Project Design Phase-I
Proposed Solution Template

Date	25 October 2022
Team ID	PNT2022TMID45553
Project Name	Predicting the energy output of wind turbine based on weather condition
Maximum Marks	2 Marks

Proposed Solution Template:

Project team shall fill the following information in proposed solution template.

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	Our aim is to predict the wind energy based on previous year dataset of energy output of wind turbine(windmill). The energy output of a wind farm is highly dependent on the weather conditions present at its site. If the output can be predicted more accurately, energy suppliers can coordinate the collaborative production of different energy sources more efficiently to avoid costly overproduction.
2.	Idea / Solution description	We analyzed the data for a Windmill Farm and extracted the parameters (assuming other physical conditions like weight of blades, height of windmill to be same etc) that affect power generation the most. Then we prepared an ML model taking the obtained features in consideration, using Boosted Regressor Tree Model. Then for provinding solution quicker to the end-user, we Made an Android app to obtain power predictions of next 72 ss hours on hourly basis in single click.
3.	Novelty / Uniqueness	We create an Android app to predict the weather for our users to know about the weather for next 72 hrs. By using this they will know and use the another alternate method for inability of wind turbine during Bad weather. Because use of wind turbine in bad weather is not possible to get power.
4.	Social Impact / Customer Satisfaction	Sound and visual are the two main public health and Community concerns associated with operating wind turbines. Most of the sound generated by wind turbines Is aerodynamic, caused by the movement of blades through the air.
5.	Business Model (Revenue Model)	Wind energy has been the main resource of renewable energy in the China and European Union region for the last decade. We need to implement these models in the territories those who don't have max level of wind turbines and whom they don't have wind turbines. Making Available of wind turbines for those territories will reduce the use of non-renewable energy sources. Incase at a certain point there is no possible of

		having coal and crude oil we need to change ourself and adopt ourself to the renewable energy sources. So this can be the bigger business to the modern world.
6.	Scalability of the Solution	Our Aim is to improve the wind turbines as large as possible.