Project OFS

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1 Events

- Car arriving
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Pseudocode is the following

```
Event: Car_arriving(){
    schedule new Car_arriving()
}
Event: Car_leaving(){
}
```

2 Assumptions

We make the following assumptions

Arriving cars

- Cars arrive according to a Poisson process.
- If a car cannot find a spot to park, it will try an arbitrary other parking place, again according to the preferences in the table, excluding the parking spot it has tried.
- The parking moment, the charging volume, and the moment of arrival are independent.
- When a car arrives, but 1.4·charging_time < connection_time, the connection time is changed until this is the case. The resulting distribution of connection times is not the same as the original distribution. We choose not to correct for this.

Solar panels

- The generated amount of energy of a solar panel is independent of the amount of energy generated in previous hours on the same day.
- During the period of an hour, the power output of the solar panels is constant
- Pricing is independent of the power output of solar panels.
- If solar energy is left over, it flows back into the external grid

Grid power

- There is always enough grid power to provide the power at any time