Market consultation - Product Design Group

Multiple Supply Contracts for Adjustable Appliances

29/09/2022

fluvius. ORES resa Sibelga Synergrid

Virtual meeting rules

Please keep your camera on (to the extent possible)

Please turn off the microphone when you do not want to intervene

Questions:

1. Post your questions in the chat (with slide number if applicable)
2. Interactions are foreseen

Important note (réserve importante / belangrijk voorbehoud)

- DSOs would like to stress that co-creation process requires -by definition- open exchanges in which different stakeholders contribute

- The elements presented in the following slides correspond to the current state of reflection for the design of a structural solution allowing consumers to have multiple contracts on a same Access Point

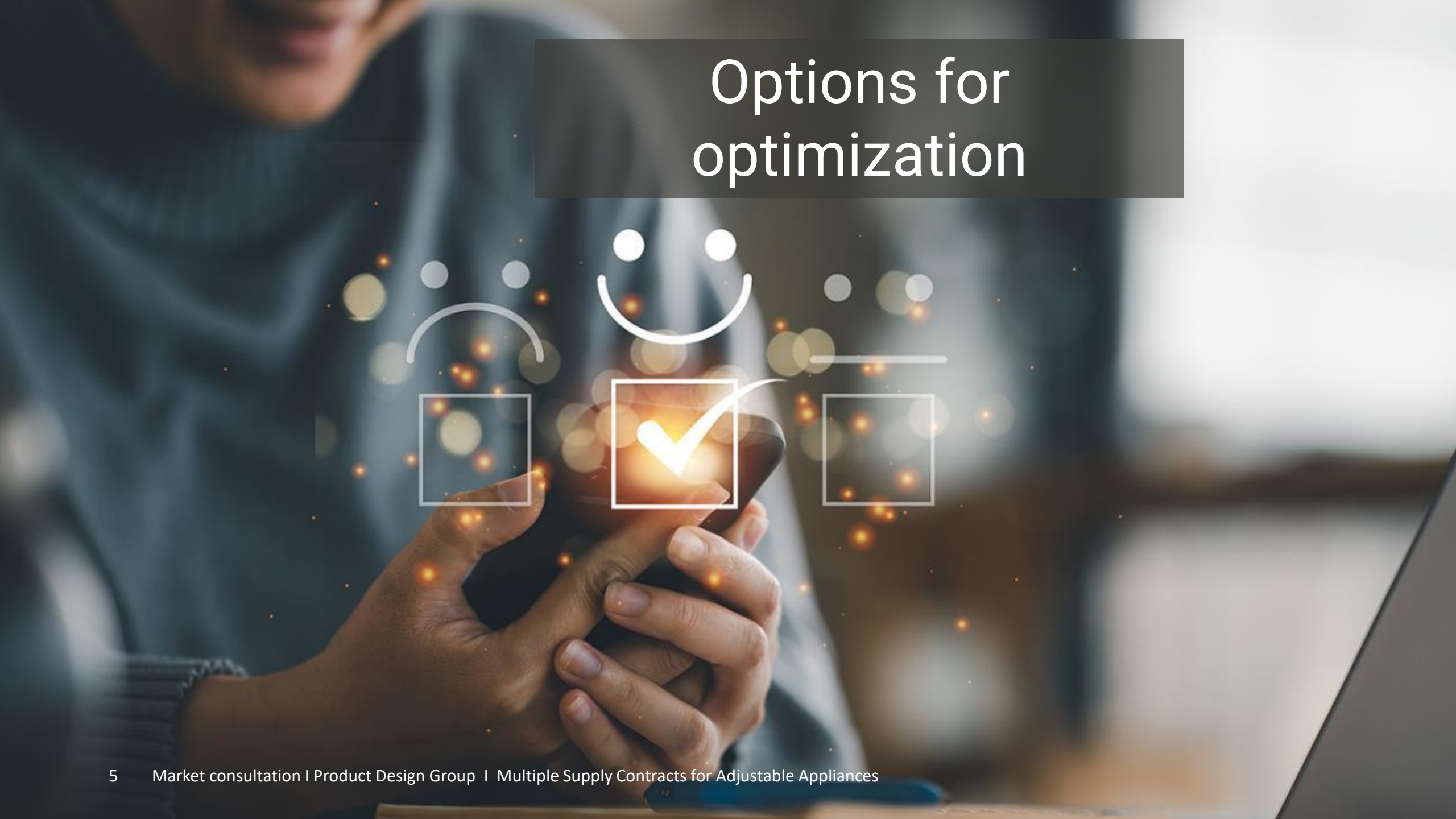
- In any case the product developed by DSOs will be based on the corresponding regulations and regulatory guidelines

Agenda

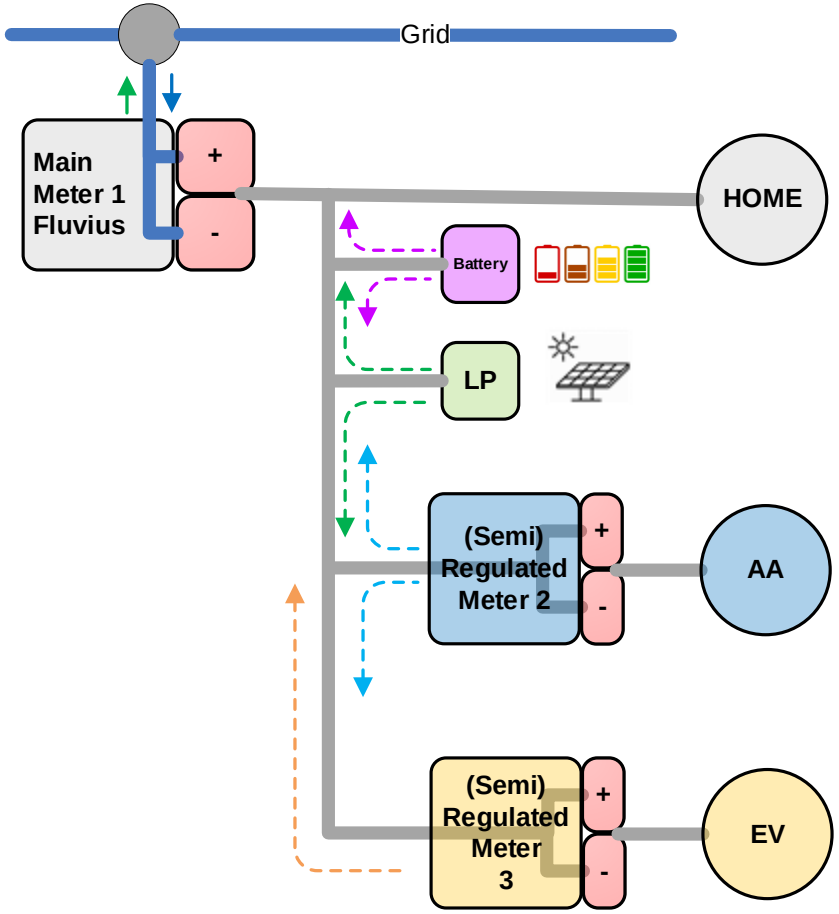
1. Options for optimization
2. Contractual framework and reporting
3. Other open issues
4. Planning and next steps

Synergrid

Options for optimization



Physical configuration



AA = Adjustable Appliance

LP = Local Production

Autoconsumption (**AC**) = energy produced by LP that is not measured on main meter

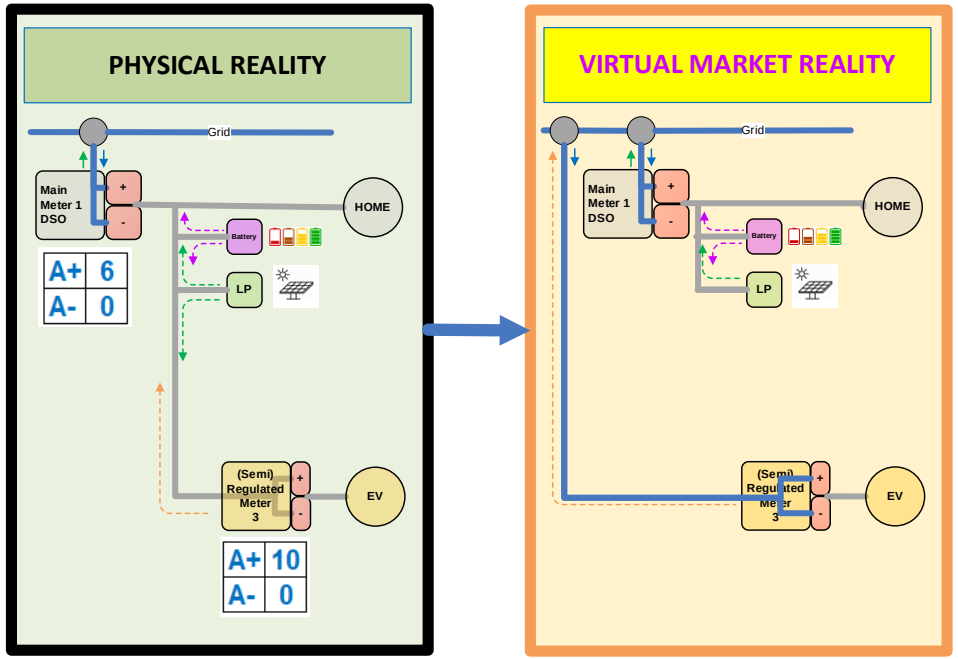
Dependency between AA contracts due to EoS scenarios

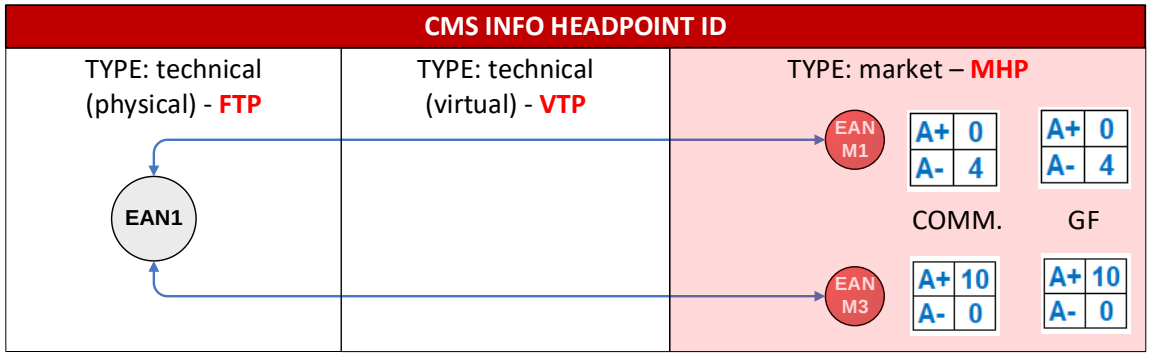
Optimization options

1. No optimization
2. Gridfee optimization
3. Gridfee and commodity optimization
4. Choice of optimization

Synergrid

Option 1 – No optimization (= current situation)





MHP= Market Head Point

Calculation result

- COMM: commodity volumes in 1 15' interval
- GF: 15' interval info taken into account in gridfee calculation

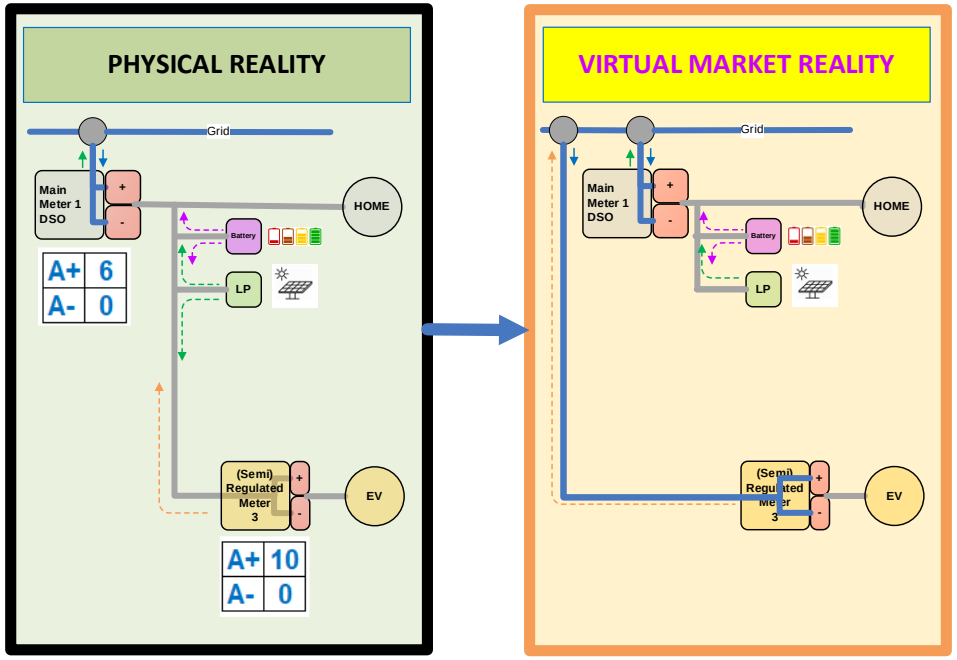
			step 1 topologie	step 2 logical meter rest	step 3 optimization auto consump.
MAIN	A+	6	6-10=-4	0	-
	A-	0	0-0=0	4	-
SUB	A+	10	10	10	-
	A-	0	0	0	-
				gross	optimized

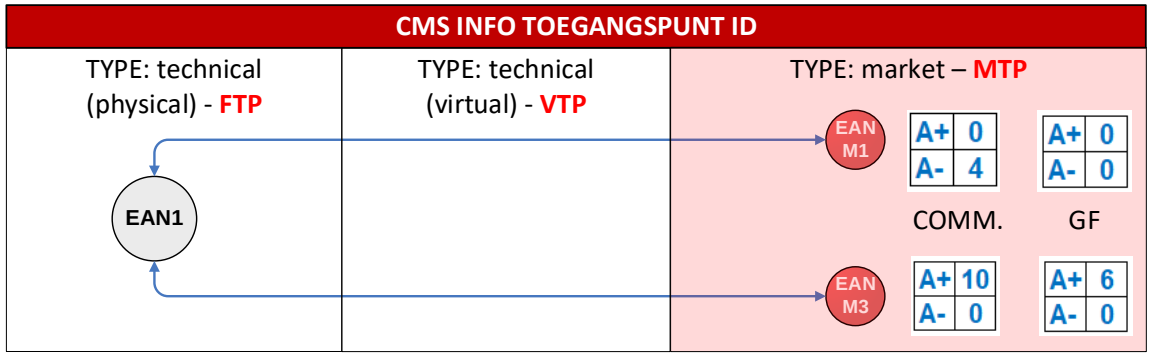
Calculation approach

- Step 1: determine autoconsumption volume by subtracting 15' measurements of submeter from main meter
- Step 2: assign AC as virtual injection on computed submeter for HOME
- Step 3: optimize AC volume (if applicable)

Synergrid

Option 2 – Gridfee optimization





Calculation result

- GF(*): optimized
- COMM: not optimized

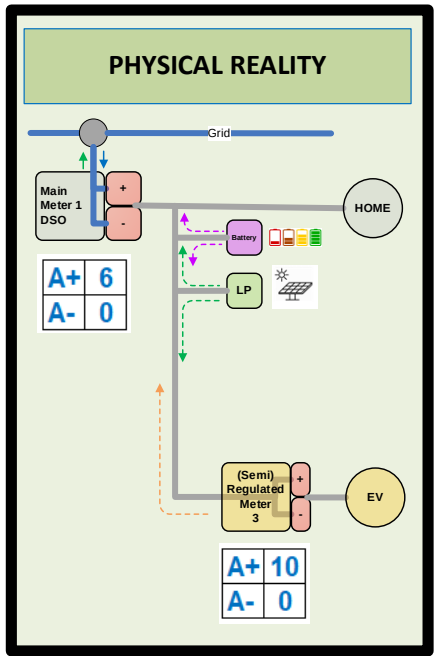
(*) The total gridfee is determined based on the exchange energy measured by the main meter and split over the different contracts

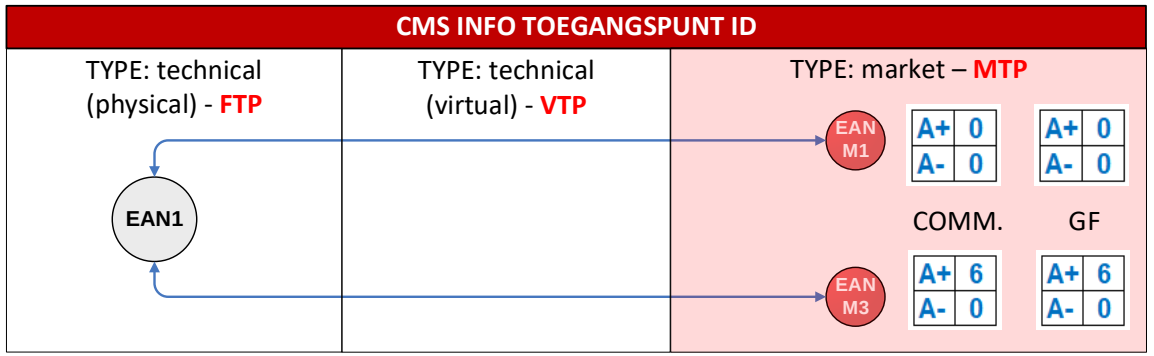
			step 1 topologie	step 2 logical meter rest	step 3 optimization auto consump.
MAIN	A+	6	6-10=-4	0	0
	A-	0	0-0=0	4	4-4=0
SUB	A+	10	10	10	10-4=6
	A-	0	0	0	0
				gross	optimized

Calculation approach

- Step 3: available AC is assigned to EV

Option 3 – Gridfee and commodity optimization





			step 1	step 2	step 3
			topologie	logical meter rest	optimization auto consump.
MAIN	A+	6	6-10=-4	0	0
	A-	0	0-0=0	4	4-4=0
SUB	A+	10	10	10	10-4=6
	A-	0	0	0	0
				gross	optimized

Calculation result

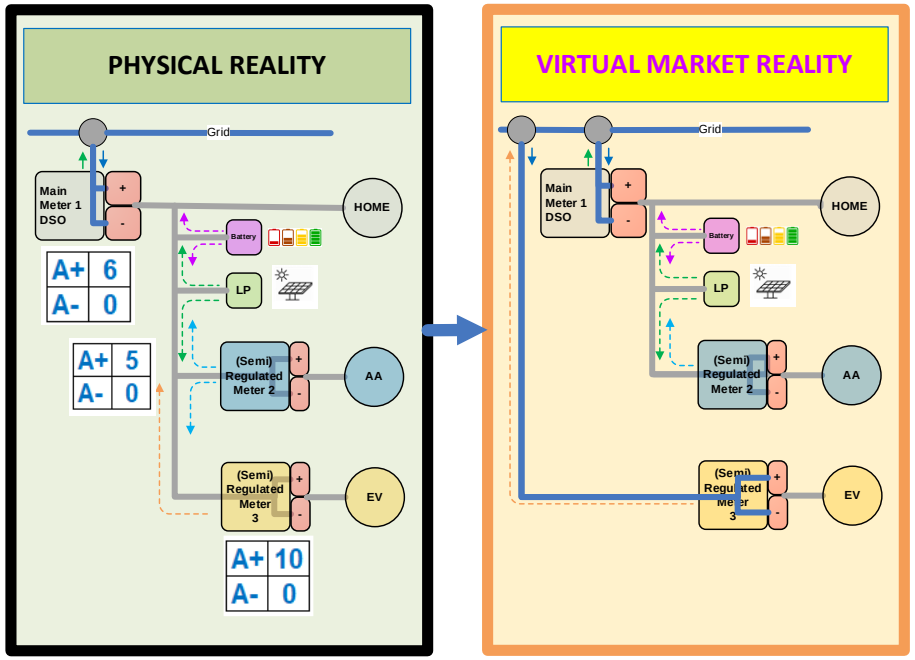
- GF(*): optimized
- COMM: optimized

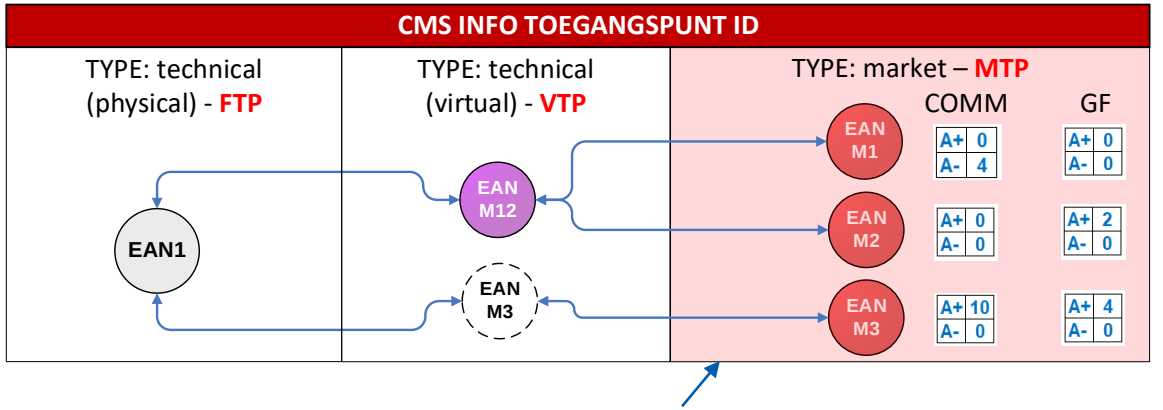
(*) The total gridfee is determined based on the exchange energy measured by the main meter and split over the different contracts

Calculation approach

- Step 3: available AC is assigned to EV

Option 4 – Choice of optimization





REPARTITION KEY: --			step 1 topologie	step 2 logical meter rest	step 3 optimization auto consump.
MAIN1	A+	6	6-5-10=-9	0	0
	A-	0	0-0-0=0	9	9-5=4
SUB2	A+	5	5	5	5-5=0
	A-	0	0	0	0
SUB3	A+	10	10	10	10
	A-	0	0	0	0
				gross	optimized

Calculation result

- GF(*): optimized
- COMM: optimized for AA, not optimized for EV

(*) The total gridfee is determined based on the exchange energy measured by the main meter and split over the different contracts

Calculation approach

- Step 3: available AC is assigned to AA, but no more than the offtake, EV does not receive AC, remaining AC is assigned to HOME as (virtual) injection

Optimization options – Summary

1: No optimization	2: GF optimization	3: GF + COMM optimization	4: Choice of optimization
Gross volumes are commercialized	**Gross volumes** are commercialized	**Optimized** volumes are commercialized	**Gross and/or optimized** volumes are commercialized
Gridfee **may depend** on number of contracts (capacity tariff)	Total gridfee **independent** of number of contracts[1]	Total gridfee **independent** of number of contracts[1]	Total gridfee **independent** of number of contracts[1]
May create 'virtual' injection on main contract	**May create** 'virtual' injection on main contract	**No** 'virtual' injection on main contract	**May create** 'virtual' injection on main contract
Coupling of MHP to physical Access Point (EoS)	**Coupling** of MHP to physical Access Point (EoS, GF)	**Coupling** of MHP to physical Access Point (EoS, GF, COMM)	**Coupling** of MHP to physical Access Point (EoS, GF) **Grouping** of MHP to 'optimization group' (COMM)

1: potential additional data tariff for submeter(s)

Synergrid

Results

Optimization needs: your views

Identifying your needs and priorities

1. No optimization

2. Gridfee optimization

3. Gridfee + Commodity Optimization

4. Choice of optimization

Go to: www.menti.com ; code : 1339 4236 or scan:

→ Q1: Categorize the options according to your needs

→ Q2: Select the option you need most in the short term

Synergrid

Contractual framework and reporting

Access contract (Toegangscontract)

Financial guarantees, conditions and liabilities

- Assumptions
  - Suppliers that are active on an SDP are also Access Holders and must have signed the Access Contract with the DSO.
  - The financial guarantees, conditions and liabilities are the same for Access Holders on a Primary or a Secondary HP (as a consequence of gridfee split).

- Impact
  - The SLA and lump sump payment for **missing or late data and rectifications** need to be revised to take into account **submeters** and submetering data.
  - The **amounts and thresholds for liabilities** towards the Access Holders may need to adapted to the increased number of contracts in the market.

Submetering regulation

Inspiration from California

UDC = Utility Distribution Company
MDMA = Meter Data Management Agent

For utility-owned submeters, the UDC will perform all functions as the submeter's MDMA. For non-utility-owned submeters, the **roles and responsibilities of the non-utility submeter** owner, or its 3rd-party MDMA, and the UDC are:

Non-utility Submeter **Owner or 3rd-party MDMA**:

1. Collect and transmit the submeter usage to the UDC
2. Have approval as an MDMA to provide the UDC with the submeter usage data, as scheduled, in the required format in compliance with the Submeter MDMA Performance Requirements. Refer to the UDC for details of the Performance Requirements.
3. Be the single point of contact for all submeter data issues

UDC:

1. Receive submeter usage from the 3rd-party MDMA
2. Use the submeter usage to separately calculate the energy used for EV charging on the applicable EV rate and all other usage on the primary house meter's current rate. The accuracy of the bill depends on receiving timely and accurate information from the 3rd-party MDMA and the accuracy of the submeter.
3. Work with the 3rd-party MDMA and the customer to resolve any billing disputes.
4. Provide a summary bill reflecting all charges, including the submeter EV usage.

Late, incomplete, or inaccurate submeter usage information will be disregarded. As a result, any EV charging during those intervals will be billed at the primary meter's current rate.

Synergrid

Connection rules (Aansluitingsreglement)

Submetering

- Add reference to Synergrid submetering C8/02
- Describe communication infrastructure for submeter data
- Specify roles and responsibilities for installation and maintenance of submetering infrastructure
- Specify metering data chain for submetering data

Distribution Grid User (DGU)

- Distinguish primary/secondary DGU

Green light (contract on each Access Point)

- Specify behavior for primary or secondary SDP

Connection contract (Aansluitingscontract)

Art. 3 **Identification** of the connection

- Foresee additional metering points for submetering

Art. 6 List of **installations** with **impact on the distribution grid**

- Add submetered assets

Reporting

Principle 1: **reporting on (market) headpoint** (instead of Access Point)

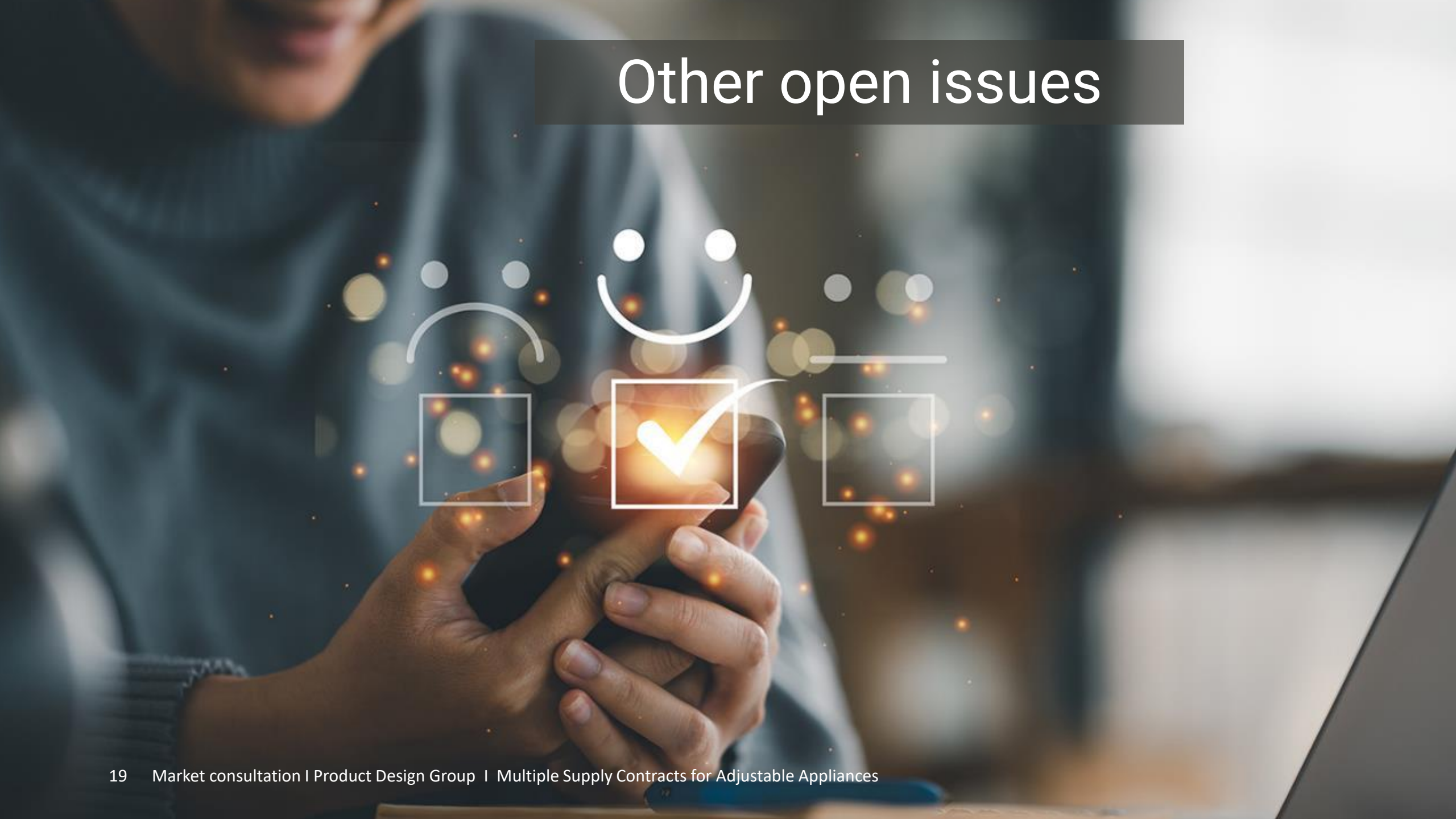
- Rationale: services, … are defined at market level, not physical level. Current CMS reporting is de facto based on (market) headpoint.

Principle 2: **no correction of allocation volumes** in case of (non)self-consumption

- Rationale: allocated volumes are volumes actually ‘sold’ by the supplier
- Impact: quotum reporting – suppliers need to submit certificates proportional to amount MWh offtake of their customers. Quotum volumes will be higher in case customers choose not to self-consume

Synergrid

Other open issues



Other open issues

Two specific issues were raised during PDGs activities:

- How do we address digital meter communication issues?
- Should we set a limit to the number of submeters and the submeter layers?

Non-communicating digital meter

Digital meter is considered as **non-communicating after 60 days** and reverts to **S0 status** (handled as classical meter). On DGU request, DSO may have the obligation to fix the problem (within 3 months in Flanders, unless DSO motivates deviation)

15 minutes values are:

- **required for :**
  - commodity volumes calculations
  - gridfee split calculations
- **used for**: allocation

From a supplier perspective, considering 15 minutes values are always required does it make sense to make SMR3 mandatory? Note: from an operational point of view SMR3 is not strictly required.

Synergrid

Number of submeters & submeter layers

Although it is technically feasible to conduct calculation with any given number of submeters, the management of complexity leads to limit the allowed number of layers and the number of submeters in line with market needs and use cases.

Hence:

- **The number submeters layers will be limited to one**
- **DSOs will support a certain number of meters** (to be defined) for LV and MV
- **Number of supported submeters might be different for MV and LV**

Question: what number of submeters is needed based on the use cases you envisage?

Synergrid

Planning and Next steps

Planning

Objective: Vision paper “Multiple supply contracts for adjustable appliances”

Next meetings: PDG Multiple supply contracts for adjustable appliances

- **24/11 AM: Draft vision paper**

⇦ **Draft vision paper will be available < 15/11**

Side Information:
- *PDG « Flexibility »: 27/10/2022*
- *PDG « Energy sharing »: 2/12/2022 (TBC)*

⇨ **Provide your Input, Ideas, Feedback…**

via marketconsultation@synergrid.be

by **21/10/2022 at the latest**

Synergrid