

per pound. Earliest units had an output of approximately 1.8 watts per pound; nearly 4 watts per pound by the mid-1980s were projected.<sup>53</sup> The new generation of RTGs that would provide power on the Galileo and Solar-Polar missions was called General Purpose Heat Source (GPHS). It was to be a modular system similar to the MHW, produce 285 watts of power in the RTG under initial space operational conditions, use Silicon-Germanium thermocouples, and attain a heat-to-electric power conversion efficiency of 6.8 percent (compared to 6.7 for the MHW, 6.3 on SNAP-19, and 5.0 on SNAP-27).<sup>54</sup>

Prospects for new missions were not good in the 1980s. President Reagan advocated a strategy of converting the agency's role to one which encouraged private enterprise demonstrations of the commercial viability of technologies, while the federal government assumed the role of supporting "long-term, high-risk energy research and development in which industry would not invest."<sup>55</sup> Reagan's administration seemed much more friendly to nuclear energy in immediately affirming the nuclear power option and later breaking ground for the Clinch River Breeder Reactor. The administration also expressed its intentions to stimulate growth and productivity of many energy technologies.<sup>56</sup> Thus, the climate improved for advocates of technology development, but the quiet technology relied on development and applications opportunities in space, and the climate for space programs was uncertain.

Space and nuclear scientists and technicians continued to seek glimmers of hope. A Harris survey in 1980 revealed that a majority of those surveyed\* believed the advantages of technology far outweighed the risks. "Even on the emotional subject of nuclear power," it was reported, "while 75%... agreed that there could be no guarantee against a catastrophic nuclear accident, most felt that the risks were justified. And most respondents seemed to have reasonable confidence in the judgment of scientists and engineers."<sup>57</sup>

On the space front, although the shuttle captured public attention and received much acclaim, a long-range and well-supported space program—especially for space science and space exploration—languished in the uncertainties of budget cutting and mixed signals about the value to the nation's strength and confidence of non-terrestrial enterprises. In 1981, NASA and its scientific advisory groups took steps to salvage the planetary program. A new

\*The survey was based on 1,500 interviews of a "national cross section" of the adult population plus an additional 600 Congressmen and business and financial leaders.