

Project Design Phase

Problem – Solution Fit Template

Date	9 February 2026
Team ID	LTVIP2026TMIDS84120
Project Name	Weather-Based Prediction of Wind Turbine Energy Output: A Next-Generation Approach to Renewable Energy Management
Maximum Marks	2 Marks

Problem – Solution Fit Template:

Wind turbine energy output is highly dependent on weather conditions such as wind speed, temperature, air density, and atmospheric pressure. Traditional forecasting methods often rely on static models or historical averages, which fail to capture real-time environmental variations. This leads to inaccurate power predictions, inefficient grid management, and energy losses for renewable energy operators.

Purpose:

- ☐ Solve complex problems in a way that fits the state of your customers.
- ☐ Succeed faster and increase your solution adoption by tapping into existing mediums and channels of behavior.
- ☐ Sharpen your communication and marketing strategy with the right triggers and messaging.
- ☐ Increase touch-points with your company by finding the right problem-behavior fit and building trust by solving frequent annoyances, or urgent or costly problems.
- ☐ Understand the existing situation in order to improve it for your target group.

Template:

