

F. No. J-14011/1/20007-IA-I(N)
Government of India
Ministry of Environment, Forest and Climate Change
(IA Division)

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Dated: 13th May 2021

To:

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Subject: EC Extension and ToR for Kudankulam Nuclear Power Project (KKNPP), Units 3 to 6, at village Kudankulam, District Tirunelveli, Tamil Nadu.

Sir,

This has reference to your communication No. NPCIL/ED(HS&E)/ESG/KKNPP-3to6/M/2021/18 dated 26.02.2021 regarding extension of validity of Environment Clearance (EC) under the EIA Notification, 2006 for the Kudankulam Nuclear Power Project (KKNPP) 3 to 6 at Village Kudankulam, Radhapuram Taluk, Tirunelveli district. The proposal was considered during 46th EAC (N&D) meeting held on 31st March 2021.

2. It is noted that KKNPP has both EC and CRZ clearance under the EIA Notification, 2006 and CRZ Notification, 2011, respectively, which have been extended at various periods of time by the Ministry on the basis of recommendation of EAC (N&D). The chronology of EC and CRZ clearance and their extensions for the project (**KKNPP 3 to 6**), is as given below:

Environmental Clearance (EC)

- i. Environmental clearance for KKNPP 3 & 4 vide letter dated 23-09-2008.
- ii. Environmental clearance for KKNPP 5 & 6 vide letter dated 31-12-2009.
- iii. Extension of validity of Environmental Clearance validity for KKNPP 3&4 upto 22-09-2018 vide letter dated 08-01-2014.
- iv. Extension of Environmental clearance validity for KKNPP 5&6 upto 31-12-2019 vide letter dated 08-01-2014.
- v. Extension of Environmental clearance validity for KKNPP 3&4 and KKNPP 5&6 upto 31-12-2020 vide letter dated 14-11-2018.

CRZ Clearance

- vi. CRZ clearance (CRZC) for KKNPP 3 to 6 vide letter dated 25-07-2012.
- vii. Extension of CRZ clearance validity for KKNPP 3 to 6 upto 31-12-2019 vide letter dated 08-01-2018.
- viii. TNSCZMA recommended extension of validity of CRZC for KKNPP 3 to 6 vide dated 04/03/2020.
- ix. Extension for KKNPP 3 to 6 till Decembers 2026 vide letter dated 22nd Oct 2020 taking into account Secretary (DAE) request dated 9th May 2018 for extension.

3. It was recalled during the meeting that the Secretary, DAE vide his letter no. 84/2018 dated 9th May 2018 had requested for extension of validity of EC & CRZ Clearance for KKNPP Unit 3 & 4 and KKNPP units 5 & 6 till December, 2026. However, subsequently the PP i.e NPCIL preferred to apply separately for CRZ and EC extension. Accordingly, their previous request which was limited to request

RS
13/5/21

for extension of CRZ clearance was considered by the EAC (N&D) and CRZ extension was granted till Dec 2026.

4. The present request is now limited to EC Extension, which got expired on 31st Dec 2020. NPCIL is requesting for extension of validity of EC for KKNPP Units 3 & 4 and KKNPP Units 5 & 6 till December 2026 and December, 2029 respectively. This is at variance from the previous request of Secretary, DAE (para 3 above), according to which CRZ extension was granted till Dec 2026 to the proposal.

5. **Progress of the Project:** Administrative Approval and Financial Sanction for KKNPP-3 & 4 from the Cabinet Committee on Security were accorded in March 2013 for sanctioned project cost of Rs 39,849 Cr. As up to January 2021, cumulative expenditure incurred for KKNPP 3&4 is Rs 22,535 Cr (56.55 % of the sanctioned project cost), cumulative commitments made is Rs 36,684 Cr and overall physical progress of 47.01 % is achieved. On the other hand, Administrative Approval and Financial Sanction for KKNPP 5&6 from the Cabinet Committee on Security were accorded in June, 2017 for sanctioned project cost of Rs 49,621 Cr. As up to Jan. 2021, cumulative expenditure incurred for KKNPP-5&6 is Rs 2979 Cr, cumulative commitments made is Rs 22,480 Cr and the remaining pre-project activities such as excavation and geotechnical investigation have been carried out.

6. **Reasons for Delay:** PP explained that although financial sanction for KKNPP Units 3&4 was accorded in March 2013 but due to delay in finalization of the contracts for designs and drawings for the project with the foreign vendor (in view of the revising requirements such as seismic parameters etc.), and the cascading delays, the actual start of the physical construction of the project viz. First Pour of Concrete (FPC) for Unit 3 could be achieved only in June 2017. Also the foreign technology vendor for the plant incorporated a large number of design changes during initial construction phase which resulted in further cascading delays. Also, lockdown due to Covid-19 pandemic and the resulting migration of the labour force from the project site have adversely impacted the project schedule. For KKNPP 5&6, financial sanction for the projects was accorded in June 2017. Construction of part of the structures for Unit 5&6 which are common, were started along with Unit 3&4. However, the First Pour of Concrete (FPC) for Units is yet to be done. In view of the delays occurred partly due to the retendering requirements and recently due to the force majeure and lockdown on account of the Covid-19 pandemic, the FPC for Unit 5 is now planned in May 2021.

7. Considering above & anticipated delays in construction schedules of KKNPP 3&4 and KKNPP 5&6, the units are expected to be commissioned by mid-2026 and mid-2029 respectively.

8. The Committee observed that since the date of first EC for the four units i.e. 2008 and 2009, it's now more than 12-13 years; and hence crossed the policy prescribed deadline for the validity of EC which is limited to 10 years. The EC extension is now sought till 2029 for units 5&6, which will make the EC validity getting extended to 20 years. However, the project is in advanced stage and around 50% progress has been made as mentioned by the PP. Further, CRZ clearance has already been extended till 2026 by the Ministry for the proposal.

9. **However, in order to ensure environmental compliance and safety, specifically since the EC extension is sought now for 20 years which is 10 years beyond the prescribed policy, the committee opined that NPCIL/DAE shall get conducted a fresh Rapid EIA with one season data and submit the Rapid EIA report along with EMP for consideration of their request for further extension for unit 5&6 till the year 2029. This will be in addition to submission of latest compliance report wrt all the EC and CRZ Clearances issued by the Ministry.**

10. As was informed by the PP, the initial EIA report was prepared in accordance with EIA Notification, 1994 and hence it was not based on ToR prescribed by the Ministry. Accordingly, Committee suggested using relevant stipulation of Standard ToR prescribed by the Ministry for Nuclear Power Plant. The stipulations shall be limited to get the comparative baseline data wrt the data available in the initial EIA report to be able to evaluate changes in the environmental parameters and the impact on biodiversity including marine biodiversity. Moreover, for the reason that Units 1 & 2 are in operation. These NPP require large quantities of water for steam generation and for discharging waste heat and low level radioactivity and hence have got to be located either along the sea coast, along a large perennial river or a large lake. The concerns at all these sites are:-

- i. The water temperature should not rise above the permitted level
- ii. Water should not get contaminated beyond permitted level

RS
13/6/21

iii. Biodiversity should not be adversely affected

11. It is necessary to collect the relevant baseline data so that impact of the operation of unit 1 & 2 on the environment and other changes in environmental parameter in approximately last 15 years can be assessed. Permitted levels of air and water radioactivity are prescribed by the AERB, in line with International Standards and for conventional chemical pollutants; national standards given by CPCB are to be met.

12. Rapid EIA shall be highlighting the comparative assessment of the present ToR stipulations vis-a-vis the initial EIA and CRZ study, to the maximum possible extent. **Accordingly, the ToR for undertaking this rapid EIA is as given below:**

1. **Study Area**-As a primary requirement of the EIA process, the proponent should collect primary baseline data in the project area as well as in the area falling within 5 km from the proposed project boundary and secondary data should be collected within 15 kms aerial distance from the project boundary, as has been specifically mentioned at column 9(iii) of Form 1 of EIA Notification 2006.
2. **Topography**-Baseline data should be given on description of the existing situation of the land at the proposed project Site including description of terrain slopes, coastal and inland topography, coastal features (lowland, beaches etc). Study of land use pattern, habitation, cropping pattern, forest cover, environmentally sensitive places etc. by employing remote sensing techniques (if available) and through secondary data sources.
3. **Details of Human Habitation within 5Km from the project site.**
4. **Soil**- Changes in the parameters of soil may affect plantation and vegetative growth, which in turn may endanger the health of local habitat. Hence baseline data of the soil for the project area must be given.
5. **Meteorological Data**- Meteorological data for at least 10 years covering the following should be included in the EIA report. This data should be from the nearest meteorological station and the current data should be collected from the proposed site.
 - a. Wind speed and direction
 - b. Rainfall
 - c. Temperature
 - d. Relative Humidity
 - e. Barometric Pressure
6. **Water Environment**
 - a. **Ground Water**- Baseline data of ground water including data of pH, dissolved solids, suspended solids, BOD, DO, coliform bacteria, oil, heavy metals is to be collected at least for one season. Usage of ground water in the plant is to be indicated.
 - b. **Surface Water**- Baseline data on location of surface waters like lagoons, lakes, tidal inlets, streams, rivers, their details, present quality and their usage, if any, is to be indicated. Details of the water bodies in the project area should be described separately.
7. **Marine Environment**
 - i. Coastal Hydrology/Geomorphology- Baseline oceanographic data should extend at least to depths more than 10m. Coastal hydrology requires collection of oceanographic data during the study period, covering the following parameters:
 - a. Tides
 - b. Waves (wind waves and swells)
 - c. Storm surges
 - d. Currents
 - e. Salinity
 - f. Sea water temperature
 - g. Suspended load and

h. Seabed bathymetry

- ii. Details of mangroves, marshes and other coastal vegetation, sand dunes, coastal stability, seismic characteristics, history of any endangered species, coastal erosion and shoreline changes should be furnished.
- iii. Bed Sediment Contamination-Baseline data on bottom sediments and the associated bottom biota and other physical habitat, at the proposed project area and in the neighborhood areas has to be collected and analyzed.
- iv. Sea/Harbor Water Quality-Baseline data shall be collected on chemical parameters in the open sea and near the site to determine chemical characteristics in the marine environment such as sea water temp, BOD, DO, pH, TSS etc.

8. **Biological Environment**

- i. Marine/Coastal Ecology-Baseline data of aquatic flora/fauna at the project area including the coastal area is to be ascertained by proper surveys including mangroves and marshes and other coastal vegetation. Data on coastal stability, seismic characteristics, history of any endangered species, coastal erosion, shoreline changes, if any, are also required.
- ii. Flora and Fauna in the neighbourhood.

9. **Air Environment**-Baseline data of ambient air parameters such as RSPM, NO_x, SO_x, CO_x, heavy metals and other harmful air pollutants along with gross beta, gross gamma radioactivity should be provided. This data is to be collected from a number of sampling stations in the emergency preparedness area. Favourably

10. Anticipated Environmental Impacts and Mitigation Measures.

13. On the basis of recommendation of the EAC(N&D), the Ministry of Environment Forest and Climate Change, in acceptance of the recommendation of the EAC (Nuclear and Defense), hereby accords approval to the extension of validity of Environment Clearance (EC) for Kudankulam Nuclear Power Project (KKNPP) 3 to 6 at Village Kudankulam, Radhapuram Taluk, Tirunveli district till December, 2026 subject to compliance of all the conditions specified in EC dated 23rd September 2008 for Units 3&4, EC dated 31st December, 2009 for Units 5&6, CRZ clearance dated 25-07-2012 and TNSCZMA recommendation for extension of validity of CRZC dated 04/03/2020.

14. Further, as recommended by EAC(N&D), it is approved that the request for further extension would be considered only on submission of Rapid EIA/EMP report as per the details at para 10-11 and ToR at para 12 above. This will be in addition to submission of latest compliance report wrt all the EC and CRZ Clearances issued by the Ministry.


15/5/21
(R S Bora)

Under Secretary to the Govt of India

Copy To:

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2. Chairman, Atomic Energy Regulatory Board, Niyamak Bhawan, Anushakti Nagar, Mumbai -4000094.
3. Secretary, Ministry of Power, Sharam Shakti Bhawan, Rafi Marg, New Delhi
4. CMD, NPCIL, Nabhikiya Urja Bhavan, Anushaktinagar, Mumbai - 400 094, India.
5. The Chairman, Central Pollution Control Board Parivesh Bhavan, CBD-cum-Office Complex, East Arjun Nagar, New Delhi - 110 032.
6. The Chairman, Tamil Nadu Pollution Control Board, 76, Mount Salai, Guindy, Chennai- 600032, Tel- 044-22353134-139, Email-ID: tnpcb-chn@gov.in
7. Addl. Principal Chief Conservator of Forests (C), Ministry of Environment, Forests and Climate Change, Integrated Regional Office, Ist and IInd Floor, Handloom Export Promotion Council, 34, Cathedra, Garden Road, Nungambakkam, Chennai – 34, Email: ro.moefccc@gov.in
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9. Guard File/ Monitoring Cell.