Over the past several years, the politics of the Clinch River Breeder Reactor (CRBR) has been tied to one crucial vote after another on Capital Hill. As this is written in mid-November, another vote on the project is likely to occur during the lame-duck session of the 97th Congress, and, by the time this material is published, the fate of this controversial project may have been sealed. A majority vote in the House of Representatives to cancel the project could be fatal; a sustaining vote to continue the project will guarantee it life only until another vote is taken next year.

There is a strange political paradox about CRBR. President Jimmy Carter sought to kill it, but a large body of his own party, joined annually by the Republicans voting in a bloc, stayed his hand and continued the project. Now, President Ronald Reagan strongly supports CRBR, but a large number of conservative Republicans, joined by the most liberal Democrats, stand ready to strike it down every time they have a chance to vote on the matter.

Whatever the outcome of the next vote, Capitol Hill support for Clinch River has gradually eroded from a very solid majority to something that now appears to be roughly an equal division on this issue.

The history of CRBR has been clouded by many debates both inside and outside the nuclear community. The project was conceived a dozen or so years ago at a time when the first waves of public debate over nuclear power were just beginning to break on these shores. At that time, there was a very close
supportive bond between the Atomic Energy Commission (AEC), the Joint Congressional Committee on Nuclear Energy, and the nuclear-energy community (industry, academia, and American Nuclear Society), and a demonstration breeder was then, as now, considered to be a vital element in the future of nuclear power. The breeder gives fission power essentially an unlimited future, and breeding technology is well established. It has been demonstrated in this country in small R&D plants dating back to the earliest days of the peaceful atom, and it has been demonstrated abroad in medium-sized plants. Without the breeder, the fission-power option is one of short-term. The only fissionable isotope occurring in nature—uranium 235—is relatively rare, but a breeder can produce a net gain in fissionable isotopes—plutonium 239.

There was never any notion within the original groups named above that the breeder would not be deployed. The only question at that time was “when?” and “how?” Our first commercial power reactors were built by the light-water converter-reactor (LWR) industry, which grew up around the nuclear-Navy submarine program. It was generally conceded that the LWR phase of the fission-power industry, given plutonium recycle in LWRs, would endure for 50 years or so, to be followed by some mixture of LWRs and breeders. The future scheme would be designed to burn all the plutonium as it was produced and separated from the spent fuel. Thus, the system (the nuclear-fuel cycle) would be in balance, and there