

Connection & Compliance processes

Session 2

Experts Group – Implementation NCs

Brussel, 25/02/2016

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Approval of minutes of last meeting

Draft minutes have been sent around to all participants. No comments were received.

Agenda

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Reminders

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Operational Notification Procedure for auxiliary loads

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Demand Response Services

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Derogations

Reminders

Reminders

Elia philosophy:

Integrate the NCs requirements for the connection of grid users (generation and demand facilities) in the existing process.

No intention to completely modify the process if not required, but potential re-evaluation of specific points are possible.

Operational Notification Procedure for auxiliary loads

Operational Notification Procedure for auxiliary loads

Answer to question session 1

Synchronous power generating module = an indivisible set of installations which can generate electrical energy such that the frequency of the generated voltage, the generator speed and the frequency of network voltage are in a constant ratio and thus in synchronism

- Also supply auxiliary (indivisible unit)
- EON/ION/FON/LON applicable for the whole unit of type D connected to the transmission grid.

Operational Notification Procedure for auxiliary loads

Answer to question session 1

An **EON** shall entitle the power generating facility owner to energise its internal network and auxiliaries for the power generating modules by using the grid connection that is specified for the connection point.

An **ION** shall entitle the power generating facility owner to operate the power generating module and generate power by using the grid connection for a limited period of time

A **FON** shall entitle the power generating facility owner to operate a power generating module by using the grid connection.

The power generating facility owner shall apply to the relevant system operator for a **LON**, if the power generating facility owner reasonably expects the circumstances described in paragraph 1 to persist for more than three months.

Demand Response Services

Code requirements

TITLE III CONNECTION OF DEMAND UNITS USED BY A DEMAND FACILITY OR A CLOSED DISTRIBUTION SYSTEM TO PROVIDE DEMAND RESPONSE SERVICES TO SYSTEM OPERATORS

CHAPTER 1 GENERAL REQUIREMENTS

- Categories (*art. 27*)
- Specific provisions (*art. 28-30*)

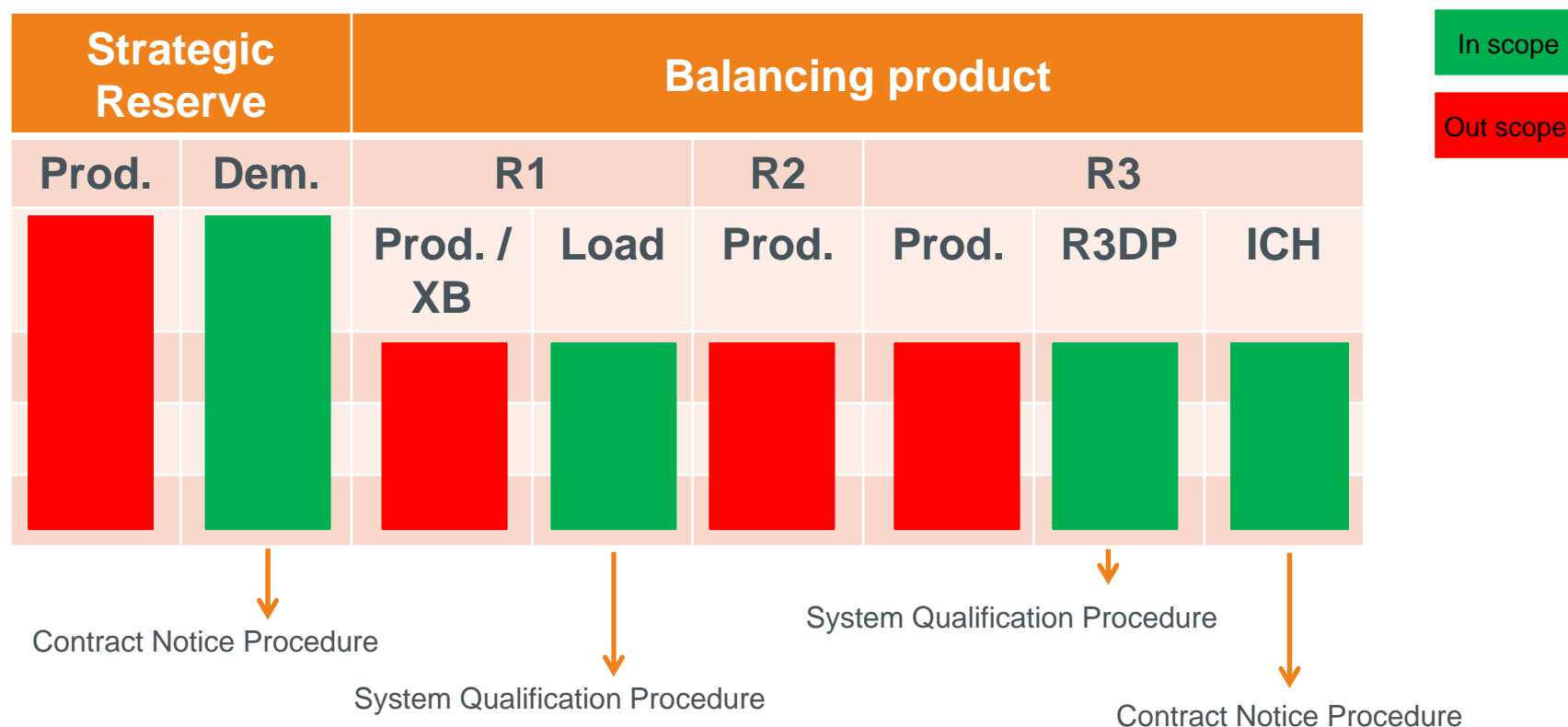
CHAPTER 2 OPERATIONAL NOTIFICATION PROCEDURE

- Distinction based on the connection voltage level (below & above 1000V)
 - Confirm ability to satisfy the technical design and operational requirements
 - Notify in advance modification offer
 - Procedure (*art. 32 and 33*)
- } (*art. 31*)

Strategic Reserve & Ancillary Services

Current situation

MVAR & Black start: not for demand units



→ Depending of the services: two different procedures to procure the services

Categories of Demand Response Services

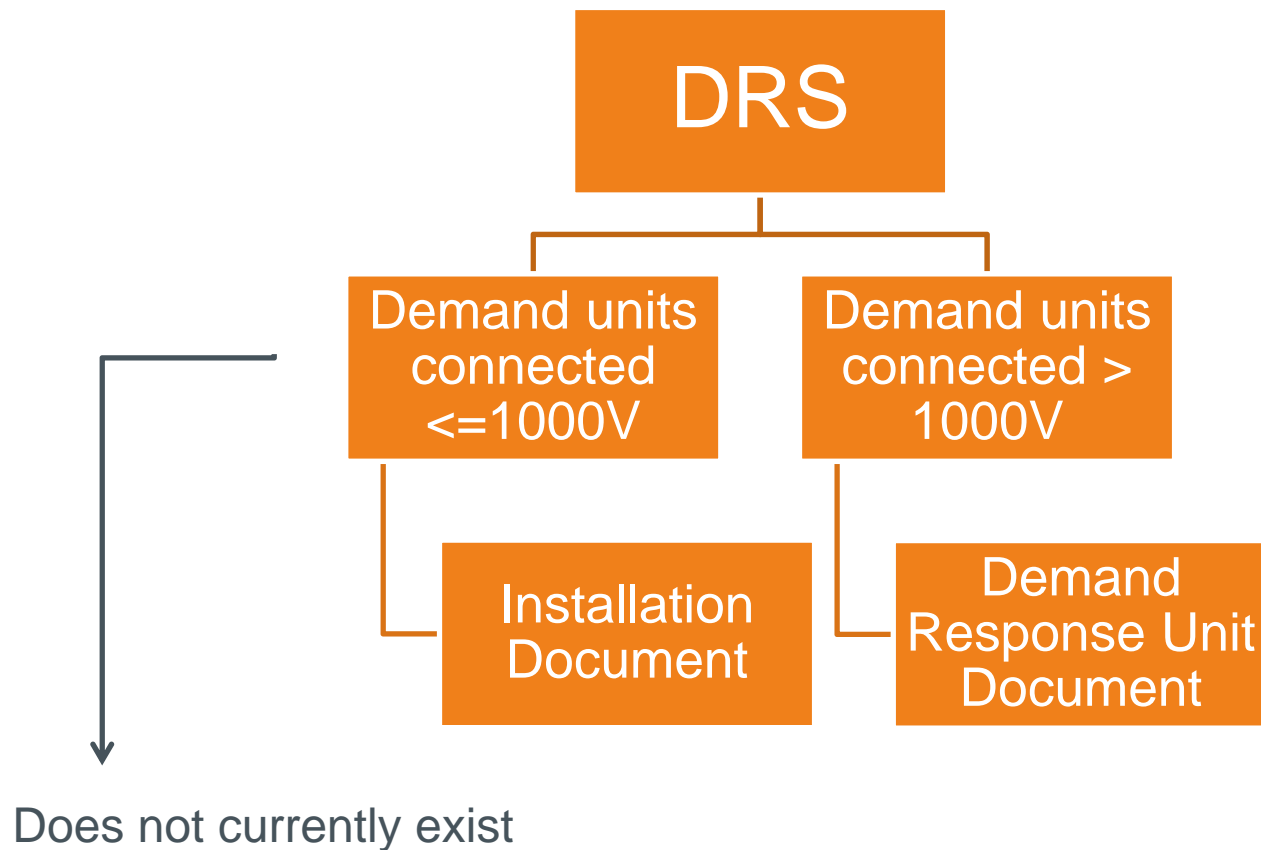
| Categories defined in the code DCC | Current services |
|--|-------------------------------------|
| Remotely controlled | |
| • Demand response active power control | Strategic Demand Reserve, R3DP, ICH |
| • Demand response reactive power control | - |
| • Demand response transmission constraint management | - |
| Autonomously controlled | |
| • Demand response system frequency control | R1 load |
| • Demand response very fast active power control | - |

DCC Art. 27.3

The categories are not exclusive and this Regulation does not prevent other categories from being developed. This Regulation does not apply to demand response services provided to other entities than relevant system operators or relevant TSOs.

OPERATIONAL NOTIFICATION PROCEDURE

DCC Art. 31.1: Distinction based on the connection voltage level



Procedures for demand units within a demand facility or a CDS connected at a voltage level of or below 1000V



Installation Document (to submit prior offer in the market)

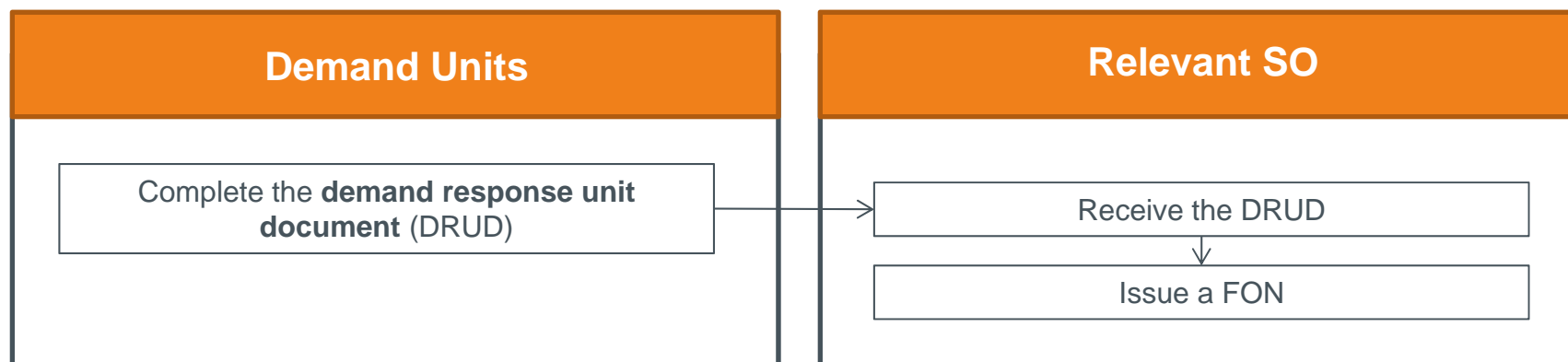
Requirements function types of connection and categories of services


- **Location** at which the demand unit with demand response is connected to the network.
- **Maximum capacity** of the demand response installation in kW.
- **Type of demand response services.**
- **Demand unit certificate and the equipment certificate** as relevant for the demand response service, **or if not available, equivalent information.**
- **Contact details** of the demand facility owner, the closed distribution system operator or the third party aggregating the demand units from the demand facility or the closed distribution system.

The installation document template shall be provided by the relevant system operator, and the contents agreed with the relevant TSO, either directly or indirectly through a third party.

The content of the installation document of individual demand units may be aggregated by the relevant system operator or relevant TSO.

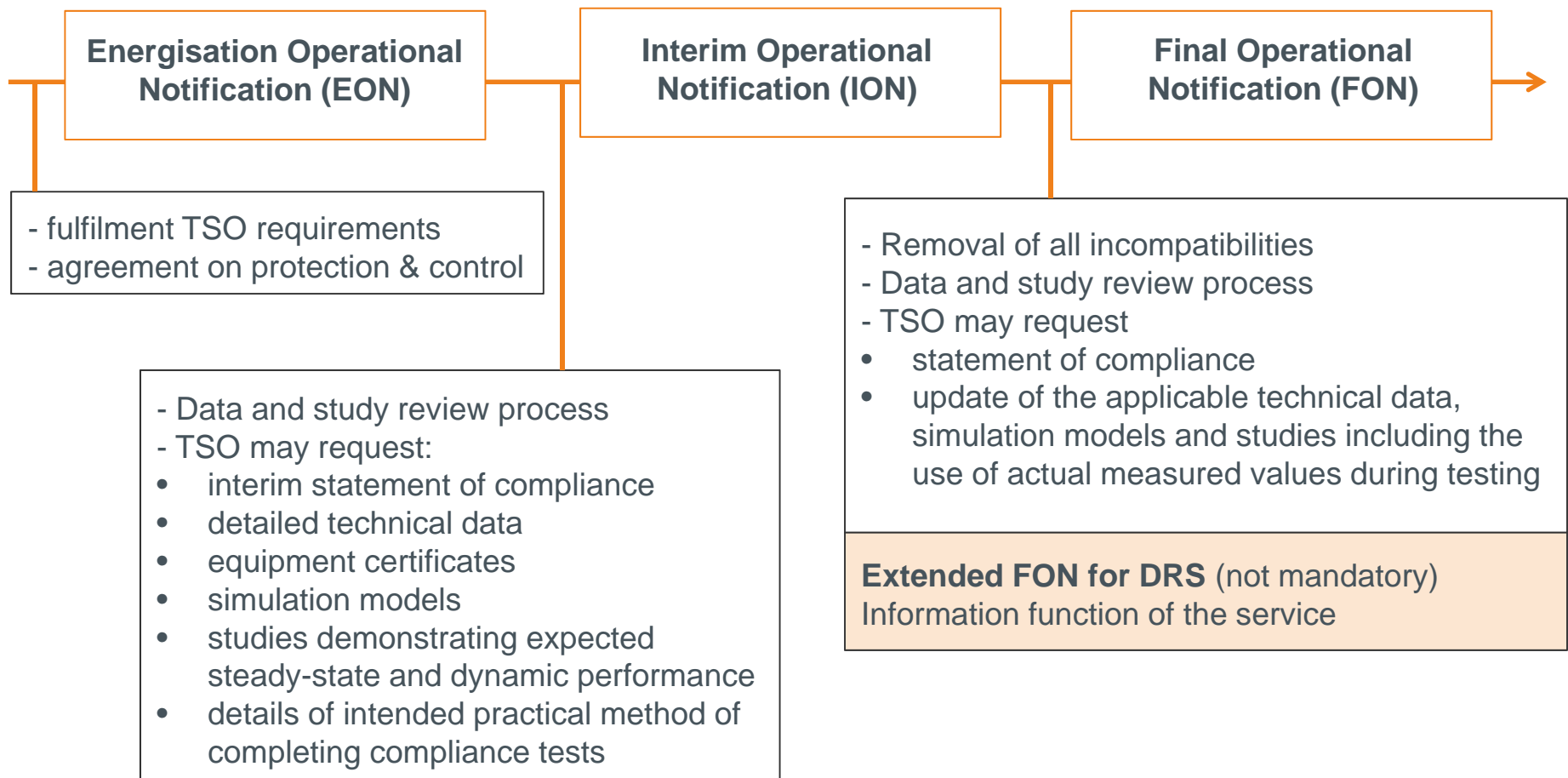
Procedures for demand units within a demand facility or a CDS connected at a voltage level above 1000V



 document, issued either by the demand facility owner or the CDSO to the relevant system operator for demand units with demand response and connected at a voltage level above 1000V, which **confirms the compliance of the demand unit with the technical requirements** set out in this Regulation and **provides the necessary data and statements**, including a statement of compliance

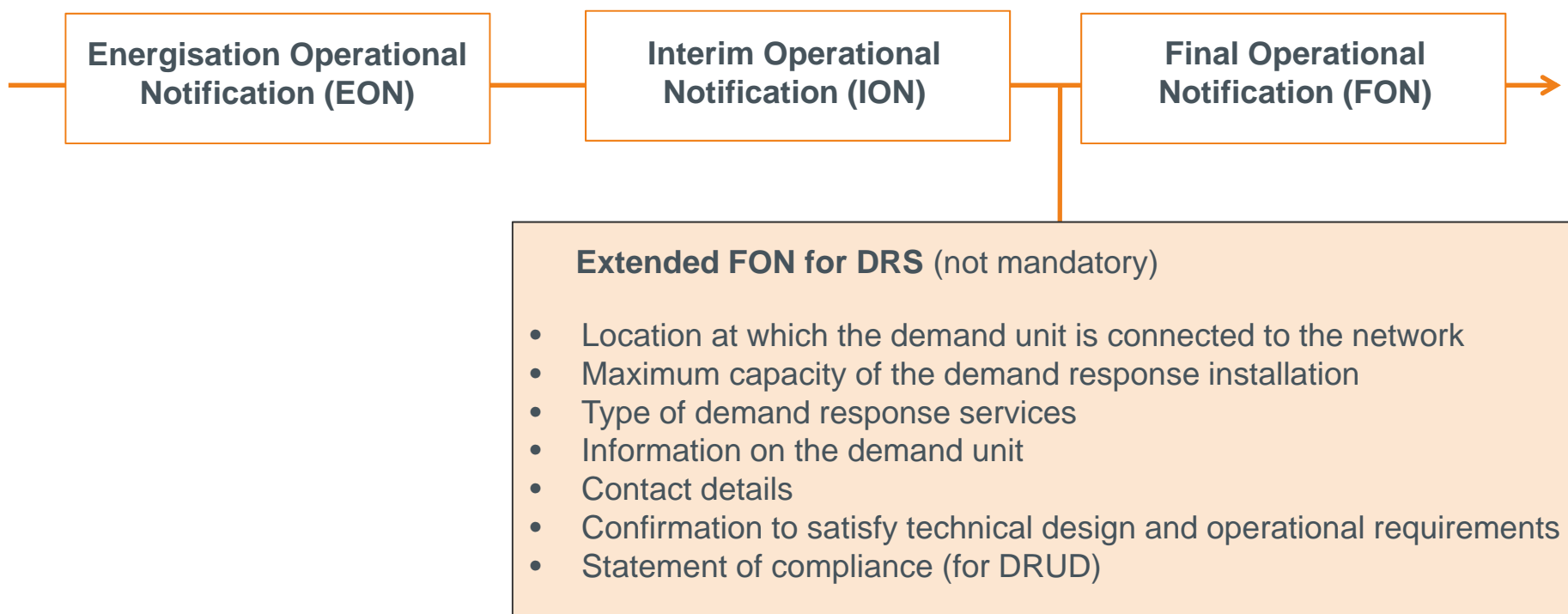
The relevant system operator, in coordination with the relevant TSO, shall specify the content required for the DRUD. The content of the DRUD shall require a statement of compliance which contains the information in Articles 36 to 47 for demand facilities and closed distribution systems.

Operational notification procedure - Requirements



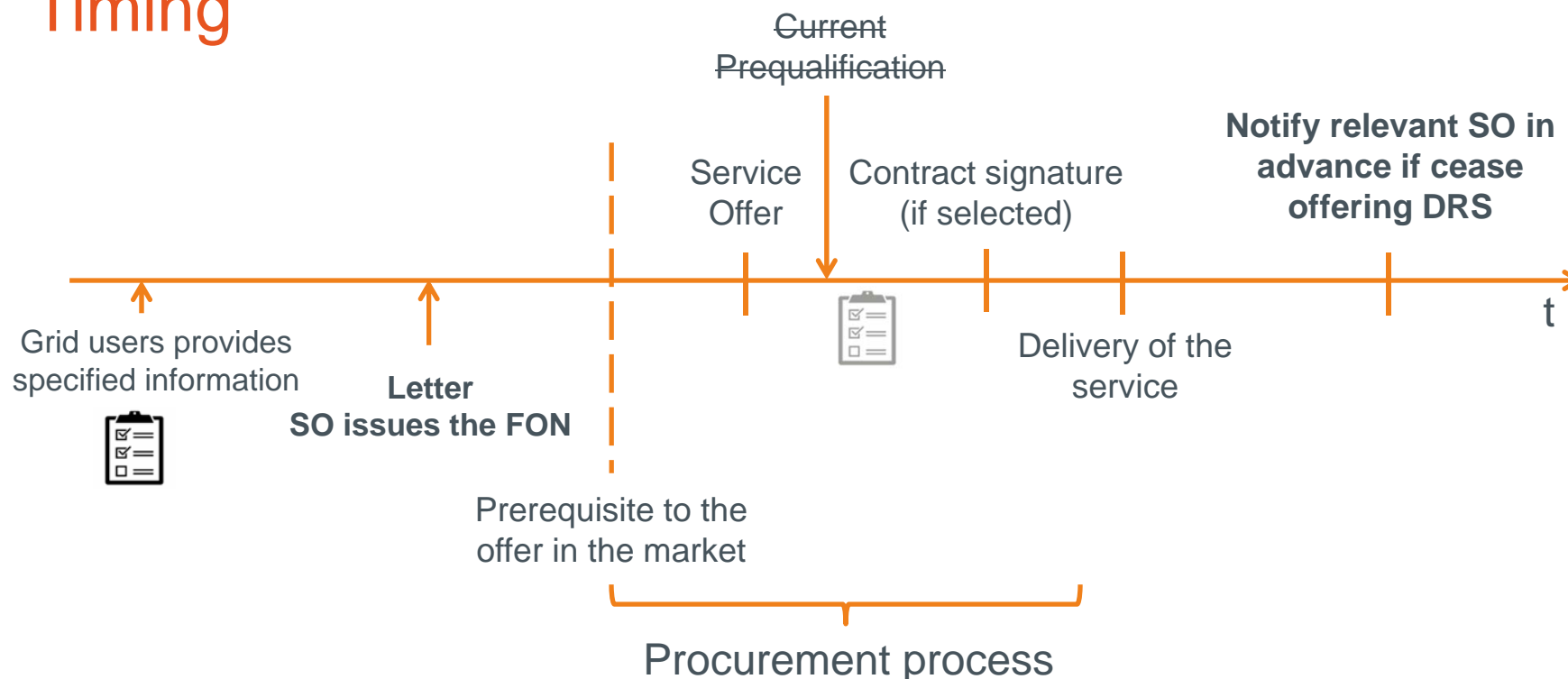
The requested information will contain at least what is asked currently.

Operational notification procedure - Requirements



The requested information will contain at least what is asked currently.
 The information to provide will be determined and discussed in the technical topics.

Timing



DCC Art. 31.3

The demand facility owner or the CDSO shall notify, [...] the relevant system operator or relevant TSO, in advance of any decision to cease offering demand response services and/or about the permanent removal of the demand unit with demand response.

Elia proposal: application and cessation form available on the Elia website, information and documents to provide function of the type of connections & the demand response services

Derogations

Derogations

| Code | Derogations |
|------------|---|
| DCC | |
| Art. 24.5 | Extension of the period of the validity of the ION |
| Art. 25.4 | Derogation to obtain the FON in case of incompatibility |
| Art. 26.5 | Extension of the period of the validity of the LON |
| RfG | |
| Art. 35.5 | Extension of the period of the validity of the ION |
| Art. 36.6 | Derogation to obtain the FON in case of incompatibility |
| Art. 37.5 | Extension of the period of the validity of the LON |

Many thanks for your attention!

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Demand response services remotely controlled

Definitions

Demand response active power control means demand within a demand facility or closed distribution system that is available for modulation by the relevant system operator or relevant TSO, which results in an active power modification.

Demand response reactive power control means reactive power or reactive power compensation devices in a demand facility or closed distribution system that are available for modulation by the relevant system operator or relevant TSO.

Demand response transmission constraint management means demand within a demand facility or closed distribution system that is available for modulation by the relevant system operator or relevant TSO to manage transmission constraints within the system.

Demand response services autonomously controlled

Definitions

Demand response system frequency control means demand within a demand facility or closed distribution system that is available for reduction or increase in response to frequency fluctuations, made by an autonomous response from the demand facility or closed distribution system to diminish these fluctuations.

Demand response very fast active power control means demand within a demand facility or closed distribution system that can be modulated very fast in response to a frequency deviation, which results in a very fast active power modification.