PAUL TSONGAS REPORTS

"THE SOLAR ENERGY GAP"

This month in Washington, INFORM, a non-profit research group released an extensive survey of private and public sector development of new energy technologies. In this week's column, I would like to share with you some of INFORM's findings concerning solar energy development.

Of all the energy conversion technologies surveyed by INFORM in their two years of research and 700 pages of findings, solar heating and cooling is the most immediately available. The main barrier to the widepread use of solar units for these purposes is the high cost of installation. In addition, traditional energy systems such as oil, gas, or electricity remain necessary since solar units do not supply 100% of needs. For these reasons, commercial demand for solar systems is low. This limited demand has made large corporations and energy companies reluctant to invest in solar unit manufacture. Therefore, the federal government and the Congress have decided to provide various incentives for the development of reasonably priced solar units. But as INFORM found out, predetermined industry and federal opinions on the practicality of solar energy have hindered development. While generation of electricity through giant solar powered plants will not be possible for some time, solar heating and cooling units are being installed today. Many of these units are considered economical in certain climates with present technology. In the next decade, as fossil fuels become scarcer and their prices higher, solar units for residences and businesses will be much in demand. But these facts, according to INFORM, are too often ignored.

The approach of the private sector appears to be divided along the lines of whether a company is large or small. Large companies tend to look towards Congressionally mandated Energy Research and Development Administration (ERDA) demonstration programs and funds. In fact, large companies have received over 80% of available funds. Research usually is concentrated on development of one part of the solar unit. Too many of these companies have limited their efforts to seeking federal grants, rather than making it part of a commitment to market a useful solar component. INFORM cites one of the largest U.S. manufacturers of electrical products as falling into this category. The company has received numerous ERDA and National Science Foundation grants for the construction of solar collectors. INFORM concludes that the firm's "main thrust in solar collectors and solar air conditioners is aimed at developing new technology for government funded demonstration programs. It has no present plans to manufacture a product for the public." The company has no confidence in the future profitability of solar energy. Small companies also look to the federal government. Their success has been limited. Instead, smaller companies have made an effort to attract capital to develop complete solar units for residences. Units are tailored for particular needs. But again, the cost is often prohibitive.

As can been seen from INFORM's research, neither large or small companies have succeeded in developing a strategy which will result in the immediate commercialization of solar energy units. This failure must be shared by ERDA, the Congress, and the individual companies. The solar energy "gap" means that despite a monetary commitment to this alternative energy source, various factors have combined to delay progress. We are still a distance from efficient and affordable mass produced units.

Failure to close the solar energy gap means that a situation could arise in the future in which solar units are in immediate demand. This could result from an eventual shortage of fossil fuels. Without government support of this alternate energy supply, we could find ourselves years from large scale production during the time of an acute energy shortage.

INFORM suggests that the answer may be in the creation of solar incentives. This could take the form of residential and business tax credits (which the Congress is presently considering), a guaranteed market for solar units, price supports, or low interest loans for homeowners and small companies. The public interest group also suggests that ERDA and other federal agencies closely monitor large companies receiving grants to make sure that their interest in traditional energy systems does not prevent them from devoting the proper attention to federal contracts for solar energy development.

I believe that the Congress must insist that the Energy Research and Development Adminsitration awards contracts and grants to those companies, and particularly those smaller companies that give evidence of a commitment to the expeditious development and commercialization of solar systems. The emphasis of New England's recently submitted Solar Energy Research Institute proposal quite properly makes this the key goal of the nation's solar efforts.