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US-India Strategic Energy Partnership

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Why in News

Recently, India and the USA have participated in a **virtual ministerial meeting** of the **U.S.-India Strategic Energy Partnership (SEP)** to review progress, highlight major accomplishments, and prioritize new areas for cooperation.

- The SEP was established in **April 2018** whose objective is to encourage meaningful engagements through robust **government-to-government cooperation** and **industry engagement**.
- The **next Ministerial meeting** will be held in **2021**.

Key Points

- **Description:**
 - The SEP organizes **inter-agency engagement** on both sides across **four primary pillars** of cooperation:
 - Power and Energy Efficiency,
 - Oil and Gas,
 - Renewable Energy,
 - Sustainable Growth.
 - The SEP also supports USA efforts under the **AsiaEDGE initiative**, which establishes **India as a strong energy partner** in the **Indo-Pacific region**.
- **Major Outcomes:** Number of achievements and priorities for new work under the SEP were announced by both sides. These can be **broadly segregated** under the **four primary pillars of cooperation**, as given below:

1. Power and Energy Efficiency:

- **Modernizing the Power System:** Both countries have been collaborating on the integration of **new technologies** into the smart grid; modernizing the power distribution sector i.e. rooftop solar, deployment of Smart Meters etc.

The two countries are leading joint research and development (R&D) through **Advance Clean Energy-Research (PACE-R)** on **smart grids and energy storage** to increase resilience and reliability of the electric grid.

- New areas of research on **transformational power generation** based on **supercritical CO₂ (sCO₂) power cycles** and **advanced coal technologies** for power generation including carbon capture, utilization, and storage (CCUS) were also initiated.

sCO₂ is a **fluid state of carbon dioxide** where it is held at or above its critical temperature and critical pressure.

- Commitment to advance **civil nuclear cooperation** i.e. recent progress on the **Westinghouse** (USAs Electric Company) **nuclear reactor project at Kovvada, Andhra Pradesh** were also discussed.
- It also promotes continued bilateral R&D engagement on advanced civil nuclear energy technologies through the **U.S.-India Civil Nuclear Energy Working Group**.

2. Oil and Gas: A Memorandum of Understanding (MoU) was signed to begin cooperation on **Strategic Petroleum Reserves operation**.

- The possibility of **India storing oil in the U.S. Strategic Petroleum Reserve** was also discussed.
- Both sides have noted the significant increase in the bilateral hydrocarbon trade through SEP touching 9.2 billion USD during 2019-20 and marking a **93% increase since 2017-18**,

Through the **U.S.-India Natural Gas Task Force**, it affirmed to promote greater hydrocarbon trade between the two countries.

3. Renewable Energy: The both sides launched a **public-private Hydrogen Task Force** to help scale up technologies to **produce hydrogen from renewable energy and fossil fuel sources** and to bring down the cost of deployment for enhanced energy security and resiliency.

- **Efficient Buildings and Clean Technologies:** A MoU was signed to collaborate on India's first-ever **Solar Decathlon in 2021**, establishing a **collegiate competition** to prepare the next generation to design and build high efficiency buildings powered by renewables.
 - In response to the Covid-19 pandemic, **United States Agency for International Development (USAID)** and **Energy Efficiency Services Ltd (EESL)**, India has jointly initiated “**Retrofit of Air Conditioning to Improve Air Quality for Safety and Efficiency**” (**RAISE**) for healthy and energy efficient buildings.
 - Launched collaboration between the **USA Department of Energy (DOE) National labs** and the **Indian National Institutes under the Ministry of New & Renewable Energy** as part of the **South Asia Group for Energy (SAGE)**, supported by **USAID**, for joint research on development of advanced clean technologies.
- Information exchange on **sustainable biofuel production (bioethanol and renewable diesel)** and use for air and sea transport were also discussed.
- It will also explore cooperation on utilizing the economic value of converting bio-waste into biogas.

4. Sustainable Growth: The best practices are being adopted through **methodologies in energy data management and capacity building in energy modeling.**

- **USAID** and **NITI Aayog** jointly launched the **India Energy Modeling Forum** to build a network of modeling communities and its linkage with Government for analytical work and policy making exercise.
- **Empowering Women in the Energy Sector:** USAID launched the **South Asia Women in Energy (SAWIE) platform** focused on the power sector and both the countries have been working to incorporate **gender-focused activities** across the technical pillars.

Source: PIB