

Memo: Survey DataHub Date: June 7 th , 2019	 European forum for energy B usiness I nformation eX change
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Survey: DataHub

In the strategy paper by ACER “A bridge to 2025” of September 2014, it was proposed to establish common criteria for a well-functioning end customer market and to develop a roadmap. The goal of this paper is to create a competitive, reliable and innovative European end customer market by 2025. Therefore, requirements have been formulated by ACER to optimize processes, e.g. to enable supplier’s change within 24 hours. In order to shorten processes and make them more efficient, a growing number of European countries use or plan to use a central DataHub.

For ebIX® member countries that are planning to implement a DataHub and for EBG, it is necessary to have a common understanding about the meaning, use and planning of DataHubs in the energy market of the different countries. Therefore, we have prepared a survey to answer a few questions about the following criteria:

- In general
- Organizational issues
- Financing
- Security issues
- Customer involvement
- Questions about the processes
- Official reporting
- Technical issues

The ebIX® member countries are requested to review the questionnaire in order to create a good basis for the new Role-To-Role (HUB) Project and to get a common understanding of the meaning of a DataHub. In the new “hub”-project the questionnaire can be extended by further points. Perhaps it makes sense during the project to expand the survey for a common comprehensive understanding and then to publish this survey.

Please describe the current situation of a DataHub in your country and what is specifically planned (please do not document any wishes or assumptions).

In general

We distinguish between:

- Communication Hub (providing central access and routing)

and

- DataHub (Hubs), which is (are) formal responsible for storage of master data and also providing one or more market processes. (Which is defined in more detail in the first question)

Country	For the general understanding: What kind of Hub(s) do you have? What does the Hub structure look like? (Description, Link etc.)	What are the (formal) responsibilities for the Hub(s)?	What is the purpose and what are the drivers for a DataHub for the market and the market players?	DataHub in use or in planning or under construction?	Does the law or regulation make formal requirements for DataHubs in the energy market?	What are the recognised advantages or disadvantages with your Hub(s)?
Belgium	There is no central datahub. The DGO's each have their own access register, metering data system and settlement system.	The planned Central Market System (CMS) will be responsible for all message exchange and will contain the access register, a metering database, a settlement engine for allocation and reconciliation and a gridfee calculation engine	A harmonized way of working for all market actors. A single point of connection for all market actors.	Under construction	No, only for the market processes.	

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Denmark	<p>It is a centralized information exchange system for the retail market including the whole sales settlement.</p> <p>The datahub will take of the business processes in the downstream market such as change of supplier, moves, meter data and settlement, and will also be responsible for reporting aggregated data for imbalance settlement (eSett).</p> <p>Link: https://en.energinet.dk/Electricity/DataHub and on the page especially the PDF file: LEARN MORE ABOUT DATAHUB AND THE DANISH SUPPLIER-CENTRIC MODEL</p>	<p>The DataHub is a storage for master data (Metering Points and Customers) and measurement data.</p> <p>The DataHub execute business processes and is doing the whole sale settlement.</p> <p>The DataHub will also provide all the needed information to eSett for the imbalance settlement (Nordic Balance Settlement)</p>	<p>A single point of connection for all market actors.</p> <p>.....</p>	In use	Yes some	

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Finland	<p>It will be centralised information exchange system for the electricity retail market “datahub”.</p> <p>The datahub will perform the tasks defined by law for example, business processes and balancing.</p>	<p>Responsibilities are defined in the Electricity Market Act. Datahub is measurement data storage, execute business processes, takes care of the distribution system operator's imbalance settlement and balance corrections, ensures that all the information needed is delivered to eSett according to the Nordic Balance Settlement model. Promote information exchange and enable value-added services.</p>	<p>Concentrating all essential electricity use information in one place, the datahub will speed up, simplify and improve the actions of all parties. Furthermore, the centralised solution provides all parties with equal, simultaneous access to the information.</p> <p>A qualitative perspective and cost analysis also supported the selection of the datahub.</p> <p>Customers get better customer service and new services and are more active in the electricity market.</p>	Go-live is in April 2021.	Yes, the Electricity Market Act and Regulations.	See answer in column 3.
Germany	We don't have a hub(s) in use.	There are no formal responsibilities yet.	The TSO and some DSO and suppliers are interested in a hub. Not the regulator. But the interests are different.	No public discussion.	NO	To reduce the complexity in our market communication

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Netherlands	<p>We have data-hub and communication-hub functionality at EDSN.</p> <p>The Metering Point Administration and the allocation/reconciliation and near-time balancing is data-hub functionality and therefore contains metered data.</p> <p>We administer some special registers for the market as a data hub.</p> <p>The communication hub is for metered and meter data and some other functions.</p>	<p>Formally it is the joint grid operators that are responsible.</p> <p>The hub contains the Metering Point Administrator role and (soon) the Metered Data Aggregator role (for allocation of energy and reconciliation).</p> <p>Some applications are dedicated for certain purpose and users and can have different ownership.</p>	<p>The initial initiative came from within the sector to accommodate the new liberalised market processes. First to ease the communication and make processes better work, later on to centralize registers and administrative functions as well. In that process the governance went to the joint grid companies.</p>	<p>In use since 2002 and still evolving.</p>	<p>There is no direct link to the hub in the regulation, law of codes. In the Information code the use of a joint facility is stated.</p> <p>The regulator values the data-hub but leaves it to the market parties to organise and operate.</p>	<ul style="list-style-type: none"> • Simplification to single point of communication leads to less costs at the parties and lower barriers to enter the market. • One uniformed process for all parties involved eliminates the local differences, as for instance between all different administrators (as for multiple Metering Point Administrators that work in detail a bit different and require dedicated skills at the suppliers to operate optimally). • Transparency and level playing field. <p>The general disadvantage (or better: risk) of the “single point of failure” never proved true so far yet (in almost 20 years).</p>

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Poland	There is no central datahub. Communication between market participant is peer to peer via local web portals.	Each DSO is responsible for its own registers and information exchange system with the market players. In the future all retail electricity market processes will be realised via central datahub, based on master data stored in a central database.	Purpose: A harmonized way of working for all market actors and a single point of contact for all market actors. The initial initiative of harmonizing market processes came from 5 DSO's (communication hub project). Then, based on the decision of Ministry of Energy, the role was moved from DS's to TSO, and the project has shifted from communication hub into central data hub.	Central Data Hub project has just started. Appropriate legislation is under construction. TSO will be the party responsible for datahub implementation and maintenance.	Appropriate legislation is still under construction.	-
Sweden	It is a central data hub for data exchange between energy suppliers, DSOs and TSO. The hub will perform the reconciliation process Be responsible for reporting aggregated data for imbalance settlement (eSett).	Administrate the processes in left column.	Positive cost benefit analysis when distributed processes are centralized. Easier to adapt to future market changes. Supplier centric model – one party for the customer. More active customers. The suppliers will have competition on equal terms.	A prototype is being built at the moment. Go-live is probably in the end of 2021.	The Swedish TSO has got a government mandate to build a data hub. All market parties must use the data hub when in use.	TBD. See answer in column 3

Organizational issues

	Who is owner of the Data Hub(s)?	Who operates the DataHub? If a service provider is in use, what is the relationship between owner and service provider?	Who decides what the Data Hub is used for? How is it decided?	Who is responsible for the decision on further developments of the DataHub?	Is there an user guideline for the DataHub? (If yes, please answer questions anyway!) Please insert document or link.
Belgium	The DGO's	Atrias, a subsidiary of the DGO's	The DGO's	The DGO's	Published as BRS and IM documents on the Atrias website
Denmark	The company Energinet DataHub A/S owns the DataHub (part of the Energinet group) and Energinet is the TSO	Energinet DataHub A/S. Also the owner.	The legislation and the market parties and the TSO. Normally changes comes from different working groups or changes in legislation	Energinet DataHub A/S in cooperation with the market parties and the Danish Energy Agency	https://en.energinet.dk/Electricity/DataHub
Finland	Fingrid Datahub Oy. Fingrid Datahub Oy is Fingrid Oyj's (TSO) wholly owned subsidiary established to handle the operations linked to the datahub	Fingrid Datahub Oy (TSO)	The Ministry of Employment and the Economy of Finland has drafted the purpose in cooperation with Fingrid, the authorities and representatives of the industry.	Fingrid Datahub Oy carries out development work in cooperation with the industry. Must be taken into account possible effects on the law.	https://www.ediel.fi/en/datahub
Germany	No statement possible.	No statement possible. Owner s a problem in the informal discussion.	No statement possible.	No statement possible.	No statement possible.

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Netherlands	The joint (6) DSO's and (2) TSO's. Responsibilities can be different between the different administrations EDSN performs.	The hub is operated by EDSN, owned by the joint grid companies (TSO's and DSO's).	Formally the grids decide what EDSN is doing. Market processes are decided by NEDU, a union of all market roles and have to be implemented in the hub. Indirectly all the market parties together (united in NEDU) decide what the hub does and how it is done.	The joint grids are responsible. Discussions and decisions in the NEDU will steer the direction.	There are a lot of user manuals for all the different specific functions the hub performs. The manuals are published restricted for the market participants on a SharePoint site (so no working public link available).
Poland	The owner of the future central data hub will be TSO.	TSO will be the owner and the operator of the system at the same time.	Not yet regulated.	Not yet regulated.	Not yet.
Sweden	Swedish national grid (TSO)	Swedish national grid (TSO) will be responsible for operating the data hub.	The purpose has been authored by the Swedish inspectorate together with hearings and remittance to the market.	The TSO is responsible to build the data hub. It is not yet decided any processes for new or changed functionality.	Not yet.

Financing

Country	How is the DataHub financed concrete? (Calculation principle)	How to decide how the funds from the Hub(s) financing will be used? (Implementation, support, further development)?	Are the costs of the DataHub monitored?	Are there any statements, whether the implementation/ operation of the DataHub has led to savings?
Belgium	Not in use yet	Not in use yet	Not in use yet	Not in use yet
Denmark	The DataHub is financed through Energinet's tariffs	The DataHub Energinet	The cost will be regulated from 2021	
Finland	Datahub costs will be charged from its users. Cost sharing has not yet been decided.	Will be decided later.	The costs are monitored in the ongoing project.	Project ongoing. Results later.
Germany	No statement possible.	No statement possible.	No statement possible.	No statement possible.
Netherlands	<p>Depending on the specific function it is financed by the grids (under their market facilitation obligations).</p> <p>For example, the Metering Point Admin functions are DSO payed, based on their number of Metering Points.</p> <p>Some specific functions are financed by a TSO.</p> <p>The Grids have a not-specified component for Market Facilitation in their fees.</p>	Per initiative funds are made available. Grid company's individual contribution depends on the level of participation and functionality involved.	EDSN monitors all the costs. EDSN is monitored by the Grids. The Grids are monitored by the Regulator	<p>It is always hard to compare with a non-existing situation.</p> <p>In general, it is cost saving to have one Metering Point Administration versus multiple Administrations.</p> <p>One single communication point and uniformed processes leads to less costs at the market players.</p> <p>We had a recent calculation that implementing a simple communication hub a specific communication saves sector wide over € X million annually just on maintenance of all the connections.</p>
Poland	It is planned to finance DataHub via TSO tariff.	Not yet regulated.	Not yet regulated.	Not yet regulated.

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Sweden	<p>The cost for the data hub will not be financed by the grid fee. All actors will be billed from the hub/TSO.</p> <p>The calculation to distribute the costs for the data hub will be investigated and decided later.</p>	Too early	The costs are monitored in the ongoing project.	Too early

Security issues

Country	What data protection rules must be observed? Are there any special national rules?	How are the access rights regulated?	Who can send inquiries to the Data Hub?	Who maintains the data?
Belgium	GDPR and a “security by design” guideline imposed by the DGO. E.g.: all data is separated between the DGO’s.		All connected market actors will be able to send inquiries according to the processes described in the BRS.	The DGO’s
Denmark	GDPR and security rules as IP addresses, certificates. Beside this we have currently in Denmark a “war rule” meaning that the data in the DataHub must be stored in Denmark (still discussed if the DataHub is part of this rule)	When entering the market, a party will have to be assessed by Energinet as user in DataHub. Functionality is granted based on the role. The party itself assigns access to its own employees (within that role).	Registered players in the market	The DSO and the Balance Supplier
Finland	GDPR must be observed.	The customer can authorize a Datahub party to use its own information for a specific purpose. The Datahub parties are entitled to the information only during the contractual relationship.	You have to be a registered actor in the data hub. Datahub will offer a user interface for the customers where the customers can see information about themselves that registered to Datahub.	The parties are responsible for the data they provide to the datahub.

Country	What data protection rules must be observed? Are there any special national rules?	How are the access rights regulated?	Who can send inquiries to the Data Hub?	Who maintains the data?
Germany	In case of hub/hubs: GDPR must be observed. Also national requirements from the Bundesamt für Sicherheit (BSI) and the national Datenschutzbeauftragter (Data Protection Officer)	No statement possible.	No statement possible.	No statement possible.
Netherlands	GDPR must be acknowledged. Further rules on clear competition have to be acknowledged and as imposed on the grids all parties in a role have to be treated equally. And the usual data protection applies based on business values.	When entering the market, a party will have to be assessed by EDSN (proper licencing, etc.) and will be registered. Functionality is granted based on the role. The party itself assigns access to its own employees (within that role) and has to adhere to the usage rules (proper and timely processing).	All parties in a role have the same rights. Depending on the functionality defined for the role they can access data they are entitled to. The party will only get the data it has or had responsibility for (i.e. a grid can only see data from Accounting Points (AP's) in its own grid, a supplier can only see data from AP's it supplies or supplied, etc). There are some anonymised reports for more general usage.	Data is maintained by the acting roles in the corresponding market processes. For instance, the DSO initiates an AP and maintains the more technical data of it according to predefined processes. By (e.g.) moving in a customer to the AP the supplier updates the master data of that AP.
Poland	GDPR must be observed. The rest is not yet regulated.	Not yet regulated.	Not yet regulated.	Not yet regulated.
Sweden	GDPR must be observed. A national hub law will be in place before the data hub go-live.	You have to be the owner for the information or have a business connection (for example ongoing delivery). Otherwise you need a customer consent. The authority for statistics and couple of more authorities have permission in law to request certain information.	You have to be a registered actor in the data hub.	

Customer Involvement

Country	Are customers involved in the processes when a Data Hub is available? If so, how are they involved?	Can/ must customers maintain their own master data?	How does the customer release his data when a requesting party wants to retrieve this data from the DataHub?
Belgium	Possible future evolution not decided yet	No	N/A
Denmark	No	No, but a customer can start a process for cancelling a supplier switch (if wrong)	A new possibility is under construction. Here the customer can give authorization to a third party which is entitled to the information on the basis of the contractual relationship.
Finland	Datahub will offer a user interface for the customers where the customers can see information about themselves that registered to Datahub. The customer can authorize a Datahub party to use its own information for a specific purpose.	The customers only can check their master data, but they are not allowed to change them. Customer have only the opportunity to give or remove authorizations.	The customer gives the authorization, or the party is entitled to the information on the basis of the contractual relationship.
Germany	If we will have hub with personal data, the customer must be involved in minimum for to give permission. Also, there must be a possibility that the customer can see who has the possibility for his data and who used it.	No statement possible.	No statement possible.
Netherlands	Customers are not involved in the processes and data alignments of the hub. As an effect of the GDPR we are working on a customer portal to see its own energy related data.	No. Currently it is indirectly via the grid or the supplier the customer can have data changed.	At the moment the customer has to give explicit consent to that party and with that (checkable consent) the party can retrieve restricted master data. For instance, for new suppliers we have made 5 stages depending on the contracting phase where the supplier can retrieve some specific master data elements of the AP. We are planning to implement a generic customer consent functionality (comparable to what ebIX is modelling).
Poland	The customers will not be involved in the processes directly, but via BS. They will be offered a dedicated portal to see its own energy related data.	Not yet decided.	Not yet regulated.
Sweden	They don't need to, but they have the opportunity to login into the customer portal. The customer portal can be used to get an overview of your contracts and register/withdraw a customer consent for ESCO/energy supplier.	No	Contract or a customer consent registered in the customer portal.

Questions about the processes

Country	For which processes the DataHub is used? (Only information for master data or also processing?)		Does the DataHub serve to carry out any master data or processes or does it only allow queries?	Does the DataHub proactively inform the market partners about changes, perhaps to master data (e. g. address information, metering point master data)? If yes, how is the information provided?
	Now	Planned		
Belgium	Not in use yet	Structure, measure, grid fee bill, settle	Not clear	Yes, described in the BRS processes
Denmark	The DataHub is used for all processes regarding the states of a Metering Point, and all market processes connected to a Metering Point such as moves, switches of supplier and end of supply. It is also used for measurement data and does the settlement between market parties in the end user market.		The DSO is responsible for Metering Point master data, while the supplier is responsible for customer master data.	When a party updates master data by a business process– all relevant parties automatically are informed about the changes.
Finland		Processes are listed in the law: Supplier switch, move in/out, master data change, delivery and storage of measurement data, balancing, disconnection or connection.	Information needed in processes will be sent via datahub.	Yes, datahub sends notifications of changes to the parties via message exchange.
Germany	No statement possible.	The TSO which the metered data for balancing, The DSO which for a minimum the master data for accounting and metering point (market location, metering point)	No statement possible.	No statement possible.

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	Now	Planned		
Netherlands	The hub is used for: Metering Point Administrator role: including all corresponding market processes from creation to decommissioning of an AP, and processes like move, switches of supplier and Metering Responsible, end of supply / metering, change of grid, etc. Near time balancing for gas. Communication of metering data and meter data	Allocation and reconciliation starting in 2019.	As the hub performs the role of Metering Point Administrator it manages the master data – but does not change anything on its own initiative. Also, in the other different registers it maintains, the hub does not really change the data on itself, but always after triggering by a responsible role or process.	As agreed in the market processes the hub will inform the market parties. E.g. from the role of MPA it will send updates of the master data to the Affected Roles after changes in the data took place. Data is sent by xml messages in B2B communication channels or retrievable on the user portal of the hub.
Poland	Not in use yet.	Not yet regulated.	???	Not yet regulated.

Official reporting

Country	Is the DataHub used for regulatory/ official reporting or with other market partners, who are not users of the DataHub? (Legal notifications, statistics etc.)	If the DataHub is used for official inquiries. When yes, what are typical inquiries?	Do the authorities have access to the DataHub?
Belgium	No, only by the DGO's		No
Denmark	Yes	Statistical reporting – and is also used for distribution of cost, which market by Danish law has to cover.	No
Finland	Some special reports are implemented for regulator.	Reporting responsibilities transfers from the parties to the hub, for example, the number of switches.	Authorities have the right to retrieve reports made to them. No actual access to the datahub.
Germany	No statement possible.	No statement possible.	No statement possible.

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Netherlands	Some special reports are prepared for the regulator. In general, the reporting to the regulator is done via the responsible parties. We do some (statistical) reporting to official institutions on behalf of the grids.	Statistical reporting on (the use of) Accounting Points to the national Central Office for Statistics.	Officials have no direct access to the hub. Reports are sent directly or indirectly to them.
Poland	Not yet regulated.	Not in use yet.	Not yet regulated.

Technical issues

Country	Where is the master data physically located? (E. g. cloud, server central/ decentralized, other)	If master data stored in the DataHub: How does the master data get into the DataHub and how they are maintained? (E. g. technical interface, maintenance by user, other) If data are not stored in the DataHub: How get the market partner master data?	If master data stored in the DataHub: How long master data are archived? Is there a deletion concept?	Which data transfer paths are used? (E. g. Email, file transfer, SOAP)	Which formats are used? (E. g. EDIFACT, XML, REST, other)
Belgium	Specific platform	See column 4	Depends on the type of data, between 3 and 10 years. Data will be archived afterwards	Webservices, FTP, Web-portal	
Denmark	Server central	Webservices, Web portal. Maintained by the responsible market players	From 3 months to 8 years	SOAP	Xml

Country	Where is the master data physically located? (E. g. cloud, server central/ decentralized, other)	If master data stored in the DataHub: How does the master data get into the DataHub and how they are maintained? (E. g. technical interface, maintenance by user, other) If data are not stored in the DataHub: How get the market partner master data?	If master data stored in the DataHub: How long master data are archived? Is there a deletion concept?	Which data transfer paths are used? (E. g. Email, file transfer, SOAP)	Which formats are used? (E. g. EDIFACT, XML, REST, other)
Finland		The party which is responsible for the information supplies the data to the datahub.	Master data which are actual/active and in use are stored in the Hub. Older data will be deleted from the Hub. The storage period for metering data in Datahub's operative database is six years.		https://www.ediel.fi/sites/default/files/Datahub%20External%20Interface%20Specification%201.0.pdf
Germany	No statement possible.	No statement possible.	No statement possible.	No statement possible.	No statement possible.
Netherlands	The master data is on central servers in data centre's (like a private cloud) We are moving more to public cloud usage.	As explained before for the MPA all the data is coming from responsible roles via B2B (xml SOAP over TLS connections) or can be maintained via a dedicated GUI on the User Web portal. If data is not stored, we have a communication hub function in which the xml messages are passed to the addressee.	Data is kept in the production database for a couple of years and then archived (but still retrievable) after a certain period depending on the specific dataset. Same goes for deleting data depending on the data set and the corresponding regulation (GDPR, Tax etc.) Most master data is removed after 7 years (tax law)	We use the web (https) for the portals. The B2B SOAP messages are exchanges on TLS secured connections. We still use some (xml or csv) file transfer (SOAP attachments or SFTP).	The default format is xml. There is still some old EDIFACT (scheduled to be removed) We are starting with REST.
Poland	Not in use yet.	Not in use yet.	Not yet regulated.	Not in use yet.	Not in use yet.