



**DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING**

**ACADEMIC YEAR 2019-20 (ODD)**

**Report - Industrial Visit**

**Place Visited: NLC, Neyveli (Thermal Power Station-I)**

**Date of Visit: 26.08.19**

As part of curriculum of Anna University our department has arranged one day local visit at Neyveli Lignite Corporation – Neyveli, Cuddalore District, Tamilnadu on 26.08.19. Third year & Final year EEE Students (26 Members) and five staff members were visited the thermal power station.



*Over View of Thermal Power Station-II, NLC, Neyveli*

The Er.A.Swaminathan, Assistant Engineer (Electrical), Training Complex, addressed the students and introduced about the overall view of NLC. He explained the split up of all power station Units & mines in NLC.

<b>SNO</b>	<b>POWER PLANTS</b>	<b>CAPACITY (MW)</b>
1.	Thermal Power Station-I	500
2.	Thermal Power Station-II	1470
3.	Thermal Power Station-I Expansion	420
4.	Thermal Power Station-II Expansion	500
5.	Wind Power Plant (34x1.5 MW)	51
6.	Solar Power Plant	1000

During this session, students were interacted with engineer about the various power plants.

SNO	MINES	CAPACITY (MTPA)
1.	Mine-I	10.5
2.	Mine-IA	3
3.	Mine-II	15

He explained about NLC as follows:

- A NAVRATNA company under the Ministry of Coal.
- since 1956 - more than 60 years of its glorious existence.
- Present Mining Capacity : 30.6 MTPA ( Lignite ).
- Present Power Generation Capacity (including JVs) : 3140MW (Lignite), 1000MW (Coal), 1001.56MW (Solar), 51MW (Wind), Total : 5192.56 MW.
- Projected Capital Expenditure (up to 2025): Rs.1, 28,983 Crore with a debt-equity ratio of 70:30.
- Moved from an only lignite mining and power generation Company to become an energy company.



- Diversifying into coal based power generation and generation from renewable energy sources like Solar and Wind.
- Marching towards 21011MW by 2025.

## PHOTOS IN THE THERMAL POWER STATION-I



*Students ID card verification at the entrance*

### **GENERATOR RATINGS :( SYNCHRONOUS GENERATOR)**

Made	: ANSALDO – Made in Italy
Rated Power	: 283500 kVA
Power Factor	: 0.85
Armature Voltage	: 15750 V
Armature Current	: 10392 A
Frequency	: 50Hz
Speed	: 3000 rpm
Type	: 3 $\phi$ AC
Connection	: Star
No. of Poles	: 2
The permissible over speed	: 3600 rpm for 2min
Rotation	: Clockwise seen from turbine end
Primary coolant temperature	: 45°C



*Students and staffs were at the entrance of thermal power station-I*