

# NUCLEAR OPERATOR LIABILITY AMOUNTS AND FINANCIAL SECURITY LIMITS

(Last updated: June 2017)

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## ACRONYMS

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- BSC:** 1963 Brussels Convention Supplementary to the 1960 Paris Convention ("Brussels Supplementary Convention").
- CSC:** 1997 Convention on Supplementary Compensation for Nuclear Damage.
- JP:** Joint Protocol Relating to the Application of the Vienna Convention and the Paris Convention.
- PC:** 1960 Paris Convention on Third Party Liability in the Field of Nuclear Energy ("Paris Convention").
- RPC:** 2004 Protocol to amend the Paris Convention ("Revised Paris Convention"), **not yet in force**.
- RSBC:** 2004 Protocol to amend the Brussels Supplementary Convention, ("Revised Brussels Supplementary Convention"), **not yet in force**.
- RVC:** 1997 Protocol to Amend the Vienna Convention ("Revised Vienna Convention").
- VC:** 1963 Vienna Convention on Civil Liability for Nuclear Damage ("Vienna Convention").
- ( ):** When between brackets, it means that the country has signed but not yet ratified the convention.

## FINANCIAL INFORMATION

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In the table:

- **First tier** corresponds to the liability amount imposed on the operator ("Operator's Liability Amount").
- **Second tier** corresponds to the amounts provided from public funds beyond the Operator's Liability Amount, to be made available by the State in whose territory the nuclear installation of the liable operator is situated ("Additional State Compensation").
- **Third tier** corresponds to public funds contributed jointly by all the States parties to the BSC or CSC according to a pre-determined formula ["Additional Compensation (International Arrangements)"].

Please note that under Article V, subparagraph 1 of the Vienna Convention, "The liability of the operator may be limited by the Installation State to not less than US \$5 million for any one nuclear incident". Subparagraph 3 of the same article further provides that "The United States dollar referred to in this Convention is a unit of account equivalent to the value of the United States dollar in terms of gold on 29 April 1963, that is to say US \$35 per one troy ounce of fine gold."

Therefore, in this table **(1963: USD 5 million)** means that a country applies the Operator's Liability Amount as provided under the Vienna Convention.

**SDR** is a unit of account used by the International Monetary Fund and is based upon a basket of weighted currencies. The latest exchange rates of SDRs per currency units are available at [http://www.imf.org/external/np/fin/data/rms\\_five.aspx](http://www.imf.org/external/np/fin/data/rms_five.aspx).

**Interest and legal costs** are not specified in the table.




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State	International Liability Convention	Installations/Activities	Operator's Liability Amount	Financial Security Limit	Additional State Compensation if any	Additional Compensation (International Arrangements) if any	Last updated by the NEA
<b>Argentina</b> 	VC, RVC, CSC, (JP)	Nuclear installations	USD 80 million	USD 80 million	Unlimited after depletion of the insurance coverage		June 2014
<b>Armenia</b> 	VC	Nuclear installations and transport activities	Remains to be set by forthcoming legislation	No amount specified			June 2011
<b>Australia</b> 	(CSC)	Nuclear installations and transport activities	Unlimited (in absence of legislation to the contrary)				June 2017
<b>Austria</b> 	(PC), (BSC)	Nuclear installations	Unlimited	EUR 406 million			November 2016
		Experimental and research reactors and transport activities of nuclear materials		EUR 40.6 million			
		Holder of radionuclide-exceeding 370 gigabecquerel		EUR 4.06 million			
<b>Belarus</b> 	VC, RVC	All nuclear facilities (including the associated spent fuel and radioactive waste infrastructure)	Unlimited (to be set by the President; not lower than RVC)	Mandatory but no amount specified yet			June 2011


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<b>Belgium</b> 	PC, BSC, (RPC), (RBSC), (JP)	Nuclear installations	EUR 1.2 billion	EUR 1.2 billion	Between first tier and SDR 175 million	SDR 125 million	November 2016
		Transport activities	EUR 80-297 million	EUR 297 million			
		Low risk Installations	EUR 75-297 million	EUR 297 million			
<b>Bolivia</b> 	VC		Unlimited (in the absence of legislation to the contrary)	No amount specified			June 2011
<b>Bosnia and Herzegovina</b> 	VC, RVC		Unlimited (in absence of legislation to the contrary)	No amount specified			June 2011
<b>Brazil</b> 	VC	Nuclear installations	(1963: USD 5 million)	(1963: USD 5 million)			June 2011
		Research installations and transport activities		No amount specified			
		Low risk state owned activities		No insurance required			
<b>Bulgaria</b> 	VC, JP	All nuclear facilities	BGN 96 million	BGN 96 million			June 2011





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<b>Cameroon</b> 	VC, JP		Unlimited (in the absence of legislation to the contrary)	No amount specified			June 2011
<b>Canada</b> 	CSC	Commercial power reactors and related transport activities	Phased in over 4 years starting at CAD 650 million from 1 January 2017, and increased each year until it reaches CAD 1 billion or a higher amount set by regulation	Phased in over 4 years starting at CAD 650 million, from the date the implementing legislation comes into force, and increased each year until it reaches CAD 1 billion	Only if appropriated by Parliament	SDR 300 million	June 2017
		Low risk nuclear installations (e. g. research reactors and nuclear fuel waste facilities) and related transport activities	CAD 0.5-180 million	CAD 0.5-180 million			
<b>Chile</b> 	VC, JP	Research reactors and low risk nuclear installations	USD 75 million	USD 75 million			June 2014
<b>China</b> 		Nuclear power stations	CNY 300 million	CNY 300 million	CNY 800 million or above if approved by State Council		June 2011
		Spent fuel storage, transport activities and reprocessing facilities					
		Other nuclear installations	CNY 100 million	CNY 100 million			





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<b>Croatia</b> 	VC, JP		HRK 320 million	HRK 320 million			June 2011
<b>Cuba</b> 	VC		Unlimited (in the absence of legislation to the contrary)	No amount specified			June 2011
<b>Czech Republic</b> 	VC, (RVC), JP, (CSC)	Nuclear installations used for power generation purposes, storage facilities and repositories of spent fuel assigned to these installations or nuclear materials generated by reprocessing of spent fuel	CZK 8 billion	CZK 2 billion minimum			June 2017
		Other nuclear installations and transport activities	CZK 2 billion	CZK 300 million minimum			
<b>Denmark</b> 	PC, BSC, (RPC), (RBSC), JP	Nuclear installations and transport activities	SDR 60 million	SDR 60 million	SDR 115 million	SDR 125 million	June 2014
<b>Egypt</b> 	VC, JP		Unlimited (in the absence of legislation to the contrary)	Unlimited (in the absence of legislation to the contrary)			June 2011

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<b>Estonia</b> 	VC, JP		Unlimited (in the absence of legislation to the contrary)	Unlimited (in the absence of legislation to the contrary)			June 2011
<b>Finland</b> 	PC, BSC, (RPC), (RBSC), JP	Nuclear installations	Unlimited liability (for damage suffered within Finland)  SDR 600 million (for damage suffered outside Finland)	SDR 600 million		SDR 125 million	November 2016
		Low risk installations and transport activities	SDR 5-600 million				
<b>Former Yugoslav Republic of Macedonia</b> 	VC		Unlimited (in the absence of legislation to the contrary)	No amount specified			June 2011
<b>France</b> 	PC, BSC, (RPC), (RBSC), JP	Nuclear installations	EUR 700 million	EUR 700 million		SDR 125 million	November 2016
		Low risk nuclear installations	EUR 70 million	EUR 70 million			
		Transport activities	EUR 80 million	EUR 80 million			
		Transit across France	EUR 80 million (if covered by the Paris Convention)  Unlimited (if not covered by the Paris Convention)	EUR 80 million (if covered by the Paris Convention)  EUR 700 million (if not covered by the Paris Convention)			

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State	International Liability Convention	Installations/Activities	Operator's Liability Amount	Financial Security Limit	Additional State Compensation if any	Additional Compensation (International Arrangements) if any	Last updated by the NEA
<b>Germany</b> 	PC, BSC, (RPC), (RBSC), JP	Nuclear power plants	Unlimited	EUR 2.5 billion	Up to EUR 2.5 billion	SDR 125 million	November 2016
		Other nuclear installations		Up to EUR 2.5 billion [maximum depending on thermal capacity (for reactors); on type, amount, activity and nature of radioactive substances (for other installations)]			
		Transport activities		Up to EUR 70 million (maximum depending on type, amount, activity and nature of the radioactive substances)			
<b>Greece</b> 	PC, JP, (RPC)	Nuclear installations	SDR 15 million	SDR 15 million			November 2016
		Transport activities					
<b>Hungary</b> 	VC, (RVC), JP	Nuclear installations	SDR 100 million	SDR 100 million	SDR 200 million		November 2016
		Transport or storage of nuclear fuel	SDR 5 million	SDR 5 million	SDR 295 million		
<b>India</b> 	CSC	Nuclear reactor having thermal power equal to or above 10 MW	Rs 1 500 Crores (INR 15 billion)	Rs 1 500 Crores (INR 15 billion)	After depletion, from the operator's liability and up to SDR 300 million		November 2016
		Spent fuel reprocessing plant	Rs 300 Crores (INR 3 billion)	Rs 1 500 Crores (INR 15 billion)			
		Research reactors having thermal power below 10 MW, other fuel cycle facilities and transportation of nuclear materials	Rs 100 Crores (INR 1 billion)	Rs 1 500 Crores (INR 15 billion)			



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<b>Indonesia</b> 	(RVC), (CSC)	Nuclear installations	IDR 4 trillion	No information			June 2011
<b>Israel</b> 	(VC)		No information	No information			June 2011
<b>Italy</b> 	PC, BSC, (RPC), (RBSC), (RVC), JP, (CSC)	Nuclear installations and transport activities	SDR 15 million	SDR 15 million	SDR 160 million	SDR 125 million	November 2016
<b>Japan</b> 	CSC	Nuclear reactors above 10 000 kW and spent fuel reprocessing facilities	Unlimited	JPY 120 billion	After depletion of the operator's liability, such aid to be determined by the Diet		June 2014
		Other nuclear installations and transport activities where higher risk material is involved	Unlimited	JPY 24 billion			
		Other nuclear installations and transport activities where lower risk materials are involved	Unlimited	JPY 4 billion			
<b>Jordan</b> 	VC, RVC		No information	No information			June 2014

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Kazakhstan 	VC, RVC		No information	No information			June 2014
Korea 		Power reactors above 10 000 kW Research reactors above 10 000 kW Reactors under 10 000 kW Fuel cycle facilities Handling and transportation Spent fuel interim storage	SDR 300 million	SDR 300 million <sup>i</sup> KRW 6 billion KRW 20 million – 1 billion depending upon its size KRW 10 million – 2 billion depending upon its process KRW 20 million – 200 million depending upon its process KRW 2 billion			July 2015
Latvia 	VC, RVC, JP	Nuclear installations Other practices (nuclear facilities, radioactive waste disposal / management facilities) Practices involving high doses of radiation sources Practices involving medium doses of radiation sources	LVL 4 million LVL 0.8 million LVL 0.4 million LVL 80 000	LVL 4 million LVL 0.8 million LVL 0.4 million LVL 80 000	Difference between available insurance and LVL 80 million		June 2011

i. An insurance policy covers maximum six reactor units for the same site.

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		Other practices which require a special license	LVL 1 000	LVL 1 000			
<b>Lebanon</b> 	VC, (RVC), (CSC)		Unlimited (in absence of legislation to the contrary)	No amount specified			June 2011
<b>Lithuania</b> 	VC, (RVC), JP, (CSC)	Nuclear installations and transportation	LTL equivalent of (1963: USD 5 million)	LTL equivalent of (1963: USD 5 million)			June 2011
<b>Luxembourg</b> 	(PC), (BSC)		Unlimited (in absence of legislation to the contrary)	No amount specified			June 2014
<b>Mauritius</b> 	VC, (CSC)		Unlimited (in absence of legislation to the contrary)	No amount specified			June 2014
<b>Mexico</b> 	VC	Nuclear installations and transportation	MXN 100 million pesos for each nuclear incident  MXN 195 million pesos in case of successive nuclear incidents occurring at the same nuclear installation within a period of twelve consecutive months	No amount specified, but MXN 100 million pesos indirectly required			June 2017



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State	International Liability Convention	Installations/Activities	Operator's Liability Amount	Financial Security Limit	Additional State Compensation if any	Additional Compensation (International Arrangements) if any	Last updated by the NEA
<b>Moldova</b> 	VC		Unlimited (in absence of legislation to the contrary)	No amount specified			June 2011
<b>Montenegro</b> 	VC, RVC, CSC		No information	No information			July 2015
<b>Morocco</b> 	(VC), RVC, CSC, (JP)		SDR 100 million	No amount specified	SDR 5 million		June 2011
<b>Netherlands</b> 	PC, BSC, (RPC), (RBSC), JP	Nuclear power plants	EUR 1.2 billion	EUR 1.2 billion	Up to EUR 1.5 or 2.3 billion	SDR 125 million	November 2016
		Enrichment installations, research reactors, storage installations and closed nuclear power plants	EUR 22.7-100 million	EUR 22.7-100 million			
		Transport activities	EUR 8-22.7 million	EUR 8-22.7 million			
<b>Niger</b> 	VC, RVC		Unlimited (in absence of legislation to the contrary)	No amount specified			June 2011

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<b>Nigeria</b> 	VC		Unlimited (in absence of legislation to the contrary)	No amount specified			June 2011
<b>Norway</b> 	PC, BSC, RPC, RBSC, JP	Nuclear installations and transport activities	SDR 60 million	SDR 60 million	SDR 115 million	SDR 125 million	June 2014
		Exceptional cases, low risk nuclear installations and transport activities	SDR 5 million minimum	SDR 5 million minimum	SDR 170 million		
<b>Pakistan</b> 			No information	No information			June 2014
<b>Peru</b> 	VC, (RVC), (CSC)		Unlimited (in absence of legislation to the contrary)	No amount specified			June 2011
<b>Philippines</b> 	VC, (RVC), (JP), (CSC)	Nuclear installations and transport activities	USD 5 million	USD 5 million to be decided on a case by case basis	After depletion of the operator's liability, such aid as may be determined by the Congress		June 2011

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<b>Poland</b> 	VC, RVC, JP	Nuclear installations	SDR 300 million	SDR 300 million			June 2014
		Research reactors or a nuclear facility where nuclear material originated from it is kept or stored, as well as transportation of nuclear material from such facilities		SDR 0.4-5 million			
		Nuclear material and spent fuel storage and disposal facilities for nuclear materials not originated from research reactors		SDR 300 million			
		Radioactive waste repositories		SDR 300 million			
<b>Portugal</b> 	PC, (RPC), (JP)	Nuclear installations	SDR 15 million	No amount specified			November 2016
		Transport activities					
		Low risk installations					

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State	International Liability Convention	Installations/Activities	Operator's Liability Amount	Financial Security Limit	Additional State Compensation if any	Additional Compensation (International Arrangements) if any	Last updated by the NEA
<b>Romania</b> 	VC, RVC, JP, CSC	Nuclear installations	SDR 300 million (can be reduced to SDR 150 million if State provides for the difference up to SDR 300 million)	SDR 300 million (can be reduced to SDR 150 million if State provides for the difference up to SDR 300 million)	Difference between first tier and SDR 300 million		June 2017
		Research reactors, radioactive waste and spent fuel storage facilities	SDR 30 million (can be reduced to SDR 10 million if State provides for the difference up to SDR 30 million)	SDR 30 million (can be reduced to SDR 10 million if State provides for the difference up to SDR 30 million)	Difference between first tier and SDR 30 million		
		Transport of nuclear fuel used in a nuclear reactor	SDR 25 million	SDR 25 million			
		Transport of nuclear materials	SDR 5 million	SDR 5 million			
<b>Russian Federation</b> 	VC	Nuclear installations	Unlimited	No amount specified, but recommended amount is (1963: USD 5 million)	After depletion of the financial security		June 2014
<b>Saint Vincent and Grenadines</b> 	VC, JP	Nuclear installations	Unlimited (in absence of legislation to the contrary)	No amount specified			June 2011

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<b>Saudi Arabia</b> 	VC, RVC	Nuclear installations	Unlimited (in absence of legislation to the contrary)	No amount specified			June 2014
<b>Senegal</b> 	VC, (CSC)	Nuclear installations	No information	No information			June 2014
<b>Serbia</b> 	VC		Unlimited (in absence of legislation to the contrary)	No amount specified			June 2011
<b>Slovak Republic</b> 	VC, JP	Nuclear installations with nuclear reactor or nuclear reactors serving for energy purposes (during their commissioning and operation)	EUR 300 million	EUR 300 million			November 2016
		Nuclear installations with nuclear reactor or nuclear reactors serving exclusively for scientific, educational or research purposes (during their commissioning and operation), transport of radioactive materials, nuclear materials and spent fuel handling, storage, conditioning and treatment of radioactive waste, any nuclear installations in decommissioning	EUR 185 million	EUR 185 million			








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<b>Slovenia</b> 	PC, BSC, JP, (RPC), (RBSC)	Nuclear installations	SDR 150 million	SDR 150 million	SDR 25 million	SDR 125 million	November 2016
		Research reactors		SDR 5 million	SDR 170 million		
		Transport activities		SDR 20 million	SDR 155 million		
<b>South Africa</b> 		Koeberg Nuclear power station (2 units)	ZAR 2.4 billion	ZAR 2.4 billion	After depletion of the operator's liability, such aid as may be determined by the Parliament		June 2014
		Safari-1 Research reactor	ZAR 120 million	ZAR 120 million			
		Other nuclear installations	ZAR 1 million	ZAR 1 million			
<b>Spain</b> 	PC, BSC, (RPC), RBSC, (VC), (JP)	Nuclear installations	EUR 700 million	EUR 700 million	Between first tier and SDR 175 million	SDR 125 million	November 2016
		Low risk nuclear installations	EUR 30 million minimum	EUR 30 million minimum			
		Transport activities					
<b>Sweden</b> 	PC, BSC, JP, (RPC), (RBSC)	Nuclear installations and transport activities	SDR 300 million	SDR 360 million	SEK 900 million	SDR 125 million	June 2017
		Installations for production and storage of un-irradiated uranium and transport activities	SDR 10 million	SDR 12 million			
<b>Switzerland<sup>ii</sup></b>	BSC, PC, RPC, RBSC, (JP)	Nuclear installations and transport activities	Unlimited	CHF 1 billion	After depletion of the operator's liability, such		November 2016

ii. On 9 March 2009, Switzerland deposited its instrument of ratification of the 1960 Paris Convention as amended by the 1964, 1982 and 2004 amending Protocols and on 11 March 2009 Switzerland deposited its instrument of ratification of the 1963 Brussels Supplementary Convention as amended by the 1964, 1982 and 2004 Protocols. As ratifications are effective only with respect to the conventions as amended by all the respective amending protocols, entry into force for Switzerland of the RPC and RBSC will only take place once the 2004 Protocols to amend them have themselves entered into force.



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		Transit across Switzerland		CHF 50 million	aid may be determined by the Federal Assembly.		
Chinese Taipei 		Nuclear Installations	TWD 4.2 billion	TWD 4.2 billion			November 2016
Trinidad and Tobago 	VC		Unlimited liability (in the absence of legislation to the contrary)	No amount specified			June 2011
Turkey 	PC, JP, (RPC)	Nuclear installations	SDR 15 million	SDR 15 million			November 2016
		Transport activities	SDR 5 million minimum	SDR 5 million minimum			
Ukraine 	VC, (RVC), JP, (CSC)	Nuclear installations	SDR 150 million	SDR 150 million			June 2011
		Research reactors (Kiev NRI and Sebastopol reactors)	SDR 5 million				
United Arab Emirates	RVC, JP, CSC	Nuclear installations	SDR 450 million	SDR 450 million			July 2014

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State	International Liability Convention	Installations/Activities	Operator's Liability Amount	Financial Security Limit	Additional State Compensation if any	Additional Compensation (International Arrangements) if any	Last updated by the NEA
		Research reactors, low power reactors and facilities to process or store nuclear material	SDR 5 million minimum	SDR 5 million minimum			
<p>United Kingdom</p> 	PC, BSC, (RPC), (RBSC), (VC), (JP)	Nuclear installations and operator transport activities	GBP 140 million	GBP 140 million	Between first tier and SDR 175 million	SDR 125 million	November 2016
		Low risk installations (e.g. research reactors and nuclear disposal installations)	GBP 10 million	GBP 10 million			

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<p>United States</p> 	<p>CSC</p>	<p>Commercial power reactors rated at or above 100 000 kW(e)</p>	<p>USD 12.81 billion</p>	<p>USD 450 million + premium charges up to about USD 12.36 billion</p> <p>Total: USD 12.81 billion</p> <p>Calculation of premium charges based on assessment of USD 121.255 million for each nuclear reactor (102 as of June 2017) at the time of the nuclear accident</p> <p>Amounts established by the US Nuclear Regulatory Commission rule published in 81 Federal Register 96347 (30 December 2016)</p>	<p>After depletion of initial funds, the Congress may determine additional amounts.</p>		<p>June 2017</p>
		<p>Commercial power reactors rated at less than 100 000 kW(e) and transport activities</p>	<p>USD 560 million</p>	<p>USD 560 million (USD 60 million by insurance + 500 million by federal indemnification)</p>			
<p>Uruguay</p> 	<p>VC, JP</p>		<p>Unlimited (in absence of legislation to the contrary)</p>	<p>No amount specified</p>			<p>June 2011</p>