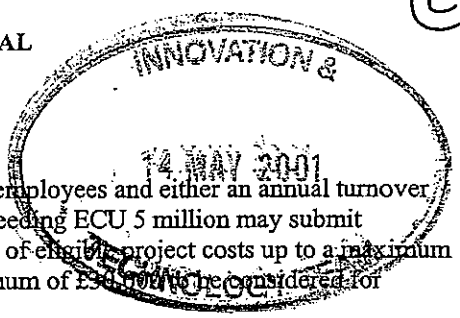
931



Awards are made on a competitive basis, at the discretion of DTI.

- Individuals and independent small businesses with fewer than 50 employees and either an annual turnover not exceeding ECU 7 million or an annual balance sheet total not exceeding ECU 5 million may submit proposals for support with feasibility studies. Assistance will be 75% of eligible project costs up to a maximum grant of £45,000. Eligible costs of feasibility studies must be a minimum of £30,000 to be considered for support.

- Independent businesses with fewer than 250 employees and either an annual turnover not exceeding ECU 40 million or an annual balance sheet total not exceeding ECU 25 million may compete for support with development projects. The award in this case will be 30% of eligible project costs up to a maximum grant of ECU 200,000 (including any grant already received for a feasibility study). A very small number of exceptional development projects may receive a higher grant at a variable percentage of total eligible costs (with a maximum rate of 30%). Development projects must be a minimum size of £60,000 to be eligible for support.

The new **Smart** reflects the objectives of the Foresight Programme which aims to identify opportunities in markets and technologies which will enhance the nation's prosperity and quality of life, and promote closer collaboration between business and the science base.

BNSC

Smart Project Appraisal Form

Reference: GOSE 931

Applicant: SATELLITE PROPULSION RESEARCH LTD.

Project Title: SATELLITE PROPULSION TECHNOLOGY

Advice Required From: [redacted]

Your Rôle BRITISH NATIONAL SPACE CENTRE.

You are asked, along with others, to make a recommendation to a judging panel on whether, in your opinion, the project proposal should be supported. You are not being asked to make a final decision, nor are you expected to take the role as the final arbiter. You are asked to indicate in the High/Low rating how you perceive the project in terms of the criteria indicated in the marking frame. It would be appreciated if you would add to this rating with a brief explanatory text in the comment's section. **You should bear in mind your comments could be revealed under the rules for Open Government on rare occasions.**

If you do not have any background knowledge in the technology requested please either return this Form to me or forward it to a suitable colleague **and notify me of your action**

Please complete this form putting a tick in the box you consider is the most appropriate for the proposal attached. **AND please comment on each aspect - your comments have great value to us as the project may be finally judged by someone without a technical background.** If you have no knowledge of the subject area can you suggest an alternative source, if possible? **Please also return the proposal.**

To fill in the check box, double click on the check box and change the **Default value** to Checked

RATING → HIGH 5 4 3 2 1 LOW

INNOVATION ☐ ☑ ☐ ☐ ☐

Technically new in world terms; involves T/T from recent research

New only to the firm concerned; trivial & low risk technology

Please indicate how the proposal differs from existing technology:

The US NASA has a Breakthrough Propulsion Physics (BPP) aimed at long term (or never) solutions to space propulsion. The use of microwave thrusters form part of that programme. This application is one means of potentially achieving such a thrusters and in that sense is innovative.

ASSESSMENT OF TECHNICAL RISK ☑ ☐ ☐ ☐ ☐

Clear and realistic technical objectives. Challenging Research Programme

Technical objectives unclear or impractical. Little or no technical risk

How do you rate the applicant's chances of achieving the technical objectives?

In general a well thought out technical programme, though I note that the market assessment report is left until last, where in practice this should be in parallel and upfront to gauge more fully and accurately the market. I assume the author wishes to show the credibility (or otherwise) of the design, before considering the market.

RATING → HIGH 5 4 3 2 1 LOW

COMMERCIAL NEED ☐ ☑ ☐ ☐ ☐

Strong need in world markets

Sales depend on stressing technical or other novelty

Please explain how the proposed end product differs from what already exists in the market:

The market would welcome proof of a real operational BPP success. None have been achieved to date. The US BPP conference is being held in US in July and this will indicate the current state of play. All BPP approaches are considered long term, if ever. If the proposal solution actual works the market would open up, but not as the author suggests all of it, since the market is [redacted] conservative and alternatives exist

ENVIRONMENTAL IMPACT ☐ ☐ ☑ ☐ ☐

The project will have a beneficial impact on the environment; sustainable technology

Potentially adverse environmental impact

What will the impact be (if any)?

The number of space craft is relatively small and although the system proposed is very "clean" its impact will be marginal.

RATING → HIGH 5 4 3 2 1 LOW

DESIGN IMPACT ☐ ☑ ☐ ☐ ☐

The project shows awareness of good design practice; enhances the applicant's design effectiveness and project value.

Design not considered; adds no value to the applicant's project

What will the impact be (if any)?

The proposal (annex A) indicates correctly what must be achieved in the next phase of activity, namely a complete mathematical analysis of the thruster, confirmation of the theory and reproduction of the experimental results and independent replication of the results obtained to date (and of the next phase in the proposal) to determine the creditability and proof of principle of the concept/breadboard.

DO YOU KNOW THE APPLICANT? Yes ☐ No ☑

⇩

If "Yes" please include a view on the competence of the applicant to carry out the project in your comments below

With the information you have, would you recommend Support ☑ Rejection ☐ **Of the Smart proposal.**

If you have any other comments relevant to the proposal or to your recommendation please add them here:

The venture is high risk, and given a successful demonstration, independently verified, will essentially be proof of principle. Given that then de engineering and application will need much thought to produce a product saleable to de Space Sector. De low thrust, efficiency, alternatives, etc will need careful consideration before a product and its market can be established, or otherwise, bearing in mind de high risks and de state of play in de US BPP. However de modest investment requested, if answering de questions raised above will indicate feasibility or otherwise.

Please indicate your knowledge or expertise in the subject area

Recognised world/national/sector expert or practitioner	☐
Over 5 years practical knowledge of the subject area	☑
Less than 5 years practical knowledge	☐

No practical knowledge of the subject, but some policy or related knowledge	☐
New to the subject area with limited or no knowledge. If you have ticked this category can you suggest an alternative source, if possible:	☐

.....

Name of person who completed the form:	
Directorate / Establishment	BNSC 151 BUCKINGHAM PALACE RD. LONDON SW1W 9SS
(Direct) Telephone No:	

We do appreciate the time and effort you have put into this proposal. Do you wish to be kept informed of progress on the application and project if approved? Yes ☑ No ☐

Please return the form to:

By E-mail [redacted]

Or fax or post to:

[redacted]

Innovation and Technology Team
3rd Floor
Bridge House
1 Walnut Tree Close
Guildford
GU1 4GA

[redacted]