

nature

June 17, 1976

On location with the JET set

FUSION power is unlikely to contribute significantly to Britain's energy resources over the next 50 years. But its energy potential is so large that development of the technology must be continued. That view from ACORD, the Advisory Council on Research and Development for Fuel and Power, is contained in a discussion document, *Energy R&D in the United Kingdom* (other details, see page 535), which accords the subject barely a couple of paragraphs. But it does remark that there is general scientific agreement that the next step in the nuclear fusion programme should be the Joint European Torus (JET). And that is the rub. Everyone in Europe, not just Britain, probably agrees what the next step should be. But they differ sharply on where it should be.

What Mark Twain said about the weather, in fact, is not inappropriate to Europe's decision on a site for JET: everyone talks about it, but no one does anything about it. The long dispute has become altogether too protracted to make any sense. In February, the council of Research Ministers again postponed the decision they had already put off last December, when the new five-year European fusion programme involving JET was to be finalised. They managed agreement on initial financing of the project, but when it came to JET's location, the European Commission and Italy plumped for the European Joint Research Centre at Ispra while Britain lobbied for Culham (the design team's base), France for Cadarache and West Germany for Garching.

In an effort to reach a decision, a "fusion consultative committee" was formed, chiefly to re-examine the alternative sites but also to fulfil a more general advisory role. It was to report to the next Research Ministers' meeting, due this week (June 18). When it met in April, the committee said a decision to build JET was needed forthwith. But it did not deal with the question of the site, even though it was thought it might give its verdict early in May at a Foreign Ministers' meeting—the level at which the issue might need resolution. The agenda for the Ministers' meeting, however, was too full to include JET. By the time the consultative committee was due to meet again in May, the Italian election was in prospect and the story was already about that, again, no decision would be taken. Now the June 18 meeting itself has been postponed.

This tale of procrastination invites exasperation and

despair, not least on the part of the design team. It is understood that a formula, including financial arrangements, is now being sought which might go some way towards maintaining the team's cohesion. It is to be hoped that this materialises. Members of the team had two-year contracts which expired last December and which were renewed for six months on the now-frustrated expectation that a decision would have been reached. That did not prevent the departure of some of them then. It is not certain that it will do so now. But every effort must be made to keep these people together if Europe is legitimately to imagine itself serious about nuclear fusion.

On that ground alone an early decision seems vital. The technical assessment of each of the alternative sites is not likely to change significantly: some are better than others in some respects, others are better in other respects. There is a balance of judgment involved which it is difficult to strike because it is so fine. But the decision is essentially a political one anyway. There is no gainsaying that already complex problems are complicated further by this fact. But things have now reached a crucial stage. A healthy element of competition in scientific research is essential to progress. And that progress is only possible in the fusion field on a European scale. The danger presented by the delay over JET now threatens the prospects for nuclear fusion as a future energy source by undermining Europe's hitherto prominent position in this field in comparison with the USA and USSR.

Few people are yet saying that the USA and USSR should be allowed simply to get on with it. Those countries themselves want Europe in on the venture anyway. But there are many who, by scrambling so unedifyingly over what is admittedly a real plum and one of the most lucrative research projects of the decade, are allowing Europe's case to go by default. The Nine must now ask themselves: if the politics of petty nationalism is impairing European co-operation on fusion to the extent that no decision on a site for the project can be made, can the people of Europe really be offered much hope for the aims of the project itself? The institutions of Europe may not reveal it, but the people they serve so indirectly are the ones who are ultimately paying for the present mess. And the cost, both financial and otherwise, is growing all the time. □