# Prelim Bits 29-08-2018

## India Energy Efficiency Scale-Up Programme

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- Government of India and the World Bank has signed $300 million agreement for the India Energy Efficiency Program.
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- The program is being implemented by Energy Efficiency Services Limited (EESL).
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- It will help scale up the deployment of energy-saving measures in residential and public sectors.
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- Under the scheme, EESL will deploy LED bulbs, tubelights, ceiling fans and street lights which will be supplied by the private sector.
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- It will help schemes such as UJALA (Unnat Jyoti by Affordable LEDs for All) and SLNP (Street Lighting National Programme).
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- This programme will help India meet its Nationally Determined Contributions under the Paris accord.
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- India has set the target of avoiding additional generation capacity of 19.6 GW under National Mission for Enhanced Energy Efficiency target.
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- Investments from the World Bank will help to achieve the above target and avoid lifetime greenhouse gas emissions.
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## UJALA and SLNP

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- Under UJALA scheme, LED bulbs at 40% of the market price will be distributed to every grid connected consumer.
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- India Energy Efficiency Scale-Up Programme will help EESL expand UJALA’s

deployment of efficient ceiling fans, LED street lights and LED tube lights, along with its already-successful LED bulbs.
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- SLNP scheme aims to replace conventional street light with smart and energy efficient LED street lights by March, 2019.
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- Both the schemes are being implemented by EESL.
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## Gaganyaan

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- Gaganyaan is India’s ambitious manned spaceflight mission.
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- It aims to send a three-member crew to space for a period of five to seven days.
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- It will be launched by ISRO by 2022.
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- It will make India the fourth nation in the world to launch a Human Spaceflight Mission after USA, Russia and China.
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- ISRO has developed some critical technologies through demonstrations like Space Capsule Recovery Experiment (SRE-2007), Crew module Atmospheric Reentry Experiment (CARE-2014) and Pad Abort Test (2018).
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- The spacecraft will be placed in a low earth orbit of 300-400km.
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- GSLV Mk-III launch vehicle will be used to for the mission. It has the payload capacity of 4000 kg satellites in Geosynchronous Transfer Orbit (GTO) and 8000 kg payload to Low Earth Orbit.
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- The crew will be selected by Indian Air Force (IAF) and ISRO jointly after which they will undergo training for two-three years.
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- **Crew Escape System** – It is an emergency escape measure to quickly pull the astronaut crew out to a safe distance from launch vehicle during a launch abort.
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- Pad Abort test was conducted earlier to demonstrate this to ascertain the efficiency of crew escape system.
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## PM-STIAC

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- Prime Minister’s Science, Technology and Innovation Advisory Council (PM-STIAC) is a 21-member panel.
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- Scientific Advisory Committees (SAC) - Cabinet and SAC-PM are dissolved and replaced by PM-STIAC.
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- It will advise the Prime Minister on all matters related to S&T, innovation and monitor the implementation of PM’s vision on the same.
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- It is expected to act as a high-level advisory body to several ministries and execute mission-oriented programmes.
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- It will be chaired by the government’s Principal Scientific Advisor.
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- Secretaries of various scientific ministries such as education, environment and health would be ‘special invitees’ to the council meetings.
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## Indian Ocean Conference

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- It is an initiative to bring the state leaders, diplomats and bureaucrats from across the Indian ocean region under one roof to strengthen the understanding among each other.
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- It is organised by India Foundation, an independent research centre along with the partners from Singapore, Bangladesh and Sri Lanka.
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- Earlier, the conference was held in Singapore and Sri Lanka in 2016 and 2017 respectively.
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- The 3$^{rd}$ edition of Indian Ocean Conference was organised recently in Hanoi, Vietnam.
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- The theme of this year’s conference is ‘Building Regional Architectures’, particularly with regards to trade and commerce, security and governance.

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## Non-Attainment Cities

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- Non-attainment cities are those cities marked by Central Pollution Control Board that have fallen short of the National Ambient Air Quality Standards (NAAQS) for PM 10 and $NO_2$ over 5 years.
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- There are 94 non-attainment cities in the country.
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- These cities were asked as part of the National Clean Air Campaign (NCAP) to implement measures aimed at mitigating air pollution.
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- The measures include control and mitigation measures related to vehicular emissions, re-suspension of road dust and other fugitive emissions, bio-mass, municipal solid waste burning, industrial pollution, and construction and demolition activities.
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- The aim of pollution mitigation measures was to cut overall pollution in these cities by 35% in the next three years.
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## National Ambient Air Quality Standards (NAAQS)

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- Air (Prevention and Control of Pollution) Act empowers Central Pollution Control Board to set standards for the quality of air.
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- Current NAAQS were notified by CPCB in the year 2009.
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- Pollutants covered under NAAQS are Sulphur Dioxide ($SO_2$), Nitrogen Dioxide (NO2), Particulate Matter (PM 10, PM 2.5), Ozone (O3), Lead (Pb), Carbon Monoxide (CO), Ammonia (NH3), Benzene (C6H6), Benzo(a)Pyrene (BaP), Arsenic(As), Nickel (Ni).
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## National Air Quality Index

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- NAQI, launched by CPCB,  is a number used to communicate to the public how polluted the air currently is or how polluted it is forecasted to become.
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- The classifications of air quality are part of a 6 grade, colour coded taking into account 8 pollutant levels.
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- These pollutants are:
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1. Ground-level Ozone or O3

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2. Particulate Matter (soot and dust) - PM 2.5 and PM 10

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3. Carbon Monoxide or CO

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4. Sulphur Dioxide or SO2 and

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5. Nitrogen Dioxide or NO2

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6. Ammonia or NH3

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**Source: The Hindu, PIB, Indian Express**

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