

Original

नेयवेली लिग्नाइट कार्पोरेशन लिमिटेड

(भारत सरकार का 'नवरत्न' उद्यम)

पी.ओ. नेयवेली - 607801, कडलूर जिला, तमिलनाडु

(पंजीकृत कार्यालय : 135, पेरियार ई.वी.आर.

हाई रोड, कीलपाक, चेन्नई - 600010)

CIN : L93090TN1956GOI003507



NEYVELI LIGNITE CORPORATION LIMITED

('Navratna' A Govt. of India Enterprise)

P.O NEYVELI - 607801, Cuddalore Dist., Tamil Nadu

(Registered Office : 135 Periyar EVR

High Road, Kilpauk, Chennai - 600010)

CIN : L93090TN1956GOI003507

महाप्रबंधक वाणिज्यिक का कार्यालय

COMMERCIAL DEPARTMENT

Phone : 04142-253429

FAX : 04142-252646

website : www.nlcindia.com

email : commercial@nlcindia.com

Lr.No; NLC/CGM/Comml./ Tech Infor. /1301/2015

To

The Secretary,  
Central Electricity Regulatory Commission,  
3rd & 4th floor, Chanderlok Building,  
36, Janpath Marg,  
NEW DELHI - 110 001 .

Sir,

Sub : Furnishing updated technical details in respect of NLC Thermal Power  
Stations - Reg.

Ref : CERC (Furnishing Technical Details by Generating Companies) Regulations  
2009 dated 14.10.2009

Please find enclosed an Affidavit, furnishing the updated technical details as on 01-04-2015  
of NLC-generating stations including upcoming generating stations under the jurisdiction of  
the Hon'ble Commission in line with the CERC Regulations cited along with soft copy of the  
details in a CD.

The above may be taken on record.

Yours faithfully,

for Neyveli Lignite Corporation Ltd.

Encl : As above

Chief General Manager / Commercial

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3	Annexure – Technical Details of NLC Generating Stations- TPS I, TPS I Expansion, TPS II Stage I, TPS II Stage II, Barsingsar TPS, TPS II Expansion, & NTPL TPS Tuticorin.	6-19
4	Soft Copy of Annexure –Technical Details of NLC generating Stations in a CD	Enclosed

*J. J. J.*



குமிழ்நாடு தமிழ்நாடு TAMIL NADU

S. Sommar 35AA 151503

60854  
27-11-2014  
உ.லி -

N.L.C. Ltd, Neyveli.

S. Sommar  
R.C. No. 9381/B1/10-1  
Neyveli Lignite Corporation, T.N. Circle  
Chennai - 600 010



**FORM 2**  
**BEFORE THE CENTRAL ELECTRICITY REGULATORY COMMISSION NEW DELHI**

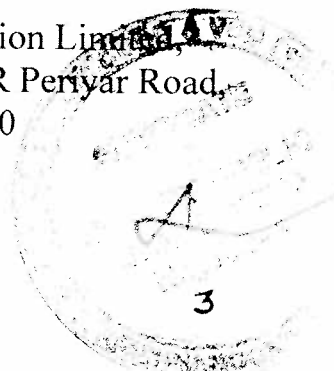
**IN THE MATTER OF:**

Furnishing updated technical details as on 1<sup>st</sup> April 2015 of NLC Thermal Power Stations in compliance with CERC (Furnishing Technical Details by Generating Companies) Regulations 2009 dated 14.10.2009

Neyveli Lignite Corporation Limited,  
Neyveli House, 135, EVR Periyar Road,  
Kilpauk, Chennai-600 010

..... PETITIONER

*S. Sommar*



Affidavit verifying the reply:

I, I, R.Mohan, son of Shri.C.S. Rajagopalan aged about 57 years resident of F-17, Rajendra Prasad Salai, Block – 27, Neyveli -607803, do solemnly affirm and say as follows:

1. I am the Chief General Manager (Commercial) of the NEYVELI LIGNITE CORPORATION LIMITED, the Petitioner in the above matter and am duly authorized by the said Petitioner to make this affidavit.

- *Hon'ble Commission vide CERC (Furnishing Technical Details by Generating Companies) Regulations, 2009 dated 14.10.2009 has directed the generating companies, falling within the regulatory jurisdiction of the Commission to furnish updated technical details as on 1<sup>st</sup> April of all its generating stations which are already operating and new generating stations which are being set up, and as per a prescribed Form A annexed to the Regulation. Accordingly NLC is filing the updated technical details vide this affidavit.*

2. The statements made in FORM 1 enclosed, containing a total number of ~~15~~ pages herein now shown to me are true to my knowledge and based on information and I believe them to be true.

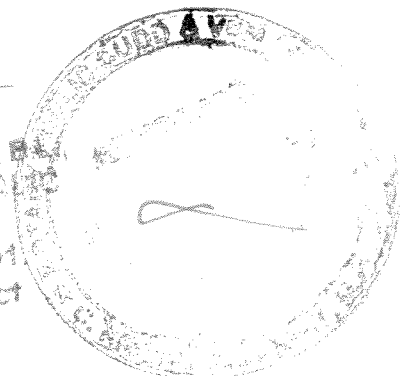
Solemnly affirm at NEYVELI on this day of 18-04-2015 that the contents of the above affidavit are true to my knowledge, no part of it is false and no material has been concealed there from.



**R.Mohan**  
**Chief General Manager / Commercial / NLC LTD.**

Identified before me by

*18/4/15*  
C.KRISHNA MOORTHY, M.A., B.L.  
ADVOCATE & NOTARY PUBLIC  
ROLL No. 531/00  
Block - 2, Neyveli - 607 801  
Chettalore & DM District



*18/4/15*

**BEFORE THE CENTRAL ELECTRICITY REGULATORY COMMISSION NEW DELHI**

**IN THE MATTER OF:**

Furnishing updated technical details as on 1<sup>ST</sup> April 2015 of NLC Thermal Power Stations in compliance with CERC (Furnishing Technical Details by Generating Companies) Regulations 2009 dated 14.10.2009

Neyveli Lignite Corporation Limited,  
Neyveli House,  
135, EVR Periyar Road,  
Kilpauk, Chennai-600 010

..... **PETITIONER**

THE PETITIONER HUMBLY STATES THAT:

**BACKGROUND:**

In exercise of powers conferred under Section 178 read with sub-section (3) of Section 10 of the Electricity Act 2003, Central Electricity Regulatory Commission has notified the CERC (Furnishing of Technical Details by the Generating Companies) Regulations, 2009 for furnishing of technical details by the generating companies.

Accordingly, NLC is furnishing to CERC in respect of NLC's generating stations including upcoming generating Stations, the up to date details prescribed in the Form A of the regulation, indicating the status as on 1<sup>ST</sup> April 2015 are enclosed as Annexure. (Soft Copy in CD)

**PRAYER:**

NLC humbly requests the Hon'ble Commission

1. To take on record the updated technical details as on 01.04.2015, submitted by NLC in respect of its Thermal Power Stations including upcoming generating Stations in accordance with Sub-section (3) of Section 10 of the Electricity Act 2003 vide this affidavit.

  
**PETITIONER**

## Annexure

### TECHNICAL DETAILS TO BE FILED BY THE GENERATING COMPANIES IN COMPLIANCE OF

#### SUB-SECTION (3) OF SECTION 10 OF THE ELECTRICITY ACT, 2003

#### Coal/Lignite Fired Thermal Generating Stations as on 1st April 2015

1	Name and address of the generating company	NEYVELI LIGNITE CORPORATION LIMITED, NEYVELI-607801.	
2	Name of the generating station	Thermal Power Station I	
3	Location (District and State) of the generating station	CUDDALORE DIST, TAMILNADU STATE	
4	Type	Thermal	
5	Installed capacity and configuration (number of units x MW) of existing/ under execution project :	600 MW, (6 x50 MW+3x100 MW)	
(i)	Unit-I to Unit VI	MW	50MW
(ii)	Unit-VII to Unit IX	MW	100 MW
6	Actual/expected dates of commercial operation, Unit-wise :	DD/MM/YYYY	
(i)	Unit-I	50 MW	23-05-1962
(ii)	Unit-II	50 MW	23-01-1963
(iii)	Unit-III	50 MW	11-06-1963
(iv)	Unit-IV	50 MW	27-10-1963
(v)	Unit-V	50 MW	29-04-1964
(vi)	Unit-VI	50 MW	24-08-1965
(vii)	Unit-VII	100 MW	28-03-1967
(viii)	Unit-VIII	100 MW	12-02-1969
(xi)	Unit-IX	100 MW	21-02-1970
7	Details of tied up beneficiaries/target beneficiaries/merchant capacity along with* percentage share with reference to the installed capacity for each beneficiary/category		
(i)	Beneficiary -1 TNEB	(%)	91.00
(ii)	Beneficiary - NLC Schemes	(%)	9.00
8	Associated transmission system or proposed evacuation arrangement	110/220 KV provided by TNEB	
9	Name of manufacturer		
(i)	Steam generator	Tagonrog Boiler Works, Moscow	
(ii)	Steam turbine	Leningrade Metal Works(LMW), Moscow.	
(iii)	Generator:		
10	Main fuel and Source	LIGNITE Indigenous	
(i)	Linked Mine	Linked Neyveli Mines I	
(ii)	Mode of Transport	Belt Conveyor	

11	Gross Calorific Value (NCV) of fuel used/to be used (Design)	(Kcal/Kg)	2450 Kcal/Kg
12	Secondary Fuel used/proposed to be used	HFO	
13	Rated Main Steam Pressure at inlet to turbine	kg/cm <sup>2</sup> (abs.)	89 Kg/cm <sup>2</sup> (a)
14	Rated Main Steam Temperature at inlet to turbine	Centigrade	535°C
15	Rated Reheat Steam pressure at inlet to turbine	Kg/cm <sup>2</sup> (abs.):	Not applicable
16	Rated Reheat Steam Temperature at inlet to turbine	Centigrade	Not applicable
17	Range of Design fuel specified		
i)	Ash	(%)	Max. --
			Min. 3.3
ii)	Moisture	(%)	Max. --
			Min. 53.3
iii)	Gross Calorific Value (NCV) Design	(Kcal/Kg)	Max. --
			Min. 2450
iv)	Volatile Matter (VM)	(%)	Max.
			Min.
19	Reference conditions for Guaranteed Turbine Cycle Heat Rate (Design)		2352 Kcal/Kwhr (50MW) 2250 Kcal/MW (100 MW)
(i)	Make up	(%)	5
ii)	MCR	(%)	100
iii)	Design inlet cooling water temperature	Centigrade	29 Deg.c (50 MW) 27 Deg.c (100 MW)
20	Guaranteed boiler Efficiency Design	%	88.06% (NCV Basis)
21	Reference fuel as specified for guaranteed Boiler efficiency (Design)		
i)	Ash	(%)	3.3
ii)	Moisture	(%)	53.3
iii)	Gross Calorific Value (NCV) Design	(Kcal/Kg)	2450
iv)	Volatile Matter (VM)	(%)	
22	Number and Type of Boiler Feed Pumps	2 Nos Electrical Motor driven (50MW)/ 3 Nos Electrical Motor driven (100 MW)	
23	Source of cooling water	Artificial Lake (Make up from Mine I)	
24	Type of cooling cycle used	Closed cycle	
25	Type of cooling Tower	Induced Draft	

*J. J. J.*

**TECHNICAL DETAILS TO BE FILED BY THE GENERATING COMPANIES IN COMPLIANCE OF  
SUB-SECTION (3) OF SECTION 10 OF THE ELECTRICITY ACT, 2003  
Coal/Lignite Fired Thermal Generating Stations as on 1st April 2015**

1	Name and address of the generating company	NEYVELI LIGNITE CORPORATION LIMITED , NEYVELI-607801 .	
2	Name of the generating station	Thermal Power Station I Expansion	
3	Location (District and State) of the generating station	CUDDALORE DIST, TAMILNADU STATE	
4	Type	Thermal	
5	Installed capacity and configuration (number of units x MW) of existing/ under execution project :	420 MW, (2x210 MW)	
	(i) Unit I	MW	210 MW
	(ii) Unit II	MW	210 MW
6	Actual/expected dates of commercial operation, Unit-wise :	DD/MM/YYYY	
	Unit-I		09-05-2003
	Unit-II		05-09-2003
7	Details of tied up beneficiaries/target beneficiaries/merchant capacity along with* percentage share with reference to the installed capacity for each beneficiary/category		
	(i) Beneficiary -1 TNEB	(%)	46.00
	(ii) Beneficiary -2. KPTCL Escoms	(%)	22.00
	(iii) Beneficiary -3 KSEB	(%)	14.00
	(iv) Beneficiary -4 Pandy	(%)	3.00
	v) Power Unallocated	(%)	15.00
8	Associated transmission system or proposed evacuation arrangement	Provided by Power Grid	
9	Name of manufacturer		
	(i) Steam generator	M/s Ansaldo/Italy	
	(ii) Steam turbine	M/s Ansaldo/Italy	
	(iii) Generator:	M/s Ansaldo/Italy	
10	Main fuel and Source	LIGNITE Indigenous	
	(i) Linked Mine	Linked Neyveli Mines I expn	
	(ii) Mode of Transport	Belt Conveyor	
11	Gross Calorific Value (GCV) of fuel used/to be used	(Kcal/Kg)	2674 (Design)
12	Secondary Fuel used/proposed to be used	HFO &LDO	
13	Rated Main Steam Pressure at inlet to turbine	kg/cm2 (abs.)	150 Kg/cm2
14	Rated Main Steam Temperature at inlet to turbine	Centigrade	535°C
15	Rated Reheat Steam pressure at intet to turbine	Kg/cm2 (abs.):	32.96 Kg/cm2
16	Rated Reheat Steam Temperature at inlet to turbine	Centigrade	535°C

*Asst. Secy*



17	Range of Design fuel specified		
i)	Ash	(%)	Max. 11
			Min. 2
ii)	Moisture	(%)	Max. 56
			Min. 48
iii)	Gross Calorific Value (GCV)	(Kcal/Kg)	Max. 3047
			Min. 2534
iv)	Volatile Matter (VM)	(%)	Max. 24.85
			Min. 20.94
19	Reference conditions for Guaranteed Turbine Cycle Heat Rate (Design)		1944 Kcal/Kwhr
i)	Make up	(%)	3
ii)	MCR	(%)	100
iii)	Design inlet cooling water temperature	Centigrade	35 Deg.c
20	Guaranteed boiler Efficiency(on GCV Basis)	%	77.00%
21	Reference fuel as specified for guaranteed Boiler efficiency (Design)		
i)	Ash	(%)	6
ii)	Moisture	(%)	52
iii)	Gross Calorific Value (GCV)	(Kcal/Kg)	2674
iv)	Volatile Matter (VM)	(%)	22.26
22	Number and Type of Boiler Feed Pumps	Three Nos Electrical Motor driven	
23	Source of cooling water	Lake Water	
24	Type of cooling cycle used	Closed cycle	
25	Type of cooling Tower	Natural Draft	

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TECHNICAL DETAILS TO BE FILED BY THE GENERATING COMPANIES IN COMPLIANCE OF

SUB-SECTION (3) OF SECTION 10 OF THE ELECTRICITY ACT, 2003

Coal/Lignite Fired Thermal Generating Stations as on 1st April 2015

1	Name and address of the generating company	NEYVELI LIGNITE CORPORATION LIMITED NEYVELI-607801.	
2	Name of the generating station	Neyveli Second Thermal Power Station II Stage I (3x210MW)	
3	Location (District and State) of the generating station	CUDDALORE DIST, TAMILNADU STATE	
4	Type	<b>LIGNITE</b>	
5	Installed capacity and configuration (number of units x MW) of existing/ under execution project :	630 MW, (3x210 MW)	
(i)	Unit I	<b>MW</b>	210 MW
(ii)	Unit II	<b>MW</b>	210MW
(iii)	Unit III	<b>MW</b>	210 MW
6	Actual/expected dates of commercial operation, Unit-wise :	<b>DD/MM/YYYY</b>	
	Unit-I		23/04/1988
	Unit-II		08/05/1987
	Unit III		29/09/1986
7	Details of tied up beneficiaries/target beneficiaries/merchant capacity along with* percentage share with reference to the installed capacity for each beneficiary/category		
(i)	Beneficiary -1 APTRANSCO	(%)	15.40
(ii)	Beneficiary -2. KPTCL Escoms	(%)	13.4
(iii)	Beneficiary -3 KSEB	(%)	10.00
(iv)	Beneficiary -4 TNEB	(%)	27.90
(v)	Beneficiary -5 Pandy	(%)	10.30
(vi)	Beneficiary -6 NLC Mines	(%)	8.00
(vii)	Power Unallocated	(%)	15.00
8	Associated transmission system or proposed evacuation arrangement	<b>Provided by Power Grid</b>	
9	Name of manufacturer		
(i)	Steam generator	M/s Transelectro/Hungary	
(ii)	Steam turbine	M/s FRANCIOSI / Italy	
(iii)	Generator:	M/s FRANCIOSI / Italy	
10	Main fuel and Source	LIGNITE Indigenous	
(i)	Linked Mine	Linked Neyveli Mines II; Supplemented by Transfer to Mine II from Mine I Expn, Mine IA	
(ii)	Mode of Transport	Belt Conveyor	
11	Gross Calorific Value (GCV) of fuel used/to be used (Design)	(Kcal/Kg)	2800
12	Secondary Fuel used/proposed to be used	LSHS/HFO	
13	Rated Main Steam Pressure at inlet to turbine	kg/cm <sup>2</sup> (abs.)	150
14	Rated Main Steam Temperature at inlet to turbine	Centigrade	535
15	Rated Reheat Steam pressure at inlet to turbine	Kg/cm <sup>2</sup> (abs.):	33.4
16	Rated Reheat Steam Temperature at inlet to turbine	Centigrade	535

17	Range of Design fuel specified		
i)	Ash	(%)	Max. 12 Min. 3
ii)	Moisture	(%)	Max. 52 Min. 44
iii)	Gross Calorific Value (GCV)	(Kcal/Kg)	Max. 3200 Min. 2500
iv)	Volatile Matter (VM)	(%)	Max. 27 Min. 22
19	Reference conditions for Guaranteed Turbine Cycle Heat Rate (Design)		2012.7 Kcal/Kwhr
i)	Make up	(%)	3
ii)	MCR	(%)	100
iii)	Design inlet cooling water temperature	Centigrade	34 Deg.c
20	Guaranteed boiler Efficiency(on GCV Basis)	%	76.9
21	Reference fuel as specified for guaranteed Boiler efficiency (Design)		
i)	Ash	(%)	7.00
ii)	Moisture	(%)	48.5
iii)	Gross Calorific Value (GCV) Design	(Kcal/Kg)	2800
iv)	Volatile Matter (VM)	(%)	23.5
22	Number and Type of Boiler Feed Pumps	Three Nos Electrical Motor driven	
23	Source of cooling water	Water Pumped from Mining Activity	
24	Type of cooling cycle used	Closed cycle	
25	Type of cooling Tower	Natural Draft	

*J. S. S.*

**TECHNICAL DETAILS TO BE FILED BY THE GENERATING COMPANIES IN COMPLIANCE OF  
SUB-SECTION (3) OF SECTION 10 OF THE ELECTRICITY ACT, 2003  
Coal/Lignite Fired Thermal Generating Stations as on 1st April 2015**

1	Name and address of the generating company	NEYVELI LIGNITE CORPORATION LIMITED NEYVELI-607801.	
2	Name of the generating station	Neyveli Second Thermal Power Station II Stage II (4x210MW)	
3	Location (District and State) of the generating station	CUDDALORE DIST, TAMILNADU STATE	
4	Type	LIGNITE	
5	Installed capacity and configuration (number of units x MW) of existing/ under execution project :	840 MW, (4x210 MW)	
(i)	Unit I	MW	210 MW
(ii)	Unit II	MW	210MW
(iii)	Unit III	MW	210 MW
(iv)	Unit IV	MW	211 MW
6	Actual/expected dates of commercial operation, Unit-wise :	DD/MM/YYYY	
	Unit-I		25/01/1992
	Unit-II		02/06/1992
	Unit III		17/03/1993
	Unit IV		09/04/1994
7	Details of tied up beneficiaries/target beneficiaries/merchant capacity along with* percentage share with reference to the installed capacity for each beneficiary/category		
(i)	Beneficiary -1 APTRANSCO	(%)	21.40
(ii)	Beneficiary -2. KPTCL Escoms	(%)	13.70
(iii)	Beneficiary -3 KSEB	(%)	10.70
(iv)	Beneficiary -4 TNEB	(%)	31.50
(v)	Beneficiary -5 Pandy	(%)	1.80
(vi)	Beneficiary -6 NLC Mines	(%)	5.90
(vii)	Power Unallocated	(%)	15.00
8	Associated transmission system or proposed evacuation arrangement	Provided by Power Grid	
9	Name of manufacturer		
(i)	Steam generator	M/S BHEL	
(ii)	Steam turbine	M/S BHEL	
(iii)	Generator:	M/S BHEL	
10	Main fuel and Source	LIGNITE Indigenous	
(i)	Linked Mine	Linked Neyveli Mines II; Supplemented by Transfer to Mine II from Mine I Expn, Mine IA	
(ii)	Mode of Transport	Belt Conveyor	
11	Gross Calorific Value (GCV) of fuel used/to be used (Deign)	(Kcal/Kg)	2800
12	Secondary Fuel used/proposed to be used	HFO/LSHS & LDO	
13	Rated Main Steam Pressure at inlet to turbine	kg/cm2 (abs.)	150
14	Rated Main Steam Temperature at inlet to turbine	°C	535
15	Rated Reheat Steam pressure at infet to turbine	Kg/cm2 (abs.):	34.3
16	Rated Reheat Steam Temperature at inlet to turbine	°C	535

17	Range of Design fuel specified		
i)	Ash	(%)	Max. 12
			Min. 3
ii)	Moisture	(%)	Max. 60
			Min. 45
iii)	Gross Calorific Value (GCV)	(Kcal/Kg)	Max. 3200
			Min. 2500
iv)	Volatile Matter (VM)	(%)	Max. 26
			Min. 22
19	Reference conditions for Guaranteed Turbine Cycle Heat Rate (Design)		2008.8 Kcal/Kwhr
(i)	Make up	(%)	3
ii)	MCR	(%)	100
iii)	Design inlet cooling water temperature	°C	34 Deg.c
20	Guaranteed boiler Efficiency(on GCV Basis)	%	76.90%
21	Reference fuel as specified for guaranteed Boiler efficiency (Design)		
i)	Ash	(%)	7
ii)	Moisture	(%)	48.6
iii)	Gross Calorific Value (GCV) (Design)	(Kcal/Kg)	2800
iv)	Volatile Matter (VM)	(%)	24
22	Number and Type of Boiler Feed Pumps	Three Nos Electrical Motor driven	
23	Source of cooling water	Water Pumped from Mining Activity	
24	Type of cooling cycle used	Closed cycle	
25	Type of cooling Tower	Natural Draft	

*Signature*

**TECHNICAL DETAILS TO BE FILED BY THE GENERATING COMPANIES IN COMPLIANCE OF**

**SUB-SECTION (3) OF SECTION 10 OF THE ELECTRICITY ACT, 2003**

**Coal/Lignite Fired Thermal Generating Stations as on 1st April 2015**

1	Name and address of the generating company	NEYVELI LIGNITE CORPORATION LIMITED Neyveli -607 801	
2	Name of the generating station	Barsingsar Thermal Power Station Barsingsar - 334 402 Rajasthan	
3	Location (District and State) of the generating station	Bikaner District, Rajasthan	
4	Type	Thermal / Lignite	
5	Installed capacity and configuration (number of units x MW) of existing/ under execution project :	250MW, 2x125 MW	
(i)	Unit-I	MW	125MW
(ii)	Unit-II	MW	125MW
6	Actual/expected dates of commercial operation, Unit-wise :	DD/MM/YYYY	
(i)	Unit-I	20/01/2012	
(ii)	Unit-II	29/12/2011	
7	Details of tied up beneficiaries/target beneficiaries/merchant capacity along with* percentage share with reference to the installed capacity for each beneficiary/category		
(i)	Beneficiary -1 RRVPNL (STU)	(%)	98.00
(iv)	Beneficiary - 2 NLC Barsingsar Mines	(%)	2.00
8	Associated transmission system or proposed evacuation arrangement	220KV System Provided by RRVPNL	
9	Name of manufacturer		
(i)	Steam generator	M/s.BHEL	
(ii)	Steam turbine	M/s. BHEL	
(iii)	Generator:	M/s. BHEL	
10	Main fuel and Source	LIGNITE Indigenous	
(i)	Linked Mine	Linked Neyveli Lignite Corporation Barsingsar Mines	
(ii)	Mode of Transport	Belt Conveyor	
11	Gross Calorific Value (GCV) of fuel used/to be used	(Kcal/Kg)	2405 - 2898
12	Secondary Fuel used/proposed to be used	HFO/LDO	
13	Rated Main Steam Pressure at inlet to turbine	kg/cm <sup>2</sup> (abs.)	126 Kg/cm <sup>2</sup> (g)
14	Rated Main Steam Temperature at inlet to turbine	Centigrade	535°C
15	Rated Reheat Steam pressure at intet to turbine	Kg/cm <sup>2</sup> (abs.):	29.58 Kg/cm <sup>2</sup> (g)
16	Rated Reheat Steam Temperature at inlet to turbine	Centigrade	535°C



<b>17</b>	Range of Design fuel specified		
<b>i)</b>	Ash	(%)	Max 30 Min. 8
<b>ii)</b>	Moisture	(%)	Max. 45 Min. 32
<b>iii)</b>	Gross Calorific Value (GCV)	(Kcal/Kg)	Max. 3300 Min. 1900
<b>iv)</b>	Volatile Matter (VM)	(%)	Max. 25.5 Min. 14.3
<b>19</b>	Reference conditions for Guaranteed Turbine Cycle Heat Rate (Design)		1994.6
<b>(i)</b>	Make up	(%)	0
<b>ii)</b>	MCR	(%)	100
<b>iii)</b>	Design inlet cooling water temperature	Centigrade	34 Deg.c
<b>20</b>	Guaranteed boiler Efficiency(on GCV Basis)	%	81.81% Design (GCV-2600 Kcal)
<b>21</b>	Reference fuel as specified for guaranteed Boiler efficiency (Design)		
<b>i)</b>	Ash	(%)	26.11
<b>ii)</b>	Moisture	(%)	39.13
<b>iii)</b>	Gross Calorific Value (GCV)	(Kcal/Kg)	2600
<b>iv)</b>	Volatile Matter (VM)	(%)	18.26
<b>22</b>	Number and Type of Boiler Feed Pumps		2 Nos Electrical Motor driven
<b>23</b>	Source of cooling water		Water Carrier System -Water from IGNP Canal, 60 km away from Plant.
<b>24</b>	Type of cooling cycle used		Closed cycle
<b>25</b>	Type of cooling Tower		Induced Draft

Site specific information-Boiler based on CFBC technology.

Water for the plant is from Indira Gandhi Nahar Panyojana (IGNP) RD-800 located at 60 KM from the Plant.



**TECHNICAL DETAILS TO BE FILED BY THE GENERATING COMPANIES IN COMPLIANCE OF  
SUB-SECTION (3) OF SECTION 10 OF THE ELECTRICITY ACT, 2003  
Coal/Lignite Fired Thermal Generating Stations as on 1st April 2015**

1	Name and address of the generating company	NEYVELI LIGNITE CORPORATION LIMITED NEYVELI-607801.	
2	Name of the generating station	Thermal Power Station II Expansion	
3	Location (District and State) of the generating station	CUDDALORE DIST, TAMILNADU STATE	
4	Type	Lignite based Thermal Station	
5	Installed capacity and configuration (number of units x MW) of existing/ under execution project :	500 MW, (2x250 MW)	
	(i) Unit I	MW	250 MW
	(ii) Unit II	MW	250 MW
6	Actual/expected dates of commercial operation, Unit-wise :	DD/MM/YYYY	
	Unit-I		30-06-2014
	Unit-II		31-12-2014
7	Details of tied up beneficiaries/target beneficiaries/merchant capacity along with* percentage share with reference to the installed capacity for each beneficiary/category		
	(i) Beneficiary -1 TNEB	(%)	46.00
	(ii) Beneficiary -2. KPTCL	(%)	22.00
	iii) Beneficiary -3 KSEB	(%)	14.00
	iv) Beneficiary -4 Pandy	(%)	3.00
	v) Power Unallocated	(%)	15.00
8	Associated transmission system or proposed evacuation arrangement	400 KV Switchyard at TPS II Expn & Neyveli -Pugalur 400 KV DC lines (ATS provided by PGCIL)and 400 KV Interconnection to TPS II	
9	Name of manufacturer		
	(i) Steam generator	CFBC Boilers - M/S BHEL in Collaboration with M/s Lentjes, Germany	
	(ii) Steam turbine	M/S BHEL	
	(iii) Generator:	M/S BHEL	
10	Main fuel and Source	LIGNITE Indigenous	
	(i) Linked Mine	Linked Neyveli Mines II Expansion	
	(ii) Mode of Transport	Belt Conveyor	
11	Gross Calorific Value (GCV) of fuel used/to be used	(Kcal/Kg)	2650
12	Secondary Fuel used/proposed to be used	HFO &LDO	
13	Rated Main Steam Pressure at inlet to turbine	kg/cm <sup>2</sup> (abs.)	170
14	Rated Main Steam Temperature at inlet to turbine	°C	537°C
15	Rated Reheat Steam pressure at inlet to turbine	Kg/cm <sup>2</sup> (abs.):	40.5
16	Rated Reheat Steam Temperature at inlet to turbine	°C	537°C
17	Range of Design fuel specified		
	i) Ash	(%)	Max. 14 Min. 4
	ii) Moisture	(%)	Max. 55 Min. 46.5
	iii) Gross Calorific Value (GCV)	(Kcal/Kg)	Max. 3000 Min. 2300
	iv) Volatile Matter (VM)	(%)	Max. 26 Min. 20
19	Reference conditions for Guaranteed Turbine Cycle Heat Rate (Design)		1952.9 Kcal/Kwhr



	(i) Make up	(%)	0
	ii) MCR	(%)	100
	iii) Design inlet cooling water temperature	°C	36 Deg.c
20	Guaranteed boiler Efficiency(on GCV Basis)	%	78.62%
21	Reference fuel as specified for guaranteed Boiler efficiency (Design)		
	i) Ash	(%)	8.5
	ii) Moisture	(%)	50.5
	iii) Gross Calorific Value (GCV) (Design)	(Kcal/Kg)	2650
	iv) Volatile Matter (VM)	(%)	23
22	Number and Type of Boiler Feed Pumps	Three Nos Electrical Motor driven	
23	Source of cooling water	Treated Storm Water from Mine II	
24	Type of cooling cycle used	Closed cycle	
25	Type of cooling Tower	Natural Draft	

**All values are only Indicative**

Site specific information-

1. 2x250 MW CFBC Boilers are being constructed for this project. These are first 250MW boilers in India. These

i) The low temperature range of Combustor (840-860 Deg C) ensures reduction in Nox emission level.

ii) Addition of powdered Limestone alongwith main fuel captures sulphur di oxide resulting in the reduction of Sox emission level. For this purpose a separate Lime Powder handling system is envisaged in the CFBC Boiler.

iii) Additional systems like Emergency BFP, Emergency Circulating water sytem, DMCW booster sytem, Blower System, Bed material makeup system and Bed ash cooling system are also provided to meet the requirements of CFBC technology.

2. The prescribed lignite size for this boiler is than 10 mm. In Lignite Handling system, pulverised are not used. Instead primary and secondary crusherhouses and Screen houses are constructed for sizing the lignite to suit the requirement.

3. Storm water from Mine II will be treated and used for this plant thereby preserving ground water. The water treatment is carried out as briefed below.

i) The Storm water from Mine II is treated through different processes in Pre Treatment Plant (PTP) to produce soft water and DM clarified water.

ii) The Soft water is used for Circulating water System

iii) The DM clarified water from PTP is subject to further treatment through Reverse Osmosis and Demineralisation processes in RO/DM Plant to produce DM Water. This is used for system Makeup in the Power Plant Operation.

**TECHNICAL DETAILS TO BE FILED BY THE GENERATING COMPANIES IN COMPLIANCE OF  
SUB-SECTION (3) OF SECTION 10 OF THE ELECTRICITY ACT, 2003**

**Coal/Lignite Fired Thermal Generating Stations as on 1st April 2015**

1	Name and address of the generating company	NLC Tamilnadu Power Limited (NTPL) A Joint Venture Project of NLC Ltd and TNEB. Reg. Office: "Neyveli House", 135, Periyar EVR High Road, Chennai - 600 010	
2	Name of the generating station	NTPL TUTICORIN THERMAL POWER STATION	
3	Location (District and State) of the generating station	District : Tuticorin; State: Tamilnadu	
4	Type	<b>Coal Fired Thermal Station</b>	
5	Installed capacity and configuration (number of units x MW) of existing/ under execution project :	1000 MW (2x500 MW)	
(i)	Unit I	<b>MW</b>	500 MW
(ii)	Unit II	<b>MW</b>	500 MW
6	Actual/expected dates of commercial operation, Unit-wise :	DD/MM/YYYY	
	Unit-I	30-06-2014	
	Unit-II	31-12-2014	
7	Details of tied up beneficiaries/target beneficiaries/merchant capacity along with* percentage share with reference to the installed capacity for each beneficiary/category		
(i)	Beneficiary -1 TNEB	<b>(%)</b>	38.70
(ii)	Beneficiary -2. Andhrapradesh Discoms	<b>(%)</b>	25.46
(iii)	Beneficiary -3. Karnataka Escoms	<b>(%)</b>	15.79
(iv)	Beneficiary -3 KSEB	<b>(%)</b>	7.25
(v)	Beneficiary -4 Pandy	<b>(%)</b>	0.95
(vi)	Power Unallocated	<b>(%)</b>	11.85
8	Associated transmission system or proposed evacuation arrangement	Provided by Power Grid	
9	Name of manufacturer		
(i)	Steam generator	M/S BHEL	
(ii)	Steam turbine	M/S BHEL	
(iii)	Generator:	M/S BHEL	
10	Main fuel and Source		
(i)	Linked Mine	Mahanathi Coal Fields, Talchar,	
(ii)	Mode of Transport	Road, Rail cum Sea	
11	Gross Calorific Value (GCV) of fuel used/to be used	(Kcal/Kg)	3700
12	Secondary Fuel used/proposed to be used		
	HFO & LDO		
13	Rated Main Steam Pressure at inlet to turbine	kg/cm2 (abs.)	170
14	Rated Main Steam Temperature at inlet to turbine	Centigrade	537°C
15	Rated Reheat Steam pressure at inlet to turbine	Kg/cm2 (abs.):	40.5
16	Rated Reheat Steam Temperature at inlet to turbine	Centigrade	565°C
17	Range of Design fuel specified		
(i)	Ash	<b>(%)</b>	Max. 40 Min. 32

ii)	Moisture	(%)	Max.	16
			Min.	12
iii)	Gross Calorific Value (GCV)	(Kcal/Kg)	Max.	4200
			Min.	3200
iv)	Volatile Matter (VM)	(%)	Max.	25
			Min.	21
19	Reference conditions for Guaranteed Turbine Cycle Heat Rate (Design)	Kcal/Kwhr	1932	
(i)	Make up	(%)	0	
ii)	MCR	(%)	100	
iii)	Design inlet cooling water temperature	Centigrade	33	
20	Guaranteed boiler Efficiency(on GCV Basis)	%	85.90%	
21	Reference fuel as specified for guaranteed Boiler efficiency (Design)			
i)	Ash	(%)	36	
ii)	Moisture	(%)	14	
iii)	Gross Calorific Value (GCV)	(Kcal/Kg)	3700	
iv)	Volatile Matter (VM)	(%)	23	
22	Number and Type of Boiler Feed Pumps	2 Nos. Steam turbine driven & One No Electrical Motor driven		
23	Source of cooling water	Sea Water		
24	Type of cooling cycle used	Closed cycle		
25	Type of cooling Tower	Natural Draft		

**All values are only Indicative**

*J. J. J.*