

Financial Support

1. Income

Table 1: Expected budget revenues (M\$)

	2017	2018	2019	2020	2021	2022	2023	Total
Contributions of the Member States	204.5	204.5	204.5	207.6	211.7	217.0	222.4	1 472.2
Increase of contributions(%)	0.0%	0.0%	0.0%	1.5%	2.0%	2.5%	2.5%	

Income of the JINR budget is formed from contributions of the Member States. The contributions will be assessed according to the methodology for calculating the scale of contributions approved by the Committee of Plenipotentiaries (CP) in November 2015. There is no increase of the sum of contributions planned for 2017–2019, and increase in the period 2020–2023 will not exceed 2.5%. In determining the increase of contributions for 2020–2023, the necessary minimum requirements for implementing the Institute’s major research projects were taken into account.

In total, the expected volume of the JINR budget revenues from contributions of the Member States for the Seven-year plan is \$1 472.2 million.

Revenues from the states that are not Member States and with which JINR has agreements on science and technology cooperation are identified in the annual budgets. This is due to the fact that the volume of these funds and their distribution by research projects is determined yearly by the Joint Coordinating Committees.

The annual budgets of the Institute will also take into account the contributions for dedicated funding of projects, in particular the contribution of the Russian Federation to create the basic configuration of the NICA complex, which, in accordance with the Agreement between the Government of the Russian Federation and JINR signed on 2 June 2016, will amount to 8.8 billion rubles for the period up to 2020 (in prices of the year 2013).¹

The value and structure of other revenues to the Institute is planned to be taken into account in the budget after making appropriate changes to the budgetary structure by decision of the CP beginning in 2018.

Table 2 shows the resources necessary for the effective and timely execution of the JINR Seven-year development programme. The material costs for each research project, the fields of research and the basic facilities are substantiated by the estimated costs or expert evaluations to ensure the research programmes and projects endorsed by the JINR Scientific Council and Programme Advisory Committees, by the technical design projects and programmes to upgrade the existing facilities and construct new facilities of the JINR research infrastructure, as well as by the plans of participation in large international projects and collaborations.

¹ In 2016, the Russian Federation effected payment of its dedicated contribution for the years 2016–2018 in an amount of 4.7 billion rubles. The stages of subsequent funding for 2018–2020 will be determined by the Russian Government in 2018.

2. Expenditure

Table 2: Budget expenditure plan for 2017–2023 (M\$)

	2017	2018	2019	2020	2021	2022	2023	Total
Staff (items 1, 2, 3)	57.6	68.0	77.2	84.5	91.4	97.0	102.0	577.7
ISTC (item 4)	7.0	7.0	8.0	8.0	8.5	8.5	8.5	55.5
Material costs, R&D, construction (items 5,6,9,10,18,19)	108.5	99.0	87.8	82.2	74.5	75.6	75.1	602.7
Energy and water (items 7,8)	5.4	5.2	5.7	6.6	8.1	8.4	8.9	48.3
Repairs (item 14)	8.9	8.5	8.5	8.4	10.0	7.9	7.9	60.1
Operating expenses (items 11-13, 15-17)	6.9	6.6	7.1	7.5	8.6	8.8	8.9	54.4
Director's reserve fund	10.2	10.2	10.2	10.4	10.6	10.8	11.1	73.5
Total	204.5	204.5	204.5	207.6	211.7	217.0	222.4	1 472.2

The major part of spending planned for the seven-year period is given in the consolidated items “Material costs, R&D, construction” and “Staff”. Together they represent about 80% of all requirements of the JINR Seven-year development programme. In total, the planned material support of the experimental research programme will amount to \$602.7 million.

The development programme also includes spending for the salaries of the Institute's staff, which should correspond to the modern level of remuneration of labour, and for the effective operation of JINR as an international intergovernmental organization: international cooperation, development of energy-efficient engineering infrastructure, development of modern social infrastructure ensuring the appropriate level of an international scientific research centre.

The total resources needed to ensure the realization of the Seven-year plan for the development of JINR for 2017–2023 will amount to \$1 472.2 million.

In the case of regular payments of contributions to the budget in full, the Institute's Directorate can provide a deficit-free execution of the budget through various mechanisms: making proposals to amend the schedules of implementing the major research projects and/or optimizing budget expenditure items 7, 8, 11-17 as well as using the reserve fund instrument.

3. Material costs

Table 3: Expenditure for the consolidated item “Material costs, R&D, construction (M\$)

	2017	2018	2019	2020	2021	2022	2023	Total
Accelerator complex NICA	59.0	50.1	37.8	30.6	22.4	20.3	17.7	237.9

Cyclotron complex DRIBs-III	14.0	13.8	14.2	14.1	14.7	15.7	16.0	102.5
Neutrino programme	7.4	7.6	7.6	7.5	7.7	8.0	8.0	53.8
IBR-2 and spectrometers	4.4	4.3	4.5	4.3	4.2	4.5	4.7	30.9
Information Technology	2.0	2.1	2.2	2.4	2.5	3.0	3.3	17.5
Other research projects	4.8	4.3	4.9	6.2	6.7	6.5	7.3	40.7
Support of research projects through grants of Plenipotentiaries and cooperation programmes	5.2	5.2	5.2	5.3	5.5	5.6	5.7	37.7
Subtotal	96.8	87.4	76.4	70.4	63.7	63.6	62.7	521.0
Operation of basic facilities	4.9	4.6	5.7	5.6	6.0	7.1	7.4	41.3
Infrastructures of Laboratories	2.4	2.3	2.7	2.7	2.8	2.9	3.0	18.8
Infrastructure of JINR	4.4	4.7	3.0	3.5	2.0	2.0	2.0	21.6
Total	108.5	99.0	87.8	82.2	74.5	75.6	75.1	602.7

A significant part of expenditure in the consolidated item “Material costs, R&D, construction” is aimed at financing JINR’s major projects: realization of the NICA megascience project based on a heavy-ion superconducting collider, construction of globally unique DRIBs-III cyclotron complex, upgrade of the spectrometer complex of the IBR-2 research reactor, the neutrino programme and megaprojects in this field of research, development of Information Technology, active development of life sciences at JINR.

Construction and commissioning of the NICA basic configuration is planned for 2016–2020. The cost of the project in its basic configuration is 17.5 billion rubles (in prices of 2013). A corresponding agreement on the intent to build the NICA complex and on the unification of logistical and financial resources between the Government of the Russian Federation and JINR was signed on 2 June 2016. In accordance with this Agreement and CP decisions, JINR has committed itself to an expenditure of 8.7 billion rubles for this project (in prices of 2013).

Indicative allocation of the dedicated contribution of the Russian Federation to this project over the years is shown in Table 4. It will be updated in compliance with the recommendations of the Supervisory Board and the CP.

Table 4: Expenditure for NICA secured from the RF dedicated contribution (million rubles)

	2017	2018	2019	2020	Total
Construction of experimental facilities	1 300.0	1 300.0	780.0	360.0	3 740.0
Research and engineering infrastructure	780.0	700.0	450.0	440.0	2 370.0
Computer and information complex	210.0	50.0	50.0	50.0	360.0
Channels and installations for applied innovative research	210.0	230.0	200.0	77.4	717.4
Total	2 500.0	2 280.0	1 480.0	927.4	7 187.4

4. Staff costs

Table 5: Staff costs and forecast average salary at JINR

	2017	2018	2019	2020	2021	2022	2023
Staff costs (M\$)	57.6	68.0	77.2	84.5	91.4	97.0	102.0
Average monthly salary (thousand rubles)	66.0	79.0	90.8	102.6	113.7	119.6	123.7
Average monthly salary of the research staff (thousand rubles)	92.3	110.6	127.1	143.6	159.2	167.5	173.2

The share of staff costs in the general expenditure will increase from 28% (\$57.6 million) in 2017 up to 46% (\$102.0 million) in 2023. This growth will help implement the programmes to improve the remuneration system and to ensure by 2023 the competitive level of the average salary at JINR for the Member States.

It is expected that in 2018 the average salary of the JINR research staff with regard to all budget payments will reach the level of twice the average monthly salary in the region, which will correspond to the decisions of the CP and to the state social policy of the host country of JINR aimed at increasing, by 2018, the average salary of Russian scientists up to 200% of the average salary in the respective region. This will remove the existing serious lag in the remuneration level of the established landmark. It will also improve the attractiveness of the Institute to highly qualified specialists, which should increase the level of the international procedure of competitive filling of scientific positions at JINR.

5. ISTC, “Energy and water”, “Repairs”, “Operating costs”

Expenditure under the item “ISTC” (International science and technology cooperation) is budgeted in the plan according to the current level in view of an annual growth of 2.5–3.0% beginning 2019. This is due to the expansion of international cooperation, without which it is impossible to

implement the Institute's projects, and to the active work to attract new Member States to JINR. The increase in ISTC costs is also connected with increasing number of orders and technological developments in Member States and with rising costs of services.

Expenditure under the item "Energy and water" is planned on the basis of the existing consumption and of additional power needs in the second half of the seven-year period due to the start-up of new experimental facilities. The estimate also takes into account the forecast increase in tariffs for services of companies in the fuel and energy sector of the Russian Federation.

The volume of expenditure on "Repairs" is defined in view of the needs to renovate and expand the production areas providing the operation of new experimental facilities, to develop the engineering infrastructure, to increase the number of modern research work places in the Institute's Laboratories, as well as to spend on the current maintenance of the Institute's buildings and installations. The cost of repairs is planned by years approximately at the same level during the seven-year period.

The consolidated item "Operating expenses" includes the costs of ensuring and improving industrial and radiation safety, physical protection systems, scientific information and engineering and technical support, as well as the costs of transport and communication services. The budget expenditure for this item is calculated on the basis of the current volumes indexed to the forecast inflation rate and increase in the volume of services.

6. Risks related to execution of the JINR budget plan

The main risks for the execution of the JINR Seven-year development plan for 2017–2023 are significant shifts in the timescales for implementing the largest research projects, which can lead to diminished interest of countries in the JINR scientific programme and to reputational losses for the Institute. Such changes in the schedules of projects first and foremost can be caused by failure to implement the revenue section of the JINR budget. The volume of JINR's actual budget income can be seriously affected by crisis-like phenomena in the economies of Member States, leading in some cases to the non-payment of contributions, as well as risks of high volatility of the exchange rates, which also can lead to a deficit of funds.

Availability of budget deficit can entail the need to limit budget expenditure, primarily material expenses, which can significantly affect the timescales for implementing JINR's major research projects endorsed for realization by the Scientific Council and by the CP. In this case, to implement the seven-year programme it may be necessary, in agreement with the CP, to involve credit resources, which in turn will lead to a change in the financial profile of the planned budget for the seven-year programme and to the emergence of credit risks.

The current structure of the budget includes a special reserve fund in the amount of 5% of the total sum of contributions, which is in the operational management by the Institute's Director. The Director's reserve fund represents a part of budgetary resources. This fund is intended to mitigate the negative consequences for the Institute in the event of crisis-like phenomena in the economies of Member States. By the Director's decision, resources from this fund may be directed to additional support of the priority projects in the event of budget deficit as well be used to cover unforeseen expenses. In the JINR budget plan for 2017–2023, these resources are provided in a total volume of \$73.5 million.

7. Forecast macroeconomic indicators

In forming the budget expenditure of JINR, use was made of forecast macroeconomic indicators expected in the host country of the Institute.

Table 6: Forecast microeconomic indicators

	2017	2018	2019	2020	2021	2022	2023
Forecast annual average US dollar exchange rate (rubles per 1 US dollar)	64.8	64.1	62.7	62.7	62.7	62.7	62.7
Forecast euro exchange rate (US dollars per 1 euro)	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Forecast annual average inflation rate (price increase) in the host country of JINR (%)	6%	5%	4%	4%	4%	4%	4%
Forecast annual average increase of electricity tariffs (%)	7%	6%	5%	5%	5%	5%	5%
Forecast annual average increase of heat and water tariffs (%)	4%	4%	4%	4%	4%	4%	4%

The forecast indicators rest on the basic version of the “Scenario conditions, main forecast parameters for Russia’s socio-economic development and threshold levels of prices (tariffs) for the services of companies in the infrastructure sector in 2017 and in the planning period for 2018 and 2019” developed by the Ministry of Economic Development of the Russian Federation.

Due to the fact that the indicators are forecast up to 2019, the forecast figures for the years 2020–2023 in the JINR budget plan are taken similarly to the year 2019.