



न्यूक्लियर पावर कारपोरेशन ऑफ इंडिया लिमिटेड  
NUCLEAR POWER CORPORATION OF INDIA LIMITED  
(भारत सरकार का उद्यम A Govt. of India Enterprise)  
मद्रास परमाणु बिजलीघर MADRAS ATOMIC POWER STATION  
स्वास्थ्य भौतिज्ञ इकाई Health Physics Unit  
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Ref: NPCIL/MAPS/PSPC/2013

19.8.2013.

**Sub: Public Awareness activity in Kalpakkam Township  
during NESCO Carnival-2013**

Nuclear Employees Cultural and Sports Organisation (NESCO) of Kalpakkam township was hosting Carnival from 2<sup>nd</sup> to 11<sup>th</sup> August, 2013 for the benefit of Kalpakkam inmates where in participation from all sectors like vendors, merchants from other cities, general public in and around the villages of Kalpakkam were visiting stalls in the carnival. NTC,MAPS also has set up a stall in the carnival and utilizing this public awareness team of MAPS has augmented staff for sensitizing and creating awareness about the need of nuclear power, its operation and its advantages over other power sources. Following MAPS officials took part in this public awareness,

S/Shri

1. S.Viswanathan, SO/E,MM
2. N.R. Shivaramakrishnan, SO/E, HPU
3. S.S Prasanna, SO/E, NTC
4. A. Manivannan, SO/E, CTC
5. S.Raghavan,SO/D,NTC
6. N.S.R.Murthy, SO/D, NTC
7. P. Bujji Babu, SO/D, NTC
8. V.S. Santhanam, SO/C, Chemical Lab
9. R.Varadarajan, SA/E, NTC
10. K.Muruganatham, SA/E, NTC
11. J.Suriyamoorthy, FM/B, NTC
12. G.Mohan, Sr.T/H, NTC
13. G. Vijayakumar, SA/C, MM
14. N. Prabhakaran, Personal Secretary
15. A. Athikesavan, AG-3, CMM
16. R.S. Lourduraj, T/G, NTC
17. N.Mani, T/G, NTC
18. M.Murugesan, T/G, NTC

19. P.Chinnagovindan, T/F1, IM
20. M.Thangaraj, T/F1, NTC
21. P. Kumaresan, T/B, Operations

The officials demonstrated the exhibits to the public and also explained them about various aspects and safety features of Nuclear power. This attracted the audience in large number including students, the general public around Kalpakkam and also the inmates of Kalpakkam. The programme was about 9 days and attracted 750 to 1000 people per day and roughly about 7000 to 8000 persons visited the stall. Visitors posed questions on contemporary topics like Fukushima and its implications and comparison with respect to Indian reactors. How Indian reactors are safe and free of such rare events. Similarly current progress of KKNPP also were asked by visitors. PAPC team has clearly explained to the public to their satisfaction. Few of the visitors recorded their feed back in the visitors book. This attempt gave us good opportunity as a part of public outreach where large numbers of general public from various walks of life are assembling.

Public Awareness pamphlets specially printed both in card board and colour digital papers depicting Advantages of Nuclear power and how radiation from nuclear power plant is insignificant in comparison to any other natural radiation were also widely distributed.

  
(S. Viswanathan)  
SO/E, MM

**OS/Chairman (PAPC)**

Cc: Individuals thro email  
Shri T.S. Rajakumar, DM(HR)







# NUCLEAR FISSION

Heavy atoms like Uranium-235 are unstable. When a neutron strikes atom of unstable element, it splits into two or more nuclei releasing large amount of heat, which is known as fission.



Where n=neutron

Fission of one Uranium-235 atom produces about 200 Mev of energy

**Chain Reaction**

During Fission of a nucleus 2 or 3 neutrons are released. When one of these neutrons collide with another nucleus that nucleus also breaks up. In this manner using one neutron from every fission, another fission is caused. This is Known as Chain Reaction. It creates an ongoing fission process and release of energy.

# How is Electric Energy Produced?



In Thermal power plants - By burning fossil fuels like oil, gas or coal in a boiler. Steam produced in the boiler is used to rotate the turbine and generator which produces electricity.

In a hydroelectric turbine, flowing (or falling) water pushes against the turbine blades, causing the rotor to spin, turning the copper armature inside the generator and generating an electric current



In a nuclear power plant, Heat Energy is produced inside a Reactor by the fission process of fissile atoms like Uranium-235, Plutonium-239 etc. This heat is used to turn water into steam, that, generates electricity.

Electric energy is also produced by the conversion of the energy contained in wind into electricity using wind mill. In a wind mill, the wind spins the turbine rotor turning the copper armature inside the generator and generating an electric current.

