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## Equipment cost estimation for pilot demonstration lead-cooled fast-neutron reactor BREST-OD-300

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One of the main problems in determining the investment in the construction of new nuclear facilities at the design stage is the cost estimation of non-standard equipment. The novelty and lack of experience are the features of early stage of the project. The uniqueness of the projected facilities makes it impossible to use catalogues and price-lists. It is required different approaches to estimate the cost of such equipment.

The methods of assessing the cost of projected non-standard reactor equipment can be divided into two main groups: analogy and resource or engineering build-up methods. Additional cost estimating methods include parametric methods and corrective amendments.

Methods and approaches of non-standard equipment cost estimation are differ from stage to stage, allowing to obtain a more accurate result. It is necessary to take into account features of the application of a method according to the stage of design work.

The essence of different approaches of equipment cost estimation is disclosed, advantages and disadvantages of different methods are analyzed, guidance on the applicability depending on the specific conditions of evaluation is provided.

The comparison of cost indexes is made.

Economies of scale and learning curve must be taken into account.

Rosatom Production System (RPS) is proposed as one of additional equipment cost estimation method.

Expected accuracy can be determined by cost estimate classification matrix according to Association for the Advancement of Cost Engineering International (AACE International) recommended practice.

All available methods and tools must be used to estimate cost of non-standard equipment at the design stage. Obtaining close results by means of different methods indicates reliable estimates of equipment cost.

Iterative approach to the assessment of the main BREST-OD-300 reactor equipment, based on decomposition and structural analysis, is presented taking into account the economic characteristics of potential manufacturing plants

It is important to develop and improve cost estimation methods taking into account best practices to achieve economic competitiveness.

### Country/Int. Organization

Russian Federation, ROSATOM, JSC "NIKIET"

**Primary authors:** Mr GOLTISOV, Alexander (ROSATOM, JSC "NIKIET"); Mr MOLOKANOV, Nikolay (ROSATOM, JSC "NIKIET", MEPhI)

**Presenter:** Mr MOLOKANOV, Nikolay (ROSATOM, JSC "NIKIET", MEPhI)

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