



इस अंक में:

- नाभिकीय नारे
- तकनीकी सत्र
- नाभिकीय आंकड़ा
- नाभिकीय समाचार
- शब्द कोश
- आपको मालूम है?
- विशेष आलेख
- नाभिकीय सामान्य ज्ञान

तैयारकर्ता एवं संपादक:

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जारीकर्ता:

सतीश कुमार भा,
स्थल निदेशक,
कुडनकुलम न्यूक्लियर
पावर प्रोजेक्ट

प्रिय पाठकगण,

मार्च 2026 भारत के ऊर्जा आत्म निर्भरता की दिशा में एक ऐतिहासिक कदम रेखांकित करता है। मार्च 01 को, कैगा इकाई 5 व 6 में कंक्रीट की पहली ढलाई ने दो स्वदेशी 700 मेगावाट रिएक्टरों के निर्माण शुरू होने का संकेत दिया। यह स्वदेशी प्रगति हमारे बढ़ते फ्लीट के लिए स्थिर यूरेनियम आपूर्ति सुरक्षित करने के लिए कनाडा के कैमेको के साथ एक ऐतिहासिक दीर्घकालिक समझौते से प्रेरित है। इसके अलावा, राजस्थान में माही बांसवाड़ा परियोजना इकाई 1 व 2 के लिए खुदाई की मंजूरी, हमारी 'फ्लीट मोड' नीति को पूरा करती है, जो भारत को अपने 100 गीगावाट नाभिकीय लक्ष्य की ओर बढ़ाती है। पढ़कर आनंदित हों...

अध्यक्ष, जन जागरूकता समिति

मार्च 2026 के विशिष्ट बिंदु

1

केकेएनपीपी स्थल पर 42 और स्थल के बाहर 09 जन संपर्क कार्यक्रम आयोजित किए गए

2

2,064 घंटों का जन संपर्क, 21,94 लोगों से संपर्क

3

17,170 जन जागरूकता प्रकाशन वितरित किए गए

केकेएनपीपी का जलवायु परिवर्तन के न्यूनकरण में योगदान

जलवायु परिवर्तन आज वैश्विक पर्यावरण मुद्दों में सर्वाधिक महत्वपूर्ण है। नाभिकीय विद्युत न्यूनतम कार्बन प्रौद्योगिकियों में से एक है जो बढ़ती हुई आबादी एवं सामाजिक-आर्थिक विकास के लिए विद्युत उत्पादन करते हुए ग्रीन हाउस गैसों (जीएचजी) के उत्सर्जन (अधिकतर CO₂) में कमी लाती है। CO₂ के उत्सर्जन में कमी लाने में केकेएनपीपी का योगदान (दिनांक 31 मार्च 2026 को) अब तक इस प्रकार है।



कुल उत्पादित विद्युत इकाई

126,286
मिलियन यूनिट



केकेएनपीपी द्वारा कुल CO₂ उत्सर्जन में कमी

108,480,028
टन

नोट: कोयले एवं नाभिकीय ऊर्जा के औसत जीवन चक्र ग्रीन हाउस गैस उत्सर्जन क्रमशः 888 एवं 29 (टन/गीगावाट घंटा) है।

Public Awareness e-Newsletter

Kudankulam Nuclear Power Project

March 2026

Issue -165

In this issue:

- Nuclear Slogan
- Technical session
- Nuclear Database
- Nuclear News
- Lexicon
- Did you know?
- Feature article
- Nuclear Trivia

Snap shot



A glimpse of **Brahminy Starling** near Anuvijay Township, Chettikulam.

Photography by
Sh Rathina Pandi
Senior Technician/H
MMU, KKNPP

Scientific classification

Kingdom:	Animalia
Phylum:	Chordata
Class:	Aves
Order:	Passeriformes
Family:	Sturnidae
Genus:	Sturnia
Species:	<i>S. pagodarum</i>

Binomial name:
Sturnia pagodarum

Source: en.wikipedia.org

Dear Readers,

March 2026 marks a historic leap in India's quest for energy independence. On March 1, the **first concrete pour** at **Kaiga Units 5 & 6** signaled the start of construction for two indigenous 700 MW reactors. This domestic progress is bolstered by a landmark long-term agreement with Canada's **Cameco** to secure a steady uranium supply for our growing fleet. Furthermore, the approval of excavation for the **Mahi Banswara** project, Unit 1&2 in Rajasthan cements our "fleet mode" strategy, accelerating India toward its 100 GW nuclear goal. Read on happily!

-Chairman, PA Committee



Spotlight of March 2026

1

42 on-site & 09 Off-site outreach programme organised

2

2,064 hours of Public Outreach, reached 2,194 people

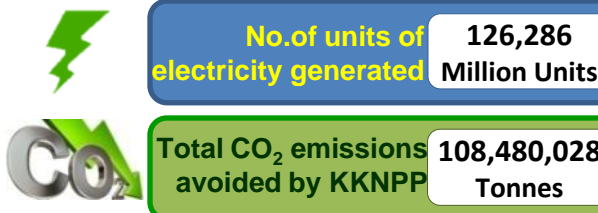
3

17,170 PA Publications distributed



KKNPP's contribution to climate change mitigation

Climate change is the foremost global environmental issue today. Nuclear power is one of the low carbon technologies that can contribute to reducing greenhouse gas (GHG) emissions (mostly CO₂) while generating electricity for growing populations and socioeconomic development. KKNPP's contribution in preventing the CO₂ emissions till now (As on Mar 31, 2026) is given below.



Note: Average lifecycle GHG emissions for Coal & Nuclear is 888 & 29 (tonnes/GWh) respectively.

India has achieved self-reliance in nuclear power generation

“The country achieved complete self-reliance by adopting fully indigenous technology and equipment in the installation and maintenance of nuclear power plants. The country aims to produce 100 gigawatts of nuclear power by 2047, and for this, Nuclear Power Corporation of India Limited (NPCIL) set a target of 54 gigawatts to contribute. Pressurised Heavy Water Reactors (PHWRs), Light Water Reactors, and newly introduced Small Modular Reactors are planned for nuclear power generation. Preliminary work on these is already underway on an experimental basis, with the highest priority given to safety and quality in nuclear power production.”



Dr. Ajit Kumar Mohanty

Chairman, Atomic Energy Commission & Secretary, DAE, Govt of India.

Source: Excerpts from his speech during the First Pour of Concrete ceremony at KGS 5 and 6 at Kaiga on Mar 01, 2026.



NPCIL Mission:

To develop nuclear power technology and to produce Nuclear Power as a safe, environmentally benign and economically viable source of electrical energy to meet the increasing needs of country.

It was strategic mistake to turn against nuclear

"I believe that it was a strategic mistake for Europe to turn its back on a reliable, affordable source of low-emissions power. The current Middle East crisis gives a stark reminder of the vulnerabilities this creates ... nuclear energy is reliable, providing electricity all year, around the clock. So the most efficient system combines nuclear and renewables, and is underpinned by storage, flexibility, and grids ... Europe has been a pioneer in nuclear technology and could once again lead the world in it. Next-generation nuclear reactors could become a European high-tech high-value export"



Ursula von der Leyen

President, European Commission

Source: WNA, Wikipedia



Technical session

Electricity and Energy Storage

(Source: World Nuclear Association)

Following a two-year study by the California Public Utilities Commission, the state in 2010 passed legislation requiring 1325 MWe of electricity storage (excluding large-scale pumped storage) by 2024. In 2013 it brought forward the deadline to 2020, then having 35 MW total. The legislation specifies power, not storage capacity (MWh), suggesting that the main purpose is frequency control. The stated purpose of the legislation is to increase grid reliability by providing dispatchable power from an increasing proportion of solar and wind inputs, replace spinning reserve, provide frequency control and reduce peak capacity requirements (peak shaving). The storage systems can be connected with either transmission or distribution systems, or be behind the meter.

The main focus is on battery energy storage systems (BESS). Energy arbitrage may enhance revenue, buying off-peak and selling for peak demand. Southern California Edison in 2014 announced plans for 260 MW of electricity storage to offset the closure of the 2150 MWe San Onofre nuclear plant. While 1.3 GW in the context of the state's 50 GW demand will not provide much dispatchable power, it was a major incentive for the utilities.

Oregon followed California, and in 2015 set a requirement for larger utilities (PGE and PacifiCorp) to procure at least 5 MWh of storage by 2020, and PGE proposed 39 GW in several locations, costing \$50 to \$100 million. In June 2017 Massachusetts issued a target of 200 MWh storage by 2020. In November 2017 New York resolved to set a storage target for 2030.

In the USA, there is some 22 GW of pumped storage capacity and 550 gigawatt-hours of energy storage across the country, according to the Office of Energy Efficiency & Renewable Energy. In 2022, large-scale battery storage capacity in the USA reached 9.1 GW and 25 GWh. The Energy Information Administration projects this to reach 30.0 GW by the end of 2025.

To be continued in Apr 2026



Updated as on Apr 09, 2026

Source: <https://pris.iaea.org/PRIS>

OPERATIONAL REACTORS

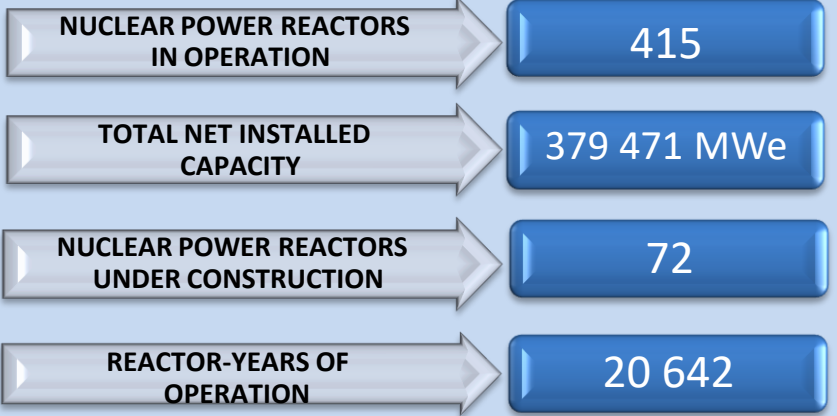
Country	MWe #	No. of Reactors
ARGENTINA	1641	3
ARMENIA	416	1
BELARUS	2220	2
BELGIUM	2056	2
BRAZIL	1884	2
BULGARIA	2006	2
CANADA	12714	17
CHINA	58770	60
CZECH REP	3963	6
FINLAND	4369	5
FRANCE	63000	57
HUNGARY	1916	4
INDIA	7550	21
IRAN	915	1
JAPAN	12631	14
KOREA	25609	26
MEXICO	1552	2
NETHERLANDS	482	1
PAKISTAN	3262	6
ROMANIA	1300	2
RUSSIA	27969	34
SLOVAKIA	2308	5
SLOVENIA	688	1
SOUTH AFRICA	1854	2
SPAIN	7123	7
SWEDEN	7008	6
SWITZERLAND	2973	4
UKRAINE	13107	15
UAE	5348	4
UK	5883	9
USA	96952	94
Total	379471	415

Net Electrical Capacity

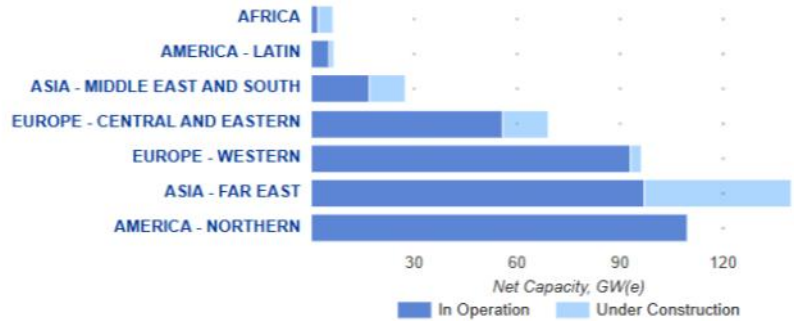
Source: <https://pris.iaea.org/PRIS>
www.nucnet.org



Current Status:



Regional Distribution of Nuclear Power Plants:



New connections to the grid: (Year 2026)



Source: www.nucnet.org & www.neimagazine.com





Pilot operation of accident-tolerant fuel completed 17 Mar



The third and final pilot 18-month operation of accident-tolerant fuel (ATF) has been completed at Rostov Nuclear Power Plant's unit 2. In 2021 three fuel assemblies of the TVS-2M design were loaded into the reactor core, each with 12 of the new fuel elements. Six were manufactured using 42KhNM chromium-nickel alloy as a structural material and six were made with chromium-coated zirconium alloy cladding. The fuel assemblies have completed three full fuel cycles as planned. The properties of the chromium-plated surface make it possible to eliminate a number of operations during the fabrication of nuclear fuel for VVER reactors, which still rely on manual labour.

Source: www.world-nuclear-news.org

Excavation work approved for India's Mahi Banswara units 27 Mar



India's Atomic Energy Regulatory Board has approved the start of activities towards excavation for construction of the Mahi Banswara Rajasthan Atomic Nuclear Power Project units 1 and 2. The permission, announced on Thursday, has been issued to Anushakti Vidyut Nigam Limited (Ashvini) for the 700 MWe pressurised heavy water reactors planned at the plant, in the Banswara district of Rajasthan. Ashvini is a joint venture between Nuclear Power Corporation of India Limited (51%) and National Thermal Power Corporation (49%) formed in 2024.

Source: www.world-nuclear-news.org



First concrete poured for new capacity at Kaiga in India 01 Mar



The first pouring of concrete marks the point at which a project becomes a nuclear power unit under construction - the aim is for the first new unit at the Kaiga nuclear power plant to achieve criticality in five years. The ceremony (see picture) - at the site in the Uttara Kannada district of Karnataka state was held just days after approval was given by India's Atomic Energy Regulatory Board for the first pour of concrete for the **Kaiga 5 and 6 units**, which are to be 700 MWe pressurised heavy water reactors. NPCIL said it achieved the "significant milestone" on Sunday and said: "In a first, Kaiga-5&6 project is being implemented adopting an innovative strategy involving just a few mega EPC packages (like Excavation, Nuclear Island, Turbine Island and Nuclear Instrumentation) to enable faster project execution and reduced interface issues".

Source: www.world-nuclear-news.org

Cameco and India sign new uranium supply agreement 02 Mar

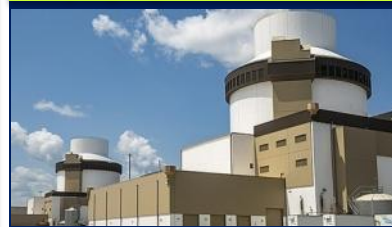
Canada's Cameco has entered a long-term agreement to supply uranium ore concentrate to India's Department of Atomic Energy, for use in the country's fleet of nuclear reactors. The agreement will see Cameco supply nearly 22 million pounds of uranium



ore concentrate (U3O8) to the Department of Atomic Energy (DAE) between 2027 and 2035 on market-related price terms, with a total contract value estimated at about CAD2.6 billion (USD1.9 billion). The agreement was signed during a visit by Canadian Prime Minister Mark Carney to Mumbai and New Delhi, during which he met with Indian Prime Minister Sh Narendra Modi. India currently has 24 operating reactors along with ambitious plans to deploy dozens more to reach 100 GW by 2047.

Source: www.world-nuclear-news.org

Study highlights economic impact of US fleet of AP1000s 12 Mar



The deployment of a fleet of ten Westinghouse AP1000 units in the USA would create more than USD1 trillion in GDP over an 80-year lifetime, a PricewaterhouseCoopers study has found. The study - carried out by PricewaterhouseCoopers LLC (PwC) for Westinghouse and its owners Brookfield and Cameco - says that the construction phase of a 10-unit AP1000 fleet could generate more than USD92.8 billion of gross domestic product (GDP) for the USA and support 44,300 high-paying jobs annually for 13 years. Once operational, the 10-unit fleet would create an additional USD1.03 trillion of GDP over its 80-year lifetime while supporting 22,500 jobs annually. The report - says that the construction phase of a 10-unit AP1000 fleet - which could power at least 7.5 million homes - would create USD54.7 billion in labour income and USD20.1 billion in tax revenues, while the 80-year operational phase would support USD329 billion in labour income and USD271 billion in tax revenues.

Source: www.world-nuclear-news.org



QUICK FACTS

The nitrogen problem

▲ Nitrogen is a leading source of water pollution, with potentially serious effects on human health and the environment. Major sources of nitrogen pollution include fertilizers, wastewater and industrial discharges. While **nitrogen fertilizer has boosted food production over the past century, around 80% of it is lost to the environment.**

▲ Nitrogen pollution, especially from nitrates, is a major threat to rivers, lakes, groundwater and coastal waters.

▲ If concentrated in drinking water, nitrates can impair the blood's ability to transport oxygen around the body. Nitrogen pollution also causes water to become overly enriched with nutrients, leading to harmful algal and plant growth in lakes and rivers.

▲ Tracing where nitrate contamination comes from is essential for protecting aquatic systems and guiding efforts to clean up polluted areas. Isotopic techniques help identify the sources of nitrogen pollution.

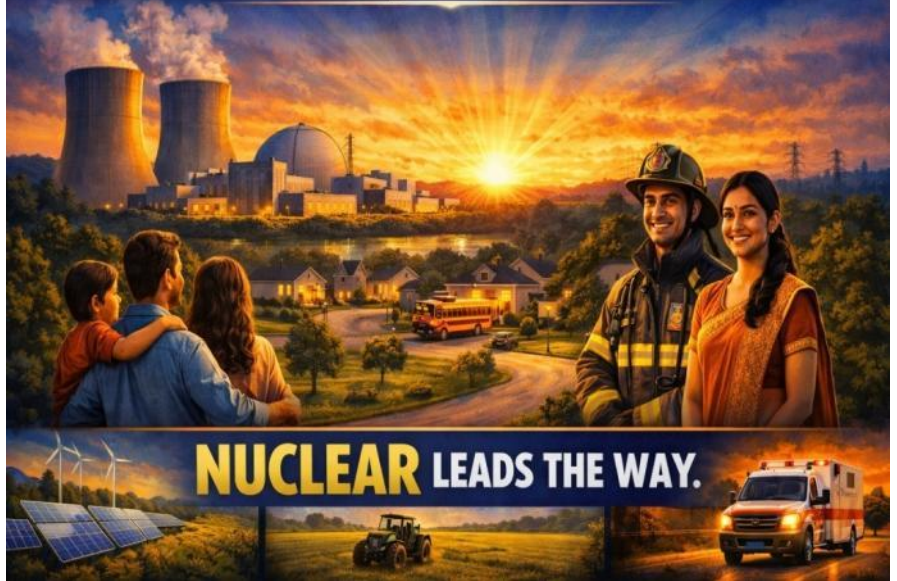
Source: IAEA



Nuclear Slogan



RELIABLE POWER, RESILIENT COMMUNITIES –



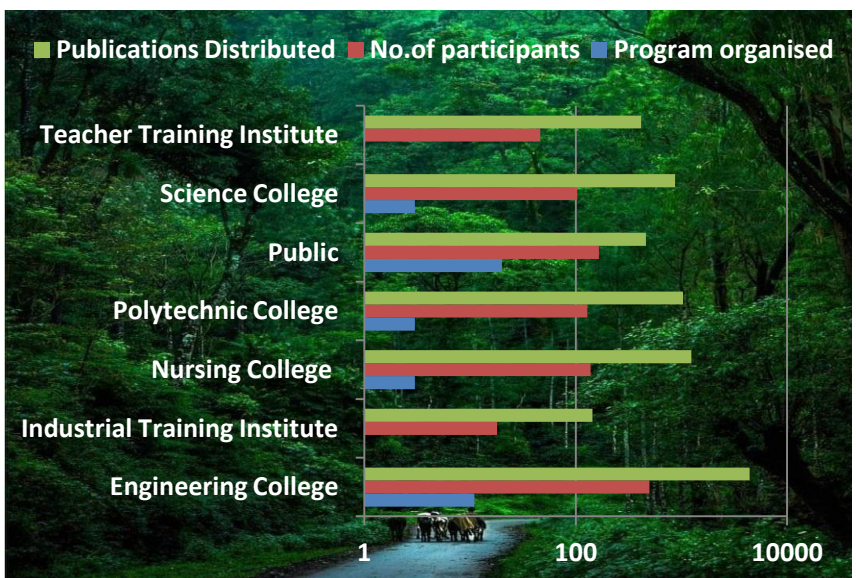
NUCLEAR LEADS THE WAY.



PA activity conducted at KKNPP Site

At site

As a part of public awareness programme, visits of Public from districts such as Tirunelveli, Kanyakumari and Tuticorin and also from Kerala to KKNPP were organised. The visitors of KKNPP were provided with a detailed information on nuclear power generation and its safety principles.





Few glimpses from Site Visit

At site

Manonmaniam Sundaranar University (03 Mar)



Government Polytechnic College, Nedumangad (04 Mar)



M.E.T. Engineering College (05 Mar)



PSN College of Engineering and Technology (05 Mar)





Few glimpses from Site Visit

At site

**Adhiparasakthi College of Engineering
(07 Mar)**



**ACE College of Engineering
(09 Mar)**



**Trainees from NPCIL-
KKNPP & CIPET Skill Centre
CSR Beneficiaries,
Radhapuram, Tirunelveli
Dist (10 Mar)**



**C.K. College of Engineering &
Technology
(11 Mar)**



**Trainees from Technical
Training Centre, Integral
Coach Factory
(12 Mar)**





Few glimpses from Site Visit

At site

Shree Venkateshwara Hi-Tech Polytechnic College (I Batch) (12 Mar)



Shree Venkateshwara Hi-Tech Polytechnic College (II Batch) (13 Mar)



St. Xavier's Catholic College of Engineering, Nagercoil (16 Mar)



Scad College of Education (17 Mar)



C.S.I.ST.LUKE'S College of Nursing (18 Mar)





Few glimpses from Site Visit

At site

**Annai Velankanni College
(18 Mar)**



**Annammal College of
Nursing (I Batch)
(19 Mar)**



**Thiruvalluvar College
(20 Mar)**



**Adhiparasakthi Engineering
College
(20 Mar)**





Few glimpses from Site Visit

At site

**Government ITI, Konam
(24 Mar)**



**Annammal College of
Nursing (I Batch)
(26 Mar)**



**St. Xavier's Catholic College
of Engineering (II Batch)
(27 Mar)**



**Francis Xavier
Engineering College
(Autonomous) (II Batch)
(30 Mar)**



More on SOLO

SOLO features a thermally-moderated, helium-cooled nuclear reactor. The design features a "solid heterogeneous composite moderator" and is intended to accommodate both traditional zircaloy-clad low-enriched (below 5%) uranium (LEU) fuel or, when available, LEU+ and high-assay low-enriched uranium (HALEU) fuels.

The reactor's design efficiently decouples cooling and moderation functions, providing inherent safety features that significantly reduce its risk profile.

This enables a straightforward safety analysis, where the safety case can be established based on fundamental principles, without the need for complex evaluation models.

SOLO is designed to offer a wide range of versatile applications, including off-grid power solutions for data centres, mini-grids serving remote towns and villages, and large-scale industrial operations.



SOLO

The **SOLO Micro-Modular Reactor (MMR)** is a compact nuclear power plant developed by Terra Innovatum. It is designed to be a "plug-and-play" energy solution, providing reliable, carbon-free power and heat to remote communities, industrial sites, and critical infrastructure.

Key Specifications

Power Output: Generates **1 megawatt of electricity (MWe)** and 4–5 megawatts of thermal energy (MWth).

Operational Life: Designed to run for **15 years without refueling**. With an optional "core swap," its operational life can be extended to 45 years.

Fuel: Uses standard low-enriched uranium (LEU) fuel pellets (below 5% U-235) and is designed to transition to future fuels like HALEU.

Cooling: Uses **helium gas** instead of water, which eliminates the risk of hydrogen or steam explosions and allows deployment in arid environments.

Size & Transport: Highly compact (approx. 10 cubic meters) and designed to fit inside a standard shipping container for easy transport by truck, train, or ship.



Terra Innovatum's SOLO micro-modular nuclear reactor.

SOLO can easily scale up to deliver 1 GWe or more with a minimal footprint, making it suitable for rapidly replacing fossil fuel-based thermal plants. As well as electricity and heat generation, it can also contribute to critical applications in the medical sector by producing radioisotopes essential for oncology research and cancer treatment. SOLO is a micro-modular reactor (MMR) was conceptualised in 2018 and the design was developed over six years. Terra Innovatum anticipates that SOLO will be available globally within the next three years.

Source: www.neimagazine.com,
interestingengineering.com, WNA

See left

PA outreach programme conducted outside KKNPP:



As a part of PA outreach activity, Seminars, Workshop, Lectures and exhibitions were conducted at Educational Institutions and Organizations.

PA lecture at CAPE Institute of Technology, Tirunelveli Dist.

National level symposium was conducted by ECE Department Cape Institute of Technology, Tirunelveli District.

Date: Mar 06, 2026

Sh Ramesh Moorthy B, Scientific Officer-F, E&I, KKNPP participated as guest and delivered an awareness lecture on the importance of Nuclear Energy for the sustainable development of our country. A total of 150 students participated in the event.

Date	Name of the Institution	No. of participants	Publications distributed
06 Mar	CAPE Institute of Technology, Tirunelveli Dist	150	0
06 Mar	C.S.I. Institute of Technology, Thovalai	350	0
06 Mar	Holy Cross College, KK Dist.	700	3700
09 Mar	Sri Sarada College for Women, Tirunelveli	750	3700
11 Mar	Sri Paramakalyani College, Tirunelveli Dist.	800	3800
12-13 Mar	MS University, Tirunelveli Dist.	1050	3800
13 Mar	Good Sphered College of Engineering and Technology, Kanyakumari	300	0
18 Mar	TDMNS College, Tirunelveli Dist.	530	2900
26 Mar	Malankara Catholic College, Kanyakumari	175	200
Grand Total		4805	18100



Few glimpses

PA lecture at CAPE Institute of Technology, Tirunelveli district On Mar 06, 2026



PA lecture at C.S.I. Institute of Technology Thovalai KK Dist.

The 31st College Day was successfully organized at CSI Institute of Technology, Thovalai, Nagercoil with great enthusiasm.

Date: Mar 06, 2026

Shri G Balakrishnan, CE, Civil, KKNPP graced the occasion as Chief Guest and delivered an inspiring speech, motivating students to pursue excellence and contribute meaningfully to society. The event showcased student talents and achievements, making it a memorable celebration for the entire college community.

PA Exhibition at Holy Cross college, Nagercoil

Intercollegiate Competition on the theme: "Nuclear Energy: Powering a Sustainable Future".

Date: Mar 06, 2026

KKNPP set up an informative pavilion, demonstrating the significance of nuclear energy. The event enhanced students' understanding of safe and sustainable power, inspiring awareness about clean energy solutions and future opportunities. About 700 students from the college and nearby schools visited the KKNPP pavilion during the event.



Few glimpses

Outside KKNPP

PA lecture at C.S.I. Institute of Technology Thovalai KK Dist. on Mar 06, 2026



No. of participants: 350



PA Exhibition at Holy Cross college, KK district On Feb 27, 2026



No. of participants: 700



No. of Publications distributed: 3700





Few glimpses

Outside
KKNPP

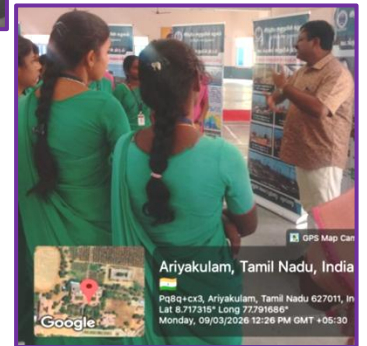
PA exhibition
at Sri Sarada
College for
Women
Tirunelveli

PA exhibition at Sri Sarada College for Women
Tirunelveli on Mar 09, 2026

Sri Sarada College for Women, Tirunelveli, organized an Exhibition-cum-Seminar on the theme "Nuclear Energy: Safe, Clean, Sustainable" in association with Kudankulam Nuclear Power Project.

Date: Mar 09, 2026

KKNPP set up an informative pavilion, demonstrating the significance of nuclear energy. The event enhanced students' understanding of safe and sustainable power, inspiring awareness about clean energy solutions and future opportunities.



PA exhibition
At Sri
Paramakalyani
College
Tenkasi

No. of participants: 750



PA exhibition at Sri Paramakalyani College Tenkasi on Mar 11, 2026

Sri Paramakalyani College, Alwarkurichi, organized a Science Day Celebration focusing on the theme "Science and Future Energy: Harnessing Nuclear, Solar, and Emerging Technologies." In association with Kudankulam Nuclear Power Project.

Date: Mar 11, 2026

The event featured exhibitions, expert lectures, and interactive demonstrations. KKNPP's participation highlighted the importance of nuclear energy, creating awareness among students about sustainable and clean energy solutions.

**No. of participants:
800**



PA exhibition at MS University Tirunelveli district

The Department of Management Studies, Manonmaniam Sundaranar University, Tirunelveli, organized the 3rd International Conference on Sustainable Marketing Strategies: Issues and Challenges.

Date: Mar 12-13, 2026

The event witnessed active participation from academicians, industry experts, research scholars, and students, fostering meaningful discussions on sustainable and innovative marketing practices.

A key highlight of the conference was the participation of Kudankulam Nuclear Power Plant (KKNPP), which established an informative pavilion at the venue. The pavilion attracted significant attention from students and visitors, creating awareness about nuclear energy, its safety aspects, and its role in sustainable power generation.

Through interactive exhibits and expert engagement, KKNPP effectively inspired young minds from Tirunelveli district and surrounding regions to understand the importance of clean energy. The initiative contributed to bridging the gap between scientific knowledge and public awareness, making the event both educational and impactful.



Few glimpses

Outside KKNPP

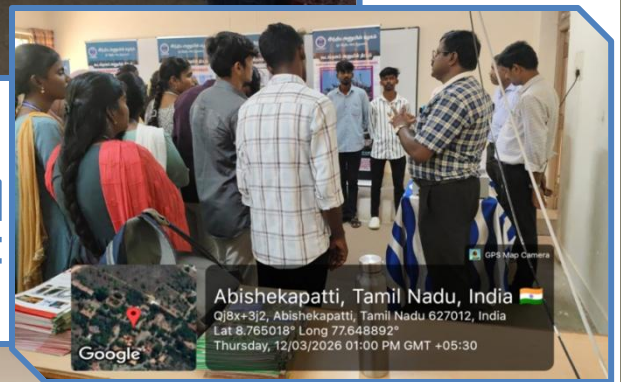
PA exhibition at MS University, Tirunelveli district on Mar 12-13, 2026



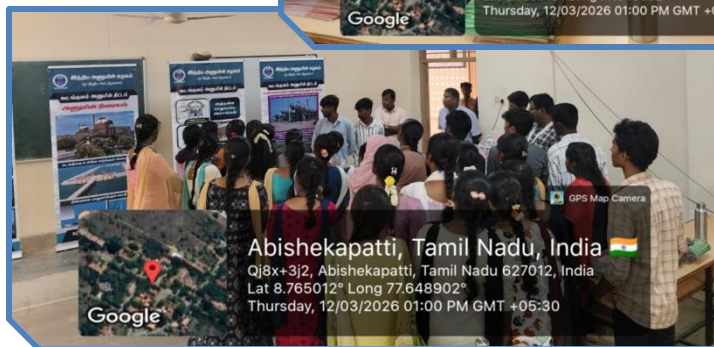
Abishekapatti, Tamil Nadu, India QJ7x+j9v, Ms University Rd, Abishekapatti, Tamil Nadu 627012, India Lat 8.765012° Long 77.648892° Thursday, 12/03/2026 01:00 PM GMT +05:30



No. of participants: 1050



Abishekapatti, Tamil Nadu, India QJ8x+3j2, Abishekapatti, Tamil Nadu 627012, India Lat 8.765012° Long 77.648892° Thursday, 12/03/2026 01:00 PM GMT +05:30



Abishekapatti, Tamil Nadu, India QJ8x+3j2, Abishekapatti, Tamil Nadu 627012, India Lat 8.765012° Long 77.648892° Thursday, 12/03/2026 01:00 PM GMT +05:30

PA lecture at University College Of Engineering, Nagercoil

Shri S. Thirunavukkarasu, Station Director, KKNPP 3&4, graced the Convocation Ceremony of UNIVERSITY COLLEGE OF ENGINEERING, NAGERCOIL, as the Chief Guest.

Date: Mar 14, 2026

In his address, he highlighted the vital role of education, perseverance, and innovation in shaping the future of the nation. Referring to India's vision of achieving Net Zero, he stressed the importance of clean and sustainable energy, particularly nuclear power, in meeting growing demands responsibly.

He encouraged students to aim high by preparing for competitive examinations such as GATE and to pursue research-oriented careers that contribute to technological advancement. Drawing inspiration from Dr. Homi Bhabha, the pioneer of India's nuclear program, he urged graduates to uphold scientific temper, integrity, and commitment to national development. His motivating speech inspired the young minds to excel in their careers and contribute meaningfully to society.



PA lecture at University College Of Engineering, Nagercoil on Mar 14, 2026



PA lecture at Good Shepherd College of Engg. & Tech, Kaliyal, KK Dist.

College Day was organized at Good Shepherd College of Engg. & Tech, Kaliyal, KK Dist.

Date: Mar 13, 2026

Shri A. V. Sathish, OIC– Nuclear Information Centre, KKNPP, participated as the Chief Guest and delivered an motivational speech to the students on nuclear power and also the career opportunities in the nuclear sector.

PA Lecture at TDMNS College T.Kallikulam Tirunelveli

T.D.M.N.S. College, Tirunelveli, organized an Intercollegiate Seminar-cum-Expo on “Next-Generation Nuclear Power: A Clean Energy Revolution” in association with Kudankulam Nuclear Power Project.

Date: Mar 18, 2026

KKNPP set up an informative exhibit, highlighting advancements in nuclear technology and its role in sustainable development. The event fostered scientific awareness, innovation, and understanding of clean and safe energy solutions among students.

A total of 530 students visited KKNPP pavilion.



Few glimpses

Outside KKNPP

PA lecture at Good Shepherd College of Engg. & Tech, Kaliyal, KK Dist. on Mar 13, 2026



No. of participants: 300

PA TDMNS College, T.Kallikulam, Tirunelveli on Mar 18, 2026





Nuclear Energy and Sustainable Development

Source: World Nuclear Association



Did you know?

Darlington 4 back in service, completing refurb project

► The fourth unit at Darlington nuclear power plant in Ontario, Canada, has been reconnected to the grid at 100% power, ending the mammoth refurbishment project which began in 2016.



The Darlington plant will keep generating electricity into the 2050s (Image: OPG)

► Ontario Power Generation (OPG) said the four-unit CAD12.8 billion (USD9.4 billion) Darlington Refurbishment Project - which extends the plant's operation by another 30 years - had been completed CAD150 million under budget and four months early.

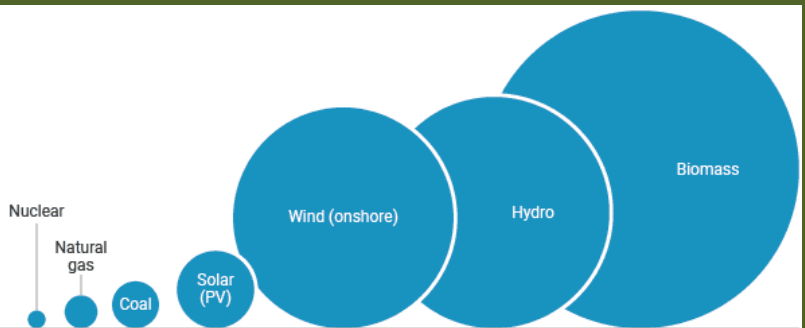
► Unit 4 was taken offline in July 2023 for refurbishment, which was completed in 968 days, the quickest of the four units. OPG says about 8000 lessons have been learned from the refurbishment project.

Source: WNA

The environmental pillar

Land and water use :

A large two-unit nuclear power plant can provide electricity for 4-5 million people from a generating footprint of just 2 square kilometres. However, the land use of all energy-generating technologies extends beyond their generating footprint, and includes the required mining of raw materials and, for conventional sources of power, their fuel cycle. Taking this into account, the land use of biomass, hydro, wind and solar are between one and three orders of magnitude greater than nuclear.



Relative land use (fuel mining and generating footprint) of electricity generation options per unit of electricity (source: Brook & Bradshaw, 2015)

At some stage during supply, construction or operation, all electricity generating options consume water. Wind and solar energy have the smallest water 'footprints', whereas biomass and hydropower have the largest. Fossil fuels and nuclear consume significant quantities of water in the operational phase for cooling.

Fresh water is a valuable resource in most parts of the world. Apart from proximity to main load centres, there is no reason to site nuclear power plants away from a coast, where they can use once-through seawater cooling. The high energy density of uranium means that logistical requirements for fuel are modest (about 200 tonnes for a large reactor annually versus over 3,000,000 tonnes for an equivalent coal plant) allowing for flexible siting of nuclear power plants. In the event that water is so limited that it cannot be used for cooling, and a coastal location is not available, plants can be sited away from the load demand, but this will incur additional transmission costs.





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How do global warming threaten the infrastructure and freshwater security of India's major coastal cities like Mumbai and Chennai?

The Energy Connection:

Fossil-fuel-based power generation is one of the largest contributors to greenhouse gas emissions. Transitioning to low-carbon energy sources, including nuclear power, is a key strategy for reducing global warming and slowing the rate of sea-level rise.

Nuclear power plants generate large amounts of electricity without emitting carbon dioxide during operation, making them an important component of climate-mitigation strategies alongside renewable energy sources.

What the Future Requires

To protect coastal populations and infrastructure, long-term planning must include:

- ✳️ Climate-resilient infrastructure design
- ✳️ Coastal protection systems such as sea walls and natural buffers
- ✳️ Reduced reliance on fossil fuels
- ✳️ Expansion of clean and low-carbon energy technologies such as Nuclear, Solar, Wind, Hydropower, Bioenergy and Hydrogen energy.

Source: www.rmsi.com,
www.deccanherald.com,
www.idiva.com

The widespread burning of fossil fuels—coal, oil, and natural gas—for electricity, transport, and industry releases large quantities of carbon dioxide (CO₂) and other greenhouse gases into the atmosphere. These gases trap heat, leading to a steady increase in Earth's average temperature, a process known as global warming. This warming does not only affect air temperature—it also heats the oceans and melts ice, leading directly to rising sea levels.



Predicted Sea-Level Rise by 2050:

According to a 2024 analysis and NASA's projection tool, here are the estimated increases for key cities (relative to the 1995–2014 baseline):

City	Predicted Rise by 2050	Primary Risk Factor
Mumbai	~0.12m to 0.28m	Submergence of critical roads (WEH) and 990+ buildings.
Chennai	~0.18m to 0.25m	Saltwater intrusion into freshwater aquifers.
Kochi	~0.15m to 0.22m	High vulnerability due to low-lying backwater topography.
Visakhapatnam	~0.17m to 0.25m	Increased inundation of port infrastructure.
Paradip Odisha	~0.19m to 0.24m	Compound risk from sea rise and intensifying cyclones.