9.2 – Disadvantages:

1. **Dependence on Weather Data Accuracy:**
   - Forecast quality relies heavily on meteorological data.
   - Inaccurate or delayed weather inputs produce wrong power predictions.
   - Sudden local weather changes are hard to capture.
2. **Prediction Uncertainty:**
   - Wind is naturally chaotic and non-linear.
   - Even advanced AI/ML models cannot guarantee 100% accuracy.
   - Short-term turbulence and gusts reduce reliability.
3. **High Initial Setup Cost:**
   - Requires sensors, data acquisition systems, storage servers, and software tools.
   - Installation of weather monitoring equipment increases project budget.
4. **Complex Model Development:**
   - Needs expertise in machine learning, data science, and power systems.
   - Model tuning, feature engineering, and validation are time-consuming.
   - Difficult for small organizations without technical teams.
5. **Maintenance of Sensors & Equipment:**
   - Weather sensors degrade over time.
   - Calibration and periodic replacement are necessary.
   - Faulty sensors lead to misleading predictions.
6. **Large Data Requirements:**
   - Requires long-term historical data for reliable training.
   - Missing values and noisy data complicate preprocessing.