Shuttle Gets Caught in Trade War

The U.S. Trade Representative's Office is investigating complaints that European governments are killing off the nascent private launch business in the United States by engaging in predatory pricing for commercial launches on the rocket Ariane. The investigation, which was formally begun last month, will be a minor irritant in U.S.-European relations, but it could be a more serious problem for the National Aeronautics and Space Administration (NASA).

The Europeans have responded to the charges by pointing the finger at NASA, essentially claiming that the agency is engaged in more blatant predatory pricing by heavily subsidizing commercial users of the space shuttle. This trade dispute is therefore likely to include what many regard as a key element in the prospects for space commercialization—the cost of getting into orbit aboard the shuttle (see accompanying article).

A formal complaint about Ariane prices was filed with the Trade Representative's Office in May by Transpace Carriers Inc., a fledgling U.S. company that is attempting to break into the private launch business with NASA's old workhorse, the Delta rocket. NASA is planning to phase out the Delta by the end of 1986, when the shuttle is supposed to displace the government's expendable launchers. But Transpace, which is headed by a man who ran NASA's Delta program for 5 years, David Grimes, believes there is still a place for the rocket and has worked out a deal with NASA aimed at keeping Deltas flying under private enterprise. In essence, Transpace will buy the rockets from McDonnell Douglas, which currently manufactures them under contract to NASA, and reimburse NASA and the Air Force for launch and tracking services. It will also buy some Delta components owned by NASA.

Transpace is not the only potential competitor to the shuttle. General Dynamics is hoping to get into the private launch business with its Atlas/Centaur rocket, Martin Marietta may eventually enter the field with a version of its Titan launcher, and at least two small companies, Space Services Inc. of Houston and Starstruck Inc. of Redwood City, California, are developing their own vehicles. Then there is Japan, which has a rocket under development for the 1990's, and the Soviet Union has been making noises about commercial launches on its Proton booster. They all believe that expendable launch vehicles offer advantages over the shuttle in terms of cost, reliability, flexibility, and assured launch schedule.

Transpace's first serious shot at landing a contract came in May, when the company put in a bid, along with Arianespace—the company that manages Ariane—and NASA, to launch a communications satellite for Satellite Business Systems. The contract went to Arianespace, which apparently underbid its competitors. A few days later, Transpace filed its complaint.

The complaint alleges that European governments pay more than commercial customers for launches by Ariane. This price differential, Transpace says, represents a subsidy used to price competitors out of the market. Transpace also claims that Arianespace does not pay the full cost of launch facilities and services and that customers who use Ariane benefit from subsidized insurance rates.

In a formal response, Erik Quistgaard, director general

of the European Space Agency, said that Ariane's prices were initially pegged to those of the shuttle, but since last January, Arianespace has been charging prices "based on full recovery [of] costs," and "applicable to all users." Quistgaard went on to complain that "It is, however, clear—and this has been amply proved—that the shuttle flights are substantially subsidized." He pointed out that although NASA charges commercial customers only \$71 million for a shuttle launch, the full costs per flight are in the region of \$300 million.

Although Transpace's general counsel, Dennis Ahearn, says "we are not, repeat not, taking on NASA" with the complaint, the Trade Representative's Office will find it difficult to avoid looking into NASA's pricing policy. The \$71-million price tag was set in 1982 and is valid through fiscal year 1988. It is based on the assumption that there is a base level of operations required to fly and maintain the shuttle as a national vehicle to launch government payloads, and commercial customers should not be required to pay for these operations. They pay only for the services that have to be added to fly their payloads. (NASA officials point out that private launch companies will also be charged only add-on costs when they use government launch facilities.)

The Europeans argue that this policy means that commercial customers are subsidized because they do not pay their full share of the total costs of operating the shuttle. The agency is currently in the throes of calculating the prices it will charge after 1988, and if it is forced to change its pricing policy to include some of those base costs, the price hike could be substantial.

That would certainly provide an economic boost to the shuttle's competitors. But if the shuttle loses a large chunk of the commercial launch business, it would fly fewer times per year and the cost per flight would go up because the fixed costs would be spread over fewer launches. That would make the shuttle even less able to compete against the expendable launch vehicles it was once supposed to supersede.

Part of the brouhaha over launch prices reflects the fact that there are several would-be competitors chasing few launch contracts. If the market for communications satellites expands rapidly, then some of the friction will die down. Transpace, for example, contends that there will be so many satellites looking for launchers over the next few years that the shuttle will be able to handle only a fraction of the business and the real fight will therefore be between itself and Arianespace.

Others dispute those projections, pointing out that there is considerable spare capacity on communications satellites already in orbit and that new ground-based technologies, such as fiber optics, will eventually constrain the growth of satellite-based communications. In that case, there will be little room for a private sector launch business and NASA and Arianespace will be the only contenders.

In any case, Transpace's action has raised the issue of launch pricing to the level of international negotiations. The Trade Representative's Office is expected to begin talks with the Europeans in September, and it has I year to complete its investigation.—COLIN NORMAN

SCIENCE, VOL. 225