Developmental work also proceeded on radioisotope-dynamic systems that would harness the plutonium heat source to drive an electricity-generating turbine. With improved spacecraft and gyro mechanisms to compensate for rotating equipment, space-nuclear power developers no longer avoided the isotope-heat-to-turbine option. Radioisotopic-dynamic systems, then competing for selection, would generate 1,000 to 2,000 watts of power; the anticipated outcome of the competition was a system qualified for space flight by early 1982 in the next satellite program of the U.S. Air Force.[50]

Neither of these projected schedules for NASA and DOD missions was met. The Jupiter orbiter/probe, named Galileo, was rescheduled for a 1985 launch and then for 1986. The Air Force satellite using a dynamic isotope power system also was delayed greatly. Selection between competing dynamic isotope technologies for the Air Force's Space Based Surveillance Spacecraft (SBSS) was anticipated to occur "some time in 1986/1987."

The competing dynamic systems were Brayton Isotope Power System (BIPS) and the Organic Rankine Isotope Power System (KIPS). In the early 1980s, the RTG Program Plan said: "It is...necessary to update the 1978-1979 work completed on KIPS and perform comparable studies on BIPS in the integrated spacecraft configuration to provide information to candidate SBSS system contractors.[51]

In the few missions where commitments for supplying RTGs still remained, there were many scheduling delays. A new NASA program named Solar-Polar, sponsored jointly by NASA and the European Space Agency—each of which was to supply one spacecraft—was scheduled for launch in 1983, then delayed, and finally discontinued under U.S. budget re-evaluations. The United States retained commitments, however, to launch the European spacecraft from the U.S. space shuttle, to provide tracking and data services for the mission, and to supply RTGs for the spacecraft.[52]

With mission schedules slipping and new missions extremely hard to pin down, the RTG program continued its work of technology improvement. While costs of the MHWs used on LES and Voyager were approximately $25,000 per watt of electric power, program officials expected to achieve a 60 percent reduction, to approximately $10,000 per watt by 1981, and to less than $7,000 per watt by the mid-1980s, through the introduction of an improved radioisotope heat source. Economies were achieved by increasing RTG output