



Department of Energy and Power Engineering, Tsinghua University

Location

Tsinghua University
Beijing, China

Further Information

<http://www.depe.tsinghua.edu.cn/depeen/index.htm>

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Introduction

The Department of Energy and Power Engineering, originally known as the Power group in the Department of Mechanical Engineering, was established in 1952 under the name of the Department of Power System, while the Department of Mechanical Engineering had been originally established in 1932. At present, for teaching and scientific research, in the Department of Energy and Power Engineering there are five institutes, namely, Institute of Energy and Power Engineering, Institute of Power Mechanics and Engineering, Institute of Thermophysics, Institute of Fluid

Mechanics and Engineering, and Institute of Control, Safety, and Simulation of Large Power Plants.

Many research projects completed by the Department of Energy and Power Engineering have been recognized with awards from the central government, ministries, and provinces.

The Department of Energy and Power Engineering trains students in engineering design, experimental research and engineering management in the following areas: energy research and utilization, clean combustion techniques, optimization and simulation of power systems and devices, and power engineering and control. The department grants undergraduate degrees in Energy, Power System and Automation and graduate degrees in four areas: engineering Thermo-physics; Energy and Power Engineering; power Mechanics and engineering, and fluid Mechanics and engineering. The department has had post-doctoral candidates since 1988. Thermo-physics, Energy and Power Engineering and power Mechanics and engineering are national key subjects. The department now has 32 professors, including 1 Academician of the Chinese Academy of Sciences, 2 Academicians of the Chinese Academy of Engineering, 2 “Yangtze River Plan” Super Scholars, 31 associate professors. 60 postdoctoral candidates have completed work here with 15 more currently studying here. In addition, 5 other professors share appointments with other locations.

The department is striving towards the goal of providing a world-class education. Since the reform and open-door policy was put into practice, the Department has initially formed the multilevel and multi-standard style for advancing the engineering sciences. The department has conducted a series of reforms to



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improve our teaching methodology, teach and train our students with emphasis on research and innovation, tutor and mentor undergraduates, and provide large scale reforms and improvements of our teaching and curriculum. These reforms aim to train professionals with breadth of knowledge, great motivation for their work, and ability to pursue scientific research.

Many research projects in the Department of Energy and Power Engineering are promoting the development of the Chinese energy and power systems and are being applied in Chinese industry including many fundamental research projects, such as the China NSF Projects and the National 863 Projects. In recent years, the Department of Energy and Power Engineering has received 5 National Invention Awards, 3 National Science and Technology Progress Awards, 1 National Science Award, 63 awards by ministries or provinces, 9 National Key Technical Development Awards and 16 Tsinghua University Technical Development Awards. The Department of Energy and Power Engineering also owns 46 patents.

The Department of Energy and Power Engineering has implemented a “Tutoring and Mentoring System” for students from their first year through graduate school. It provides direction

about studying and living as students pass through this crucial development stage. The program emphasizes expanding the students’ knowledge, so that they can understand other thermal energy related disciplines and high-tech development applications related to thermal energy so as to pave the way for their future growth and development. The tutoring system especially emphasizes the application of scientific research. The Energy and Power Engineering Department focuses on developing our students mathematics and physics fundamentals, their scientific quality and their innovation ability. Our training plans, teaching outlines and curricula from throughout the department all work toward this target. The continuous improvement of our teaching and our laboratories and the increased number and quality of experimental courses has greatly strengthened the students practical ability.

As we review the history and development of the Department, we can feel its thrilling vitality, which challenges The Department of Energy and Power Engineering to strive for ever higher goals. With the reform and opening to the outside world and with the educational system reform, the faculty of the Department of Energy and Power Engineering eagerly welcome the challenges in the world as further opportunities to build our society.