

Chapter VIII

Past Lessons and Future Challenges

Lessons from a Program Lineage

The space-RTG program spans a period of less than three decades, although its antecedents can be traced back over a half-century more. There were many technical improvements and successes in the program despite cycles of budgetary growth and decline. Managed by a small core of dedicated professionals, the program persisted through numerous organizational changes and shifts in the climate for space exploration and nuclear-power applications. As a component of modern-day endeavors that require large allocations of public resources and support from many sectors of society, the program accumulated extensive experience concerning survival and continuity in the modern environment for technical research and development. Moreover, the RTG program activities cut across two technological fields—atomic energy and space exploration—that have been the focus of tremendous attention and controversy in the second half of the twentieth century.

Significant lessons stand out in this history of a technology developed in a relatively small program managed and fostered by a relatively small group of people.

Advantages of Being Small and “Quiet.” In an era when there are mixed emotions about technology (especially “supertechnologies”), there may be advantages in being both small and quiet. Many RTG program people would probably agree that it is not always best to be big—especially when bigness is accompanied by pressures of high expectations. For many years the space reactor-power and nuclear space-propulsion efforts drew far more resources, as well as far more attention and pressures, than the RTG program. When the reactor-power and space-propulsion efforts were curtailed by extreme budgetary pressures and growing discontent with nuclear power and space, the quiet technology not only continued, it gathered increased support. Modest funding also meant less pressure from private sector contractors seeking a piece of the action and fostered conditions for a hard core of technicians and