed the importance of keeping the integrity of the design and the importance of having a designated design entity or design authority to ensure it.			x	this should be covered by 3.33 and 3.65	
Saudi Arabia	NUSSC	28	Appendix II	Appendix II	Please consider keeping in this Appendix only recommendations that are specific to SMRs or of high weight for SMRs.	Appendix II contains recommendations, which are not specific for SMRs, e.g. II.4, II.6, introductory paragraph to II.16, and the latter itself.			x	While there may be some items that are more broadly applicable, the IAEA found that these issues were more relevant to SMRs and needed to be highlighted in the Appendix.	
Saudi Arabia	NUSSC	31	II.15 (d)	1807	[...] in the absence <b>the</b> licensee.	Editorial.			x	current language is acceptable	
Saudi Arabia	NUSSC	27	Appendix I	Appendix I	Please consider transforming Appendix I in Annex I as the list of documents is constituted of examples of documents to be submitted.  If the proposal is accepted, the first part of I.1 could read as:  <i>All the following documents <b>are</b> updated by the applicant or licensee, as appropriate, and submitted to the regulatory body during the licensing process. The content of these documents may be divided or combined into different documents, as appropriate:</i>  In addition, no reference to the body text should be made, e.g. A site evaluation report, including a report on environmental radiation monitoring (see 1577 <del>para 3.3 3.10</del> );						I.1 The following are examples of documents that may be updated by the applicant or licensee and submitted to the regulatory body during the licensing process. The content of these documents may be divided or combined into different documents, as appropriate:  Modified following SSC review

Saudi Arabia	NUSSC	29	II.14 (c)	1765	[...] construction, <b>operation</b> , commissioning, operation and maintenance introduced by the design.	Clarity/editorial.	x		
Saudi Arabia	NUSSC	30	II.15	1790	Some deployment models also propose <b>of</b> off-site decommissioning. For such cases:	Editorial.	x		
Saudi Arabia	NUSSC	32	II.17 (a)	1828	Understands the information ( <i>i.e. maintains</i> an informed customer capability (2));	Clarity/editorial.	x		
Sweden	NUSSC	1	3.20.	836 - 846	Removal of the paragraph or adding that the text is an example for nuclear power plants.	The paragraph refers to SSR-2/1 which is applicable for nuclear power plants, not all nuclear installations. It is neither obvious that the five levels defined in the text is applicable for all nuclear installations.  Therefore, the suggestion is either to remove the paragraph or write that the example is applicable for nuclear power plants.	x		
The Netherlands	NUSSC	5	2.26	294-295	body, together with the address to which the application should be sent. It should be made clear what the application should include, for example:	We agree with the transparency, however, what an application should include is typically included in quite detail in the regulatory framework, but that differs from country to country.	x		
The Netherlands	NUSSC	1	2.7	108	organizations and could include options for early public information. Any such processes	To date, in the Netherlands it is not foreseen to have public participation in during pre-licensing process. We do aim to inform the public about the process and also aim to give access to important documentation as early in the process as we can, in order to give the public a good position to participate in the formal licensing procedure.	x		
The Netherlands	NUSSC	24	3.37	1037	3.37 Prior to or in the authorization of on-site construction, conditions may be imposed by the	These aspects may be part of the construction license conditions, as they are in NL.	x		The revised content has broader applicability.
The Netherlands	NUSSC	12	2.41(b)	405-407	consider to delete (b)	This holds for a licensee, not for an applicant. And as such is arranged elsewhere. Copying that here is confusing.	x		
The Netherlands	NUSSC	16	2.41(k)	436	The applicant or licensee should <b>be able to</b> demonstrate that contractual arrangements do not	It should not be put forward as an active expectation, but as something that can be shown when asked.	x		
The Netherlands	NUSSC	25	3.52(b)	1185	(b) Review, assessment and inspection, <b>as appropriate</b> , by the regulatory body. The aim of these regulatory	It should be made sure that there is no confusion as to all commissioning test should be reviewed, assessed and inspected by the RB.	x		
The Netherlands	NUSSC	4	2.21	196-263	general question: what exactly is meant with the mentioned 'licensing principles' is unclear, and therefore also their desired way of establishment in the legal and regulatory framework.	the mentioned examples vary from matters the applicant should comply to, to how the regulatory body should do it's work and how the framework itself should function.	x		"Licensing principles" refers to the fundamental guidelines and standards established within a regulatory framework to ensure compliance, safety, and accountability in the licensing process for nuclear facilities or other regulated entities. Each country needs to establish more detailed licensing guidelines based on its own legal and regulatory framework.
The Netherlands	NUSSC	2	2.16	159	regulatory body, that are not part of the general regulatory framework.	Otherwise this could be read as that all legal requirements should be referenced, which is not feasible, and will lead to the doubling of requirements		x	It is recommended to remain this sentence to consistent with the original version of SSG-12, emphasizing that all regulatory conditions should be stated, rather than needing to fulfill all regulatory conditions.
The Netherlands	NUSSC	3	2.21	220-221	Consider to remove this text: Nuclear security requirements should be predefined and should be considered in the licensing process	In some countries, such as the Netherlands, Security is not part of the formal license proces but is a obligation after the license is granted, and as such is an topic for oversight. Also, as security is arranged in the nuclear security series, it might be a bit confusing to include it in the safety standards series.		x	The core content of para. 2.21 states that 'Licensing principles should be established in the legal and regulatory framework' The following bullets provide 'Examples of licensing principles,' which may vary based on the regulatory requirements of different countries. Therefore, it is not recommended to delete these bullets.
The Netherlands	NUSSC	6	general	general	Consider to remove all instances of the term 'inspection'	In a lot of countries, inspections are typically not part of licensing but of oversight. It would be very confusing to include inspections in this guide. Also, most countries do not have inspection powers with regards to parties that do not have a license yet. Obviously, when an existing licensee applies for a license, inspections are possible, but they should be concluded in the guide on oversight and enforcement, to not confuse matters.		x	inspections are a necessary component of the licensing process for many MS. Removing "inspection" from the document would substantially change the document from the current consensus version.
The Netherlands	NUSSC	7	general	general	Consider to replace all instances of 'licensee' with 'applicant'	The applicant can be an existing licensee, but is not one necessarily. The only thing to be sure is that after succesfull following this proces, the applicant is an licensee. But during the proces it does not have to be that way, so in our opinion, it is better to use 'applicant' consistently.		x	The subsection 'ROLES AND RESPONSIBILITIES OF THE APPLICANT OR LICENSEE' provides detailed definitions for both terms. It is not recommended to make changes, as there is still a significant difference between 'applicant' and 'licensee' in different contexts.
The Netherlands	NUSSC	8	general	general	Consider to remove all expectations to the organisation of the appliaent from this document	this guides puts a lot of obligations on license applicants during prelicensing, as if they are already licensees. (implementing security measures, change management, management system, OEF). This is quite a big step, and it is unclear from which moment they would apply. Also, it is not expected to find these expectations in a guide on the licensing proces. Therefore, in our opinion, it is better not to implement those here. If the IAEA wants to publish expectations with regards to a potential applicant during prelicensing, it would be better to include it in another guide.		x	It is important to emphasize that during the pre-licensing phase, the applicant has only one objective: to become a licensee. Therefore, clearly stating these expectations is acceptable and will be very helpful for the applicant's subsequent formal licensing application.

The Netherlands	NUSSC	9	2.37	373-374	Consider to remove the requirement 'Before or soon after a licence is granted, the regulatory body should monitor the applicant or licensee to verify that it has as appropriate:	In NL, and also in other countries, the following topics are part of the oversight process, not the licensing process.			x	The following topics are within the scope of the licensing process.
The Netherlands	NUSSC	10	2.38	382	After the initial application, throughout the formal licensing process, the regulatory body should ensure that proposed	It should be made clear that this does not apply to prelicensing phase.			x	No changes are recommended, as the beginning of this paragraph already clearly specifies that it relates to the licensing process.
The Netherlands	NUSSC	11	2.39	390-394:	consider to remove 2.39.	OEF is an established requirement to licensees. To stretch this to applicants during their application would only serve to confuse matters. Also as there is no clear requirement on this, creating new expectations in a guide is in line with the Dutch application of the SSS.			x	Ensuring the suitable management system is an important component of licensing process.
The Netherlands	NUSSC	13	2.41(c)	409	on-site or within the organization as a whole, even when outsourcing licensing activities,	It is expected that licensing, not licensed is meant here.			x	'Licensed Activities' should be the correct term here. This emphasizes that the applicant/licensee has sufficient control over the licensed activities, rather than focusing on how to license outsourced activities.
The Netherlands	NUSSC	14	2.41(e)	415-419	consider to delete (e)	This holds for a licensee, not for an applicant. And as such is arranged elsewhere. Copying that here is confusing.			x	This is a very detailed regulatory requirement and an important control measure in the licensing process, so it should not be deleted.
The Netherlands	NUSSC	15	2.41(h)	425	installation, or the applicants office space, from the moment on that sensitive information is present, in line with national regulations.	not all applicants are existing nuclear installations, also it should be clear from which moment on this would apply.			x	The proposed new text shifts the focus from the original's emphasis on the responsibility to implement nuclear security measures to a narrower focus on protecting sensitive information.
The Netherlands	NUSSC	17	2.42	439-450	Consider to delete 2.42	This holds for a licensee, not for an applicant. And as such is arranged elsewhere. Copying that here is confusing.			x	This section is related to a licensee. It is an important responsibility of the licensee and a crucial aspect of the licensing review process, so it is not recommended to delete it.
The Netherlands	NUSSC	18	2.43	455	Please consider to look at the list after: The licence for a nuclear installation could include the following elements (unless...):	The following topic are to specific to warrant a should statement (e.g.: A stamp from those who are empowered to issue te license?). Usually, the topics that are addressed in the national framework are not so specifically worded to trigger the 'unless-statement', but it is also not desirable to always expect these exact topic. Therefore a 'could-statement' would be an elegant compromise. Alternatively, the elements could be made less specific.			x	This list is essentially consistent with the original version of SSG-12. It has been used and validated by multiple countries and is widely adopted with consensus.
The Netherlands	NUSSC	20	3.9	709-758	Consider to remove 3.9	3.9, and more in general the section on licensing of siting and site evaluation is doubles with SSR-1/SSG-37/GSG-10. It is important to reference and not duplicate, as duplication leads to a lot of confusion when one document is updated.			x	While we do not plan to remove section 3.9, we reviewed this section and others and believe it is consistent with the other guidance.
The Netherlands	NUSSC	22	3.27	931	3.27 Prior to the application for the commissioning or operation license, the applicant should ensure that a review of the detailed design of SSCs	Otherwise it is unclear when this has to be done. As it is detailed design, prior to hot com/operation seems most reasonable.			x	Typically, before obtaining a construction license, the detailed design of SSCs important to safety is completed and reviewed (during the basic design phase). During construction phase, any design modifications require re-assessment prior to the releasing of commissioning and operation license. Therefore, while the proposed new text is not incorrect, it does not offer practical guidance for this task.
The Netherlands	NUSSC	23	3.34	996-1004	suggestion to remove a) and e), or the entire summation.	Depending on the national framework, this may be part of oversight, not licensing (such as is the case in NL)			x	The regulatory body should review these items before a construction licence
The Netherlands	NUSSC	19	2.47(b)	519-523	519 (b) Formal hearings and other appropriate means of communication should 520 be: 521 (i) Open to the public, the media and other interested parties; 522 (ii) Announced a reasonable period of time before the hearing takes place. 523 (c) The public should be given the opportunity to present their opinions at meetings and	Opening and announcing beforehand all regular meetings between applicant and regulatory body to the public would complicate the (pre)licensing process, and not help with transparency as these are usually very specialist topics.				(b) FormalRegulair meetings, formal hearings and or other appropriate means of communication should be: Changed to "Formal meetings" to clarify that not all meetings may need public engagement.
The Netherlands	NUSSC	27	3.60-3.68	1332-1420	consider deleting the section on safety review	in NL, as in many countries, the periodic or special purpose safety reviews are not part of the licensing process. Also, they are outlined in better detail in other IAEA publications. Therefore, it only gives confusion to add sections on that topic in this guide.			x	From a lifetime perspective, periodic safety review or other alternatives are important components of the licensing process and should not be removed.
The Netherlands	NUSSC	21	general	general	Consider to remove all mention of 'and construction'	throughout the sections on licensing of the design, sometimes 'design and construction' is used. This leads to inconsistencies. Recommendation to remove all mention of 'and construction', as the guidance on licensing of construction is mentioned in the next section.	x			
The Netherlands	NUSSC	26	general	general	Consider checking the parts on licensing of design, construction and commissioning for consistency.	In some countries, the applicant is not already a licensee for any of these steps (only becomes one after a construction license is granted). This should be kept in mind for these parts of the guidance.				Added applicant to certain areas where they might not yet be considered a licensee
The Netherlands	NUSSC	28	general	general	The ANVS applauds the efforts of the IAEA to be as complete as possible in this publication. However, we like you to consider to avoid duplication with topics that are addressed in other IAEA publications. Any area of interest that has it's own guidance could be mentioned by referral, not duplication in this text.	Not only as divergence could occur when one document is updated and the other is not, but also because of the risk of complacency when reading part of the desired information in one document, and not knowing that other expectations on the same topic are addressed elsewhere.				We agree with this comment but recommend performing this analysis/comparison to other publications following Member State review.



United Kingdom	NUSSC	4	2.17	166	Replace "operating procedures and authorization of personnel" with "operating procedures, authorization of personnel, <b>radioactive waste management and arrangements for decommissioning</b> ".	To emphasise the need for the licence conditions to also cover back-end matters.	x		
United Kingdom	NUSSC	6	2.28	314	Before "with the vendor" insert "of the regulatory body".	To clarify that interactions are encouraged with the regulator, to avoid any potential misconception that they are solely encouraged between the vendor and potential licensee.	x		
United Kingdom	NUSSC	7	2.28	319	After "first-of-a-kind" insert ", and for matters relating to radioactive waste management and decommissioning, as these are aspects that are particularly important to be considered at the earliest stages of the development of the design".	To avoid decision making progressing too far in the absence of sufficient information on these important matters.	x		
United Kingdom	NUSSC	9	2.32	Line 340	Replace 'staffing study' with ' <b>resourcing strategy</b> '	More appropriate phrase which is also future focused	x		
United Kingdom	NUSSC	14	3.21	861	Insert new sub-paragraphs: "(g) That there are adequate provisions for operational radioactive waste management. (h) That adequate arrangements for decommissioning of the installation (including the radioactive wastes arising from decommissioning) are in place."	To provide better balance in this paragraph between front-end and back-end nuclear safety matters, all of which need to be considered and resolved to the satisfaction of the regulatory body before the installation is licensed.	x		
United Kingdom	NUSSC	15	3.36(b)	1017	Should include both financial and Human resources.	This section needs to be clear that before nuclear related construction begins that the licensee has an adequate organization with appropriate capabilities.		changed to "adequate financial and personnel capabilities"	based on comment from other SSC member.
United Kingdom	NUSSC	17	3.87	1533 & 1534	Depending on relative progress of DS542 (revision of WS-G-5.1), may need to update the reference to WS-G-5.1 to the revised Safety Standard.	To avoid referring to a potentially-superseded Safety Standard.	x		the ongoing revision to the publication is noted in the Reference section.
United Kingdom	NUSSC	10	242	Line 450	Replace "best practices" with " <b>good practices</b> ".	Consistency within the document, e.g. with line 237.	x		
United Kingdom	NUSSC	5	2.21(p)	253	Replace "will" with " <b>is likely to</b> ".	It is impossible to demonstrate that a future action will occur, only the likelihood that it will occur.	x		
United Kingdom	NUSSC	8	2.31 (a) & (d)	329 / 335	These sections confuse the terms competence and capability. Should stick to the term organizational capability as used in the rest of the document.	Competence is a subset of capability – it is important to be clear on definitions. A capability is the ability of the organization to do something – this needs People, Processes and Platforms. Competence is a subset of people – as well as capacity.	x		
United Kingdom	NUSSC	16	3.85(g)	1521	Replace "Tightness" with " <b>Integrity</b> ".	More appropriate word	x		
United Kingdom	NUSSC	18	Appendix I.1(dd)	Line 1612	In sub-paragraph (dd), after "including" insert " <b>proposals for treatment, packaging, storage and final disposal of waste (including decommissioning wastes)</b> ."	To ensure that sufficient information is provided on subsequent waste management activities, all of which need to be considered in the assessment of the licence application.	x		
United Kingdom	NUSSC	1	1.7	47	interfaces between safety (including conventional health and safety), security, safeguards and transport aspects need also to be considered and evaluated by the regulatory body during the licensing process	Important 'purposes'. Conventional health and safety are important for construction phase and can impact on long term nuclear safety. Transport is of growing importance, particular in relation to SMRs		x	1.7 is intended to provide an overview of the publication. Based on the focus of the document, highlighting conventional health and safety up front would seem out of place.  Transport is not noted in 1.7 either, as it is an area of focus for SMRs, and is highlighted in Appendix II
United Kingdom	NUSSC	19	Appendix II	Appendix II	<b>[Substantial new text development is required]</b>	Appendix II is significantly incomplete and needs substantial further development. It does not address the concerns that exist that the plans for the management of spent fuel and radioactive waste from many of the proposed new reactor designs are not being developed sufficiently quickly. Uncertainties include: - the characteristics and quantities of the wastes and spent fuels that would be created - their disposability - timescales of when they would arise  In addition, the lack of clarity on the methods used to construct, operate and refuel SMRs & AMRs will significantly affect waste management and decommissioning wastes.  There is a potential risk that decision making on the selection of SMR & AMR technologies may proceed without fully taking into account the nature and extent of the impacts and consequences (including costs) arising from the wastes and spent fuels that would be created and from the decommissioning of such new technologies.  Appendix II needs to be expanded to address this significant gap.			New section II.15-II.17 added with guidance on radioactive waste and spent fuel management.  Additional language added under OffSite Construction, Commissioning and Decommissioning
United Kingdom	NUSSC	3	2.1	203	Should expand sentence to include safety, security and safeguards obligations.	To emphasise the inclusion of safety, security and safeguards. There are a number of instances in the document as whole where the inclusion of security and safeguards should be considered, for example line 338, 405 etc.		x	the reference in the comment is not connected to safety, security and safeguards. Please clarify
United Kingdom	NUSSC	11	2.43	Para. 2.43	Omit sub-para. (c)	It is not necessary for nuclear safety reasons for the licence to specify the maximum allowable inventories of sources.		x	this SSG applies to all nuclear installations, and this information is essential for regulatory bodies to license the installation.

United Kingdom	NUSSC	12	3,2	636	Should note that in most jurisdictions manufacturing licenses are not issued.	The licensing process in most jurisdictions are limited to the specific installation on a specific operating site.			x	[this section is noted as "alternative regulatory processes" and the introduction notes that some States have different approaches.
United Kingdom	NUSSC	13	3.9(b)(iii)	Line 749	The licensee's security of tenure and rights of access, and the <b>contractual</b> relationship between the applicant and the owner of the site area	A legally binding agreement between parties is required			x	adding "contractual" would be overly limiting to the text.
United Kingdom	NUSSC	20	Appen. II	1695	An Informed Capability does not meet the requirement. The requirement is for an Intelligent Customer capability	The differentiation between and Informed Customer and an Intelligent Customer is key. You can be informed about something but not necessarily competent to fully understand it – hence <b>Intelligent is more appropriate here</b>			x	informed customer is the term used in the IAEA Glossary (Ref. 2)
United Kingdom	NUSSC	2	New para. 1.7 before current para. 1.7	New para. 1.7 before current para. 1.7	<b>"Similar recommendations on the licensing process for disposal facilities for radioactive waste are provided in other IAEA Safety Standards [SSR-5 &amp; SSG-23]."</b>	The IAEA definition of "nuclear installation" does not include facilities for the disposal of radioactive waste, and so they are outside the scope of DS539. A signpost to other IAEA Safety Standards on licensing of such facilities would be helpful.		included in footnote 3, which includes the definition of a nuclear installation		Including the other Safety Standards in the footnote is a more logical place, based on the definition in the footnote
United States of America	NUSSC	2	1,3	19	1.3 Figure 1 shows the main stages dealt with in this Safety Guide regarding the licensing process. Past experience has shown that there is some overlapping of these stages; that is, one stage may start before the previous one is fully completed. Moreover, in a given stage, there may be one or more 'hold points' or <b>required licensing actions</b> , set by national legislation and regulatory requirements. These hold points or <b>required licensing actions</b> give the regulatory body the power to ensure that risks to people and to the environment from nuclear installations and their activities are properly controlled by the <b>licensees</b> for the nuclear installations and their activities.	Appears hold points are licensing actions and people and organizations responsible must be on the license in the US.		1.3 Figure 1 shows the main stages dealt with in this Safety Guide regarding the licensing process. Past experience has shown that there is some overlapping of these stages; that is, one stage may start before the previous one is fully completed. Moreover, in a given stage, there may be one or more 'hold points' or <b>required licensing actions</b> , set by national legislation and regulatory requirements. These hold points or <b>required licensing actions</b> give the regulatory body the power to ensure that risks to people and to the environment from nuclear installations and their activities are properly controlled by the <b>persons or organizations</b> for the nuclear installations and their activities.		The term "licensees" refers to the holder of a current license. Therefore, "by the persons or organizations" is more appropriate.
United States of America	NUSSC	5	2,15	151	2.15 Procedures for <b>evaluating, approving, denying, and</b> issuing authorizations for each stage of the lifetime of the nuclear installation and for each type of installation should be prepared by the regulatory body, to 153 ensure that all necessary steps have been taken prior to the granting of a licence.	Should be procedures for these activities, otherwise the implication is that the State will always grant an authorization.		x		
United States of America	NUSSC	4	2.8(a)	114	Licences may be granted: (a) For a specific time period (e.g. 10 years, 40 years), or for a specific stage in the lifetime of the nuclear installation (e.g. construction, operation). In such <b>cases</b> , a mechanism should be established to ensure that the person or organization responsible ( <b>licensee</b> ) for the nuclear installation and its activities remains responsible for safety, security and safeguards at the installation, even if the licence has expired, unless the site has been removed from regulatory control.	<b>Plural needed due to previous sentence. Licensee is term used by some countries.</b>		Agree to change " In such cases"		The term "licensees" refers to the holder of a current license. Therefore, "by the persons or organizations" is more appropriate.
United States of America	NUSSC	10	2,28	316	2.28 Pre-licensing interactions (sec para. 2.7) with the vendor and the potential licensee are encouraged. These pre-licensing interactions not only benefit the regulatory body, but they also benefit vendors and potential licensees because they allow for early identification and <b>resolution</b> understanding of technical and policy issues that could affect licensing. This is particularly important for non-water-cooled reactors and small modular reactors because they are often first-of-a-kind. A good practice is to include an assessment of safety, security, and safeguards needs in pre-licensing interactions, including the interfaces between each of these areas.	In the US, during such a process, the NRC will not make regulatory decisions.		x		

United States of America	NUSSC	12	2.52	563	2.52 A graded approach to safety assessment should also take account of other relevant factors such as the maturity of the licensee, and complexity and ageing related issues relating to the nuclear installation and its activities. Maturity relates to: the use of proven practices and procedures, proven designs and operating experience at similar nuclear installations and for similar activities; uncertainties in the performance of such a nuclear installation or activities; and the availability of competent staff and experienced managers, contractors and suppliers. Complexity relates to: the extent and difficulty of the effort needed to construct, maintain, operate and decommission a nuclear installation or to conduct an activity; the number of the related processes for which control is necessary; the physical and chemical forms of the radioactive material and the extent to which the radioactive material has to be handled; the half- lives of the radionuclides concerned; <b>the risk and uncertainty associated with activities</b> and the reliability and complexity of systems and components and their accessibility for maintenance inspection, testing and repair. Similarly, a graded approach should be applied as the nuclear installation progresses through the stages of 563 its lifetime.	Complexity as related to graded approach should include consideration of risk and uncertainty of activities to inform decisions.	x		
United States of America	NUSSC	11	2.41(a)	403	2.41 The applicant or licensee for a nuclear installation has the following obligations: (a) The applicant or licensee should prepare and submit a comprehensive application to the regulatory body that demonstrates that priority is given to safety; that is, that the level of safety <b>meets regulatory requirements as high as reasonably achievable</b> and that safety will be maintained at the site for the entire lifetime of the nuclear installation.	Reasonable assurance of safety is necessary. It's safe or it's not safe.	x		
United States of America	NUSSC	8	21.1(m)	237	The applicant and the regulatory body should take into account international <b>and industry</b> good practices, as appropriate, throughout the licensing process.	Industry interest groups are important to this process.	x		
United States of America	NUSSC	1	1,1	5	1.1 Achievement of <b>an adequate level of safety</b> in relation to nuclear installations requires an effective governmental, legal and regulatory framework — including a regulatory body with well defined responsibilities and functions — as well as qualified vendors, manufacturers and operating organizations.	US does not require the best and highest level of safety. It's safe or it is not. There must be reasonable assurance of safety.		x	The existing language was consensus language from the existing SSG-12.
United States of America	NUSSC	3	1,7	46	1.7 While this Safety Guide focuses on safety at nuclear installations, interfaces between safety, <b>environmental</b> , security and safeguards aspects need also to be considered and evaluated by the regulatory body during the licensing process. The IAEA Nuclear Security Series covers security issues at authorized installations.	Environmental is part of the licensing process.		x	Environmental considerations are an important part of the licensing process and are described in the following sections. Paragraph 1.7 primarily provides an overview on the scope of the document, at a high level.
United States of America	NUSSC	6	2,16	158	2.16 Licence conditions are additional specific obligations with the force of law. Licence conditions should be incorporated into the licence for a nuclear installation, to supplement general requirements or to make them more precise, if necessary. Licences should state explicitly, or should include by reference or attachment, all conditions imposed by the regulatory body. <b>License conditions should be perfunctory (can be checked that it was performed or not) and not something that requires a future evaluation that should be approved by the regulatory authority.</b>	License conditions cannot include an evaluation that is necessary to make the decision.		x	The added description may reflect practices in one or more States, but not every State considers licensing conditions as an item that doesn't require an evaluation.
United States of America	NUSSC	7	2,17	161	2.17 Licence conditions should cover, as appropriate, safety related aspects affecting the site evaluation, design, construction, commissioning, operation and decommissioning of the nuclear installation <b>and its subsequent release from regulatory control</b> , so as to enable effective regulatory control at all stages. These	Once the license is terminated the regulatory authority in the US has no authority.		x	They are not contradictory; ' release from regulatory control' is the final step, and every processes prior to that should fall within the scope of licensing.
United States of America	NUSSC	9	2,26	294	2.26 The procedures for applying for a new licence should be published by the regulatory body, together with the address to which the application should be sent. The application should include, at a minimum:  <b>Add: evidence that it is financially and technical qualified</b>	These aspects should be in an application for a new license.		x	Although "evidence that it is financially and technical qualified" is important, it is not suitable as the minimum scope for submitting a licensing application. The regulatory body will assess the relevant content before a licence is granted, , as required by para 2.37, such as financial security, management system, staff qualification and etc.