#ref #hw

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1 | Thresholds

1.0.1 |**prelim**

- temp

1.0.2 |**series (racks)**

- voltage

1.0.3 |**parallel**

- usable capacity * efficiency
- discharge rate * efficiency

1.0.4 |**calculate**

- lifetime
- env impact
- cost
- dimensions
- weight
- maintenance
- safety

1.0.5 |**objects**

```
"single battery" ::
{
    usable capacity, // satisfy
    discharge rate, // satify
    current type,
    // instantaneous,
    round trip efficiency,
    cycle count,
    type,
    cost,
    dimensions,
    weight,
    maintenance,
```

```
    safety
}


"rack" ::
{
    count,
}

"type" ::
{
    environmental impact,
    temp operability,
}

"output object" ::
{
    battery,
    in rack,
    racks,
    aggregate environmental impact,
    aggregate cost,
    volume,
    aggregate weight,
    maintenance,
    safety,
    lifetime score,
}
```

1.0.6 |calculations

lifetime score = cycle count * usable capacity

1.0.7 |inputs for a place!

- location
- num people
- size
- yearly average tempature
- standard dev of yearly average temp
- days of autonomy
- AHP matrix

$$

name	in_rack	racks	total_count	ag_env	ag_cost	volume	ag_weight	ma
Discover AES 7.4 kWh	1	9	9	1.088888888888889	58302	32552.415	1728	1

$$

- smt

    – smt