**Project Design Phase-I**
**Proposed Solution Template**

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| Date | 24 September 2022 |
| Team ID | PNT2022TMID30223 |
| Project Name | Predicting energy output of wind turbine based on weather condition |
| Maximum Marks | 2 Marks |

**Proposed Solution Template:**

The project team shall fill in the following information in the proposed solution template.

| S.No. | Parameter | Description |
|---|---|---|
| 1. | Problem Statement (Problem to be solved) | To predict the energy output of wind turbines. |
| 2. | Idea / Solution description | In this project, a Machine learning approach is proposed for the power prediction of wind turbines based on wind flow and a prediction system is developed with a method of combining statistical models and physical models. In this system, the future prediction of wind farm is forecasted by the autoregressive model. |
| 3. | Novelty / Uniqueness | ➢ Finding weather conditions using city names can be performed on the same page. so that accurate prediction can be possible.<br>➢ Neat and clear GUI should be developed. |
| 4. | Social Impact / Customer Satisfaction | ➢ Energy suppliers are interested in accurate predictions, as they can avoid overproduction.<br>➢ Predicting wind energy will reduce the use of nuclear power sources and traditional sources of energy such as coal and oil.<br>➢ These will rapidly decrease the $co_2$ emission. |
| 5. | Business Model (Revenue Model) | ➢ Cost-efficient.<br>➢ Time consumption is very low.<br>➢ Easily portable.<br>➢ Only internet is required.<br>➢ This application is reliable.<br>➢ Easy to use. |
| 6. | Scalability of the Solution | This website can be accessed by everyone who needs information regarding this prediction. |