



**BMS INSTITUTE OF TECHNOLOGY AND MANAGEMENT**  
**YELAHANKA - BANGALORE - 64**  
**DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING**

### Activity Report

<b>Activity Title</b>	Industrial Visit
<b>Title</b>	Hydro-Electric Power Plant
<b>Brief Description</b>	Outcome Based Education (OBE) is a method of teaching that emphasises what students can actually do after they are trained. Decisions on teaching and learning are made based on how best to facilitate the desired outcome which in turns leads to planning process that is different from traditional educational planning. In OBE, the desired outcome is first identified before the curriculum is created to support the intended outcome. Department of EEE, has made mandatory to organize industrial visits to all semesters for the better visualization of core subjects. This also facilitates "see and learn" kind of objective.
<b>Intended Students</b>	6 <sup>th</sup> Semester.
<b>Prepared by</b>	Mr. Manjunatha Babu P
<b>Date</b>	04-04-2017 ( One Day)

#### Executive Summary

" Industrial Visit to Varahi Hydro-electric Power Plant "

Date: 04-04-2017 ( One Day)

Venue: Varahi Power house

Audience: 6<sup>th</sup> SEM, EEE

Speaker: Mr. Manjunatha Babu P, Mr. Nagaraj D C, Mr. Rajnikanth , Mrs. Manjula B K

Introduction:

About Varahi power plant:

The river Varahi takes its birth at a height of 730 m in the Western Ghats at Hebbagilu, near Agumbe in Shimoga District. It joins the Arabian Sea near Kundapur. After a 25 Km initial run, this swift and powerful river falls 455 m in cascades to form the bellowing Kunchikal falls.

Varahi is Karnataka's first underground powerhouse – a key milestone in the corporate history of KPCL. Initially conceived as a surface power house at the blueprint stage, Varahi was later converted into an underground Powerhouse. The decision for the change-over was based on three key parameters: technical, economical and our concern for environment protection. Stage I of the Varahi Hydro Electric Project has a total installed capacity of 230 MW contributing 1100 MU annually. This consists of 2 x 115 MW Generating Units at Varahi underground Powerhouse and two 4.5 MW units in the power house at the Mani Dam site. Provision was made to add two more Units at this power house of similar capacity (115 MW) & the excavation works were completed during Stage I works only. Now the construction works of units 3 & 4 each of 115 MW capacities is under progress. These



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units are scheduled to be commissioned during November 2008.

The learning objectives of the industrial visit are:

1. Recognise the process units – Boiler, Pump, Condenser, Steam turbine, Generator, Electrostatic precipitator etc.
2. Identify the input and output for different processes.
3. Experience the importance of working safely.
4. Understand the concept of thermal energy/hydal conversion & estimate overall efficiency of power plant.
5. Understand how does the product of the plant interfaced to the world.

### Activity Outcome

<b>AO1</b>	<b>Understand</b> reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues
<b>AO2</b>	<b>Understand</b> the impact of the professional engineering solutions in societal and environmental contexts.
<b>AO3</b>	<b>Function</b> effectively as an individual, and as a member or leader in diverse teams.
<b>AO4</b>	<b>Apply</b> effective communication skills to comprehend and write effective reports of the visit.

#### AOs, POs and PSO Mapping:

AOs/POs	PO6 (The engineer and society)	PO7 (Environment and sustainability)	PO9 (Individual and team work)	PO10 (Communication)
<b>AO1</b>	<b>2</b>			
<b>AO2</b>		<b>2</b>		
<b>AO3</b>			<b>2</b>	
<b>AO4</b>				<b>2</b>
<b>PSO:1</b>	<b>Analyze and Design Electrical Power Systems.</b>			

- AO1 and AO2 are framed by keeping the industrial visit in mind. These AO's are implemented by physically visiting the plant and interacting with the engineers at the power plant.
- AO3 and AO 4 are realised by involving the students in planning and execution of Industrial visit by putting them in the following groups,  
**Planning group:** Takes care of documentation part of the visit in consultation with the faculty.  
**Transportation Group:** Takes care of identification of mode of transport, by selecting appropriate transport agency.



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**Finance group:** Plan and raise the necessary budgetary requirements for the visit. This committee also sets the possible per head tour cost.

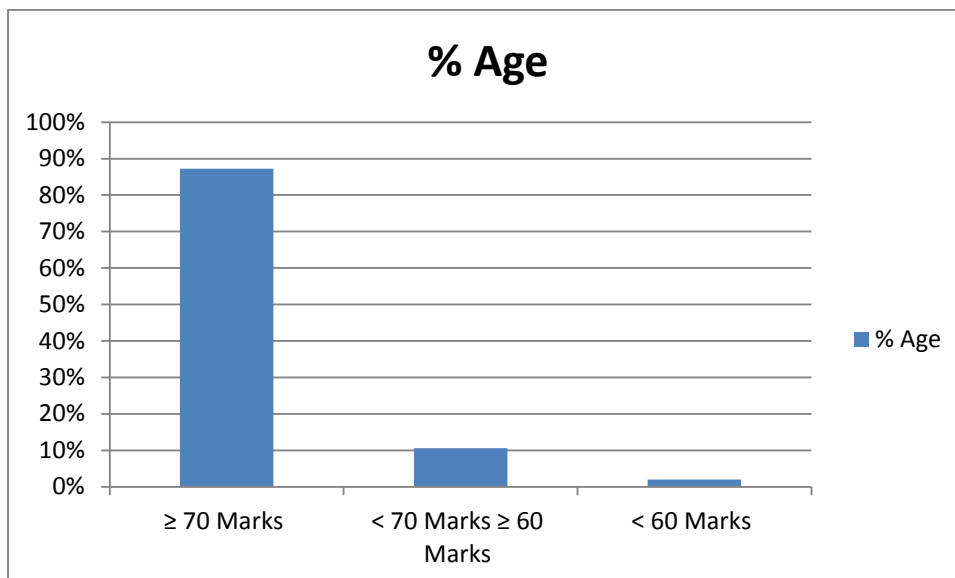
**Hospitality group:** Takes care of refreshment along the journey.

**Impact Analysis:**

Grade:1	More than 50% of students scores 60% of marks
Grade:2	More than 60% of students scores 60% of marks
Grade:3	More than 70% of students scores 60% of marks

**Total number of students attended the visit: 47**

**More than 70% of students scores 60% of marks: 41**



**Staff Coordinators**

**HOD, EEE Dept.**