**RBE**

**Computer & Microelectronics**

**Engineer**

**Problem Analysis**

**1 Load**

**N powerplants**

**Kerosine**

**Gas**

**Wind**

Efficiency

Cost

**External Factors**

**Objective :** Meeting the energy need while minimising the total cost

Contraintes :

* Wind powerplants cost nothing, but their energy production depends on the wind power.
* Provide an API to enter json playloads into the programme using a POST method
* Rendre l’API disponible sur le port 8888
* The total production of powerplants must be perfectly equal to the total load

**Problem Analysis**

Pros :

* Definition of a key metric to discriminate between the different powerplants. The unit price representing the production price of one MWh for each powerplant takes this role. The unit price is obtained by dividing the effective cost with the maximum output.
* The core of the method is based on Merge Sort, and is suitable for parallel programming.
* Maximum complexity of 0(n), including a complexity of 0(n) for loading data, and an average complexity of 0(nlog) for the rest

**For each powerplant**

**For each powerplant**

**For each powerplant**

**For each powerplant**

**Compute the unit price**

**For each powerplant**