
ENTSO-E answer to ACER Manual of procedures on fundamental data reporting Consultation

11 August 2014

1. Introduction

ENTSO-E welcomes the effort of ACER to produce the Manual of procedures on fundamental data reporting in order to be ready when the REMIT IA will be voted by European Commission and welcomes also the fruitful collaboration between ENTSO-E and the Agency.

For ENTSO-E, the guidance which the Manual provides is valuable information to build a correct and efficient reporting process of the fundamental data to ACER.

ENTSO-E would recommend that for any future releases of the Manual, a similar consultation would be undertaken to ensure that all stakeholders are considered in the amendment process.

2. Consultation questions

1- Please provide us with your general comments on the purpose and structure of the draft Manual, annexed to the consultation paper.

A. Structure of the document

ENTSO-E considers that all topics in relation to fundamental data are addressed in the Manual. However, the complexity of the hierarchy of documents and the different links to the TRUM, ACER requirements for RRM and ACER Technical specifications for RRM do not ease the analysis and prevent having a full picture of the organisational and technical obligations of the reporting entity. It would be beneficial to have a global view on the full documentation to give a reasoned answer to this consultation. At least, the TRUM and the Manual of procedures should be independent, since both are evolving in parallel.

B. References to standards:

All the EIC codes under Art. 4.2 of the Manual of Procedures, which is referred to in Chapter 5.2 of the TRUM, need to be taken into consideration and not only EIC X codes.

C. International standards to be used:

In consideration of the fact that Reg. 1227/2011 states, in Whereas 19, that: *“the required information or parts thereof should be collected from other persons and existing sources where possible”* and, in Art. 8(5) that: *“The reporting obligations on market participants shall be minimised by collecting the required information or parts thereof from existing sources where possible”*, ENTSO-E believes that the whole reporting process needs to be carried out using existing industry standard (International Electrotechnical Commission - IEC). In fact, these have been developed in relation to operational processes in order to minimise the impact on final consumers.

It is worthwhile bearing in mind that TSOs are regulated by NRAs. Any deviation from existing standards would induce significant IT changes for about 50 TSOs and thus the additional costs would have to be approved by NRAs. Any such modifications would require implementation time and would delay the fulfilment of TSOs obligations under REMIT.

It would be more rational to set one IT system (ARIS) to be able to perform operations based on industry standards than to modify 50 systems.

Data

In light of the above, ENTSO-E welcomes the use of the fundamental data standards as described in the Manual of Procedures in relation to COMMISSION REGULATION (EU) No 543/2013 of 14 June 2013 on submission and publication of data in electricity markets. Those standards are the IEC 62325-451 series. Furthermore, for the nominations reporting, the standard that should be used is the one described in Annex 1: IEC 62325-451-2 schedule.

Communication protocol: MADES/IEC 62325-503

We would welcome that the Agency considers the MADES standard as an additional protocol of communication between ARIS and other platforms (for example, the ENTSO-E central information transparency platform and other local market participant platforms):

The MADES (Market Data Exchange Standard) specifies an *international standard* for a communication platform that every Transmission System Operator (TSO) in Europe, and even every market participant, can use to reliably and securely exchange documents.

The MADES goals are to define a messaging system that is secure, reliable, standard, transparent and enabling a single face to the market, i.e. a party has a single interface to exchange whatever data with any other party.

The *IEC 62325-503* Technical Specification, "**Framework for energy market communications – Market data exchanges guidelines for the IEC 62325-351 European Style Market profile**", was approved by the IEC in September 2013. The current version of the product - ECP, "Energy Communication Platform" - was developed in compliance with this standard.

A technical summary on MADES/ECP and link with REMIT is provided in Annex 1.

D-Specific comments on the Manual of Procedures on Fundamental Data Reporting:

Moreover, ENTSO-E has provided specific comments on the PFUM in section 3 of this document.

2- Please provide us with your views on the attached data fields (see Annex I of the draft Manual) for the reporting of fundamental data.

Regarding Annex I, ENTSO-E has remarks on the two following reportings:

Fundamental data reporting:

See proposed comments and modifications in section 3.

Nominations reporting:

See proposed comments and modifications in section 3 and annex 2 for a detailed table of comments, including the names of the fields as they are used in the IEC 62325-451-2 schedule standard.

3-As regards the data fields for electricity and gas nominations (see Annex I of the draft Manual), please notice that a data field for Status is included for gas (data field No 14), but not for electricity. Please

provide us with your views whether this data field is relevant also for electricity nominations, and if so, whether existing Industry format could be updated accordingly.

In case of electricity nomination reporting, the final nomination is required and is relevant for the market surveillance. The Status, on the contrary, has no added value as it represents the matched nomination between TSOs that would be reported, and the time horizon it would refer to, will be identified under the field marketAgreement type (Y,M,W,D etc.).

4-Please provide us with your views on the attached electronic formats (see Annex II of the draft Manual) for the reporting of fundamental data.

The latest documents to be used are published under the “Technical documentation” subparagraph of: <https://www.entsoe.eu/major-projects/central-information-transparency-platform/data-providers-information/Pages/default.aspx>

It is envisaged that by autumn a possible page for REMIT could be established. The link would be then provided to ACER for the final document.

In relation to xsds names, ENTSO-E would recommend to rename them with the full name as they are on ENTSOE- website. (e.g iec62325-451-6-outage.xsd compared to outage.xsd)

5-The attached electronic formats for the reporting of gas nominations do currently not reflect the data fields for Contract Reference/Type (data field No 13) and Status Code (data field No 14). Please provide us with your views as whether these data fields should be required and thus if the XML schemas should be aligned accordingly.

Not relevant for electricity field

6-In order to avoid unnecessary costs or administrative burdens on reporting entities, the Agency intends to rely as much as possible on existing industry standards and data formats for the collection of fundamental data under REMIT. For the purpose of ensuring operational reliability, the Agency however reserves the right not to take over all future changes of such standards and data formats introduced by the industry. Any future changes of existing standards and data formats shall therefore be agreed between the Agency and relevant industry organization, before applying for the purpose of REMIT reporting. Please provide us with your views on the above approach.

We agree with this approach once REMIT implementation starts and the transparency central platform is operational for fundamental data reporting. (During the testing phases of the platform, slight corrections could be applied if needed). It is indeed understandable once a version of the standard is agreed for ACER Reporting, that it only evolves once agreed between both parties, taking into account the IT evolutions requested.

7-In order to assess insider trading, the Agency would consider necessary to have the following timestamps reported in sufficient level of detail:

- Time of the event (the time of occurrence of e.g. an outage of a power plant);

- Time of reporting to the public (the time when e.g. a market participant reported the outage to a platform for publication, or, in case of a nomination, the time when market participant nominated to a TSO);
- Time of publication (in the case of inside information, the time when the inside information was first disclosed to the market);
- Time of reporting to the Agency

The Agency considers that some formats as now specified, may not currently support the above requirements clearly enough. The Agency is considering to add such timestamps as data fields where not yet present. Please provide us with your views on the impact of adding such data fields to the present formats.

For nominations:

The time of the event for the nominations can be the time of the matching process as after this stage the nominations cannot be changed. Information related to “matching time” is fixed and available in the allocation rules.

The timing timestamps included in the standard (creation date time) represents the creation date and time of the report to the Agency and corresponds to the requested “Time of reporting to the Agency”. The data to be reported for nominations is issued after the matching between TSOs of all the final nominations per party (whole set of nominations are matched simultaneously). This could be done till D+1.

The transmission time of each nomination is not known at this stage. The nomination is submitted by the market participant during the gate timeframe (defined in the allocation rules) and this timing is regulated.

The Time of publication is not relevant for nominations as no individual nominations are published.

As described in question 1, modification of standards induces considerable impacts (costs, IT, resources). This information “Time of reporting to the public” is not available in the operational processes themselves at this stage and cannot be reported.

Adding these timestamps will then require a significant modification of the whole operational processes between TSOs on top of the standard itself.

The time of reporting to the Agency as described is the creation date of the file.

For outages:

The ‘time of the event’ is the ‘start date time’ of the outage already included in the reporting file.

ENTSO-E considers that the ‘Time of reporting to the public’ and the “Time of publication” are the same as the publication is instantaneous in the EMFIP platform.

The time of reporting to the Agency as described is the creation date of the file

3. General comments on the documents

Referenced document	Section	Current text	Proposed modification	Justification / Comments
Manual of procedures	3.1	On behalf of market participants, TSOs for electricity and gas or third parties on their behalf shall make available to the Agency information related to nominations;	On behalf of market participants, TSOs for electricity and gas or third parties on their behalf shall make available to the Agency information related to nominations;	In line with draft IA
Manual of procedures	4.2	b) Submitted data is subject to business validation rules as described in the ACER Technical Specifications for RRM s so that erroneous data is rejected.		Business validation rules should be shared between ACER and ENTSO-E / TSOs in order to ensure that data accepted by the Central Information Transparency Platform is also accepted by ARIS
Manual of procedures	5	Day-ahead Net Transfer Capacity (NTC):		In regulation 543/2013, day-ahead NTC is optional. In addition, when Flow based allocation is implemented, day-ahead NTCs will not be computed by TSOs anymore.
Manual of procedures	5	Physical flows data related to all bidding zone borders within the European Union for each [reporting] day in Schedule Market Document (IEC62325-	Physical flows data related to all bidding zone borders within the European Union for each [reporting] day in Publication Market Document (IEC62325-	Format for physical flows on Central Information Transparency Platform is Publication

		451-2)	451-3)	Market Document (IEC62325-451-3)
Manual of procedures	5	The Agency furthermore notes that the outages as reported to the Agency at all times should allow the Agency to identify the location of the outage		Please note that location in the MOP for Central Information Transparency Platform is the bidding zone
Manual of procedures	5	Outages data bigger than 100 MW of all relevant infrastructure within the European Union as reported to ENTSO-E transparency platform in n Unavailability Market Document format (IEC62325-451-6)		Name and location of consumption units are not foreseen directly in the format. ENTSO-E proposes to provide the “static overview” of consumption units as well, so that ACER would be able to match the EIC code with the name and location of the unit. In addition: The market participant is not included in the formats and information is not available on the Central Information Transparency Platform as it is not required by the 543/2013 Regulation.
Manual of procedures	5	The Agency furthermore notes that the outages as reported to the Agency at all times should allow the Agency to identify the location of the outage and the market participants (if applicable) concerned.	The Agency furthermore notes that the outages as reported to the Agency at all times should allow the Agency to identify the location of the outage and the market participants (if applicable) concerned.	The information about Market Participant that owns the asset is not required by the 543/2013 Regulation and not foreseen on the Central Information

				Transparency Platform
Manual of procedures	5	d) Actual generation per unit bigger than 100 MW	Actual generation per generation unit bigger than 100 MW	In line with article 16.1.a of regulation 543/2013
Manual of procedures	5	d) Actual generation per unit bigger than 100 MW within the European Union for each [reporting] day in at least hourly resolution in Generation and Load Market document (IEC62325-451-6-generationload) in hourly resolution .	d) Actual generation per unit bigger than 100 MW within the European Union for each [reporting] day in at least hourly resolution in Generation and Load Market document (IEC62325-451-6-generationload) in hourly resolution .	Duplicate
Manual of procedures	5	Outages data bigger than 100 MW ... Actual generation per unit bigger than 100 MW ... Static overview generation units bigger than 100 MW		The Central Information Transparency Platform will not implement this threshold to make it possible to report outages of units under 100MW if they are considered significant by the data provider. It may thus be possible that ARIS receive data related to assets under 100MW.
Manual of procedures	5	Static overview generation units bigger than 100 MW	Description of generation and production units bigger than 100 MW within the European Union, as described for configuration of the Central Information Transparency Platform, in Configuration document (IEC62325-451-6)	Clarification of the “static overview”
Manual of procedures	5	To be added	Description of consumption units bigger	In order to be able to gather the

			than 100 MW within the European Union, as described for configuration of the Central European Platform, in Configuration document (IEC62325-451-6)	name and location of a consumption unit in relation to its EIC code
Manual of procedures	5	...available bidding zone borders within the European Union...		<p>Situation for borders with non EU members should be clarified somehow, as :</p> <ul style="list-style-type: none"> - the fundamental data on these borders will be published, - nomination data is part of operational process with neighbouring TSOs.
Manual of procedures	5.2	<p>The Agency currently assumes that the Commission's Implementing Acts will foresee that electricity TSOs in the European Union shall provide the Agency fundamental electricity transmission data related to cross border nominations</p> <p>...</p> <p>The nominations would be provided, per direction between bidding zones,</p>	<p>The Agency currently assumes that the Commission's Implementing Acts will foresee that electricity TSOs in the European Union shall provide the Agency fundamental electricity transmission data related to final cross border nominations</p> <p>...</p> <p>The final nominations would be provided, per direction between bidding zones,</p>	In line with draft IA
Manual of procedures	5.2	The nominations would be gathered by the end of the schedule day and reported afterwards to the Agency in [two files	The nominations would be gathered by the end of the schedule day and reported afterwards to the Agency in [one file per TSO and	Clarification (2 files is dependent on the example)

		one for each of the [relevant] borders] OR [one file per TSO]	per relevant borders] OR [one file per TSO]	
Manual of procedures	5.2	In addition to clarifications in Annex I, please note the following specification on the following data fields for electricity nominations: <ul style="list-style-type: none"> Data field 20, on 'object aggregation': for reporting the value is always 'per party'. 	Proposal to remove the sentence	This is a specific precision for one field, and complicates the understanding. See proposal on the table in Annex 2 of this document.
Manual of procedures	5.2	Footnote: The Agency notes that in some European market rules additional 'long term' nominations exist in accordance with local market rules such as weekly.	Footnote: The Agency notes that in some European market rules additional 'long term' nominations exist in accordance with local market rules such as weekly, whereas in some market rules, long-term horizons nominations are merged when the market participant nominates (in which case the distinction cannot be made)	Align with different market rules in Europe
Manual of procedures	5.2		Add sentence: Daylight saving time: ALL ENTISOE/IEC standards use the UTC timing standard and therefore deals automatically with the saving lights issues through that standard	Similar to section for EDIgas formats
Manual of procedures	Annex II		Use the whole reference for the linked xsds (example: iec62325-451-2-schedule.xsd)	
Manual of procedures	Annex II		The links to the EDI library and xsds that are in the document could all be located in the annex II	

			Current link is https://www.entsoe.eu/fileadmin/user_upload/_library/resources/Transparency/20140606_CIM.zip	
REMIT ENTSO-E REPORTING SCHEMA USAGE GUIDELINES FOR DATA FIELDS	2.3	All reports must contain two mandatory fields. - Reporting Timestamp... - Reporting participant...	Proposal to remove	This information is not included in the data required by Regulation 543/2013 and as such not available on the central Information Transparency platform (and not included in the formats). The timestamp of the files is the creation date and time for the files created for reporting to ARIS The reporting participant is ENTSO-E
REMIT ELECTRICITY NOMINATIONS REPORTING SCHEMA USAGE GUIDELINES FOR DATA FIELDS	2.3		Add reference to iec62325-451-2 schedule	
REMIT ELECTRICITY NOMINATIONS REPORTING SCHEMA USAGE GUIDELINES FOR DATA FIELDS	2.3	All reports must contain two mandatory fields. - Reporting Timestamp... - Reporting participant...	Proposal to remove	The reporting timestamp of the files is the creation date and time for the files created for reporting to ARIS. See answer to question 7 The reporting participant is the

				TSO, the market participant for each nomination is also reported.
REMIT ELECTRICITY NOMINATIONS REPORTING SCHEMA USAGE GUIDELINES FOR DATA FIELDS	2.3		See proposed table in annex 2 of this document	
REMIT ELECTRICITY NOMINATIONS REPORTING SCHEMA USAGE GUIDELINES FOR DATA FIELDS	Electricity Nomination Reports	The nominations would be gathered by the end of the schedule day and reported afterwards to the Agency in [two files one for each of the [relevant] borders] OR [one file per TSO]	The nominations would be gathered by the end of the schedule day and reported afterwards to the Agency in [one file per TSO and per relevant borders] OR [one file per TSO]	Clarification (2 files is dependent on the example)
REMIT ELECTRICITY NOMINATIONS REPORTING SCHEMA USAGE GUIDELINES FOR DATA FIELDS	Electricity Nomination Reports	The Agency currently assumes that the Commission's Implementing Acts will foresee that electricity TSOs in the European Union shall provide the Agency fundamental electricity transmission data related to cross border nominations ... The nominations would be provided, per direction between bidding zones,	The Agency currently assumes that the Commission's Implementing Acts will foresee that electricity TSOs in the European Union shall provide the Agency fundamental electricity transmission data related to final cross border nominations ... The final nominations would be provided, per direction between bidding zones,	In line with draft IA
REMIT ELECTRICITY NOMINATIONS REPORTING SCHEMA USAGE GUIDELINES FOR DATA	Electricity Nomination Reports	Footnote: The Agency notes that in some European market rules additional 'long term' nominations exist in accordance with local market rules such as weekly.	Footnote: The Agency notes that in some European market rules additional 'long term' nominations exist in accordance with local market rules such as weekly, whereas in some	Align with different market rules in Europe

FIELDS			market rules, long-term horizons nominations are merged when the market participant nominates (in which case the distinction cannot be made)	
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4. Annexes

Annex 1: MADES communication protocol

The MADES (Market Data Exchange Standard) specifies an *international standard* for a communication platform that every Transmission System Operator (TSO) in Europe, and even every market participant, can use to reliably and securely exchange documents.

MADES goals are to define a messaging system that is secure, reliable, standard, transparent and enabling a single face to the market, i.e. a party has a single interface to exchange whatever data with any other party.

The *IEC 62325-503* Technical Specification, "Framework for energy market communications – Market data exchanges guidelines for the IEC 62325-351 European Style Market profile", was approved by the International Electrotechnical Commission (IEC) in September 2013. The current version of the product - ECP, "Energy Communication Platform" - was developed in compliance with this standard.

ECP

The ECP is the ENTSO-E implementation of MADES / IEC 62325-503, currently used by many of its member TSOs and power exchanges.

ECP comes as a *free* to use *turnkey solution* for organisations that want to follow this standard.

ECP concretely implements the following non functional requirements:

- **Security** – Only the recipient of the message is capable of reading the message content. The sender of any message can be unambiguously authenticated. Single way to encrypt and sign the documents.
- **Reliability** – The message delivery is guaranteed.
- **Integration** – The ECP functionality for sending and receiving messages can be integrated with a wide variety of technologies.
- **Standard** – ECP is the implementation of MADES / IEC 62325-503 standard, which defines the technical aspects of communication between entities within the energy sector.
- **Transparency** – Any message transported by ECP can be tracked down to gather trustworthy information about the state of delivery and the traversal path.
- **Portability** – The ECP can be installed on most of the widely used operation systems and work with a large variety of database servers.

ECP and REMIT

It is our opinion that the ECP will be a stepping-stone for ENTSO-E and TSOs to make sure that we have successfully provided fundamental data reports to the Agency and that we fulfil the Association obligations under Article 8(5) of REMIT.

Moreover, the ECP will allow ENTSO-E to ensure data integrity and operational reliability as specified in the ACER Requirements for RRM and the ACER technical specifications for RRM. More specifically and in reference to the "Manual of Procedures on Fundamental Data Reporting" chapter 4.1, the ECP can clearly:

- Ensure the security, confidentiality and completeness of information.
- Authenticate the source of information through certificate.

Technical advantages

The MADES specifies the interfaces for an endpoint to upload and download documents to and from the involved node. MADES also specifies how a business application inside a party information system can

exchange with the endpoint through services or usual file transfers. The ECP is also based on web services, and these web services are encapsulated in a package enabling to decrease the overall implementation costs for the users:

- No extra development is needed to implement the web service; web services are encapsulated;
- No “communication” tests are needed for each web service; the user only has to test its first connection with its node, once this test is successful, any exchange can be made.
- No “cent or penny tests” are needed for data exchange with the other users; the ECP connectivity is achieved when the access to the node has been tested; whereas in web services, every two peer connections need to be tested.
- Any payload can be exchanged; the only tests requested are the ones related to the “business content” of the payload.
- ECP is based on asynchronous exchanges and thus each party does not have to be connected to the network always; with web services synchronous data exchanges are to be managed and these required more complex processes and, in particular, time to process the requests before the hang out of the communication in case of no answer;
- In an ECP network, only the nodes shall have a high level of availability and redundancy; while for web services, all the parties shall have high available and redundancy architecture.
- From the security point of view, the ECP user is always the one initiating the communication with its node.
- Version management is provided; this enables an easy maintenance process of the software.
- Each participant benefits from the use of a standard product.

Consequently every European market participant (trader, distribution utilities, etc.) could benefit from a single, common, harmonised and secure platform for data exchanges.

Annex 2: Schedule/Nomination document - BASED ON International IEC standards, as mandated by EC within Smart Grids project

ENTSO-E proposes to use the field names as they are defined in the IEC standards. Therefore, we provided the first column below with the names of the fields as described in iec-62325-451-2 Schedule Market Document. Additional precisions are provided in the last column as well in relation to each field.

	Field Identifier	Field Identifier	Description (Definition)	Remarks Agency	Precisions from ENTSO-E
	Schedule_MarketDocument header (iec-62325-451-2 Schedule Market Document)	Schedule document header			
				NB: please note RED fields, those are not used from existing IEC format. Still the fields remain but do not need to be filled.	
				NB: please note GREEN fields are proposed for <u>Clarification in standard, based on testing. May need additional work</u>	
1	mRID	Document identification	Unique identification of the document for which the time series data is being supplied.		

2	revisionNumber	Document version	Version of the document being sent. A document may be sent several times, each transmission being identified by a different version number that starts at 1 and increases sequentially	Addresses 'Lifecycle'-fields need by allowing to keep track of updates to previously provided information.	
3	type	Document type	The coded type of the document being sent.		Possible codes for this field are for example : A01 - Balance responsible schedule A02 - Allocated capacity schedule A04 = System Operator area schedule ... Complete list is in the ENTSOE codelist.

4	process.processType	Process type	The nature of the process that the document is directed at.	<p>See examples of current values</p> <p>Possible values are : A17 - Schedule day A01 - Day ahead A02 - Intraday incremental A12 - Long term A18 - Intraday total A19 - Intraday accumulated depending on whether the reporting is made within a single reporting (LT / DA / ID at the end of day) or within several reportings covering the day.</p>	<p>Possible values are : A17 - Schedule day A01 - Day ahead A02 - Intraday incremental A12 - Long term A18 - Intraday total A19 - Intraday accumulated depending on whether the reporting is made within a single reporting (LT / DA / ID at the end of day) or within several reportings covering the day.</p>
5	process.classificationType	schedule classification type	A type that is used to classify the schedule by aggregation or classification.	Code allowing to summarise eg per day transactions per trader, or all nominations through day.	
6	sender_MarketParticipant.mRID	Sender identification	Identification of the party who is sending the document	EIC-code for the reporting party. This is commonly expected to be a TSO	<p>EIC code for the reporting party Note: Coding scheme is also identified within the field (notation : <sender_MarketParticipant.mRID codingScheme="A01">value_EICcode </sender_MarketParticipant.mRID>)</p> <p>This is true for all fields with party or domain codes</p>

7	sender_MarketParticipant.marketRole.type	Sender role	Identification of the role that is played by the sender.	The TSO reporting, for some countries potentially common system who deals with it - such as Nordic and GB.	This refers to a role as defined in the ENTSOE role model, for example A04 = TSO
8	receiver_MarketParticipant.mRID	Receiving identification	Identification of the party who is receiving the schedules.	ACER	Code for ACER – EIC code Normally, EIC codes are used in the IEC standards to identify the parties, and checked in the IT systems as part of the verifications before the file is sent. This is only a technical need, but has no impact either on the responsibility of the Agency or on the reported data. Allocation of EIC code is a very quick process.
9	receiver_MarketParticipant.marketRole.type	Receiver role	Identification of the role played by the receiver.	ACER - REMIT; This refers to a role(describes a function)	This refers to a role (describes a function not a party) defined in the ENTSOE role model Possible codes here could be : A32 - market information aggregator A33 - information receiver

10	createdDateTime	Creation date time	Date and time of transmission of the scheduling data.	This is the creation date and time of document, which indicated when the document was created. This is a key field, Agency considers important to know when market participant submitted his/her nominations to the TSO.	This represents the creation date and time of the report to the Agency, In the nomination process, it follows the matching between TSOs of all the final nominations per party (all matched together). The transmission time of each nomination is not known at this stage. The nomination is submitted by market participant during the gate timeframe (defined in the rules) and this timing is regulated.
11	schedule_Time_Period.timeInterval start	Schedule time interval	The beginning and ending date and time of the period covered by the document containing the schedule.	This covers period, e.g. year or day.	beginning of the timeinterval
11 bis	schedule_Time_Period.timeInterval end	Schedule time interval	The beginning and ending date and time of the period covered by the document containing the schedule.	This covers period, e.g. year or day.	end of the timeinterval
12	domain.mRID	Domain	The domain covered within the Schedule Document.	Bidding zone. May help to guide where data belongs in ARIS.	

13	subject_MarketParticipant.mRID (if applicable)	Subject party (if applicable)	The Party that is the subject of the Schedule Document.	In some countries 3rd party reports on behalf of TSO (like Elexon in GB; see http://www.elexon.co.uk/about/other-services/data-flows/); optional field	
14	subject_MarketParticipant.marketRole.type (if applicable)	Subject Role (if applicable)	The Role of the SubjectParty.	see field 13	
15	matching_Time_Period.timeInterval.start (if applicable)	Matching Period (if applicable)	The beginning and ending date and time of the period that is to be matched within the schedule.	Potentially this field specifies at which gate closure time this nomination was sent (see field 10 - this allows to determine link to timing when nomination was received by TSO)	beginning of the matching period In case of schedule day, it corresponds to the beginning of the day
15 bis	matching_Time_Period.timeInterval.end (if applicable)	Matching Period (if applicable)	The beginning and ending date and time of the period that is to be matched within the schedule.	Potentially this field specifies at which gate closure time this nomination was sent (see field 10 - this allows to determine link to timing when nomination was received by TSO)	end of the matching period In case of schedule day, it corresponds to the end of the day
	Schedule Timeseries	Schedule Timeseries			

16	mRID	Senders time series ID	<p>Sender's identification of the time series instance.</p> <p>This must be unique for the whole document and guarantee the non-duplication of the product, business type, object aggregation, in area, out area, metering point identification, in party, out party, capacity contract type and capacity agreement identification</p>	<p>Allows unique ID of this nomination.</p> <p>Similar to UTI in trades. Does not function in isolation - this does not relate to reporting of data as such, but is used for validation.</p>	
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17	version	Senders time series version	<p>The time series version is changed only if a given time series has changed.</p> <p>The time series version must be the same as the document version number in which it has been added or changed. All time series, whether changed or not, must be retransmitted when a document is resent.</p> <p>In the case of the deletion of a time series, it is resent with all periods zeroed out.</p>	Versioning belonging to updates of time series, allows to do data validation and control.	
18	businessType	Business type	Identifies the trading nature of an energy product.	<p>Possible codes include for example (not exhaustive) :</p> <p>A03 - External trade explicit capacity</p> <p>A06 - External trade without explicit capacity</p> <p>...</p>	<p>Possible codes include for example (not exhaustive):</p> <p>A03 - External trade explicit capacity</p> <p>A06 - External trade without explicit capacity</p> <p>...</p> <p>Complete list is in the ENTSOE codelist.</p>

19	product	Product	Identification of an energy product such as Power, energy, reactive power, transport capacity, etc.	Electricity. Possible codes include for example (not exhaustive) : 8716867000016 - Active power	Possible codes include for example (not exhaustive) : 8716867000016 - Active power ...
20	objectAggregation	Object Aggregation	Identifies how the object is aggregated.	Default value: Per Party. Mainly aggregated per party for REMIT. So to specify that is BY PARTY; A03 = Party	This attribute details how the value is aggregated (or not) with regard to business description. In this reporting, nominations are sent per party and time frame (the object being described concerns a party). Possible code is : A03 = party
21	in_Domain.mRID (if applicable)	In area (if applicable)	The area where the product is being delivered.	E.g. from zone related to TSO A. Optional field - needs to be filled unless Bidding zone affected is known from other reported field.	EIC code for the zone where the energy is going This field represents a zone
22	out_Domain.mRID (if applicable)	Out area (if applicable)	The area where the product is being extracted.	E.g. from zone related to TSO B. Optional field - needs to be filled unless Bidding zone affected is known from other reported field.	EIC code for the zone where the energy is coming from This field represents a zone

23	marketEvaluationPoint.mRID (if applicable)	Metering Point Identification (if applicable)	The identification of the location where one or more products are metered.	It is USED FOR DC (Direct current) - cables. FR-UK DC-cable nominations could have use for such field. For DC links, it is sometimes used in planning phase (nomination/matching process), and later used for imbalance settlement accounting process. Field is used to differentiate the delivery point.	For DC links, it is sometimes used in planning phase (nomination/matching process), and later used for imbalance settlement accounting process. Field is used to differentiate the delivery point.
24	in_MarketParticipant.mRID (if applicable)	In party (if applicable)	The market participant that is putting the product into the area.	To be reported as field; MP identified by EIC or ACER code. Key field allowing to link through MP-ID to other monitoring information about that MP.	
25	out_MarketParticipant.mRID (if applicable)	Out Party (if applicable)	The market participant taking the product out of the area.	To be reported as field; MP identified by EIC or ACER code; Key field allowing to link through MP-ID to other monitoring information about that MP. NB: note that there can be one to many nominations, in some countries. Those would be split in several nomination files.	

26	marketAgreement.type (if applicable)	Capacity contract type (if applicable)	The contract type defines the conditions under which the capacity was allocated and handled.		Use is dependent on the Business Type Possible codes are: A01 = Daily A02 = weekly A03 = monthly ... Complete list is in the ENTSOE codelist.
27	marketAgreement.mRID (if applicable)	capacity agreement ID (if applicable)	The identification of an agreement for the allocation of capacity to a party.	To be reported; Link to Transportation contracts - key information allowing to link data within ARIS to Transportation data. Please note that the link to transportation contracts is not always possible with this field, because LT nominations can be made by the party once for all the capacity acquired in several long-term allocations.	Please note that the link to transportation contracts is not always possible with this field, because LT nominations can be made by the party once for all the capacity acquired in several long-term allocations.
28	measurement_Unit.name	Measurement unit	The unit of measure which is applied to the quantities in which the time series is expressed.	MW (always in accordance with Electricity Transparency regulation)	
29	curveType	Curve type (if applicable)	The coded representation of the type of curve being described.	To be reported field. BLOCK or Continuous. Example values.	Possible code : A01 = sequential fixed block
	Reason (if applicable)	Reason (if applicable)			

30	code (if applicable)	Reason Code (if applicable)	A code indication that a textual reason for modification will be provided in the reason text.	Would be Optional. For nominations this field would only be used in exceptional circumstance by TSO denying nominations to MPs; example value 'Security curtailment' which only applies when eg TSO rejects nominations.	
31	text (if applicable)	Reason text (if applicable)	Textual reason for a modification.	FREE TEXT, explaining 30. Limitation of allowed text size could be introduced.	
	Period	Period			
32	timeInterval start	Time interval	The start and end date and time of the time interval of the period in question.	In a pre-defined format. ISO 8601. See fields 33, 34, 35.	
32bis	timeInterval end	Time interval	The start and end date and time of the time interval of the period in question.	In a pre-defined format. ISO 8601. See fields 33, 34, 35.	
33	resolution	Resolution	The resolution defining the number of periods that the time interval is divided.	ISO 8601. Hourly, 30 min or 15 min depending on market. Through EU different granularity of data is customary; key issue to manage in ARIS for aggregation and analysis of data, with trading data.	
	Point	Interval			

34	position	Position	The relative position of a period within a time interval.	Linked to field 32. Fields 34 and 35 define position and value, e.g. (1, 150), e.g. (2, 250), e.g. (3,200). This would define e.g. that on Day X, in first hour, 150 MW would flow; in 2nd hour 250 MW flow, in 3rd hour 200 MW would flow etc.	
35	quantity	Quantity	The quantity of the product scheduled for the position within the time interval in question.	NB: one will see that per 1 sender, in 1 file, multiple nominations, time series can be provided.	