Solar DC Cooking System

Why in News

Recently, the **solar DC cooking technology** was developed by the **Central Mechanical Engineering Research Institute (CMERI).**

- The CMERI is an institute under the **Council for Scientific and Industrial Research (CSIR)**.

Key Points

- **About:**
    - It is a **Solar Energy based Cooking System** which consists of a solar PV panel, charge controller, battery bank and cooking oven.
    - It provides a **Clean Cooking Environment**, Invertor-Less Direct Operation, Fast and Uniform Heating and a potential to save 1 ton Carbon Dioxide emissions per year/household.
    - It has **20-25% better efficiency** and is **more Economical** in comparison with **Conventional Solar based Cooking Systems** which loses efficiency owing to AC-DC conversion.
    - The simple Technology Design also ensures **Ease-of-Manufacturing** and thus provides a substantial Economic Opportunity for the Micro-Industries.
    - It will cost in the range of **Rs 65,000- Rs 70,000** and if Government subsidies are provided there will be a **significant reduction in the price of the product.**
- **Significance:**
    - Widespread usage the system can also **play a critical role in achieving the target of 200 GW of** Solar energy and also to **save almost 290 million tons of Carbon Dioxide emissions.**
    - Along with the **widening of the popularity base of Technology**, there is a probability of **improvement in Job Prospects.**
- **Government Schemes Related to Solar Energy:**
    - **Rooftop solar scheme**
    - Kisan Urja Suraksha evam Utthaan Mahabhiyan **(PM-KUSUM)**
    - **International Solar Alliance**
    - One Sun, One World, One Grid **(OSOWOG)**
    - National Solar Mission **(a part of National Action Plan on Climate Change)**

Source: PIB