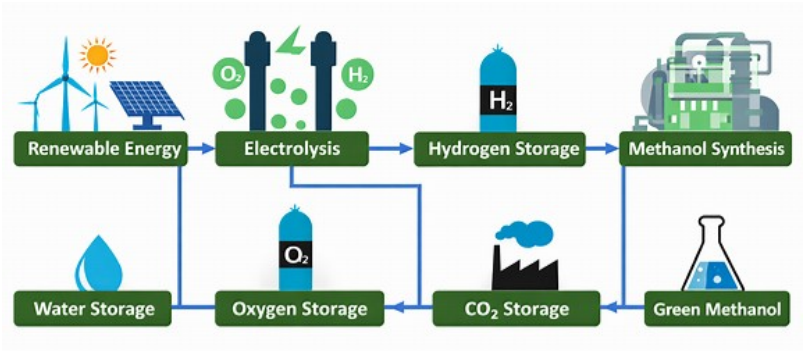
Green Methanol

Prelims: *Current events of national and international importance | Energy*

Why in News?

Recently, India's ACME Green Molecules Business signed a long-term supply agreement with Japan's Mitsubishi Gas Chemical (MGC) for 100,000 tonnes of green methanol annually.

- **Green Methanol –** A sustainable, net-zero carbon liquid fuel and chemical feedstock produced from renewable sources such as biomass (bio-methanol) or green hydrogen and captured CO_2 (e-methanol).
- **Process –** Produced by reacting **green hydrogen** (from water electrolysis powered by wind/solar) with ***captured carbon dioxide*** under heat and pressure.
- Alternatively, it is made by cleaning and synthesizing syngas from ***gasified organic biomass waste.***



- **Uses**
  - **Maritime shipping –** Decarbonized using alternative bunker fuels.
  - **Aviation –** Shift to e-SAF (sustainable aviation fuel).
  - **Chemical manufacturing –** Replace fossil fuels to produce green plastics, textiles, and adhesives.

Quick Facts

eSAF – Electro Sustainable Aviation Fuel is a synthetic, drop in replacement for conventional jet fuel that is produced using captured CO_2, water, and renewable electricity.

Reference

Economic Times | Green Methanol