Market consultation - Product Design Group

Multiple Supply Contracts for Adjustable Appliances

24/11/2022

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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. Draft vision paper – introduction and discussion
2. Additional example with 2 submeters
3. Next steps

Draft vision paper

Draft vision paper - introduction

Key messages

- Extension of current market model
- Separate measurement with (semi-)regulated meter
- SMR3
- EoS: additional contracts merged with primary contract
- Gross volumes in allocation, potentially evolving to optimization
- Gridfee optimization and split (capacity tariff)
- Align volumes with energy sharing, largely decoupled for flexibility
- Data access controlled by main DGU

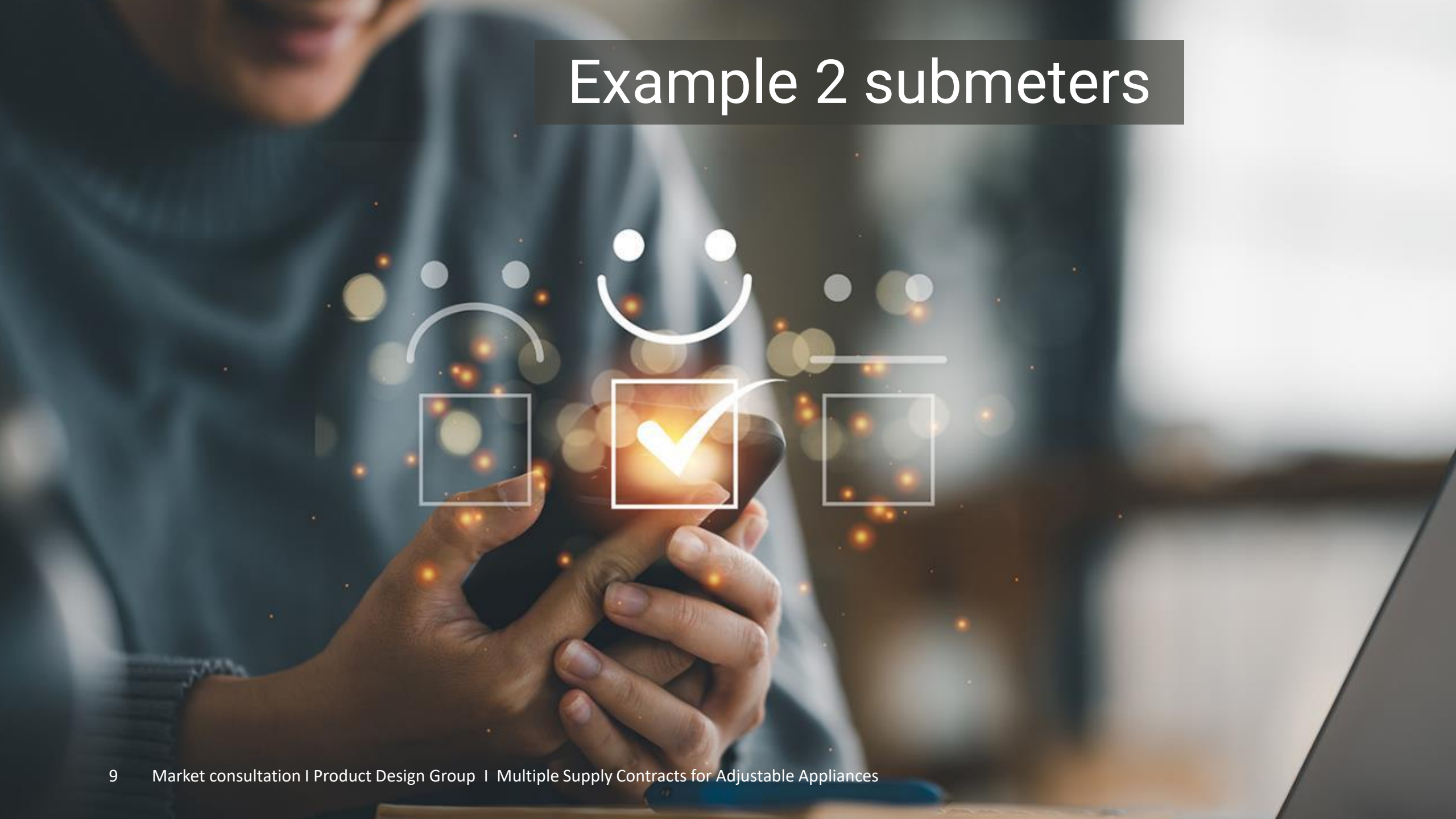
Draft vision paper – latest updates

- Examples calculated meters
- Examples access point configurations
- Examples market volumes calculation

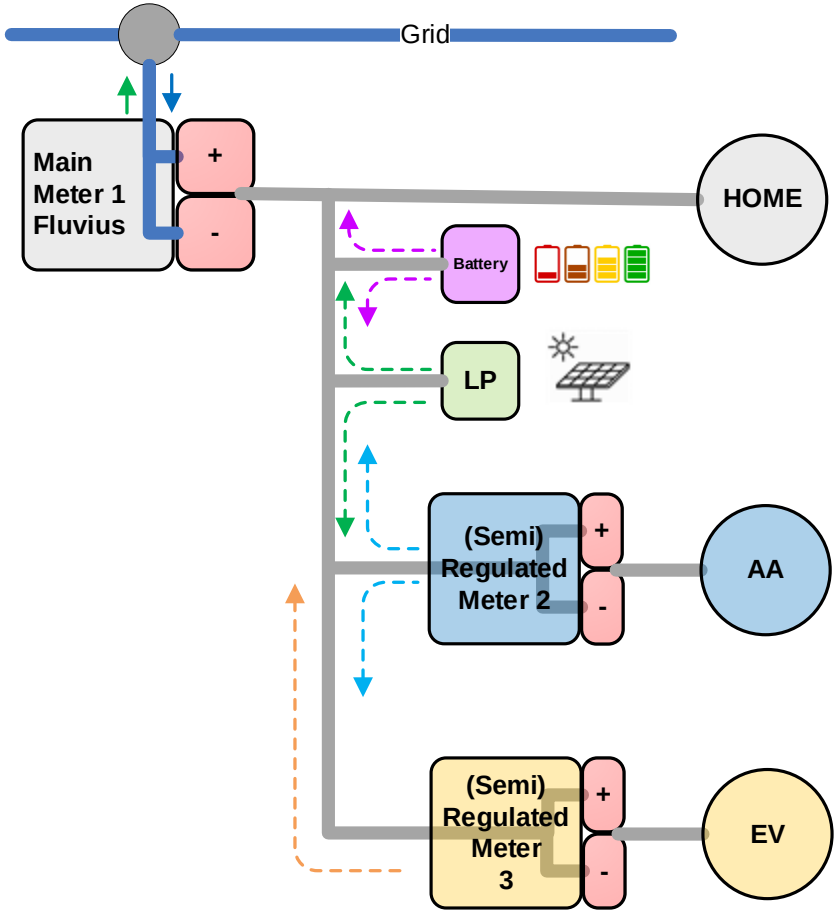
Draft vision paper – discussion

- Any remarks from participants?

Example 2 submeters



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

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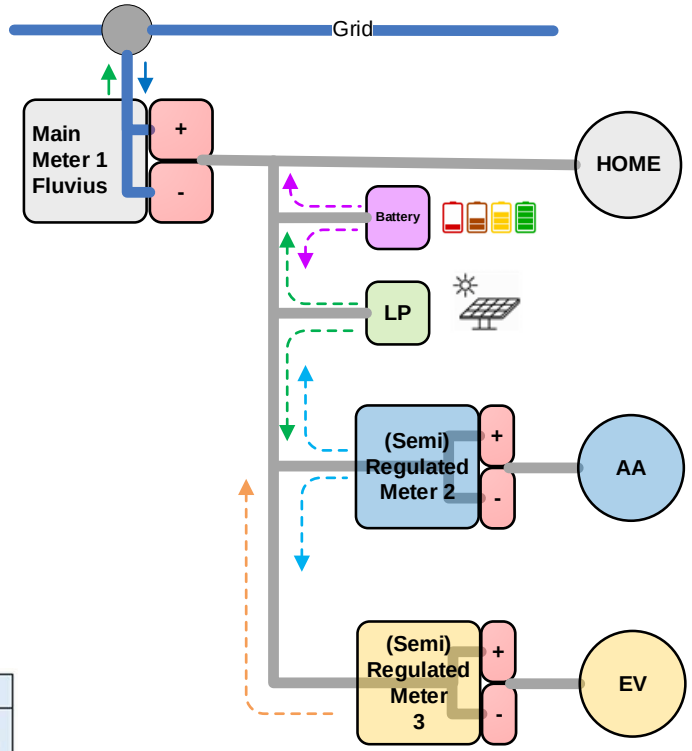
Principles

- Calculated submeter for home makes **best case assumption on local energy flows**, without violating measured energy flows
- Assignment of local energy flows is **not a customer choice** but a fixed algorithm
  - Priority (AA before EV)
  - Proportional (AA and EV proportional to the measured volume)
- Both **Gross and Optimized volumes** may be needed depending on the optimization option



	No optimization	Grid fee optimization	Grid fee & commodity optimization		
			Full optimization	All optimized except EV	Optimization choice
Commercialized volumes	Gross	Gross	Optimized Gross	Gross and Optimized Gross	Gross and/or Optimized Gross

Example – 2 submeters

KEY: PROPORTIONAL			step 0 logical meter submeters	step 1 topology	step 2 logical meter rest	step 3 optimization self-consump.
MAIN1	A+	2	-	2-2-5=-5	0	0
	A-	5	-	5-2-3=0	5	5-1,43-3,57=0
SUB2	A+	2	2		2	2-1,43=0,57
	A-	3	(3-1)=2		3	2=2
SUB3	A+	6	(6-1)=5		6	5-3,57=1,43
	A-	3	3		3	3
					gross	optimized

Note: a fixed algorithm needs to be chosen to
(1) Assign minimum local energy flows (step 0)
(2) Assign self-consumption (step 3)

'priority' tends to be simpler than 'proportional' but both are possible

Instead of the logical submeter in step 0, the values of step 2 could be used for proportional allocation

Step 0 – determine minimal local energy flows

- Local energy flow is at least $3_{SUB2} + 3_{SUB3} - 5_{MAIN1} = 1$
- 1 is taken from first AMHP (priority)

Step 1 – compute calculated submeter for HOME

- Submeter HOME is calculated on logical submeters from step 0

Step 2 – compute Gross Commodity Volume

- Convert negative values to positive for opposite direction
- Negative values indicate self-consumption

Step 3 – compute Optimized Gross Commodity Volume

- Allocate self-consumption – i.c. proportional to logical submeter offtake
- SUB2: 2 / (2 + 5) * 5 = 1,43
- SUB3: 5 / (2 + 5) * 5 = 3,57

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Example – 3 submeters

Step 0 – determine minimal local energy flows

Step 1 – compute calculated submeter for HOME

Step 2 – compute Gross Commodity Volume

Step 3 – compute Optimized Gross Commodity Volume

KEY: PROPORTIONAL			step 0 logical meter submeters	step 1 topology	step 2 logical meter rest	step 3 optimization self-consump.
MAIN1	A+	2	-	2 - 2 - 4 - 4 = -8	0	0
	A-	5	-	5 - 1 - 3 - 1 = 0	8	8 - 1,6 - 3,2 - 3,2 = 0
SUB2	A+	2	2		2	2 - 1,6 = 0,4
	A-	3	(3-2)=1		3	1 = 1
SUB3	A+	6	(6-2)=4		6	4 - 3,2 = 0,8
	A-	3	3		3	3
SUB4	A+	4	4		4	4 - 3,2 = 0,8
	A-	1	1		1	1
					gross	optimized

Next steps

Next steps

Objective: Vision paper "Multiple supply contracts for adjustable appliances"

Next steps: PDG Multiple supply contracts for adjustable appliances

- **23/12: Final vision paper**

⇐ **Feedback on Draft vision paper < 07/12/2022**

⇨ **+ Provide your Input, Ideas, Feedback on PDGs…**

via marketconsultation@synergrid.be

Side Information:

- *PDG « Energy sharing »: 2/12/2022*
- *PDG « Flexibility »: 26/01/2023*