

Congress authorizes faster magnetic-fusion program

The Magnetic Fusion Energy Act, which President Carter signed into law last month "represents a remarkable consensus of Congressional opinion over the appropriate pace of magnetic fusion research," according to John Clarke, deputy associate director for fusion energy at the Department of Energy. It provides for an accelerated program of research and development of magnetic fusion technology with the ultimate goal of having an operating magnetic fusion demonstration plant before the end of the century.

Rep. Mike McCormack (D-Wash.) first introduced a precursor to the final Act last winter. DOE argued against the McCormack bill, saying that it was unrealistically ambitious (PHYSICS TODAY, May 1980, page 114). It would have required, for example, completion of the Engineering Test Facility by 1987. Last February, DOE convened a panel under the chairmanship of Solomon Buchsbaum (Bell Laboratories) to consider the pace of the magnetic fusion program. That panel reported in June that "the US is now ready to... [explore] the engineering feasibility of fusion power" (PHYSICS TODAY, August 1980, page 21). But instead of the ETF, the panel proposed a more modest Fusion Engineering Device. The final draft of the fusion bill, actually a compromise between McCormack's and another bill introduced in the Senate by Paul Tsongas (D-Mass.), calls for completion of an FED by 1990, which DOE considers reasonable.

The Act states that progress in magnetic fusion is currently limited only by available funds, and not by technical barriers, and so calls for a doubling within seven years of the present funding level for magnetic fusion and a 25% increase in funding in Fiscal Years 1982 and 1983. This would bring the 1982 level to about \$500 million, and Clarke told us that the budget DOE submitted to the Office of Management and Budget for FY 1982 is not inconsistent with this objective.

The bill cites some specific research areas that should be stressed, including plasma confinement, alternative confinement concepts and materials.

To implement the needed engineer-

ing development, the law directs the Secretary of Energy to develop a plan for the creation of a national fusion engineering center, which would accelerate fusion technology development by concentrating and coordinating the major engineering devices and associated activities. The Secretary is also instructed to set up something akin to

the old standing committee AEC had for magnetic fusion.

Whether the intent of the bill will be followed through with the necessary appropriations in the coming years will in large part depend on the new Congress, but the 96th Congress passed the legislation with strong bipartisan support in both houses.

—MEJ



John Deutch (left), formerly of DOE, and Sen. Paul Tsongas (D-Mass.). Tsongas introduced the fusion energy bill (see story at left) in the Senate; an interview with Deutch appears below.

Deutch reflects on energy policy

Until his resignation as Under Secretary of Energy last spring, John Deutch was what one might call the "czar" of energy research in the US, responsible for an \$11-billion research and development program. With the creation of DOE in 1977, Deutch, then chairman of the chemistry department at MIT, was hired as director of the Office of Energy Research. While director, he headed an interagency review group on nuclear waste management, negotiated the implementing accord between the US and the People's Republic of China on

cooperation in high-energy physics, assisted in a domestic policy review on solar energy, participated in the Foster Committee's review of fusion programs and created the Energy Research Advisory Board. Deutch also led the Administration's effort to establish a synthetic-fuels corporation. Last year Deutch was named Under Secretary of Energy. He has also served as Acting Assistant Secretary for Energy Technology.

Deutch is now back at MIT, but he has remained active in national energy