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## ITER signs Cooperation Agreement with Kazakhstan

# SAINT PAUL-LEZ-DURANCE, France (13 June 2017)—The ITER Organization has officially welcomed a new non-Member technical collaborator: the National Nuclear Center of the Republic of Kazakhstan.

On Sunday 11 June, a Cooperation Agreement was signed by ITER Director-General Bernard Bigot and the director of Kazakhstan's National Nuclear Center, Erlan Batyrbekov, calling for scientific and engineering cooperation between the two institutions.

Agreement scope includes the technical exchange of experts, access to Kazakhstan's KTM tokamak for materials testing, and the development of diagnostics for ITER. Kazakhstan also has an abundance of mineral resources that are of interest to ITER, some of which—like beryllium—are of great relevance to the project.

india The Agreement was signed on the grounds of the 2017 World's Fair, located this year in Astana, Kazakhstan, before a large gathering of delegates and media representatives.

japan

china

eu

"We are very thankful to add today a new collaboration partner to the ITER Project," said Bernard Bigot during the signing ceremony. "It is a unique opportunity, enabling us to perform detailed material studies at the recently inaugurated KTM tokamak."

The KTM tokamak, based at the National Nuclear Center in the city of Kurchatov, is a small and versatile machine that is capable of testing materials under high particle and heat flux. For fusion scientists and engineers, developing the materials that will be able to maintain their structural and thermal conduction properties at the heat and neutron fluence levels expected in a fusion reactor is one of the key challenges on the road to fusion electricity.

For the ITER Organization, the Agreement signed with the National Nuclear Center of the Republic of Kazakhstan is only the second example of technical collaboration with a non-Member institution. (The first example was the Cooperation Agreement signed with ANSTO, the Australian Nuclear Science and Technology Organisation, in September 2016.)

Kazakhstan, which was involved in the early phase of ITER engineering design activities, is also partner to a specific fusion research cooperation agreement signed with Euratom in 2006 on "cooperation in the sphere of peaceful uses of nuclear energy."

The Cooperation Agreement is effective immediately.



## BACKGROUND TO THE PRESS RELEASE

### The ITER Project

ITER—designed to demonstrate the scientific and technological feasibility of fusion power—will be the world's largest experimental fusion facility. Fusion is the process that powers the Sun and the stars: when light atomic nuclei fuse together to form heavier ones, a large amount of energy is released. Fusion research is aimed at developing a safe, abundant and environmentally responsible energy source.

ITER is also a first-of-a-kind global collaboration. Europe is contributing almost half of the costs of its construction, while the other six Members to this joint international venture (China, India, Japan, the Republic of Korea, the Russian Federation and the USA), are contributing equally to the rest. The ITER Project is under construction in Saint-Paul-lez-Durance, in the south of France.

The ITER Council approved the proposal for technical collaboration with Kazakhstan's National Nuclear Center on the basis of Article 19 of the ITER Agreement, which reads: "... the ITER Organization may, in furtherance of its purpose, cooperate with other international organizations and institutions, non-parties, and with organizations and institutions of non-parties, and conclude agreements or arrangements with them to this effect. The detailed arrangements for such cooperation shall be determined in each case by the Council."

For more information on the ITER Project, visit: <u>http://www.iter.org/</u>

### Kazakhstan's National Nuclear Center

The National Nuclear Center, located in the city of Kurchatov, eastern Kazakhstan, employs over 1,600 scientists and researchers in a number of specialized domains (the development of atomic energy, radioecology, nuclear physics...). The KTM tokamak was designed in 2000 to model plasma-material interaction under the conditions expected at ITER—the first technological tokamak for reactor material science, allowing plasma-facing materials to be tested under a wide range of exposure (fluence). Commissioning operations at the facility are planned to be completed later this year.

For more information on the National Nuclear Center of the Republic of Kazakhstan, visit: <u>http://www.nnc.kz/en</u>