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# Asistencija regulativi i reformi energetskog sektora

## Metering

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### **USAID/BiH REAP**

Bosnia and Herzegovina (BiH) Regulatory and Energy Assistance Project (REAP)  
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## **To be covered:**

- **ISO's Comments on REAP's Gap Analysis**
- **ENTSO-E Role Model Applied to BiH**
- **Gap Analyses and Key findings from Tables**
- **International practice – Great Britain**
- **Issues for discussion**



## **ISO's Comments on REAP's Gap Analyses**

- **“The issue of metering is complex.**
- **Who should have access to data, who needs this data and for what purposes must be determined.**
- **It will be useful to use a matrix table that contains the participants in the process, the data available to them and the data that they need.**
- **After we achieve general approval regarding these three issues, than some sub-processes may be more precisely defined.**
- **We agree that many processes should be defined in detail; but first, there should be a model for the metering process and metering data exchange.”**







## Gap Analysis – Wholesale Market

Roles			Document	Who
Type	Role Name	Description		
Actor	Meter Operator	A party responsible for installing, maintaining, testing, certifying and decommissioning physical meters.	ISO Grid Code Item 5.23: Metering Item 9: Metering Code	Transco, Generators & Customers connected to the High Voltage Network
Actor	Meter Administrator	A party responsible for keeping a database of meters.	ISO Grid Code Item 9.2.1.f) & 9.10.	Transco
Actor	Metered Data Collector	A party responsible for meter reading and quality control of the reading.	ISO Grid Code Item 9.7.	ISO ( <i>From Transco-DS connection point, Transco-Generator connection point &amp; Transco-Customer connection point only</i> ).
Actor	Metered Data Responsible Party	A party responsible for the establishment and validation of metered data based on the collected data received from the Metered Data Collector. The party is responsible for the history of metered data for a Metering Point.	ISO Grid Code Item 9.2.1.d) & 9.11.	ISO ( <i>From Transco-DS connection point, Transco-Generator connection point &amp; Transco-Customer connection point only</i> ).
Actor	Metered Data Aggregator	A party responsible for the establishment and qualification of metered data from the Metered Data Responsible Party. <b>This data is aggregated according to a defined set of market rules.</b>	ISO Grid Code Item 9.11.	ISO ( <i>From Transco-DS connection point, Transco-Generator connection point &amp; Transco-Customer connection point only</i> ).
Actor	Metering Point Administrator	A party responsible for registering the parties linked to the metering points in a Metering Grid Area. Also responsible for maintaining the Metering Point technical specifications and creating and terminating metering points.	ISO Grid Code Item 9.2.1.f) & 9.10.	Transco



## Gap Analysis– Distribution Network

Roles			Document		Who
Type	Role Name	Description			
Actor	Meter Operator	A party responsible for installing, maintaining, testing, certifying and decommissioning physical meters.	FERC	GC Art. 56 - 60	DSO
			RERS		
Actor	Meter Administrator	A party responsible for keeping a database of meters.	FERC	Rulebook on Metering Point Art. 23. h)	DSO
			RERS	Distribution Code Art.8.3.	DSO
Actor	Metered Data Collector	A party responsible for meter reading and quality control of the reading.	FERC	<ul style="list-style-type: none"> <li>General Conditions of Supply; Contract on Access to Network</li> <li>Rule on Metering point</li> </ul>	DSO
			RERS	<ul style="list-style-type: none"> <li>General Conditions of Supply; Chapter V</li> <li>Distribution Code, Chapter 8</li> </ul>	DSO
Actor	Metered Data Responsible Party	A party responsible for the establishment and validation of metered data based on the collected data received from the Metered Data Collector. The party is responsible for the history of metered data for a Metering Point.	FERC	<ul style="list-style-type: none"> <li>General Conditions of Supply, Art. 5. e)</li> <li>Rule on Metering point, Art 23.</li> </ul>	DSO <i>Validation System is not defined in the rules.</i>
			RERS	<ul style="list-style-type: none"> <li>General Conditions of Supply, Art. 9. l) &amp;p)</li> </ul>	DSO <i>Validation System is not defined in the rules.</i>



## Gap Analysis – Distribution Network

Roles			Document		Who
Type	Role Name	Description			
Actor	Metered Data Aggregator	A party responsible for the establishment and qualification of metered data from the Metered Data Responsible Party. <b>This data is aggregated according to a defined set of market rules</b>	FERC		DSO <i>Gap: There is nothing about aggregation and grouping of metered data. Market rules are silent on this issue.</i>
			RERS		DSO <i>Gap: There is nothing about aggregation and grouping of metered data. Market rules are silent on this issue.</i>
Actor	Metering Point Administrator	A party responsible for registering the parties linked to the metering points in a Metering Grid Area. Also responsible for maintaining the Metering Point technical specifications and creating and terminating metering points.	FERC	General Conditions of Supply . Part III-Chapter I	DSO Implicitly defined
			RERS	General Conditions of Supply, Art. 23. (3)	DSO



## **Gap Analysis – Key Findings**

**BiH regulations on metering are generally in compliance with the standardized role model, except in two cases:**

- **Meter Data Aggregator:**

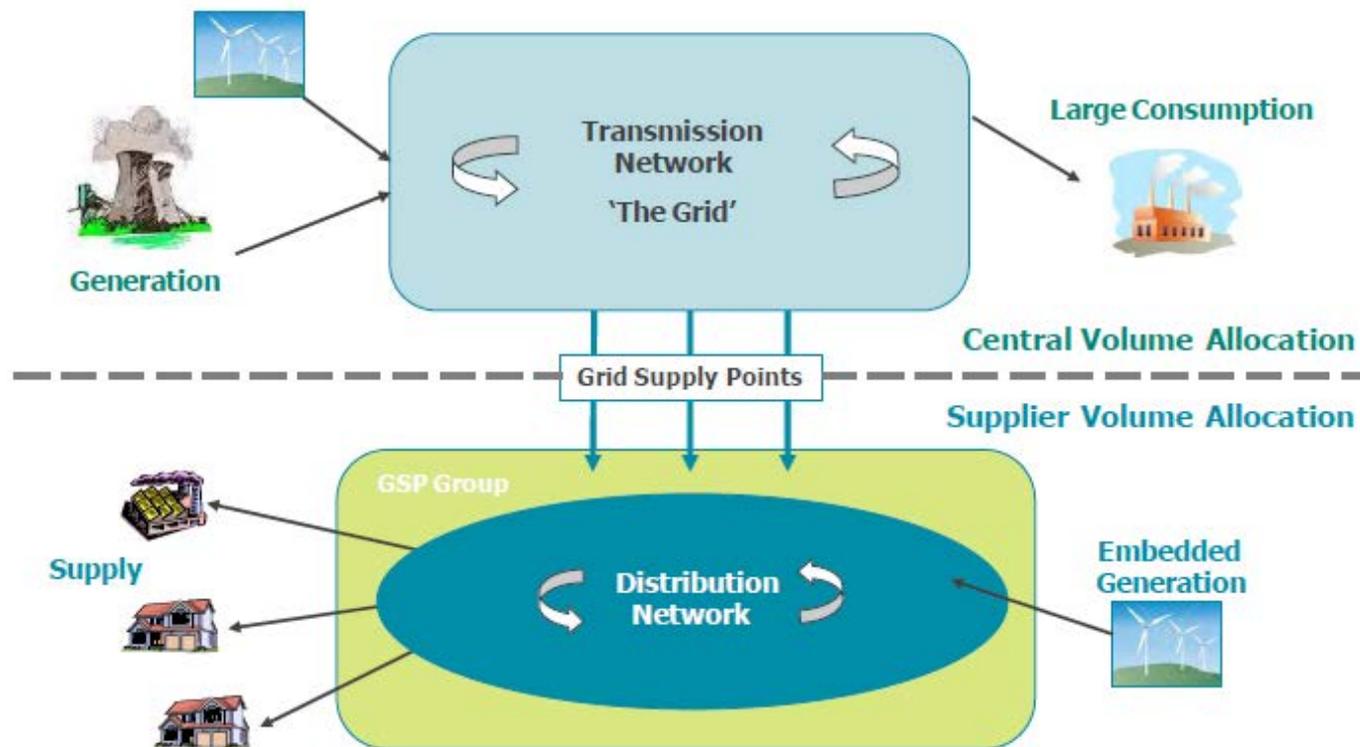
**Metered Data Aggregator's role is to aggregate data from all meter responsible parties. DSO's role as a metered data aggregator in the distribution network is not adequately described and determined.**

- **Metered Data Responsible Party:**

**While the DSOs are obliged to establish a database for metering data, the methodology to validate it and structure of the database are not determined in the rules.**



# International practice – Great Britain (GB)





## International practice –GB (Cont'd)

- **“Central Volume Allocation (CVA)”**: The transmission network and all generation and demand directly connected to it.
- **“Supplier Volume Allocation (SVA)”**: The distribution network and all generation and demand connected to it. Means the determination of quantities of Active Energy to be taken into account for the purposes of Settlement in respect of Supplier Balancing Mechanism (BM) Units;
- **"Supplier BM Unit"**: BM Unit registered to a Supplier. These BM Units cover Supply and contain all of a particular Supplier's Metering Point Administration Numbers (MPANs) for a given Grid Supply Point (GSP) Group.



## International practice –GB (Cont'd)

- **"GSP Group": means a distinct electrical system, consisting of:**
  - i. the **Distribution System(s)** which are connected to the **Transmission System** at (and only at) **Grid Supply Point(s)** which fall within one **Group of GSPs**, and
  - ii. any **Distribution System** that:
    1. is (i) connected to a **Distribution System** in paragraph, or to (ii) any other **Distribution System** under this paragraph, and
    2. is not connected to the **Transmission System** at any **Grid Supply Point** and the total supply into it, which is determined by metering for each half hour.



## International practice –GB (Cont'd)

- **BM Unit** that is connected to the **Transmission Network** (e.g., a large coal plant or steel works) is part of the **CVA** market.
- **BM Units** connected to the **Distribution Networks** (e.g., a **Supplier's** customers in that area or an **Embedded Generator**) are part of the **SVA** market.
- **All CVA sites** are half-hourly metered. This data is collected every half hour and feeds directly into the **Settlement Calculations**.
- *All SVA data also goes into Settlement, but through a more indirect route.*
- **All SVA sites** are not half-hourly metered.



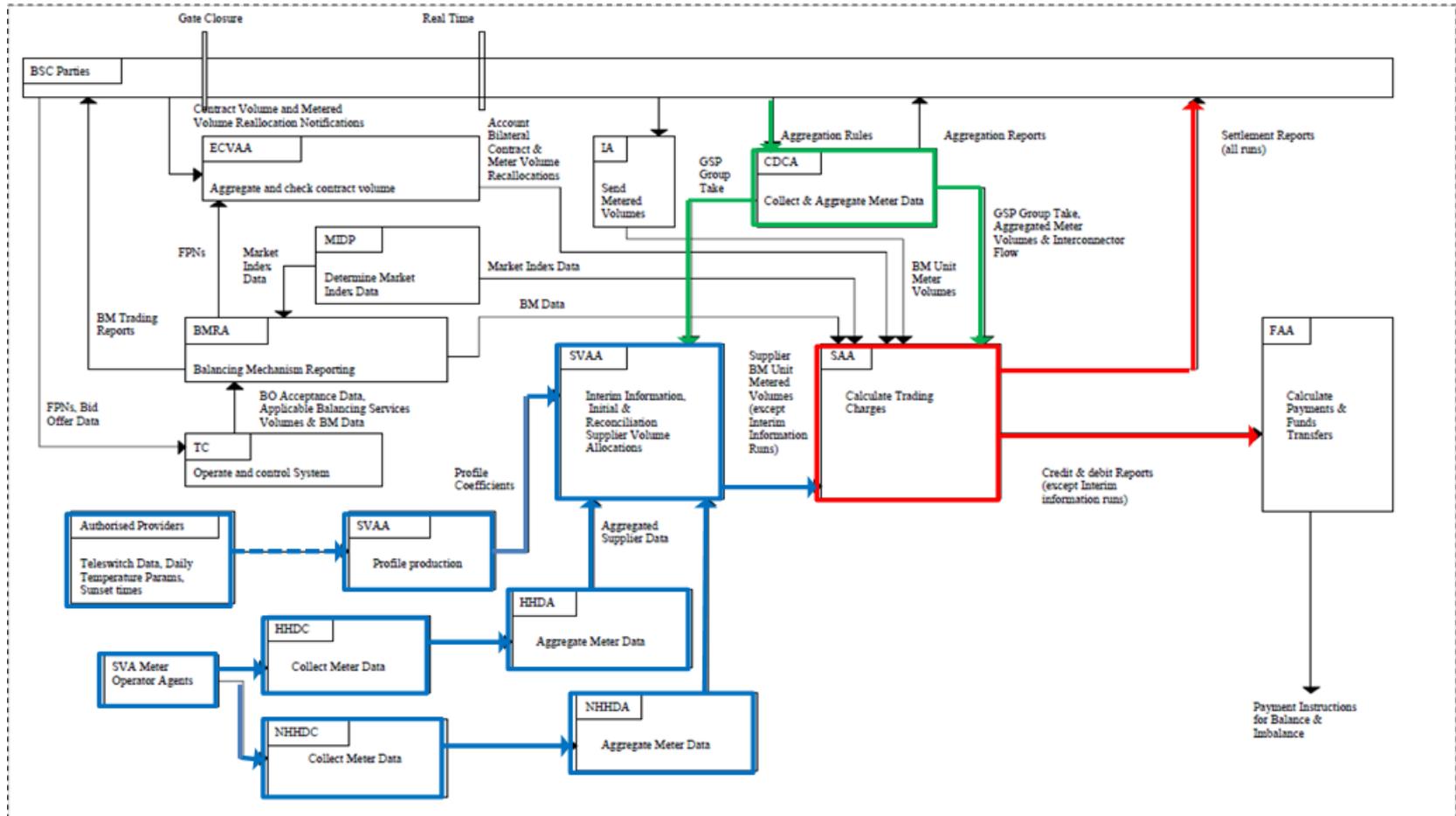
## International practice –GB (Cont'd)

BM Unit	Prefix	Description
Directly Connected	T_	These BM Units are directly connected to the Transmission Systems.
Embedded	E_	These BM Units are embedded into a Distribution System.
Interconnector	I_	These BM Units are related to an Interconnector.
Supplier	2_	These BM Units cover Supply, and contain all of a particular Supplier's MPANs for a given Grid Supply Point (GSP) Group.



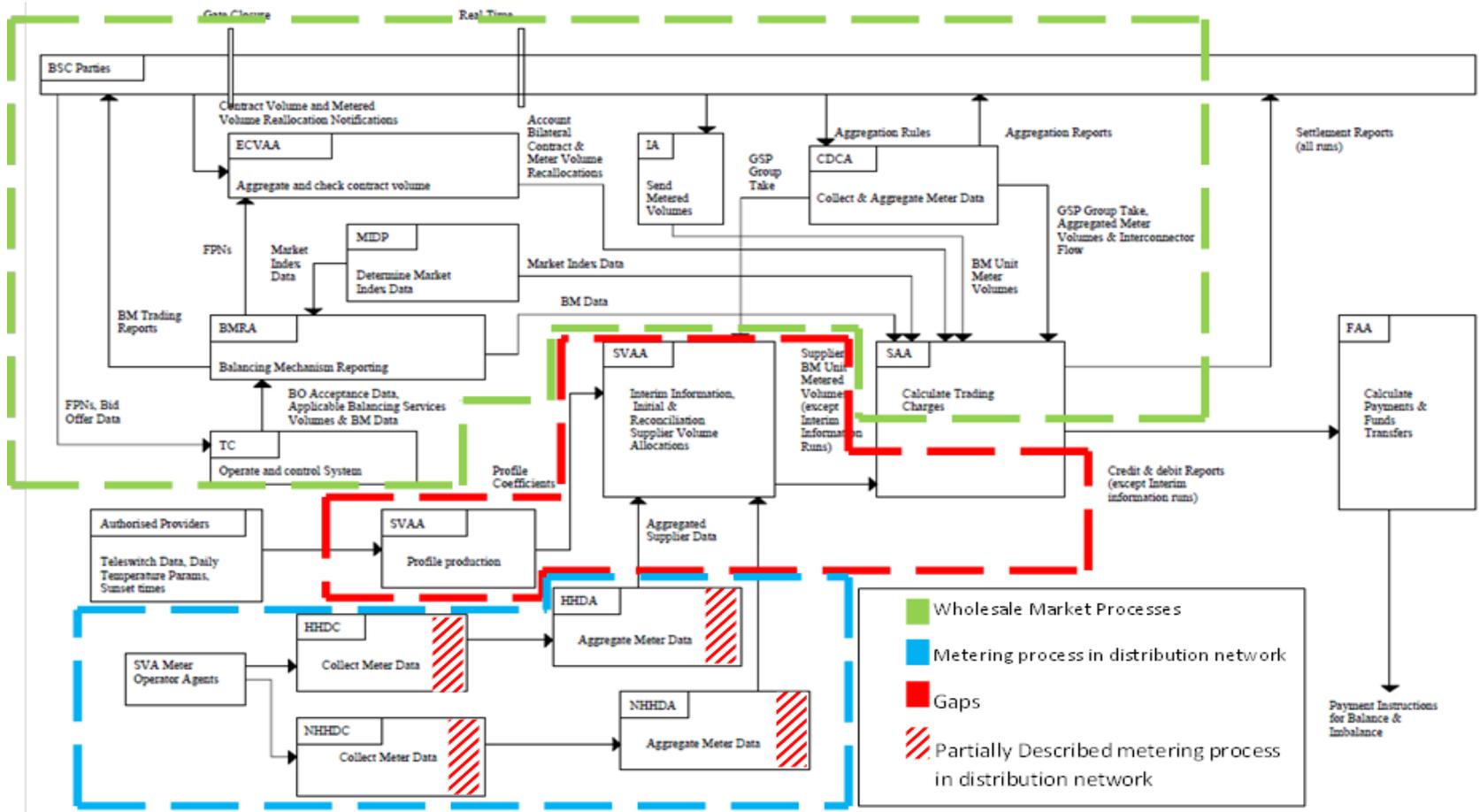


# Trading Arrangements Context Diagram





## BiH documents vs. International Practice



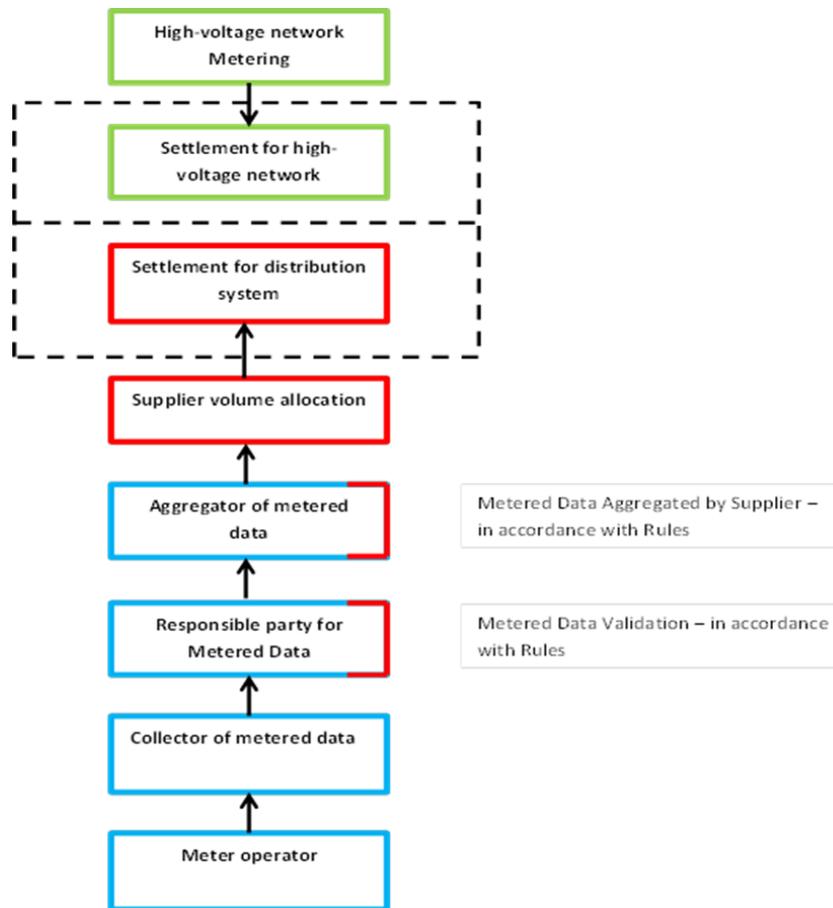


## BiH documents vs. International Practice

- **BiH regulations and rules:**
  - cover areas colored in green and blue on the **Slide 17**
  - areas colored in red are not covered
- **Slide 19** presents the same figure in the simplest way



# BiH documents vs. International Practice





## **BiH documents vs. International Practice**

### **The gaps are the following:**

- The metering process , including metered data validation, aggregation, non-incremental metering data profiling and meter data flow between actors in the distribution network and retail market are not described in full in the documents.**
- Metered data processing for Supplier Volume Allocation is not described and assigned to an actor in regulations**
- Metered data and processed metered data flow are not described in the regulations, including actors' assignment to use them for balancing settlement purposes.**



## **Actions to be made in Distribution Network**

- **Prescribe provisions in rules to validate metered data in order to ensure collected data could be used for balancing settlement and create technical preconditions for it.**
- **Prescribe provisions in rules to aggregate metered data and create technical preconditions for it.**
- **Prescribe methodology to profile non-incremental metered data and include it in rules.**
- **Determine the actor to perform balancing supplier volume allocation.**
- **Prescribe provisions in rules to allocate balancing consumed volumes by supplier and create the technical preconditions for it.**
- **Prescribe provisions in rules to describe metering data flow.**



## **Issues to be discussed and agreed upon**

- **Who will calculate and allocate imbalances for suppliers in the retail market?**
- **How should inputs be provided from the ISO and the Actor assigned to perform Supplier Volume Allocation?**
- **Reporting systems on metered, processed, validated, aggregated and profiled data, who sends what and when to whom?**



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