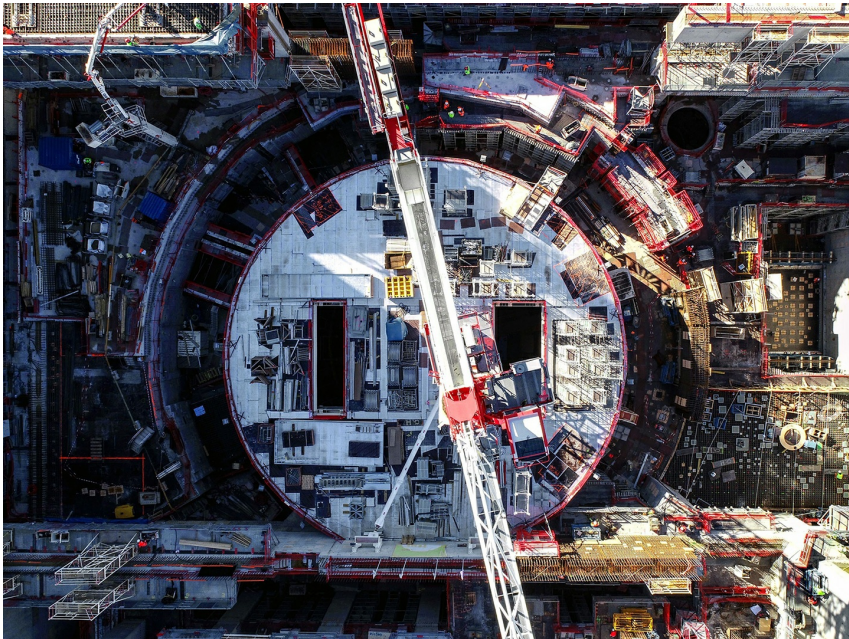


Virtual: Highlight Seminar Series: Bernard Bigot, ITER

acee.princeton.edu/acee-news/virtual-highlight-seminar-series-bernard-bigot-iter



Date: Thursday, May 14, 2020

Time: 12:00 p.m. – 1:00 p.m. ET,
(4:00p.m. – 5:00 p.m. GMT)

Location: Virtual seminar. Please register for details.

[Register Here](#)

2019/2020 Highlight Seminar Series

Speaker

Director-General Bernard Bigot, ITER Organization

Title

The ITER Project: moving forward

The International Thermonuclear Experimental Reactor (ITER) is a 35-country collaboration **designed to build a 500-MW fusion plant in southern France, which is slated to be the first fusion experiment to produce more energy than it consumes.**

Learn more from [Andlinger Center Speaks: Fusion's hot moment](#)

Abstract

By the end of 2019, ITER had completed about 67% of the overall work required to achieve First Plasma. Significant progress has been achieved over the past five years, most visible in the completion of key buildings and infrastructure on the worksite. The tokamak building was ready to receive equipment as of 31 March 2020. Commissioning

of the connection to the EU grid and the steady-state electric network is complete. Planning for commissioning other key plant systems (e.g., secondary cooling water, cryoplant, pulsed power for magnet systems) is well underway.

On the manufacturing front, progress is equally impressive. The base and lower cylinder of the cryostat were completed and turned over to ITER in July 2019. The first two poloidal field coils will soon be turned over to ITER (PF6 shipping from China, and PF5 fabricated onsite), and two more are being wound. Factory tests of the first central solenoid module will be completed in Summer 2020, and five more modules are in the manufacturing process. The first two toroidal field coils arrived onsite in April, from Japan and Italy, despite current constraints. The first sections of the thermal shield are onsite. The first vacuum vessel sector is complete and will ship from Korea on 20 April. This progress means that, for most of the major first-of-a-kind components, the capability has now been demonstrated to fabricate according to ITER's demanding specifications.

With this progress achieved, ITER is formally entering Assembly Phase, progressing steadily toward First Plasma. The sequence of ITER operation from First Plasma (FP) to the achievement of the $Q = 10$ project goal has been consolidated in a Staged Approach, with all systems to be installed before the start of full fusion power operation in 2035.

Highlights from each of these areas – manufacturing, commissioning, and tokamak assembly – will be presented along with the most current status and plans.