#### **GLOBAL NUCLEAR GROUP**

14 August 2014

# EU Council Adopts Revised Nuclear Safety Directive

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Helen Cook Associate Washington, DC +1 415 691 9958 helen.cook@Shearman.com On 14 August 2014, the European Union's ("EU") new nuclear safety directive, Council Directive 2014/87/EURATOM ("2014 Directive"),<sup>1</sup> will come into force as an EU-wide legally binding instrument.<sup>2</sup> The 2014 Directive amends the Council Directive 2009/71/EURATOM ("2009 Directive")<sup>3</sup> by seeking to further bolster the framework for the safety of nuclear installations in the EU.

Here we explain the background to the 2014 Directive, as well as summarise some of the main amendments to the 2009 Directive and potential impacts for industry.

### Background to the 2014 Directive

The nuclear accident at the Fukushima Daiichi nuclear power plant in March 2011 was the catalyst for the revision of the 2009 Directive. This event refocused the world's attention on the safety of nuclear installations and the potential cross-border impact of a nuclear accident.<sup>4</sup>

The immediate response of the EU's Council of Ministers was to call for a safety review of all 132<sup>5</sup> operating EU nuclear power plants on the basis of a "comprehensive and transparent

- <sup>1</sup> Council Directive 2014/87/Euratom of 8 July 2014 amending Directive 2009/71/Euratom establishing a Community framework for the nuclear safety of nuclear installations [2014] OJ L 219/42.
- <sup>2</sup> Draft proposal for a Council Directive amending Directive 2009/71/EURATOM establishing a Community framework for the nuclear safety of nuclear installations COM(2013) 343 final, 13 June 2013, 5.
- <sup>3</sup> Council Directive 2009/71/Euratom of 25 June 2009 establishing a Community framework for the nuclear safety of nuclear installations [2009] OJ L 172/18.

<sup>4</sup> COM (2013) 343 final, above n 2, 7.

risk and safety assessment" (a review which became known as "stress tests") to be conducted in cooperation with the European Nuclear Safety Regulators Group.<sup>6</sup> Stress tests were commenced in 2011 by means of self-assessment by licence holders (the nuclear power plant owners and operators) and the preparation of reports by national regulators on the status of the plants, while an extensive EU-wide peer review process was carried out in early 2012.<sup>7</sup>

In addition to the stress tests, the EU's Council of Ministers charged the European Commission with the task to "review the existing legal and regulatory framework for the safety of nuclear installations" and "propose . . . any improvements that may be necessary."<sup>8</sup> The European Parliament also resolved for "an urgent revision of the [2009] Directive with a view to its strengthening, namely by taking into account the results of the stress tests implemented in the aftermath of the Fukushima accident."<sup>9</sup> Against this background, in June 2013 the European Commission published its draft proposal for an EU Council Directive to amend the 2009 Directive (the "Draft Proposal").<sup>10</sup>

On 8 July 2014, following the stress tests and legislative response, as well as a public consultation on the Draft Proposal, the EU Council of Ministers adopted the 2014 Directive. According to Article 2 of the 2014 Directive, in order to comply with its terms Member States have until 15 August 2017 to bring into force the necessary laws, regulations and administrative arrangements to give effect to the 2014 Directive.<sup>11</sup>

### Amendments to the 2009 Directive

The 2009 Directive is strengthened to include a set of "shared objectives" aimed at harmonising the EU approach to nuclear safety.<sup>12</sup> The overall aim is the implementation and continuous improvement of the highest standards of nuclear safety and its regulation at the EU-level.<sup>13</sup>

The primary amendments contained in the 2014 Directive are intended to:

- strengthen the role and effective independence of the national regulatory authorities;<sup>14</sup>
- enhance transparency in nuclear safety and emergency preparedness and response (including information and cooperation obligations and involvement of the public);<sup>15</sup>
- strengthen existing principles, and introduce new general nuclear safety objectives and requirements, in particular "defence-in-depth," aimed at addressing specific technical issues across the entire lifecycle of

<sup>&</sup>lt;sup>6</sup> European Council Conclusions EUCO 10/1/11, 11.

<sup>&</sup>lt;sup>7</sup> COM(2013) 343 final, above n 2, 3.

<sup>&</sup>lt;sup>8</sup> Ibid; See also: EUCO 10/1/11, above n 7, 11.

<sup>9</sup> Ibid, 3.

<sup>&</sup>lt;sup>10</sup> COM(2013) 343 final, above n 2.

<sup>&</sup>lt;sup>11</sup> OJ L 219/42, above n 1, 51.

<sup>12</sup> COM(2013) 343 final, above n 2, 7.

<sup>13</sup> Ibid, 8.

<sup>&</sup>lt;sup>14</sup> Ibid, 5; see also OJ L 219/42, above n 1, paragraph (6), 43.

<sup>&</sup>lt;sup>15</sup> COM(2013) 343 final, above n 2, 5; see also: EU Business, 'Amended Nuclear Safety Directive', 9 July 2014.

**nuclear installations** (siting, design, construction, commissioning, operation and decommissioning), particularly nuclear power plants;<sup>16</sup>

- reinforce monitoring and exchange of experiences by establishing an EU-wide system of topical peer reviews;<sup>17</sup>
- enhance accident management and on-site emergency response, and ensure continuous review and adoption of lessons learned; and<sup>18</sup>
- establish a mechanism for developing EU-wide harmonised nuclear safety guidelines (through the peer reviews and coordinated national self-assessments) and a strong nuclear safety culture (through effective management systems, appropriate education and training).<sup>19</sup>

The table set out in Appendix 1 sets out the key provisions of the 2014 Directive compared to the 2009 Directive.

### What This Means for Industry

FORATOM, on behalf of the European nuclear industry, welcomed the adoption of the 2014 Directive, stating that "[t]he European nuclear industry supports in particular how it strengthens the role and independence of Europe's national regulators and endorses agreed safety objectives for nuclear power plants, in accordance with the recommendations of the Western European Nuclear Regulators' Association (WENRA)."<sup>20</sup>

While the 2014 Directive sets out obligations binding on Member States, and many of the amendments are focused on national legislative and regulatory frameworks, including additional obligations on national regulatory authorities, there are a number of amendments that are specifically targeted at licence holders.

To prepare for the introduction of the new provisions of the 2014 Directive, licence holders may:

- Take particular note of explicit reference to the licence holder's prime responsibility to ensure nuclear safety, which cannot be delegated to contractors or sub-contractors. Licence holders are responsible for all activities of their contractors and sub-contractors and, therefore, licence holders need to ensure that their contracts include provisions that:
  - require compliance with nuclear safety requirements to the same level as required by the licence holder to ensure that the licence holder can comply with terms and conditions of its licence and relevant regulations;
  - stipulate the requirement to have programs relating to quality assurance and nuclear safety culture in place in contractor and sub-contractor organisations;

<sup>16</sup> COM(2013) 343 final, above n 2, 5.

<sup>18</sup> EU Business, 'Amended Nuclear Safety Directive', 9 July 2014.

<sup>17</sup> Ibid.

<sup>&</sup>lt;sup>19</sup> COM(2013) 343 final, above n 2, 5; EU Business, 'Amended Nuclear Safety Directive', 9 July 2014; OJ L 219/42, above n 1, paragraph (18), 44.

<sup>&</sup>lt;sup>20</sup> See: <u>http://www.foratom.org/newsfeeds/273-revised-safety-directive-to-reinforce-national-legislative-and-regulatory-framewor.html</u>, 2 July 2014. FORATOM had previously identified a number of concerns with the Draft Proposal and many of these concerns have been addressed in the 2014 Directive.

- provide for the license holder to review decisions, activities and any sub-contracting to ensure compliance with nuclear safety requirements; and
- require contractors to pass on to sub-contractors all relevant terms and conditions (in a "back-to-back" fashion) to
  ensure the licence holder has adequate oversight and control at all times.
- Reconsider "defence-in-depth" for their installations and work with regulators to ensure that the licence holder's arrangements satisfy any amendments, including with respect to the requirement to regularly assess, verify, and continuously improve defence-in-depth arrangements.
- Reconsider on-site emergency procedures and arrangements, including severe accident management guidelines or equivalent arrangements, and work with regulators to ensure that the licence holder's arrangements satisfy any amendments. In particular, ensure that on-site emergency procedures are periodically reviewed and regularly updated, including to take account of lessons learned from the Fukushima Daiichi nuclear accident and any other incidents or accidents at nuclear facilities.
- Review human resource qualifications and competencies to ensure the ability to fulfill obligations with respect to nuclear safety at installations. In particular, pay attention to the human resources of contractors and sub-contractors whose activities affect nuclear safety and ensure these human resources are sufficiently qualified and competent. As noted above, this can be achieved by proper contractual arrangements that give requisite levels of control to licence holders.
- Review, and if necessary, revise or develop communications policies to ensure that obligations with respect to transparency and dissemination of appropriate information to local authorities, populations and stakeholders in the vicinity of a nuclear installation are properly incorporated into that policy.
- Review, and if necessary revise or develop, an institutional nuclear safety culture policy within licence holder organisations, ensuring that this policy incorporates all traits of a positive nuclear safety culture.
- Plan and prepare for the required systematic and regular review (at least every 10 years) of the safety of nuclear installations, to ensure compliance with the current design basis and identify further safety improvements by taking into account aging issues, operational experience, the most recent research results and developments in international standards.

For other entities which are not the primary licence holders, the 2014 Directive contains concepts and standards that warrant attention, particularly for contractors and sub-contracts doing business with licence holders. It may also be prudent for companies that have policies for doing business in the nuclear sector (whether individually or through common initiatives such as the Nuclear Power Plant Exporters Principles of Conduct)<sup>21</sup> to consider whether any amendments should be made to these policies to take into account and facilitate compliance with the 2014 Directive. It would be equally prudent for commercial banks and lending institutions to review their lending policies and guidelines against the 2014 Directive to ensure that enhanced nuclear safety requirements are appropriately incorporated.

<sup>&</sup>lt;sup>21</sup> See: <u>http://nuclearprinciples.org/the-principles/</u>.

Ultimately, the ongoing goal of the entire nuclear industry is to strive for, and work together to ensure the adoption and implementation of, the highest standards of nuclear safety – not only in Member States of the EU - but around the world.

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This memorandum is intended only as a general discussion of these issues. It should not be regarded as legal advice. We would be pleased to provide additional details or advice about specific situations if desired.

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### Appendix 1: Key Provisions of the 2014 Directive Compared to the 2009 Directive

The major substantive changes contained in the 2014 Directive are set out in **bold and italicised** text below. More minor amendments are not identified.

2014 Directive	2009 Directive			
CHAPTER 1 ( <i>OBJECTIVES</i> ,	CHAPTER 1 (OBJECTIVES, SCOPE AND DEFINITIONS)			
OBJECTIVES, SCOPE AND DEFINITIONS	OBJECTIVES, DEFINITIONS AND SCOPE OF APPLICATION			
Article 1 (	(Objectives)			
The objectives of this Directive are:	The objectives of this Directive are:			
<ul> <li>(a) to establish a Community framework in order to maintain and promote the continuous improvement of nuclear safety and its regulation;</li> </ul>	<ul> <li>(a) to establish a Community framework in order to maintain and promote the continuous improvement of nuclear safety and its regulation;</li> </ul>			
(b) to ensure that Member States shall provide for appropriate national arrangements for a high level of nuclear safety to protect workers and the general public against the dangers arising from ionizing radiations from nuclear installations.	(b) to ensure that Member States shall provide for appropriate national arrangements for a high level of nuclear safety to protect workers and the general public against the dangers arising from ionizing radiations from nuclear installations.			
Article 2 ( <i>Scope</i> )				
1. This Directive shall apply to any civilian nuclear installation subject to a licence.	<ol> <li>This Directive shall apply to any civilian nuclear installation operating under a licence as defined in Article 3(4) at all stages covered by this licence.</li> </ol>			
2. This Directive does not prevent Member States from taking more stringent safety measures in the subject-matter covered by this Directive, in compliance with Community law.	2. This Directive does not prevent Member States from taking more stringent safety measures in the subject-matter covered by this Directive, in compliance with Community law.			
3. This Directive supplements the basic standards referred to in Article 30 of the Treaty as regards the nuclear safety of nuclear installations and is without prejudice to the existing Community legislation for	3. This Directive supplements the basic standards referred to in Article 30 of the Treaty as regards the nuclear safety of nuclear installations and is without prejudice to Directive 96/29/Euratom.			

	2014 Directive		2009 Directive		
	the protection of the health of the workers and the				
	general public against the dangers arising from				
	ionising radiation, and in particular Council				
	Directive 2013/59/Euratom (*).				
	Article 3 (I	Defin	itions)		
For	For the purposes of this Directive the following		For the purposes of this Directive the following		
def	initions shall apply:	definitions shall apply:			
1.	'nuclear installation' means:	1.	'nuclear installation' means:		
(a)	a nuclear power plant, enrichment plant, nuclear	(a)	an enrichment plant, nuclear fuel fabrication plant,		
	fuel fabrication plant, reprocessing plant, research		nuclear power plant, reprocessing plant, research		
	reactor facility, spent fuel storage facility; and;		reactor facility, spent fuel storage facility; and		
(b)	storage facilities for radioactive waste that are on	(b)	storage facilities for radioactive waste that are on		
()	the same site and are directly related installations	(-)	the same site and are directly related installations		
	listed under point (a);		listed under point (a);		
2.	'nuclear safety' means the achievement of proper	2.	'nuclear safety' means the achievement of proper		
	operating conditions, prevention of accidents and		operating conditions, prevention of accidents and		
	mitigation of accident consequences, resulting in		mitigation of accident consequences, resulting in		
	protection of workers and the general public from		protection of workers and the general public from		
	dangers arising from ionizing radiations from nuclear installations;		dangers arising from ionizing radiations from nuclear installations;		
3.	'competent regulatory authority' means an authority	3.	'competent regulatory authority' means an authority		
	or a system of authorities designated in a Member		or a system of authorities designated in a Member		
	State in the field of regulation of nuclear safety of		State in the field of regulation of nuclear safety of		
	nuclear installations as referred to in Article 5;		nuclear installations as referred to in Article 5;		
4.	'licence' means any legal document granted under	4.	'licence' means any legal document granted under		
	the jurisdiction of a Member State to confer		the jurisdiction of a Member State to confer		
	responsibility for the siting, design, construction,		responsibility for the siting, design, construction,		
	commissioning and operation or decommissioning		commissioning and operation or decommissioning		
	of a nuclear installation;		of a nuclear installation;		

	2014 Directive		2009 Directive
5.	'licence holder' means a legal or natural person	5.	'licence holder' means a legal or natural person
	having overall responsibility for a nuclear		having overall responsibility for a nuclear
	installation as specified in a licence.		installation as specified in a licence.
	'accident' means any unintended event, the		
	consequences or potential consequences of		
	which are significant from the point of view		
	of radiation protection or nuclear safety;		
7.	'incident' means any unintended event, the		
	consequences or potential consequences of		
	which are not negligible from the point of		
	view of radiation protection or nuclear		
	safety;		
?.	'abnormal operations' means an		
	operational process deviating from normal		
	operation which is expected to occur at least		
	once during the operating lifetime of a		
	facility but which, in view of appropriate		
	design provisions, does not cause any		
	significant damage to items important to		
	safety or lead to accident conditions;		
).	'design basis' means the range of conditions		
	and events taken explicitly into account in		
	the design, including upgrades, of a nuclear		
	installation, according to established		
	criteria, so that the installation can		
	withstand them without exceeding		
	authorised limits by the planned operation		
	of safety systems;		
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10. 'design basis accident' means accident conditions against which a nuclear installation is designed according to

### **2014 Directive**

established design criteria, and for which the damage to the fuel, where applicable, and the release of radioactive material are kept within authorised limits;

11. 'severe conditions' means conditions that are more severe than conditions related to design basis accidents; such conditions may be caused by multiple failures, such as the complete loss of all trains of a safety system, or by an extremely unlikely event.

CHAPTER 2 (OBLIGATIONS)

### **SECTION 1 (General Obligations)**

Article 4 (Legislative, regulatory and organisational framework)

1.	Member States shall establish and maintain a national legislative, regulatory and organisational framework ("national framework") for the nuclear safety of nuclear installations. The national framework shall provide in particular for:	1.	Member States shall establish and maintain a national legislative, regulatory and organisational framework (hereinafter referred to as the 'national framework') for nuclear safety of nuclear installations that allocates responsibilities and provides for coordination between relevant state bodies. The national framework shall establish responsibilities for:
(a)	the allocation of responsibilities and coordination between relevant state bodies;	(a)	the adoption of national nuclear safety requirements. The determination on how they are adopted and through which instrument they are applied rests with the competence of the Member States;
(b)	national nuclear safety requirements, <i>covering all stages of the lifecycle of nuclear installations</i> ;	(b)	the provision of a system of licensing and prohibition of operation of nuclear installations without a licence;

2014 Directive	2009 Directive
(c) a system of licensing and prohibition of operation of nuclear installations without a licence;	c) the provision of a system of nuclear safety supervision;
(d) a system of <i>regulatory control</i> of nuclear safety <i>performed by the competent regulatory</i> <i>authority</i> ;	(d) enforcement actions, including suspension of operation and modification or revocation of a licence.
(e) <i>effective and proportionate</i> enforcement actions, including, where appropriate, <i>corrective</i> <i>action</i> or suspension of operation and modification or revocation of a licence.	I
The determination on how national nuclear safety requirements referred to in point (b) are adopted and through which instrument they are applied remains within the competences of the Member States;	
2. Member States shall ensure that the national framework is maintained and improved when appropriate, taking into account operating experience, insights gained from safety analyses for operating nuclear installations, development of technology and results of safety research, when available and relevant.	2. Member States shall ensure that the national framework is maintained and improved when appropriate, taking into account operating experience, insights gained from safety analyses for operating nuclear installations, development of technology and results of safety research, when available and relevant.
Article 5 (Competer	nt regulatory authority)
<ol> <li>Member States shall establish and maintain a competent regulatory authority in the field of nuclear safety of nuclear installations.</li> </ol>	<ol> <li>Member States shall establish and maintain a competent regulatory authority in the field of nuclear safety of nuclear installations.</li> </ol>

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- 2. Member States shall ensure the effective independence from undue influence of the competent regulatory authority in its regulatory decision-making. For this purpose, Member States shall ensure that the national framework requires that the competent regulatory authority:
- (a) is functionally separate from any other body or organisation concerned with the promotion or utilisation of nuclear energy, and does not seek or take instructions from any such body or organisation when carrying out its regulatory tasks;
- (b) takes regulatory decisions founded on robust and transparent nuclear safety-related requirements;
- (c) is given dedicated and appropriate budget allocations to allow for the delivery of its regulatory tasks as defined in the national framework *and is responsible for the implementation of the allocated budget;*
- (d) employs an appropriate number of staff with qualifications, experience and expertise necessary to fulfil its obligations. *It may use external scientific and technical resources and expertise in support of its regulatory functions;*
- (e) establishes procedures for the prevention and resolution of any conflicts of interest;

### **2009 Directive**

2. Member States shall ensure that the competent regulatory authority is functionally separate from any other body or organisation concerned with the promotion, or utilisation of nuclear energy, including electricity production, in order to ensure effective independence from undue influence in its regulatory decision making.

#### **2014 Directive**

- (f) provides nuclear safety-related information without clearance from any other body or organisation, provided that this does not jeopardise other overriding interests, such as security, recognised in relevant legislation or international instruments.
- 3. Member States shall ensure that the competent regulatory authority is given the legal powers necessary to fulfil its obligations in connection with the national framework described in Article 4(1). For this purpose, Member States shall ensure that the national framework entrusts the competent regulatory authorities with the following main regulatory tasks, to:
- (a) propose, define or participate in the definition of national nuclear safety requirements;
- (b) require that the licence holder complies and demonstrates compliance with national nuclear safety requirements and the terms of the relevant licence;
- (c) verify such compliance through regulatory assessments and inspections;
- (d) *propose* or carry out *effective and proportionate* enforcement actions.

- 3. Member States shall ensure that the competent regulatory authority is given the legal powers and human and financial resources necessary to fulfil its obligations in connection with the national framework described in Article 4(1) with due priority to safety. This includes the powers and resources to:
- (a) require the licence holder to comply with national nuclear safety requirements and the terms of the relevant licence;
- (b) require demonstration of this compliance, including the requirements under paragraphs 2 to 5 of Article 6;
- (c) verify this compliance through regulatory assessments and inspections; and
- (d) carry out regulatory enforcement actions, including suspending the operation of nuclear installation in accordance with conditions defined by the national framework referred to in Article 4(1).

2014 Directive	2009 Directive		
Article 6 ( <i>Lic</i>	Article 6 ( <i>Licence holders</i> )		
Member States shall ensure that the national framework requires that:	1. Member States shall ensure that the prime responsibility for nuclear safety of a nuclear installation rests with the licence holder. This responsibility cannot be delegated.		
<ul> <li>(a) the prime responsibility for the nuclear safety of a nuclear installation rests with the licence holder. That responsibility cannot be delegated <i>and includes responsibility for the activities of contractors and sub-contractors whose activities might affect the nuclear safety of a nuclear installation;</i></li> <li>(b) when applying for a licence, the applicant is</li> </ul>	<ol> <li>Member States shall ensure that the national framework in place requires licence holders, under the supervision of the competent regulatory authority, to regularly assess and verify, and continuously improve, as far as reasonably achievable, the nuclear safety of their nuclear installations in a systematic and verifiable manner.</li> <li>The assessments referred to in paragraph 2 shall</li> </ol>		
required to submit a demonstration of nuclear safety. Its scope and level of detail shall be commensurate with the potential magnitude and nature of the hazard relevant for the nuclear installation and its site;	include verification that measures are in place for prevention of accidents and mitigation of consequences of accidents, including verification of the physical barriers and licence holder's administrative procedures of protection that would have to fail before workers and the general public would be significantly affected by ionizing radiations.		
<ul> <li>(c) licence holders are to regularly assess, verify, and continuously improve, as far as reasonably <i>practicable</i>, the nuclear safety of their nuclear installations in a systematic and verifiable manner. That shall include verification that measures are in place for the prevention of accidents and mitigation of the consequences of accidents, <i>including the verification of the application of defence-in-depth provisions</i>;</li> </ul>	4. Member States shall ensure that the national framework in place requires licence holders to establish and implement management systems which give due priority to nuclear safety and are regularly verified by the competent regulatory authority.		

2014 Directive		2009 Directive
(d) licence holders establish and implement	5.	Member States shall ensure that the national
management systems which give due priority to		framework in place requires licence holders to
nuclear safety;		provide for and maintain adequate financial and
		human resources to fulfil their obligations with
		respect to nuclear safety of a nuclear installation,
		laid down in paragraphs 1 to 4.

- (e) licence holders provide for appropriate on-site emergency procedures and arrangements, including severe accident management guidelines or equivalent arrangements, for responding effectively to accidents in order to prevent or mitigate their consequences. Those shall in particular:
  - (i) be consistent with other operational procedures and periodically exercised to verify their practicability;
  - (ii) address accidents and severe accidents that could occur in all operational modes and those that simultaneously involve or affect several units;
  - *(iii) provide arrangements to receive external assistance;*
  - (iv) be periodically reviewed and regularly updated, taking account of experience from exercises and lessons learned from accidents;
- (f) licence holders provide for and maintain financial and human resources with appropriate qualifications and competences, necessary to fulfil their obligations with respect to the nuclear

### **2014 Directive**

**2009 Directive** 

safety of a nuclear installation. *Licence holders shall also ensure that contractors and subcontractors under their responsibility and whose activities might affect the nuclear safety of a nuclear installation have the necessary human resources with appropriate qualifications and competences to fulfil their obligations.* 

Article 7 (Expertise and skill in nuclear safety)

Member States shall ensure that the national framework requires all parties to make arrangements for the education and training for their staff having responsibilities related to the nuclear safety of nuclear installations so as to obtain, maintain and to further develop expertise and skills in nuclear *safety and on-site emergency preparedness*. Member States shall ensure that the national framework in place requires arrangements for education and training to be made by all parties for their staff having responsibilities relating to the nuclear safety of nuclear installations in order to maintain and to further develop expertise and skills in nuclear safety.

### Article 8 (**Transparency**)

 Member States shall ensure that necessary information in relation to the nuclear safety of nuclear installations and its regulation is made available to workers and the general public, with specific consideration to local authorities, population and stakeholders in the vicinity of a nuclear installation. That obligation includes ensuring that the competent regulatory authority and the licence holders, within their fields of responsibility, provide in the framework of their communication policy:

(a) information on normal operating conditions of nuclear installations to workers and the general public; and

#### Article 8 (Information to the public)

Member States shall ensure that information in relation to the regulation of nuclear safety is made available to the workers and the general public. This obligation includes ensuring that the competent regulatory authority informs the public in the fields of its competence. Information shall be made available to the public in accordance with national legislation and international obligations, provided that this does not jeopardise other interests such as, inter alia, security, recognised in national legislation or international obligations.

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- (b) prompt information in case of incidents and accidents to workers and the general public and to the competent regulatory authorities of other Member States in the vicinity of a nuclear installation.
- 2. Information shall be made available to the public in accordance with relevant legislation and international instruments, provided that this does not jeopardise other overriding interests, such as security, which are recognised in relevant legislation or international instruments.
- 3. Member States shall, without prejudice to Article 5(2), ensure that the competent regulatory authority engages, as appropriate, in cooperation activities on the nuclear safety of nuclear installations with competent regulatory authorities of other Member States in the vicinity of a nuclear installation, inter alia, via the exchange and/or sharing of information.
- 4. Member States shall ensure that the general public is given the appropriate opportunities to participate effectively in the decision-making process relating to the licensing of nuclear installations, in accordance with relevant legislation and international instruments.

### **2014 Directive**

#### **2009 Directive**

**SECTION 2** (Specific Obligations)

Article 8a (Nuclear safety objective for nuclear installations)

- 1. Member States shall ensure that the national nuclear safety framework requires that nuclear installations are designed, sited, constructed, commissioned, operated and decommissioned with the objective of preventing accidents and, should an accident occur, mitigating its consequences and avoiding:
- (a) early radioactive releases that would require off-site emergency measures but with insufficient time to implement them;
- (b) (large radioactive releases that would require protective measures that could not be limited in area or time.
- 2. Member States shall ensure that the national framework requires that the objective set out in paragraph 1:
- (a) applies to nuclear installations for which a construction licence is granted for the first time after 14 August 2014;
- (b) is used as a reference for the timely implementation of reasonably practicable safety improvements to existing nuclear installations, including in the framework of the periodic safety reviews as defined in Article 8c(b).

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Article 8b (Implementation of the nuclear safety objective for nuclear installations)

- 1. In order to achieve the nuclear safety objective set out in Article 8a, Member States shall ensure that the national framework requires that where defence-in-depth applies, it shall be applied to ensure that:
- (a) the impact of extreme external natural and unintended man-made hazards is minimised;
- (b) abnormal operation and failures are prevented;
- (c) abnormal operation is controlled and failures are detected;
- (d) accidents within the design basis are controlled;
- (e) severe conditions are controlled, including prevention of accidents progression and mitigation of the consequences of severe accidents;
- (f) organisational structures according to Article 8d(1) are in place.

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- 2. In order to achieve the nuclear safety objective set out in Article 8a, Member States shall ensure that the national framework requires that the competent regulatory authority and the licence holder take measures to promote and enhance an effective nuclear safety culture. Those measures include in particular:
- (a) management systems which give due priority to nuclear safety and promote, at all levels of staff and management, the ability to question the effective delivery of relevant safety principles and practices, and to report in a timely manner on safety issues, in accordance with Article 6(d);
- (b) arrangements by the licence holder to register, evaluate and document internal and external safety significant operating experience;
- (c) the obligation of the licence holder to report events with a potential impact on nuclear safety to the competent regulatory authority; and,
- *(d) arrangements for education and training, in accordance with Article 7.*

Article 8c (Initial assessment and periodic safety reviews)

Member States shall ensure that the national framework requires that:

(a) any grant of a licence to construct a nuclear installation or operate a nuclear

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#### **2014 Directive**

installation, is based upon an appropriate site and installation-specific assessment, comprising a nuclear safety demonstration with respect to the national nuclear safety requirements based on the objective set in Article 8a;

(b) the licence holder under the regulatory control of the competent regulatory authority, re-assesses systematically and regularly, at least every 10 years, the safety of the nuclear installation as laid down in Article 6(c). That safety reassessment aims at ensuring compliance with the current design basis and identifies further safety improvements by taking into account ageing issues, operational experience, most recent research results and developments in international standards, using as a reference the objective set in Article 8a.

Article 8d (On-site emergency preparedness and response)

1. Without prejudice to the provisions of the Directive 2013/59/Euratom, Member States shall ensure that the national framework requires that an organisational structure for on-site emergency preparedness and response is established with a clear allocation of responsibilities and coordination between the licence holder, and competent authorities and organisations, taking into account all phases of an emergency.

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2. Member States shall ensure that there is consistency and continuity between the on-site emergency preparedness and response arrangements required by the national framework and other emergency preparedness and response arrangements required under Directive 2013/59/Euratom.

### CHAPTER 2a (PEER REVIEWS AND REPORTING)

#### Article 8e (*Peer reviews*)

- Member States shall, at least once every 10 years, arrange for periodic self-assessments of their national framework and competent regulatory authorities and invite an international peer review of relevant segments of their national framework and competent regulatory authorities with the aim of continuously improving nuclear safety. Outcomes of such peer reviews shall be reported to the Member States and the Commission, when available.
- 2. Member States shall ensure that, on a coordinated basis:
- (a) a national assessment is performed, based on a specific topic related to nuclear safety of the relevant nuclear installations on their territory;
- (b) all other Member States, and the Commission as observer, are invited to peer review the national assessment referred to in point (a);

[See Article 9(3) (Reporting).]

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- (c) appropriate follow-up measures are taken of relevant findings resulting from the peer review process;
- (d) relevant reports are published on the above mentioned process and its main outcome when results are available.
- 3. Member States shall ensure that arrangements are in place to allow for the first topical peer review to start in 2017, and for subsequent topical peer reviews to take place at least every six years thereafter.
- 4. In case of an accident leading to situations that would require off-site emergency measures or protective measures for the general public, the Member State concerned shall ensure that an international peer review is invited without undue delay.

	Article 9 ( <i>Reporting</i> )			
1.	Member States shall submit a report to the Commission on the implementation of this Directive for the first time by 22 July 2014, and then by 22 July 2020.	1.	Member States shall submit a report to the Commission on the implementation of this Directive for the first time by 22 July 2014, and every three years thereafter, taking advantage of the review and reporting cycles under the Convention on Nuclear Safety.	
2.	On the basis of the Member States' reports, the Commission shall submit a report to the Council and the European Parliament on progress made with the implementation of this Directive.	2.	On the basis of the Member States' reports, the Commission shall submit a report to the Council and the European Parliament on progress made with the implementation of this Directive.	
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### Article 10 (Transposition)

 Member States shall bring into force the laws, regulations and administrative provisions necessary to comply with this Directive by 22 July 2011. They shall forthwith inform the Commission thereof.

When Member States adopt these measures, they shall contain a reference to this Directive or shall be accompanied by such reference on the occasion of their official publication. The methods of making such reference shall be laid down by Member States.

1a. The obligations of transposition and implementation of Articles 6, 8a, 8b, 8c and 8d shall not apply to Member States without nuclear installations, unless they decide to develop any activity related to nuclear installations subject to a licence under their jurisdiction.

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When Member States adopt these measures, they shall contain a reference to this Directive or shall be accompanied by such reference on the occasion of their official publication. The methods of making such reference shall be laid down by Member States.

- 2. Member States shall communicate to the Commission the text of the main provisions of national law which they adopt in the field covered by this Directive and of any subsequent amendments to those provisions.
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