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DSO as a neutral retail market facilitator and Metering processes in a retail market

KEMA Consulting GmbH

USAID/BiH REAP

Joint DSO and Metering Task Force Meeting

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DSO as a neutral retail market facilitator and Metering processes in a retail market

Joint DSO and Metering Task Force Meeting

Hans Pipke, Dr. Daniel Grote, Peter Fischer

26 June, 2013



Regulatory and Energy Assistance

Project Background

- **According to legislation:**
 - **Free choice of supplier for all non-household customers in Republika Srpska and the Brcko District from 1 January 2008**
 - **Free choice of supplier for all customers connected at 35kV or above in Federation BiH from 1 June 2013**
 - **Free choice of supplier for all customers** (including households) in Bosnia and Herzegovina from **1 January 2015**
- Conduct a cost-benefit analysis for a **roll-out of smart metering** by 1 January 2014 and if assessed positively roll-out of smart metering to at least 80% of customers by 2020 in Bosnia and Herzegovina
- Regulatory Energy Assistance Project (REAP) and Electric Power Sector stakeholders of BiH identified several gaps in legal and regulatory framework of Bosnia and Herzegovina, among them:
 - Distribution system operator's (DSO's) role as the neutral retail market facilitator
 - Metering in the electricity retail market (with focus on customers connected to distribution network)

Project Objectives

DSO as neutral retail market facilitator

- 1) Definition of roles and processes for a well-functioning electricity retail market, taking into account European best practice and the specific situation in BiH
- 2) Gap analysis of existing legislation and codes in BiH that describe the DSO's roles and processes
- 3) Draft missing processes and definition of the DSO's role on the retail market

Metering in retail market

- 1) Legislation regarding metering in BiH
- 2) Roles in the metering processes in relation to European best practice
- 3) Metering processes in relation to European best practice
- 4) Meter data and customer data used in this processes



DSO as a neutral retail market facilitator

26 June, 2013

Agenda - DSO as neutral retail market facilitator

- 1) Role of DSO in retail market and unbundling from supply
- 2) Processes to be defined for a competitive retail market and European practice
- 3) Gap analysis of existing legislation in BiH (short summary)
- 4) Draft processes of DSO as neutral retail market facilitator

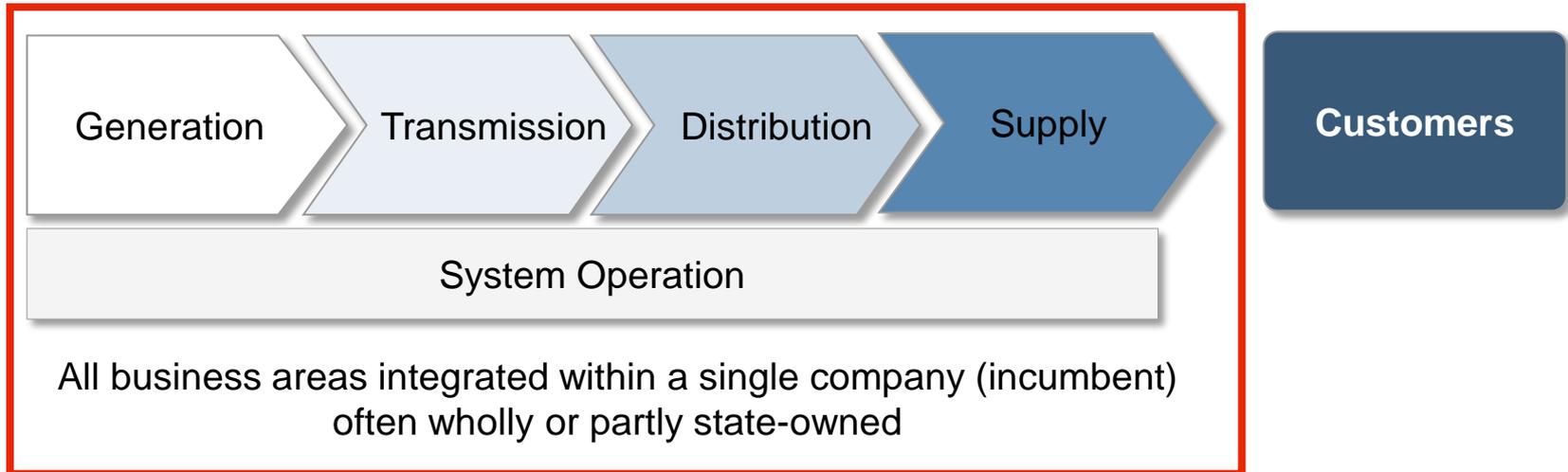
Retail Market Competition and the DSO



Retail Market Competition and the DSO

Vertically integrated company (traditional regime)

- Traditionally, all business areas in the electricity sector, such as electricity generation, transmission, distribution and the supply of electricity to end-users, have been regarded as natural monopolies not subject to competition

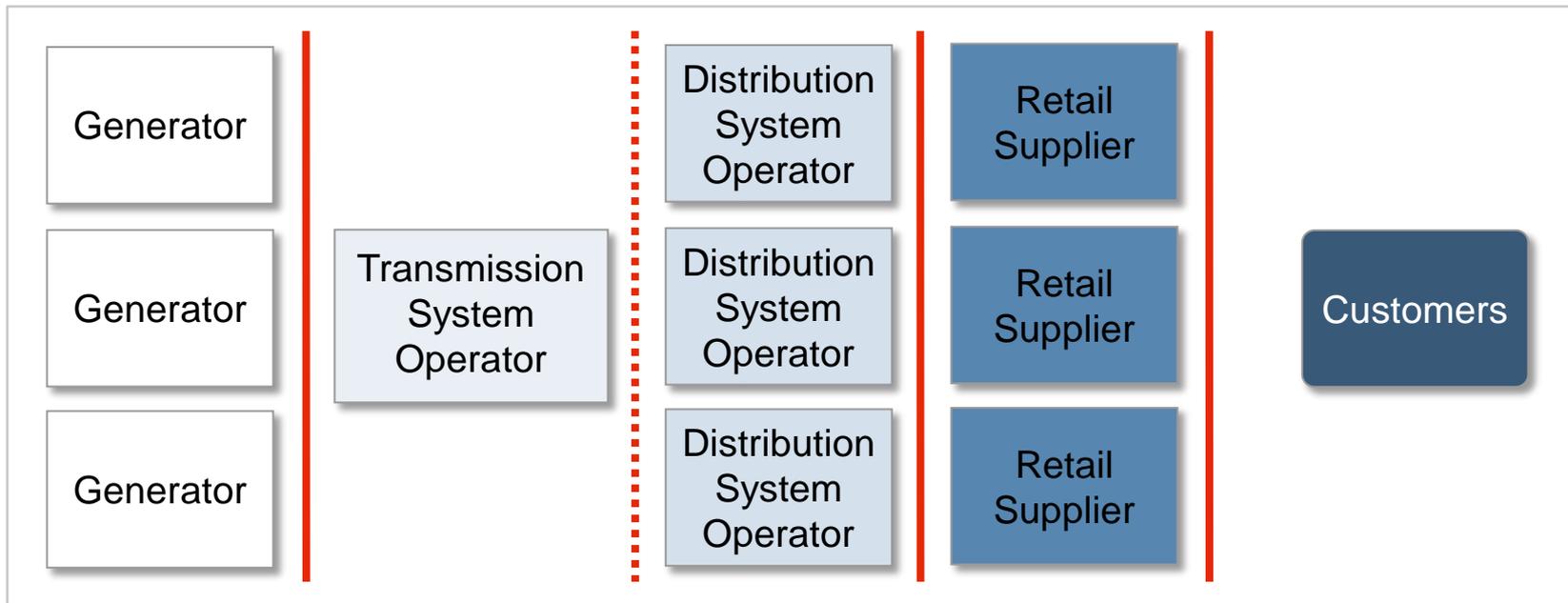


Independent
Power Producer

Retail Market Competition and the DSO

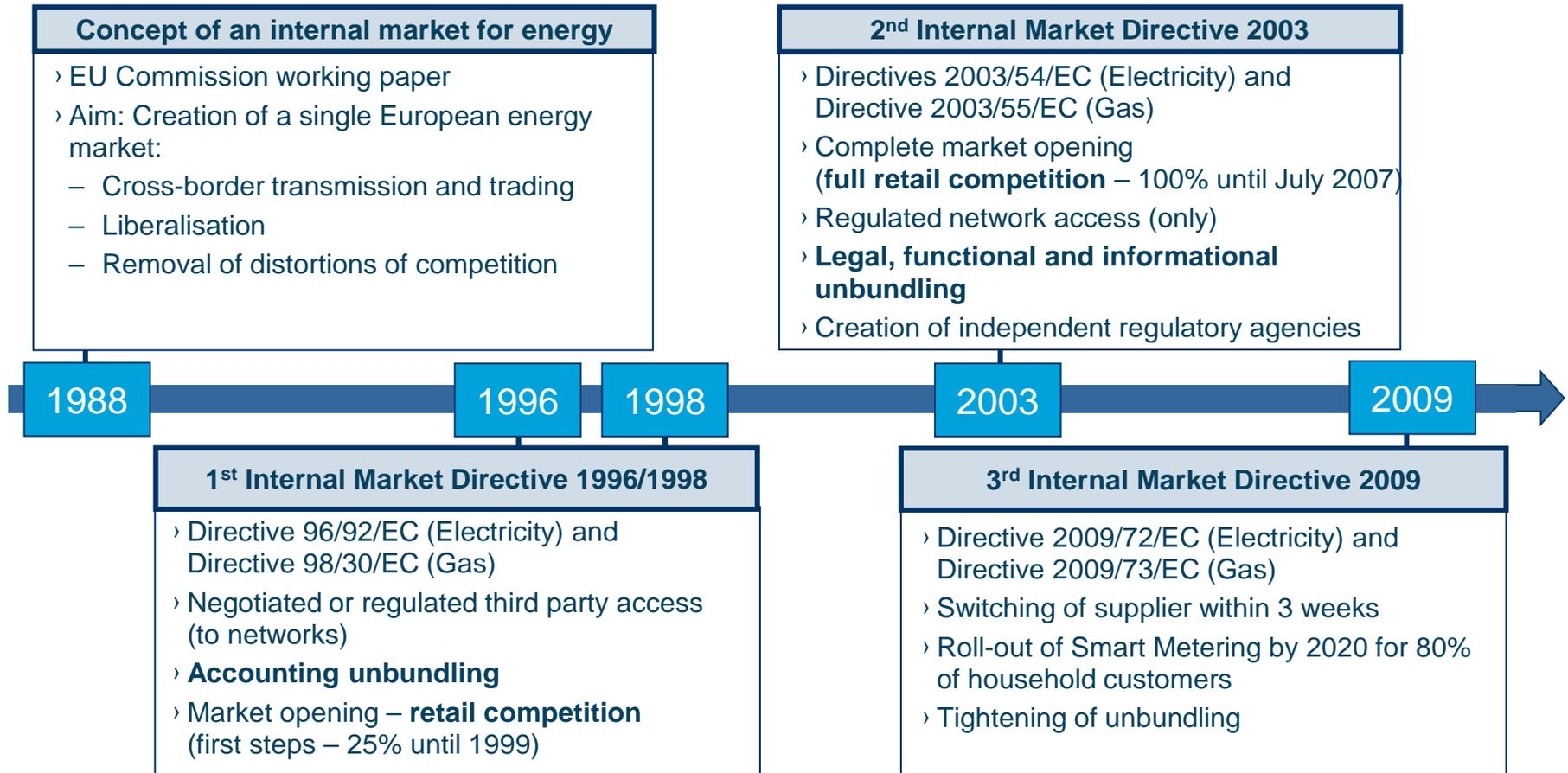
Vertical unbundling – separation of competitive and monopolistic business areas

- Now network business generally regarded as natural monopoly, while other business areas of the electricity sector are generally regarded as potentially competitive services
- Competitive business areas (generation, retail supply) organised in separate business units or companies independent from monopolistic business areas (transmission, distribution)



Retail Market Competition and the DSO

Timeline of European legislation – Internal energy market



Retail Market Competition and the DSO

International developments – retail competition

First introduction of retail competition

- UK since 1990
- Norway since 1991
- New Zealand since 1993
- Australia since 1994
- Finland since 1995
- Sweden since 1996
- USA since 1997/98
- Germany since 1998
- Japan since 2000
- Canada since 2001/02
- Switzerland since 2009
- **Bosnia and Herzegovina 2008 (non-household customers)**
- **Bosnia and Herzegovina 2015 (household customers)**

End-users eligible to choose their supplier freely in %

	1997	1999	2000	2003	2005	2007
Austria	0%	33%	100%	100%	100%	100%
Belgium	0%	35%	35%	52%	90%	100%
Denmark	0%	35%	90%	100%	100%	100%
Finland	40%	100%	100%	100%	100%	100%
France	0%	30%	30%	37%	70%	100%
Germany	0%	100%	100%	100%	100%	100%
Greece	0%	0%	30%	34%	62%	100%
Ireland	0%	0%	30%	56%	100%	100%
Italy	0%	45%	45%	70%	79%	100%
Luxembourg	0%	30%	n/a	57%	84%	100%
Netherlands	0%	33%	33%	63%	100%	100%
Portugal	0%	30%	30%	45%	100%	100%
Spain	0%	54%	54%	100%	100%	100%
Sweden	40%	100%	100%	100%	100%	100%
UK	50%	100%	100%	100%	100%	100%
Norway	100%	100%	100%	100%	100%	100%
Estonia					12%	n/a
Latvia					76%	100%
Lithuania					74%	100%
Poland					80%	100%
Czech Republic					74%	100%
Slovakia					79%	100%
Hungary					67%	100%
Slovenia					77%	100%

Source: DG TREN data



Retail Market Competition and the DSO

Integration of monopoly and competitive business areas of the electricity sector within a single company sets incentives to hinder development of retail market competition

- 1) DSO affiliated to retail supply unit of a utility has strong incentives to discriminate other suppliers that compete with the affiliated retail supply unit
- 2) Utility has strong incentives to shift costs from its units or subsidiaries operating in competitive market segments to its regulated distribution business unit or subsidiary in order to gain a competitive advantage for its operations in the retail market

To avoid such discriminatory behaviour detailed unbundling requirements have been specified in the EU Directives that regulate:

- cost allocation of (accounting unbundling)
- handling of information (information unbundling)
- interaction of personnel and the daily operations (functional unbundling) between the distribution business unit and other units or entities of the vertically integrated utility
- legal status of the entity carrying out the distribution business (legal unbundling)

- By decision of the Ministerial Council of the Energy Community those requirements had also to be implemented in Bosnia and Herzegovina by **1st of July 2007**

Retail Market Competition and the DSO

Effective unbundling requires DSO to treat an affiliated supply business unit the same way as any other supplier (in particular as regards handling of information)

- Since DSO is in charge of metering processes and of connection of customers to the grid it obtains a lot of data that could potentially be used for supply activities of the affiliated supply business unit
- Affiliated supplier could for example
 - directly approach customers with switching intentions (indicated to DSO) with improved offers
 - delay provision of customer data needed by new supplier for customer switching process

To establish competitive retail markets, it is therefore of crucial importance that appropriate rules and procedures are in place that guarantee that DSO provides same level of information to all market participants without advantages for the affiliated supply unit

Retail Market Competition and the DSO

Special attention needs to be given to access to IT systems

- Informational unbundling according to EU Directive 2009/72/EC requires that
 - any commercially sensitive information obtained by DSO in the course of carrying out its business is to be kept confidential (especially not disclosed to other business units of its company)
 - any commercially advantageous information is to be made available to all market participants in a non-discriminatory manner (the same timing, procedures, extent and quality of data apply to all)
 - different IT systems are to be kept for distribution data (with DSO) and supply data (with the supplier), also persons with access to these information are to be separated (access rights, „Chinese Walls“)
 - either two clients within one IT system (unbundling through access rights) or two completely different IT systems
 - no exemption for small DSOs

Retail Market Competition and the DSO

Special attention needs to be given as regards the access to IT systems

- ERGEG*-Guidelines on informational unbundling list examples for commercially sensitive information:
 - Financial and technical conditions of grid access (individual grid access contracts)
 - Financial and other conditions of energy supply (individual energy supply contracts, such as interruptibility,...)
 - Metering data, load profile and load forecast of the clients (enabling suppliers to set up tailor made products)
 - Inactive and planned new connections to the grid (reducing acquisition cost)
 - Name, address and bank account details of the client (reducing acquisition cost)
 - Billing records (giving information on good/bad customer behaviour)
 - Participation in capacity allocation procedures (revealing potential alternative suppliers)

*Source: Guidelines for Good Practice on Functional and Informational Unbundling for Distribution System Operators – Ref:C06-CUB-12-04b, 15 July 2008

Retail Market Competition and the DSO

Retail market competition requires definition of precise and transparent retail market processes

- Besides the general unbundling requirements, it has proven quite successful for the development of electricity retail market competition throughout Europe to:
 - describe the specific tasks of the DSO and the supplier(s) in the electricity retail market
 - to precisely define procedures, timeframes and extent for the data to be exchanged between the supplier and the DSO
- Clearly defined retail market processes ensure that all market players can exchange critical information efficiently and swiftly in a non-discriminatory manner
- The availability of such information allows customers to seek products or services that best suit their needs, while suppliers are able to invoice their customers and develop and offer new products and services.

In a competitive retail market also procedures need to be in place to ensure a continuous energy supply to the customer in the case the customer is moving in or out of a place, switching the supplier or not being able to pay its bill

Tasks and Responsibilities of the DSO and other Market Participants



General task and responsibilities of the DSO

In the unbundled world tasks and responsibilities of DSO and supplier have to be clearly distinguished

- DSO operates, maintains and develops the distribution network
- DSO responsible for regional grid access and grid stability, integration of renewables at distribution level and (often) for regional load balancing
- DSO needs to establish and publish the terms and conditions, including rules and network connection and access tariffs, in a non-discriminatory and cost-reflective way
- DSO responsible for installing, operating and reading of meters (in the majority of European countries including Bosnia and Herzegovina)
- DSO generally only in touch with end-users as regards metering processes, connection or disconnection of customers to the grid, physical delivery of electricity and in cases of (planned) outages due to maintenance or construction work
- As responsible for metering process and customer (dis)connections, DSO has also task of operating and maintaining a database with connection and metering point relevant data and providing discrimination free access to this data for all market participants

General task and responsibilities of the supplier

In the unbundled world tasks and responsibilities of DSO and supplier have to be clearly distinguished

- Supplier general responsibility for all activities related to the sale, including resale, of electricity to customers
- Supplier purchases electricity on the wholesale market or directly from generators and sells this electricity – in competition or as a supplier of last resort / default supplier – to its end-users.
- Supplier designs different end-user tariff models and products (such as specific tariffs for provision of electricity from renewable energy sources only)
- Supplier carries out activities related to
 - billing processes
 - switching of customers
 - acquisition of new customers
- Supplier in regular exchange with its current and potential new customers through marketing and sponsoring activities as well as through specific customer service centres

Tasks and responsibilities of DSO in relation to retail market

Taking the role as information hub DSO supports reliable and swift market processes

- Effective exchange of information between market actors is crucial for functioning of competitive retail markets
- DSOs can play a key role in the development of the retail market by facilitating transparent and non-discriminatory access to network and customer information
- Since the DSO itself is not active in the competitive market he is in a position to act as a *neutral market facilitator*; in this role the DSO ensures a fair level playing field without preferential treatment of related companies
- As DSO provides access to network and to customer and metering information for all market participants it plays a key role in facilitating commercial activities of other market participants in a competitive market, which include
 - managing metering
 - offering demand response services
 - providing information to market players in a timely, efficient and non-discriminatory manner
 - supporting the process of changing supplier
 - safeguarding customers' privacy and data confidentiality

Requirements from EU-Directive affecting retail market processes

Requirements relevant for electricity retail market procedures within Directive 2009-72-EC

- Member States shall ensure that: ... where a customer, while respecting contractual conditions, wishes to change supplier, the change is effected by the operator(s) concerned **within three weeks**; and customers are entitled to receive **all relevant consumption data**. [Article 3(5)]
- Member States shall ... define the concept of **vulnerable customers**, which may refer to energy poverty and, inter alia, to the **prohibition of disconnection** of electricity to such customers in critical times. [Article 3(7)]
- **Customers** should benefit from transparent, simple and inexpensive procedures for dealing with their **complaints** by their electricity service provider. In addition **out-of-court dispute settlements** procedures shall be specified that enable disputes to be settled fairly and promptly, preferably **within three months**, with provision, where warranted, for a system of reimbursement and/or compensation [ANNEX1 (1) f].
- Customers ... have at their disposal their consumption data, and shall be able to, by explicit agreement and free of charge, give any registered supply undertaking access to its metering data. The party responsible for data management shall be obliged to give those data to the undertaking. **Member States shall define a format for the data and a procedure for suppliers and consumers to have access to the data**. No additional costs shall be charged to the consumer for that service [ANNEX1 (1) h].

Requirements from EU-Directive affecting retail market processes

Requirements relevant for electricity retail market procedures within Directive 2009-72-EC

- Customers ... are properly informed of **actual electricity consumption** and costs frequently enough to enable them to regulate their own electricity consumption. That information shall be given by using a **sufficient time frame**, which takes account of the capability of customer's metering equipment and the electricity product in question. Due account shall be taken of the cost-efficiency of such measures. No additional costs shall be charged to the consumer for that service [ANNEX1 (1) i].
- Customers ... receive a final closure account following any change of electricity supplier **no later than six weeks** after the change of supplier has taken place [ANNEX1 (1) j].

Processes to be Defined for a Competitive Retail Market



Processes to be Defined for a Competitive Retail Market

For a well-functioning, competitive retail market the following tasks, responsibilities and processes have to be defined

Customer Contact / Information

Customer Contract

Dispute settlement

Third party access to data

Information exchange

Customer connection / disconnection

Supplier of last resort / default supplier

Customer switching

Moving in/out of customer

Billing / Invoicing

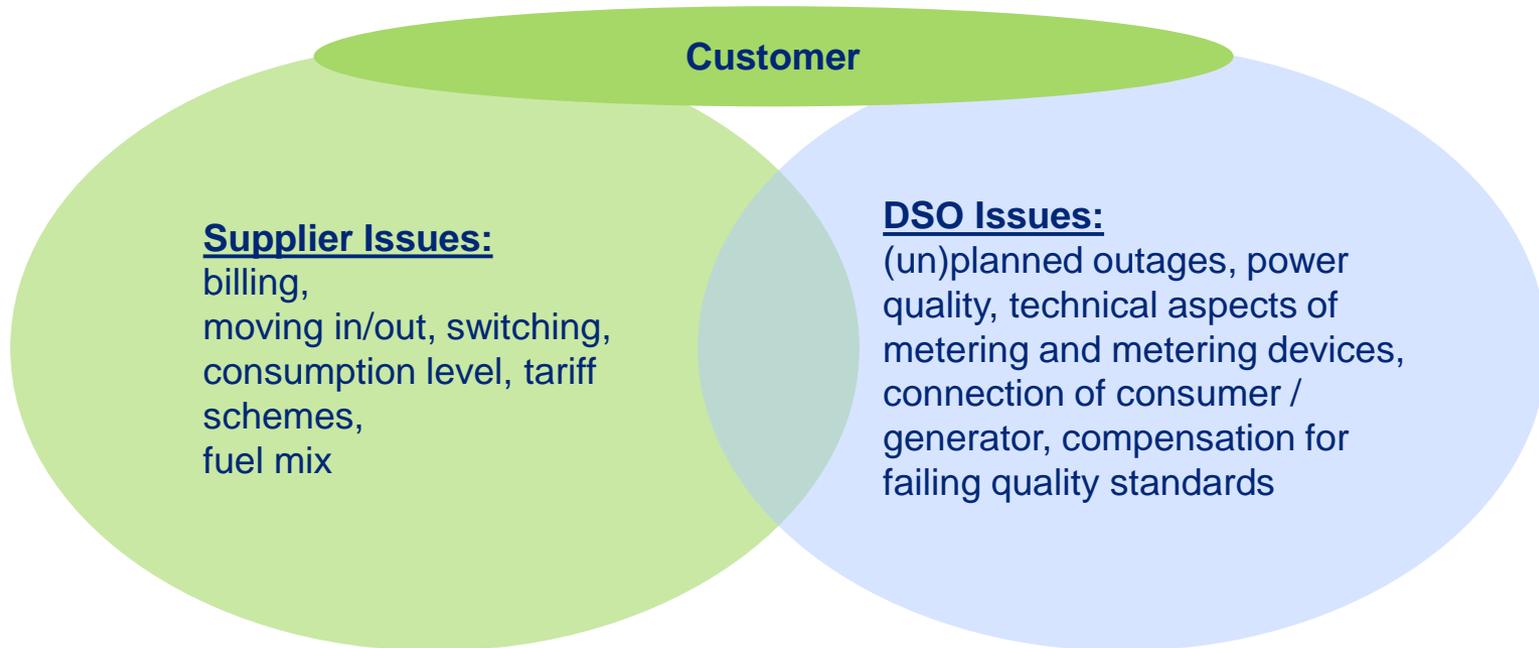
Metering

→ Will be addressed in a separate session on Thursday

Balancing and Settlement

→ Is addressed by a separate Technical Assistance of other colleagues from DNV KEMA in a separate Working Group

Customer contact and information



▪ Customer Contact

- Supplier as a main point of contact (for commercial questions)
- DSO as contact for grid related questions

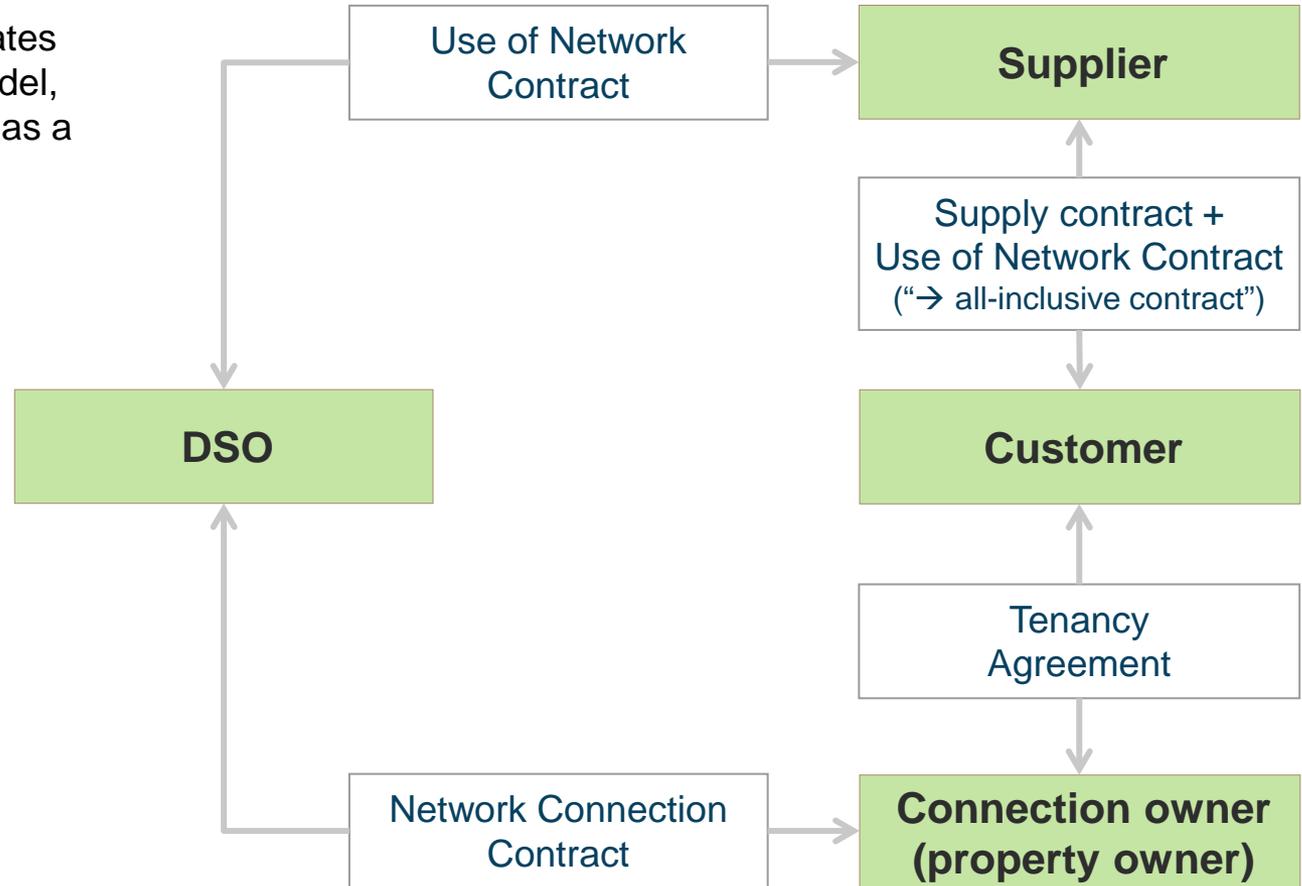
▪ Customer information

- Clear information on roles and contact details of supplier and DSO (e.g. publication on website)
- Easy access to information for customer e.g. how to choose / switch the supplier?; where to make a complaint?; tariff / price changes?

Customer Contract

„All-inclusive-contract“ situation (single-point contract)

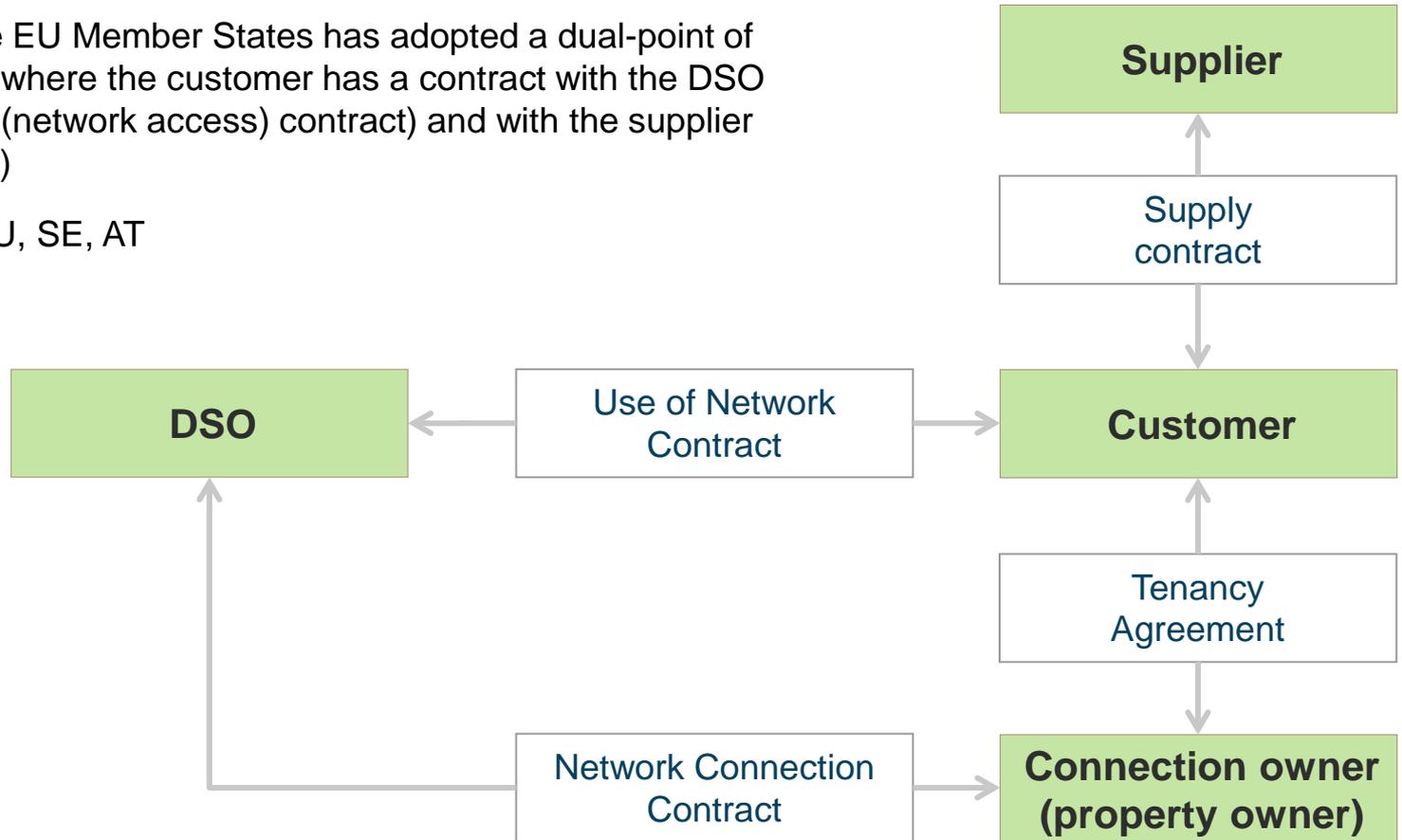
- Majority of EU member states apply a single contract model, where the customer only has a contract with supplier



Customer Contract

Separate supply and use of network contracts (dual-point contract)

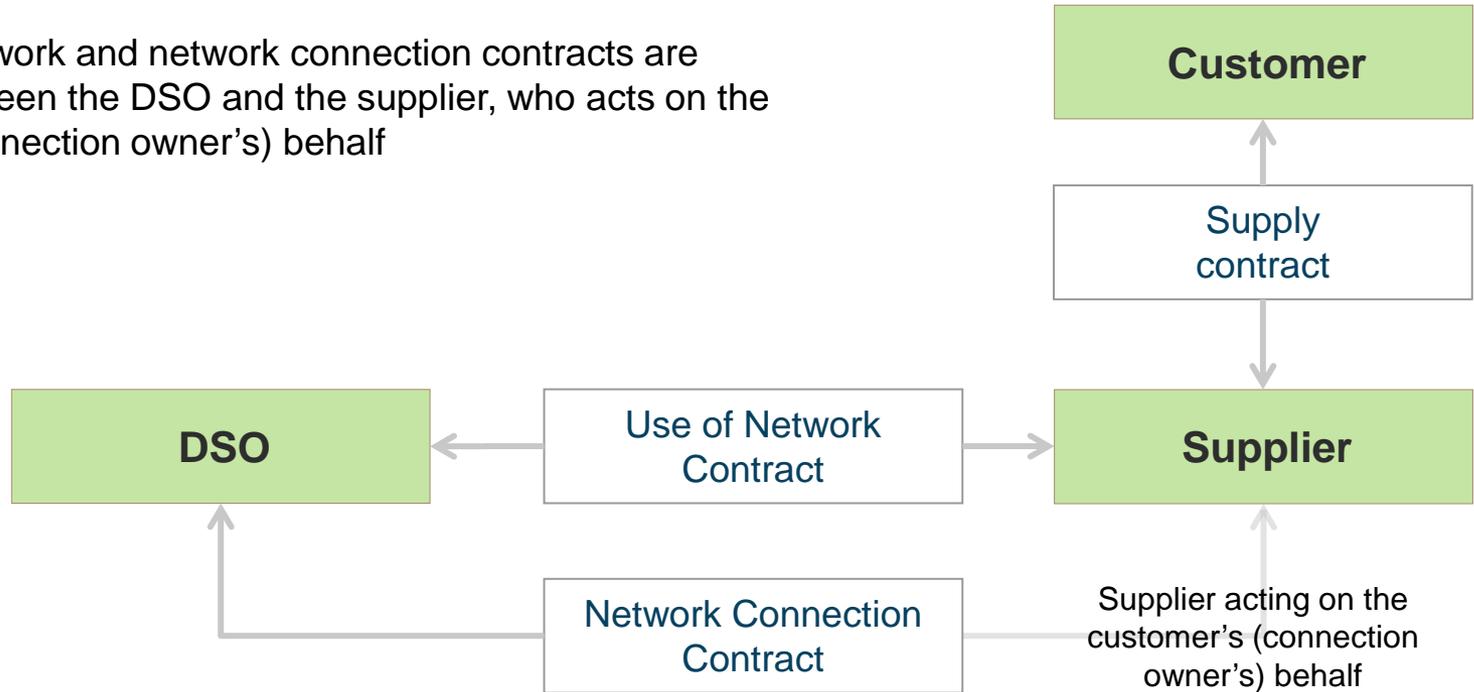
- A minority of the EU Member States has adopted a dual-point of contract model, where the customer has a contract with the DSO (use of network (network access) contract) and with the supplier (supply contract)
- Applied in FI, HU, SE, AT



Customer Contract

Supplier acting on the customer's (connection owner's) behalf

- Both use of network and network connection contracts are concluded between the DSO and the supplier, who acts on the customer's (connection owner's) behalf
- IT, FR, UK, ES



In order to limit costs for customers, DSOs and suppliers we recommend to apply either the single contract model or limit the contract between the customer and the DSO to the connection to the grid in Bosnia and Herzegovina.

Billing / Invoicing

Billing

- Use of network charges and the supply of electricity could be charged to customers
 - either in a single bill, whereas the DSO invoices the network fees to the supplier in a separate step preceding the billing of the customer; or
 - in two separate bills, issued by supplier and DSO respectively.
- Almost all EU Member States apply the single bill approach including related costs such as taxes. Only in two EU Member States (SE, DK) are two separate bills charged to customers.
- The supplier is usually liable for unpaid bills including the component for the use of network charges.

We recommend to apply the single bill approach in Bosnia and Herzegovina wherein the supplier also collects the network fees for the DSO from its customers.

Dispute settlement

In cases of customer complaints, procedures need to be in place, including an independent out-of court dispute resolution scheme

- Responsibilities and prime contact party for customer complaints depend on chosen contact and contract model. In most cases the first instance of customer complaints should be handled consistently within a reasonable timeframe by suppliers
- In case a customer is not satisfied, he has several different options. Customers can:
 - turn to an in-house company ombudsman (e.g. FR)
 - turn to an independent dispute settlement organization (e.g. NL)
 - turn to a regulator with dispute settlement functions (e.g. IT, GR)
 - turn to (free of charge) consumer advice service (e.g. FI)
- Such independent persons or organisations can provide a fair and cost-efficient mediation process in cases where the cost of referral to a court might be disproportionate to the harm and the appropriate level of compensation. Nonetheless both the consumer and the supplier still have the right to go to court if they don't agree with the proposed settlement.

We recommend that a specialized dispute settlement department be developed within the regulatory authority.

Third party access to data

Access to data in a non-discriminatory manner is essential to ensure the smooth functioning of the retail market

- Suppliers should have access to commercial data essential for
 - the switch of suppliers
 - billing (invoicing)
 - and provision of energy services, offering reliable, innovative product and services based on customers preferences
- DSOs should have access to technical data essential for
 - operational control of the grid
 - realization of benefits of smart metering and smart grids
- An adequate view of the network and of the contracts between suppliers and customers ensures
 - a well-functioning retail market by providing necessary information to market players in a timely, efficient and non-discriminatory manner,
 - the maintenance of network stability
 - the integration of intermittent renewable energy sources into the power system

We recommend to assign responsibilities and access rights so that suppliers have access to commercial data, while DSOs have access to technical data necessary to manage the grid effectively.

Information exchange

Efficient and effective data exchange between market actors ensures that DSO and suppliers are able to conduct processes necessary for a competitive retail market

- DSO – responsible for meter operation and reading – should provide necessary information (consumption information and the relevant connection point data) to all market players (suppliers and customers) in a timely, efficient and non-discriminatory manner, while at the same time protecting customers' privacy and data confidentiality
- Within EU Member States three different models can be identified through which information is exchanged between metering operator (usually DSO) and supplier:
 - Most commonly information is exchanged directly and bilaterally; all market parties directly send one another standardized messages. (IT, NO, FI, ES, SE, DE, DN, FR, HU, GR)
 - Alternatively messages are sent to a central data hub, where messages are checked and then forwarded to final addressee (CZ, NL)
 - Data hubs can also be organized as a central database where exchanged data is not only checked, but also stored. This provides added value in the form of record keeping and data storing (UK)
- Models 2 and 3 have the advantage that messages are sent to, checked by, received from and possibly stored at just one address. It is important that such data dispatching platform is operated in an efficient, transparent and non-discriminatory manner with clear access rules to protect customers' data confidentiality

We recommend to assign the DSOs with the task of operating and maintaining such databases in Bosnia and Herzegovina.

Supplier of last resort (SoLR)

SoLR ensures the continuity of supply for household customers and small enterprises in case a supplier becomes insolvent

- The appointment of an SoLR should be transparent, non-discriminatory and restrict competition as little as possible
- In some EU Member States the SoLR is also responsible to supply vulnerable customers who fail to pay their bills
- Tariffs of the SoLR should be cost-based, since at tariffs below market prices a customer has no incentive to re-enter the electricity market and a regulated sub-market would be created
- This problem is especially relevant when the SoLR is appointed to customers who have failed to pay their bills
- Low SoLR tariffs would then provide a particular incentive for customers (who are eligible for such tariffs) not to pay their bills

We recommend to define clear and transparent procedures for the appointment of the supplier of last resort (SoLR) in Bosnia and Herzegovina. The DSO should notify the SoLR to commence its supply to specific customers in the case of predefined situations (e.g., when a supplier becomes insolvent).

Default supplier

A default supplier enables supplying and billing of customers when customers do not actively select a supplier

- A default supplier enables supplying and billing customers even when a supply contract has not yet been explicitly agreed
- When a person moves into a new house the customer should be able to use electricity immediately
- When opening up retail markets, all consumers are on default supplied by the incumbent supplier until they choose to switch
- It is important that the tariff of the default supplier is cost-based and that in particular any cross-subsidies between other services and default supply are avoided
- Customers only have an incentive to enter the market if market price is below the tariff of default supply

We recommend to define clear and transparent procedures for the appointment of the default supplier in Bosnia and Herzegovina. DSO should notify default supplier to commence its supply to specific customers in cases where customers do not actively select a supplier.

Customer switching

In a well-functioning retail electricity market, customers actively choose their supplier

- Since the old supplier has an incentive to obstruct the switch of a customer to a new supplier as far as possible, transparent and non-discriminatory switching procedure and timelines are of particular importance.
- Since continuous supply with electricity is essential, this includes also measures to make sure that the customer is not cut off the network as part of the switching process.
- For the switching process two different models can be observed in EU Member States:
 - Customer → new supplier → registration with DSO and notification of old supplier. Here the risk of bad debt remains with the old supplier. (NL, NO, IT, ES, SE, FR, DK, GR)
 - Customer → new supplier → DSO checks → old supplier may restrict switch → DSO confirms to new supplier whether switch can proceed or not. In this model the switching process is subject to a check by the DSO and may be blocked by the 'old supplier' under certain conditions. (FI, DE, CZ, HU, AT, UK)
- In some markets objections to switching for outstanding debt are normal practice. In other markets switching is not permitted under any circumstances.

We recommend to apply a customer switching model in Bosnia and Herzegovina, where DSO first checks with old supplier whether any bad debts remain that have first to be settled with the old supplier before the customer switch can proceed

Moving of end-users

When customers move in or move out of a property procedures need to be in place regarding the supply contract

- Two different approaches are currently applied within EU Member States:
 - Supply contract is linked to specific customer. When customer moves location, he informs supplier – who then informs DSO of the move – while the supply contract moves with customer, unless customer explicitly chooses to switch to a new supplier. (NL, IT, NO, FI, CZ, DE)
 - Supply contract is linked to connection point and automatically ends when customer moves. The customer contacts supplier and has to arrange a contract for new address with a new supplier or will be assigned to default supplier. (SE, ES, FR, HU, GR; DK)
 - Following the first approach, supply contract is linked to the specific customer (i.e., moving with the customer if the customer is moving from one place to another) would have the advantage that a customer, previously supplied at a different location, would not automatically be assigned to the default supplier at the new location, when not actively contracting with a new supplier.

Gap analysis of existing legislation and codes

DSO



Gap analysis of existing legislation and codes

The gap analysis is based on the current procedures specified in the existing legislation and codes for Bosnia and Herzegovina

- Within the gap analysis the following legal documents have been analysed on any missing roles and processes as regards the DSOs role in the retail market
 - 1) ISO Market Rules
 - 2) Network Code
 - 3) General Conditions of Supply
 - 4) Distribution Code
 - 5) Metering Code
 - 6) Rule(s) on Eligible Customers
 - 7) Gap Analysis (developed by REAP)

Gap analysis of existing legislation and codes

Within the existing *legal and regulatory framework* of Bosnia and Herzegovina many necessary processes are currently not yet defined at the level of detail required for the development of competitive retail markets.

Based on the available legal documents the following gaps can be identified

Elaboration needed	Substantial process definition needed	Full development of processes needed
<ul style="list-style-type: none"> ▪ dispute settlement ▪ customer contract 	<ul style="list-style-type: none"> ▪ third party access to data ▪ customer switching ▪ customer connection and disconnection ▪ supplier of last resort / default supplier ▪ publication of information to customers ▪ exchange of information 	<ul style="list-style-type: none"> ▪ moving in/out ▪ customer contact ▪ invoicing of network fee
<p>Adjustments may be required to foster development of competitive retail markets</p>	<p>Existing descriptions lack necessary detailed specifications</p>	<p>Processes not yet defined</p>

Draft processes and roles for the DSO as neutral retail market facilitator



Goal and principles for definition of retail market processes

Goal

- **Enable / facilitate development of competitive retail markets** by providing a non-discriminatory framework for interactions between DSO, old and new suppliers and customers

General requirements for the definition of retail market processes

- Definition of **responsibilities, timeframes, data requirements and formats** to ensure all market players can exchange critical information efficiently and swiftly in a non-discriminatory manner
- **Practical to implement** (accounting for specifics of the electricity sector in Bosnia and Herzegovina) and **understandable** and **transparent** to DSO and suppliers as well as customers (where they are involved) to enable stakeholders to adequately respond to processes
- **Minimize administrative burden** for DSO, old and new suppliers and customers → data to be collected and exchanged should be standardised and amount of data to be exchanged should be limited to necessary information

Principles for definition of retail market processes

General requirements for the definition of retail market processes

- Promote **accountability** of DSO, old and new suppliers for their actions → avoidance of disputes and legal battles and improves general acceptance of stakeholders
- Based on **publicly available** documented and transparent procedures → less scope for incumbent supplier or DSO to exercise discretion in conducting processes, reduces risk for new suppliers to enter the market
- **Stable and predictable** → confidence of DSO enables customers and companies to confidently plan for future; assurance for DSO investments in the network and the metering assets
- Processes are a starting point to be further developed and adjusted with development of retail market or in case of technical progress
- Procedures need to be in place on what regulatory sanctions are to be imposed if a market participant does not comply with processes

Definition of retail market processes

Detailed retail market process descriptions have been proven very beneficial for the development of well-functioning retail markets

- To develop a functioning retail market, successful European countries have:
 - described the specific tasks / responsibilities of the DSO and the supplier(s) in the electricity retail market
 - precisely defined procedures (or steps), timeframes, the extent of data and formats to be exchanged between supplier and DSO
- Based on the international practice and the requirements specified in the European legislation, DNV KEMA has developed a proposal for processes and role descriptions that define the specific procedures to be applied by the DSO (and the supplier(s))
- In the following we present one example for such process descriptions in detail – proposals for other processes have been presented at the working group meeting in Jahorina and are described in detail in the final report

An efficient sanctioning system that motivates market participants to comply with regulations and operating rules is crucial to successful market operation

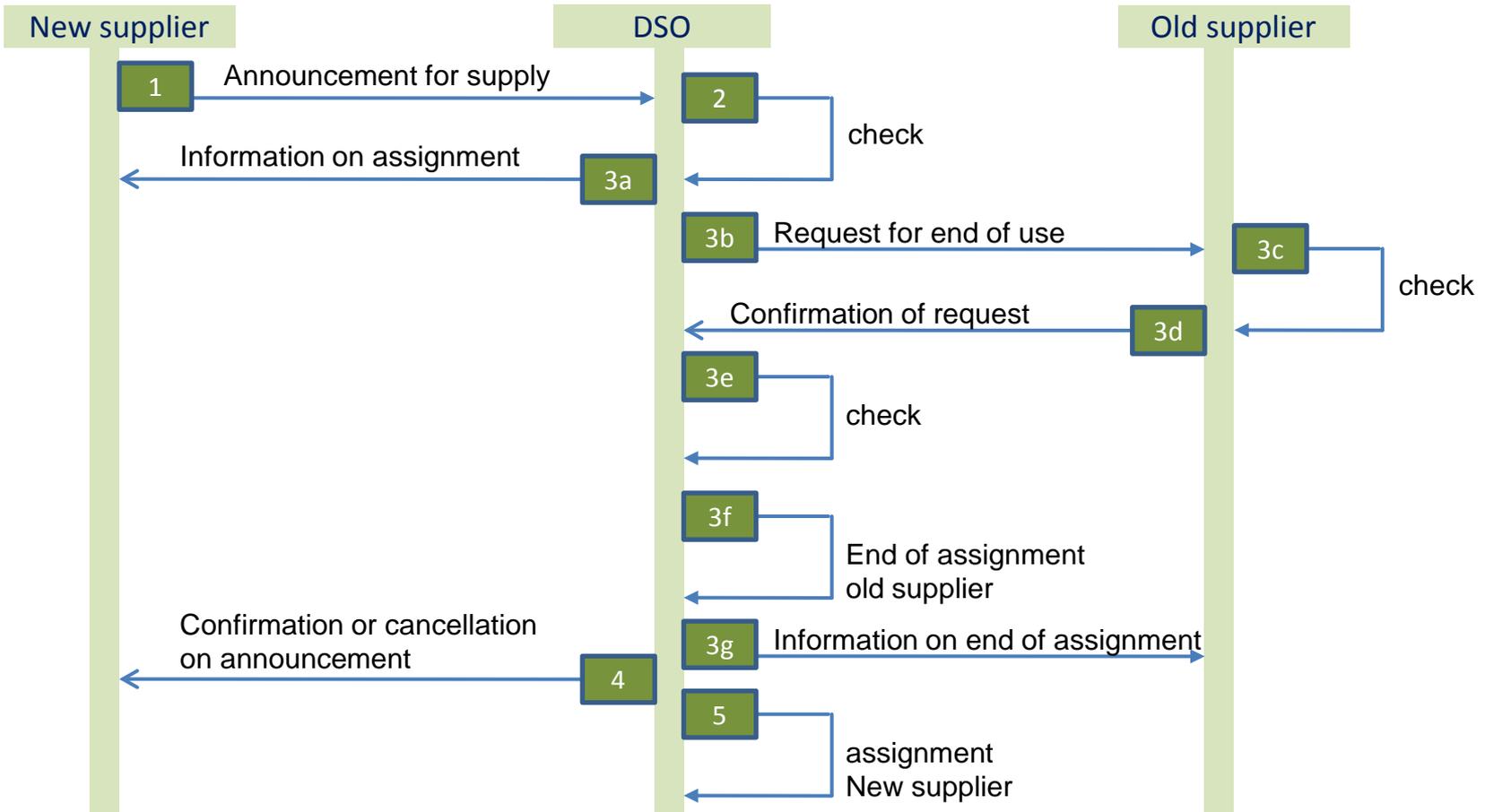
Customer connection and disconnection

Retail market competition strongly depends on clear procedures for changes in supply contracts

- DSO responsible for technical establishment of connection point, installation of meter devices and distribution of electricity
- DSO needs to be informed on time, when changes in supply situation occur, for example:
 - beginning of a new supply contract
 - end of a supply contract
 - disconnection due to non-payment or non-compliance (dismissal of supplier)
 - customer switches suppliers
- New supplier registers a customer with DSO after signing a new contract of supply for a connection point
 - Once informed DSO can assign delivered energy and finally send measured values to correct supplier
- End of supply is cancellation of connection point through a supplier because of an ending contract of supply
 - Once informed DSO assigns delivered energy to new supplier or supplier of last resort

Customer connection and disconnection

Beginning of supply



Customer connection and disconnection

Beginning of supply

1 **New supplier
→ DSO** **New supplier registers connection point by DSO to specific date**

Deadline: asap

Information / data:

- connection point ID
- name of the customer
- type of customer/ load profile (e.g. household)
- balancing group
- trigger
- frequency of meter reading

2 **DSO**

DSO checks, if all requirements are fulfilled

- a) No other supplier is registered for connection point or corresponding cancellation exists
- b) Another supplier is registered without a corresponding cancellation

Deadline: asap, at the latest 4 days after announcement

Customer connection and disconnection

Beginning of supply

3a	DSO → new supplier	<p>DSO informs new supplier about existence of old supplier and requests for cancellation to old supplier</p> <p><u>Deadline:</u> asap, at the latest at the end of the 4th working day after announcement</p> <p><u>Information / data:</u></p> <ul style="list-style-type: none">• identification of old supplier
3b	DSO → old supplier	<p>DSO sends request for cancellation because of request of new supplier</p> <p><u>Deadline:</u> asap, at the latest at the end of the 4th working day after announcement</p> <p><u>Information / data:</u></p> <ul style="list-style-type: none">• connection point ID• name of the customer
3c

Default supplier / Supplier of last resort

Default supplier or supplier of last resort is in charge when no contract of supply can be assigned to the consumption of a connection point

- The default supplier is responsible when:
 - consumer moves in to a place or a new connection point is established and consumer does not actively choose a supplier, or
 - when consumer sticks with the incumbent supplier, i.e., doesn't want to use the possibility to freely choose a supplier in the market or to switch to a different contract with the incumbent supplier
- The supplier of last resort (SoLR) is responsible to supply those customers whose supplier has become insolvent and ceases operation or otherwise abruptly stops service
- If customer does not choose a supplier when moving into a new place, DSO notifies default supplier of the new assignment
- Selection of SoLR – country examples:
 - Open competitive tender process for SoLR, if tender not successful (no bids) SoLR will be assigned by regulatory authority according to pre-defined criteria (Poland, Ireland, GB, Italy)
 - Supplier with largest share of household customers within a distribution grid assigned SoLR / default supplier for 3 years (Germany, Luxemburg) by DSO, tariffs to be approved by regulator

Information sharing

Non-discriminatory exchange of information is crucial for functioning of retail markets

- Information sharing involves the following processes:
 - *Identification of a connection point*; necessary step before starting one of the other described processes, because involved market participants make sure to refer to same customer and same connection point.
 - *Request for change of master data*; DSO needs to keep a file with basic data of each customer (master data) connected to his grid.
 - *Request for information* describes information sharing, especially of data regarding the customer or the connection point, between two market participants; the inquirer needs to have an authorization from the customer unless there is a legal basis for the request.
 - *Transmission of an inventory list* by DSO to different suppliers – summarizing all customer switches, announcements and cancellations of the last month – makes sure, that all processes have been successfully concluded

Invoicing of network fee

Invoicing process with customer will be carried out by supplier

- If supplier acts as single point of contact for the customer, he will invoice the electricity supply and the network fee in one bill
- Before supplier can send out a bill to the customer, DSO needs to provide metering data and a bill for the network fees to the supplier
- Process describes communication between DSO and supplier

Experiences in Germany

Development and implementation of uniform business processes and data formats for the supply of electricity to customers takes time and requires regular adjustments

The following issues could be observed with the implementation of retail market processes in Germany

- Reliable retail market rules are a significant advantage for suppliers
- Not all details can be specified by the regulator, especially to implement processes on the IT side → further consultations with the regulator on questions of implementation and interpretation needed
- Data formats have to be adjusted several times (now every 6 months)
- Several DSOs and suppliers have not implemented processes on time (substantial fines)
- Small DSOs and suppliers have not always implemented all processes
- Several market actors have been fined by regulator for abuse and non-compliance with deadlines
- At the very beginning high level of erroneous data; however, issues could quickly be solved
- Significant training needed for employees on new processes
- Now high level of implementation and generally swift and non-discriminatory switching procedures

DSO as neutral retail market facilitator

Summary

Summary

Retail Market Competition and the DSO

- DSOs affiliated to a vertically integrated utility also active in supply of electricity to end-users and existing/incumbent suppliers have strong incentives to obstruct the switching of customers to a different supplier. **To ensure this occurs, we recommend the following:**
 - Specific responsibilities and tasks of supplier and DSO must to be differentiated and clear retail market processes defined
 - Simple and reliable retail processes that include the definition of responsibilities, timeframes, data requirements and formats are critical, and ensure that all market players can exchange critical information efficiently and swiftly in a non-discriminatory manner.
 - Procedures must be in place to ensure a continuous energy supply to the customer in case the customer is moving in or out of a place, switching the supplier or is not able to pay its bill.
 - It is important for the implementation of effective unbundling that the DSO maintains a database independent of the affiliated supplier and provides non-discriminatory access to the database to all market participants.

Summary

Processes to be Defined for a Competitive Retail Market

- In line with the European practice we strongly recommend the definition of the following areas relevant for the DSO's role on the retail market and the assignment of the following responsibilities to DSOs and suppliers:
 - Customer contact and information – supplier acts as main point of contact, DSO to be addressed for grid-related questions / information
 - Customer contract – minimum of contracts for the customer, one connection contract (with DSO) and one supply contract (with retail supplier)
 - Dispute settlement – supplier handles customer complaints
 - Third party access to data – the supplier provides access to commercial data, the DSO to technical data
 - Information exchange – necessary information is provided to all market players in an efficient, non-discriminatory manner
 - Customer connection and disconnection – responsibility of the DSO
 - Supplier of last resort, default supplier – definition of a clear processes, DSO checks
 - Customer switching – supplier is responsible for the process, DSO checks
 - Metering – responsibility of the DSO
 - Billing – supplier invoices customer, DSO charges network fees to supplier

Summary

Gap analysis of existing legislation and codes

- Based on the available legal documents there are three types of gaps in the definition of roles and processes as regards the DSOs role in the retail market can be identified:
 - Elaboration is needed on processes for dispute settlement and customer contract.
 - Substantial process definition needed for third party access to data, customer switching, customer connection and disconnection, supplier of last resort and default supplier processes, the requirements for publication of information to customers and the exchange of information between different stakeholders
 - Full development needed for the processes of moving in/out, the customer contact and the invoicing of the network fee.

Summary

Draft processes and roles for the DSO as neutral retail market facilitator

- To develop a functioning retail market, successful European countries have:
 - described the specific tasks of the DSO and the supplier(s) in the electricity retail market
 - precisely define procedures (or steps), timeframes and the extent of the data to be exchanged between supplier and DSO
- Based on the international practice and the requirements specified in the European legislation, DNV KEMA has provided separately a first draft proposal for processes and role descriptions that define the specific procedures to be applied by the DSO (and the supplier(s))
- Draft proposals have been drafted for the processes of customer connection and disconnection, supplier switching, default supplier and supplier of last resort, information sharing and invoicing
- DSO is responsible for metering processes, which will be covered next
- An efficient sanctioning system that motivates market participants to comply with regulations and operating rules is crucial to successful market operation

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