

# International Conference on Fast Reactors and Related Fuel Cycles: Next Generation Nuclear Systems for Sustainable Development (FR17)



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## Safety Assurance for BN-1200 Power Unit During Accidents

*Monday, June 26, 2017 2:00 PM (20 minutes)*

Safety analysis of BN-1200 RP Unit is performed with account of requirements specified for innovative nuclear technologies including IAEA recommendations.

The following BDBAs are considered within BN-1200 project:

- ☒ Heat removal accidents with loss of energy supply, failures of active systems for reactor shutdown, failures of normal cooldown system and active components of emergency cooldown system;
- ☒ Accidents with insertion of positive reactivity and failure of active reactor shutdown systems;
- ☒ Accidents with plugging up of FSA flow area.

Computational validation of safety in accidents is performed using verified computational codes of new generation.

To validate safety, an integrated approach is applied that analyses main processes and phenomena occurring in the RP and Unit's rooms during accident.

Computational results showed that there is no need to evacuate or move out population under projected population radiation doses for population beyond the NPP site.

### Country/Int. Organization

Russia

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