



ETSO Scheduling System (ESS)

Implementation Guide

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REVISION HISTORY

Version	Release	Date	Paragraphs	Comments
0	3	2001-08-04		Pilot test version
1	0	2002-03-27		Initial release of document
1	1	2002-05-14		General revision with clarifying text after Steering Committee comments.
2	0	2002-11-10	3.1, 3.2, 7.1, 7.2, 7.3, 7.4, 7.4.2 (new), 8.2.1	Added new text, modified flow diagram and added a message type to cater for intermediate confirmations
			3.3	Revised ground rules 9 and 10 to cater for the addition of a resolution attribute. Added ground rule 11 to ensure the coherence of the time interval period. Other ground rules shifted down by 1
			4.1, 5.1, 6.1, 7.1	Revised information model to incorporate size optimization and improvement changes and to make the sender identification key.
			4.2, 5.2, 6.2, 7.2	Incorporated model changes into DTD. Modified the constant attribute "value" to "v" for optimization. Separated DTD from data instance and created new sub-paragraph for the data instance.
			4.3.1, 4.3.3	Corrected business type names.
			4.3.4	Adjusted message acceptance and rejection criteria.
			4.3.5, 4.5	Added the case for treating an empty message
			4.7, 4.8, 6.6, 6.7, 7.6 to 7.8	New paragraphs to explain the new model classes.
			5.3	Clarified text.
			5.5, 5.5.1, 6.4, 6.4.1, 7.4, 7.4.1	Clarified reason codes.
			5.6, 5.7	Introduced the case of imbalance global position.
			7.3	Introduced the notion of an imposed time series. Also realigned the confirmed series to indicate the complete time series information. Replaced the confirmed message identification information in the message header

Version	Release	Date	Paragraphs	Comments
2	1	2002-12-22	8.2.4	Deleted non-preferred coding scheme codes. Introduced country coding scheme and the possibility to create bi-laterally agreed coding schemes.
			8.2.5	Corrected definitions.
			8.2.7	Clarified reason codes and added new codes.
			9	Updated the core components
			10	Deleted paragraph 10 concerning the use if a DTD which made use exclusively of the UID. This is no longer relevant.
			11	Introduced relative addresses. Added file naming convention.
			12	Deleted the content of the Role model as it appears in a standalone document. Introduced uniquely the situation of the ESS within the role model.
			General	Removed all DTDs to separate section. Minor editorial corrections
			4, 5, 6, 7	Corrected chapter titles
2	2	2003-02-12	8	Correction of word “CodingScheme” to “codingScheme”. Change of “\” to “/”.
			3.2	Correct figure 7 to ensure that the transmission process can start.
			4.3.6	Clarify the significance of “sender” in the message header.
			6.1	Corrected model to show that “message sender identification” contained a coding scheme.
			7.1, 7.2	Removed constraint on imposed times series and time series confirmation
			8.1, 8.3, 8.5, 8.7	Changed release number
			8.2, 8.6, 8.8	Correct errors in examples (period of 1 hour)
			9	Delete section 9 (code lists) and reproduce it as a separate document
			10.1 (now 9.1) 11.3 (now 10.3)	Corrected spelling errors Corrected directory references
2	3	2003-04-29	6.3.1	Corrected erroneous mention of the reason code at the header level.
			8.1	Modified DTD to remove the code list from the process type. This will provide more flexibility to the message and version 2 Release 2 remains 100% upwards compatible.
			8.1 to 8.8	Changed Release number
			8.6	Removed Reason code in header level from

Version	Release	Date	Paragraphs	Comments
			8.5, 8.7	example Corrected “SubValue” to read “subValue”

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REFERENCE DOCUMENTS.

1. The ETSO Role Model
2. A Common Identification System for The Electricity Industry, The ETSO Identification Coding Scheme - EIC

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1. OBJECTIVE

The objective of this implementation guide is to make it possible for software vendors to develop an IT application for market players that can exchange electricity market schedules, such as day ahead or intra day schedules, to all related parties in all countries.

The implementation guide is one of the building blocks for using UML (Unified Modelling Language) based techniques in defining processes and messages for interchange between actors in the electrical industry in Europe.

The initial conception of the guide has been based on the day ahead energy scheduling process in order to obtain a more generic specification of schedule process management.

This process is very closely related to other processes such as imbalance settlement, other scheduling processes, cross border tariffs, capacity allocation, etc. The procedures, messages and methods described in the implementation guide may be partially or fully applicable to these processes.

This guideline can be used as a model for using XML (eXtended Markup Language) technology in all related processes.

The main concern of the TSOs is on the secure and reliable operation while facilitating electricity market procedures. The methods, components and procedures described in this guide can be the basis of including some operational requirements of UCTE, Nordel and other constituents of ETSO.

It is the intention of the ETSO TF14 to make this implementation guide as the platform to be used for as many as related processes as possible. The ETSO TF14 objective is that the different market participants and associations use this platform in a co-ordinated manner.

The guide is targeted basically towards business-to-business application interfaces using the full power of the acknowledgment process. However, it may be equally put into place in a more user-orientated fashion through a web-based service where the key elements of the acknowledgement process are implicit in the service itself.

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2. BALANCE SETTLEMENT PROCESS OVERVIEW

The electricity market in Europe is now opening. Some countries have opened the market completely and others have started the process. A central part of any national legal requirements in the electricity market is that each electricity supplier in the market shall be in balance. This means that the amount of electricity produced and consumed through bilateral agreements are balanced. The procedure to calculate this balance and the invoicing of any differences is called “balance settlement”.

The full balancing process can be broken down into three phases:

1. A planning phase, where balance responsible parties (e.g. trade responsible, production responsible, consumption responsible parties, etc.) calculate in advance the consumption of all involved parties for the day ahead. At the conclusion of this phase the system operator informs each balance responsible party of what has been accepted of their schedules and informs the entity responsible for imbalance settlement, called the “imbalance settlement responsible” of all the schedules in question.
2. An operation phase, where the schedule that has been determined during the planning phase is executed. The system operator, to ensure system balance at any moment, handles any deviations between production, consumption and unforeseen congestion.
3. A settlement phase, where following the date of operation, the metered data aggregator sends the data to the imbalance settlement responsible. The imbalance settlement responsible, along with complementary data received from other sources, then carries out the imbalance settlement itself.

The messages defined in this document cover the first phase of the balance settlement process, the planning phase.

It provides a standard enabling a uniform layout for the transmission of scheduling data between the European electricity system operators, producers, suppliers and traders and all imbalance settlement responsible organizations. This shall ensure a common interface between different software solutions.

2.1 Definition

The messages defined in this document enable balance responsible parties (e.g. trade responsible, production responsible, consumption responsible parties, etc.) to send their schedules (consumption, production, capacity, etc.) to the system operators for the day ahead. The message may also be used for the transmission of intra day schedules associated with a day ahead schedule.

2.2 Operational scenario

2.2.1 The overall context

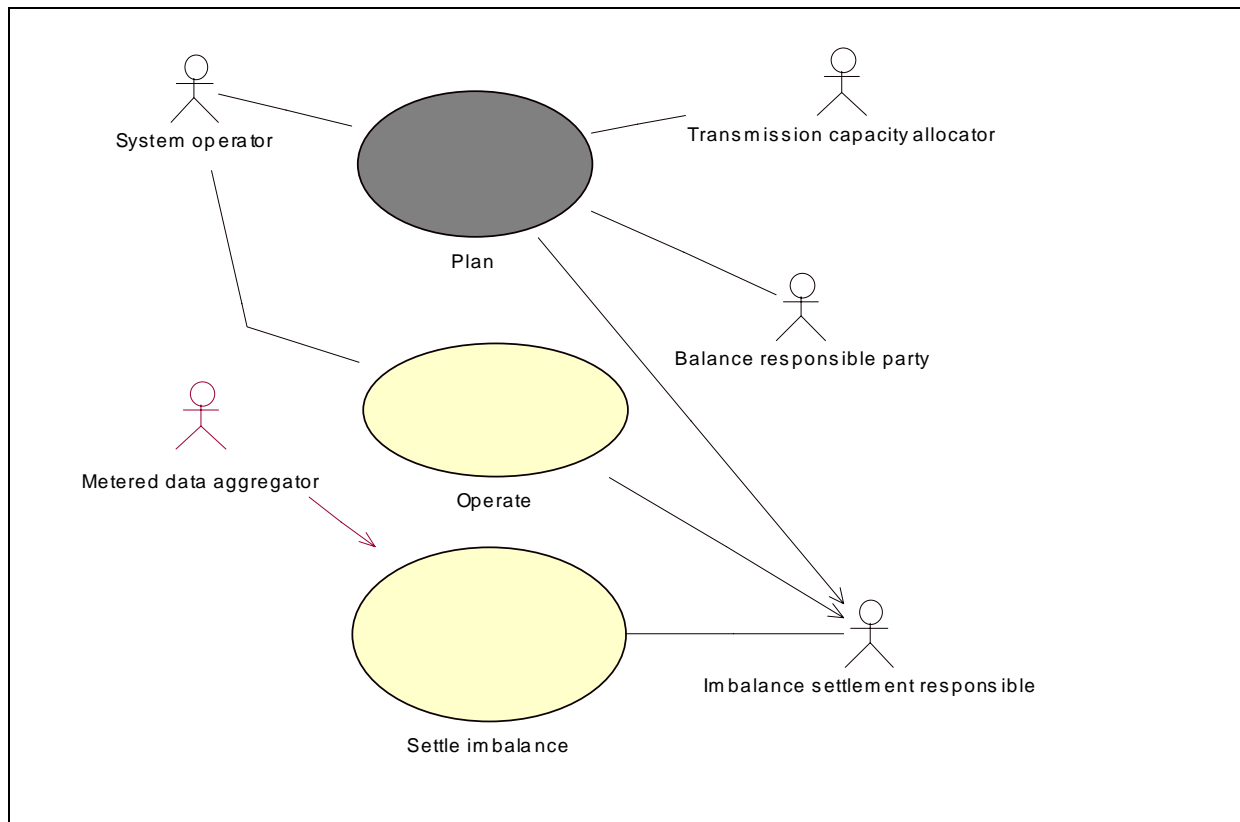


Figure 1: The balancing process perspective

Within this perspective there are three principal activities which can be identified. These, as shown in figure 1 are

1. **The planning activity that is the subject matter of this implementation guide and will be further detailed below.** The principal deliverable of this phase is a set of time series schedules that have gone through their validation process (conformity, matching, plausibility and acceptance).
2. The operational activity that ensures that the different schedules are correctly implemented. This means that the planned production is available to cater for the planned consumption. It also has to ensure that any deviations from the various schedules (production, capacity, consumption, etc.) are catered for.
3. The imbalance settlement activity that takes place once everything has been completed. It may be spread over a defined lapse of time. It is composed of three basic activities. The first activity receives all the schedules that have been agreed as well as market or agreed prices. The second activity recuperates the measured values of the delivered products. The final activity reconciles these values and identifies the imbalances.

In addition there is a pricing activity that is normally completely independent of the technical and the online processes. It is there to provide the rules to enable the involved parties to manage their financial risks. At the end of the day the same activity is used to determine the price of all deviations from the schedule. This activity has not been identified in Figure 1 since it is essentially an independent activity.

2.2.2 Breakdown of the planning phase

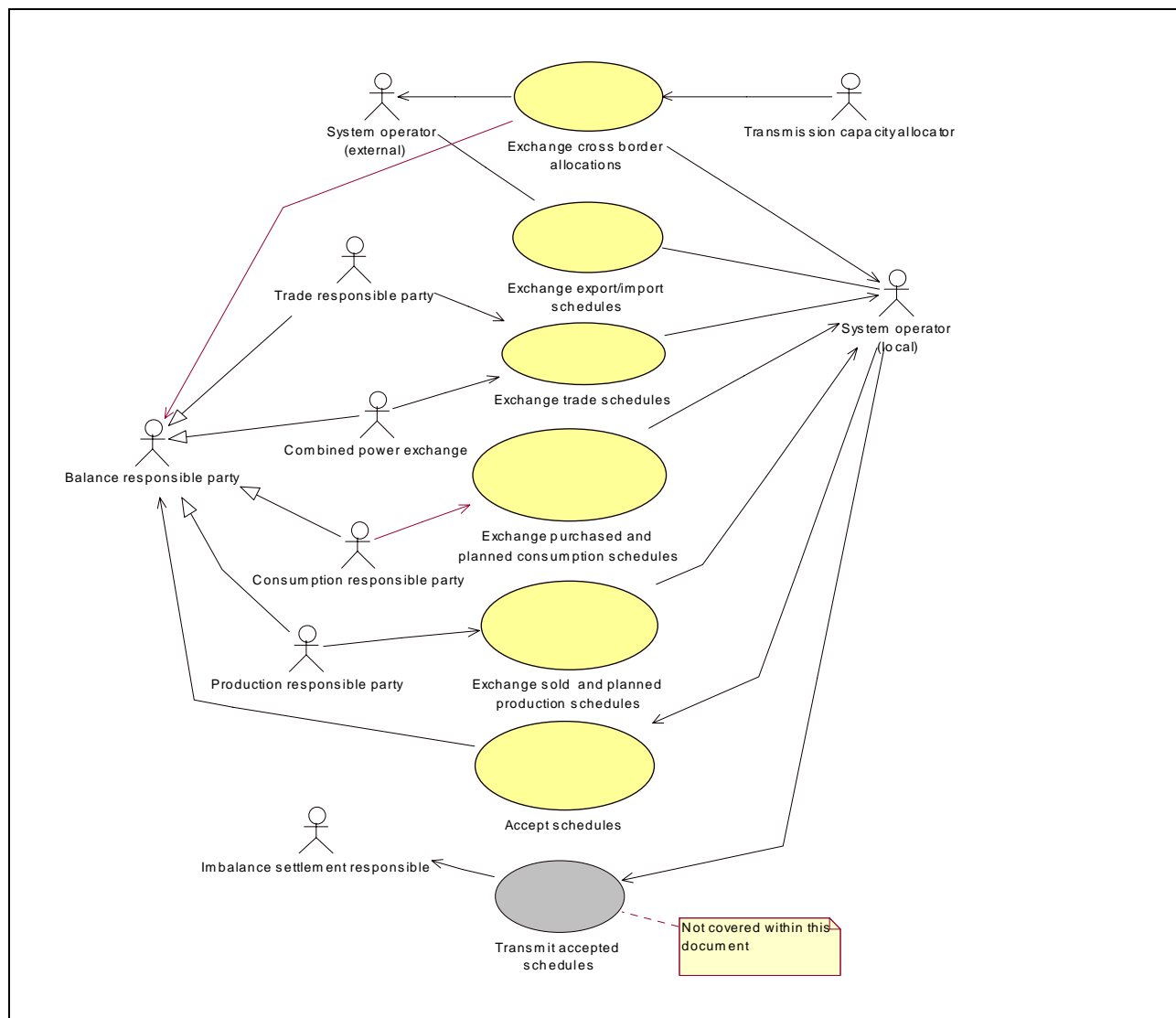


Figure 2: Information exchange during the planning phase

The planning phase, outlined in Figure 2, concerns principally the schedules supplied by the different balance responsible and system operator roles for a given balance area or a group of balance areas. It also deals with the exchange schedules between two balance areas via system operators and transmission capacity allocators. The resulting schedules of all these information flows are transmitted to the imbalance settlement responsible after validation at the system operator level.

The diagram in Figure 3 outlines the different domains of responsibility of the principal actors that play a role within this guide. The balance responsible parties operate within one or several balance areas, a system operator ensures the correct operation of one or several balance areas. Finally the transmission capacity allocator ensures the allocation of transmission capacity between balance areas.

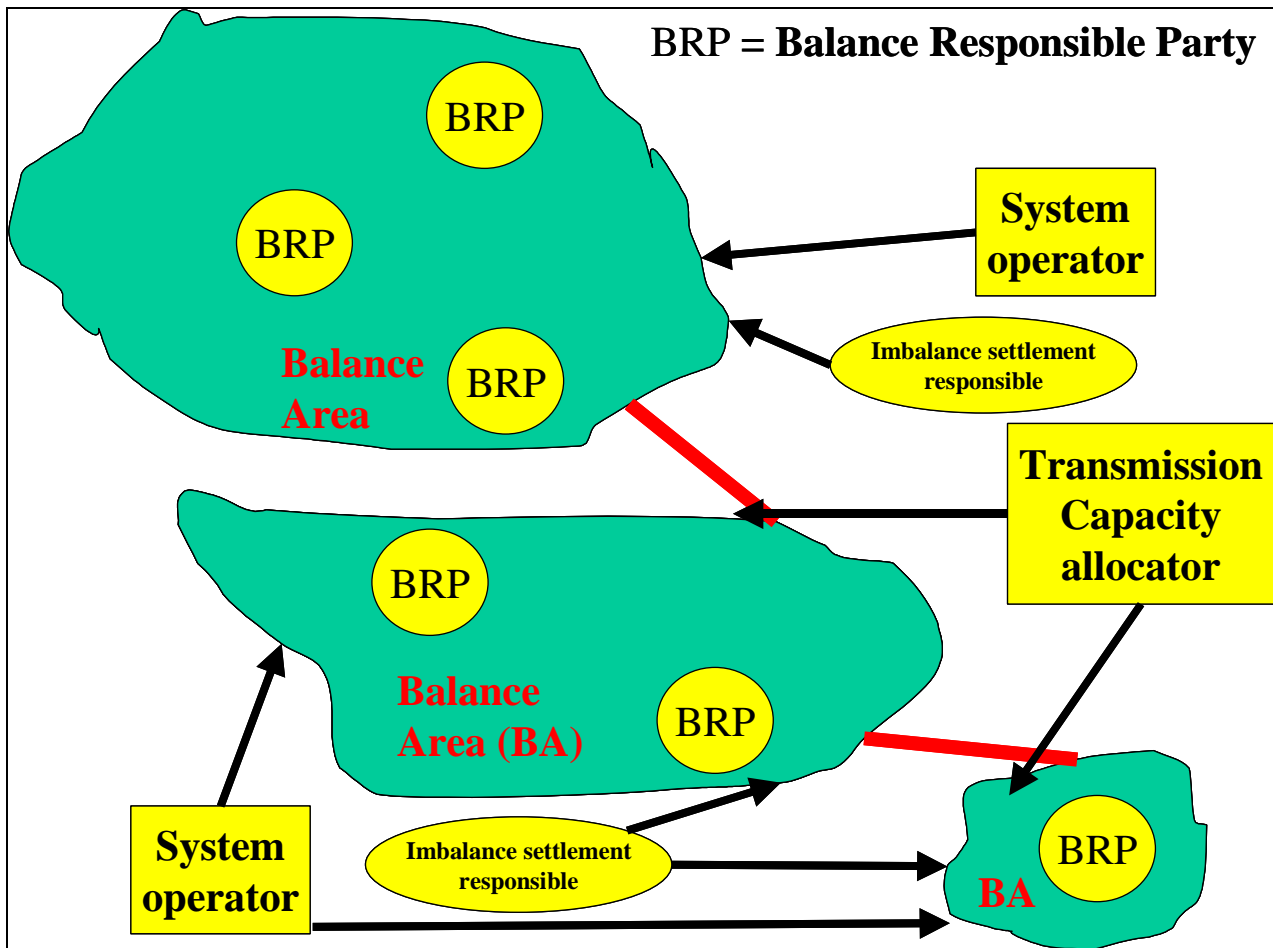


Figure 3: Domains of responsibility

The basic principle upon which this phase has been based is that all the trades between 2 balance responsible parties must be balanced. For each balance area all the “in” flows should balance with all the “out” flows. In the case of imbalance, the system operator must manage the imbalance prior to the operation phase.

This guide covers the recuperation of all the information necessary for the balance process for the cross border allocations, export/import schedules and trade schedules.

The functions concerning the transmission of purchased and sold unit schedules and their acceptance are covered but are only partially described. The functions not completely covered refer to the imbalance settlement process where consumption or production under or overheads cannot be tied to an individual balance responsible party. However, at the macroscopic level these are completely covered.

The operational and imbalance settlement activities have not yet been taken into account in this guide.

3. SCHEDULE SYSTEM INFORMATION REQUIREMENTS

3.1 Process flow

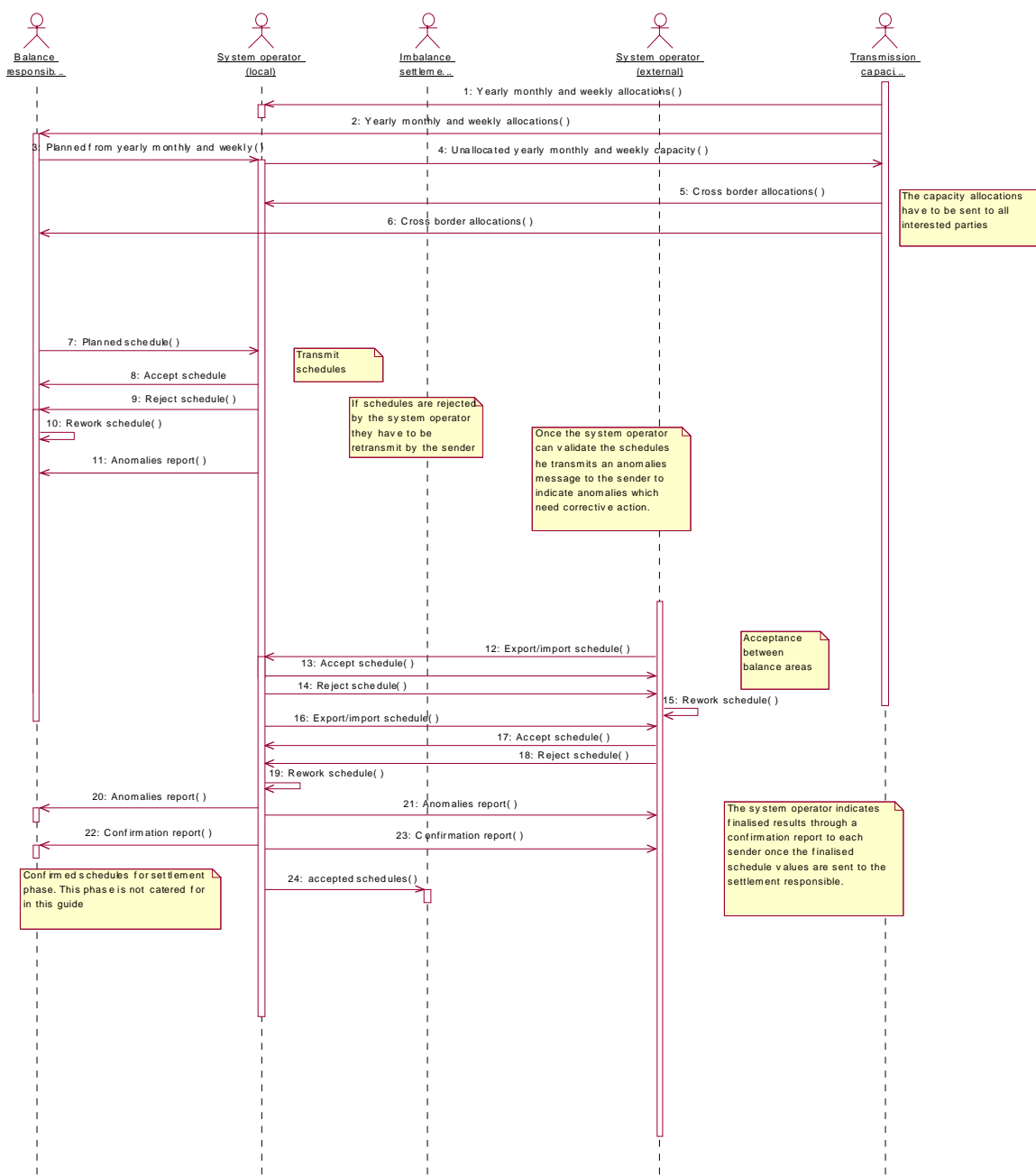


Figure 4: Typical sequence diagram of the information flow from the local system operator perspective

The sequence diagram in Figure 4 outlines the information that is exchanged between the different actors in the planning phase of balance settlement process. The information flows concern essentially the day ahead scheduling process as seen from a balance area administered by a local

system operator and connected to another balance area administered by an external System operator (as depicted in figure 3).

Trade can take place between the balance areas and the transmission capacity between the areas is allocated to the balance responsible parties by the transmission capacity allocator.

This is a typical market structure in central Europe and requires a complicated set of information flows.

The Nordic market in comparison is relatively simple and requires a simple subset of the sequence diagram. In the Nordic market there is neither a transmission capacity allocator nor are there any interactions with external system operators. Consequently the information flows concerning these actors are not required. Without these flows therefore, the sequence diagram reflects the Nordic market.

Prior to allocation the system operators exchange an agreement of capacity between balance areas. The transmission capacity allocator is then informed of the capacity available for allocation. Allocation may be applied either through auctioning or through market rules.

After the allocation the transmission capacity allocator will inform the balance responsible parties of the capacity that they have been allocated for inter area energy transmission. This information will also be sent to both system operators to enable them to have an indication of the cross border loading. This information also enables them to verify if a trader's energy schedules are within the limits of the allocated capacity. If not, the schedules in question are rejected

Some areas are electrically interconnected with no limitations on transmission capacity. In this case there is no transmission capacity allocator.

The balance responsible will then inform their system operator of the trades that they have carried out. These purchases and sales will initially be controlled for coherence and if correct, they will be informed by the system operator that the schedule has been accepted for processing. If not, they will be informed of the schedules rejection.

The system operator may optionally partially control the schedules as soon he has all the necessary information in his possession. In the case of error, he will inform the balance responsible party of the errors through an anomaly report. The balance responsible party may then resubmit the schedules with the necessary corrections.

As soon as cut-off occurs the system operator will finalise all controls respecting market rules. He will then send a confirmation report (or eventually an anomaly report) to the various parties informing them of the actions that will be taken into account for the day in question.

Depending on market rules, apart from the final confirmation report that is produced after cutoff, intermediate confirmation reports may be generated. The cutoff time refers not only to daily or intra daily markets as considered in this guide, but also to the different markets that cover imbalance adjustments, reserve allocation, etc. (ancillary services markets).

Any bypass procedures to be used after cutoff are market dependent and are not covered in this guide, but the scheduling messages defined in this document may be used.

To close the process all the approved schedules are sent to the imbalance settlement responsible party. This process is not covered in this guide. In some contexts the imbalance settlement responsible may receive the balance responsible schedules and inform the system operator of the approved schedules.

3.2 Schedule system information flows

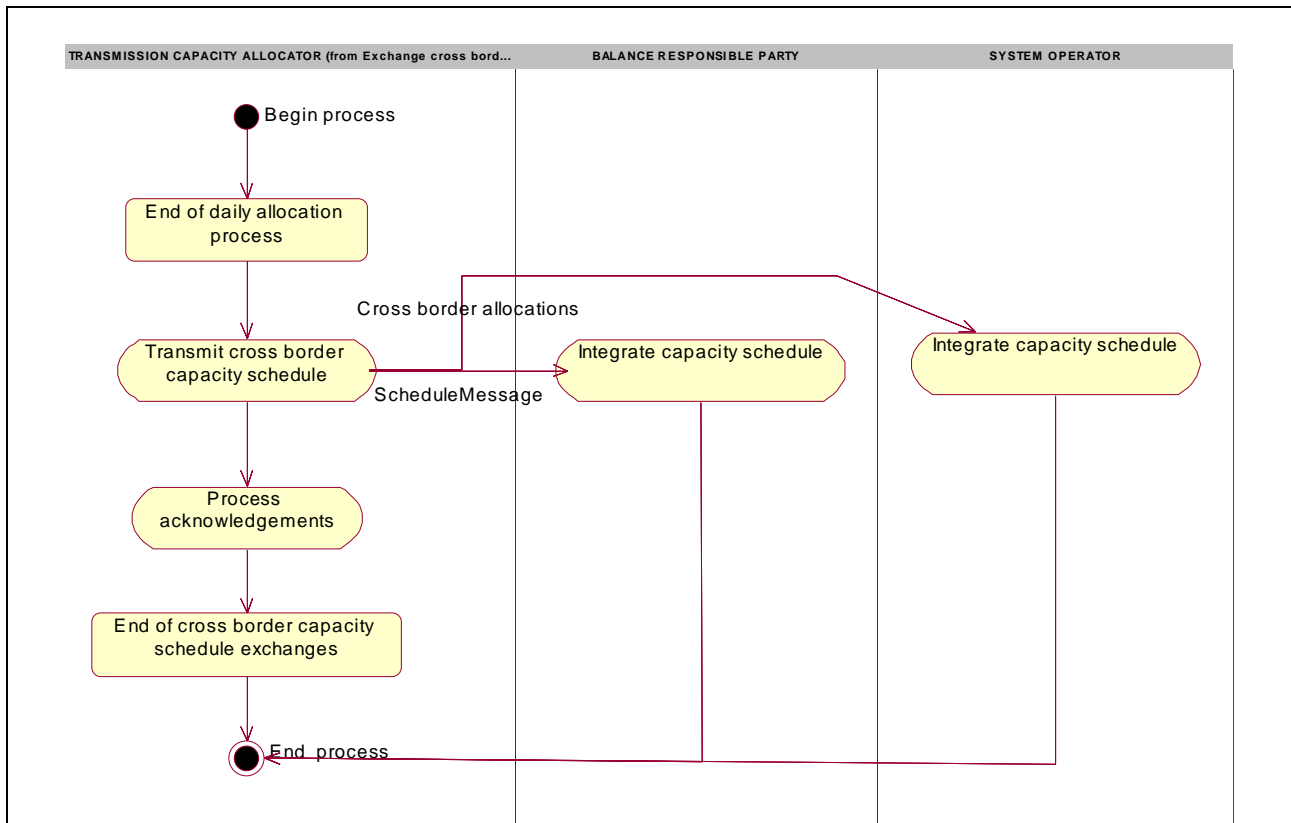


Figure 5: The cross border capacity allocation process

As soon as the transmission capacity allocator has terminated the allocation he transmits the allocated capacity schedule to both the balance responsible party and the system operators. The parties receiving the allocated capacity schedules integrate the information into their systems. This can be considered the first cycle of the planning phase and is outlined in Figure 5.

Once the balance responsible parties receive the allocated capacity information, they are in a position to begin the principal phase of the planned scheduling process.

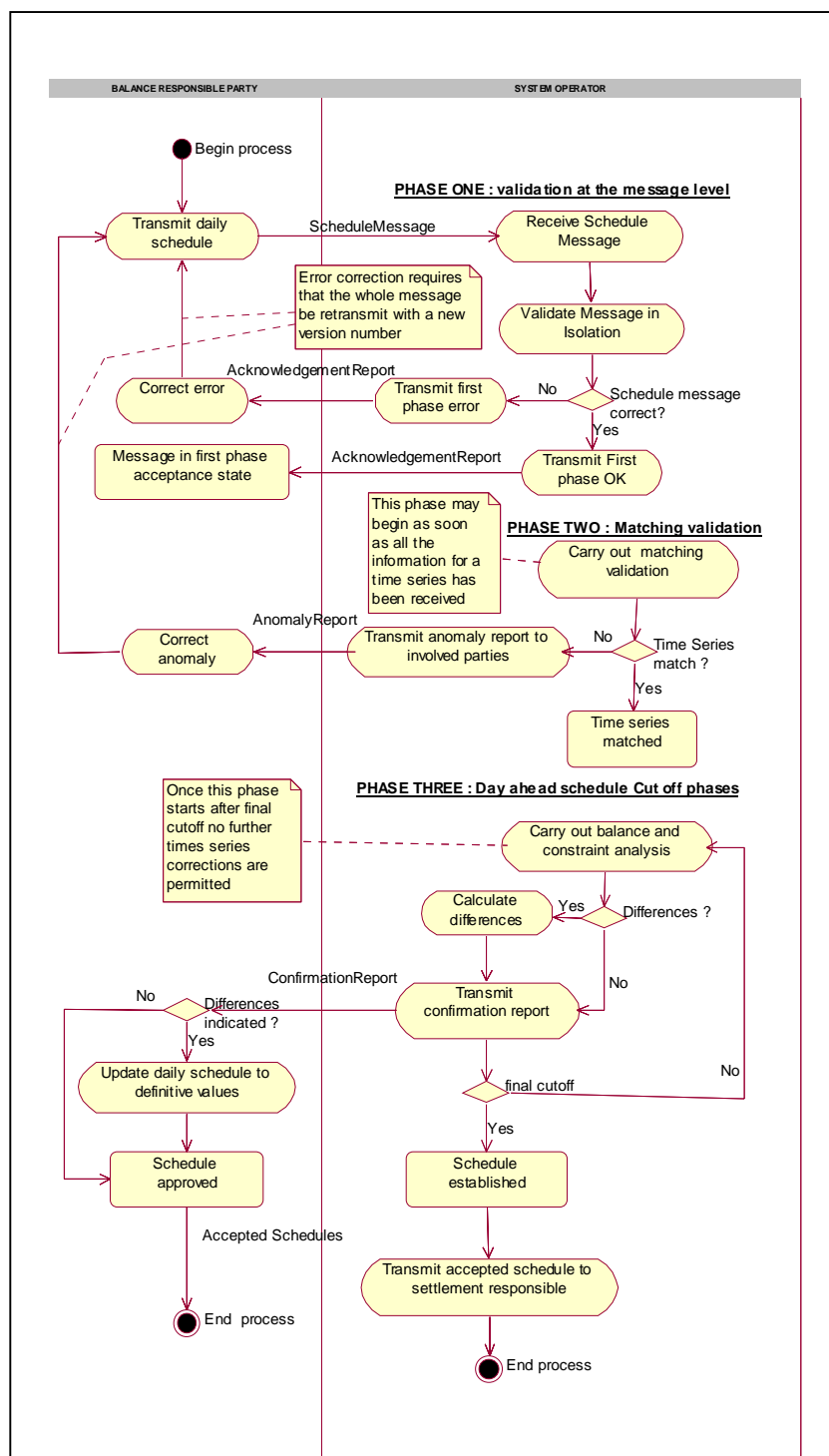


Figure 6: Schedule planning transmission process

A more precise decomposition of the interchange between balance responsible parties and the system operator is provided in Figure 6.

The schedule message transmission cycle is composed of three phases:

1. The initial transmission of the schedule message to the system operator. During this phase the message is verified for coherence independently of all the schedule messages that have been transmit by other parties. This phase verifies the coherence of the time

series within the message. The phase ends with the transmission to the sender of a positive or negative acknowledgement of the time series received.

2. The matching validation can be carried out on the time series within a message once the time series from the complementary parties has been received. If a time series is found not to match, an anomaly message is transmit to all the involved parties informing them of the problem. Time series found to be in error need to be retransmit via the retransmission of the applicable schedule message (with a new message version) containing the corrected time series (with the version number of the retransmit message). The retransmit schedule message will include all the non-erroneous time series that were sent with the message. These will maintain the version number of their last clean transmission.
3. The last phase occurs at the moment of cut-off or prior to it for the schedule type involved. A difference's analysis is then carried out, respecting market rules, between the set of time series that has been received and what has been accepted as the time series for the period in question. Each party that sent a schedule message is then informed via a confirmation report message of the situation that has been accepted at this stage of the process. Any differences will be highlighted in the report. The reception of this report after final cutoff ends the scheduling process.

The last phase cannot be completed until all the export and import information has been exchanged between the various system operators. Once the system operators have received this information they may terminate the difference analysis and transmit the confirmation report to the concerned parties.

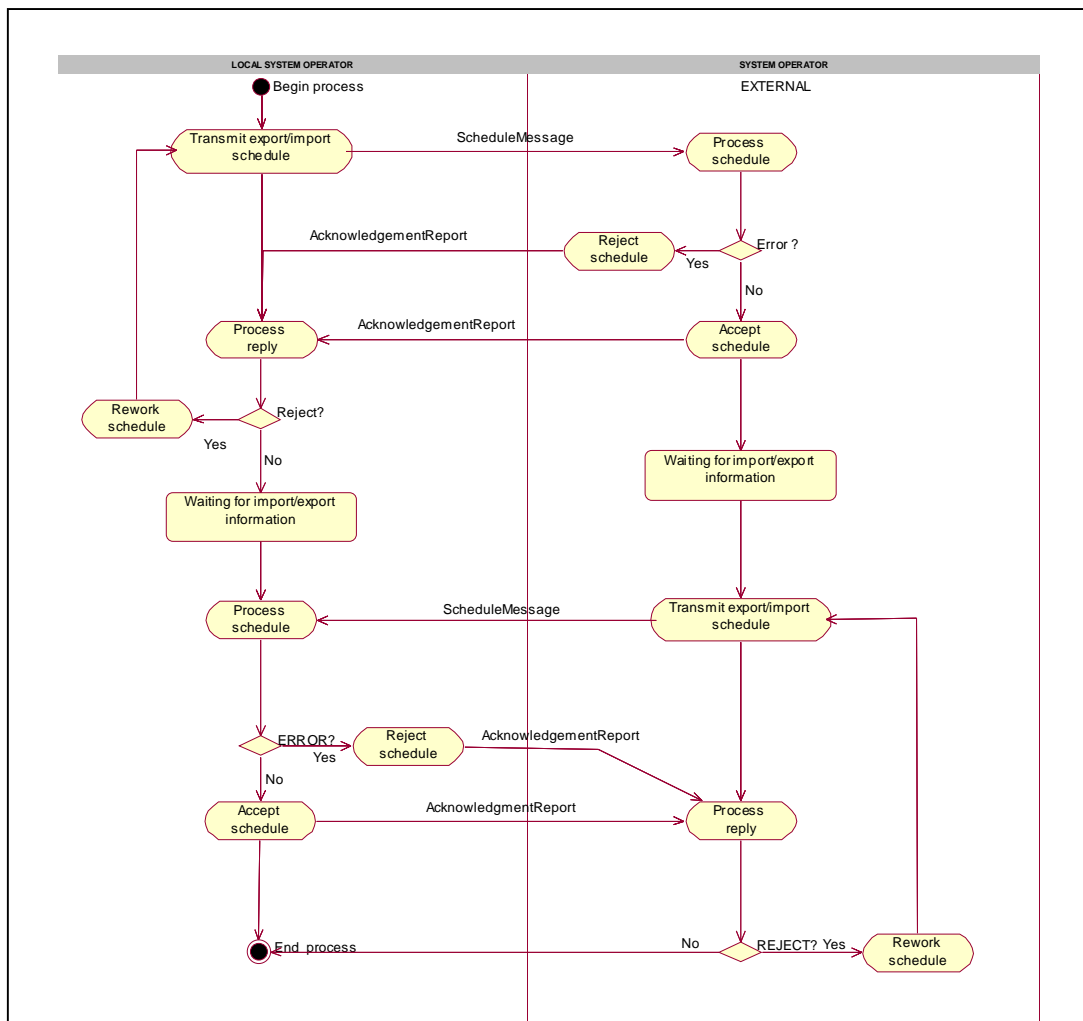


Figure 7: The import/export transmission process

Figure 7 outlines the transmission of the external trades between the different system operators.

The last task, which completes the balancing settlement process, is the transmission of the accepted schedules to the imbalance settlement responsible. This last phase is not catered for in this guide.

The schedule message, the acknowledgement message, the anomaly report message and the confirmation report message is defined within this guide.

3.3 General ground rules

The process flow assumes that a certain number of basic rules are respected. This does not include the specific rules that have been defined in an interchange agreement. These basic rules are:

1. A responsible party must transmit a global position in compliance with market rules for day ahead schedules. This is necessary to ensure a consistent position for each actor. This means that there is one day ahead schedule message per participant containing all his time series for trade, production and consumption. The last valid schedule message received represents the global position for the party.
2. A time series shall be sent for each unique combination 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 (refer to paragraph 0 for definitions).
3. Every time a new version of a schedule message is retransmit all the time series contained in the previous transmission must appear in the new version. In the case where a time series is missing, or an existing time series is rejected, the complete message will be rejected.
4. All version numbers shall be positive integer values and leading zeros shall be suppressed
5. All scheduling messages received shall have an acknowledgement (acceptance, rejection or errors).
6. All the time series information that has been validated in phase 1 (validation at message level) for formal correctness may be used to balance their complementary time series as soon as these become available.
7. All the times related to energy products in the messages are expressed in Coordinated Universal Time (the acronym of which is UTC) in compliance with ISO 8601. This is restricted to YYYY-MM-DDTHH:MMZ in order to remain in conformity with XML schema requirements.
8. All the time intervals in the messages are expressed in compliance with ISO 8601 This is restricted to YYYY-MM-DDTHH:MMZ/YYYY-MM-DDTHH:MMZ. The time interval has an inclusive start time and an exclusive end time and is expressed in minutes (i.e. 00:00Z to 00:00Z is exactly a 24 hour period).
9. The resolution of a time series period shall always be expressed in minutes.
10. The time interval of a period shall always be a multiple of its resolution.
11. For a schedule message the time interval of a period shall always be equal to the Schedule time interval.
12. Negative quantities for a time series are only permitted for certain categories of netted time series (see specific business types in section 8.2.5)..
13. A time series shall be suppressed by zeroing out all the time interval periods in the time series.
14. It is preferred that the quantity for a balance responsible time series in a day ahead and an intra day schedule is given in power units' as the average value

over the time interval, i.e. MW (code MAW). If the quantity time interval does not correspond to a 15', 30' or 60 minute interval, converting average power to energy will often result in rounding errors. If this is the case, it is recommended that energy units of measure are used.

15. The quantity for an allocated capacity schedule is always given in maximum power units, i.e. MW (code MAW).
16. Whenever a coded value within a message is associated with a coding scheme, the coding scheme must always be supplied. The coding scheme is an independent attribute with a size of 3 alphanumeric characters.

3.4 Identification of direction within a message

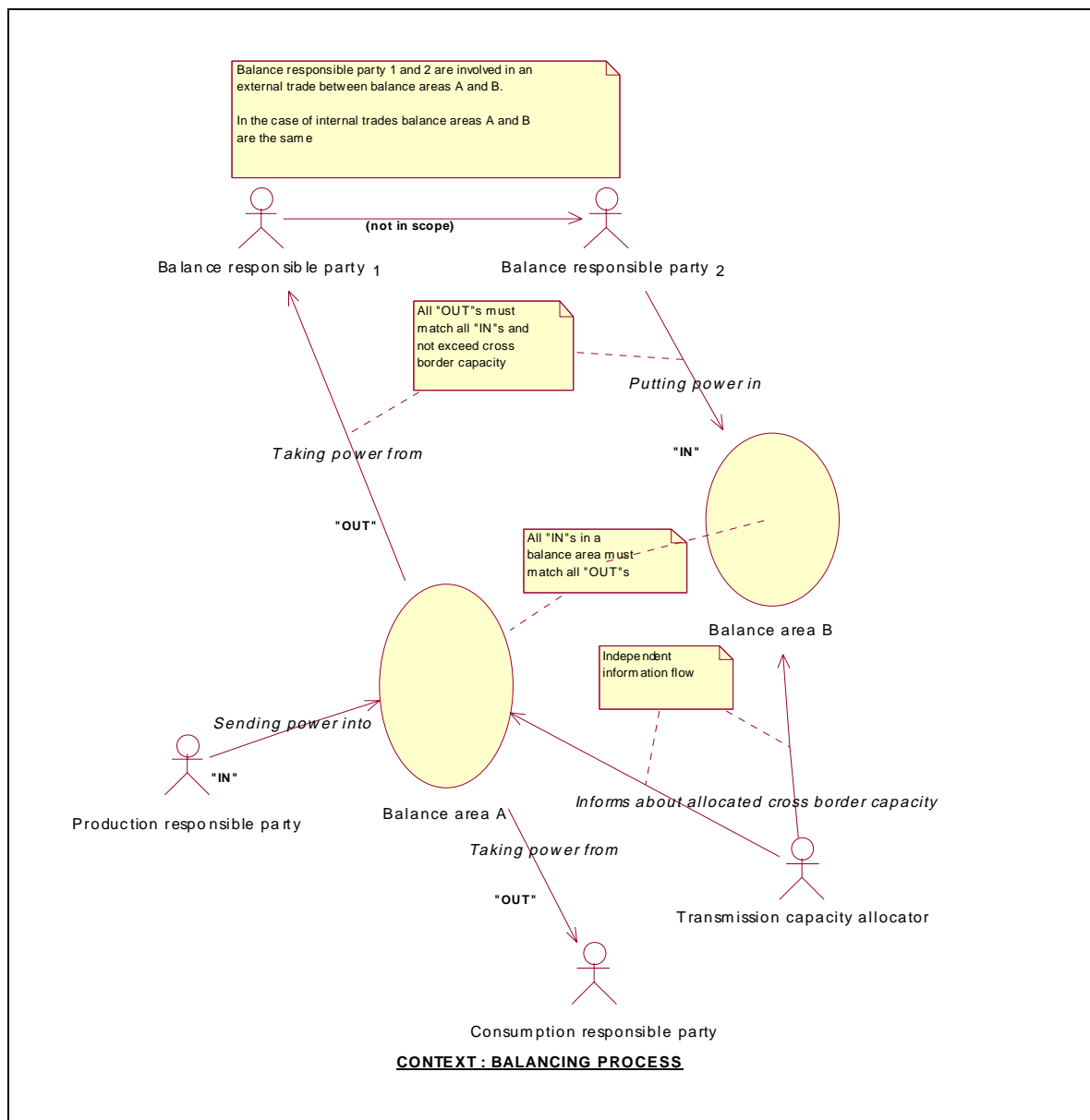


Figure 8: Energy flow use case.

Schedules are used for the determination of product imbalances for areas and market participants. To be able to do imbalance calculations it is always necessary to know the direction of the product flow.

In order to ensure that the direction of an energy flow can be established it is important to clearly establish a set of business rules concerning the content of a schedule. There is frequently confusion between the origin or destination of a flow and its direction. The use case shown in Figure 8 outlines what is necessary for the balancing process. In this diagram it is clear that a production responsible party, who is normally the source of the energy, from a balancing point of view, puts the energy into an area. In a similar fashion a consumption responsible, takes the energy out of an area. Consequently it can clearly be seen that the energy flows in relation to an area flows from “out” to the “in”. This rule applies equally to areas and parties.

In the case of internal trades within an area the “out area” will always be the same as the “in area”. An error condition shall be raised if these values are not equal. The direction of the energy flow therefore can be determined as going from the “out party” (seller) to the “in party” (buyer).

In the case of external trades the “out area” shall always be different to the “in area”. If this is not the case then an error condition shall be raised. The energy flow shall always go from the “out area” to the “in area”. In the case of external trades the “out party” need not be different to the “in party” (one to one nominations, for example can take place as in the case of the German market).

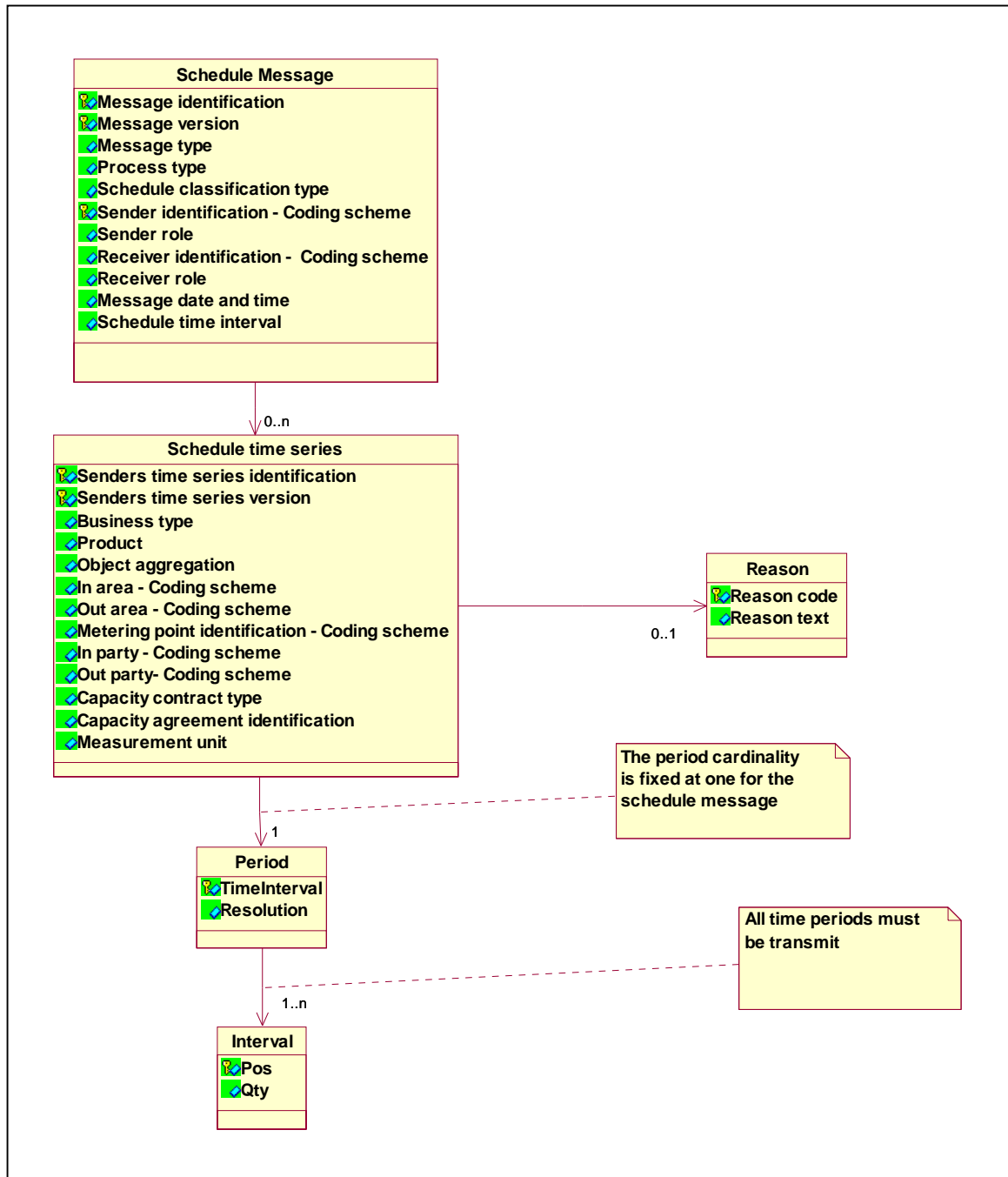
With the application of these principles an area can be said to be balanced if all the “outs” are equal to all the “ins”. The same is equivalent for each balance responsible party. In the case of external trades for a party, the total should not exceed the allocated capacity.

In order to ensure that the areas and parties are clearly identified in the message, the terms “in” and “out” will be used in the area and party names.

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4. SCHEDULE MESSAGE IMPLEMENTATION

4.1 Information model



4.2 Rules governing the Schedule Message Implementation

4.2.1 Dependency matrix

The matrix, outlined below, shows the mandatory requirement for dependant key attributes that appear in the schedule time series element. For example in the case where the business type is “A01” then the in area and in party are required.

		Area		Party			
Business type	Name	IN	OUT	IN	OUT	Capacity Agreement identification	Capacity contract type
A01	Production	M		M			
A02	Internal trade	M	M	M	M		
A03	External trade explicit capacity	M	M	M	M	M	M
A04	Consumption		M		M		
A05	External trade total	M	M				
A06	External trade unlimited capacity	M	M	M	M		
A07	Net Production / Consumption	M	M	M	M		
A08	Net internal trade	M	M	M	M		

Object aggregation	Name	Metering point
A01	Area	
A02	Metering point	M

M signifies mandatory; Blank signifies not used.

4.2.2 General rules governing message content

4.2.2.1 Message and time series version numbers.

A schedule message is sent for the schedule identified by its type, given by the “message type” for a set of time series schedules, given by the “schedule time interval”. The schedule message shall provide the complete position of the party responsible. This is the basis on which the message and time series version procedure has been devised. It is important to stress that the procedure requires that only one schedule message is received for a given

role. Each schedule message has a unique identification. If there are additions, modifications or suppressions to the set of time series within the schedule message, the identification is complemented by a version number.

The initial transmission of a schedule message should generally have a version number of “1”. However, in specific circumstances this may be different, but the initial transmission of a message should always have the lowest version number for that message. For each transmission of the schedule message the version number is incremented. The receiver shall ensure that a retransmitted schedule message has a version number strictly superior to the previous version number. The message version number does not have to be in strict sequential order.

Each retransmission of the schedule message shall include all the time series associated with the message in question. Each time series has a version number that corresponds to the version number of the message in which the series has been added or changed. In other words it shall be “1” for the time series which has been sent in the initial transmission of a message whose version number is 1. Unchanged time series should keep the version number of their last valid transmission. The time series version number is mainly for information purposes and it is market rules that dictate its final method of use. For example, in some cases a market may require that all the time series version numbers are strictly the same as the message version, whereas in other cases markets may require that only those time series which have changed shall have their version number changed.

This principle allows all markets to transmit messages in a compatible fashion even though different market rules apply.

4.2.2.1.1 Example where market rules dictate that only changed time series have their version number changed.

Example: an initial transmission of a message with 3 time series:

Message identification	Message version	Senders time series identification	Senders time series version
1234	1	TS01	1
		TS02	1
		TS03	1

A second transmission of the same message with a modification only to TS02 :

Message identification	Message version	Senders time series identification	Senders time series version
1234	5	TS01	1
		TS02	5
		TS03	1

A third transmission of the same message with the addition of TS04 :

Message identification	Message version	Senders time series identification	Senders time series version
1234	11	TS01	1
		TS02	5
		TS03	1
		TS04	11

Note: The three schedule messages above are the only ones that the TSO might receive (i.e. the sequential increase of the message version is not required but it must be superior to the preceding version received.).

4.2.2.1.2 Example where market rules dictate that all time series should have the same version in the message.

Example: an initial transmission of a message with 3 time series:

Message identification	Message version	Senders time series identification	Senders time series version
1234	1	TS01	1
		TS02	1
		TS03	1

A second transmission of the same message with a modification only to TS02:

Message identification	Message version	Senders time series identification	Senders time series version
1234	5	TS01	5
		TS02	5
		TS03	5

A third transmission of the same message with the addition of TS04:

Message identification	Message version	Senders time series identification	Senders time series version
1234	11	TS01	11
		TS02	11
		TS03	11
		TS04	11

4.2.2.2 Intra day trading.

The intra-day transmission of a balance responsible position for the time interval concerned respects exactly the same rules at that of a day ahead message.

An intra day set of time series is usually “on the day for the day” , as it can only modify schedules already established for the daily markets.

This is to say that in this implementation intra day trading implies that the day ahead schedules have been established before the intra day schedule may be transmitted. It also implies that intra day trading can only take place within the scope of the days already scheduled. At gate closure if a trader did not provide a day ahead schedule market rules might permit him to transmit intra day schedules with the assumption that his day ahead schedule was completely zero.

In other words the intra day schedule begin date must be greater than the first day ahead schedule begin date and the intra day schedule end date must be equal to the last day ahead schedule end date. This is necessary because the intra day schedule, as for the days ahead already scheduled, must provide the global position of the balance responsible party.

For example a day ahead schedule for a day “D” is established on the morning of the day D-1. Intra day markets therefore can cover from the closing time for the schedule of the day D (on the day D-1) until the end of the day D).

On the day D-1 after closure for the day ahead schedule, intra day schedules, depending on market rules, could be established from 20h00 on the day D-1 until 24h00 on the day D, from 6h00 until 24h00 on the day D, or from 12h00 to 24h00 on the day D, or from 18h00 to 24h00 on the day D.

For a given intra day transmission the approval process is carried out until cutoff.

Any time period intervals that have not changed in relation to the day ahead schedule are merely copied into the intra day schedule unchanged.

The schedule time interval covers the start of the intra day period and it goes to the end of the day already scheduled. Market rules define exactly this process.

An intra day message identification is unique for the period in question. The version shall respect the same basic rules as have been established for the day ahead schedule message. This is true for each complete intra day period.

The control of an intra day message follows the same basic rules as that of a day ahead schedule.

Other possibilities for operating intra day trading and their corresponding schedules may exist (such as that of the UK), but this has not been taken into consideration in this implementation guide.

4.2.3 Specific rules for allocated capacity schedules

An allocated capacity schedule follows the same basic rules as for every other schedule message. In the case of this schedule the only possibilities available for the business type and object aggregation are as follows:

		Area		Party			
Business type	Name	IN	OUT	IN	OUT	Capacity agreement	Capacity contract
A03	External trade explicit capacity	M	M	M	M	M	M

Object aggregation	Name	Metering point
A01	Area	
A02	Metering point	M

4.2.4 Message acceptance and rejection criteria.

The schedule message is composed of four levels:

1. The message header providing the basic message identification, the identification of involved parties, and the schedule time interval.
2. The time series identification level providing all the information that is necessary to uniquely identify a time series. It also provides some information relative to the time interval such as the measurement unit.
3. The period level that defines the time interval period and resolution that covers the quantities being reported. In the case of the schedule message only one period is permitted.
4. The interval level that provides the time interval position (time interval period / resolution) and the quantity for the position in question.

In each of these cases an error condition may occur which can either cause the rejection of the message or the time series or the time interval quantities. The following conditions describe these possibilities:

ERROR	SECONDARY CONDITION	ACTION
1. A message header error.		The complete message is rejected.
2. A time series identification level header.	A: If it is the initial transmission of a message, or if it concerns the addition of a new time series.	The complete time series in question is rejected.
	B. If it is the retransmission of a message with a new version number then if it concerns an error at the time series level or if the time series is missing.	The complete message is rejected.
3 A period level error	An error concerning the time interval or the resolution	The complete time series is rejected
4. An interval level error.	If it is an error with the quantity.	Set the quantity value to zero.
	If the position doesn't exist.	The position is ignored
	If the position is missing;	Set the quantity to zero.

4.2.5 A message without any time series instances

A message that contains no time series instances shall be considered to be a valid transmission from a market participant indicating that there is no time series information forthcoming. This is dependant on market rules that in some circumstances require the systematic transmission of a message from a market participant.

The market participant may at a later time transmit a new version of the message in question with time series information.

4.3 Schedule message class specifications

4.3.1 Message Identification

ACTION	DESCRIPTION
Definition of element	Unique identification of the message for which the time series data is being supplied.
Description	<p>A schedule message for a given set of time series and a given schedule time interval must have a unique identification assigned by the sender of the message for all transmissions to the receiver.</p> <p>All additions, modifications, or suppressions for the time series and schedule time interval must use the same identification.</p> <p>An intra day message shall have an identification code, which is not the same as the day ahead message.</p> <p>A schedule message must provide the position of the responsible party for the day in question.</p> <p>The party sending a time series can only send it within a single role (e.g. trade responsible, consumption responsible, etc).</p> <p>If the sender plays multiple roles then, as many messages as the party plays roles must be sent (e.g. in the case where the sender is a production responsible party who also acts as a trader, two messages will be sent to the system operator.</p> <p>One message will be sent in the sender's capacity as production responsible party and one in his capacity as trade responsible party).</p>
Size	The identification of a schedule message may not exceed 35 alphanumeric characters.
Applicability	This information is mandatory.
Dependence requirements	None

4.3.2 Message Version

ACTION	DESCRIPTION
Definition of element	Version of the message being sent. A message may be sent several times, each transmission being identified by a different version number that starts at 1 and increases sequentially.
Description	<p>The schedule message version is used to identify a given version of a time series set for a given schedule time interval.</p> <p>The first version number for a given schedule message identification shall normally be 1.</p> <p>The message version number must be incremented for each retransmission of a schedule message that contains changes to the previous version.</p> <p>The receiving system should ensure that the version number for a schedule message is superior to the previous version number received.</p>
Size	A version number may not exceed 3 numeric characters.
Applicability	This information is mandatory.
Dependence requirements	None.

4.3.3 Message Type

ACTION	DESCRIPTION
Definition of element	The coded type of the message being sent.
Description	<p>The schedule message type identifies the information flow characteristics.</p> <p>Refer to ESS Code list document for valid codes.</p>
Size	The schedule message type value may not exceed 3 alphanumeric characters.
Applicability	This information is mandatory.
Dependence requirements	None.

4.3.4 Process Type

ACTION	DESCRIPTION
Definition of element	The nature of the process that the message is directed at.
Description	The process type identifies the process to which the information flow is directed. Refer to ESS Code list document for valid codes.
Size	The process type value may not exceed 3 alphanumeric characters.
Applicability	This information is mandatory.
Dependence requirements	None.

4.3.5 Schedule classification type

ACTION	DESCRIPTION
Definition of element	A type that is used to classify the schedule by aggregation or classification.
Description	The schedule classification type identifies the aggregation or classification type of the schedule In the case of normal day ahead schedules exchanged between the trader and the TSO, the code A01 (exchange) is used. The code A02 (summary) is generally only used for exchanges between TSOs. Refer to ESS Code list document for valid classification type codes.
Size	The schedule classification type value may not exceed 3 alphanumeric characters.
Applicability	This information is mandatory.
Dependence requirements	None.

4.3.6 Sender Identification – Coding Scheme

ACTION	DESCRIPTION
Definition of element	Identification of the party who is sending the message.
Description	<p>The sender of the message is identified by a unique coded identification. This code identifies the party that is the “owner” of the information being transmitted in the document.</p> <p>The codification scheme used for the coded identification is indicated by the coding scheme attribute. It is a 3 character alphanumeric code. Refer to ESS Code list document for valid coding scheme codes.</p>
Size	<p>The maximum length of a sender’s identification is 16 alphanumeric characters.</p> <p>The maximum length of the coding scheme code is 3 alphanumeric characters.</p>
Applicability	Both the identification and the coding scheme are mandatory.
Dependence requirements	None.

4.3.7 Sender Role

ACTION	DESCRIPTION
Definition of element	Identification of the role that is played by the sender.
Description	<p>The sender role, which identifies the role of the sender within the message.</p> <p>Refer to ESS Code list document for valid role codes.</p>
Size	The maximum length of a sender role is 3 alphanumeric characters.
Applicability	This information is mandatory.
Dependence requirements	None.

4.3.8 Receiver Identification – Coding Scheme

ACTION	DESCRIPTION
Definition of element	Identification of the party who is receiving the schedules.
Description	<p>The receiver of the message is identified by a unique coded identification.</p> <p>The codification scheme used for the coded identification is indicated by the coding scheme attribute. It is a 3 character alphanumeric code. Refer to ESS Code list document for valid coding scheme codes.</p>
Size	<p>The maximum length of a receiver's identification is 16 alphanumeric characters.</p> <p>The maximum length of the coding scheme code is 3 alphanumeric characters.</p>
Applicability	Both the identification and the coding scheme are mandatory.
Dependence requirements	None.

4.3.9 Receiver Role

ACTION	DESCRIPTION
Definition of element	Identification of the role played by the receiver.
Description	<p>The receiver role, which identifies the role of the receiver within the message.</p> <p>Refer to ESS Code list document for valid role codes.</p>
Size	The maximum length of a receiver role is 3 alphanumeric characters.
Applicability	This information is mandatory.
Dependence requirements	None.

4.3.10 Message Date And Time

ACTION	DESCRIPTION
Definition of element	Date and time of transmission of the scheduling data. The time must be expressed in UTC as YYYY-MM-DDTHH:MM:SSZ.
Description	The date and time that the message was prepared for transmission by the application of the sender.
Size	The date and time must be expressed in UTC as YYYY-MM-DDTHH:MM:SSZ.
Applicability	This information is mandatory.
Dependence requirements	None.

4.3.11 Schedule Time Interval

ACTION	DESCRIPTION
Definition of element	<p>The beginning and ending date and time of the period covered by the message containing the schedule. The schedule start and stop time interval must be expressed with a UTC time as follows:</p> <p>YYYY-MM-DDTHH:MMZ/YYYY-MM-DDTHH:MMZ.</p>
Description	<p>This information provides the start and end date and time of the schedule time interval.</p> <p>The System Operator or the Balance Settlement Responsible for which the Balance Responsible Parties (or their service providers) have to provide schedule information sets the schedule time interval.</p> <p>Typically the Balance Responsible Parties have to provide schedules for the next local day.</p> <p>In many markets Balance Responsible Parties have the option to change their schedules during the day. This is referred to as intra day trading, and the Balance Responsible Parties then typically has to send in schedules for a schedule time interval of a few hours.</p> <p>All time intervals for the time series in the message must be within the total time interval for the schedule.</p> <p>The receiver will discard any time intervals outside the schedule period.</p>
Size	<p>The start and end date and time must be expressed as</p> <p>YYYY-MM-DDTHH:MMZ/YYYY-MM-DDTHH:MMZ.</p>
Applicability	<p>This information is mandatory.</p>
Dependence requirements	<p>None.</p>

4.4 Rules governing the Schedule Time Series class

A party may transmit as many time series as necessary to establish his position for a given schedule time interval and schedule type.

A message sent without any time series signifies that the sending party has no time series information to transmit for the period in question at the moment of transmission. Market rules may require such a context.

The sender assigns a unique identification to each occurrence 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.

A time series has a version number that has initially the value of "1". If a given time series is modified then its version number shall be assigned the same value of the version number of the schedule message in which it is transmit.

If a version number of a time series has not changed between transmissions, it is the receiver's responsibility to ensure that this is correct.

A time series shall contain a period that will cover the complete schedule time interval. The period shall also indicate the resolution of the periods within the time interval. The time interval must be completely covered by a whole multiple of the resolution.

If a time series is suppressed in a later transmission the time series will be resent with all the periods containing a zero value quantity.

Note: In the case of the one-to-one nomination principle the following is to be taken into consideration:

- Where the same party is on both sides of the border the same party code is used to identify it (i.e. typically in the case of an internal border).
- Where different parties are on either sides of the border (typically in the case of international borders), the parties must inform both system operators that their two codes should be considered the same from a one-to-one nomination perspective. This is generally implemented through a formal declaration.

4.4.1 Senders Time Series Identification

ACTION	DESCRIPTION
Definition of element	<p>Sender's identification of the time series instance.</p> <p>This must be unique for the whole message 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>
Description	<p>A unique identification within the schedule message assigned by the sender.</p> <p>This identification shall guarantee the uniqueness 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>
Size	The maximum size of a time series identification is 35 alphanumeric characters.
Applicability	This information is mandatory.
Dependence requirements	None.

4.4.2 Senders Time Series Version

ACTION	DESCRIPTION
Definition of element	<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 message version number in which it has been added or changed. All time series, whether changed or not, must be retransmitted when a message is resent.</p> <p>In the case of the deletion of a time series, it is resent with all periods zeroed out.</p>
Description	<p>The version number assigned to the time series in question.</p> <p>The time series version shall be the same as the message version number for its initial transmission.</p> <p>Each time a time series is modified the version number is assigned the same value as the schedule message version number used to transmit the modified information.</p>
Size	The maximum size of a time series version is 3 numeric characters.
Applicability	This information is mandatory.
Dependence requirements	This data element is always associated with the sender's time series identification.

4.4.3 Business type

ACTION	DESCRIPTION
Definition of element	Identifies the trading nature of an energy product.
Description	The nature of the time series for which the product is handled. Refer to ESS Code list document for valid codes.
Size	The maximum length of this information is 3 alphanumeric characters.
Applicability	This information is mandatory.
Dependence requirements	None.

4.4.4 Product

ACTION	DESCRIPTION
Definition of element	Identification of an energy product such as Power, energy, reactive power, transport capacity, etc.
Description	This identifies the product for which the time series is reporting. There is a different time series for each product Refer to ESS Code list document for valid codes.
Size	The maximum length of this information is 13 numeric characters.
Applicability	This information is mandatory.
Dependence requirements	None.

4.4.5 Object aggregation

ACTION	DESCRIPTION
Definition of element	Identifies how the object is aggregated.
Description	This identified to what extent the object is aggregated Refer to ESS Code list document for valid codes.
Size	The maximum length of this information is 3 alphanumeric characters.
Applicability	This information is mandatory.
Dependence requirements	None.

4.4.6 In Area – Coding Scheme

ACTION	DESCRIPTION
Definition of element	The area where the product is being delivered
Description	The identification of the in area. The codification scheme used for the coded identification is indicated by the coding scheme attribute. It is a 3 character alphanumeric code. Refer to ESS Code list document for valid coding scheme codes.
Size	The maximum length of the in area code is 18 alphanumeric characters. The maximum length of the coding scheme code is 3 alphanumeric characters.
Applicability	This information is dependent.
Dependence requirements	Refer to the matrix in 4.2.1 for dependency requirements.

4.4.7 Out Area – Coding Scheme

ACTION	DESCRIPTION
Definition of element	The area where the product is being extracted.
Description	The identification of the out area. The codification scheme used for the coded identification is indicated by the coding scheme attribute. It is a 3 character alphanumeric code. Refer to ESS Code list document for valid coding scheme codes.
Size	The maximum length of the out area code is 18 alphanumeric characters. The maximum length of the coding scheme code is 3 alphanumeric characters.
Applicability	This information is dependent.
Dependence requirements	Refer to the matrix in 4.2.1 for dependency requirements.

4.4.8 Metering Point Identification – Coding Scheme

ACTION	DESCRIPTION
Definition of element	<p>The identification of the location where one or more products are metered.</p> <p>This may be one physical location or the combination of several points together.</p> <p>A metering point identification may be divided into a value and an optional sub-value.</p>
Description	<p>The identification of the location where one or more products are metered.</p> <p>A metering point identification code may be divided into 3 parts:</p> <ul style="list-style-type: none">- A value.- An optional sub-value in order to satisfy the needs of more precise identification. The use or not of the sub-value is determined by market requirements.- A coding scheme. Refer to ESS Code list document for valid coding scheme codes.
Size	<p>The maximum length of the identification value is 35 alphanumeric characters.</p> <p>If the identification sub value is used its maximum size is 35 characters.</p> <p>The coding scheme is 3 alphanumeric characters.</p>
Applicability	<p>This information is dependent.</p>
Dependence requirements	<p>Refer to the matrix in 4.2.1 for dependency requirements.</p>

4.4.9 In Party – Coding Scheme

ACTION	DESCRIPTION
Definition of element	The party that is putting the product into the area.
Description	<p>The identification of the party putting the product into the in area.</p> <p>The codification scheme used for the coded identification is indicated by the coding scheme attribute. It is a 3 character alphanumeric code. Refer to ESS Code list document for valid coding scheme codes.</p>
Size	<p>The maximum length of this information is 16 alphanumeric characters.</p> <p>The maximum length of the coding scheme code is 3 alphanumeric characters.</p>
Applicability	This information is dependent.
Dependence requirements	Refer to the matrix in 4.2.1 for dependency requirements.

4.4.10 Out Party – Coding Scheme

ACTION	DESCRIPTION
Definition of element	The party taking the product out of the area.
Description	<p>The identification of the party taking the product out of the out area.</p> <p>The codification scheme used for the coded identification is indicated by the coding scheme attribute. It is a 3 character alphanumeric code. Refer to ESS Code list document for valid coding scheme codes.</p>
Size	<p>The maximum length of this information is 16 alpha-numeric characters.</p> <p>The maximum length of the coding scheme code is 3 alphanumeric characters.</p>
Applicability	This information is dependent.
Dependence requirements	Refer to the matrix in 4.2.1 for dependency requirements.

4.4.11 Capacity Contract Type

ACTION	DESCRIPTION
Definition of element	<p>The contract type defines the conditions under which the capacity was allocated and handled.</p> <p>e.g.: daily auction, weekly auction, monthly auction, yearly auction, etc.</p> <p>The significance of this type is dependent on the in area and out area specific coded working methods.</p> <p>The transmission capacity allocator responsible for the area in question auctions defines the contract type to be used.</p>
Description	<p>This information defines the conditions under which the capacity was allocated and handled.</p> <p>Refer to ESS Code list document for valid codes.</p>
Size	<p>The maximum length of this information is 3 alphanumeric characters.</p>
Applicability	<p>This information is dependent.</p>
Dependence requirements	<p>Refer to the matrix in 4.2.1 for dependency requirements.</p>

4.4.12 Capacity agreement identification

ACTION	DESCRIPTION
Definition of element	<p>The identification of an agreement for the allocation of capacity to a party.</p>
Description	<p>This provides the identification of the allocated capacity by a capacity allocator. The same identification must be always used even when the same capacity is fully or partially resold.</p>
Size	<p>The maximum length of this information is 35 alpha-numeric characters.</p>
Applicability	<p>This information is dependent.</p>
Dependence requirements	<p>Refer to the matrix in 4.2.1 for dependency requirements.</p>

4.4.13 Measurement Unit

ACTION	DESCRIPTION
Definition of element	The unit of measure which is applied to the quantities in which the time series is expressed.
Description	<p>The unit if measurement used for the quantities expressed within the time series.</p> <p><i>ETSO recommends that time series that are sent for day ahead schedules use the “power” unit of measure (MAW). Refer to paragraph 3.3 for more details.</i></p> <p>Refer to ESS Code list document for valid codes.</p>
Size	The maximum length of this information is 3 alphanumeric characters.
Applicability	This information is mandatory.
Dependence requirements	None.

4.5 Rules governing the Reason class

The reason class is generally used during intra-day processing. It provides the reason for the modifications that are being carried out on the time series. It is not currently considered for use in other contexts.

4.5.1 Reason code

ACTION	DESCRIPTION
Definition of element	A code indication that a textual reason for modification will be provided in the reason text. Currently the following code has been identified : A48 : Modification reason.
Description	The reason code is used to enable processing of the reason text which, depending on market conditions, should be provided in intra day trading. In this context only one reason code has been defined (A48).
Size	The maximum length of this information is 3 alphanumeric characters.
Applicability	This information is dependent on market conditions and shall only be used for intra day trading.
Dependence requirements	This information is mandatory for intra day trading if market conditions so dictate.

4.5.2 Reason Text

ACTION	DESCRIPTION
Definition of element	Textual reason for a modification.
Description	The textual reason must be provided where the reason code A48 is present.
Size	The maximum length of this information is 512 alphanumeric characters.
Applicability	This information is dependent.
Dependence requirements	None.

4.6 Rules governing the Period class

There is only one period class for a time series schedule.

The time interval covered by the period shall be equal to the complete period of the schedule.

The number of periods within a time series as characterized by the resolution must completely cover the period's time interval.

If a time series is suppressed then the interval quantities are all zeroed out.

A senders minimal resolution must respect market rules.

4.6.1 Time Interval.

ACTION	DESCRIPTION
Definition of element	The start and end date and time of the time interval of the period in question. The time of the start and end of the period is expressed in UTC with the following format: YYYY-MM-DDTHH:MMZ/YYYY-MM-DDTHH:MMZ.
Description	This information provides the start and end date and time of the period being reported.
Size	The start and end date and time must be expressed in compliance with the following format: YYYY-MM-DDTHH:MMZ/YYYY-MM-DDTHH:MMZ.
Applicability	This information is mandatory.
Dependence requirements	None.

4.6.2 Resolution

ACTION	DESCRIPTION
Definition of element	The resolution defining the number of periods that the time interval is divided.
Description	This information the resolution of a single period. The time interval must contain a whole number of periods as expressed by the resolution.
Size	<p>The resolution is expressed in compliance with ISO 8601 in the following format:</p> <p style="text-align: center;">PnYnMnDTnHnMnS.</p> <p>Where nY expresses a number of years, nM a number of months, nD a number of days.</p> <p>The letter "T" separates the date expression from the time expression and after it nH identifies a number of hours, nM a number of minutes and nS a number of seconds.</p> <p>For example PT15M expresses a 15 minute resolution.</p>
Applicability	This information is mandatory.
Dependence requirements	None.

4.7 Rules governing the Interval class

The interval class contains the relative position within a time interval period and the quantity associated with that position.

The position must begin with 1 and increment by 1 for each subsequent position forming a series of contiguous numbers covering the complete range of the period.

Any leading zeros in a position shall be suppressed.

Negative values are not allowed in schedule time series quantities except in the case where a netted business type is employed. If the direction of the product flow changes during the schedule period the two time series with opposite In area, Out area and parties are required.

Zero value periods must be sent.

Leading zeros in a quantity shall be suppressed before transmission.

If the direction of the product flow changes during the schedule time interval the two time series with opposite in area, out area or parties are required.

4.7.1 Pos

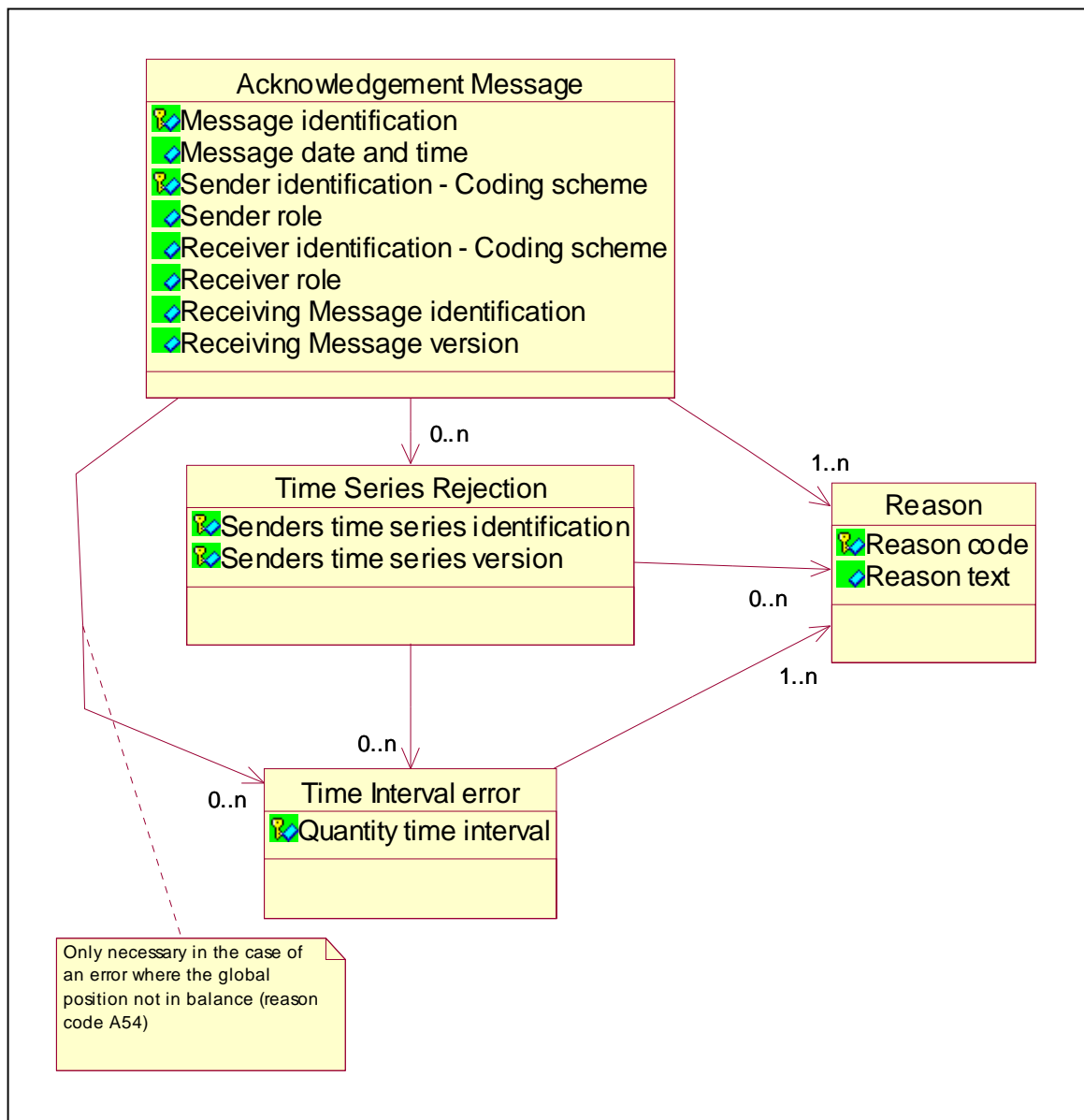
ACTION	DESCRIPTION
Definition of element	The relative position of a period within a time interval.
Description	This information provides the relative position of a period within a time interval.
Size	The relative position must be expressed as a numeric integer value beginning with 1. All leading zeros must be suppressed. The maximum number of characters is 6.
Applicability	This information is mandatory.
Dependence requirements	None.

4.7.2 Qty

ACTION	DESCRIPTION
Definition of element	The quantity of the product scheduled for the position within the time interval in question.
Description	<p>This information defines the quantity of energy scheduled for the position within the time interval period.</p> <p>A decimal point value may be used to express values that are inferior to the defined unit of measurement.</p> <p>The decimal mark that separates the digits forming the integral part of a number from those forming the fractional part. (ISO 6093) shall always be a period (“.”).</p> <p>All quantities are non-signed values except in the case where netted business types are used.</p>
Size	<p>The maximum length of this information is 17 numeric characters (decimal mark and sign, if used, included).</p> <p>The number of decimal places identifying the fractional part of the quantity depends on local market rules.</p>
Applicability	This information is mandatory.
Dependence requirements	None.

5. ACKNOWLEDGEMENT MESSAGE IMPLEMENTATION

5.1 Information model



5.2 Rules governing the acknowledgement message implementation

An acknowledgement message is sent to the party to acknowledge reception of the message identified in the acknowledgement. For example it may be sent to confirm reception of a schedule message immediately after a first level series of validations have been carried out.

The sender of the acknowledgement message is the receiver of the message being acknowledged. The receiver of the acknowledgment message is the sender of the message being acknowledged.

Generally speaking, the message being acknowledged will have been validated in situ to ensure that it may be correctly processed by the application. The validation can also be carried out against a previous version of the same message (in order to identify an incomplete time series set for example).

The acknowledgement terminates the first phase of validation in the case of schedule message transmission by the balance responsible parties to the system operator. Its transmission to the party concerned should not be delayed.

In the case of quantity rejection, the rejected quantities will be initialised to zero.

5.3 Rules governing the Acknowledgement message Class

5.3.1 Message Identification

ACTION	DESCRIPTION
Definition of element	Unique identification of the acknowledgement of a message that has been received.
Description	<p>An acknowledgement message is sent in reply to the receipt of a message containing a set of time series for a given schedule time interval.</p> <p>An acknowledgement is sent for the receipt of every schedule message.</p>
Size	The acknowledgement identification may not exceed 35 alphanumeric characters.
Applicability	This information is mandatory.
Dependence requirements	None.

5.3.2 Message Date And Time

ACTION	DESCRIPTION
Definition of element	Date and time of transmission of the acknowledgement. The time must be expressed in UTC as YYYY-MM-DDTHH:MM:SSZ.
Description	The date and time that the message was prepared for transmission by the sender.
Size	The date and time must be expressed in UTC as YYYY-MM-DDTHH:MM:SSZ.
Applicability	This information is mandatory.
Dependence requirements	None.

5.3.3 Sender Identification – Coding Scheme

ACTION	DESCRIPTION
Definition of element	Identification of the party that is sending the acknowledgement.
Description	<p>The sender of the acknowledgement is identified by a unique coded identification. This value should be the same as that found in the receiver identification of the message being acknowledged.</p> <p>The codification scheme used for the coded identification is indicated by the coding scheme attribute. It is a 3 character alphanumeric code. Refer to ESS Code list document for valid coding scheme codes.</p>
Size	<p>The maximum length of a sender's identification is 16 alphanumeric characters.</p> <p>The maximum length of the coding scheme code is 3 alphanumeric characters.</p>
Applicability	This information is mandatory.
Dependence requirements	None.

5.3.4 Sender Role

ACTION	DESCRIPTION
Definition of element	Identification of the role played by the sender.
Description	The sender role, which identifies the role of the sender within the message. Refer to ESS Code list document for valid role codes.
Size	The maximum length of a sender role is 3 alphanumeric characters.
Applicability	This information is mandatory.
Dependence requirements	None.

5.3.5 Receiver Identification – Coding Scheme

ACTION	DESCRIPTION
Definition of element	Identification of the party who is receiving the acknowledgement.
Description	The receiver of the message is identified by a unique coded identification. This should be the same value as the sender of the schedule message. The codification scheme used for the coded identification is indicated by the coding scheme attribute. It is a 3 character alphanumeric code. Refer to ESS Code list document for valid coding scheme codes.
Size	The maximum length of a receiver's identification is 16 alphanumeric characters. The maximum length of the coding scheme code is 3 alphanumeric characters.
Applicability	This information is mandatory.
Dependence requirements	None.

5.3.6 Receiver Role

ACTION	DESCRIPTION
Definition of element	Identification of the role played by the receiver.
Description	The receiver role, which identifies the role of the receiver within the message. Refer to ESS Code list document for valid role codes.
Size	The maximum length of a receiver role is 3 alphanumeric characters.
Applicability	This information is mandatory.
Dependence requirements	None.

5.3.7 Receiving Message Identification

ACTION	DESCRIPTION
Definition of element	Unique identification of the message received for a set of time series.
Description	This information identifies the schedule message for a set of time series for a given schedule time interval that has been received by the system operator. All additions, modifications, or suppressions for the time series and schedule period must use the same identification.
Size	A receiving message code identification may not exceed 35 alphanumeric characters.
Applicability	This information is mandatory.
Dependence requirements	None.

5.3.8 Receiving Message Version

ACTION	DESCRIPTION
Definition of element	Version of the message received.
Description	The schedule message version is used to identify a given version of a time series set for a given schedule time interval.
Size	A version number may not exceed 3 numeric characters.
Applicability	This information is mandatory.
Dependence requirements	None.

5.4 Rules governing the Reason class

If the acknowledgement of the schedule message is without error only one reason element is necessary at the acknowledgement header level. However, if there are errors then there may be as many “reason” elements as are necessary to describe any errors discovered in the received schedule message.

At least one reason element must appear associated with the header part of the message.

If there are errors at the time series level as many reason elements as necessary may be found at that level.

If there are errors at the time interval level as many reason elements as necessary may be used. It should be noted that the relative position transmit in the original schedule message will have been converted to an absolute time interval whenever errors occur at this level in the acknowledgement message. Errors concerning the period class of a schedule message shall be related directly to the time series in question.

The reason codes imply that certain elements are absent or present as detailed in the following table:

Reason code	Message level elements	Time series level elements		Interval level elements
A01	M			
A02	M			
A03	M	M	A20	
		M	A21	M A42, A46, A49, A59
		M	A22	
		M	A23	
		M	A27	
		M	A41 (Period)	
		M	A50	
		M	A55	
		M	A56	
		M	A57	
		M	A58	
		M	A59	
A04	M			
A05	M			
A10	M			
A51	M			
A59	M			

Reason code	Message level elements	Time series level elements		Interval level elements
A52	M			
A53	M			
A54	M			
A57	M			

(Refer to paragraph 4.2.4 for a description of the acceptance/rejection criteria.).

5.4.1 Reason code

ACTION	DESCRIPTION
Definition of element	<p>A code providing the acknowledgement status. Currently the following status's have been identified:</p> <p><u>At the message level :</u></p> <p>A01: Message fully accepted A02: Message fully rejected A03: Message contains errors at the time series level A04: Schedule time interval incorrect A05: Sender without valid balance responsible contract A10: Credit limit exceeded A51: Message identification or version conflict A52: Time series missing from new version of message A53: Receiving party incorrect A54: Global position not in balance A57: Deadline limit exceeded A59: Not compliant with local market rules</p> <p><u>At the time series level</u></p> <p>A20: Time series fully rejected A21: Time series accepted with specific time interval errors A22: In party/out party invalid A23: Area invalid A27: Cross border capacity exceeded A41: Resolution inconsistency A50: Senders time series version conflict A55: Time series identification conflict A56: Corresponding time series not netted A57: Deadline limit exceeded A58: One to one nomination inconsistency A59: Not compliant with local market rules</p> <p><u>At the time interval level :</u></p> <p>A42: Quantity inconsistency A46: Quantities must not be signed values A49: Position inconsistency A59: Not compliant with local market rules</p>
Description	<p>The reason code provides the status of the acknowledgement. If the receiving message is fully accepted then there is simply a reason code (A01) at the header part of the acknowledgement. For errors as many reason elements as necessary may be used.</p>
Size	<p>The maximum length of this information is 3 alphanumeric characters.</p>

ACTION	DESCRIPTION
Applicability	This information is mandatory after the Acknowledgement level and TimeIntervalError level. It is dependent at TimeSeriesRejection level.
Dependence requirements	This information is mandatory after the acknowledgement and the TimeIntervalError elements. It is not necessary at the TimeSeriesRejection level if and only if TimeIntervalError elements are identified.

5.4.2 Reason Text

ACTION	DESCRIPTION
Definition of element	Textual description of a rejection.
Description	If the code does not provide all the information to clearly identify an error the reason text may be used.
Size	The maximum length of this information is 512 alphanumeric characters.
Applicability	This information is dependent.
Dependence requirements	Used only if the reason code is insufficient to identify an error.

5.5 Rules governing the Time Series Rejection class

A time series rejection element is used in three circumstances.

1. In the first case to identify a time series which has been completely rejected.
2. In the second case to identify a time series where there are selective errors at the time interval level.
3. In the third case it is used to identify time intervals that are not in balance in the context of the global position of the incoming message. In this case the class is dependent on the message level as opposed to the time series level. This is because it is not possible to identify the specific time series where the imbalance occurs. This class at the message level can only exist when an error condition A54 occurs. In all other cases it is invalid.

If the time series is completely rejected one or multiple reason elements are required to identify the error.

If there are selective errors a reason element is not required after the time series, however, if it provides useful information such an element may be used.

5.5.1 Senders Time Series Identification

ACTION	DESCRIPTION
Definition of element	Sender's identification of the time series instance that was received.
Description	The identification code provided in the schedule message to identify a time series.
Size	The maximum length of this information is 35 alphanumeric characters.
Applicability	This information is dependent.
Dependence requirements	Used only to identify specific time series that is subject to rejection. If the schedule message is completely accepted this information is not transmitted.

5.5.2 Senders Time Series Version

ACTION	DESCRIPTION
Definition of element	The time series version assigned by the schedule message sender to a specific sender's time series identification.
Description	The version number associated with the time series identification to which an error is referring.
Size	The maximum length of this information is 3 numeric characters.
Applicability	This information is dependent.
Dependence requirements	Used only to identify specific time series that is subject to rejection. If the schedule message is completely accepted this information is not transmit.

5.6 Rules governing the Time Interval Error class

In this case of a rejection this element may be used to identify specific time series intervals that are in error. The intervals in question are calculated by the receiver from the position as identified in the incoming message. In this case of a global position imbalance it is determined from the imbalance calculation.

In general the reason text can be used to explain clearly the motivation for the rejection.

A reason element is mandatory with every time period error element.

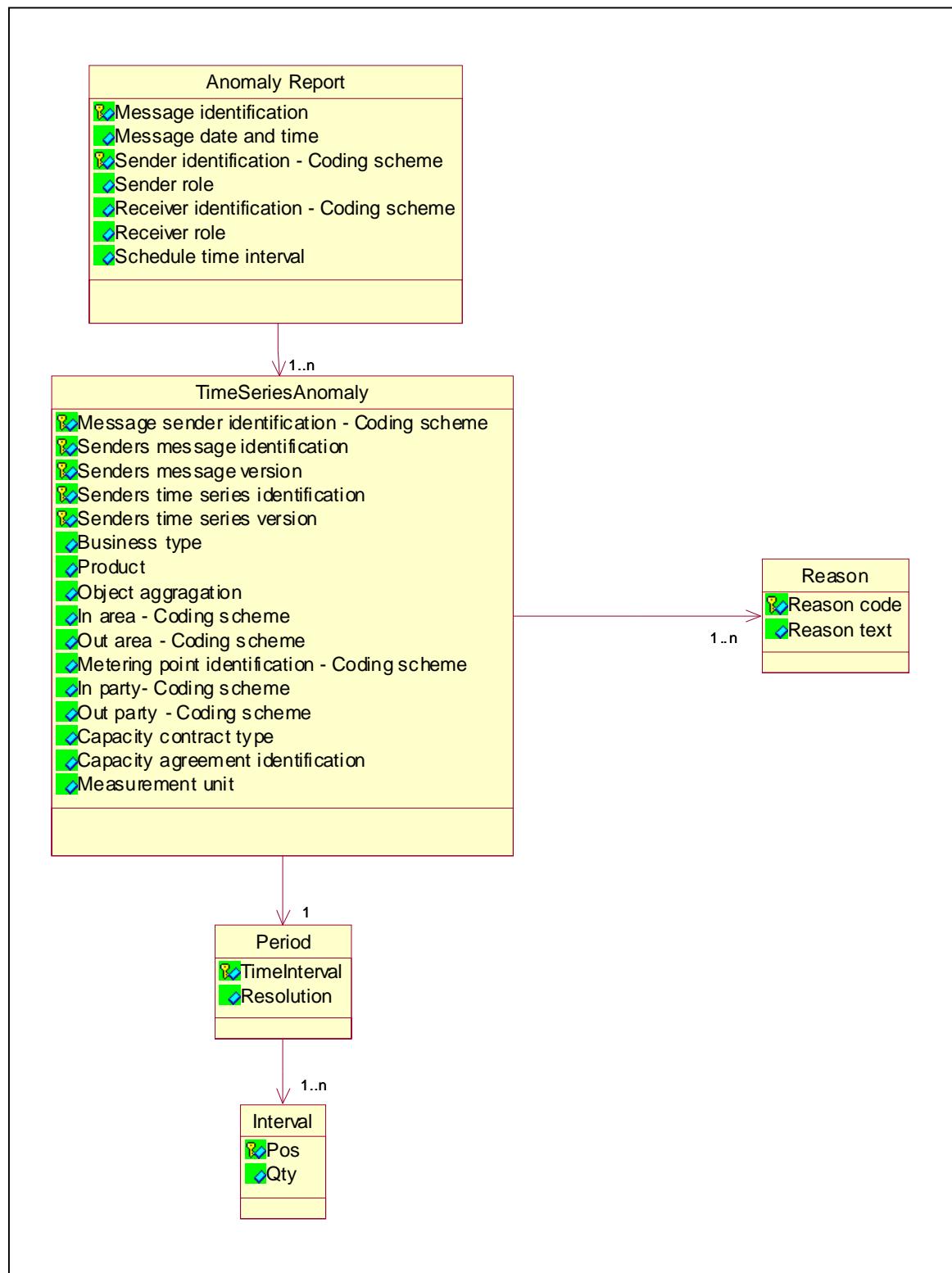
5.6.1 Quantity Time Interval

ACTION	DESCRIPTION
Definition of element	The start and end date and time of the time period in error.
Description	<p>This information is used to identify the time interval that has been identified as being in error. This is a calculated value using the position in question, the resolution and the start of the time interval of the period.</p> <p>If the reason code is insufficient to explain the motivation for the rejection, the reason text may be used.</p>
Size	YYYY-MM-DDTHH:MMZ/YYYY-MM-DDTHH:MMZ.
Applicability	This information is dependent.
Dependence requirements	Used only if a specific time interval is to be identified.

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6. TIME SERIES ANOMALY REPORT IMPLEMENTATION

6.1 Information model



6.2 Rules governing the anomaly report class

An anomaly report is generated as soon as all the information necessary to balance a party's time series becomes available. If there are any anomalies discovered during this phase, an anomaly report is sent to all involved parties. The anomaly contains only the time series that have been identified as being in error for the party in question.

Each party is responsible for ensuring that the problem is satisfactorily resolved prior to the schedule cut-off time. Corrective action by one of the parties requires the retransmission of the offending schedule message with the required corrections. If only one party is in error, that party alone will transmit his corrective schedule message.

6.2.1 Message Identification

ACTION	DESCRIPTION
Definition of element	Unique identification of the anomaly report that is sent to involved parties in phase 2 of the schedule process.
Description	An anomaly report is identified by a unique number generated by the sender to serve as the identification of the report in any further communication on the subject.
Size	An anomaly report identification may not exceed 35 alphanumeric characters.
Applicability	This information is mandatory.
Dependence requirements	None.

6.2.2 Message Date And Time

ACTION	DESCRIPTION
Definition of element	Date and time of transmission of the anomaly report. The time must be expressed in UTC as YYYY-MM-DDTHH:MM:SSZ.
Description	The date and time that the message was prepared for transmission by the sender.
Size	The date and time must be expressed in UTC as YYYY-MM-DDTHH:MM:SSZ.
Applicability	This information is mandatory.
Dependence requirements	None.

6.2.3 Sender Identification – Coding Scheme

ACTION	DESCRIPTION
Definition of element	Identification of the party who is sending the anomaly report.
Description	<p>The sender of the message is identified by a unique coded identification.</p> <p>The codification scheme used for the coded identification is indicated by the coding scheme attribute. It is a 3 character alphanumeric code. Refer to ESS Code list document for valid coding scheme codes.</p>
Size	<p>The maximum length of a sender's identification is 16 alphanumeric characters.</p> <p>The maximum length of the coding scheme code is 3 alphanumeric characters.</p>
Applicability	This information is mandatory.
Dependence requirements	None.

6.2.4 Sender Role

ACTION	DESCRIPTION
Definition of element	Identification of the role played by the sender.
Description	<p>The sender role, which identifies the role of the sender within the message.</p> <p>Refer to ESS Code list document for valid role codes.</p>
Size	The maximum length of a sender role is 3 alphanumeric characters.
Applicability	This information is mandatory.
Dependence requirements	None.

6.2.5 Receiver Identification – Coding Scheme

ACTION	DESCRIPTION
Definition of element	Identification of the party who is receiving the anomaly report.
Description	The receiver of the message is identified by a unique coded identification. The codification scheme used for the coded identification is indicated by the coding scheme attribute. It is a 3 character alphanumeric code. Refer to ESS Code list document for valid coding scheme codes.
Size	The maximum length of a receiver's identification is 16 alphanumeric characters. The maximum length of the coding scheme code is 3 alphanumeric characters.
Applicability	This information is mandatory.
Dependence requirements	None.

6.2.6 Receiver Role

ACTION	DESCRIPTION
Definition of element	Identification of the role played by the receiver.
Description	The receiver role, which identifies the role of the receiver within the message. Refer to ESS Code list document for valid role codes.
Size	The maximum length of a receiver role is 3 alphanumeric characters.
Applicability	This information is mandatory.
Dependence requirements	None.

6.2.7 Schedule time interval

ACTION	DESCRIPTION
Definition of element	The start and end date and time of the schedule period covered by the anomaly report The interval must be expressed in UTC as YYYY-MM-DDTHH:MMZ/YYYY-MM-DDTHH:MMZ.
Description	This information provides the start and end date and time of the schedule period for which the anomaly report is being generated.
Size	The start and end date and time must respect the format: YYYY-MM-DDTHH:MMZ/YYYY-MM-DDTHH:MMZ.
Applicability	This information is mandatory.
Dependence requirements	None.

6.3 Rules governing the Reason class

In an anomaly report errors are detailed at the time series level to identify the anomalies that have occurred.

The reason codes imply that certain elements are absent or present as detailed in the following table:

Time series level elements	
M	A09
M	A27
M	A28
M	A29

6.3.1 Reason code

ACTION	DESCRIPTION
Definition of element	A code providing the status of the anomaly. Currently the following status's have been identified: <u>At the timeseries level</u> A09: Time series not matching A27: Cross border capacity exceeded A28: Counterpart time series missing A29: Counterpart time series quantity differences
Description	The reason code provides the status of the anomaly. As many reason elements as necessary may be used.
Size	The maximum length of this information is 3 alphanumeric characters.
Applicability	This information is dependent.
Dependence requirements	This information is at the time series level to provide related explanatory information.

6.3.2 Reason Text

ACTION	DESCRIPTION
Definition of element	Textual rejection of an anomaly.
Description	If the code does not provide all the information to clearly identify an error the reason text may be used.
Size	The maximum length of this information is 512 alphanumeric characters.
Applicability	This information is dependent.
Dependence requirements	Used only if the reason code is insufficient to identify an error.

6.4 Rules governing the Time Series anomaly class

All the time series that are found to be in error for a particular party may be assembled together in the anomaly report for transmission. The assembly of the time series depends on the report's destination. Anomaly reports only concern errors requiring immediate action in order to enable the time series in question to be taken into consideration for the planned schedule. The errors that caused the rejection of the time series may be identified at this level, if required.

6.4.1 Message Sender Identification – Coding Scheme

ACTION	DESCRIPTION
Definition of element	The identification of the party whose time series is in anomaly.
Description	A unique identification within the schedule system. The codification scheme used for the coded identification is indicated by the coding scheme attribute. It is a 3 character alphanumeric code. Refer to ESS Code list document for valid codes.
Size	The maximum size of an identification code is 16 alphanumeric characters. The maximum length of the coding scheme code is 3 alphanumeric characters.
Applicability	This information is mandatory.
Dependence requirements	None.

6.4.2 Senders Message Identification

ACTION	DESCRIPTION
Definition of element	The identification of the message where the time series is in error.
Description	The identification of the schedule message sent by the concerned party containing the time series in error.
Size	The maximum size of this information is 35 alphanumeric characters.
Applicability	This information is mandatory.
Dependence requirements	None.

6.4.3 Senders Message Version

ACTION	DESCRIPTION
Definition of element	The identification of the version of the message in question.
Description	The version number of the schedule message containing the time series in error.
Size	The maximum size of a time series version is 3 numeric characters.
Applicability	This information is mandatory.
Dependence requirements	This data element is always associated with the sender's time series identification.

6.4.4 Senders Time Series Identification

ACTION	DESCRIPTION
Definition of element	The identification of the time series in error.
Description	The identification of the time series sent by the concerned party that was in error.
Size	The maximum size of this information is 35 alphanumeric characters.
Applicability	This information is mandatory.
Dependence requirements	None.

6.4.5 Senders Time Series Version

ACTION	DESCRIPTION
Definition of element	The time series version that is in anomaly.
Description	The version of the time series in error.
Size	The maximum size of a time series version is 3 numeric characters.
Applicability	This information is mandatory.
Dependence requirements	This data element is always associated with the sender's time series identification.

6.4.6 Business type

ACTION	DESCRIPTION
Definition of element	The trading nature of the time series in error.
Description	The nature of the time series that has been found in error.
Size	The maximum length of the time series type is 3 alphanumeric characters.
Applicability	This information is mandatory.
Dependence requirements	None.

6.4.7 Product

ACTION	DESCRIPTION
Definition of element	The product of the time series in error.
Description	This identifies the product for which the time series is reporting.
Size	The maximum length of this information is 13 numeric characters.
Applicability	This information is mandatory.
Dependence requirements	None.

6.4.8 Object aggregation

ACTION	DESCRIPTION
Definition of element	The aggregation of the time series in error.
Description	The aggregation of the time series that has been found in error.
Size	The maximum length of the time series type is 3 alphanumeric characters.
Applicability	This information is mandatory.
Dependence requirements	None.

6.4.9 In Area – Coding Scheme

ACTION	DESCRIPTION
Definition of element	The in area of the time series in error.
Description	The identification of the in area of the time series that has been found to be in error with the coding scheme used in the original transmission.
Size	<p>The maximum length of this information is 18 alphanumeric characters.</p> <p>The maximum length of the coding scheme code is 3 alphanumeric characters.</p> <p>The codification scheme used for the coded identification is indicated by the coding scheme attribute. It is a 3 character alphanumeric code. Refer to ESS Code list document for valid codes.</p>
Applicability	This information is dependent.
Dependence requirements	Refer to the matrix in 4.2.1 for dependency requirements.

6.4.10 Out Area – Coding Scheme

ACTION	DESCRIPTION
Definition of element	The out area of the time series in anomaly.
Description	The identification of the out area of the time series that has been found to be in error with the coding scheme used in the original transmission.
Size	<p>The maximum length of this information is 18 alphanumeric characters.</p> <p>The maximum length of the coding scheme code is 3 alphanumeric characters.</p> <p>The codification scheme used for the coded identification is indicated by the coding scheme attribute. It is a 3 character alphanumeric code. Refer to ESS Code list document for valid codes.</p>
Applicability	This information is dependent.
Dependence requirements	Refer to the matrix in 4.2.1 for dependency requirements.

6.4.11 Metering Point Identification – Coding Scheme

ACTION	DESCRIPTION
Definition of element	The identification of the metering point of the time series in error.
Description	<p>The identification of the location where one or more products are metered of the time series that has been found to be in error with the coding scheme used and sub-value if it was in the original transmission.</p> <p>The codification scheme used for the coded identification is indicated by the coding scheme attribute. It is a 3 character alphanumeric code. Refer to ESS Code list document for valid codes.</p>
Size	<p>The maximum length of this information is 35 alphanumeric characters. The maximum length of the sub value, if used, is 35 alphanumeric characters.</p> <p>The maximum length of the coding scheme code is 3 alphanumeric characters.</p>
Applicability	This information is dependent.
Dependence requirements	Refer to the matrix in 4.2.1 for dependency requirements.

6.4.12 In party – Coding Scheme

ACTION	DESCRIPTION
Definition of element	The identification of the in party of the time series in error.
Description	The identification of the party, which is putting the product into the area, of the time series that has been found to be in error with the coding scheme used in the original transmission.
Size	<p>The maximum length of this information is 16 alphanumeric characters.</p> <p>The maximum length of the coding scheme code is 3 alphanumeric characters.</p> <p>The codification scheme used for the coded identification is indicated by the coding scheme attribute. It is a 3 character alphanumeric code. Refer to ESS Code list document for valid codes.</p>
Applicability	This information is dependent.
Dependence requirements	Refer to the matrix in 4.2.1 for dependency requirements.

6.4.13 Out party – Coding Scheme

ACTION	DESCRIPTION
Definition of element	The identification of the out party of the time series in error.
Description	The identification of the party, which is taking the product out of the area, of the time series that has been found to be in error with the coding scheme used if it was in the original transmission.
Size	<p>The maximum length of this information is 16 alphanumeric characters.</p> <p>The maximum length of the coding scheme code is 3 alphanumeric characters.</p> <p>The codification scheme used for the coded identification is indicated by the coding scheme attribute. It is a 3 character alphanumeric code. Refer to ESS Code list document for valid codes.</p>
Applicability	This information is dependent.
Dependence requirements	Refer to the matrix in 4.2.1 for dependency requirements.

6.4.14 Capacity Contract Type

ACTION	DESCRIPTION
Definition of element	The capacity contract type of the time series in error.
Description	This information defines the conditions under which the capacity was allocated and handled. It corresponds to the information found in the time series in error in the original transmission.
Size	The maximum length of this information is 3 alphanumeric characters.
Applicability	This information is dependent.
Dependence requirements	Refer to the matrix in 4.2.1 for dependency requirements.

6.4.15 Capacity agreement identification.

ACTION	DESCRIPTION
Definition of element	The capacity agreement identification of the time series in error.
Description	This information identifies the agreement made between the parties for the sale or purchase of capacity. It corresponds to the information found in the time series in error in the original transmission.
Size	The maximum length of this information is 35 alphanumeric characters.
Applicability	This information is dependent.
Dependence requirements	Refer to the matrix in 4.2.1 for dependency requirements.

6.4.16 Measurement Unit

ACTION	DESCRIPTION
Definition of element	The unit of measure which is applied to the quantities in which the time series in error is expressed.
Description	The unit of measurement used for the quantities expressed within the time series in error.
Size	The maximum length of this information is 3 alphanumeric characters.
Applicability	This information is mandatory.
Dependence requirements	None.

6.5 Rules governing the Period class

The period and resolution as identified the original message must be sent in the anomaly report

6.5.1 Time Interval.

ACTION	DESCRIPTION
Definition of element	The start and end date and time of the time interval of the period in question. The time of the start and end of the period is expressed in UTC with the following format: YYYY-MM-DDTHH:MMZ/YYYY-MM-DDTHH:MMZ.
Description	The time interval of the original message.
Size	The start and end date and time must be expressed in compliance with the following format: YYYY-MM-DDTHH:MMZ/YYYY-MM-DDTHH:MMZ.
Applicability	This information is mandatory.
Dependence requirements	None.

6.5.2 Resolution

ACTION	DESCRIPTION
Definition of element	The resolution defining the number of periods that the time interval is divided.
Description	The resolution as sent in the original message
Size	The is expressed in compliance with ISO 8601 in the following format: PnYnMnDTnHnMnS. Where nY expresses a number of years, nM a number of months, nD a number of days. The letter “T” separates the date expression from the time expression and after it nH identifies a number of hours, nM a number of minutes and nS a number of seconds. For example PT15M expresses a 15 minute resolution.
Applicability	This information is mandatory.
Dependence requirements	None.

6.6 Rules governing the Interval class

All the interval quantities for the time series in error must be sent in the anomaly report

6.6.1 Pos

ACTION	DESCRIPTION
Definition of element	The relative position of a period within a time interval.
Description	The position as identified in the original message.
Size	The relative position must be expressed as a numeric integer value beginning with 1. All leading zeros must be suppressed. The maximum number of characters is 6.
Applicability	This information is mandatory.
Dependence requirements	None.

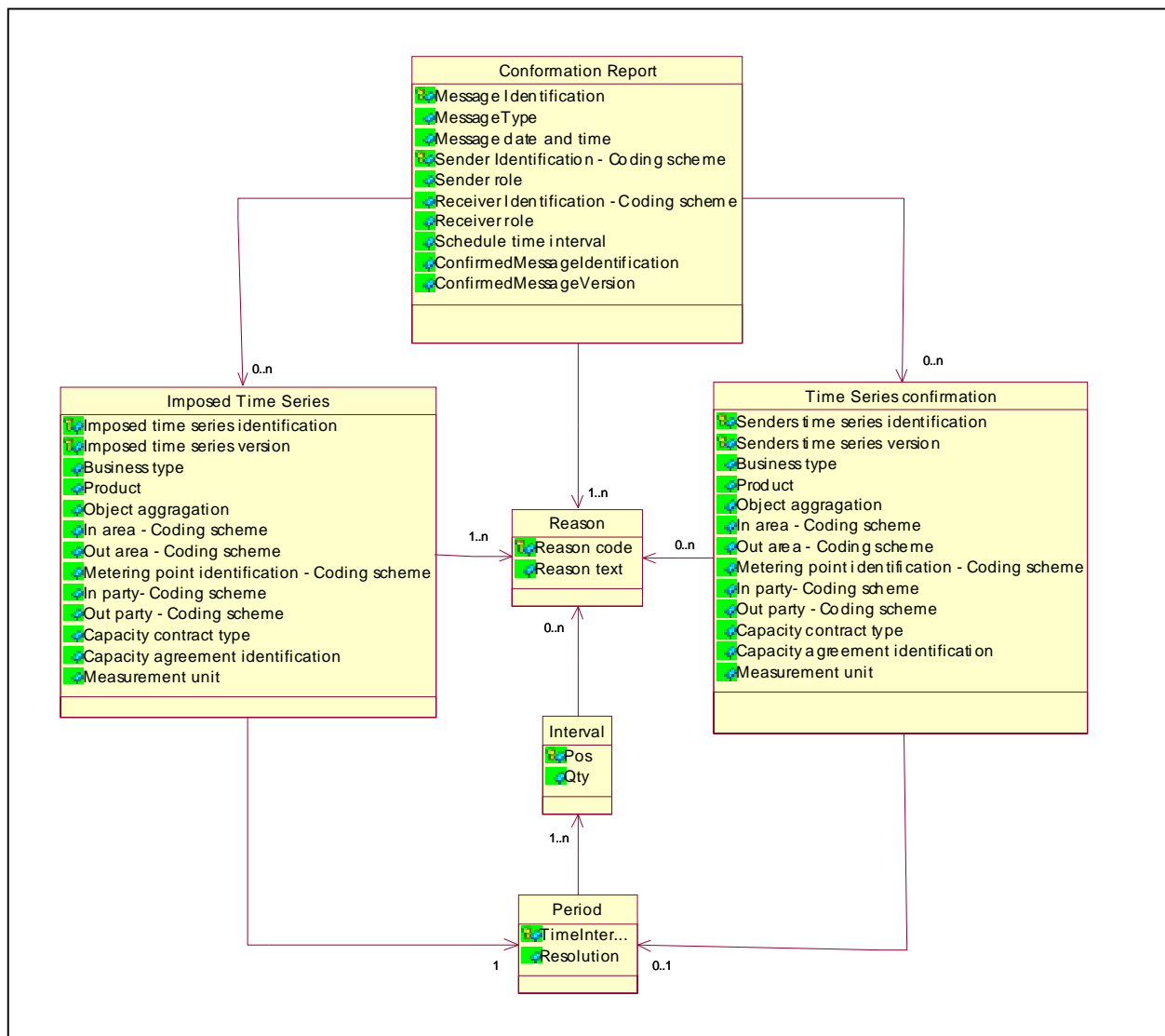
6.6.2 Qty

ACTION	DESCRIPTION
Definition of element	The quantity of the product scheduled for the position within the time interval in question.
Description	The quantity of the original message.
Size	The maximum length of this information is 17 numeric characters (decimal point and sign, if used, included). The number of decimal places depends on local market rules.
Applicability	This information is mandatory.
Dependence requirements	None.

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7. TIME SERIES CONFIRMATION REPORT IMPLEMENTATION

7.1 Information model



7.2 Rules governing the confirmation report class

A confirmation report is generated once a cutoff time has been reached for the schedule time interval in question. At that point in time the total schedule is balanced and all outstanding discrepancies are noted.

Depending on market rules, apart from a final confirmation report that is produced after cutoff, intermediate confirmation reports may be generated. The cutoff time refers not only to daily or intra daily markets as considered in this guide, but also to the different markets that cover imbalance adjustments, reserve allocation, etc. (ancillary services markets).

The system operator then informs all interested parties of the situation in respect to their schedule.

The confirmation report provides the market participant's global position, i.e. all the time series that have been provided in the schedule message for the schedule time interval in question. It may include one or several time series that the system operator has imposed on the market participant in compliance with market rules.

Their schedule can either be globally confirmed, or in the case of discrepancies, they will be informed of what aspects of their time series have been finally accepted.

This message terminates the schedule planning process.

7.2.1 Message Identification

ACTION	DESCRIPTION
Definition of element	Unique identification of the confirmation report that is sent to all involved parties after phase 3 of the schedule process.
Description	A confirmation report is identified by a unique number generated by the sender to serve as the identification of the report in any further communication on the subject.
Size	A confirmation report identification code may not exceed 35 alphanumeric characters.
Applicability	This information is mandatory.
Dependence requirements	None.

7.2.2 Message Type

ACTION	DESCRIPTION
Definition of element	The coded type of the message being sent.
Description	The confirmation report message type identifies the information flow characteristics. Refer to ESS Code list document for valid codes.
Size	The confirmation report message type value may not exceed 3 alphanumeric characters.
Applicability	This information is mandatory.
Dependence requirements	None.

7.2.3 Message Date And Time

ACTION	DESCRIPTION
Definition of element	Date and time of the preparation for transmission of the confirmation report.
Description	The date and time that the message was prepared for transmission by the sender.
Size	The date and time must be expressed in UTC as YYYY-MM-DDTHH:MM:SSZ.
Applicability	This information is mandatory.
Dependence requirements	None.

7.2.4 Sender Identification – Coding Scheme

ACTION	DESCRIPTION
Definition of element	Identification of the party who is sending the confirmation report.
Description	<p>The sender of the message is identified by a unique coded identification.</p> <p>The codification scheme used for the coded identification is indicated by the coding scheme attribute. It is a 3 character alphanumeric code. Refer to ESS Code list document for valid coding scheme codes.</p>
Size	<p>The maximum length of a sender's identification code is 16 alphanumeric characters.</p> <p>The maximum length of the coding scheme code is 3 alphanumeric characters.</p>
Applicability	This information is mandatory.
Dependence requirements	None.

7.2.5 Sender Role

ACTION	DESCRIPTION
Definition of element	Identification of the role played by the sender.
Description	<p>The sender role, which identifies the role of the sender within the message.</p> <p>Refer to ESS Code list document for valid role codes.</p>
Size	The maximum length of a sender role is 3 alphanumeric characters.
Applicability	This information is mandatory.
Dependence requirements	None.

7.2.6 Receiver Identification – Coding Scheme

ACTION	DESCRIPTION
Definition of element	Identification of the party who is receiving the confirmation report.
Description	The receiver of the message is identified by a unique coded identification. The codification scheme used for the coded identification is indicated by the coding scheme attribute. It is a 3 character alphanumeric code. Refer to ESS Code list document for valid coding scheme codes.
Size	The maximum length of a receiver's identification code is 16 alphanumeric characters. The maximum length of the coding scheme code is 3 alphanumeric characters.
Applicability	This information is mandatory.
Dependence requirements	None.

7.2.7 Receiver Role

ACTION	DESCRIPTION
Definition of element	Identification of the role played by the receiver.
Description	The receiver role, which identifies the role of the receiver within the message. Refer to ESS Code list document for valid role codes.
Size	The maximum length of a receiver role is 3 alphanumeric characters.
Applicability	This information is mandatory.
Dependence requirements	None.

7.2.8 Schedule time interval

ACTION	DESCRIPTION
Definition of element	The beginning date and time and the ending date and time of the schedule period covered by the confirmation report.
Description	This information provides the beginning date and time and the ending date and time of the schedule period for which the confirmation report is being generated.
Size	The start and end date and time must respect the format: YYYY-MM-DDTHH:MMZ/YYYY-MM-DDTHH:MMZ. The time must be expressed in UTC.
Applicability	This information is mandatory.
Dependence requirements	None.

7.2.9 Confirmed Message Identification

ACTION	DESCRIPTION
Definition of element	The identification of the market participant's message containing his global position that is being confirmed.
Description	The identification of the message that was sent by the concerned party containing his global position.
Size	The maximum size of this information is 35 alphanumeric characters.
Applicability	This information is dependent.
Dependence requirements	The confirmed message identification is only provided where the market participant has submitted a schedule. This is not supplied in cases where there is uniquely an imposed time series due to non-reception from the market participant of a schedule.

7.2.10 Confirmed Message Version

ACTION	DESCRIPTION
Definition of element	The message version that was taken into consideration.
Description	The version of the message being confirmed.
Size	The maximum size of a time series version is 3 numeric characters.
Applicability	This information is dependent.
Dependence requirements	This data element is always associated with the confirmed message identification.

7.3 Rules governing the Reason class

In a confirmation report reason codes can be detailed at three levels (the period class is assimilated with the time series level):

1. At the header level to identify that all the schedules have been accepted, partially accepted or rejected
2. At the time series level to identify where differences have occurred.
3. At the interval level to indicate where quantities have been increased, decreased, or where default quantities have been applied.

Reason code	Message level elements	Time series level elements		Interval level elements
A06	M	M		M
A07	M	M	A20	
		M	A26	
		M	A30	M Blank, A43, A44 or A45
A08	M	M	A20	

The time series level and interval level can also be used in the case of imposed time series (used exclusively in the case of reason code A30).

7.3.1 Reason code

ACTION	DESCRIPTION
Definition of element	<p>A code providing the status of the information. Currently the following status's have been identified :</p> <p><u>At the message level :</u> A06: Schedule global position accepted A07: Schedule global position partially accepted A08: Schedule global position rejected</p> <p><u>At the timeseries level :</u> A20: Time series fully rejected A26: Default time series applied A30: Imposed Time series from nominated party's time series (party identified in reason text)</p> <p><u>At the time interval level :</u> A43: Quantity increased A44: Quantity decreased A45: Default quantity applied</p>
Description	The reason code provides the status of the differences and confirmation. If the schedule is fully accepted then there is simply a reason code (A06) at the header part of the report. For errors as many reason elements as necessary may be used.
Size	The maximum length of this information is 3 alphanumeric characters.
Applicability	This information is dependent.
Dependence requirements	This information is used either at the header level to give a global description of the error, at the time series or time interval quantities levels to provide more detailed information.

7.3.2 Reason Text

ACTION	DESCRIPTION
Definition of element	Textual explanation of an eventual difference .
Description	If the code does not provide all the information to clearly identify a difference the reason text may be used.
Size	The maximum length of this information is 512 alphanumeric characters.
Applicability	This information is dependent.
Dependence requirements	Used only if the reason code is insufficient to identify a difference.

7.4 Rules governing the Time Series confirmation class

All the time series that have been sent by the concerned party are identified in the confirmation report. If there are discrepancies these are identified with a reason code and eventual text. A time series if being rejected in the confirmation report shall not contain any period information.

7.4.1 Senders Time Series Identification

ACTION	DESCRIPTION
Definition of element	The identification of the time series being confirmed.
Description	The identification of the time series sent by the concerned party that is being confirmed.
Size	The maximum size of this information is 35 alphanumeric characters.
Applicability	This information is mandatory.
Dependence requirements	None.

7.4.2 Senders Time Series Version

ACTION	DESCRIPTION
Definition of element	The time series version being confirmed.
Description	The version of the time series being confirmed.
Size	The maximum size of a time series version is 3 numeric characters.
Applicability	This information is mandatory.
Dependence requirements	This data element is always associated with the sender's time series identification.

7.4.3 Business type

ACTION	DESCRIPTION
Definition of element	The trading nature of the time series being confirmed.
Description	The nature of the time series being confirmed.
Size	The maximum length of the time series type is 3 alphanumeric characters.
Applicability	This information is mandatory.
Dependence requirements	None.

7.4.4 Product

ACTION	DESCRIPTION
Definition of element	The product of the time series being confirmed.
Description	This identifies the product for which the time series is reporting.
Size	The maximum length of this information is 13 numeric characters.
Applicability	This information is mandatory.
Dependence requirements	None.

7.4.5 Object aggregation

ACTION	DESCRIPTION
Definition of element	The aggregation of the time series being confirmed.
Description	The aggregation that has been employed in the time series being confirmed.
Size	The maximum length of the time series type is 3 alphanumeric characters.
Applicability	This information is mandatory.
Dependence requirements	None.

7.4.6 In Area – Coding Scheme

ACTION	DESCRIPTION
Definition of element	The in area of the time series being confirmed.
Description	The identification of the in area of the time series being confirmed with the coding scheme used in the original transmission.
Size	<p>The maximum length of this information is 18 alphanumeric characters.</p> <p>The maximum length of the coding scheme code is 3 alphanumeric characters.</p> <p>The codification scheme used for the coded identification is indicated by the coding scheme attribute. It is a 3 character alphanumeric code.</p>
Applicability	This information is dependent.
Dependence requirements	Refer to the matrix in 4.2.1 for dependency requirements.

7.4.7 Out Area – Coding Scheme

ACTION	DESCRIPTION
Definition of element	The out area of the time series being confirmed.
Description	The identification of the out area of the time series being confirmed with the coding scheme used in the original transmission.
Size	The maximum length of this information is 18 alphanumeric characters. The maximum length of the coding scheme code is 3 alphanumeric characters. The codification scheme used for the coded identification is indicated by the coding scheme attribute. It is a 3 character alphanumeric code.
Applicability	This information is dependent.
Dependence requirements	Refer to the matrix in 4.2.1 for dependency requirements.

7.4.8 Metering Point Identification – Coding Scheme

ACTION	DESCRIPTION
Definition of element	The identification of the metering point of the time series being confirmed.
Description	The identification of the location where one or more products are metered of the time series being confirmed with the coding scheme used and sub-value if it was in the original transmission. The codification scheme used for the coded identification is indicated by the coding scheme attribute. It is a 3 character alphanumeric code.
Size	The maximum length of this information is 35 alphanumeric characters. The maximum length of the sub value, if used, is 35 alphanumeric characters. The maximum length of the coding scheme code is 3 alphanumeric characters.
Applicability	This information is dependent.
Dependence requirements	Refer to the matrix in 4.2.1 for dependency requirements.

7.4.9 In party – Coding Scheme

ACTION	DESCRIPTION
Definition of element	The identification of the in party of the time series being confirmed.
Description	The identification of the party, which is putting the product into the area, of the time series being confirmed with the coding scheme used in the original transmission.
Size	<p>The maximum length of this information is 16 alphanumeric characters.</p> <p>The maximum length of the coding scheme code is 3 alphanumeric characters.</p> <p>The codification scheme used for the coded identification is indicated by the coding scheme attribute. It is a 3 character alphanumeric code.</p>
Applicability	This information is dependent.
Dependence requirements	Refer to the matrix in 4.2.1 for dependency requirements.

7.4.10 Out party – Coding Scheme

ACTION	DESCRIPTION
Definition of element	The identification of the out party of the time series being confirmed.
Description	The identification of the party, which is taking the product out of the area, of the time series being confirmed with the coding scheme used if it was in the original transmission.
Size	<p>The maximum length of this information is 16 alphanumeric characters.</p> <p>The maximum length of the coding scheme code is 3 alphanumeric characters.</p> <p>The codification scheme used for the coded identification is indicated by the coding scheme attribute. It is a 3 character alphanumeric code.</p>
Applicability	This information is dependent.
Dependence requirements	Refer to the matrix in 4.2.1 for dependency requirements.

7.4.11 Capacity Contract Type

ACTION	DESCRIPTION
Definition of element	The capacity contract type of the time series being confirmed.
Description	This information defines the conditions under which the capacity was allocated and handled. It corresponds to the information found in the time series being confirmed.
Size	The maximum length of this information is 3 alphanumeric characters.
Applicability	This information is dependent.
Dependence requirements	Refer to the matrix in 4.2.1 for dependency requirements.

7.4.12 Capacity agreement identification

ACTION	DESCRIPTION
Definition of element	The capacity agreement identification of the time series being confirmed.
Description	This information identifies the agreement made between the parties for the sale or purchase of capacity. It corresponds to the information found in the time series being confirmed.
Size	The maximum length of this information is 35 alphanumeric characters.
Applicability	This information is dependent.
Dependence requirements	Refer to the matrix in 4.2.1 for dependency requirements.

7.4.13 Measurement Unit

ACTION	DESCRIPTION
Definition of element	The unit of measure which is applied to the quantities in which the time series is expressed.
Description	The unit of measurement used for the quantities expressed within the time series.
Size	The maximum length of this information is 3 alphanumeric characters.
Applicability	This information is mandatory.
Dependence requirements	None.

7.5 Rules governing the imposed time series class

A time series may be imposed by the system operator on the market participant in respect to specific market rules. For example, if market rules indicated that in case of mismatch one of the parties time series would automatically be taken and imposed on the other party. Such a condition could occur if a market participant had a message that was rejected due to syntax errors and the message was never retransmit prior to cutoff. An imposed time series cannot be provided if an equivalent time series has already been accepted.

7.5.1 Imposed Time Series Identification

ACTION	DESCRIPTION
Definition of element	The identification of the imposed time series assigned by the system operator.
Description	The identification of the time series imposed by the system operator on the market participant.
Size	The maximum size of this information is 35 alphanumeric characters.
Applicability	This information is mandatory.
Dependence requirements	None.

7.5.2 Imposed Time Series Version

ACTION	DESCRIPTION
Definition of element	The imposed time series version assigned by the system operator.
Description	The version of the imposed time series. This value s in general should be equal to 1.
Size	The maximum size of an imposed time series version is 3 numeric characters.
Applicability	This information is mandatory.
Dependence requirements	This data element is always associated with the imposed time series identification.

7.5.3 Business type

ACTION	DESCRIPTION
Definition of element	The trading nature of the time series imposed.
Description	The nature of the time series that the system operator is imposing.
Size	The maximum length of the time series type is 3 alphanumeric characters.
Applicability	This information is mandatory.
Dependence requirements	None.

7.5.4 Product

ACTION	DESCRIPTION
Definition of element	The product of the imposed time series .
Description	This identifies the product for which the system operator is imposing the time series
Size	The maximum length of this information is 13 numeric characters.
Applicability	This information is mandatory.
Dependence requirements	None.

7.5.5 Object aggregation

ACTION	DESCRIPTION
Definition of element	The aggregation of the imposed time series.
Description	The aggregation of the time series imposed by the system operator.
Size	The maximum length of the time series type is 3 alphanumeric characters.
Applicability	This information is mandatory.
Dependence requirements	None.

7.5.6 In Area – Coding Scheme

ACTION	DESCRIPTION
Definition of element	The in area of the imposed time series.
Description	The identification of the in area of the time series that has been imposed by the system operator with the coding scheme used in the original transmission.
Size	The maximum length of this information is 18 alphanumeric characters. The maximum length of the coding scheme code is 3 alphanumeric characters. The codification scheme used for the coded identification is indicated by the coding scheme attribute. It is a 3 character alphanumeric code.
Applicability	This information is dependent.
Dependence requirements	Refer to the matrix in 4.2.1 for dependency requirements.

7.5.7 Out Area – Coding Scheme

ACTION	DESCRIPTION
Definition of element	The out area of the imposed time series.
Description	The identification of the out area of the time series that has been imposed by the system operator with the coding scheme used in the original transmission.
Size	The maximum length of this information is 18 alphanumeric characters. The maximum length of the coding scheme code is 3 alphanumeric characters. The codification scheme used for the coded identification is indicated by the coding scheme attribute. It is a 3 character alphanumeric code.
Applicability	This information is dependent.
Dependence requirements	Refer to the matrix in 4.2.1 for dependency requirements.

7.5.8 Metering Point Identification – Coding Scheme

ACTION	DESCRIPTION
Definition of element	The identification of the metering point of the imposed time series .
Description	<p>The identification of the location where one or more products are metered of the time series that has been imposed by the system operator with the coding scheme used and sub-value if it was in the original transmission.</p> <p>The codification scheme used for the coded identification is indicated by the coding scheme attribute. It is a 3 character alphanumeric code.</p>
Size	<p>The maximum length of this information is 35 alphanumeric characters. The maximum length of the sub value, if used, is 35 alphanumeric characters.</p> <p>The maximum length of the coding scheme code is 3 alphanumeric characters.</p>
Applicability	This information is dependent.
Dependence requirements	Refer to the matrix in 4.2.1 for dependency requirements.

7.5.9 In party – Coding Scheme

ACTION	DESCRIPTION
Definition of element	The identification of the in party of the imposed time series.
Description	The identification of the party, which is putting the product into the area, of the time series that has been imposed by the system operator with the coding scheme used in the original transmission.
Size	<p>The maximum length of this information is 16 alphanumeric characters.</p> <p>The maximum length of the coding scheme code is 3 alphanumeric characters.</p> <p>The codification scheme used for the coded identification is indicated by the coding scheme attribute. It is a 3 character alphanumeric code.</p>
Applicability	This information is dependent.
Dependence requirements	Refer to the matrix in 4.2.1 for dependency requirements.

7.5.10 Out party – Coding Scheme

ACTION	DESCRIPTION
Definition of element	The identification of the out party of the imposed time series.
Description	The identification of the party, which is taking the product out of the area, of the time series that has been imposed by the system operator with the coding scheme used if it was in the original transmission.
Size	The maximum length of this information is 16 alphanumeric characters. The maximum length of the coding scheme code is 3 alphanumeric characters. The codification scheme used for the coded identification is indicated by the coding scheme attribute. It is a 3 character alphanumeric code.
Applicability	This information is dependent.
Dependence requirements	Refer to the matrix in 4.2.1 for dependency requirements.

7.5.11 Capacity Contract Type

ACTION	DESCRIPTION
Definition of element	The capacity contract type of the imposed time series.
Description	This information defines the conditions under which the capacity was allocated and handled. It corresponds to the information that has been imposed by the system operator.
Size	The maximum length of this information is 3 alphanumeric characters.
Applicability	This information is dependent.
Dependence requirements	Refer to the matrix in 4.2.1 for dependency requirements.

7.5.12 Capacity agreement identification.

ACTION	DESCRIPTION
Definition of element	The capacity agreement identification of the imposed time series in error.
Description	This information identifies the agreement made between the parties for the sale or purchase of capacity. It corresponds to the information that has been imposed by the system operator.
Size	The maximum length of this information is 35 alphanumeric characters.
Applicability	This information is dependent.
Dependence requirements	Refer to the matrix in 4.2.1 for dependency requirements.

7.5.13 Measurement Unit

ACTION	DESCRIPTION
Definition of element	The unit of measure that is applied to the quantities in which the imposed time series is expressed.
Description	The unit if measurement used for the quantities expressed within the time series that has been imposed by the system operator.
Size	The maximum length of this information is 3 alphanumeric characters.
Applicability	This information is mandatory.
Dependence requirements	None.

7.6 Rules governing the Period class

The period and resolution as identified the original message must be sent in the confirmation report for all time series that have been accepted or accepted with modification. In the case of imposed time series the resolution must be that same as the market participants. All resolutions must respect market rules.

7.6.1 Time Interval.

ACTION	DESCRIPTION
Definition of element	The start and end date and time of the time interval of the period in question. The time of the start and end of the period is expressed in UTC with the following format: YYYY-MM-DDTHH:MMZ/YYYY-MM-DDTHH:MMZ.
Description	The time interval which has been accepted or imposed.
Size	The start and end date and time must be expressed in compliance with the following format: YYYY-MM-DDTHH:MMZ/YYYY-MM-DDTHH:MMZ.
Applicability	This information is mandatory.
Dependence requirements	None.

7.6.2 Resolution

ACTION	DESCRIPTION
Definition of element	The resolution defining the number of periods that the time interval is divided.
Description	The resolution that has been accepted or imposed.
Size	<p>The resolution is expressed in compliance with ISO 8601 in the following format:</p> <p style="text-align: center;">PnYnMnDTnHnMnS.</p> <p>Where nY expresses a number of years, nM a number of months, nD a number of days.</p> <p>The letter “T” separates the date expression from the time expression and after it nH identifies a number of hours, nM a number of minutes and nS a number of seconds.</p> <p>For example PT15M expresses a 15 minute resolution.</p>
Applicability	This information is mandatory.
Dependence requirements	None.

7.7 Rules governing the Interval class

All the interval quantities for the time series that has been accepted or those imposed by the system operator must be sent in the confirmation report

7.7.1 Pos

ACTION	DESCRIPTION
Definition of element	The relative position of a period within a time interval.
Description	The position that has been accepted or imposed.
Size	The relative position must be expressed as a numeric integer value beginning with 1. All leading zeros must be suppressed. The maximum number of characters is 6.
Applicability	This information is mandatory.
Dependence requirements	None.

7.7.2 Qty

ACTION	DESCRIPTION
Definition of element	The quantity of the product scheduled for the position within the time interval in question.
Description	The quantity that has been accepted or imposed.
Size	The maximum length of this information is 17 numeric characters (decimal point and sign, if used, included). The number of decimal places depends on local market rules.
Applicability	This information is mandatory.
Dependence requirements	None.

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8. XML DTD DEFINITIONS

8.1 Schedule message DTD

```
<?xml version="1.0" encoding="UTF-8"?>
<?xml-stylesheet type="text/xsl" href="schedule-xsl.xsl"?>
<!-- ETSO Task Force 14 - DTD Version : 2 RELEASE : 3 -->
<!ELEMENT ScheduleMessage (MessageIdentification, MessageVersion, MessageType,
ProcessType, ScheduleClassificationType, SenderIdentification, SenderRole, ReceiverIdentification,
ReceiverRole, MessageDateTime, ScheduleTimeInterval, ScheduleTimeSeries*)>
    <!ATTLIST ScheduleMessage DtdVersion CDATA #REQUIRED
                                DtdRelease CDATA #REQUIRED>

    <!ELEMENT MessageIdentification EMPTY>
    <!ATTLIST MessageIdentification v CDATA #REQUIRED>

    <!ELEMENT MessageVersion EMPTY>
    <!ATTLIST MessageVersion v CDATA #REQUIRED>

    <!ELEMENT MessageType EMPTY>
    <!ATTLIST MessageType v CDATA #REQUIRED>
    <!--      See Message type valid codes and meanings in implementation guide      -->

    <!ELEMENT ProcessType EMPTY>
    <!ATTLIST ProcessType v CDATA #REQUIRED>
    <!--      See role meanings in implementation guide      -->

    <!ELEMENT ScheduleClassificationType EMPTY>
    <!ATTLIST ScheduleClassificationType v (A01 | A02) #REQUIRED>
    <!--      See role meanings in implementation guide      -->

    <!ELEMENT SenderIdentification EMPTY>
    <!ATTLIST SenderIdentification v CDATA #REQUIRED
                                codingScheme CDATA #REQUIRED>

    <!ELEMENT SenderRole EMPTY>
```



```

<!--      See product meanings in implementation guide -->

<!ELEMENT ObjectAggregation EMPTY>
<!ATTLIST ObjectAggregation v CDATA #REQUIRED>
<!--      See object aggregation valid codes and meanings in implementation guide      -->

<!ELEMENT InArea EMPTY>
<!ATTLIST InArea v CDATA #REQUIRED
           codingScheme CDATA #REQUIRED>

<!ELEMENT OutArea EMPTY>
<!ATTLIST OutArea v CDATA #REQUIRED
           codingScheme CDATA #REQUIRED>

<!ELEMENT MeteringPointIdentification EMPTY>
<!ATTLIST MeteringPointIdentification v CDATA #REQUIRED
           subValue CDATA #IMPLIED
           codingScheme CDATA #REQUIRED>

<!ELEMENT InParty EMPTY>
<!ATTLIST InParty v CDATA #REQUIRED
           codingScheme CDATA #REQUIRED>

<!ELEMENT OutParty EMPTY>
<!ATTLIST OutParty v CDATA #REQUIRED
           codingScheme CDATA #REQUIRED>

<!ELEMENT CapacityContractType EMPTY>
<!ATTLIST CapacityContractType
v (A01 | A02 | A03 | A04 | A05) #REQUIRED>
<!--      See contract type meanings in implementation guide-->

<!ELEMENT CapacityAgreementIdentification EMPTY>
<!ATTLIST CapacityAgreementIdentification v CDATA #REQUIRED>

```

```

<!ELEMENT MeasurementUnit EMPTY>
<!ATTLIST MeasurementUnit
v (MWH | MAW | MAH | MAR) #REQUIRED>
<!--      See measurement unit meanings in implementation guide  -->

<!ELEMENT Period (TimeInterval, Resolution, Interval+)>

<!ELEMENT TimeInterval EMPTY>
<!ATTLIST TimeInterval v CDATA #REQUIRED>

<!ELEMENT Resolution EMPTY>
<!ATTLIST Resolution v CDATA #REQUIRED>

<!ELEMENT Reason (ReasonCode, ReasonText*)>

<!ELEMENT ReasonCode EMPTY>
<!ATTLIST ReasonCode v CDATA #REQUIRED>
<!--      See reason code meanings in implementation guide  -->

<!ELEMENT ReasonText EMPTY>
<!ATTLIST ReasonText v CDATA #REQUIRED>

<!ELEMENT Interval (Pos, Qty)>

<!ELEMENT Pos EMPTY>
<!ATTLIST Pos v CDATA #REQUIRED>

<!ELEMENT Qty EMPTY>
<!ATTLIST Qty v CDATA #REQUIRED>

```

8.2 Schedule message data instance

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE ScheduleMessage SYSTEM "../dtd/schedule-xml.dtd">
<ScheduleMessage DtdVersion="2" DtdRelease="3">
  <MessageIdentification v="1234"/>
  <MessageVersion v="1"/>
  <MessageType v="A01"/>
  <ProcessType v="A01"/>
  <ScheduleClassificationType v="A01"/>
  <SenderIdentification v="5790000432752" codingScheme="A10"/>
  <SenderRole v="A01"/>
  <ReceiverIdentification v="10X000000000RTEM" codingScheme="A01"/>
  <ReceiverRole v="A04"/>
  <MessageDateTime v="2001-06-02T09:00:00Z"/>
  <ScheduleTimeInterval v="2001-06-02T22:00Z/2001-06-02T23:00Z"/>
  <ScheduleTimeSeries>
    <SendersTimeSeriesIdentification v="TS0001"/>
    <SendersTimeSeriesVersion v="1"/>
    <BusinessType v="A03"/>
    <Product v="8716867000016"/>
    <ObjectAggregation v="A01"/>
    <InArea v="12Y000002347651H" codingScheme="A01"/>
    <OutArea v="12YRWENET-----Q" codingScheme="A01"/>
    <InParty v="11X000000100741R" codingScheme="A01"/>
    <OutParty v="11X000000340533X" codingScheme="A01"/>
    <CapacityContractType v="A01"/>
    <CapacityAgreementIdentification v="R567">
      <MeasurementUnit v="MAW"/>
      <Period>
        <TimeInterval v="2001-06-02T22:00Z/2001-06-02T23:00Z"/>
        <Resolution v="PT15M"/>
        <Interval>
          <Pos v="1"/>
        </Interval>
      </Period>
    </CapacityAgreementIdentification>
  </ScheduleTimeSeries>
</ScheduleMessage>
```

```
        <Qty v="45"/>
    </Interval>
    <Interval>
        <Pos v="2"/>
        <Qty v="40"/>
    </Interval>
    <Interval>
        <Pos v="3"/>
        <Qty v="45"/>
    </Interval>
    <Interval>
        <Pos v="4"/>
        <Qty v="45"/>
    </Interval>
</Period>
</ScheduleTimeSeries>
</ScheduleMessage>
```

Note: This example, for the sake of space, is only for the duration of one hour.

8.3 Acknowledgement message DTD

```
<?xml version="1.0" encoding="UTF-8"?>
<?xml-stylesheet type="text/xsl" href="timeseries-ack.xsl"?>
<!-- ETSO Task Force 14 - DTD Version : 2 RELEASE : 3 -->
<!ELEMENT AcknowledgementMessage (MessageIdentification, MessageDateTime, SenderIdentification,
SenderRole, ReceiverIdentification, ReceiverRole, ReceivingMessageIdentification,
ReceivingMessageVersion, Reason+, TimeSeriesRejection*, TimeIntervalError*)>
  <!ATTLIST AcknowledgementMessage
    DtdVersion CDATA #REQUIRED
    DtdRelease CDATA #REQUIRED>

  <!ELEMENT MessageIdentification EMPTY>
  <!ATTLIST MessageIdentification v CDATA #REQUIRED>

  <!ELEMENT MessageDateTime EMPTY>
  <!ATTLIST MessageDateTime v CDATA #REQUIRED>

  <!ELEMENT SenderIdentification EMPTY>
  <!ATTLIST SenderIdentification v CDATA #REQUIRED
    codingScheme CDATA #REQUIRED>

  <!ELEMENT SenderRole EMPTY>
  <!ATTLIST SenderRole v (A01 | A02 | A03 | A04 | A05 | A06 | A07 | A08) #REQUIRED>
  <!-- See role meanings in implementation guide -->

  <!ELEMENT ReceiverIdentification EMPTY>
  <!ATTLIST ReceiverIdentification v CDATA #REQUIRED
    codingScheme CDATA #REQUIRED>

  <!ELEMENT ReceiverRole EMPTY>
  <!ATTLIST ReceiverRole v (A01 | A02 | A03 | A04 | A05 | A06 | A07 | A08) #REQUIRED>
  <!-- See role meanings in implementation guide -->
```

```

<!ELEMENT ReceivingMessageIdentification EMPTY>
<!ATTLIST ReceivingMessageIdentification v CDATA #REQUIRED>

<!ELEMENT ReceivingMessageVersion EMPTY>
<!ATTLIST ReceivingMessageVersion v CDATA #REQUIRED>

<!ELEMENT Reason (ReasonCode, ReasonText*)>

<!ELEMENT ReasonCode EMPTY>
<!ATTLIST ReasonCode v CDATA #REQUIRED>
<!--      See reason code meanings in implementation guide  -->

<!ELEMENT ReasonText EMPTY>
<!ATTLIST ReasonText v CDATA #REQUIRED>

<!ELEMENT TimeSeriesRejection (SendersTimeSeriesIdentification, SendersTimeSeriesVersion,
Reason*, TimeIntervalError*)>

<!ELEMENT SendersTimeSeriesIdentification EMPTY>
<!ATTLIST SendersTimeSeriesIdentification v CDATA #REQUIRED>

<!ELEMENT SendersTimeSeriesVersion EMPTY>
<!ATTLIST SendersTimeSeriesVersion v CDATA #REQUIRED>

<!ELEMENT TimeIntervalError (QuantityTimeInterval, Reason+)>

<!ELEMENT QuantityTimeInterval EMPTY>
<!ATTLIST QuantityTimeInterval v CDATA #REQUIRED>

```


8.4 Acknowledgement message data instance

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE AcknowledgementMessage SYSTEM "../dtd/acknowledgement-xml.dtd">
<AcknowledgementMessage DtdVersion="2" DtdRelease="3">
  <MessageIdentification v="2345"/>
  <MessageDateTime v="2001-06-02T09:00:00Z"/>
  <SenderIdentification v="5790000432752" codingScheme="A10"/>
  <SenderRole v="A01"/>
  <ReceiverIdentification v="10X000000000RTEM" codingScheme="A01"/>
  <ReceiverRole v="A01"/>
  <ReceivingMessageIdentification v="1234"/>
  <ReceivingMessageVersion v="1"/>
  <Reason>
    <ReasonCode v="A01"/>
  </Reason>
</AcknowledgementMessage>
```

8.5 Anomaly report DTD

```
<?xml version="1.0" encoding="UTF-8"?>
<?xml-stylesheet type="text/xsl" href="anomaly.xsl"?>
<!-- ETSO Task Force 14 - DTD Version : 2 RELEASE : 3 -->
<!ELEMENT AnomalyReport (MessageIdentification, MessageDateTime, SenderIdentification, SenderRole,
ReceiverIdentification, ReceiverRole, ScheduleTimeInterval, TimeSeriesAnomaly+)>
  <!ATTLIST AnomalyReport
    DtdVersion CDATA #REQUIRED
    DtdRelease CDATA #REQUIRED>

  <!ELEMENT MessageIdentification EMPTY>
  <!ATTLIST MessageIdentification v CDATA #REQUIRED>

  <!ELEMENT MessageDateTime EMPTY>
  <!ATTLIST MessageDateTime v CDATA #REQUIRED>

  <!ELEMENT SenderIdentification EMPTY>
  <!ATTLIST SenderIdentification v CDATA #REQUIRED
    codingScheme CDATA #REQUIRED>

  <!ELEMENT SenderRole EMPTY>
  <!ATTLIST SenderRole v (A01 | A02 | A03 | A04 | A05 | A06 | A07 | A08) #REQUIRED>
  <!--      See role meanings in implementation guide      -->

  <!ELEMENT ReceiverIdentification EMPTY>
  <!ATTLIST ReceiverIdentification v CDATA #REQUIRED
    codingScheme CDATA #REQUIRED>

  <!ELEMENT ReceiverRole EMPTY>
  <!ATTLIST ReceiverRole v (A01 | A02 | A03 | A04 | A05 | A06 | A07 | A08) #REQUIRED>
  <!--      See role meanings in implementation guide      -->

  <!ELEMENT ScheduleTimeInterval EMPTY>
```

<!ATTLIST ScheduleTimeInterval v CDATA #REQUIRED>

<!ELEMENT Reason (ReasonCode, ReasonText*)>

<!ELEMENT ReasonCode EMPTY>

<!ATTLIST ReasonCode v CDATA #REQUIRED>

<!-- See reason code meanings in implementation guide -->

<!ELEMENT ReasonText EMPTY>

<!ATTLIST ReasonText v CDATA #REQUIRED>

<!ELEMENT TimeSeriesAnomaly (MessageSenderIdentification, SendersMessageIdentification, SendersMessageVersion, SendersTimeSeriesIdentification, SendersTimeSeriesVersion, BusinessType, Product, ObjectAggregation, InArea?, OutArea?, MeteringPointIdentification?, InParty?, OutParty?, CapacityContractType?, CapacityAgreementIdentification?, MeasurementUnit, Period, Reason+)>

<!ELEMENT MessageSenderIdentification EMPTY>

<!ATTLIST MessageSenderIdentification v CDATA #REQUIRED
codingScheme CDATA #IMPLIED>

<!ELEMENT SendersMessageIdentification EMPTY>

<!ATTLIST SendersMessageIdentification v CDATA #REQUIRED>

<!ELEMENT SendersMessageVersion EMPTY>

<!ATTLIST SendersMessageVersion v CDATA #REQUIRED>

<!ELEMENT SendersTimeSeriesIdentification EMPTY>

<!ATTLIST SendersTimeSeriesIdentification v CDATA #REQUIRED>

<!ELEMENT SendersTimeSeriesVersion EMPTY>

<!ATTLIST SendersTimeSeriesVersion v CDATA #REQUIRED>

<!ELEMENT BusinessType EMPTY>

<!ATTLIST BusinessType v CDATA #REQUIRED>

<!ELEMENT Product EMPTY>

```

    <!ATTLIST Product v (8716867000016 | 8716867000023 | 8716867000030 | 8716867000047)
#REQUIRED>
    <!--      See product code meanings in implementation guide -->

    <!ELEMENT ObjectAggregation EMPTY>
    <!ATTLIST ObjectAggregation v CDATA #REQUIRED>

    <!ELEMENT InArea EMPTY>
    <!ATTLIST InArea v CDATA #REQUIRED
      codingScheme CDATA #REQUIRED>

    <!ELEMENT OutArea EMPTY>
    <!ATTLIST OutArea v CDATA #REQUIRED
      codingScheme CDATA #REQUIRED>

    <!ELEMENT MeteringPointIdentification EMPTY>
    <!ATTLIST MeteringPointIdentification v CDATA #REQUIRED
      subValue CDATA #IMPLIED
      codingScheme CDATA #REQUIRED>

    <!ELEMENT InParty EMPTY>
    <!ATTLIST InParty v CDATA #REQUIRED
      codingScheme CDATA #REQUIRED>

    <!ELEMENT OutParty EMPTY>
    <!ATTLIST OutParty v CDATA #REQUIRED
      codingScheme CDATA #REQUIRED>

    <!ELEMENT CapacityContractType EMPTY>
    <!ATTLIST CapacityContractType v (A01 | A02 | A03 | A04 | A05) #REQUIRED>
    <!--      See contract type meanings in implementation guide-->

    <!ELEMENT CapacityAgreementIdentification EMPTY>
    <!ATTLIST CapacityAgreementIdentification v CDATA #REQUIRED>

```

```
<!ELEMENT MeasurementUnit EMPTY>
<!ATTLIST MeasurementUnit v (MWH | MAW | MAH | MAR) #REQUIRED>
<!--      See measurement unit meanings in implementation guide  -->

<!ELEMENT Period (TimeInterval, Resolution, Interval+)>

<!ELEMENT TimeInterval EMPTY>
<!ATTLIST TimeInterval v CDATA #REQUIRED>

<!ELEMENT Resolution EMPTY>
<!ATTLIST Resolution v CDATA #REQUIRED>

<!ELEMENT Interval (Pos, Qty)>

<!ELEMENT Pos EMPTY>
<!ATTLIST Pos v CDATA #REQUIRED>

<!ELEMENT Qty EMPTY>
<!ATTLIST Qty v CDATA #REQUIRED>
```

8.6 Anomaly report data instance

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE AnomalyReport SYSTEM "../dtd/anomaly-xml.dtd">
<AnomalyReport DtdVersion="2" DtdRelease="3">
  <MessageIdentification v="1234QRP"/>
  <MessageDateTime v="2001-06-02T09:00:00Z"/>
  <SenderIdentification v="5790000432752" codingScheme="A10"/>
  <SenderRole v="A01"/>
  <ReceiverIdentification v="10X000000000RTEM" codingScheme="A01"/>
  <ReceiverRole v="A01"/>
  <ScheduleTimeInterval v="2001-06-02T22:00Z/2001-06-02T23:00Z "/>
  <TimeSeriesAnomaly>
    <MessageSenderIdentification v="5790000432752" codingScheme="A10"/>
    <SendersMessageIdentification v="1234"/>
    <SendersMessageVersion v="1"/>
    <SendersTimeSeriesIdentification v="TS0001"/>
    <SendersTimeSeriesVersion v="1"/>
    <BusinessType v="A03"/>
    <Product v="8716867000016"/>
    <ObjectAggregation v="A01"/>
    <InArea v="12Y000002347651H" codingScheme="A01"/>
    <OutArea v="12YRWENET-----Q" codingScheme="A01"/>
    <InParty v="11X000000100741R" codingScheme="A01"/>
    <OutParty v="11X000000340533X" codingScheme="A01"/>
    <CapacityContractType v="A01"/>
    <CapacityAgreementIdentification v="R567">
      <MeasurementUnit v="MAW"/>
    <Period>
      <TimeInterval v="2001-06-02T22:00Z/2001-06-02T23:00Z"/>
      <Resolution v="PT15M"/>
      <Interval>
        <Pos v="1"/>
        <Qty v="40"/>
      </Interval>
    </Period>
  </TimeSeriesAnomaly>
</AnomalyReport>
```

```
</Interval>
<Interval>
  <Pos v="2" />
  <Qty v="45" />
</Interval>
<Interval>
  <Pos v="3" />
  <Qty v="45" />
</Interval>
<Interval>
  <Pos v="4" />
  <Qty v="45" />
</Interval>
</Period>
<Reason>
  <ReasonCode v="A28" />
</Reason>
</TimeSeriesAnomaly>
</AnomalyReport>
```

8.7 Confirmation report DTD

```
<?xml version="1.0" encoding="UTF-8"?>
<?xml-stylesheet type="text/xsl" href="confirmation.xsl"?>
<!-- ETSO Task Force 14 - DTD Version : 2 RELEASE : 3 -->
<!ELEMENT ConfirmationReport (MessageIdentification, MessageType, MessageDateTime,
SenderIdentification, SenderRole, ReceiverIdentification, ReceiverRole, ScheduleTimeInterval,
ConfirmedMessageIdentification?, ConfirmedMessageVersion?, Reason+, ImposedTimeSeries*,
TimeSeriesConfirmation*)>
  <!ATTLIST ConfirmationReport
    DtdVersion CDATA #REQUIRED
    DtdRelease CDATA #REQUIRED>

  <!ELEMENT MessageType EMPTY>
  <!ATTLIST MessageType v CDATA #REQUIRED>

  <!ELEMENT MessageDateTime EMPTY>
  <!ATTLIST MessageDateTime v CDATA #REQUIRED>

  <!ELEMENT MessageDateTime EMPTY>
  <!ATTLIST MessageDateTime v CDATA #REQUIRED>

  <!ELEMENT SenderIdentification EMPTY>
  <!ATTLIST SenderIdentification v CDATA #REQUIRED
    codingScheme CDATA #REQUIRED>

  <!ELEMENT SenderRole EMPTY>
  <!ATTLIST SenderRole v (A01 | A02 | A03 | A04 | A05 | A06 | A07 |A08) #REQUIRED>
  <!--      See role meanings in implementation guide      -->

  <!ELEMENT ReceiverIdentification EMPTY>
  <!ATTLIST ReceiverIdentification v CDATA #REQUIRED
    codingScheme CDATA #REQUIRED>
```



```

<!ELEMENT ReceiverRole EMPTY>
<!ATTLIST ReceiverRole v (A01 | A02 | A03 | A04 | A05 | A06 | A07 | A08) #REQUIRED>
<!--      See role meanings in implementation guide      -->

<!ELEMENT ScheduleTimeInterval EMPTY>
<!ATTLIST ScheduleTimeInterval v CDATA #REQUIRED>

<!ELEMENT ConfirmedMessageIdentification EMPTY>
<!ATTLIST ConfirmedMessageIdentification v CDATA #REQUIRED>

<!ELEMENT ConfirmedMessageVersion EMPTY>
<!ATTLIST ConfirmedMessageVersion v CDATA #REQUIRED>

<!ELEMENT Reason (ReasonCode, ReasonText*)>
<!ELEMENT ReasonCode EMPTY>
<!ATTLIST ReasonCode v CDATA #REQUIRED>
<!--      See reason code meanings in implementation guide      -->

<!ELEMENT ReasonText EMPTY>
<!ATTLIST ReasonText v CDATA #REQUIRED>

<!ELEMENT ImposedTimeSeries (ImposedTimeSeriesIdentification, ImposedTimeSeriesVersion,
BusinessType, Product, ObjectAggregation, InArea?, OutArea?, MeteringPointIdentification?,
InParty?, OutParty?, CapacityContractType?, CapacityAgreementIdentification?, MeasurementUnit,
Period, Reason*)>

<!ELEMENT ImposedTimeSeriesIdentification EMPTY>
<!ATTLIST ImposedTimeSeriesIdentification v CDATA #REQUIRED>

<!ELEMENT ImposedTimeSeriesVersion EMPTY>
<!ATTLIST ImposedTimeSeriesVersion v CDATA #REQUIRED>

<!ELEMENT BusinessType EMPTY>
<!ATTLIST BusinessType v CDATA #REQUIRED>

```

```

<!ELEMENT Product EMPTY>
<!ATTLIST Product v (8716867000016 | 8716867000023 | 8716867000030 | 8716867000047)
#REQUIRED>
<!--      See product code meanings in implementation guide -->

<!ELEMENT ObjectAggregation EMPTY>
<!ATTLIST ObjectAggregation v CDATA #REQUIRED>

<!ELEMENT InArea EMPTY>
<!ATTLIST InArea v CDATA #REQUIRED
      codingScheme CDATA #REQUIRED>

<!ELEMENT OutArea EMPTY>
<!ATTLIST OutArea v CDATA #REQUIRED
      codingScheme CDATA #REQUIRED>

<!ELEMENT MeteringPointIdentification EMPTY>
<!ATTLIST MeteringPointIdentification v CDATA #REQUIRED
      subValue CDATA #IMPLIED
      codingScheme CDATA #REQUIRED>

<!ELEMENT InParty EMPTY>
<!ATTLIST InParty v CDATA #REQUIRED
      codingScheme CDATA #REQUIRED>

<!ELEMENT OutParty EMPTY>
<!ATTLIST OutParty v CDATA #REQUIRED
      codingScheme CDATA #REQUIRED>

<!ELEMENT CapacityContractType EMPTY>
<!ATTLIST CapacityContractType v (A01 | A02 | A03 | A04 | A05) #REQUIRED>
<!--      See contract type meanings in implementation guide-->

<!ELEMENT CapacityAgreementIdentification EMPTY>
<!ATTLIST CapacityAgreementIdentification v CDATA #REQUIRED>

```

```
<!ELEMENT MeasurementUnit EMPTY>
<!ATTLIST MeasurementUnit v (MWH | MAW | MAH | MAR) #REQUIRED>
<!--      See measurement unit meanings in implementation guide  -->
```

```
<!ELEMENT TimeSeriesConfirmation (SendersTimeSeriesIdentification, SendersTimeSeriesVersion,
BusinessType, Product, ObjectAggregation, InArea?, OutArea?, MeteringPointIdentification?,
InParty?, OutParty?, CapacityContractType?, CapacityAgreementIdentification?, MeasurementUnit,
Period?, Reason*)>
```

```
<!ELEMENT SendersTimeSeriesIdentification EMPTY>
<!ATTLIST SendersTimeSeriesIdentification v CDATA #REQUIRED>
```

```
<!ELEMENT SendersTimeSeriesVersion EMPTY>
<!ATTLIST SendersTimeSeriesVersion v CDATA #REQUIRED>
```

```
<!ELEMENT Period (TimeInterval, Resolution, Interval+)>
```

```
<!ELEMENT TimeInterval EMPTY>
<!ATTLIST TimeInterval v CDATA #REQUIRED>
```

```
<!ELEMENT Resolution EMPTY>
<!ATTLIST Resolution v CDATA #REQUIRED>
```

```
<!ELEMENT Interval (Pos, Qty)>
```

```
<!ELEMENT Pos EMPTY>
<!ATTLIST Pos v CDATA #REQUIRED>
```

```
<!ELEMENT Qty EMPTY>
<!ATTLIST Qty v CDATA #REQUIRED>
```

8.8 Confirmation report data instance

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE ConfirmationReport SYSTEM "../dtd/confirmation-xml.dtd">
<ConfirmationReport DtdVersion="2" DtdRelease="3">
  <MessageIdentification v="zerotro"/>
  <MessageType v="A08"/>
  <MessageDateTime v="2001-06-02T09:00:00Z"/>
  <SenderIdentification v="5790000432752" codingScheme="A10"/>
  <SenderRole v="A01"/>
  <ReceiverIdentification v="10X000000000RTEM" codingScheme="A01"/>
  <ReceiverRole v="A01"/>
  <ScheduleTimeInterval v="2001-06-02T22:00Z/2001-06-02T23:00Z"/>
  <Reason>
    <ReasonCode v="A07"/>
  </Reason>
  <TimeSeriesConfirmation>
    <SendersMessageIdentification v="1234"/>
    <SendersMessageVersion v="1"/>
    <SendersTimeSeriesIdentification v="TS0001"/>
    <SendersTimeSeriesVersion v="1"/>
    <BusinessType v="A03"/>
    <Product v="8716867000016"/>
    <ObjectAggregation v="A01"/>
    <InArea v="12Y000002347651H" codingScheme="A01"/>
    <OutArea v="12YRWENET-----Q" codingScheme="A01"/>
    <InParty v="11X000000100741R" codingScheme="A01"/>
    <OutParty v="11X000000340533X" codingScheme="A01"/>
    <CapacityContractType v="A01"/>
    <CapacityAgreementIdentification v="R567">
      <MeasurementUnit v="MAW"/>
      <Period>
        <TimeInterval v="2001-06-02T22:00Z/2001-06-02T23:00Z"/>
        <Resolution v="PT15M"/>
      </Period>
    </CapacityAgreementIdentification>
  </TimeSeriesConfirmation>
</ConfirmationReport>
```

```
<Interval>
  <Pos v="1" />
  <Qty v="40" />
</Interval>
<Interval>
  <Pos v="2" />
  <Qty v="45" />
</Interval>
<Interval>
  <Pos v="3" />
  <Qty v="45" />
</Interval>
<Interval>
  <Pos v="4" />
  <Qty v="45" />
</Interval>

<Reason>
  <ReasonCode v="A26" />
</Reason>
</TimeSeriesConfirmation>
</ConfirmationReport>
```

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9. ETSO CORE COMPONENTS

The core components defined by ETSO respect the principles defined by ebXML.

Core components are the basic building blocks of the ETSO message interchange system.

The ebXML definition of a core component is “a building block for the creation of a semantically correct and meaningful information exchange ‘parcel’. It contains only the information pieces necessary to describe a specific concept”.

There are two kinds of core component used within the ETSO environment, basic core components that are context independent and may be used in their native mode or in a context specific mode through the addition of a prefix name that qualifies its use within the defined context.

For example, ETSO has defined the core component “time interval”. This core component defines its fundamental significance, its UID, its representation and size. In the context of ETSO planned schedules there are two notions of “time interval”.

The first notion is used at the schedule level and defines the global time period for a schedule.

The second notion appears at the time interval quantities level and defines a single period to which a quantity is assigned.

These two notions are context specific “core components” within the ETSO schedule and will automatically inherit all the attributes of the basic core component but will have a specific UID and definition to clearly explain its use.

Each of the context specific core components will be assigned a name such as “schedule time interval” and quantities time interval”. The words “schedule” and “quantities” identify the context in which the basic core component is used.

9.1 Basic core components

NAME	DEFINITION	Datatype		
		Rep.	Size	UID
Area	A domain covering a number of related objects, such as balance area, grid area, etc.	AN	18	ET0009
Business type	The exact business nature identifying the principal characteristic of a schedule time series.	AN	3	ET0017
Contract Type	The contract type defines the conditions under which the capacity is allocated and handled. EG: daily auction, weekly auction, monthly auction, yearly auction, etc. The significance of this type is dependent on area specific coded working methods.	AN	3	ET0010
Classification type	Indicates the classification mechanism used to group a set of objects together.	AN	3	ET0013
Coding Scheme	Codification scheme used to identify the authorized authority that assigned a set of coded values to identify specific objects.	AN	3	ET0004
Identification	A code to uniquely distinguish one occurrence of an entity from another.	AN	35	ET0001
Unit of measure	(synonym MeasurementUnit) The unit of measure that is applied to a quantity. The measurement units shall be in compliance with UN/ECE Recommendation 20.	AN	3	ET0011
Message Date And Time	Date and time of the preparation of a message. The time must be expressed in UTC as: YYYY-MM-DDTHH:MM:SSZ.	AN	20	ET0006
Message Type	The coded type of a message. The message type describes the principal characteristic of a message.	AN	3	ET0003

NAME	DEFINITION	Datatype		
		Rep.	Size	UID
Object aggregation	The identification of the domain that is the common dominator used to aggregate a schedule time series.	AN	3	ET0018
Party	The identification of an actor in the Energy market.	AN	16	ET0014
Position	(Synonym “pos”) A sequential value representing the relative position of an entity within a space such as a time interval	N	6	ET0021
Process type	Indicates the nature of process that the schedule addresses.	AN	3	ET0020
Energy Product	The identification of the nature of an energy product such as Power, energy, reactive power, etc.	N	13	ET0008
Quantity	(Synonym “qty”) The quantity of an energy product. Positive quantities shall not have a sign.	N	17	ET0012
Reason code	The coded motivation of an act.	AN	3	ET0015
Reason text	The textual explanation of an act.	AN	512	ET0016
Resolution	<p>Defines the number of units of time that compose an individual step within a period. The resolution is expressed in compliance with ISO 8601 in the following format: PnYnMnDTnHnMnS.</p> <p>Where nY expresses a number of years, nM a number of months, nD a number of days.</p> <p>The letter “T” separates the date expression from the time expression and after it nH identifies a number of hours, nM a number of minutes and nS a number of seconds.</p>	AN	35	ET0019
Role	Identification of the role played by a party.	AN	3	ET0005

NAME	DEFINITION	Datatype		
		Rep.	Size	UID
Sub value	The partial identification of an object, which associated with another value provides the complete identification.	AN	35	ET0022
Time Interval	The start date and time and the end date and time of an event. The time interval must be expressed in a form respecting ISO 8601 : YYYY-MM-DDTHH:MMZ/YYYY-MM-DDTHH:MMZ. ISO 8601 rules for reduction may apply. The time must always be expressed in UTC.	AN	35	ET0007
Version	A code that distinguishes one evolution of an identified object from another. Information about a specific object may be sent several times, each transmission being identified by a different version number.	N	3	ET0002

9.2 Context specific core components

NAME	DEFINITION	Originating UID	UID	SIZE Restriction
Capacity agreement identification	The identification of an agreement for the allocation of capacity to a party. The same identification must be always used even when the same capacity is fully or partially resold.	ET001	ET0105	
Imposed time series identification	The identification of a time series that has been imposed on a market participant. The sender of the confirmation message assigns it.	ET001	ET0115	
Imposed time series version	The version of a time series that has been imposed on a market participant. The sender of the confirmation message assigns it.	ET002	ET0116	
In area	The area in the direction where the product is flowing.	ET0009	ET0110	18
In party	The party that is putting the product into the area.	ET0014	ET0113	
Message Identification	Unique identification of a message.	ET0001	ET0100	
Message Version	Version of the message being sent. A message may be sent several times with the same identification. The version is used to distinguish one instance of the same message from another with the same identification.	ET0002	ET0101	
Metering Point Identification	The identification of the location where one or more products are metered. This may be one physical location or the combination of several points together.	ET0001	ET0112	35

NAME	DEFINITION	Originating UID	UID	SIZE Restriction
Out Area	The area in the direction from where the product coming.	ET0009	ET0111	18
Out party	The party that is taking the product out of the area.	ET0014	ET0114	
Quantity time interval	The time interval for a period where a quantity has been assigned.	ET0007	ET0117	
Receiver Identification	Identification of the party who is receiving the message.	ET0001	ET0107	16
Receiver role	Identification of the role that is played by the receiver.	ET0005	ET0103	
Receiving message identification	The identification of a message that has been received. This becomes unique when associated with the identification of the sender.	ET0001	ET0118	
Receiving message version	The version of a message that has been received.	ET0002	ET0119	
Schedule classification type	The means used to classify the time series within a schedule. This may either be grouped by time series characteristics or by summery.	ET0013	ET0120	
Schedule Time Interval	The start date and time and the end date and time of the time interval of the schedule. The calculated resolution is expressed in minutes. The time must always be expressed in UTC.	ET0007	ET0104	
Sender Identification	Identification of the party who is sending the message.	ET0001	ET0106	16
Sender role	Identification of the role that is played by the sender.	ET0005	ET0102	

NAME	DEFINITION	Originating UID	UID	SIZE Restriction
Senders message identification	The identification of the message that the sender of a message assigned to a schedule message instance.	ET0001	ET0121	
Senders message version	The version of the message that the sender assigned to a schedule message instance.	ET0002	ET0122	
Senders Time Series Identification	The unique identification that the sender of a message has assigned to a time series instance.	ET0001	ET0108	
Senders time Series Version	The version that distinguishes one instance of a time series instance from another with the same identification.	ET0002	ET0109	

9.3 ETSO Object classes

NAME	DEFINITION	UID
Acknowledgement message	Object used for the transmission of acknowledgements of planned schedules.	ET1003
Anomaly report	Object used for the transmission of anomaly reports for whole time series.	ET1007
Confirmation report	Object used for the transmission of confirmation of the time series to be taken into the planned schedule.	ET1009
Imposed Time Series	Object describing a time series that is imposed by a system operator. It corresponds to a synonym of the schedule time series.	ET1012
Interval	Object used for the transmission of each individual period and its associated quantity.	ET1002
Period	Object used to identify the period that the interval quantities cover and the resolution of each step within the period.	ET1011
Reason	Object used for the transmission of status codes and comments.	ET1004
Schedule message	Object used for the transmission of planned schedules.	ET1000
Schedule time series	Object used for the transmission of specific time series. A time series may be considered as a sequence of observations of a single process taken at equal time intervals.	ET1001
Time interval error	Object used for the transmission of time interval periods found to be in error.	ET1006
Time series anomaly	Object used for the transmission of time series and sender information found to be in an anomaly condition.	ET1008
Time series confirmation	Object used to identify the time series that have been confirmed for implementation.	ET1010

NAME	DEFINITION	UID
Time series rejection	Object used for the transmission of time series that have been found to be in error.	ET1005

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10. COMMUNICATIONS INFORMATION

10.1 Test indication (differentiation between live and test transmissions)

Test indication information has not been built into the messages. The recommended method for testing is to obtain a separate communications address in order to ensure that testing is carried out in a specific test environment.

10.2 Transmission requirements

Schedule message interchanges between market parties and a TSO will be determined by the TSO depending on its communications infrastructure.

10.3 Use of the central stored DTD or Schema

The ETSO Scheduling System DTDs are stored as DTDs on the site

www.edi.etso-net.org/schedulev2r3/dtd/schedule-xml.dtd.

This is the absolute address which may be used as the DTD reference point when sending XML message instances. However, in cases where the participating parties have a system security requirement that prevents remaining connected to the web it is recommended to make use of the following relative URL address:

[../schedulev2r3/dtd/schedule-xml.dtd](#).

This address must exist on the receiving parties system and must contain an exact replica of the DTD as it exists on the ETSO site.

In a similar fashion the ETSO Scheduling System Schema may be found on the site:

www.edi.etso-net.org/schedulev2r3/schema/schedule-xml.xsd.

This address may also be used with the relative address which respect the same rules as mentioned above of:

[../schedulev2r3/schema/schedule-xml.xsd](#).

10.4 Common file naming convention

In certain circumstances, such as the use of FTP transmissions, it may be necessary to agree on a mutual naming convention for the transmission of an XML schedule file. ETSO TF14 has examined this problem and recommends that the following naming convention be employed for ESS XML messages:

1. The sender identification. The identification of the sender as identified in the XML message field "Sender Identification".
2. A hyphen ("-").
3. The message identification. The identification of the message as identified in the XML message field "Message Identification".
4. A hyphen ("-").
5. Message version. The version of the message as identified in the XML message field "Message Version".
6. Terminating with the extension ".xml"

Example: 10x123456789012c-mess01-1.xml

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11. THE ETSO STEERING COMMITTEE RECOMMENDATION

On the 24th of May 2002 the ETSO Steering Committee made the following recommendation concerning the use of the ESS:

"ETSO recommends that their members implement the ETSO Scheduling System – ESS - so that the participants in the Internal Electricity Market can use a single means for electronic data interchange with the TSOs.

The ESS has been developed by ETSO with the support of EFET. For the moment it is believed to cover the day ahead business scheduling process for the continental Europe and it includes acknowledgement messages to improve the quality of the data interchange. The Belgian, Swiss and French TSOs have already implemented successful pilot versions and the German TSOs have decided to use it this year. The ESS will be maintained and further developed to cater for other markets (e.g. GB) and additional market requirements. The documentation is available at www.edi.etsa-net.org and ETSO could provide information to facilitate the use of ESS.

ETSO supports the initiatives to obtain a common agreement between energy market organisations to set up a European group to harmonise the standards for electronic data interchange. ETSO proposes to provide the ESS as an initial platform for this work for evolution and continuing maintenance. ETSO will support such work with its own experts from its Electronic Data Interchange Task Force and with a possible outside consultant financed by ETSO to be decided separately within the frame of the budget."

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12. SCOPE OF THE ESS WITHIN THE CONTEXT OF THE ROLE MODEL

The Role model details and definitions can be found in the document “ETSO Role Model”. This document is available on the ETSO website.

