

ITER ORGANIZATION CONSTRUCTION UNDERWAY

The ITER Organization entered an important phase of its history in August 2010, when construction began on the first of 39 buildings and technical areas of the ITER scientific installation. Ten years later, 75% of the infrastructure needed for First Plasma is in place and the European Domestic Agency, responsible for financing and supervising the construction of nearly all buildings as part of its in-kind contribution to the ITER Project, is progressively handing over completed areas to the ITER Organization for installation and assembly of the ITER machine and plant.



Approximately 75% of the buildings and technical areas needed for First Plasma are in place. Major projects in the next years include the ITER Control Room (B) and the neutral beam power supply infrastructure (F).



Crane access over the Tokamak pit becomes possible on 28 March 2020, as the ITER Organization, the European Domestic Agency Fusion for Energy, and contractors validate the full crane path – from the Assembly Hall through the entire length of the Tokamak Building – under load. Machine assembly can begin.



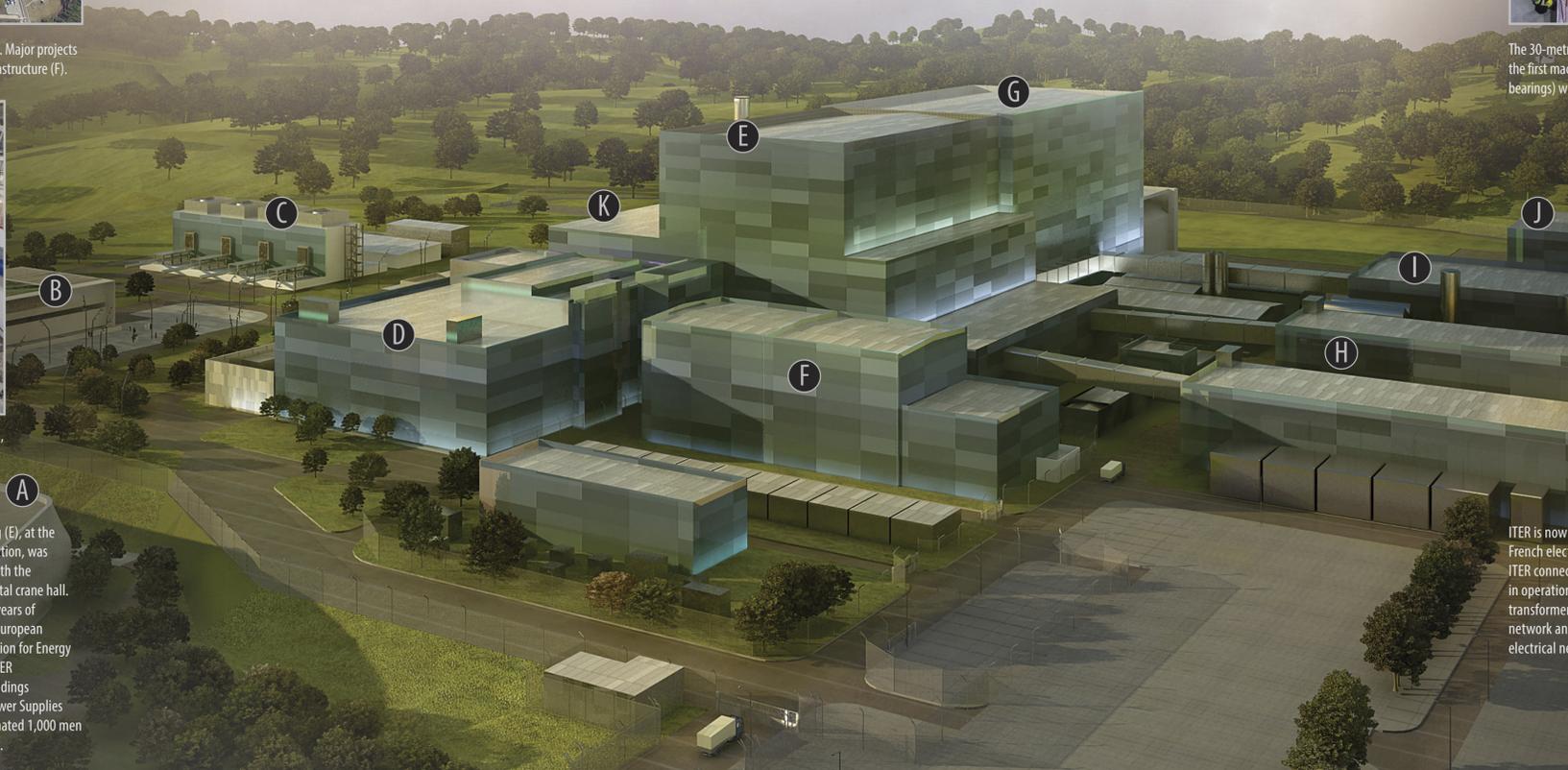
The Tokamak Building (E), at the heart of ITER construction, was completed in 2020 with the finalization of the metal crane hall. This concludes eight years of collaboration by the European Domestic Agency, Fusion for Energy (F4E), and the joint ITER Organization/F4E Buildings Infrastructure and Power Supplies (BIPS) team. An estimated 1,000 men and women took part.

KEY

- A ITER HEADQUARTERS
- B CONTROL ROOM
- C COOLING TOWERS
- D HOT CELL
- E TOKAMAK BUILDING
- F NEUTRAL BEAM HIGH VOLTAGE POWER SUPPLY
- G ASSEMBLY BUILDING
- H MAGNET POWER CONVERSION
- I CRYOPLANT
- J COIL WINDING FACILITY
- K RADIO FREQUENCY BUILDING



The 30-metre-deep well at the centre of the Tokamak Building (E) is ready in May 2020 for the installation of the first machine components – the cryostat base and lower cylinder. Eighteen ball and socket joints (cryostat bearings) will be the interface between the base of the machine and the support crown in concrete.



After recuperating the heat of the machine, the water circulating in the installation will be diverted to this zone (C) where it will be cooled using an evaporative process in the ten cooling cells and then reintroduced into the cooling circuits.

ITER is now fully connected to the French electrical grid, with all seven ITER connections at the 400kV level in operation. (There are three transformers for the pulsed power network and four for the steady state electrical network.)



THE ITER PROJECT IS CURRENTLY UNDER CONSTRUCTION IN SOUTHERN FRANCE,
ON A SITE 75 KM NORTH OF MARSEILLE.