Project Design Phase-I
Proposed Solution

Date	20 October 2022
Team ID	PNT2022TMID51318
Project Name	Project – Predicting the energy output of wind turbine based on weather condition
Maximum Marks	2 Marks

Proposed Solution:

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	Extracting electricity from renewable resources has been widely investigated in the past decades to decrease the worldwide crisis in the electrical energy and environmental pollution. For a wind farm which converts the wind power to electrical energy, a big challenge is to predict the wind power precisely in spite of the instabilities.
2.	Idea / Solution description	To solve this problem, the prediction of wind energy over the climate change can be an effective way. With the prediction being around, the energy can be obtained at a stable level so that it can be distributed evenly in a precise manner.
3.	Novelty / Uniqueness	The prediction can be done with the help of past data of the wind turbine which helps in the predicting the future output of the wind energy effectively. Here we use the past wind turbine energy data and then Machine learning algorithms to make the prediction clear.
4.	Social Impact / Customer Satisfaction	The farming becomes efficient when the energy availability in future is known earlier by prediction.
5.	Business Model (Revenue Model)	The ability to predict the output of a wind turbine benefits all the end users. It provides economic benefits such as direct employment, land lease payments, local tax revenue.
6.	Scalability of the Solution	The data collected from the weather stations can be accessed in real time easily.