MDS study

Multiple suppliers at one connection (prosumers)

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Reason for the study

- Upcoming discussions on how to handle the demand for multiple suppliers at one connection as for Prosumers

- The intention of this study was to describe a logical (modelled) way of handling MPs when there is more than one supplier (ES) and/or Balance Responsible (BRP) in a connection.
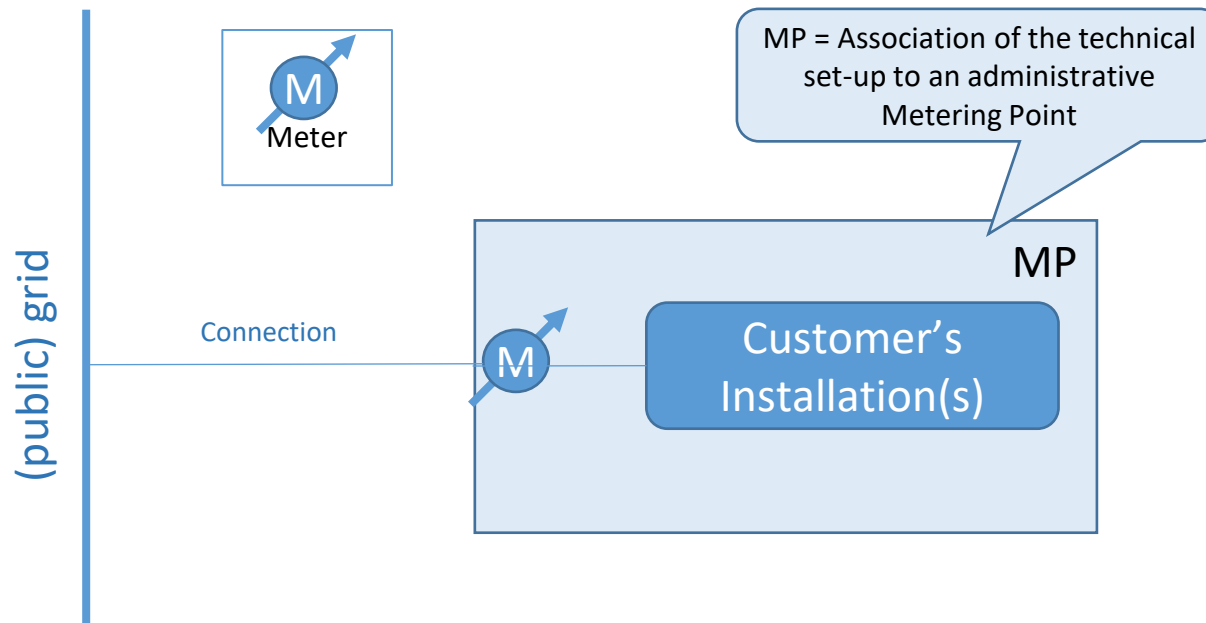
Multiple suppliers at one connection

- A Metering Point (MP) is a (virtual) point for the market processes where energy consumed or produced is accounted (measured and reconciled);

- A Metering Point (MP) is associated to a connection to the grid (E or G);

- More than one Metering Point (MP) can be associated to a connection;

- Up to now there has been an understanding that a MP:
  - has one Customer;
  - has only one Energy Supplier;
  - has only one Balance Responsible Party;
  - can be of type consumption, production or combined.

- All processes are based on the single, clear responsibilities.

Association of MP to connection

■ The GAP (DSO) connects **the installation** of a customer to the grid for supply/delivery of energy, places an **energy meter** and assigns usually **one M**P to the set-up;

M
Meter

MP = Association of the technical set-up to an administrative Metering Point

(public) grid

Connection

M

Customer's Installation(s)

MP

■ **An Installation** of a customer is an energetically (electrically) isolated physical set-up, to or from which energy flows can be measured.
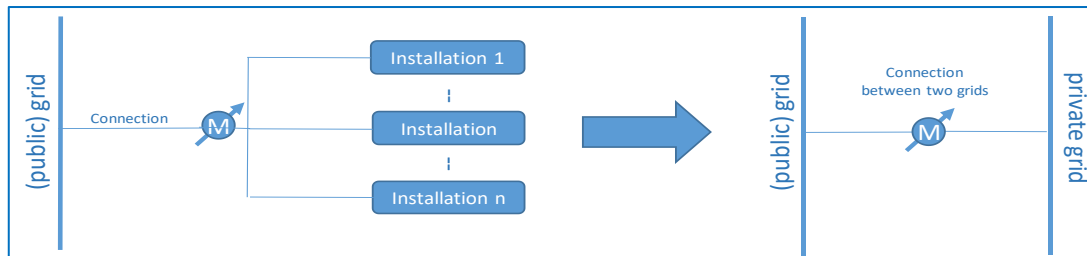
Multiple installations

1. The Grid Access Provider (GAP ≈ DSO) makes multiple independent connections to his grid:
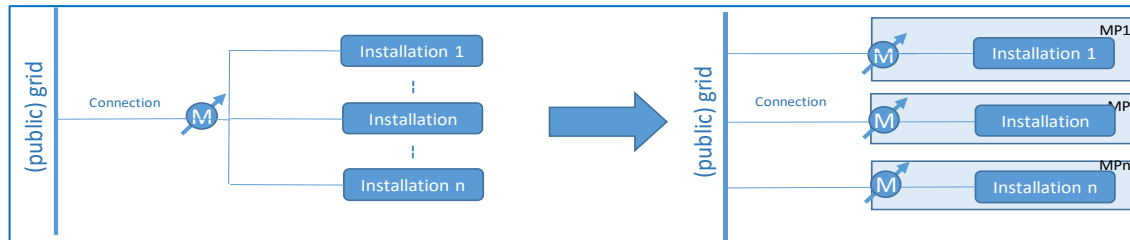
2. The Gap will regard the connection as a connection to a private grid, where the Customer assumes the role of private grid operator:

3. There is only one connection used for connecting the independent installations and the GAP adds meters to the independent installations:
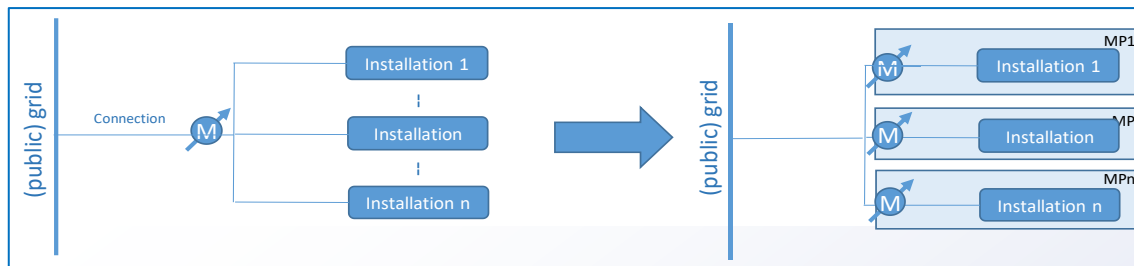
Assumptions for the current Market Processes

I. There is a need to have unambiguously clear roles and responsibilities for the parties acting in the energy market;

II. There is a need to maintain a register with unique MPs, where responsible parties (Customer, GAP, ES and BRP) and characteristics of the MP are kept. The metered data for a MP is linked to this register;

III. The MP register will be run by a Metering Point Administrator;

IV. There can only be **one ES** and **one BRP** responsible for a MP;

V. A MP will have **one responsible C**ustomer, that however may be more than one person, such as husband and wife;

VI. The GAP will keep an asset register where he links the connections to his grid to the administrative MPs;

VII. The energy transferred into or from a MP must be unambiguously determined, i.e. **a MP is metered**;

Assumptions for the study

VI.   If a Customer has two or more electrically independent Installations at one connection to the grid, he can choose to have set up multiple MPs, with one (or more) Installation(s) per MP, where each MP is metered;

VII.   An administrative or physical disconnect is the responsibility of the GAP and may be triggered by one of the parties responsible for and linked to the associated MP.
        A physical disconnect involves all Installations at the connection to the grid and therefore to the associated MPs. In this perspective, the statement is made that the disconnection is governed by the Main MP;

VIII.   In case of multiple MPs associated to multiple Installations with one connection the common characteristics for these MPs may be registered in the Main MP only, or may be duplicated from those in the Main MP.
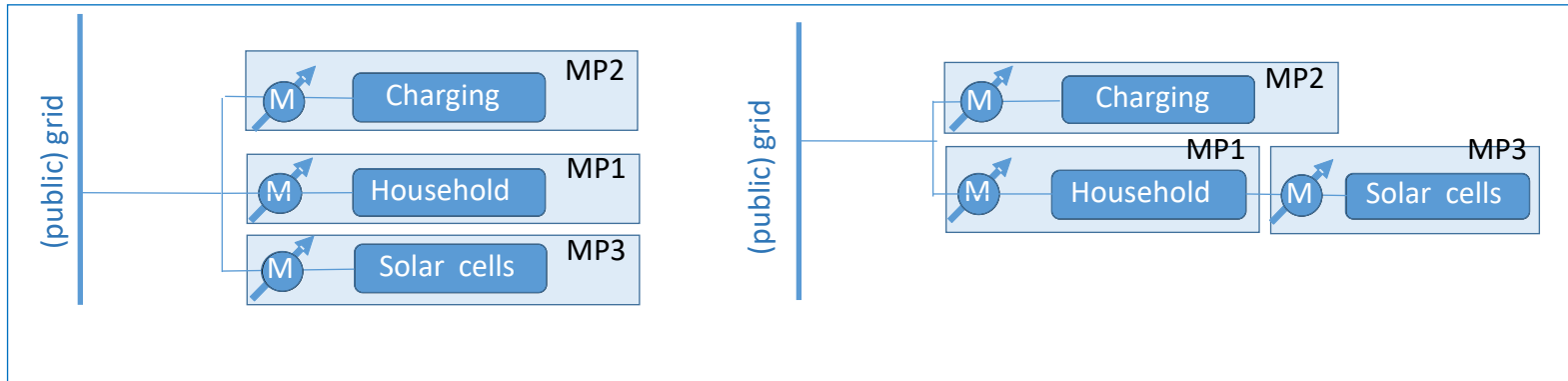
Examples [1 & 2]
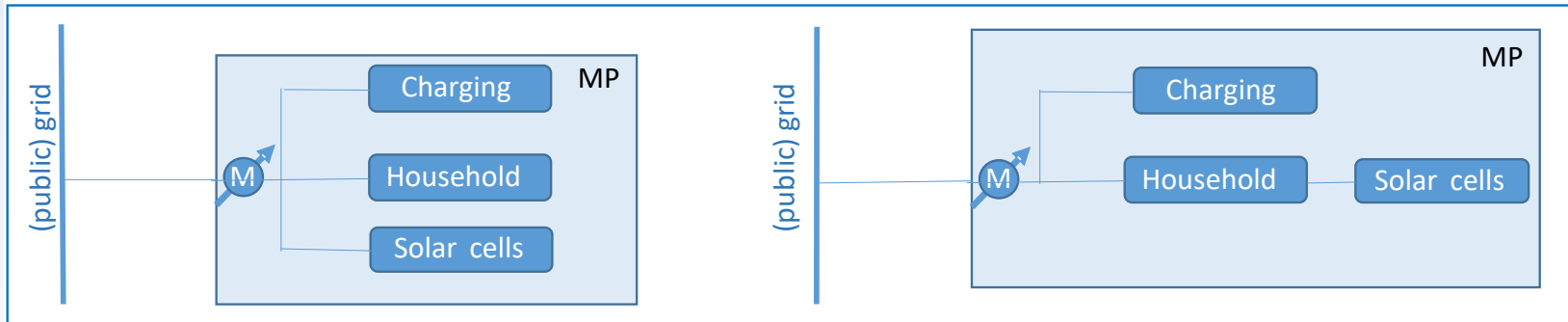
Traditional setup of Household with a Charging point for an electric vehicle and Solar cells.
In this case all covered in one Metering Point, where the total consumption / production is netted.
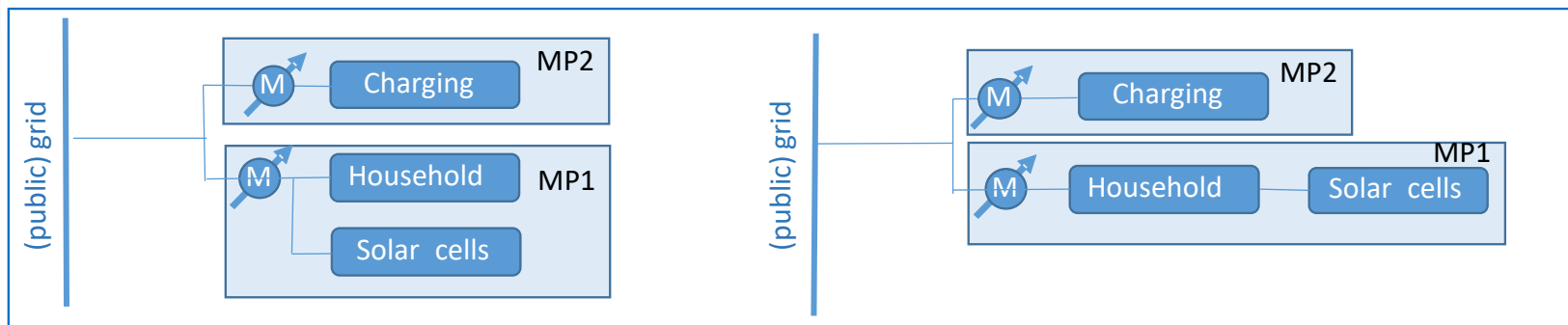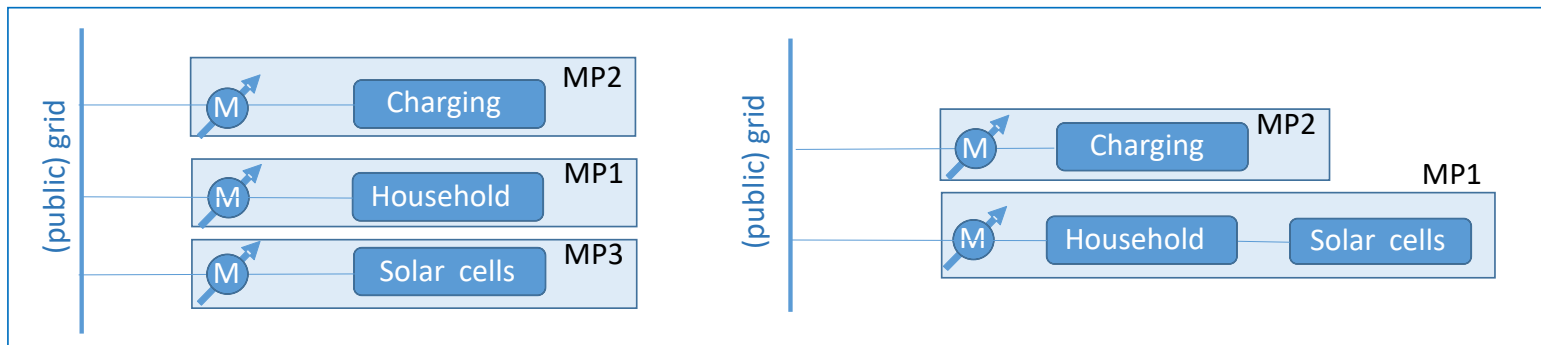

Setup of Household with a Charging point for an electric vehicle and Solar cells.
In this case covered in two Metering Points, where the consumption / production of the household with the Solar cells is netted.

Examples [3 & 4]

Setup of Household with a Charging point for an electric vehicle and Solar cells.
In this case covered in three Metering Points, where in the series case the measurements of consumption / production of the household and the Solar cells is dependent (and may not be allowed).

Setup of Household with a Charging point for an electric vehicle and Solar cells.
In this case wired up to multiple (independent) connections to the grid, in the parallel case associated with three Metering points and in the series case only two Metering Points.

Conclusions

- The needed flexibility around Installations and associated MPs can be offered by:
    - adding multiple connections (extra wires/pipes);
    - using multiple MPs at the connection when separating Installations or multiple Energy Suppliers / Balance Responsible Parties are needed.
- All existing processes and structures can be kept in place, as the processes perform (independently) on each MP;
- The construct of the Metering Point and the related market processes around unique responsible roles is not affected.