

**MAKE-II PROPOSALS : AUXILIARY POWER UNIT (APU) FOR
TK T-72 AND T-90 S/SK**

1. **Brief Description.** The Auxiliary Power Unit (APU) is an alternate source of power for the Fire Control System of the Tank and ancillaries, to cater for power requirements during a lull in a battle, while deployed in surveillance mode and during training, with a view to conserve the life of main engine of the Tank. Auxiliary Power Unit for Tank T-72 and T-90 has been identified as a 'Make-II' project under the 'Make in India' initiative of the Govt. The project has been included in the project list after due deliberations between the Service HQ, Department of Defence Production and DRDO.

2. **Op Requirement.** The Auxiliary Power Unit (APU) will be an alternate source of power for the Fire Control System its ancillaries and other opto electronic sys such as. It will cater for power requirements during lull in battle, while deployed in surveillance mode and during training, with a view to conserve the life of main engine of the Tank and to carry out operational tasks in silent mode.

3. **Likely Quantity & Cost.**

(a) **Total Quantity.** 3257 Auxiliary Power Units (APU) (Quantity 1657 for T-90 tank and quantity 1600 for T-72 tank.

(b) **Total Cost.** Rs 1325.92 Crs {3257 APU @ Rs 30 Lakhs per unit = 977.1 Crs, ESP @ 15% of the project cost = 146.56 Crs and GST @ 18% of the project cost (APU+ESP) = 202.26 Crs}.

4. **Broad Qualitative Requirements.**

(a) **The system should not change the overall silhouette of the tk, when viewed from the front.**

(b) APU should be able to concurrently operate the following systems of the tank in silent mode (Main Engine of the tank switched off) for at least Six Hours:-

- (i) Gunner, Commander and Driver Sights (Day & Ni).
- (ii) Fire Control System.
- (iii) Stabiliser System.
- (iv) Radio Sets.
- (v) Inter Communication System/ Digital Control Harness.
- (vi) Charging of Batteries.
- (vii) Navigation Aid Equipment.

(c) APU should be able to operate the above mentioned systems of the tank for not less than six hours followed by a rest of 30 minutes and again an operation of not less than six hours.

(d) The APU should be modular and mounted outside but not on the turret. It should be capable of being installed in the field.

(e) The system should not foul with existing features of the tank.

(f) **Power Output.** Not less than 13 KW at 27.5 +1V DC. The system should be compatible with MIL STD 1275 E.

(g) **Life.** The APU should be designed to last for **Minimum 2000 Engine Hours.**

Broad Timelines. As per Annexure II to Chapter III-A of DPP-2016.

