

19 Aug 2021: PIB Summary & Analysis

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1. Advanced Chaff Technology for Indian Air Force

Context:

DRDO developed advanced chaff technology to protect IAF jets from missile attacks.

Details:

- Pune and Jodhpur-based facilities of the Defence Research and Development Organisation ([DRDO](#)) have jointly developed an advanced chaff technology to safeguard fighter aircraft of the Indian Air Force (IAF) from enemy radar threats.
- They have developed the chaff cartridge meeting qualitative requirements of IAF.
- A chaff is primarily an electronic counter-measure technology used by militaries worldwide to protect high-value targets such as fighter jets or naval ships from radars and radio frequency (RF) guiding mechanisms of the enemy missiles.
- The chaff deployed in the air reflect as multiple targets for the missile guidance systems, thus misleading the enemy radars or deflecting adversary missiles.

Significance:

- In today's electronic warfare, survivability of fighter aircraft is of prime concern because of advancement in modern radar threats.
- To ensure survivability of aircraft, Counter Measure Dispensing System (CMDS) is used which provides passive jamming against infra-red and radar threats.
- Chaff is a critical defence technology used to protect fighter aircraft from hostile radar threats.
- The importance of this technology lies in the fact that very less quantity of chaff material deployed in the air acts as decoy to deflect enemy's missiles for ensuring safety of the fighter aircraft.

2. Rooftop Solar Programme

Context:

Union Minister for Power and MNRE takes review of implementation of PM-KUSUM and Rooftop Solar Programme Phase-II.

Know more about [PM-KUSUM](#) in the linked article.

About the Rooftop Solar Programme:

- The Ministry of New and Renewable Energy is implementing Rooftop Solar Programme Phase II to promote rooftop solar (RTS) in the country including in rural areas.
- The aim of the scheme is to achieve a final capacity of 40,000 MW from Rooftop Solar Projects by 2022.
- The major objective is to generate solar power through the installation of solar panels on the roofs of houses.
- The scheme seeks to promote grid-connected SPV rooftop and small SPV power generating plants among community, industrial and commercial organizations.
- This would lead to a reduced dependence on fossil fuels for the generation of electricity.
- **Features of the scheme:**
 - For individual households, subsidy up to 40 percent of the benchmark cost is provided for RTS plants up to 3 kW capacity and 20 percent for RTS plants of capacity beyond 3 kW and up to 10 kW.
 - For Group Housing Societies/Residential Welfare Associations (GHS/RWA), the subsidy is limited to 20 percent of the benchmark cost for RTS plants of capacity up to 500 kW used for supply of power to common facilities.
- Under the Phase-II of the programme, the focus will be on increased involvement of DISCOMs.
 - Performance-based incentives will be provided to DISCOMs based on RTS capacity achieved in a financial year over and above the base capacity.
- Under phase II, SPIN, an online platform has been developed for expediting project approval, report submission and monitoring progress of implementation of RTS projects.
- The programme will be implemented through DISCOMs.

How does the Rooftop Solar Cell work?

- In a grid-connected rooftop Solar Photovoltaic SPV system, the DC power is generated from the SPV (solar photo-voltaic) panel and is converted to AC using the power conditioning unit. It is then fed to the grid.