

IMPLEMENTATION GUIDE ON ELECTRONIC DATA INTERCHANGE

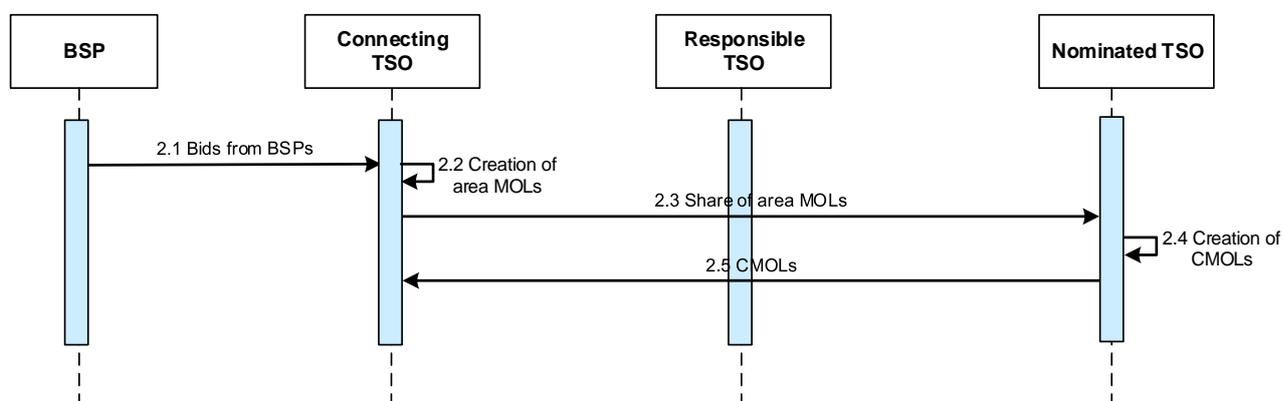
GENERAL

This document describes the requirements on the electronic data interchange between Elering AS and Balancing Service Providers (BSPs)

All date and time information expressed in the messages are to be represented as in UTC time zone.

INFORMATION EXCHANGE

1. Creation of CMOLS



1.1. Collecting bids from BSPs

Elering shall collect balancing energy bids from local BSPs. BSP offers can be provided according to rules applied for standard product.

Elering shall send Acknowledgement (ACK) message with positive or negative response for the bids received from BSPs.

DOCUMENT TYPE, COMMUNICATION CHANNEL

Document	ReserveBidDocument
Document format	.XML
Communication channel	Web-service or e-mail

NAMING CONVENTION

Element	Value	Mandatory	Description
File name	Choice of each BSP	Yes	File name usually contains date, product name, sender etc.
Message subject	Choice of each BSP	Yes	Description usually contains date, product name, sender etc.

Electronic Data Interchange description for Balancing Service Providers in Estonia

FIELD DESCRIPTION

	Element	Value	Mandatory	Description
1.Header				
1.1	DocumentIdentification	(1..35 chars).	Yes	Unique identification of the document for which the time series data is being supplied. All additions, modifications, or suppressions for the time series and activation period must use the same identification. Best practice to contain BSP abbreviation and date
1.2	DocumentVersion	(1....3 chars).	Yes	Document version (Starts at 1 and increases sequentially). Each modification for previous Document with same DocumentIdentification expressing data for same timeseries should be larger than previously sent document.
1.3	DocumentType	A37	Yes	The coded type of the document being sent: A37 – reserve bid document;
1.4	SenderIdentification	(1...16 chars)	Yes	Identification of the party that is the owner of the document and is responsible for its content (BSP EIC code.)
1.5	SenderRole	A08 A21 A27	Yes	Identification of the role that is played by the sender. A08 – BRP; A21 – Producer; A27 - Resource Provider
1.6	ReceiverIdentification	10X1001A1001A39W	Yes	Identification of the party who is receiving the document - EIC code: 10X1001A1001A39W- ELERING
1.7	ReceiverRole	A04	Yes	Identification of the receiver role A04 – System Operator
1.8	CreationDateTime	YYYY-MM-DDTHH:MM:SSZ	Yes	The date and time that the document was prepared for transmission by the application of the sender. The date and time must be expressed in UTC as YYYY-MM-DDTHH:MM:SSZ.
1.9	Reserve Bid Time Interval	YYYY-MM-DDTHH:MMZ/YYYY-MM-DDTHH:MMZ format	Yes	This information provides the start and end date and time of the tender period. The receiver will discard any time intervals outside the tender period. The start and end date and time must be expressed as YYYY-MM-DDTHH:MMZ/YYYY-MM-DDTHH:MMZ.
2. ReserveBidTimeSeries				
2.1	ReserveBidIdentification	(1..35 chars).	Yes	A unique identification of the tender assigned by the sender. This corresponds to a unique tender. It must be unique for a given auction identification. Various formats for Each BSP. Good practice to include BSP EIC.

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	Element	Value	Mandatory	Description
2.2	AuctionIdentification	BalticCoBA	Yes	A unique identification assigned by the Reserve Allocator of the set of specifications that clearly defines the auction to which the tender is addressed. Constant value: BalticCoBA
2.3	Business type	Z54	Yes	The nature of the time series for which the product is handled. Regulation offers: Z54 – Volume for mFRR standard product;
2.4	Acquiring Area	10Y1001A1001A39I	Yes	The area where the energy is to be put –EIC code. 10Y1001A1001A39I - Estonia
2.5	Connecting area	10Y1001A1001A39I	Yes	The area where the energy is coming from – EIC code. 10Y1001A1001A39I - Estonia
2.6	Measure Unit Quantity	MAW (1..3 chars)	Yes	The unit of measurement used for the quantities expressed within the time series. Always expressed in megawatts - MAW
2.7	Currency	EUR (1..3 chars)	Required only if there is a Price specified	The currency in which the monetary amount is expressed. EUR
2.8	Measure Unit Price	MWH (1..3 chars)	Required only if there is a Price specified	The unit if measurement used for the price expressed within the time series MWh per unit (code MWH), etc.).
2.9	Divisible	A01 A02	Yes	The indication of whether or not the tender may be reduced to the MinimumActivationQuantity in increments compliant with the StepIncrementQuantity. A01- Yes (Divisible) A02- No (not divisible)
2.10	LinkedBidIdentification	(1..35 chars)	No	Unique identification associated with all linked tenders. The linked bids identification is only provided if a tender is associated with the current tender. Example: Bid B is linked with bid A. Bid B can be activated only after bid A is activated. Bid B need to have bid A ID.
2.11	BlockBid	A02	Yes	The indication that all the time intervals in the time series are to be considered as a whole and that they cannot be subdivided. A02- No
2.12	ReserveObject	EIC code (1...18 chars)	Yes	Identifies the Reserve Object managed by the Resource Provider that is used to supply the reserve (EIC code).

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	Element	Value	Mandatory	Description
2.13	Direction	A01 A02	Yes	This identifies the direction of the energy flow. A01 = UP, this signifies that the available power can be used by the Acquiring area to increase energy. A02 = DOWN, this signifies that the available power can be used by the Acquiring area to decrease energy.
2.14	MinimumActivationQuantity	1	Yes	Minimum quantity of power that can be activated at a given time interval: 1 MW
3	Period			
3.1	TimeInterval	YYYY-MM-DDTHH:MMZ/YYYY-MM-DDTHH:MMZ	Yes	This information provides the start and end date and time of the period being reported. The start and end date and time must be expressed in compliance with the following format: YYYY-MM-DDTHH:MMZ/YYYY-MM-DDTHH:MMZ.
3.2	Resolution	PT60M	Yes	The resolution defining the number of periods that the time interval is divided. 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.
4	Interval			
4.1	Pos	(1...6 chars)	Yes	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.
4.2	BidQty	(1...17 numeric chars)	Yes	This information defines the quantity that is tendered for the interval in question and that is expressed in the Measurement Unit Quantity.
4.3	EnergyPrice	(1...17 numeric chars)	Yes	The unit of price for energy expressed in a unit of Currency per unit of measure (i.e. MeasureEnergyPrice) EURO/MWh The price of the energy.

2. Activation Documents

Three types of activation documents are used:

1. Activation order (DocumentType: A40)
2. Activation order response (DocumentType: A41)
3. Tender Reduction (DocumentType: A42)

Activation order is sent by Elering to BSP to communicate the information about bid activation. Activation order response is sent by BSP to Elering to communicate the actual activation of the bid. Tender reduction is sent by BSP to Elering to communicate the unavailability of the bid after the gate has been closed for that particular timeseries. Documents descriptions can be found in the following chapter.

Received documents should be checked by receiving party against .xml schema and Acknowledgement (ACK) message with positive or negative response should be sent. Acknowledgement documents are described in Chapter 3.

2.1. Activation documents (EDI)

TIMING

Activation orders and Tender Reduction documents can be sent when bids have become firm according to currently valid standard terms and conditions. Activation response is expected after sending of Activation Order.

DOCUMENT TYPE, COMMUNICATION CHANNEL

Document	ActivationDocument
Document format	.XML
Namespace	urn:entsoe.eu:wgedi:errp:cobaactivationdocument:5:0
Communication channel	web-service

NAMING CONVENTION

Element	Value	Mandatory	Description
File name	Choice of each sender	Yes	File name usually contains date, product name, sender etc.

FIELD DESCRIPTION

	Element	Value	Mandatory	Description
1	Header			
1.1	DocumentIdentification	(1..35 chars).	Yes	Unique identification of the document for which the time series data is being supplied. All additions, modifications, or suppressions for the time series and activation period must use the same identification. Best practice to contain BSP abbreviation and date
1.2	DocumentVersion	(1....3 chars).	Yes	Document version (Starts at 1 and increases sequentially). Each modification for previous Document with same DocumentIdentification expressing data for same timeseries should be larger than previously sent document.
1.3	DocumentType	A40 A41 A42	Yes	The activation order should be sent using coded type of the document: A40 – DATCR Activation For activation response should be used: A41 - Activation response For update to the unavailability of bids in CMOL the activation order should be sent using

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	Element	Value	Mandatory	Description
				coded type of the document A42 – Tender reduction
1.4	ProcessType	A30	Yes	The process type identifies the process to which the information flow is directed. Permitted codes are: A30 – Tertiary reserve process
1.5	SenderIdentification	(1...16 chars)	Yes	Identification of the party that is the owner of the document and is responsible for its content (Sender EIC code)
1.6	SenderRole	A04 A08 A21 A27	Yes	Identification of the role that is played by the sender. A04 – System Operator; A08 – BRP; A21 – Producer; A27 - Resource Provider
1.7	ReceiverIdentification	(1...16 chars)	Yes	Identification of the party who is receiving the document (Receiver EIC code)
1.8	ReceiverRole	A04 A08 A21 A27	Yes	Identification of the receiver role A04 – System Operator; A08 – BRP; A21 – Producer; A27 - Resource Provider
1.9	CreationDateTime	YYYY-MM-DDTHH:MM:SSZ	Yes	The date and time that the document was prepared for transmission by the application of the sender. The date and time must be expressed in UTC as YYYY-MM-DDTHH:MM:SSZ.
1.10	Activation Time Interval	YYYY-MM-DDTHH:MMZ/YYYY-MM-DDTHH:MMZ format	Yes	This information provides the start and end date and time of the activation period The start and end date and time must be expressed as YYYY-MM-DDTHH:MMZ/YYYY-MM-DDTHH:MMZ.
1.11	Domain	10Y1001A1001A94A	Yes	Identification of the domain that is covered in the MOL Document. 10Y1001A1001A94A (Synchronous area of Baltic states)
1.12	OrderIdentification	(1..35 chars)	Only for A41	Field is only relevant for A41. Not applicable for A40/A42. DocumentIdentification of A40 the response is being provided for.
1.13	OrderIdentificationVersion	(1.....3 chars)	Only for A41	Field is only relevant for A41.

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	Element	Value	Mandatory	Description
				Not applicable for A40/A42. DocumentVersion of A40 the response is being provided for.
2	Time series			
2.1	AllocationIdentification	(1..35 chars).	Yes	The identification of the allocation that was established with the Resource Provider to provide reserves. This should be equal to ReserveBidIdentification.
2.2	ResourceProvider	(1..35 chars).	Yes	A unique identification of the Resource Provider responsible for reserve activation. BSP EIC code.
2.3	Business type	Z54	Yes	The nature of the time series for which the product is handled. Regulation offers: Z54 – Volume for mFRR standard product;
2.4	Acquiring Area	10Y1001A1001A94A 10YLV-1001A00074 10Y1001A1001A39I 10YLT-1001A0008Q 10YFI-1-----U 10YSE-1-----K 10YPL-AREA-----S 10Y1001A1001A49F10 Y1001A1001A51S	Yes	The area where the reserve is contracted for use (destined) – EIC code. For normal activation (mFRR): 10Y1001A1001A94A - Synchronous area of Baltic states For special activation (ER mFRR): 10YLV-1001A00074 - Latvia 10Y1001A1001A39I - Estonia 10YLT-1001A0008Q – Lithuania 10YFI-1-----U – Finland 10YSE-1-----K – Sweden 10YPL-AREA-----S - Poland 10Y1001A1001A49F - Russian area 10Y1001A1001A51S - Belarus area If DocumentType is Tender reduction, then empty.
2.5	Connecting area	10Y1001A1001A39I	Yes	The area where the energy is coming from – EIC code. 10Y1001A1001A39I - Estonia
2.6	Measure Unit Quantity	MAW	Yes	The unit of measurement used for the quantities expressed within the time series. Always expressed in megawatts - MAW
2.7	Direction	A01 A02	Yes	This identifies the direction of the energy flow. A01 = UP, this signifies that the available power can be used by

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	Element	Value	Mandatory	Description
				the Acquiring area to increase energy. A02 = DOWN, this signifies that the available power can be used by the Acquiring area to decrease energy.
2.8	Status	A07 A08 A11	Yes	The status of the specific activation request. The permitted status codes are as follows: If DocumentType: DACTR activation: A08 = In process – the quantities in the time series are requested for activation. If DocumentType: Activation Response: A07= Activated - The quantities in the time series have been activated. If DocumentType: Tender reduction: A11 = Unavailable – the quantities in the time series are unavailable.
2.9	ResourceObject	(1...18 chars)	Yes	This identifies the Reserve Object managed by the Resource Provider that is used to supply the energy capabilities. Contains value from bid field "ReserveObject".
3	Period			
3.1	TimeInterval	YYYY-MM-DDTHH:MMZ/YYYY-MM-DDTHH:MMZ	Yes	This information provides the start and end date and time of the period being reported. The start and end date and time must be expressed in compliance with the following format: YYYY-MM-DDTHH:MMZ/YYYY-MM-DDTHH:MMZ.
3.2	Resolution	PTnM	Yes	The resolution defining the number of periods that the time interval is divided. 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

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	Element	Value	Mandatory	Description
				and nS a number of seconds.
4	Interval			
4.1	Pos	(1...6 chars)	Yes	This information provides the relative position of a period within an activation interval 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
4.2	Qty	(1...17 numeric chars)	Yes	This information defines the quantity that is to be activated for the interval in question and that is expressed in the Measurement Unit Quantity. If the document type is Tender reduction, then quantity for which the volume decreases.
5	Reason			
5.1	Reason Code	(1...3 chars)	Yes	Reason codes for activation: If DocumentType is DACTR activation: A37 - Balancing Z01 – Countertrade FI-EE Z02 – Countertrade EE-LV Z03 – Countertrade LV-LT Z04 – Countertrade LT-PL Z05 – Countertrade LT-SE A46 - System services If DocumentType is Tender reduction, then empty
5.2	ReasonText	(1...512 chars)	This information is dependent.	Textual explanation of information. If the code does not provide all the information to clearly identify an Reason code, the reason text may be used.

2.1.1. Rules of creating Activation Documents

Activation Document provides a time series that is based on the exact time interval (start time and stop time) that is communicated and has only one interval providing the block representing the constant power value for which the status is changed for. The time resolution consequently corresponds to the difference between the start time and the stop time.

There is only one Period class within time series. The Time Interval of the time series within the document must have the same start time as that of the Activation Time Interval defined in the Activation Document class. The stop time of time series must be equal to that of the Activation Time Interval.

For a activation document the following processing rules shall apply:

1. Change end time to earlier: create new version - new version of AO is sent with same amount and new end time.

2. Change end time to later: create additional activation - new AO is sent with same amount and new period.
3. Change start time to later: create new version - new version of AO is sent with same amount and new start time.
4. Change start time to earlier: create additional activation - new AO is sent with same amount and new period.
5. Cancel activation: create new version - new version of AO is sent with same amount and Time Interval end time the same as Time Interval start time

General rule for changes to amount: To change amount of activation new AO shall be created (AO version can not be used). Examples for specific cases:

1. To increase amount for whole activation:
 - Option 1: New AO is sent with additional amount and same period.
 - Option 2:
 - Step 1) Cancel activation - New version of AO is sent with same amount and Time Interval end time the same as Time Interval start time;
 - Step 2) Create new activation - new AO is sent with new amount and same period.
2. To decrease amount for whole activation:
 - Step 1) Cancel activation - New version of AO is sent with same amount and Time Interval end time the same as Time Interval start time;
 - Step 2) Create new activation - new AO is sent with new amount and same period.
3. To increase amount for part of activation:
 - Option 1: New AO is sent with additional amount and new period.
 - Option 2
 - Step 1) Stop activation - new version of AO is sent with same amount and new end time.
 - Step 2) Create new activation - new AO is sent with new amount and new period.
4. To decrease amount for part of the activation:
 - Step 1) Stop activation - new version of AO is sent with same amount and new end time.
 - Step 2) Create new activation - new AO is sent with new amount and new period.

3. Acknowledgements

Each received document is verified and an acknowledgment (Acknowledgement Document version 6.0) is sent to the originator of the document.

If the received document is fully accepted, then the acknowledgment contains single Reason Code A01.

If the received document is rejected, then the acknowledgment contains Reason Code A02 (Message fully rejected).

DOCUMENT TYPE, COMMUNICATION CHANNEL

Document	EAD ACKNOWLEDGEMENT DOCUMENT
Document format	.XML
Namespace	urn:entsoe.eu:wgedi:acknowledgement:acknowledgementdocument:6:0
Communication channel	e-mail or web service

NAMING CONVENTION

Element	Value	Mandatory	Description
File name and	Choice of each sender	Yes	File name usually contains ACK and info

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message subject (if applicable)			about acknowledged document
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FIELD DESCRIPTION

	Element	Value	Mandatory	Description
1.Header				
1.1	DocumentIdentification	1..35 chars	Yes	An acknowledgement document is sent in reply to the receipt of a document. This identification is assigned by the party who is acknowledging the application reception of a document Best practice to contain ACK and information from acknowledged document.
1.2	DocumentDateAndTime	YYYY-MM-DDTHH:MM:SSZ	Yes	Date and time of transmission of the acknowledgement. The date and time that the document was prepared for transmission by the sender. The date and time must be expressed in UTC as YYYY-MM-DDTHH:MM:SSZ
1.3	SenderIdentification	(1...16 chars)	Yes	Identification of the party that is the owner of the document and is responsible for its content.
1.4	SenderRole	A04 A08 A21 A27	Yes	Identification of the role that is played by the sender. A04 – System Operator; A08 – BRP; A21 – Producer; A27 - Resource Provider
1.5	ReceiverIdentification	(1...16 chars)	Yes	Identification of the party who is receiving the document (Receiver EIC code)
1.6	ReceiverRole	A04 A08 A21 A27	Yes	Identification of the receiver role A04 – System Operator; A08 – BRP; A21 – Producer; A27 - Resource Provider
1.7	ReceivingDocumentIdentification	(1...35 chars)	Yes	Unique identification of the document that has been received. This information identifies the document that has been received by the receiving party. ReceivingDocumentIdentification is extracted from the received document
1.8	ReceivingDocumentVersion	(1...3 chars)	The document version must be provided for all documents being acknowledged that have a document version attribute	The version of the document that has been received. ReceivingDocumentVersion is extracted from the received document

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	Element	Value	Mandatory	Description
1.9	ReceivingDocumentType	(1...3 chars)	The document type is mandatory in contexts where there is potential ambiguity about the document being acknowledged	The document type is used to identify the type of document being acknowledged. ReceivingDocumentType is extracted from the received document
2	Reason			
2.1	ReasonCode	(1...3 chars)	Yes	A code providing the acknowledgement status. Reason codes are described in the table below.
2.2	ReasonText	(1...150 chars)	Yes	Textual description of a rejection. Reason Title from table below should be used as ReasonText.

ACKNOWLEDGEMENT REASON CODE USAGE DESCRIPTION

Reason Code	Reason Title	Meaning
A01	Message Fully Accepted	Message is accepted for further processing.
A02	Message Fully Rejected	Message is not accepted for further processing.
A03	Message contains errors at the Time Series Level	Part of the message contents (i.e. certain time series) has been accepted for application processing. It is necessary to look at the time series level to determine the time series that have been rejected. The time series is excluded from the global position.
A04	Schedule time interval incorrect	The schedule time interval is not within the contractual agreement or the period does not agree with the schedule time interval.
A51	Message identification or version conflict	Message version number conflict. The message identification is already in the receiving system. Or a higher version already exists. Message identification cannot be found when receiving CMOL update or Activation order Message rejected Version number for the same process type must be always higher as in the previous message. When the process type changes (for example D-1 plan is sent after long term plans), it is permitted to start version numbering from 1 again or continue numbering from previous message version.
A52	Time series missing from new version of message	A time series is not contained in a new version of the message. Message rejected
A53	Receiving party incorrect	The receiving party is incorrect. Message rejected.
A55	Time series identification conflict	The identification of the time series is duplicated or incorrect. Time series will be rejected.
A49	Position inconsistency	Data rows are not consistent with the time period. For example time period is for 24h, but there are more or less data rows than 24.
A57	Deadline limit exceeded/Gate not open	For stated Process Type messages are not accepted. Message is sent either too soon (before Gate Open time) or too late (after Gate Close time).

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Reason Code	Reason Title	Meaning
A42	Quantity inconsistency	The quantity is not coherent. For example a time period with the same version number but different quantities or an non permitted number of digits after the decimal point, etc. Digits after the decimal dot are more than permitted. All data must be presented with accuracy one digit after the decimal dot.
A22	In party/Out party invalid	In Party or Out Party EIC code on the data file is faulty. Also will be shown in which Time Series (by Time series ID) the faulty code was discovered.
A23	Area invalid	In Area or Out Area EIC code on the data file is faulty. Also will be shown in which Time Series (by Time series ID) the faulty code was discovered.
A46	Quantities must not be signed Values	On the form there must be no signed values: consumption or production must not be negative values; for the fixed deliveries there is a separate column for each direction – negative numbers are not used.
A50	Senders time series version conflict	There is an error in the senders time series version. (i.e. it could be superior to the message version or is inconsistent with the existing data). The time series has been rejected. It occurs when Time Series version number in previous plan was higher than in sent plan. To avoid possible version conflict the Time Series Version can set always 1.
A62	Invalid business type	The business type does not belong to the valid set of business types for the process in question.
A71	Linked bid rejected due to associated bid unsuccessful	The bid in question has been rejected because an associated bid has been unsuccessful or is not activated yet.
A79	Process type invalid	The process type does not figure in the list of valid process types for this document
A80	DomainInvalid	The domain does not figure in the list of valid domains for this document and process
B09	Bid not accepted	The bid in question has NOT been accepted (bid is not divisible,.....)