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Strengthening the Agency's activities related to nuclear science, technology and applications

Agency activities in the development of innovative nuclear technology

Draft resolution submitted by the Russian Federation

The General Conference,

- (a) <u>Recalling</u> the Agency's statutory functions "to encourage and assist research on, and development and practical application of, atomic energy for peaceful uses...and...to foster the exchange of scientific and technical information",
- (b) Recalling also its resolutions GC(44)/RES/21, GC(45)/RES/12.F, GC(46)/RES/11.C, GC(47)/RES/10.C, GC(48)/RES/13.F, GC(49)/RES/12.F and GC(50)/RES/13.B.1 on the Agency's activities in the development of innovative nuclear technology,
- (c) <u>Conscious</u> of the need for sustainable development and of the potential contribution of nuclear power to meeting the growing energy needs in the 21st century,
- (d) <u>Noting</u> that international initiatives, including the Declaration on Nuclear Energy and Nonproliferation Joint Actions by the Russian Federation and the United States of America of 3 July 2007 (INFCIRC/709) and the Global Nuclear Energy Partnership (GNEP), whose Statement of Principles was signed on 16 September 2007, underline the importance of the Agency's International Project on Innovative Nuclear Reactors and Fuel Cycles (INPRO) and the Generation IV International Forum (GIF) and complement their activities,
- (e) <u>Noting</u> the progress achieved in a number of Member States in the development of innovative nuclear technology and the high technical and economic potential of international collaboration in the development of such technology,
- (f) <u>Noting</u> that 27 Member States and the European Commission are now members of INPRO, with Belgium having joined since the 2006 session of the General Conference,

- (g) Recognizing that INPRO has become a new mechanism and advanced platform for:
 - (1) the assessment, using a holistic approach, of innovative nuclear power systems from the viewpoint of economics, infrastructure, safety, resource use, waste minimization, environmental protection, proliferation resistance and physical protection in order to identify the actions necessary for the development and deployment of such systems that may contribute to sustainable development,
 - (2) the establishment of collaborative projects for jointly studying innovative nuclear power systems of common interest to Member States,
 - (3) the consideration of institutional and infrastructure arrangements that will be needed to foster the development and deployment of innovative nuclear power systems, integrating the results of other international initiatives,
- (h) <u>Emphasizing</u> the importance of creating databases and web-based systems for the exchange of information, for decision-makers as well as for experts in the area of common user requirements for innovative nuclear power system development and deployment,
- (i) <u>Noting</u> the progress of other bilateral and international initiatives, such as GIF, and their contribution to the development of innovative approaches to nuclear power, and
- (j) Noting with appreciation the Director General's report on the development of innovative nuclear technology contained in document GC(51)/4,
- 1. <u>Commends</u> the Director General and the Secretariat for their work in response to the relevant General Conference resolutions, in particular the results achieved to date within INPRO;
- 2. <u>Emphasizes</u> the important role that the Agency can play in assisting interested Member States with the planning and development of their nuclear infrastructures through the application of the INPRO methodology for assessments of safety, proliferation resistance, sustainability, environmental, infrastructural and economic aspects of innovative reactors and fuel cycles, and with the selection and implementation of efficient strategies for dealing, in line with their development needs, with the 21st century energy challenges in ways that meet national objectives while contributing to the balanced development of the global energy system;
- 3. <u>Requests</u> the Secretariat to proceed in an expeditious manner with the publishing of the INPRO users manual, which will provide useful guidance in the undertaking of such assessments;
- 4. <u>Invites</u> all interested Member States to combine their efforts under the aegis of the Agency in the activities of INPRO Phase 2 in considering the issues of innovative nuclear reactors and fuel cycle systems, institutional capacity, infrastructure development, and the mobilization of unconventional financial resources, in particular by continuing assessment studies of such systems and their role in the national, regional and global scenarios for further use of nuclear energy, as well as identifying common issues for possible collaborative projects, including coordinated research projects and joint initiatives, and methods for their joint implementation;
- 5. <u>Encourages</u> interested Member States, by the concerted efforts of developed and developing countries, jointly to consider how to meet their energy needs and contribute to economic development, inter alia by developing and deploying innovative nuclear power systems, taking into account the possible role of the recent initiatives aimed at the further development of the peaceful use of nuclear energy in a manner consistent with non-proliferation commitments;

- 6. <u>Recommends</u> that INPRO, subject to the availability of resources, continue to refine common user criteria for developing countries in a timely manner, including infrastructure development requirements, domestic legal and regulatory frameworks, provisions for management of spent fuel and radioactive waste and flexible financing arrangements;
- 7. <u>Calls</u> on the Secretariat and on Member States in a position to do so to investigate the availability of new, more proliferation-resistant technologies for the recycling of spent fuel and its use in advanced reactors under appropriate controls and for the long-term disposition of remaining waste materials:
- 8. Recognizing that the funding of INPRO comes partly from the Regular Budget and in large part from extrabudgetary resources, <u>requests</u> the Director General to strengthen the Agency's efforts related to the development of innovative technology, subject to the availability of resources;
- 9. <u>Stresses</u> the need for international collaboration for the development of innovative nuclear technology, including enabling technologies, and the high potential and added value achieved through such collaborative efforts, as well as the importance of taking advantage of synergies between international activities on innovative nuclear technology development;
- 10. <u>Recommends also</u> that INPRO continue to explore opportunities for synergy between its activities and those pursued under other international initiatives in various areas, including extending the global reach of nuclear energy, safety, proliferation resistance and other security issues;
- 11. Invites all interested Member States to contribute to innovative nuclear technology activities in terms of scientific and technical information, financial support or the support of technical and other relevant experts and by performing joint innovative nuclear power system collaborative projects; and
- 12. Requests the Director General to report on the progress made in the implementation of this resolution to the Board of Governors and to the General Conference at its fifty-second (2008) regular session under an appropriate agenda item.