

### Project:

#### **Business Objective:**

A combined-cycle power plant comprises gas turbines, steam turbines, and heat recovery steam generators. In this type of plant, the electricity is generated by gas and steam turbines combined in one cycle. Then, it is transferred from one turbine to another. We have to model the energy generated as a function of exhaust vacuum and ambient variables and use that model to improve the plant's performance.

#### **Data Set Details:**

This is a project where the variable to be predicted is energy production

The data file contains 9568 observations with five variables collected from a combined cycle power plant over six years when the power plant was set to work with a full load.

*The variables, or features, are the following:*

**temperature, in degrees Celsius.**

**exhaust\_vacuum, in cm Hg.**

**amb\_pressure, in millibar. (Ambient pressure)**

**r\_humidity, in percentage. (Relative humidity)**

**energy\_production, in MW, net hourly electrical energy output.**

**Acceptance Criterion:** Need to deploy the end results using Flask /Streamlit etc

#### **Milestones:**

**30 days to complete the Project**

Milestone	Duration	Task start - End Date
Kick off and Business Objective discussion	1 day	
EDA	1 Weeks – 1 ½ week	
Model Building	1 Week – 1 ½ week	
Model Evaluation	1 Week	
Feedback		
Deployment		
Final presentation	1 day	

Protocols:

- 1) All participants should adhere to agreed timelines and timelines will not be extended.
- 2) All the documentation – Final presentation and R/python code to be submitted before the final presentation day.

All the participants must attend review meeting