



CEER workshop on Meter Data Management

Meter data management in the Swiss electricity market

19.04.2012 / Sacha Perret, Datamanagement @ **swissgrid**

Verband Schweizerischer Elektrizitätsunternehmen
Association des entreprises électriques suisses
Associazione delle aziende elettriche svizzere



Agenda

- Market overview
- Meter value management
- Customers
- Conclusion (Pros / Cons)

Market overview

- Market partially liberalized by Jan. 1st, 2009
 - Customers > 100 MWh/year were enabled to switch supplier.
 - Switching customers are forced to have load profile meters (1/4h res.)
- Market participants:

#	Player	Comment
1	TSO swissgrid	Certificates of Origin, Remuneration for renewable Energy
690	DSOs	Number shrunk from 739 in Jan. 2009
> 690	Suppliers	Incl. Default supplier (Supplier of last resort)
90	Balance Responsibles	Only 14 active (With supply)
~110	Data Service Providers	DSOs or dedicated companies

Market overview (cont)

- DSOs had to unbundle grid and supply at least in their book keeping.
- So far < 300 customers switched their supplier
- Next step of liberalization will happen earliest by 2015.
 - Everyone can switch
 - Customers > 50MWh/year must have a load profile meter
 - Below this limit, customers can be handled using a standard load profile based on a HT/LT band generated from quarterly meter readings. This method is currently under development in a working group from VSE

Meter value management

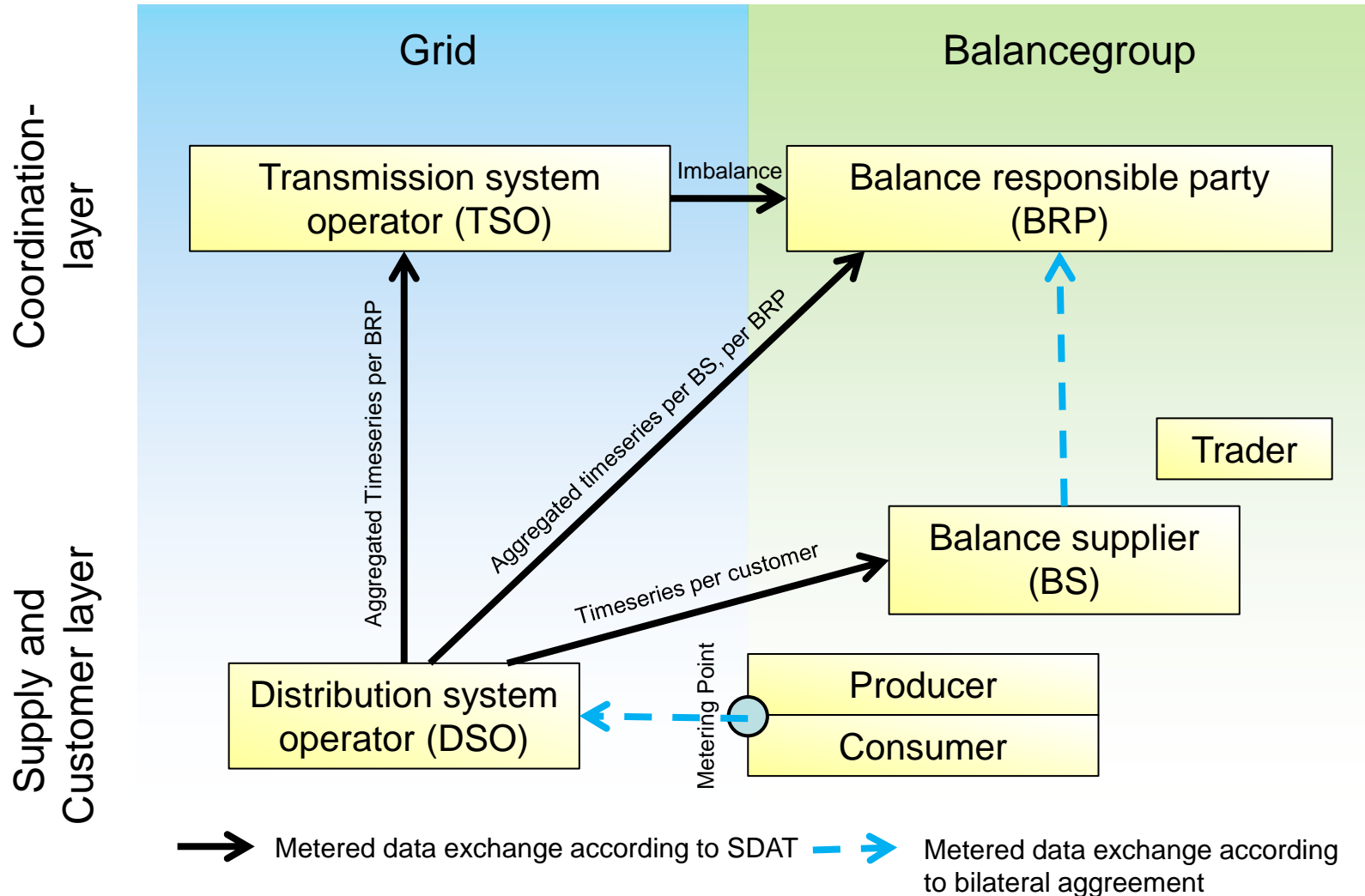
- Responsibility on metering is fully kept at the DSO.
 - Metered data responsible, Metering point administrator, Metered data aggregator
- Only the bare minimal set of data is spread among market players
 - Just enough for billing, forecast, cost allocation (e.g. Renewable Energy or Ancillary services), guarantee of origin and imbalance settlement
- All processes and data formats for the regulated data exchange are based on ebIX → No individual solutions!
 - Including Customer switching and related masterdata alignment processes
 - Data exchange for Swiss electricity market gathered in the SDAT Document



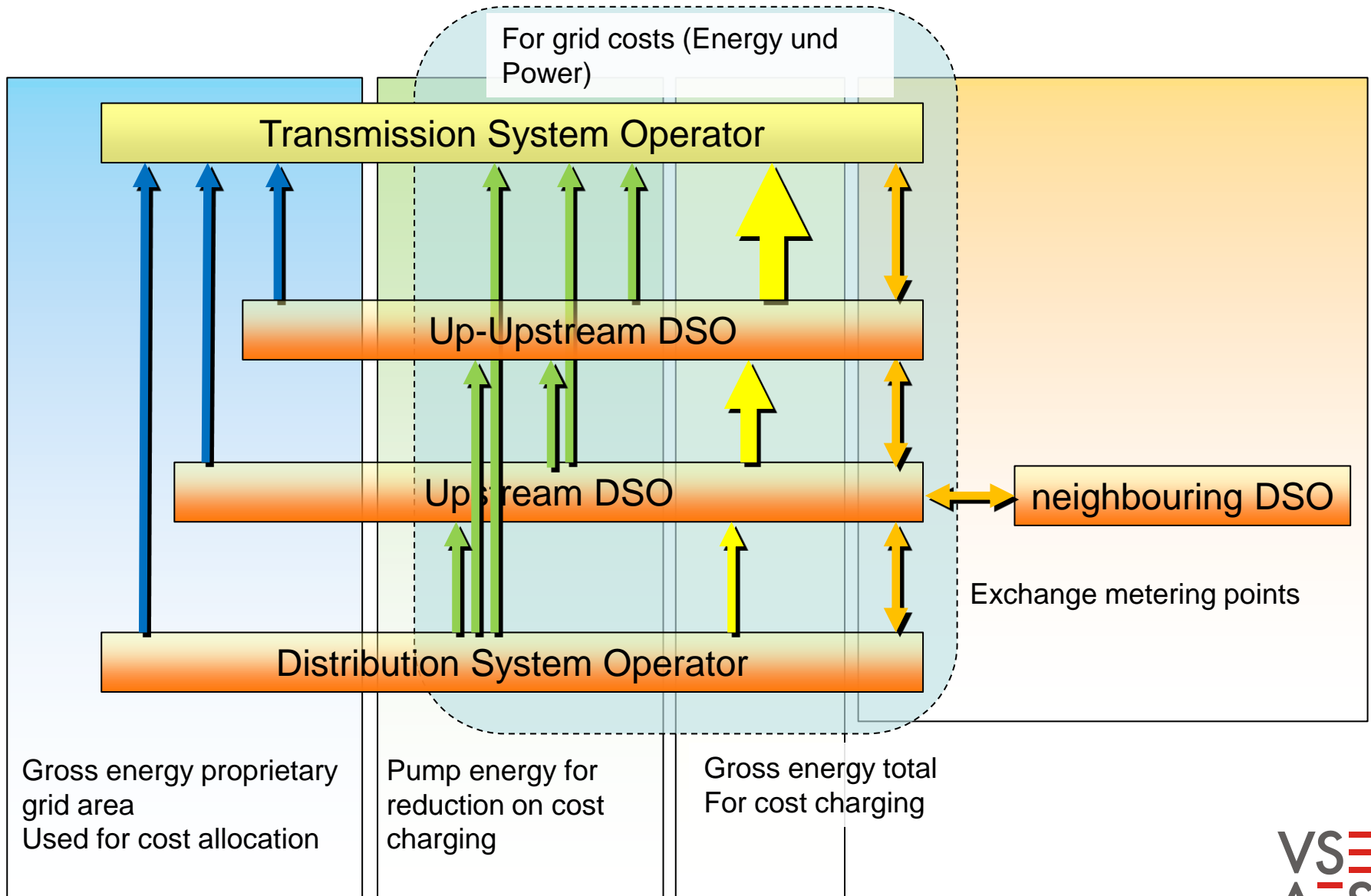
Data exchange

- Peer to peer
 - This solution has been chosen for having better buy-in from DSOs
- Service providers
 - DSOs have the free choice to subcontract data services to 3rd party.
- Daily exchange based on best available quality (planning)
- Monthly exchange on confirmed values (monthly billing)
- In case of errors detected later on, metered data can be corrected back to 6 months without detailed explanation or penalty.

Meter value management



Grid Costs



Regulation

Swiss Electricity Supply Act (StromVG)

Focuses on exchange of metered data, change processes and their implementation:

- Responsibilities
- Electricity sector establishes rules and guidelines
- What processes need to be defined
- Guidelines in case of additional data needs
- Load profile metering for switching customers

Art. 8

Messwesen und Informationsprozesse

¹ Die Netzbetreiber sind für das Messwesen und die Informationsprozesse verantwortlich.

² Sie legen dazu transparente und diskriminierungsfreie Richtlinien fest, insbesondere zu den Pflichten der Beteiligten, zum zeitlichen Ablauf und zur Form der zu übermittelnden Daten. Die Richtlinien müssen vorsehen, dass Dienstleistungen im Rahmen des Mess- und Informationswesens mit Zustimmung des Netzbetreibers auch von Dritten erbracht werden können.

³ Die Netzbetreiber stellen den Beteiligten die für den Netzbetrieb, das Bilanzmanagement, die Energielieferung, die Anlastung der Kosten, die Berechnung der Netznutzungsentgelte und die Abrechnungsprozesse im Zusammenhang mit dem Energiegesetz vom 26. Juni 1998⁵ und der Energieverordnung vom 7. Dezember 1998⁶ notwendigen Messdaten und Informationen fristgerecht, einheitlich und diskriminierungsfrei zur Verfügung. Diese Leistungen dürfen den Bezüglern nicht zusätzlich zum Netznutzungsentgelt in Rechnung gestellt werden. Werden Leistungen nach diesem Absatz von Dritten erbracht, müssen die Netzbetreiber diese angemessen entschädigen.

⁴ Die Netzbetreiber liefern den Verantwortlichen von Bilanzgruppen sowie anderen Beteiligten im Einverständnis mit den betroffenen Endverbrauchern oder Erzeugern auf Begehren und gegen eine kostendeckende Abgeltung zusätzliche Daten und Informationen. Es müssen alle in den letzten fünf Jahren erhobenen Daten geliefert werden.

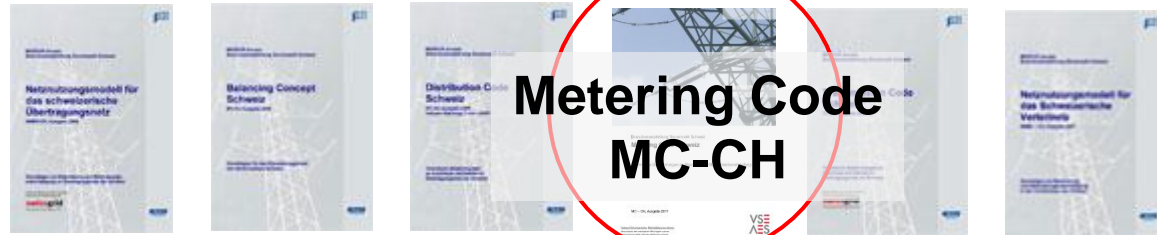
⁵ Alle Endverbraucher, die von ihrem Anspruch auf Netzzugang Gebrauch machen, sowie Erzeuger mit einer Anschlussleistung über 30 kVA müssen mit einer Lastgangmessung mit automatischer Datenübermittlung ausgestattet sein. Sie tragen die dadurch verursachten Anschaffungskosten und wiederkehrenden Kosten.

VSE Documents

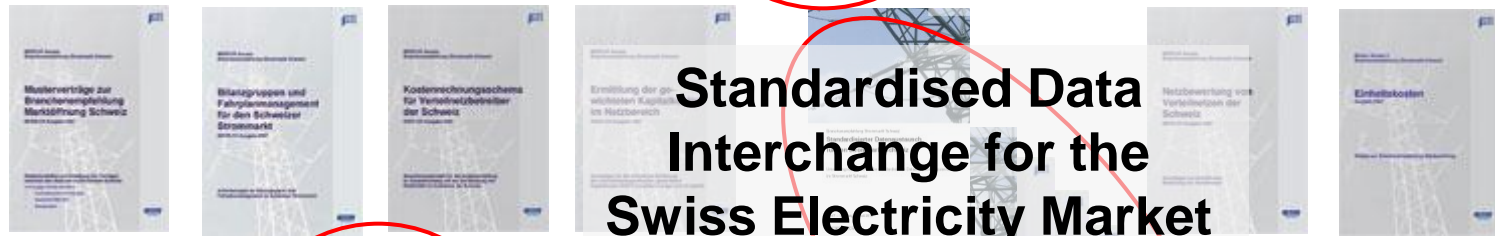
Main document
(Market model)



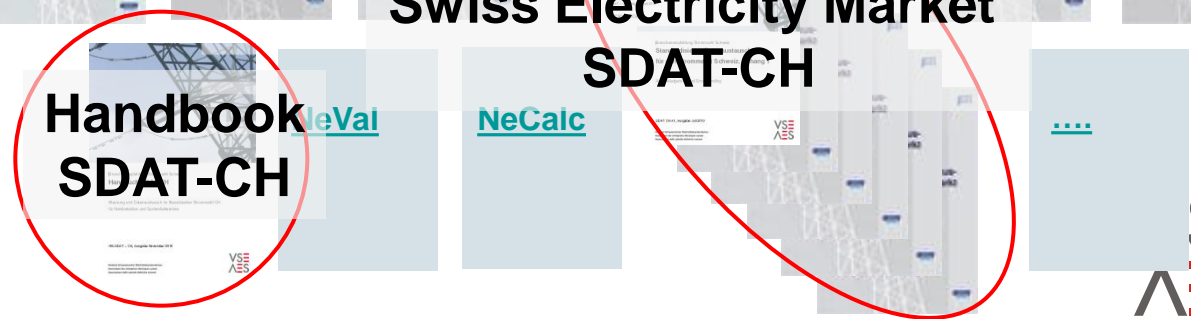
Key documents



Implementation guides



Additional tools
(SW-Tools)



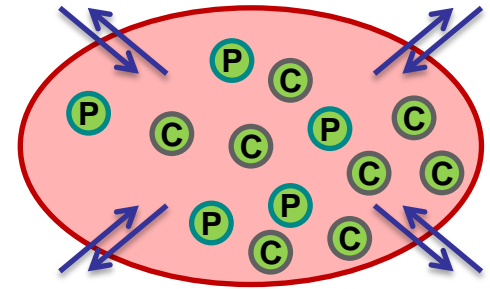
Customer

- The Customer
 - is owner over metered data
 - can always request to get metered data w/o additional cost
 - can contract 3rd party to receive the metered data
- Privacy is regulated under the general federal law for data protection
 - The DSO is responsible to make sure there is no violation.
 - No explicit law regarding privacy and security on smart metering.

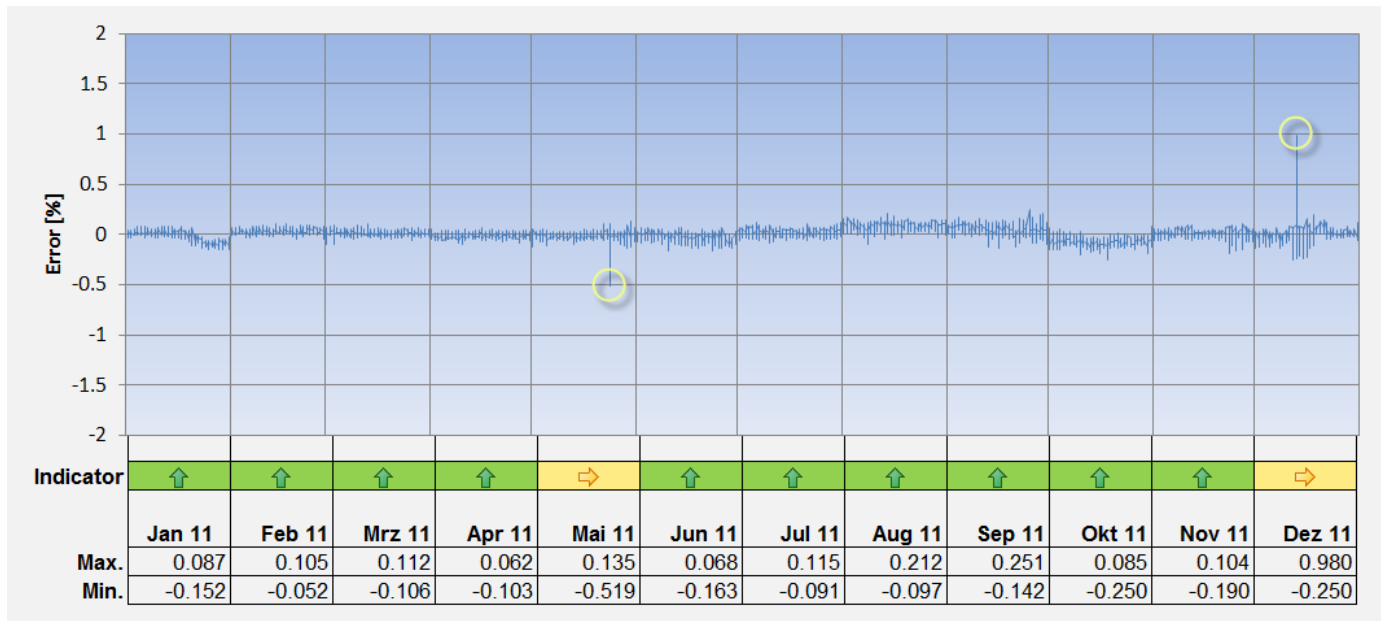
Conclusion

- Full support from DSOs since they keep fundamental role in the meter data management
- Lean data exchange model
 - Every involved market player only gets what he needs and not more
 - No central monitoring possible
- Processes between Balance Supplier, Balance Responsible Party and Traders left to the market
 - However there are some recommendations from VSE
- Room for new services / service providers
- Possibility to detect errors
- In special circumstances it's hard to figure out the source of errors
- Clean and well aligned masterdata is essential. Mass customer switches will proof the chosen concept

Data Quality



Comparison of Import and Export against Production and Consumption
swissgrid data Aggregates from DSOs



Error indicator triggering from $\pm 0.5\%$