Nuclear energy challenges in Russia

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Russian nuclear issues

- Nuclear weapons industry
- Reprocessing
- Nuclear power plants
- Uranium mining and enrichment
- Nuclear submarines, icebreakers, surface vessels
- Research reactors

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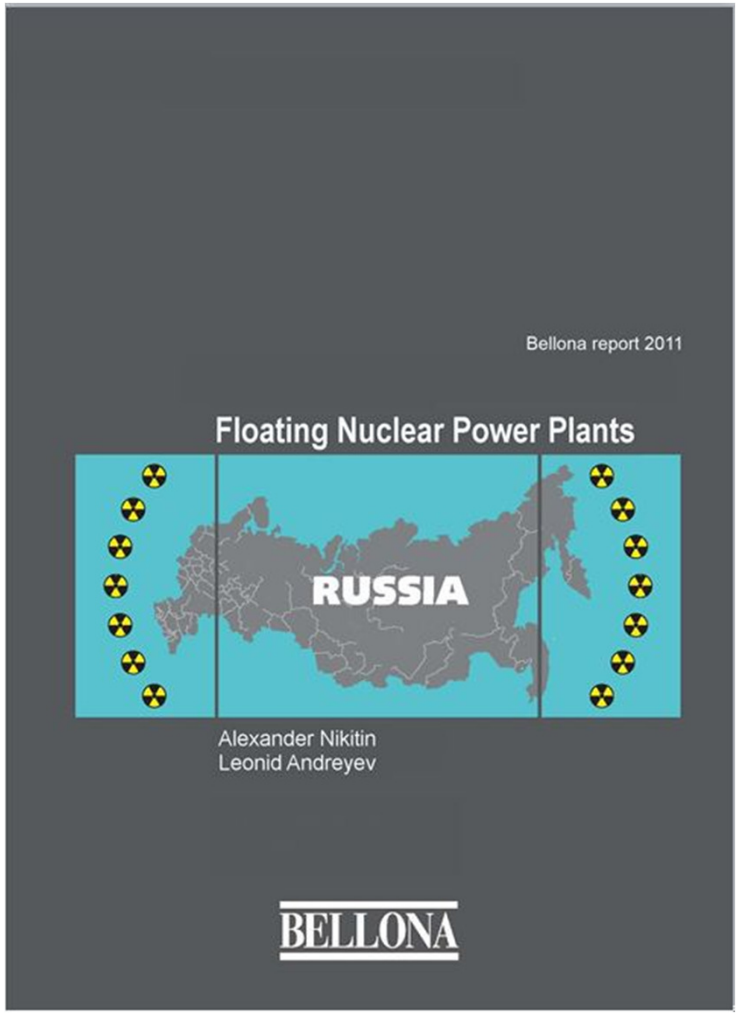
Russian nuclear legacy

- Reactor grade plutonium: 30 tonnes
- Weapons grade plutonium: 100 tonnes
- Highly enriched uranium: 1200 tonnes
- Spent nuclear fuel: 20000 tonnes
- Solid waste: 177m tonnes
- Liquid waste: 500m cubic meters

Floating nuclear power plant (FNPP)



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FNPP: environmental risks

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FNPP: non-proliferation

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FNPP economics

FNPP: USD **7.8m** per one megawatt

Olkiluoto NPP: USD **3.3m** per one megawatt

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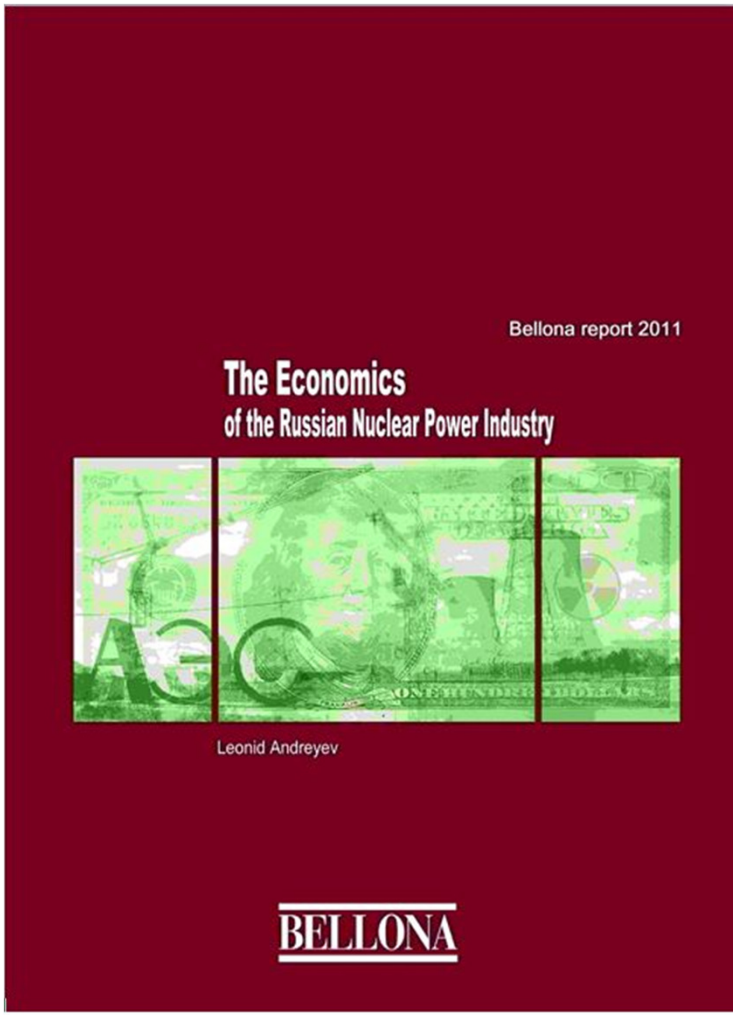
Russian nuclear power industry economics



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Nuclear economics

- Estimate «true» costs of the nuclear industry
- Not able of developing on commercial basis even with state guarantees
- Costs grow as non-nuclear energy alternatives are becoming increasingly cheaper
- The problem of spent nuclear fuel still remains unsolved and the costs of dealing with this problem – the price that future generations will eventually be forced to pay

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Russian nuclear challanges

- Unable to evaluate risks
- Do not take expenses into consideration
- Earmark funding to new builds and risky new projects rather than on waste management

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