

# Bulgaria

## EPR Fact Sheet

### Decision making

Unified Rescue System (URS) is established in Bulgaria for all hazards. Decisions on protection actions in case of nuclear or radiological emergency are made by the Ministry of Interior (MoI), supported by the National Headquarters for Coordination and Control (NHCC). The Headquarters is staffed by representatives of all relevant ministries and government bodies. Decisions are implemented through chain of command all the way down to the local level. The decision making is the same for all hazards.

### Advice

The Nuclear Regulatory Agency (NRA) is part of a Unified Rescue System. NRA is regulatory authority in nuclear safety, radiation protection and safety of the radioactive waste managements. The NRA emergency team provides advises to the National Headquarters for Coordination and Control in case of nuclear or radiological emergency.

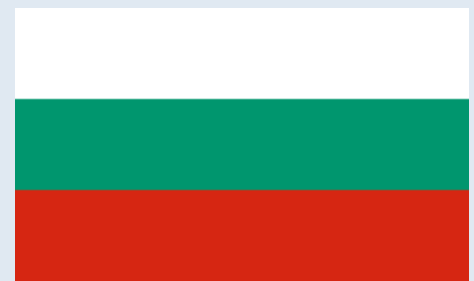
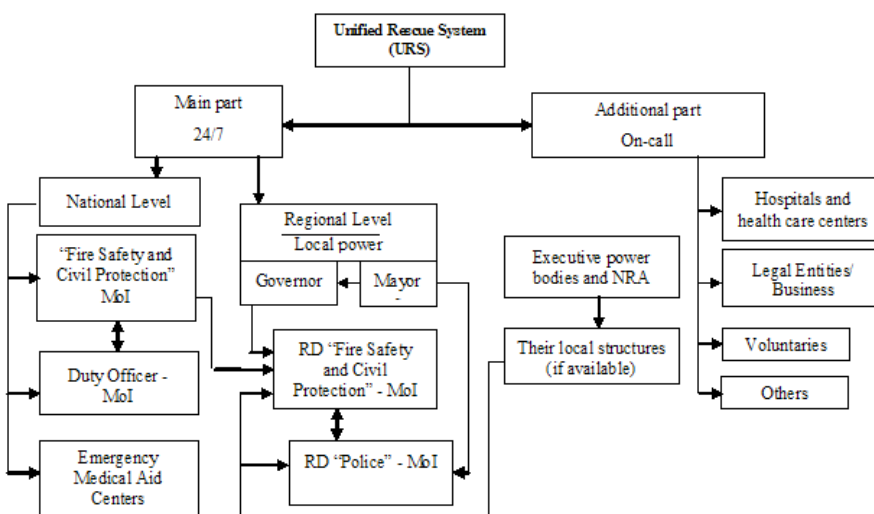
### Licensee

All licensees and permit holders are obliged by the legislation to notify NRA for deviations from normal operations, incidents and emergencies. Additionally, the NPP is obliged to notify off-site authorities (municipal, regional and national notifications points and NRA) within 15 min after emergency declaration. The plant parameters are received in NRA via an online SPDS system. The NPP gives the preliminary recommendations of protection actions to the municipal levels.

### Alarming

The alarming and the instructions/warning to the public regarding urgent protective actions are triggered by the NPP within the 30 km emergency planning zone. The stationary siren system is used and the media. Alarming is the same for all hazards.

### Organizational structure



### Country info

Capital	Sofia
Official language	Bulgarian
Population	7.2 M
Area	111 000 km <sup>2</sup>
Currency	Lev (BGN)
Time zone	UTC+2
Calling code	+359
Internet TLD	.bg
NPPs /ele. share	1/33%

### NWP\*

NRA – Nuclear Regulatory Agency

### NCA\*

NRA – Nuclear Regulatory Agency

### Emergency website

[www.bnra.bg](http://www.bnra.bg)

### Online measurements

<https://remap.jrc.ec.europa.eu/GammaDoseRates.aspx>

### Bilateral agreements

Germany, Greece, Macedonia, Romania, Russia, Serbia, Turkey, Ukraine

### RANET capabilities

None

\*National Warning Point and Competent Authority under the Emergency Conventions

## Nuclear facilities\* and population

NPP	Type	MW <sub>e</sub>	GPS coordinates		2 km pop.	5 km pop.	10 km pop.	30 km pop.	
Kozloduy	5	WWER	1000	43.745863° N	23.768321° E	0	13 000	21 000	124 000
	6	WWER	1000	43.747368° N	23.769154° E				

\*The IAEA emergency preparedness category 1 and other relevant facilities

## Planning zones



- Precautionary protective action zone: 2 km
- Urgent protective action zone: 30 km

## Emergency classification

### General emergency

Actual or potential release and exposure of the personnel and population. Requires urgent protective actions for the population and prompt actions to reduce the accident's consequences and to protect the personnel

### Site area emergency

Significant reduction of protection level of personnel on the site. Requires immediate actions to mitigate the consequences and to protect the personnel and starts preparation for taking protective actions for the population

### Facility emergency

Significant reduction of the protection level of personnel without any risk for the population. Requires immediate actions to mitigate the accident's consequences and to protect the personnel

### Alert

Events with uncertain or significantly decreased level of safety. Requires actions to evaluate the situation

### Other emergencies

Find, loss or theft of a dangerous source, including re-entry of satellites containing dangerous sources.

### Comments

Classification is based on the IAEA recommendations

## Protection strategy

The protection strategy is based on values below. For emergency at the NPP protective actions are predefined and based on emergency classification. The 2 km zone is not populated. The 2 km zone is used for agricultural purposes. Evacuation of 2 km zone is ordered when general emergency is declared, which is followed by evacuation of 30 km zone. Evacuation is accompanied by ITB. The ITB is distributed to the population within the 30 km zone. In the 30 km zone protective actions are based on field measurements and dose assessments.

For radiation emergencies protective actions are based on field measurements and dose assessments. Safety perimeters are established based on the IAEA recommendations.

## Criteria

Protective Action	Guidance levels*	Comments
Sheltering	5-50 mSv	Avertable effective dose
Evacuation	50-500 mSv	Avertable effective dose
Thyroid blocking	5-10 mSv	Avertable dose to thyroid for pregnant, breast-feeding and children (< 18)
Thyroid blocking	50-100 mSv	Avertable dose to thyroid for all the population (except the above)
Temporary relocation	10-100 mSv	Avertable effective dose for the first month
Cease the temporary relocation	10 mSv	Avertable effective dose for the next month
Permanent relocation	1000 mSv	Avertable effective dose for the lifetime

### Comments

OIL's are set in the off-site emergency response plan

EAL's are set in the on-site emergency response plan