

Biologists Asked to Shun U.S.S.R.

An appeal on behalf of the imprisoned biologist and human rights activist Sergei Kovalev has been issued from Moscow by Academician Andrei Sakharov and 20 other signatories.

Kovalev, a physiologist of some distinction, was sentenced in December 1975 to 7 years in a strict regime labor camp for making known various violations of human rights by the Soviet state (*Science*, 5 November 1976).

The Soviet authorities in the prison camp "are trying to 'rectify' Kovalev's convictions by isolation, hunger and humiliation," Sakharov and his co-signers say in the appeal, a copy of which was sent to the Federation of American Scientists. Kovalev is being deprived of the right to receive food parcels for the first 3½ years of his sentence and is also being denied medical treatment to cure a painful chronic disease.

The Sakharov appeal asks world scientists "to make use of every opportunity for drawing public attention to the tragic fate of Sergei Kovalev" and to appeal to Soviet authorities on his behalf.

Further, the appeal asks biologists in particular "to withhold scientific contacts with the Soviet Union until Sergei Kovalev is released."—N.W.

receipt of the first draft of a study of the social and environmental aspects of solar energy prepared by the Stanford Research Institute. The minidrama the SRI study reportedly caused was played out during the same time period when the groundwork was being laid for the general advisory committee study.

The SRI Affair

Commissioned by a new ERDA employee, James W. Benson, the SRI study made some novel comparisons between solar energy and nuclear power and found that solar energy came out surprisingly favorably. The study also asked such previously ill-advised questions as what energy scenarios would lead to the best chance of survival by society.

No sooner had Benson circulated the first draft of the SRI study within ERDA's solar division, say sources familiar with the agency, than he was told that his job was in jeopardy. The SRI contract was allowed to expire and Benson was told to keep the study and all information about it to himself, the sources say.

By virtue of an interlocking consultancy, Governor Carter's staff was privileged to receive a copy of the SRI report after one of the SRI study consultants became a full-time member of Carter's issues team. Other copies of the report leaked out, and so did the word of Benson's 8-week struggle to keep his job. As the political pressures grew, it began to appear increasingly unwise to cancel the SRI study altogether, and ERDA renewed the contract. Benson was nevertheless being forced out of the solar

division, insiders at ERDA say, and had to fight to hold his job at least until the election.

Other segments of ERDA are said to have felt that transfer would be a wiser solution than severance, and on 6 November, a few days after Carter became president-elect, Benson was given another job, under assistant administrator James Liverman, in a different directorate of the agency. One of the ironies of the transfer is that his new responsibilities reportedly include reviewing environmental impact statements from the solar energy program.

Some observers link the upcoming solar study directly with the too-favorable conclusions of the SRI study and the scheduled completion, next June, of a third study, being prepared for ERDA by the National Academy of Sciences. The NAS study is to examine the breeder in the context of other long-range energy sources and is also expected to solidly reflect the environmental benefits of solar energy. Certain critics suggest that ERDA is rushing to complete the general advisory committee study in the same time period in order to offset the positive effect expected from the other two studies.

According to Hirsch, the National Academy study will try to determine how the breeder fits into the world as it will look in the future, and the SRI study will try to assess the environmental effects of solar energy, but "the question we are addressing here is the micro-problem," he says. "I'm not asking about the total solar research budget, because I'm bullish on that, but I want to

know what my program balance ought to be to guarantee that the reemphasis would be achieved by upward valuation only, but Hirsch says that the purpose of the study is to get the committee's advice, and he "can't prejudge the outcome."

One of the puzzles of the whole episode is why Hirsch, who is widely regarded as a highly competent and politically astute administrator, chose the time just before a close election to act on such a politically sensitive topic. He could have prepared a brief showing the need for the study and let it sit at the back of his desk until January, at which time he could have either initiated the study with Carter's backing, and thus greater impact, or left it for his successor to initiate. The answer seems to be that the potential of solar energy is a very important question, with public expectations that may be unjustifiably high, and he stubbornly insists that the question cannot be ducked. Hirsch immersed himself in solar energy reports as soon as he assumed the assistant administrator's post 10 months ago, and by summer he was saying "We have only 2½ energy options for the future," meaning solar energy has a limited potential for base-load power. Thus his estimate of solar's potential has been consistently low-key.

"From a personal viewpoint I could be committing professional suicide," he says about his insistence on a new study. "It may be that people will be out for my neck at a time when necks are going to roll anyway, so I'm out of a job. But it is my view that when a question needs to be asked, the biggest crime is to push it under the carpet."

The new Administration is expected to reorganize a number of government agencies, including ERDA, which was singled out for discussion in a preelection position paper. In that case, the first thing that solar energy advocates would like to see is a new structure with a clearly identifiable solar spokesman. "To put fusion and solar energy under the same leadership is legislatively naive," says DeLoss from the Public Interest Research Group. "When it comes to reorganization next term, we will need some intra- as well as inter-agency changes."

Along with this judgment, there seems to be a general assessment that solar energy research is not quite out of its adolescence and that ERDA has not been a properly encouraging parent. "The problem with ERDA," says one congressional aide, "is that they have a lot of nuclear guys heading the solar energy program."—WILLIAM D. METZ