```
mcdp {
  provides endurance      [s]
  provides extra_payload [kg]
  provides extra_power    [W]
  provides num_missions   [R]
  provides velocity       [m/s]

  requires total_cost [$]
  requires total_mass [g]

  battery = instance `Batteries
  actuation = instance `Actuation

  total_power = extra_power +
    power required by actuation

  missions provided by battery >= num_missions

  energy = provided endurance * total_power
  capacity provided by battery >= energy

  total_mass = (
      mass required by battery +
      actuator_mass required by actuation +
      extra_payload)

  required total_mass >= total_mass

  gravity = 9.81 m/s^2
  weight = total_mass * gravity

  lift provided by actuation >= weight
  velocity provided by actuation >= velocity

  replacements = maintenance required by battery
  cost_per_replacement = 10 $
  labor_cost = cost_per_replacement * replacements

  required total_cost >= (
    cost required by actuation +
    cost required by battery +
    labor_cost)
}
```