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*Ask the right questions, and nature will open the door to her secrets
- Dr. C.V. Raman, The Nobel Prize in Physics 1930*

India to Set-up More Nuclear Power Plants for Augmenting Production of Clean Energy

Department of Atomic Energy, Govt. of India to set up more nuclear power plants for augmenting production of clean energy. In addition to the eleven (11) reactors (8700 MW) under construction, the Government has accorded approval and financial sanction for construction of ten (10) indigenous 700 MW Pressurized Heavy Water Reactors (PHWRs) to be set up in fleet mode. Dept. of Atomic Energy has also accorded in principle approval for five new sites for setting up nuclear power plants in the future. The present installed nuclear power capacity comprises of 22 reactors with a total capacity of 6780 MW. In addition, one reactor, KAPP-3 (700 MW) has also been connected to the grid.

Initiatives taken by ISRO for Feasibility Studies on Missions to Venus

Department of Space, Govt. of India informed that ISRO has taken initiatives for feasibility studies on missions to Venus as well as Aeronomy studies. The project encompasses spatial database generation (water resources, vegetation and energy potential) using remote sensing, geospatial techniques and the development of a Geo-portal for hosting this database. The term "aeronomy," coined and introduced about 60 years ago, refers to the scientific study of the upper atmospheric regions of the Earth and other solar system bodies. It covers the chemistry, dynamics and energy balance of both neutral and charged particles. Both these missions are being conceptualized and the scientific scopes are being deliberated nationally with science community.

India's First Privately Developed Rocket 'Vikram-S', Successfully Launched

Department of Space, Govt. of India reported that Skyroot Aerospace Private Limited made India's 1st privately developed rocket 'Vikram-S', and it was launched in Nov. 2022, which was a sub-orbital mission to demonstrate and validate the design of launch vehicle indigenously developed by an Indian private entity. Department of Space acknowledged that the successful demonstration of flight of an indigenously developed and built Launch Vehicle is likely to propel private space tech investment and is a step in the right direction towards developing small satellite launch capability intended to accelerate the delivery of satellites in orbit. For this, Department of Space is in the process of establishing a predictable, forward-looking, enabling regulatory regime for space activities in the country, through a comprehensive, well-defined policy for the entire gamut of such activities.

New Low Cost 'Powerless Heating System' Activated With Water to Heat Food in Remote Areas

Ministry of Science & Technology reported that a new low-cost heating system which could be activated by plain water anytime anywhere and does not require any fuel or electricity to heat or power it, could act as a heating solution in any location. Further, Indian Institute of Technology (IIT) Delhi, Researchers addressed this new technology that works on chemical energy and called as 'Powerless Heating Technology'. The active heating element consists of a mixture of eco-friendly minerals and salts, which generates exothermic energy resulting in heat on contact with water and provides enough energy to raise the temperature of any food or beverage by 60 to 70 degree Celsius. North East Center for Technology Application and Reach (NECTAR), an autonomous body under the Department of Science Technology, Govt. of India, supported IIT Delhi team to develop a food box and a liquid container that could be integrated with the Powerless Heating Technology.

Special Update: An Increase in NaviC System in India

Department of Space, Govt. of India reported that the usage of Indian Regional Navigation Satellite System (NavIC system) has increased in India. Dept. of Space also added that the utilisation of NaviC could be seen in national projects like public vehicle safety, power grid synchronisation, real-time train information system, etc and in other upcoming initiatives viz. common alert protocol-based emergency warning, time dissemination, geodetic network, unmanned aerial vehicles, etc. are in the process of adopting NavIC system as performance of NavIC system is at par with the other positioning systems.