



BULGARIA EXPERIENCE WITH REGULATORY PEER REVIEW SERVICES

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BULGARIAN NUCLEAR REGULATOR

Nuclear Regulatory Agency

- established 2002
- successor of Committee on the use of atomic energy for peaceful purposes
- regulatory functions for all facilities and activities
- reports to the Government

Ministry of Health

- regulatory tasks for medical applications and exposure of workers and the public



NUCLEAR LEGISLATION

Nuclear Act

- Act on the Safe Use of Nuclear Energy
 - Adopted 2002
 - Amended and supplemented 2010

Regulations

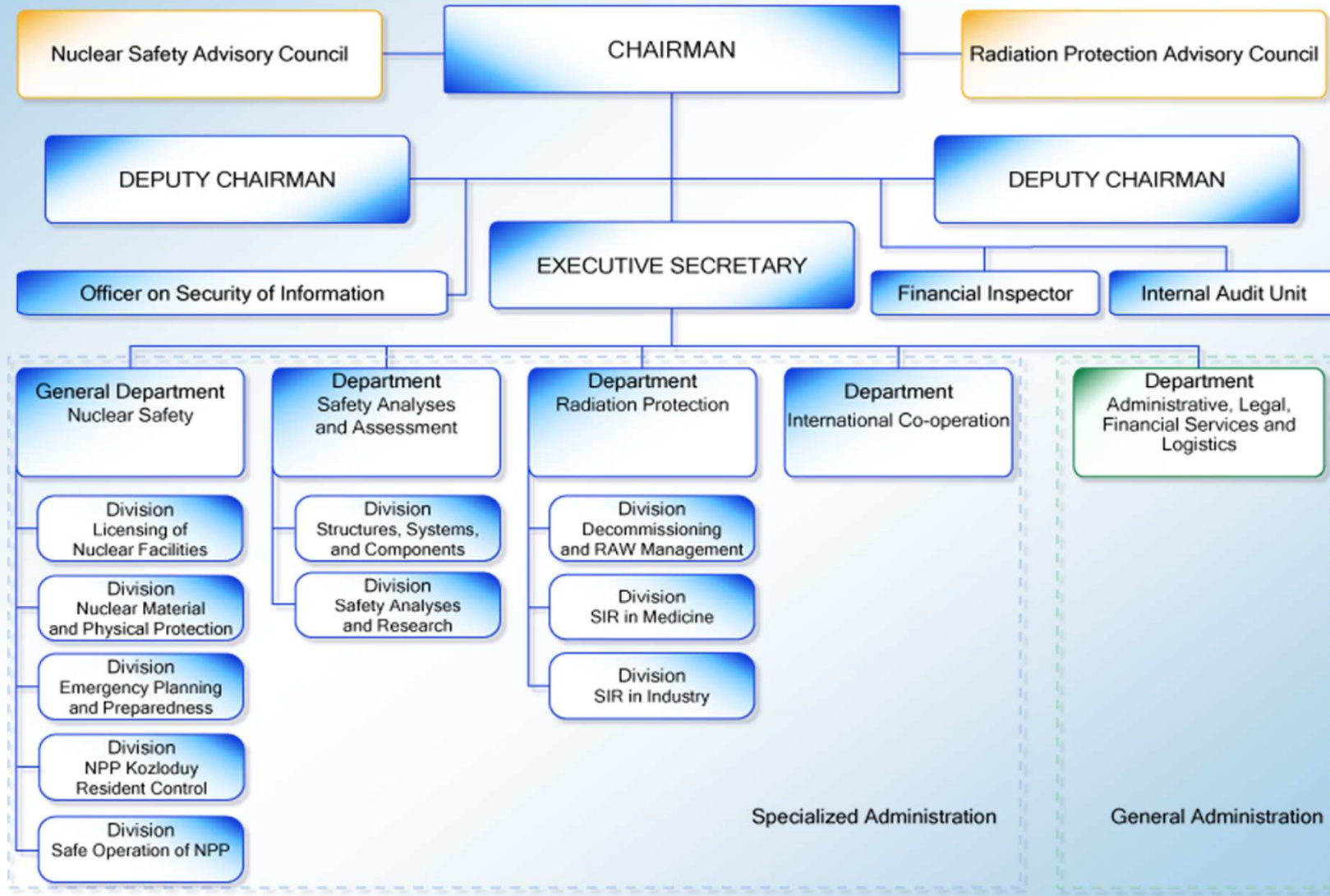
- 22 Regulations on implementation of the Nuclear Act, issued by the Government on a motion of the BNRA Chairman
- Developed in-between 2002-2005, now in revision

Regulatory guides

- Give advice on compliance with the legal requirements
- Issued by the BNRA Chairman



BNRA STRUCTURE





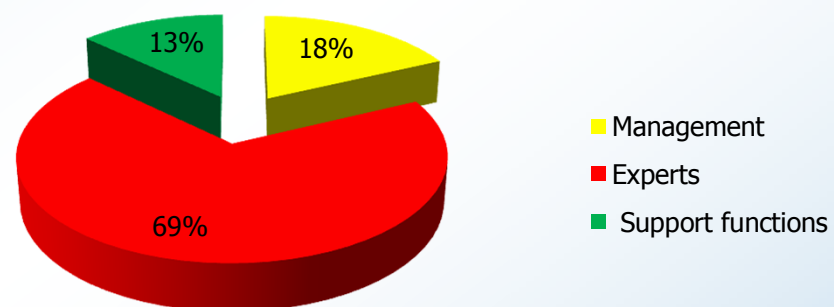
HUMAN RESOURCES

- **Staff**

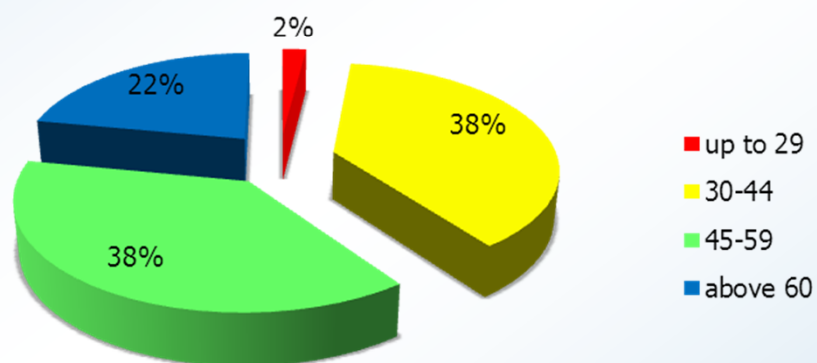
114 positions

100 occupied

Distribution of the staff



Age Profile





NUCLEAR FACILITIES in BULGARIA

- 6 nuclear facilities in operation,
- 1 nuclear facility in extended shut down condition
- 4 nuclear facilities in decommissioning
- 2 nuclear facilities at different building stages



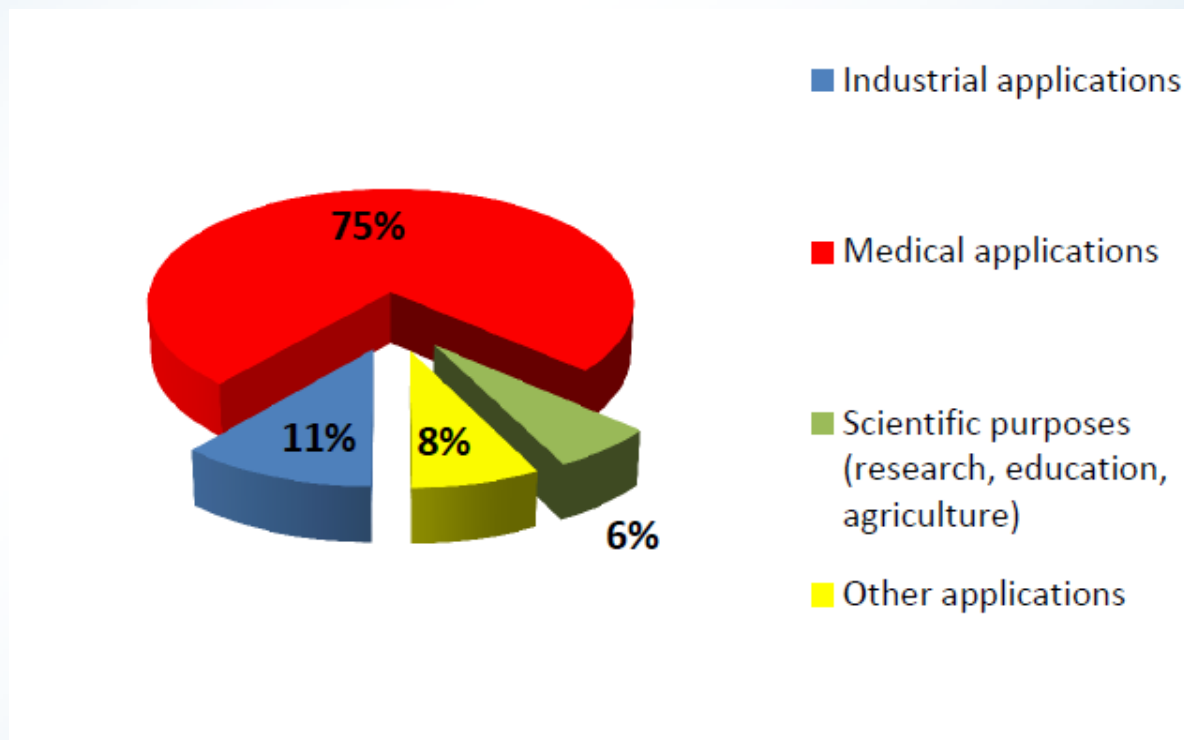


NUCLEAR APPLICATIONS

Sites with SIR - 1582

At the end of 2015

Licensees - 1257





REVIEWS of NUCLEAR REGULATORY FRAMEWORK

- **IRRT Mission – November 1997**
- **IRRT Mission – June 2003**
- **IRRS Mission – April 2013**
- **IRRS follow-up mission – April 2016**
- ❖ **IRRS missions – mandatory at least once every 10 years according to EURATOM Nuclear Safety Directive**



IRRS MISSION, 2013 - SCOPE

- **Module 1 Responsibilities and functions of the Government**
- **Module 2 Global safety regime**
- **Module 3 Responsibilities and functions of the Regulatory Body**
- **Module 4 Management system**
- **Module 5 Authorization**
- **Module 6 Review and assessment**
- **Module 7 Inspection**
- **Module 8 Enforcement**
- **Module 9 Regulations and guides**
- **Module 10 Emergency preparedness**
- **Module 11 Additional areas:**
 - **Control of medical exposures**
 - **Control of discharges and materials for clearance**
 - **Occupational radiation protection**
- **Module 12 Interface with nuclear security**
- **Module 13 Regulatory implications of the Fukushima accident**



IRRS MISSION, 2013

- **Preparatory activities:**
 - ✓ Steering Group – established December 2009
 - ✓ SAT Training – April 2010
 - ✓ Self Assessment activities – started in August 2012
 - ✓ IRRS preparatory meeting – September 2012
 - ✓ Self Assessment Findings – December 2012
 - ✓ Self Assessment Action Plan – January 2013 – 29 measures, 10 of which implemented before the mission
 - ✓ Advance reference materials

- **Staff engagement**
 - ✓ 42% of the staff on expert positions



IRRS MISSION, April 2013

- **IRRS Mission 8-19 April 2013**
- ✓ **IRRS Team** – 25 members (16 experts from IAEA Member States; 2 observers; 7 IAEA staff)
- ✓ **BNRA Team** – 18 members (22,5% of the expert staff)
- **IRRS Mission conclusions**
16 recommendations, 34 suggestions and 9 good practices



FOLLOW-UP MISSION 2016

- **Action plan from September 2013 regularly reviewed and amended**
 - ✓ Last version from February 2015
 - ✓ 46 measures to address the recommendations and suggestions
 - ✓ All recommendations and suggestions are addressed
- **Staff engagement**
 - ✓ 20% of the staff was fully involved in the preparation of the follow-up



FOLLOW-UP MISSION 2016

Results from the FU IRRS Mission

- 15 recommendations
 - Closed -7
 - Closed on the basis of progress – 7
 - Open - 1
- 34 suggestions
 - Closed -22
 - Closed on the basis of progress –11
 - Open – 1
- **Staff engagement -20% of the staff**



CONCLUSIONS AND CHALLENGES

- **Preparation for IRRS:**
 - ✓ **Self-assessment - useful, but time- and resource-consuming – more targeted questions in the self assessment tool (SARIS) would be useful;**
 - ✓ **preparation of advance reference materials – generation of ARM within SARIS would be useful**

- **IRRS Mission conclusions:**
 - ✓ **Objective and fair review of regulatory framework**
 - ✓ **Conclusions based on experts' national experience should be avoided**
 - ✓ **Continuous training of IRRS experts under IAEA program is crucial**



IRRS ADDED VALUE

- **in-depth self-assessment in the respective areas;**
- **an independent and objective review of NRA current status and practices;**
- **highlighted deficiencies and identified areas for improvement;**
- **advice on possible solutions;**
- **possibility for NRA staff to discuss with experienced experts.**

