

Legal and economic aspects of cross-building energy exchange

Michael Furtlehner
Kathrin de Bruyn
Andrea Kollmann
Markus Schwarz

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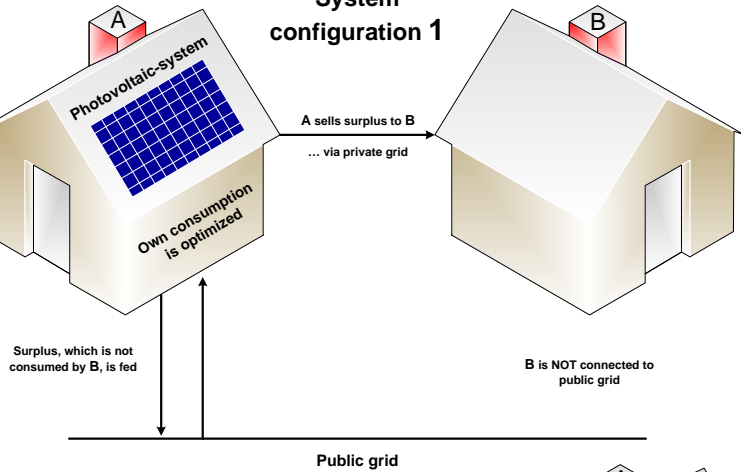
Background of „GebEn“

Integrated evaluation of different building to building configurations

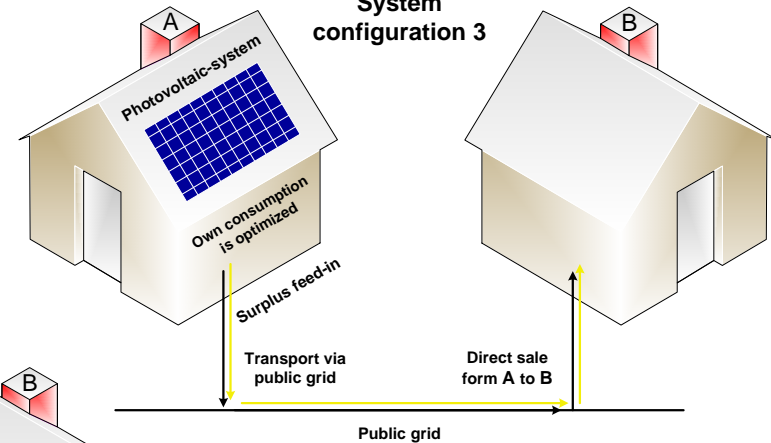
- Differentiation between electricity and heat exchange
- Energy distribution:
 - via new private grids
 - via new private grids while the second building has also a connection with the public grid
 - via public grids

Background of „GebEn“

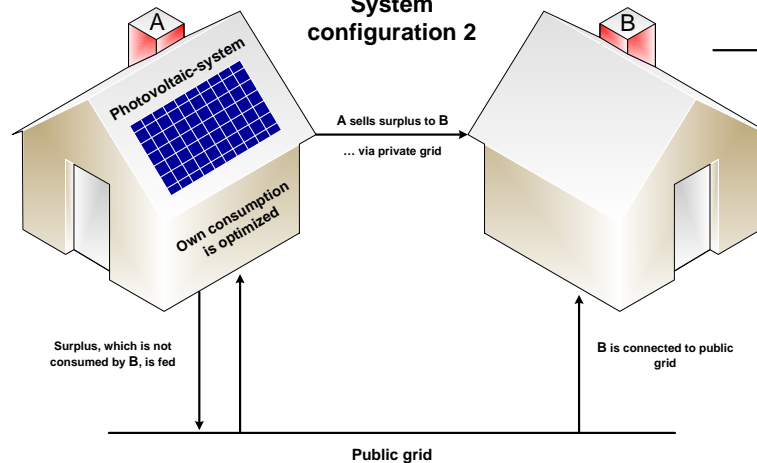
System configuration 1



System configuration 3



System configuration 2



Background of „GebEn“

The situation of cross-building energy exchange is

SO FAR:

- only a technical view (pilot projects)
- the legal and economic aspects and criteria are neglected

NEEDS:

- also a legal and economic view
- an interdisciplinary approach to analyse different building configurations

Procedure of „GebEn“

Legal investigation: European, federal and regional (AUT) legislation

- determining existing problems/barriers
- developing constructive solutions

Economic investigation:

- investments and funding
- transfer prices
- feed-in tariffs
- grid fees

Preliminary results of „GebEn“

Direct line (electricity) from a legal point of view

Art. 2 Z 12 EltRL 1996: A direct line is constructed in addition to an integrated network (= number of transmission and distribution networks, which are connected via one or more transmission lines, Art. 2 Z 11 EltRL 1996).

- A direct line is a parallel line and not part of the public electricity network.
- A direct line must not be connected to the public grid and therefore no mixing of the power flow.
- A direct line should originally improve the competition.

Preliminary results of „GebEn“

Direct line (electricity) from a legal point of view

Art. 2 Z 15 EltRL 2009/ 7 Abs. 1 Z 8 EIWOG 2010: A direct line is either a line which connects individual production sites with individual customers (1. Alt.) or a line, which connects a producer and a supplier in purpose of supplying including their permanent establishment of their subsidiaries and eligible customers (2. Alt.).

- Austrian literature/judicature of 1. Alt.: Production site and customer must not be connected to the public grid.
- Austrian literature/judicature of 2. Alt.: All participants are allowed to be connected to the public grid as well as to the direct line.
- In the 2. Alt. both „and“ can be read as „or“.

Preliminary results of „GebEn“

Direct line (electricity) from a legal point of view

Art. 34 Abs. 1 EltRL 2009: All producers and suppliers should be able to supply their own permanent establishments, subsidiaries and eligible customers via direct lines and all eligible customers should be supplied by one producers and one supplier via direct line.

70 EIWOG 2010: The execution legislation has the possibility to regulate the construction and operation of direct lines.

- These differ in terms of the definition (for example often the supply of the (eligible) customers is missing) and legal claim (often only the producer has one) to the Union legally requirements.
- Interpretation in conformity with the directive

Preliminary results of „GebEn“

Direct line (electricity) from an economic point of view

In addition to the PV system, investment in cabling (direct line), metering and installations (integration in house B) are required

A direct line (system configuration 1 and 2) is economically meaningful when:

- A high PV capacity is installed AND the share of own consumption of house A and B is high
- AND when there is a short distance between A and B (direct line: max. 50 m)

Conclusions & Outlook

- Preliminary results:
 - Configuration 1 and 2 (power flow) appear to be legally possible and under certain conditions (installed PV capacity, own consumption, distance between A and B) – economically meaningful

- Next steps:
 - Comprehensive economic assessment of the configurations
 - Compilation of individually analysed aspects
 - relevant problem areas are highlighted
 - solution proposals are derived

Thank you for your attention!

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