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COMMISSION STAFF WORKING DOCUMENT

EXECUTIVE SUMMARY OF THE EX-ANTE EVALUATION

Accompanying the document

Proposal for a Council Decision

amending Decision 2007/198/Euratom establishing the European Joint Undertaking for ITER and the Development of Fusion Energy and conferring advantages upon it

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ITER is an international scientific collaboration project between seven global partners (ITER Parties - EU, United States, Russia, Japan, China, South Korea, and India). The project, implemented on the basis of the ITER Agreement aims at demonstrating the scientific and technological feasibility of fusion energy for peaceful purposes, an essential feature of which would be achieving sustained fusion power generation.

The ITER Parties launched in 2015 a major overhaul of the project which included the appointment of a new senior management in the ITER Organization (IO) and the preparation of a new baseline. This baseline approved ad referendum in November 2016, achieved a stabilization of the project and provides a realistic basis for its completion. Changes in the management and organization of Fusion for Energy (F4E), that acts as EU's Domestic Agency delivering the European contribution to IO, took place in parallel to those in IO and entailed the change of the Director (in early 2016) and the majority of the top management and its organization (in 2016 and 2017). ITER as an investment offers European high-tech industries and SMEs a valuable opportunity to innovate and develop "spin off" products for exploitation outside fusion. A positive appreciation of ITER's progress in recent years and of its turnaround by the new management were confirmed by independent assessments providing confidence that IO and F4E are working together towards the success of the project and are better armed to manage any future project challenges.

The key **challenges** for the next MFF will be to sustain the positive momentum in the project, ensure a steady progress of the construction and assembly, and retain the commitment of all ITER Parties. Meeting these challenges will require sustained EU leadership in the project which needs to be underpinned by excellent performance of F4E and full compliance of the EU with its share of funding obligations and in-kind contributions (i.e. components under European responsibility, procured and delivered by F4E).

The **resources** needed by Euratom to enable the successful completion of the facility and the start of the operation/experimental phase are detailed in the Commission Communication on "the EU Contribution to a Reformed ITER Project" adopted by the Commission in June 2017. The critical mass of funding needed to make the ITER-related EU action work effectively corresponds to the new ITER baseline for the construction of ITER. The updated schedule and associated cost estimates present the earliest technically achievable date for the ITER construction without any contingencies and therefore assumes that all major risks can be mitigated.

ITER is a unique, long-term project which cannot be executed through industry initiative at this stage of the technology development. Accordingly, public intervention is warranted. As ITER's legal basis is an international agreement to which Euratom is a Party, **action at EU level** is more effective (less fragmentation) and efficient (better value for money/economies of scale), for meeting Euratom's obligations. This is recognized explicitly in the recent Reflection Paper on the Future of EU Finance. Indeed, pooling of resources and expertise is paramount to the construction of ITER and EU action is particularly needed to achieve the critical mass of resources and knowledge across different fields, technologies, and research infrastructures and industries required for the construction of this first of a kind project.