EUROPEAN DEFENCE AGENCY

Fact sheet

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Energy Performance Contracts and Renewable Energy Systems

Background Description

Defence facility managers can find it challenging to make the necessary investments in renewable energy sources (RES) due to non-availability of internal capital funds and due to a 'high bar' set for ROI that RES projects may not reach and due to the competition with other capital investments that have a more immediate payback. In addition, the lack of knowledge and technical expertise at the MoDs on types of available RES makes investment decisions hard to justify.

Project Analysis

There are numerous types of energy performance contracts (EPCs) to suit different projects. EPCs transfer performance risk to service supplier which allows the defence sector to concentrate on core activities. They produce guaranteed savings that increases trust in the use of RES using external technical expertise that is not available in house. They also spread payment for a RES project over time.

Objectives

The key objective of this project idea is to demonstrate that EPCs can be an effective enabler for RES projects in the defence sector and to optimise EPC solutions to RES based on experience gained on the project.

Impact – Expected Outcomes

The successful demonstration of RES projects using EPC will encourage Ministries of Defence (MoDs) to increase the installation of RES and will thus:

- Reduce utilities costs;
- Reduce carbon footprint and dependence on imports of energy products;
- Increase resilience of military installations.

Opportunities

EPC provides an alternative method of procuring a capital project like RES. Their use can create trust in RES and promotes further use in the defence sector.

It enables the development of different RES at different sites. An EPC could provide capital infrastructure without adding to the capital balance sheet of the member state.

The project is eligible for potential funding at European level, for instance, through the Structural Reform Support Programme (SRSP) and the LIFE Programme.

Challenges

- Participating in long term contracts with little prior knowledge or experience does not always appeal to MoDs;
- Selection of type of EPC that is matched with a suitable RES for each site is a key challenge. But it is critical to ensuring each project is successful in meetings its performance target;
- RES projects through EPC will have the same difficulty in passing through public planning process (e.g. wind);
- There may be potential industrial relations issues due to changes in existing maintenance provision on some sites;
- The unpredictability associated with onsite RES generation and unfamiliarity with EPC or RES may also be a substantial challenge.

Methodologies

The following stages are required:

i. Participating Member States commit to proposing pilot RES projects;

ii. Procure an EPC facilitator to undertake a preliminary study of each pilot project to assess its viability;

iii. All viable projects are recommended for approval to develop as an EPC. The EPC facilitator produces EPC request for tender (RFT) for any approved pilot projects;

iv. The EPC facilitator advises on the national procurement processes including on the terms of the EPC with the successful tenderer;

v. The EPC facilitator advises on the installation process of each pilot project with the contractor, monitors and verifies the performance of the RES;

vi. The measured output of the RES and through life-cycle cost of the project is compared against conventional procurement.

The successful pilot projects can then be promoted as exemplars of EPC based solutions to RES projects. Also, the experience gained on each pilot project can be used to optimise solutions for any further RES projects using EPC.

Way Ahead

Participating Member States will propose suitable pilot projects that may be brought forward for development as RES using EPC based on their viability.

An EPC facilitator to undertake preliminary studies of each pilot project to assess their viability.

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