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## **Overview of the Present Progresses and Activities on the Chinese Fusion Engineering Test Reactor**

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The Chinese Fusion Engineering Testing Reactor (CFETR) is the next device for the Chinese magnetic confinement fusion (MCF) program which aims to bridge the gaps between the fusion experiment ITER and the demonstration reactor DEMO. CFETR will be operated in two phases: Steady-state operation and tritium self-sustainment will be the two key issues for the first phase with a modest fusion power up to 200 MW. The second phase aims for DEMO validation with a fusion power over 1 GW. Advanced H-mode physics, high magnetic fields up to 7T, high frequency electron cyclotron resonance heating (230 GHz) & lower hybrid current drive (7.5GHz) together with off-axis negative-ion neutral beam injection will be used for achieving steady-state advanced operation. The detailed design, research and development activities including integrated modeling, R&D on high field magnet, material, T plant, remote handling, physical validation on EAST tokamak to demonstrate feasibility of high performance steady state operation, and future MCF road map will be introduced in this paper.

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China

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