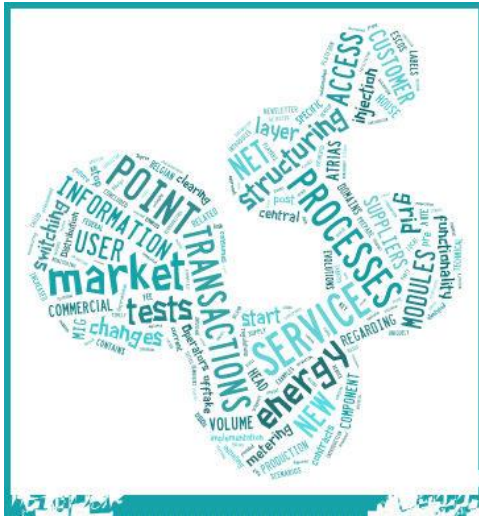


The Belgian Energy Market Model in 2016



This newsletter elaborates on the new federal clearing house Atrias and the new energy market model as documented in the MIG6¹.

Atrias was founded in 2011 by the five most important Distribution Grid Operators (DGOs) in Belgium: EANDIS, Infrax, Sibelga, ORES and TECTEO. Atrias' mission is to work with the energy suppliers, distribution grid operators and regulators to develop new and **improved market processes**. These changes will be put into service by mid-2016 and should prepare the Belgian energy market for future evolutions, such as smart meters, increased decentralised production, commercial differentiation in tariffs, ESCOs², etc.

Together with the implementation of new market processes, a **central clearing house platform** will be put into service. In addition to facilitating cooperation between the DGOs, this central market data platform should also lead to simplified administration for the other energy market players and for the customer.

And last but not least a **new market model** will be put into service.

Evolution Energy market

The European 20-20-20 targets will result into a further increase of decentralised production, use of smart meters, use of electrical vehicles, etc. which will also mean more prosumers and more ESCOs offering services such as energy audits, load management, demand response services, local aggregation services, etc.

To facilitate the offering of new services by ESCOs, it is important that information such as technical installation characteristics, consumption -, and/or production profiles of a prosumer can easily be provided to an ESCO. Of course this information is only to be provided after the prosumer provides a mandate to a specific ESCO so privacy laws are rigorously applied.

The pricing mechanism suppliers are allowed to offer to buy locally produced electricity (such as compensation, valorisation, etc.) depends on regional regulations. As investment costs of local production will most probably decrease further, regional authorities might decide to put new pricing mechanisms in place.

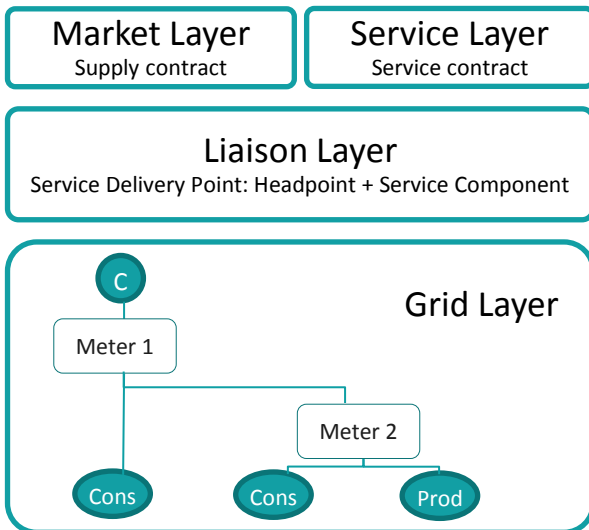
¹ The Market Implementation Guide 6.0 documentation currently has "for consultation" status:

http://www.atrias.be/UK/Pages/Publications_UMIG60.aspx

² Energy Service Company that does not have an energy supplier license and offers energy services.

Key changes to market model

In order to cope with the above requirements, a **multi-layered market structure** will be introduced, separating the commercial information from the operational and physical information.



³The **market layer** contains the commercial information regarding supply contracts concluded between a customer and an energy supplier. The **service layer** contains commercial information regarding service contracts concluded between a customer and an ESCO.

The **grid layer** contains the information about a customer’s technical installation, which is uniquely identified via the **head point** which corresponds to an EAN-GSRN⁴. The Distribution Grid Operator creates a head point per net user-market (gas or electricity) combination.

The **liaison layer** provides the link between the grid layer and the market/service layers via the **service delivery point**, which is a combination of a head point and a service component. When the service delivery point is related to a supply contract, it is called an **access point**; when it is related to a service contract, it is called a **service point**.

Here are some examples of services and the related service components:

Service	Service component	Description	# Access points
Consumption	*Offtake	The net user only consumes energy.	1
Compensation	*Compensated offtake	The net user consumes and produces energy. When the net user injects energy into the net, the offtake volume is decreased by the injected volume. The minimum volume can never go below 0.	1
“Vermarkting” injection	*Offtake *Injection	The net user consumes and produces energy. The net user sells the volume he injects into the net to a supplier that is different than the one from whom he buys his offtake volume.	2
...			

Today, the first two services are offered to net users with an installation <10kVA. The “vermarkting” injection service is not yet offered to net users with an installation <10kVA, as current regulation does not allow this.

The service components that can be offered for a head point depend on the characteristics of the technical installation and on the regulations in force.

³ A supply contract concluded by a prosumer with an energy supplier can either be the consumption (prosumer buys) or either the production (prosumer sells) of energy

⁴ EAN-GSRN = European Article Number/Global Service Related Number – unique numeric field of 18 characters

For each service delivery point one will also have to define the **configuration**. The configuration specifies the format the exchanged measurement data is to comply with.

Config id	Measurement regime ⁵	Time of Use (ToU) ⁶ Set	Invoice frequency	Information frequency
1	1	TH	Yearly	Yearly
2	1	TH	Yearly	Monthly
3	1	HI/LO	Yearly	Monthly
4	1	HI/LO	Yearly	Monthly
5	3	15'	Yearly	Monthly
6	3	15'	Monthly	Monthly
...				

The configuration that can be offered for a service delivery point depends on the characteristics of the technical installation, the regulations in force and the mandate given by the customer to the specific market player/third party to which the measurement data will be communicated.

Example: “vermarkting injection” + ESCO service to monitor production efficiency :

Let us clarify these new concepts with the example of a prosumer who selects the service “vermarkting injection” and also buys an additional service from an ESCO company to monitor the production volumes of his solar panel installation. He buys his offtake volume from Electrabel and sells his injection volume to Essent.

The injection volumes and offtake volumes will be measured separately by his smart meter (meter 1). His production volumes are measured via a submeter (meter 2). The offtake volumes will be communicated to Electrabel, the injection volumes will be communicated to Essent and the production volumes will be communicated to the ESCO company.

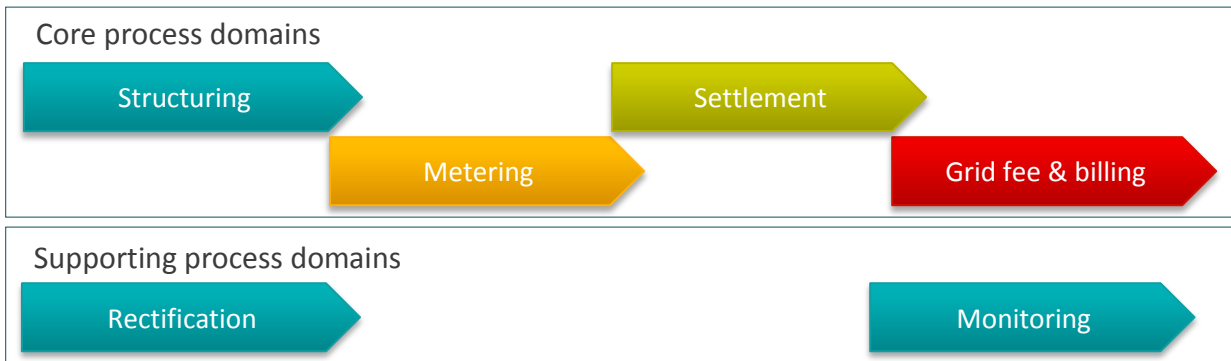
The prosumer wants to be informed on his offtake volumes by month, but wants to be invoiced on a yearly basis, while for his injection volumes he wants to be informed on a monthly basis and invoiced on a monthly basis. For his ESCO services, he expects daily information.

⁵ Measurement regime: Defines a standard granularity level (predefined) of the measurement data made available to the market. Classical mechanical meters will have measurement regime 1, Smart meters can have measurement regime 1 classical, 2 intermediate or 3 Detail

⁶ Time of Use: Timeslice for which the measurement data is aggregated. TH=Total hours , HI/LO =High/Low, 15' = 15 minute level

Market processes

The figure below gives an overview of the energy market process domains:



Some key changes introduced by the improved market processes are:

Structuring	Pre-switching functionality Transactional “start/stop” modular approach Switch partly from ex-ante tests to ex-post monitoring tests
Metering	Introduction of new functionalities and new measuring regimes to support smart meters and European energy efficiency guidelines (e.g. commercial prepayment, flexible invoicing frequency, decentralised production unit access point treatment, etc.)
Settlement	Introduction of SLP by timeframe EAN-based allocation and reconciliation
Grid fee & billing	Implementation of a central and continuous grid fee calculation Link between grid fee and metering processes (measured volume split based on SLP by tariff time-slice) Pull functionalities for invoicing

In a next newsletter we will zoom in on changes to the structuring domain.

Conclusion

The federal central clearing house Atrias aims to put the improved market processes, together with the new central clearing house application, into service by mid-2016.

Given the huge impact of the MIG6 on the energy market process domains, we advise Belgian market players to perform their impact analysis in a timely manner to prepare for the challenges in the evolution towards a smart Belgian energy market.

For more information regarding this article, please contact: Frank Sels via frank.sels@trilations.com

Authors: Alex Curtoud & Filip De Belie

Sources

<http://www.atrias.be>