

TEST CASES FOR GAS SUPPLIERS

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List of contents

1.	Introduction.....	4
2.	L1. – Start of supply.....	5
2.1.	BS-201: Change of supplier, positive scenario.....	5
2.2.	BS-201: Change of supplier, negative scenario.....	8
2.3.	BS-201: Change of supplier for several metering sites, positive scenario.....	11
2.4.	BS-201: Change of supplier, cancellation.....	11
2.5.	BS-209: Relocation (incoming consumer) – notified to the gas supplier.....	14
3.	L2. – Operation	17
3.1.	BS-203: Submission of base data, positive scenario.....	17
3.2.	BS-203: Submission of base data, negative scenario.....	24
3.3.	BS-205: Consumption statement for non-daily read metering site.....	25
3.4.	BS-205: Consumption statement for non-daily read metering site, negative scenario - 1: Periodic	28
3.5.	BS-205: Consumption statement for non-daily read metering site - correction of data, positive scenario.....	30
3.6.	BS-205: Consumption statement for non-daily read metering site - correction of data, negative scenario for a period expired long ago.....	31
3.7.	BS-206: Consumption statement for daily read metering site, positive scenario	32
3.8.	BS-206: Consumption statement for daily read metering site, negative scenario	33
3.9.	BS-206: Consumption statement for daily metering site - correction of data, positive scenario.....	35
3.10.	BS-206: Consumption statement for daily read metering site, positive scenario	37
3.11.	BS-210: Disconnection and reconnection of metering site, positive scenario	39
3.12.	BS-210: Disconnection and reconnection of metering site, negative scenario	42
3.13.	BS-212: Change of meter-reading method, positive scenario	44
3.14.	BS-213: Submission of market share values, positive scenario	48
3.15.	BS-215: Adjusted residual consumption	49
3.16.	BS-216: Aggregated gas consumption	50
3.17.	BS-217: Reconciliation statement.....	52
4.	L3. – End of supply.....	54
4.1.	BS-201: Change of supplier - end of supply, positive scenario	54
4.2.	BS-201: Change of supplier - end of supply, negative scenario	57
4.3.	BS-202: End of supply, positive scenario.....	58
4.4.	BS-207/208/209: Relocation, end of supply.....	60

Change log

The change log contains the changes that have been made in relation to the most recently published version/release. Generally, version changes contain significant structural or syntactical changes whereas new releases contain minor changes.

5 July 2011

Version 2.0	
Change	Test cases affected
Appointed date has been changed	L1.11, L1.12, L1.13, L1.14, L1.15, L1.21, L3.10, L3.11, L3.14
It has been emphasised that metering site id is GSRN	All test cases
Aggregated consumption has been changed to distributed residual consumption	L2.57, L2.58
Supplier (EAN-GLN) has been changed to (GLN)	L1.11, L1.21, L1.24, L2.10, L2.49, L2.52
Meter location address has been specified in detail	L1.21, L1.24, L2.10, L2.49, L2.52
Cancelled test cases	L1.22, L1.23, L2.16, L2.17, L2.18, L2.53, L2.54
New test cases	L1.16, L2.19

1. Introduction

This document contains a collection of test cases for gas suppliers (GS) in the Danish gas market. Describing the test cases to be implemented and detailing the order in which each step of the case is to be implemented, the document is intended as a test manual for test players.

Structure

The document and the order of test cases have been arranged to ensure that the structure has the most natural process flow, thus resembling the gas supplier's working day as much as possible. The subsequent test cases are divided into three groups, ie Start of supply, Operation, and End of supply.

All test cases are implemented via the online player test portal, which is found at the domain *www.ediport.dk*. Each test player will have individual access to the portal and thus to the test cases relevant for the test player concerned. The structure of the player test portal follows the structure of this document. Guidelines for the use of the player test portal will be provided in a separate set of documentation.

Test case sequence

Each individual test case is granted a unique identification number (ID) that refers to a similar ID in the player test portal. The following description of the individual test cases outlines the affiliation with business scenarios (BSs) and business transactions (BTs), respectively, and refers to relevant test data described in the document **Test data Gas v2**.

If special conditions apply to the individual test cases, these are outlined in the document.

In those test cases where the test player is the initiating party, it is important to emphasise that the test player uses his own system to communicate with the test player portal. As regards the gas supplier, who communicates with the distribution company (DC), the player test portal will assume the role of distribution company and, where necessary, act as the initiating party.

Each individual test case has been described step by step and implemented in the player test portal. This document describes how the test case progresses and highlights the staged checkpoints which indicate whether communication between the parties takes place as planned.

2. L1. – Start of supply

This group of test cases covers the transactions relating to the start of supply initiated by the gas supplier (GS). Transactions relating to the operation and end of supply will therefore be tested in subsequent test cases.

2.1. BS-201: Change of supplier, positive scenario

The test specification outlined below, which outlines the positive scenario of a BS-201, must be implemented once for non-daily read metering sites (ie test data for the test specification must comprise a non-daily read metering site with associated base data).

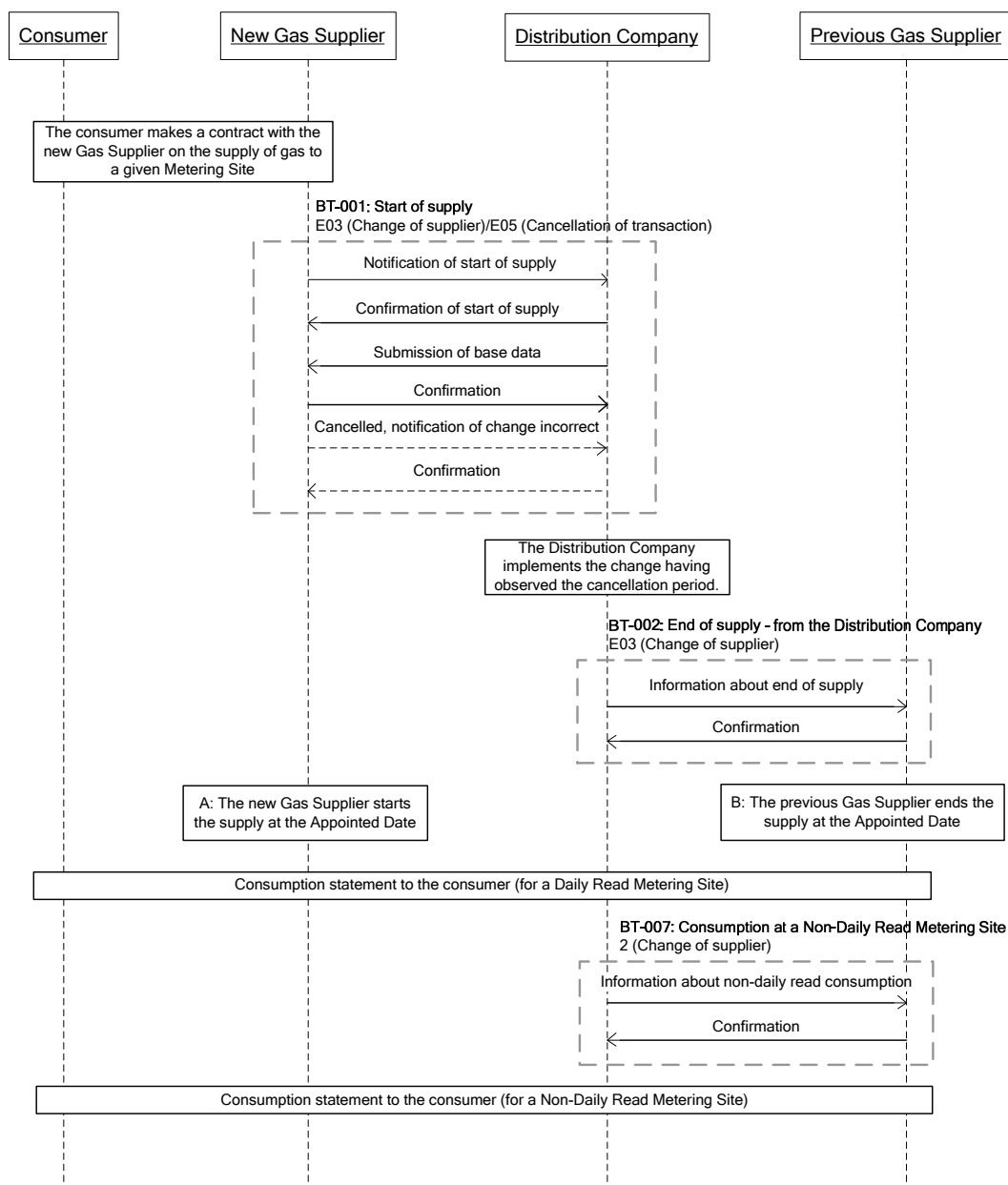


Figure 1: BS-201: Change of supplier: BT-001: Start of supply

Test case BS-201-P1b: Change of supplier for a non-daily read metering site			Test case ID: L1.11	
Description:			BS-201: Change of supplier, positive scenario	
Initiating party (first sender):			Gas supplier	
Processing party (first recipient):			Distribution company	
Special conditions:			None	
Test data:			X = #1 (non-daily metering)	
Test scenario (staged) – BT-001: Notification of change of supplier - Gas				
Step	Player	Message	Comment	OK
1	GS	UTILMD392	The gas supplier records a change of supplier for metering site X (not later than on the tenth business day before the requested appointed date) in his own application and checks that the notification is sent to the distribution company.	
2	DC	UTILMD414	The distribution company receives the notification and returns a confirmation to the gas supplier. Check point 1: Data required: – Metering site ID (GSRN) = X – Appointed date.	
3	GS		The gas supplier receives confirmation and records it in his own application. Checkpoint 2: Data required: – Metering site ID (GSRN) = X – Appointed date – Reference to transaction ID (must be the same as the transaction ID in the notification) – Consumer party name and second consumer party name.	
4	DC	UTILMDE07	The distribution company sends base data for metering site X to the gas supplier.	
5	GS		The gas supplier receives the base data and records them for metering site X in his own application. Checkpoint 3: Data required: – Metering site ID (GSRN) = X – Appointed date – Validity start date (must be the same as the appointed date) – Next meter-reading date – Physical status of metering site – Meter-reading method – Estimated annual consumption – Gas supplier (GLN) – Consumer party name and second consumer party name – Meter location address (indicated as municipality code (n4); street	

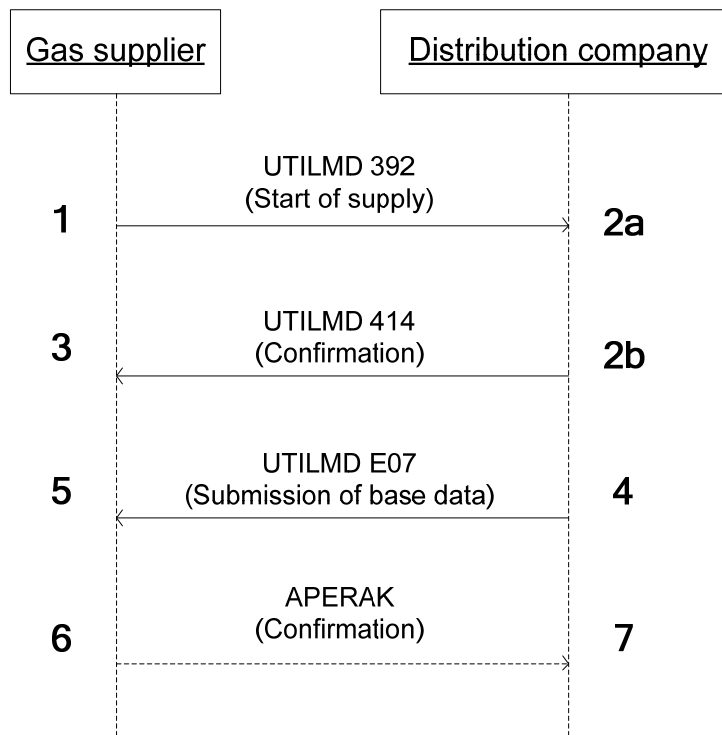
			code (n4); house number (an4); floor (an2); door number/to the right/to the left (an4)).	
6	GS	APERAK	The gas supplier sends a (positive) APERAK to the distribution company.	
7	DC		The distribution company receives and processes the APERAK, after which the change of supplier is prepared for the metering site.	

2.2. BS-201: Change of supplier, negative scenario

Description:	BS-201: Change of supplier, negative scenario
General conditions:	In the following, the various steps refer to the original steps in BS-201-P1 (positive scenario for change of supplier). Any preceding steps must have been completed, eg if a test case starts with step 2, step 1 must have been completed.

**Test scenario (staged) – BT-001: Start of supply
E03: Change of supplier**

UTILMD 392 (check by distribution company)



Test case BS-201-N4: Unknown metering site

Test case ID: L1.12

Special conditions:

This test case relates solely to steps 1-3.
Test data: X = #12

Description of purpose (if any):

To ensure that the gas supplier's system is able to interpret a negative UTILMD414 with the cause: **Metering site not identifiable**

Step	Player	Message	Comments	OK
1	GS	UTILMD392	The gas supplier records (not later than on the tenth business day before the requested appointed date) a change of supplier for metering site X , stating a metering site ID unknown to the distribution company (must be a correct 18-digit code).	
2	DC	UTILMD414	The distribution company receives the notification and returns a negative	

			UTILMD414.	
3	GS		The gas supplier receives the negative UTILMD414.	
			Checkpoint 1: Data required: <ul style="list-style-type: none"> - Metering site ID (GSRN) = X - Reply status (must be '41') - Reason for reply (must be 'E10'). 	
Test case BS-201-N6: Change of supplier already reported by another gas supplier			Test case ID: L1.13	
Special conditions:			This test case presupposes that another gas supplier has already reported a change of supplier for the metering site. Test data: X = #6	
Description of purpose (if any):			To ensure that the gas supplier's system is able to interpret a negative UTILMD414 with the cause: Change of supplier already reported	
1	GS	UTILMD392	The gas supplier records (not later than on the tenth business day before the requested appointed date) a change of supplier for metering site X in his own application and checks that the notification is sent to the distribution company.	
2	DC	UTILMD414	The distribution company receives the notification and returns a negative UTILMD414 (as change of supplier has already been reported by another gas supplier at the metering site).	
3	GS		The gas supplier receives the negative UTILMD414.	
			Checkpoint 1: Data required: <ul style="list-style-type: none"> - Metering site ID (GSRN) = X - Reply status (must be '41') - Reason for reply (must be 'E22'). 	
Test case BS-201-N13: Gas supplier already supplies the metering site			Test case ID: L1.14	
Special conditions:			This test case relates solely to steps 1-3. Test data: X = #13	
Description of purpose (if any):			To ensure that the gas supplier's system is able to interpret a negative UTILMD414 with the cause: Supplier already supplies the metering site concerned.	
1	GS	UTILMD392	The gas supplier records (not later than on the tenth business day before the requested appointed date) a change of supplier for metering site X.	
2	DC	UTILMD414	The distribution company receives the notification, simulates that the gas supplier already supplies metering site X and returns a negative UTILMD414.	
3	GS		The gas supplier receives the negative UTILMD414.	

			Checkpoint 1: Data required: <ul style="list-style-type: none"> – Metering site ID (GSRN) = X – Reply status (must be '41') – Reason for reply (must be 'E59'). 	
Test case BS-201-N14: Incorrect transaction ID			Test case ID: L1.15	
Special conditions:			This test case relates solely to steps 2-4. Test data: X = #3	
Description of purpose (if any):			To ensure that the gas supplier is able to compare the transaction ID forwarded with one referred to by the distribution company.	
1	GS	UTILMD392	Correct request for change of supplier is sent (not later than on the tenth business day before the requested appointed date) to the distribution company.	
2	DC	UTILMD414	The distribution company receives the request and returns a positive UTILMD. Reference to transaction ID does not correspond to the transaction ID indicated by the gas supplier in his original message.	
3	GS	APERAK	The gas supplier receives a confirmation and returns a negative APERAK.	
4	DC		The distribution company receives and processes the APERAK.	
			Checkpoint 1: Data required: <ul style="list-style-type: none"> – Metering site ID (GSRN)= X – Message function (must be '34') – Error code (must be '42') – Error description must be provided. 	
Test case BS-201-N6: Metering site closed down			Test case ID: L1.16	
Special conditions:			Test data: X = #6	
Description of purpose, if any:			To ensure that the gas supplier's system is able to interpret a negative UTILMD414 with the cause: Metering site closed down.	
1	GS	UTILMD392	The gas supplier records (not later than on the tenth business day before the requested appointed date) a change of supplier for metering site X in its own application and checks that the notification is sent to the distribution company.	
2	DC	UTILMD414	The distribution company receives the notification and returns a negative UTILMD414 (as the metering site has been closed down).	
3	GS		The gas supplier receives the negative UTILMD414	
			Checkpoint 1: Data required: <ul style="list-style-type: none"> – Metering site ID (GSRN) = X – Reply status (must be '41') 	

			– Reason for reply (must be 'E10')	

2.3. BS-201: Change of supplier for several metering sites, positive scenario

The test specification outlined below, which outlines the positive scenario of a BS-201 for several metering sites, must be implemented on the basis of a mixture of daily read metering and non-daily read metering sites (see test data).

NOTE! This test case is voluntary depending on whether a change of supplier for several metering sites is to be announced in the same message or whether one message for each change of supplier is to be sent.

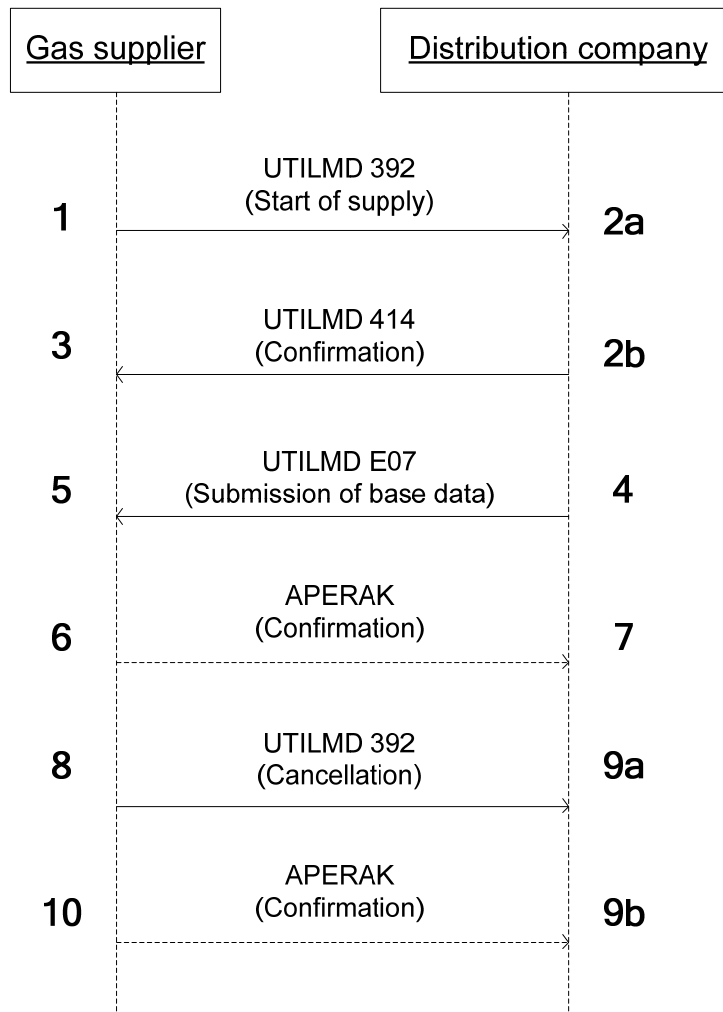
Description:	BS-201: Change of supplier for several metering sites, positive scenario
Initiating party (first sender):	Gas supplier
Processing party (first recipient):	Distribution company
Special conditions:	There is no requirement for all players to be able to send messages involving several metering sites, but all players must be able to receive and process messages involving several metering sites.
Test data:	X ₁ = #11 (non-daily metering) X ₂ = #4 (non-daily metering) X ₃ = #7 (daily metering)
Test case BS-201-P2: Change of supplier for several metering sites	Test case ID: L1.20
Test of BS-201-P1: Change of supplier, positive scenario, is repeated by requesting a change of supplier for several metering sites in the same message. As such, a request for change of supplier must comprise several transactions, in this instance one for daily read metering sites (X ₃) and two for non-daily read metering sites (X ₁ and X ₂).	

2.4. BS-201: Change of supplier, cancellation

Test case BS-201-P3: Cancellation of change of supplier	Test case ID: L1.21
Description:	BS-201: Change of supplier - cancellation, positive scenario
Initiating party (first sender):	Gas supplier
Processing party (first recipient):	Distribution company
Special conditions:	<i>None</i>

Test data: X = #2

Test scenario (staged) – BT-001: Notification of change of supplier



Step	Player	Message	Comment	OK
1	GS	UTILMD392	The gas supplier records (not later than on the tenth business day before the requested appointed date) a change of supplier for the metering site in his own application and checks that the notification is sent to the distribution company.	
2	DC	UTILMD414	The distribution company receives the notification and returns a confirmation to the gas supplier	
			Checkpoint 1: Data required: <ul style="list-style-type: none"> – Metering site ID (GSRN) = X – Appointed date. 	
3	GS		The gas supplier receives confirmation and records it in his own application.	
			Checkpoint 2: Data required:	

			<ul style="list-style-type: none"> - Metering site ID (GSRN) = X - Appointed date - Reference to transaction ID (must be the same as the transaction ID in the notification) - Transaction cause = Change of supplier ('E03') - Reply status (must be '39') - Consumer party name and second consumer party name. 	
4	DC	UTILMDE07	The distribution company sends base data for metering site to the gas supplier.	
5	GS		<p>The gas supplier receives the base data and records them for the metering site in his own application.</p> <p>Checkpoint 3: Data required:</p> <ul style="list-style-type: none"> - Metering site ID (GSRN) = X - Appointed date - Validity start date (must be the same as the appointed date) - Next meter-reading date - Transaction cause = Change of supplier ('E03') - Physical status of metering site - Meter-reading method - Estimated annual consumption - Gas supplier (GLN) - Consumer party name and second consumer party name - Meter location address (indicated as municipality code (n4); street code (n4); house number (an4); floor (an2); door number/to the right/to the left (an4)). 	
6	GS	APERAK	The gas supplier sends a (positive) APERAK to the distribution company.	
7	DC		<p>The distribution company receives and processes the positive APERAK.</p> <p>Checkpoint 4: Data required:</p> <ul style="list-style-type: none"> - Message reference (must refer to the submission of base data) - Error code = Approved ('100' = Object is approved) - Error description must be provided (godkendt/approved) - Reference to transaction ID (must be the same as the transaction ID in the base data message). 	
8	GS	UTILMD392	The gas supplier sends a cancellation message for the change of supplier to the distribution company before the expiry of the cancellation period (as the change of supplier was reported incorrectly).	
9	DC	APERAK	<p>The distribution company receives the cancellation message for the change of supplier and returns a positive APERAK.</p> <p>Checkpoint 5: Check that the change of supplier has been cancelled in the application and that the following information is provided:</p> <ul style="list-style-type: none"> - Metering site ID (GSRN) = X - Gas supplier (GLN) - Appointed date - Transaction ID (must be different from the transaction ID in the notification) - Reference to transaction ID (must be the same as the transaction ID in the notification). 	

10	GS		The gas supplier receives an acknowledgement of the cancellation from the application.
			Checkpoint 6: Data required: <ul style="list-style-type: none"> – Message reference (must refer to the cancellation) – Error code = Approved ('100' = Object is approved) – Error description must be provided (godkendt/approved) – Reference to transaction ID (must be the same as the transaction ID in the cancellation message).

2.5. BS-209: Relocation (incoming consumer) – notified to the gas supplier

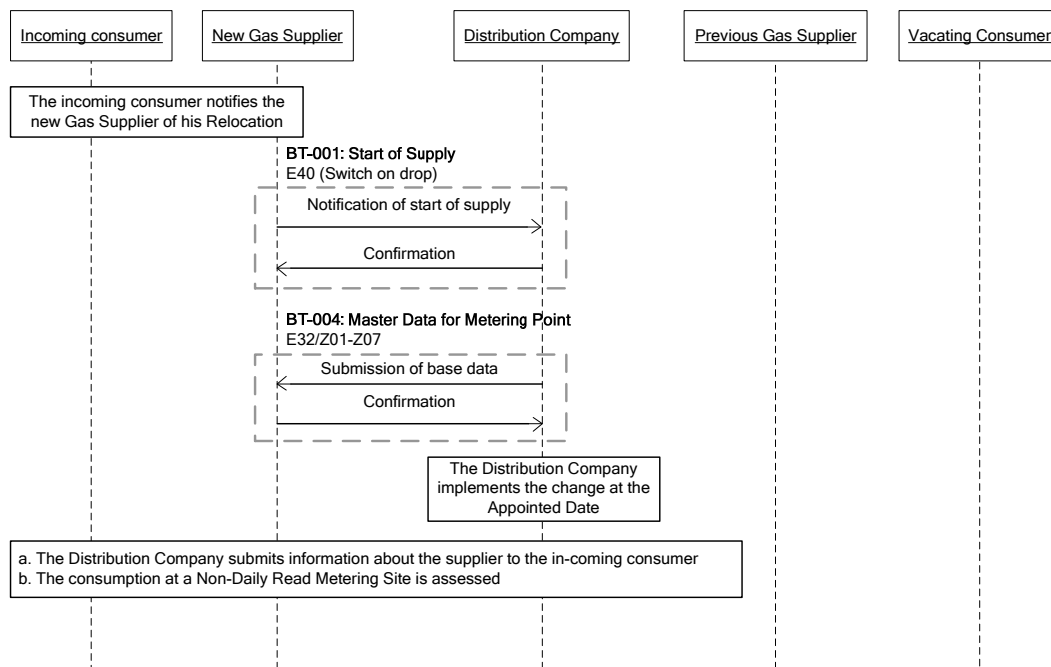
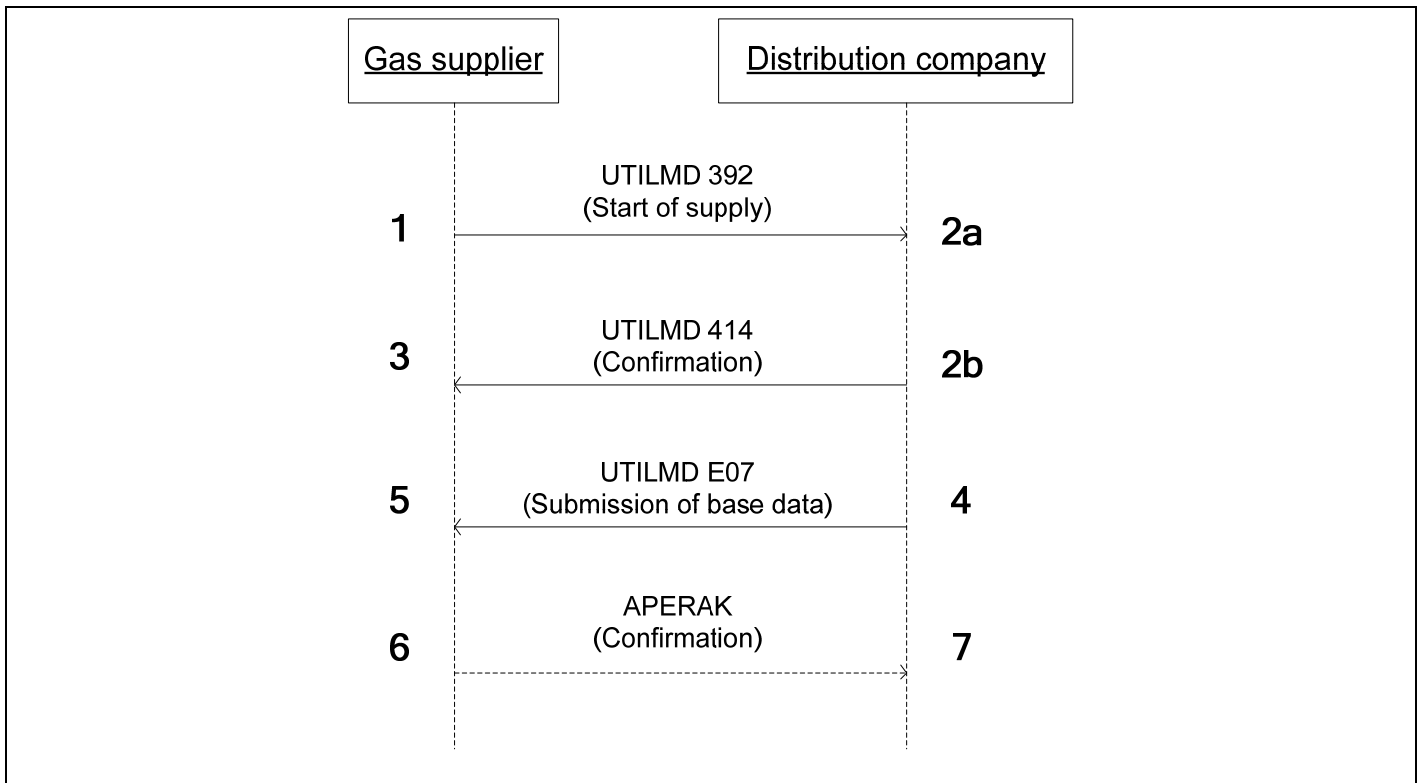


Figure 9: BS-209: Relocation (incoming consumer) – notified to the gas supplier: BT-001: Start of supply

Test case BS-209-P1: Relocation (incoming consumer) – notified to the gas supplier	Test case ID: L1.24
Description:	BS-209: Relocation (incoming consumer)– notified to the gas supplier, positive scenario
Initiating party (first sender):	Gas supplier
Processing party (first recipient):	Distribution company
Special conditions:	None
Test data:	X = #9
Test scenario (staged) – BT-001	



Step	Player	Message	Comment	OK
1	GS	UTILMD392	The gas supplier records a relocation (incoming consumer) for metering site X, indicating correct appointed date (for test purposes, the appointed date is the tenth day of the following month), in his own application and checks that the notification is sent to the distribution company – consumer party name and contact address must also be stated.	
2	DC	UTILMD414	The distribution company receives the notification and returns a confirmation message to the gas supplier. Checkpoint 1: Data required: <ul style="list-style-type: none"> – Metering site ID (GSRN) = X – Appointed date (tenth day of the following month) – Consumer party name and possible second consumer party name – Customer's contact address. 	
3	GS		The gas supplier receives a confirmation message and records it in his own application. Checkpoint 2: Data required: <ul style="list-style-type: none"> – Metering site ID (GSRN) = X – Appointed date (tenth day of the following month). – Reply status (must be '39') – Transaction cause = Change of supplier ('E01'). Reference to transaction ID (must be the same as the transaction ID in the notification). Consumer party name and second consumer party name.	
4	DC	UTILMDE07	The distribution company sends base data for metering site to the gas supplier.	

5	GS		The gas supplier receives base data and records them for the metering site in his own application.	
			Checkpoint 3: Data required: <ul style="list-style-type: none"> - Metering site ID (GSRN) = X - Start date of supply (tenth day of the following month) - Meter location address (indicated as municipality code (n4); street code (n4); house number (an4); floor (an2); door number/to the right/to the left (an4)) - Settlement method used at metering site - Transaction cause = Change of supplier ('E01') - Next scheduled date of reading - Physical status of metering site - Estimated annual consumption - Validity start date (must be the same as start date of supply) - Gas supplier (GLN). 	
6	GS	APERAK	The gas supplier sends a (positive) APERAK to the distribution company.	
7	DC		The distribution company receives and processes the APERAK, and subsequently prepares the change of supplier for the metering site.	

3. L2. – Operation

3.1. BS-203: Submission of base data, positive scenario

BS-203: Submission of base data with updating code 'E32', positive scenario

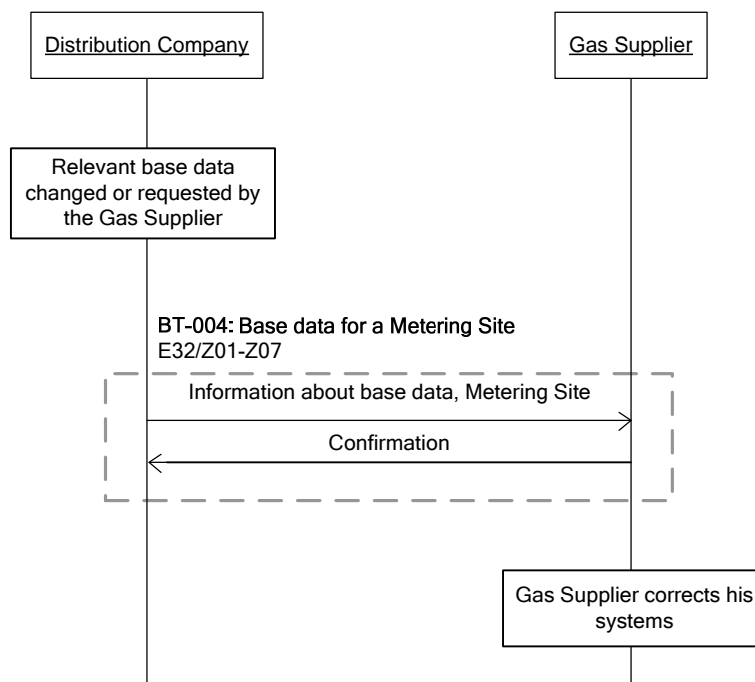
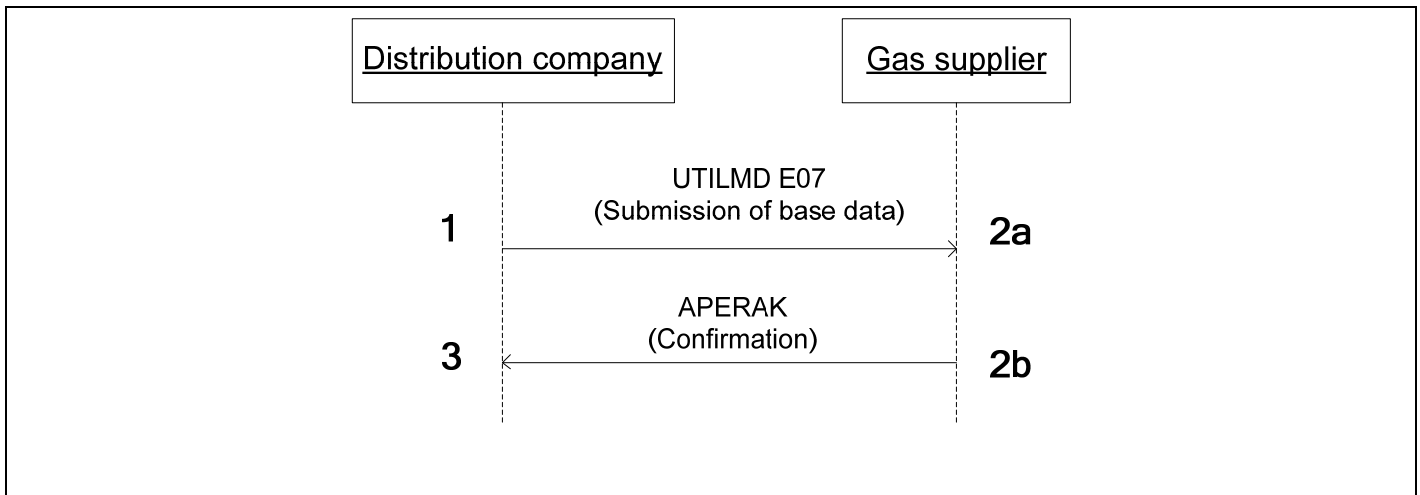


Figure 3 BS-203: Submission of base data.

Test case BS-203-P1a: Unspecified base data (non-daily metering)	Test case ID: L2.10
Description:	BS-203: Submission of base data, positive scenario
Initiating party (first sender):	Distribution company
Processing party (first recipient):	Gas supplier
Special conditions:	None
Test data:	X = #5 (non-daily metering)
Test scenario (staged) – BT-004	

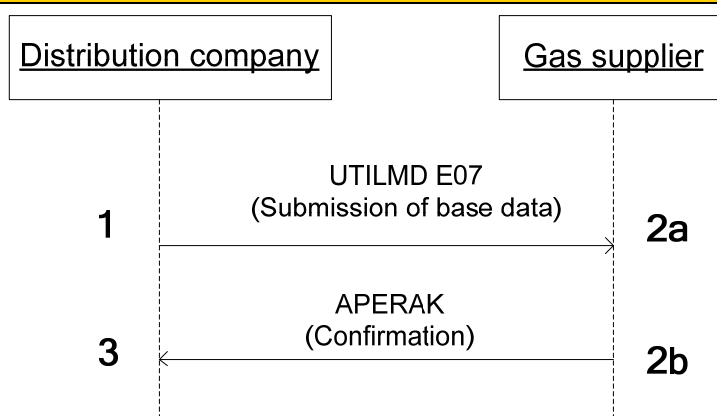


Step	Player	Message	Comment	OK
1	DC	UTILMDE07	The distribution company forwards base data to the gas supplier upon request, indicating correct transaction cause and validity start date. The distribution company checks that the base data message is sent to the gas supplier.	
2	GS	APERAK	<p>The gas supplier receives the base data message and sends a positive APERAK to the distribution company.</p> <p>Checkpoint 1: Data required:</p> <ul style="list-style-type: none"> – Transaction cause = ('E32' = No specification) – Metering site ID (GSRN) = X – Start date of supply (see test data specification) – Consumer party name and possible second consumer party name must be stated correctly – Meter location address (indicated as municipality (n4); street code (n4); house number (an4); floor (an2); door number/to the right/to the left (an4)) – Meter-reading method used at metering site – Next scheduled date of reading (only relevant for non-daily read metering sites) – Physical status of metering site – Estimated annual consumption – Validity start date (see test data specification) – Gas supplier (GLN) (must be the same as the recipient of the message). 	
3	DC		<p>The distribution company receives and processes the positive APERAK.</p> <p>Checkpoint 2: Data required:</p> <ul style="list-style-type: none"> – Message reference (must refer to the submission of base data) – Error code = Approved ('100' = Object is approved) – Error description must be provided – Reference to transaction ID (must be the same as the transaction ID in the base data message). 	

BS-203: Submission of base data with updating code 'Z02', positive scenario

Test case BS-203-P2: Base data - change of meter location address	Test case ID: L2.12
Description:	BS-203: Submission of base data - change of meter location address, positive scenario
Initiating party (first sender):	Distribution company
Processing party (first recipient):	Gas supplier
Special conditions:	
Test data:	X = #9

Test scenario (staged) – BT-004

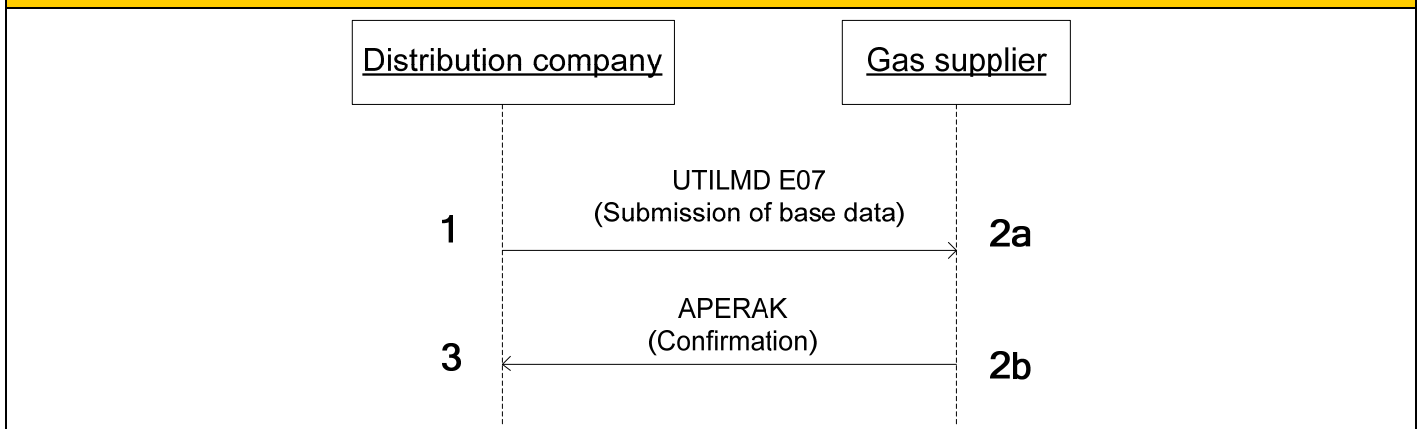


Player	Player	Message	Comment	OK
1	DC	UTILMDE07	The distribution company has changed the base data for metering site X in its own application and therefore sends updated base data to the gas supplier, indicating correct transaction cause and validity start date. The distribution company checks that the base data message is sent to the gas supplier.	
2	GS	APERAK	The gas supplier receives the changed base data and returns a positive APERAK to the distribution company. Checkpoint 1: Data required: <ul style="list-style-type: none"> – Transaction cause = Change of meter location address ('Z02' = Change of meter location address) – Metering site ID (GSRN) = X – Meter location address (see test data specification) – Validity start date (today's date, midnight). 	
3	DC		The distribution company receives and processes the positive APERAK. Checkpoint 2: Data required: <ul style="list-style-type: none"> – Message reference (must refer to the submission of base data) – Error code = Approved ('100' = Object is approved) – Error description must be provided – Reference to transaction ID (must be the same as the transaction ID in the base data message). 	

BS-203: Submission of base data with updating code 'Z03', positive scenario

Test case BS-203-P3: Base data - change of meter reading dates	Test case ID: L2.13
Description:	BS-203: Submission of base data - change of meter reading date(s), positive scenario
Initiating party (first sender):	Distribution company
Processing party (first recipient):	Gas supplier
Special conditions:	This test is only relevant for non-daily read metering sites
Test data:	X = #5

Test scenario (staged) – BT-004



Step	Player	Message	Comment	OK
1	DC	UTILMDE07	The distribution company has changed the base data for metering site X in its own application and therefore sends updated base data to the gas supplier, indicating correct transaction cause and validity start date. The distribution company checks that the base data message is sent to the gas supplier.	
2	GS	APERAK	The gas supplier receives the changed base data and returns a positive APERAK to the distribution company. Checkpoint 1: Data required: <ul style="list-style-type: none"> – Transaction cause = Change of next scheduled date(s) of reading. ('Z03' = Change of next scheduled date(s) of reading) – Metering site ID (GSRN) = X – Next scheduled date of reading – Validity start date (today's date, midnight). 	
3	DC		The distribution company receives and processes the positive APERAK. Checkpoint 2: Data required: <ul style="list-style-type: none"> – Message reference (must refer to the forwarding of base data) – Error code = Approved ('100' = Object is approved) – Error description must be provided – Reference to transaction ID (must be the same as the transaction ID in the base data message). 	

BS-203: Submission of base data with updating code 'Z05', positive scenario

Test case BS-203-P4: Base data, change of consumer party name		Test case ID: L2.14		
Description:		BS-203: Submission of base data with change of consumer party name, positive sequence		
Initiating party (first sender):		Distribution company		
Processing party (first recipient):		Gas supplier		
Special conditions:				
Test data:		X = #5		
Test scenario (staged) – BT-004				
<pre> sequenceDiagram participant DC as Distribution company participant GS as Gas supplier DC->>GS: 1 UTILMD E07 (Submission of base data) GS-->>DC: 2a APERAK (Confirmation) GS->>DC: 3 APERAK (Confirmation) DC-->>GS: 2b </pre>				
Step	Player	Message	Comment	OK
1	DC	UTILMDE07	The distribution company has changed the base data for metering site X in its own application and therefore sends updated base data to the gas supplier, indicating correct transaction cause and validity start date. The distribution company checks that the base data message is sent to the gas supplier.	
2	GS	APERAK	The gas supplier receives the updated base data and returns a positive APERAK to the distribution company. Checkpoint 1: Data required: <ul style="list-style-type: none"> – Transaction cause = Change of consumer party name(s) ('Z05' = Change of consumer party name(s)) – Metering site ID (GSRN) = X – Consumer party name and possible second consumer party name (see test data specification) – Validity start date (today's date, midnight). 	
3	DC		The distribution company receives and processes the positive APERAK. Checkpoint 2: Data required: <ul style="list-style-type: none"> – Message reference (must refer to the forwarding of base data) – Error code = Approved ('100' = Object is approved) – Error description must be provided Reference to transaction ID (must be the same as the transaction ID in the base data message).	

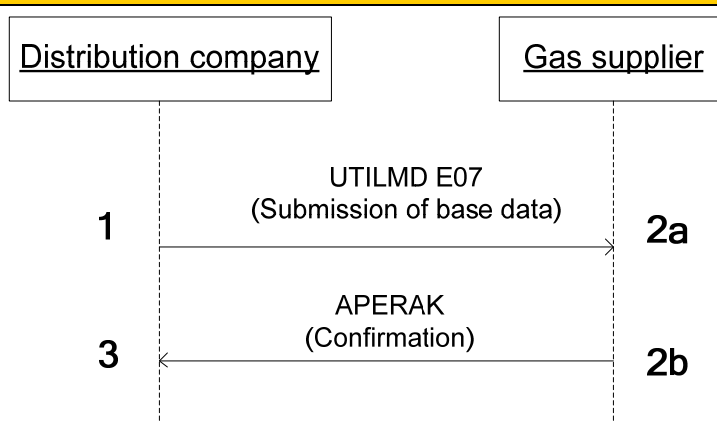
BS-203: Submission of base data with updating code 'Z02', positive scenario

Test case BS-203-P6: Base data, resubmission of street code			Test case ID: L2.19	
Description:			BS-203: Submission of base data with resubmission of street code, positive scenario	
Initiating party (first sender):			Distribution company	
Processing party (first recipient):			Gas supplier	
Special conditions:				
Test data:			X = #5	
Test scenario (staged) – BT-004				
<pre> sequenceDiagram participant DC as Distribution company participant GS as Gas supplier DC->>GS: 1 UTILMD E07 (Submission of base data) GS-->>DC: 2b APERAK (Confirmation) </pre>				
Step	Player	Message	Comment	OK
1	DC	UTILMDE07	The distribution company has received a street code for an installation address and therefore sends a base date update to the gas supplier with information about street code. The distribution company checks that the message with base data is sent to the gas supplier.	
2	GS	APERAK	The gas supplier receives the base data and returns a positive APERAK to the distribution company.	
			Checkpoint 1: Data required: <ul style="list-style-type: none"> – Transaction cause = Resubmission of street code (Z02: Change of meter location address) – Metering site ID (GSRN) = X – Validity start date (today's date, midnight) 	
3	DC		The distribution company receives and processes the positive APERAK.	
			Checkpoint 2: Data required: <ul style="list-style-type: none"> – Message reference (must refer to the submission of base data) – Error code = Approved ('100' = The object is approved) – Error description must be provided – Reference to transaction ID (must be the same as the transaction ID in the base data message) 	

BS-203: Cross-check of updated base data

Test case BS-203-P5: Cross-check of base data	Test case ID: L2.15
Description:	BS-203: Submission of base data with updating code 'Z05', positive scenario + other base data
Initiating party (first sender):	Distribution company
Processing party (first recipient):	Gas supplier
Special conditions:	In addition to the name change, other data differing from the gas supplier's base data will also be submitted. The annual volume will be changed, for example.
Test data:	X = #5

Test scenario (staged) – BT-004



Step	Player	Message	Comment	OK
1	GS		The gas supplier carefully notes which base data apply to the metering site concerned, thus making it possible to check whether the subsequent change only applies to the base data to be changed.	
2	DC	UTILMDE07	The distribution company changes the estimated annual consumption for metering site X in its own application but does not send updated base data to the gas supplier. The distribution company then changes the consumer party name in the base data for metering site X in its own application and sends the message to the gas supplier (transaction cause = 'Z05').	
3	GS	APERAK	The gas supplier receives the updated base data and returns a positive APERAK to the distribution company.	
			Checkpoint 1: Check that: <ul style="list-style-type: none"> – The estimated annual consumption has not changed (in own application). Data required: <ul style="list-style-type: none"> – Transaction cause = Change of consumer party name(s) ('Z05' = Change of consumer party name(s) – Metering site ID (GSRN) = X – Consumer party name and possible second consumer party name (see test data specification). 	
			Other changed data are ignored.	

4	-	NOTE	In a non-test situation the gas supplier will manually contact the distribution company in case of discrepancies in base data.	
5	DC		The distribution company receives and processes the positive APERAK.	

3.2. BS-203: Submission of base data, negative scenario

Description:		BS-203: Submission of base data, negative scenario		
General conditions:		None		
Test scenario (staged) – BT-004: Base data for metering site E32: General transmission of base data for metering site upon request				
<pre> sequenceDiagram participant DC as Distribution company participant GS as Gas supplier DC->>GS: 1 UTILMD E07 (Submission of base data) GS-->>DC: 2a APERAK (Confirmation) DC-->>GS: 2b DC-->>GS: 3 </pre>				
UTILMD E07 (Check by supplier)				
Test case BS-203-N12: Incorrect supplier ID		Test case ID: L2.25		
Special conditions:		This test case relates solely to steps 1-3. Test data: X = #5		
Description of purpose (if any):		-		
1	DC	UTILMD E07	Supplier ID for the new gas supplier is indicated in the base data sent to the present gas supplier.	
2	GS	APERAK	The gas supplier receives the base data and returns a negative APERAK.	
3	DC		The distribution company receives and processes the negative APERAK.	
			Checkpoint 1: Data required: <ul style="list-style-type: none"> - Metering site ID (GSRN) = X - Message function (must be '34') - Error code (must be '42') - Error description must be provided. 	

3.3. BS-205: Consumption statement for non-daily read metering site

The test case outlined below must be implemented twice; once with the meter-reading reason being 'periodic' and once with the reason being 'non-periodic'.

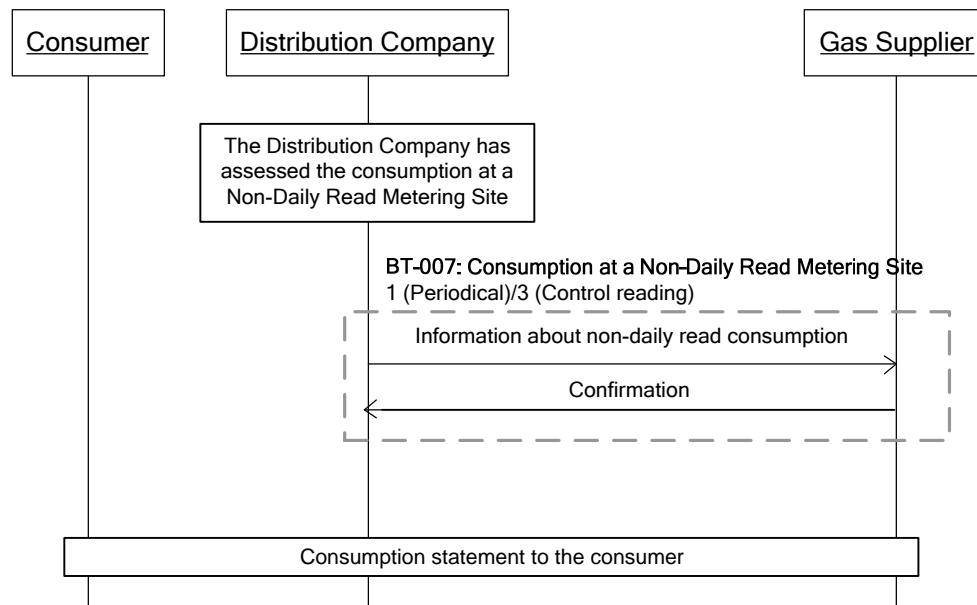
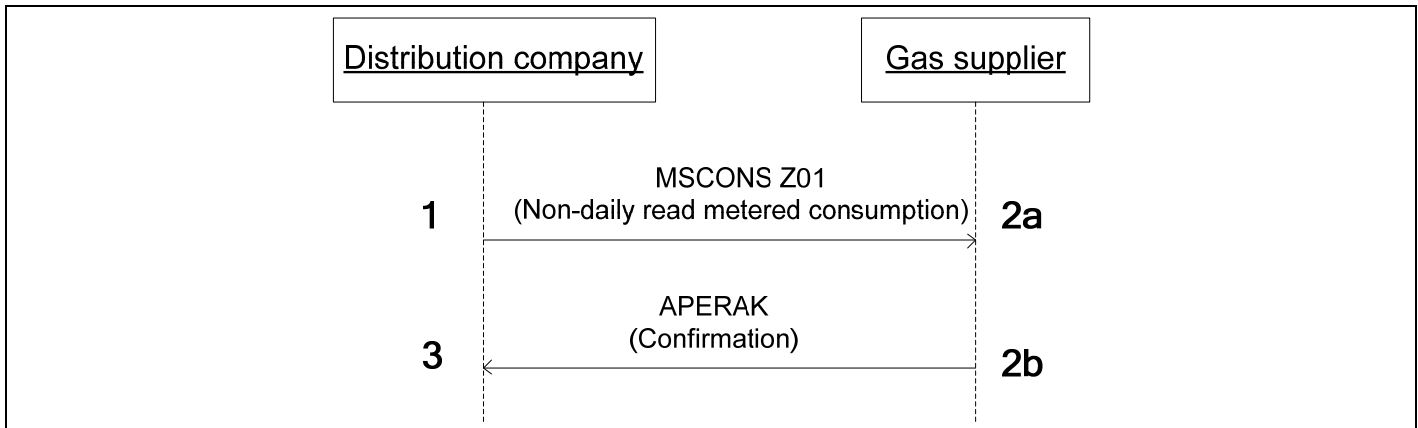


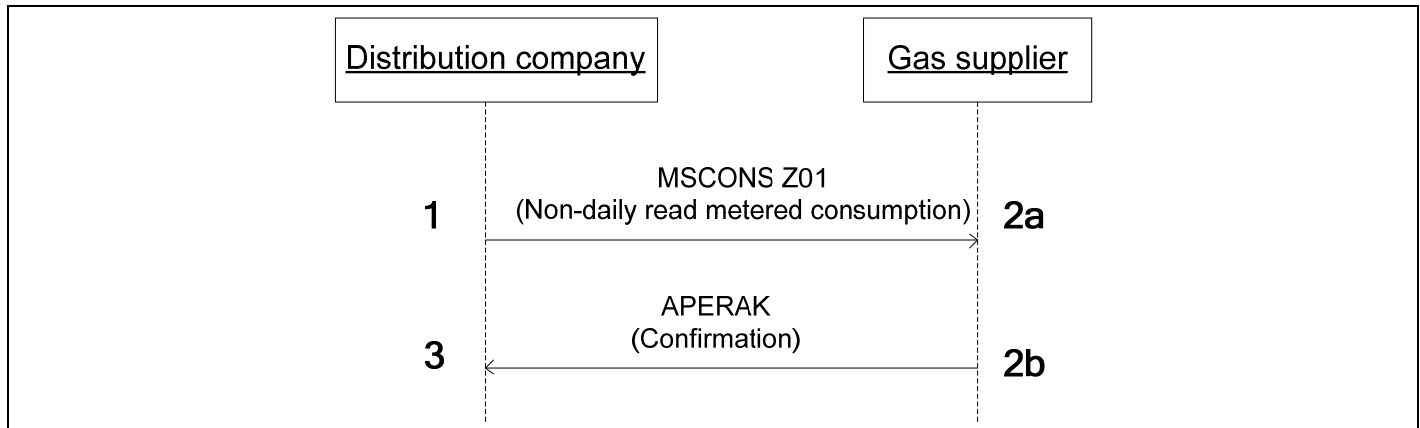
Figure 5: BS-205: Consumption statement for non-daily read metering site

Test case BS-205-P1a: Consumption statement for non-daily read metering site (periodic)	Test case ID: L2.26
Description:	BS-205: Consumption statement for non-daily read metering site (periodic), positive scenario.
Initiating party (first sender):	Distribution company
Processing party (first recipient):	Gas supplier
Special conditions:	The test case outlined below must be implemented twice; once with the meter-reading reason being 'periodic' and once with the reason being 'non-periodic' – see test case BS-205-P1b.
Test data:	X = #2 ("periodic")
Test scenario (staged) – BT-007 Consumption for non-daily read metering site	



Step	Player	Message	Comment	OK
1	DC	MSCONSZ01	The distribution company has calculated the consumption for metering site X (non-daily metering) in its own application and then sends the consumption statement to the gas supplier.	
2	GS	APERAK	The gas supplier receives the consumption statement and returns a positive APERAK to the distribution company. Checkpoint 1: Data required: <ul style="list-style-type: none"> - Message function = original message ('9' = Original) - Metering site ID (GSRN) = X - Product codes = 3002 and 3004/3006 - Metering interval = 1 year - Status code = metered value for the period (Z01' = Manually corrected value, '99' = Final value, estimated or '136' = Final value, metered) - Meter-reading reason = normal reading ('1' = Periodic). 	
3	DC		The distribution company receives and processes the positive APERAK. Checkpoint 2: Data required: <ul style="list-style-type: none"> - Message reference (must refer to the consumption statement) - Error code = Approved ('100' = Object is approved) - Error description must be provided - Reference to transaction ID (must be the same as the transaction ID in the consumption statement). 	

Test case BS-205-P1b: Consumption statement for non-daily read metering site (non-periodic)		Test case ID: L2.27
Description:		BS-205: Consumption statement for non-daily read metering site (non-periodic), positive scenario
Initiating party (first sender):		Distribution company
Processing party (first recipient):		Gas supplier
Special conditions:		
Test data:		X = #2 ('non-periodic')
Test scenario (staged) – BT-007 Consumption for non-daily read metering site		

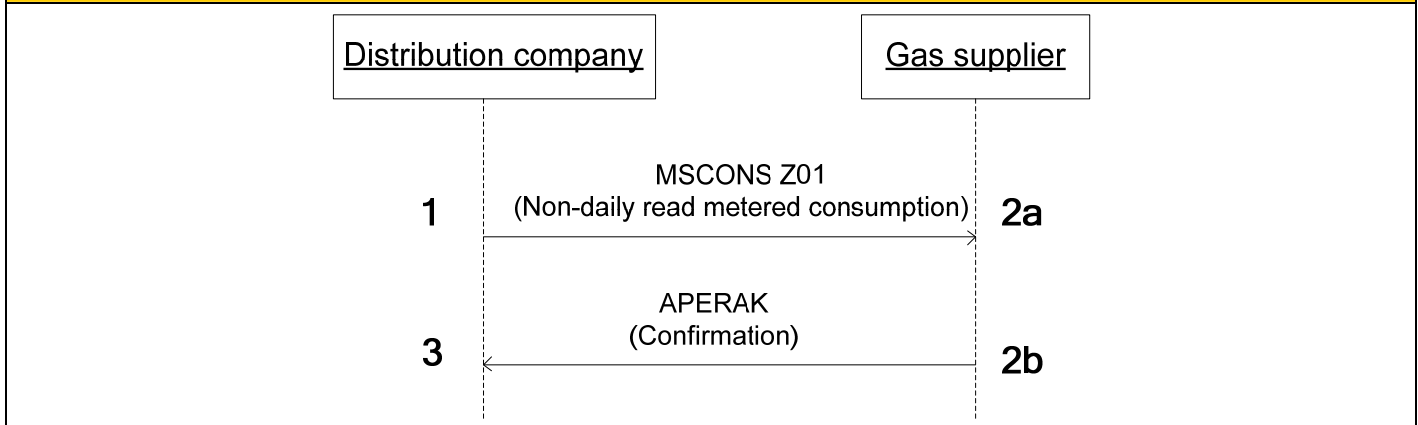


Step	Player	Message	Comment	OK
1	DC	MSCONSZ01	The distribution company has computed the consumption for metering site X (non-daily metering) in its own application and then sends the consumption statement to the gas supplier.	
2	GS	APERAK	<p>The gas supplier receives the consumption statement and returns a positive APERAK to the distribution company.</p> <p>Checkpoint 1: Data required:</p> <ul style="list-style-type: none"> - Message function = original message ('9' = Original) - Metering site ID (GSRN) = X - Product codes = 3002 and 3004/3006 - Metering interval = 1 year - Status code = metered value for the period (Z01' = Manually corrected value, '99' = Final value, estimated, or '136' = Final value, metered) - Meter-reading reason = normal reading ('3' = 'Non-periodic'). 	
3	DC		<p>The distribution company receives and processes the positive APERAK.</p> <p>Checkpoint 2: Data required:</p> <ul style="list-style-type: none"> - Message reference (must refer to the consumption statement) - Error code = Approved ('100' = Object is approved) - Error description must be provided - Reference to transaction ID (must be the same as the transaction ID in the consumption statement). 	

3.4. BS-205: Consumption statement for non-daily read metering site, negative scenario - 1: Periodic

Description:	BS-205: Consumption statement for non-daily read metering site, negative scenario
General conditions:	In the following, the steps refer to the original steps in BS-205-P1 (positive scenario for consumption statement for non-daily read metering site). It is a precondition that any preceding steps be implemented, for example if a test case starts with step 2, then step 1 must have been completed.

Test scenario (staged) – BT-007: Consumption for metering site, profiled 1: Periodic



MSCONS Z01 (Check by supplier)

Test case BS-205-N4: Incorrect product code **Test case ID: L2.29**

Special conditions: This test case relates solely to steps 1-3.
Test data X = #2

Description of purpose (if any): -

Step	Player	Message	Comment	OK
1	DC	MSCONSZ01	A product code is not stated as '3002 and 3004/3006'.	
2	GS	APERAK	The gas supplier receives the consumption statement and returns a negative APERAK to the distribution company.	
3	DC		The distribution company receives and processes the negative APERAK. Checkpoint 1: Data required: <ul style="list-style-type: none"> - Metering site ID (GSRN) = X - Message function (must be '34') - Error code (must be '42') - Error description must be provided. 	

Test case BS-205-N11: Unknown metering site **Test case ID: L2.30**

Special conditions: This test case relates solely to steps 1-3.
Test data: X = #2

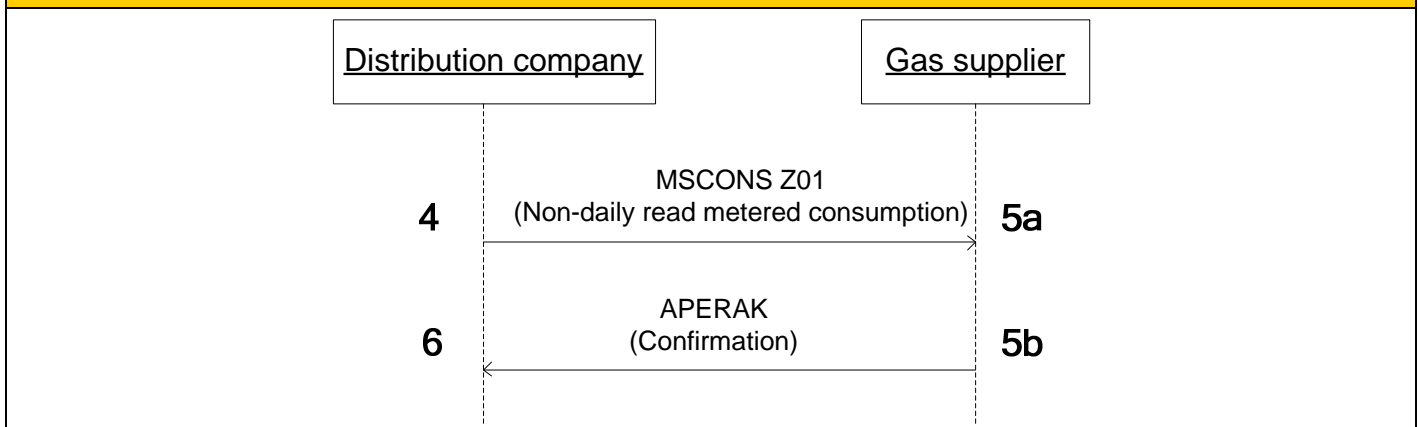
Description of purpose (if any):			-
1	DC	MSCONSZ01	Unknown metering site (recipient is not supplying the metering site concerned).
2	GS	APERAK	The gas supplier receives the consumption statement and returns a negative APERAK.
3	DC		The distribution company receives and processes the negative APERAK. Checkpoint 1: Data required: <ul style="list-style-type: none"> - Metering site ID (GSRN) = X - Message function (must be '34') - Error code (must be '42') - Error description must be provided.
Test case BS-205-N13: Gap in meter reading period			Test case ID: L2.32
Special conditions:			This test case relates solely to steps 1-3. Test data: X = #2 The gas supplier has recorded a date and a meter reading for a previous period in his own application. The date must be before the start date of the period in the test case.
Description of purpose (if any):			-
1	DC	MSCONSZ01	The distribution company submits a meter reading for the period (gap in meter-reading period).
2	GS	APERAK	The gas supplier receives the consumption statement and returns a negative APERAK.
3	DC		The distribution company receives and processes the negative APERAK. Checkpoint 1: Data required: <ul style="list-style-type: none"> - Metering site ID (GSRN) = X - Message function (must be '34') - Error code (must be '42') - Error description must be provided.
Test case BS-205-N14: Overlap in meter reading period			Test case ID: L2.33
Special conditions:			This test case relates solely to steps 1-3 Test data: X = #2 The gas supplier has recorded a date and a meter reading for a previous period in his own application. The date must be after the start date of the period in the test case.
Description of purpose (if any):			-
1	DC	MSCONSZ01	The distribution company sends a meter reading for the period (overlap in meter-reading period).
2	GS	APERAK	The gas supplier receives the consumption statement and returns a negative APERAK.
3	DC		The distribution company receives and processes the negative APERAK.

Checkpoint 1: Data required: <ul style="list-style-type: none"> - Metering site ID (GSRN) = X - Message function (must be '34') - Error code (must be '42') - Error description must be provided.
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3.5. BS-205: Consumption statement for non-daily read metering site - correction of data, positive scenario

Test case BS-205-P2: Consumption statement for non-daily read metering site - correction	Test case ID: L2.36
Description:	BS-205: Consumption statement for non-daily read metering site – correction of data, positive scenario
Initiating party (first sender):	Distribution company
Processing party (first recipient):	Gas supplier
Special conditions:	It is a precondition that BS-205: Consumption statement for non-daily read metering site, positive scenario, has been implemented.
Test data:	X = #2

Test scenario (staged) – BT-007 Consumption for non-daily read metering site – correction



Step	Player	Message	Comment	OK
4	DC	MSCONSZ01	The distribution company has discovered an error in the consumption statement for metering site X (non-daily metering) submitted under step 1 and therefore sends a correction message for the consumption statement to the gas supplier.	
5	GS	APERAK	The gas supplier receives the correction message for the consumption statement and returns a positive APERAK to the distribution company.	
			Checkpoint 1: Data required: <ul style="list-style-type: none"> - Message function = correction message ('5' = Replace) - Metering site ID (GSRN) = X - Product codes = 3002 and 3004/3006 - Metered time interval = in relation to latest meter reading date - Status code = metered value for the period (Z01' = Manually 	

			corrected value, '99' = Final value, estimated ,or '136' = Final value, metered) – Meter-reading reason = normal reading ('1' = Periodic).	
6	DC		The distribution company receives and processes the positive APERAK.	

3.6. BS-205: Consumption statement for non-daily read metering site - correction of data, negative scenario for a period expired long ago

Description:		BS-205: Consumption statement for non-daily read metering site - correction of data, negative scenario		
Special conditions:		None		
Test scenario (staged) – BT-007				
<pre> sequenceDiagram participant DC as Distribution company participant GS as Gas supplier Note over DC: 4 DC->>GS: MSCONS Z01 (Non-daily read metered consumption) Note over GS: 5a Note over GS: 5b GS-->>DC: APERAK (Confirmation) Note over DC: 6 </pre>				
MSCONS Z01 (check by supplier)				
Test case BS-205-N8: Correction for a period expired long ago			Test case ID: L2.37	
Special conditions:		This test case relates solely to steps 4-6. Test data X = #2		
Description of purpose (if any):		-		
Step	Player	Message	Comment	OK
4	DC	MSCONSZ01	The distribution company has discovered an error in a previously forwarded consumption statement for metering site X (non-daily metering) and therefore sends a correction message for the consumption statement to the gas supplier. The date of the original message lies three years back in time.	
5	GS	APERAK	The gas supplier receives the correction message for the consumption statement and returns a negative APERAK to the distribution company.	
6	DC		The distribution company receives and processes the negative APERAK.	
		Checkpoint 1: Data required: – Metering site ID (GSRN) = X – Message function (must be '34')		

			<ul style="list-style-type: none"> - Error code (must be '42') - Error description must be provided. 	
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3.7. BS-206: Consumption statement for daily read metering site, positive scenario

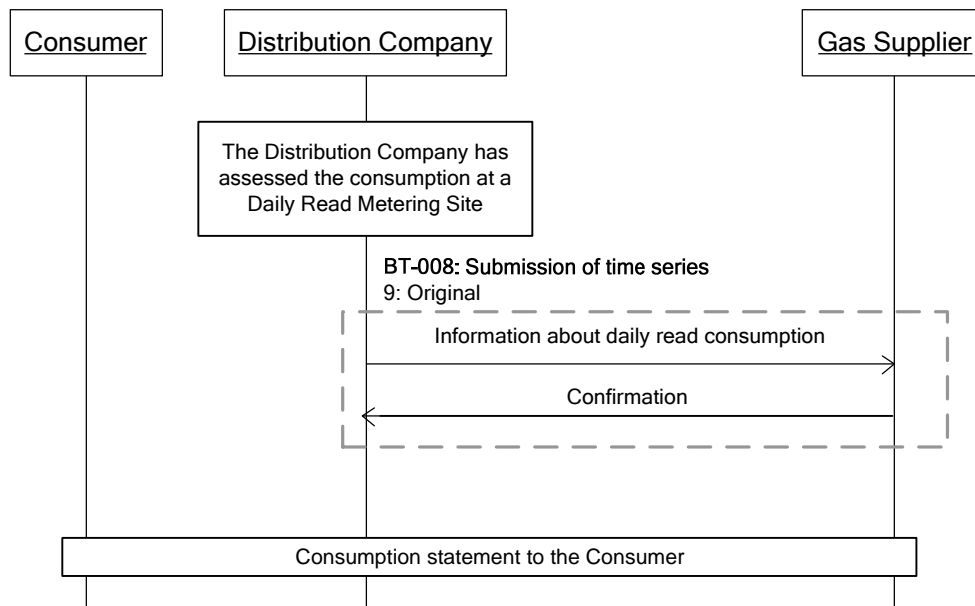
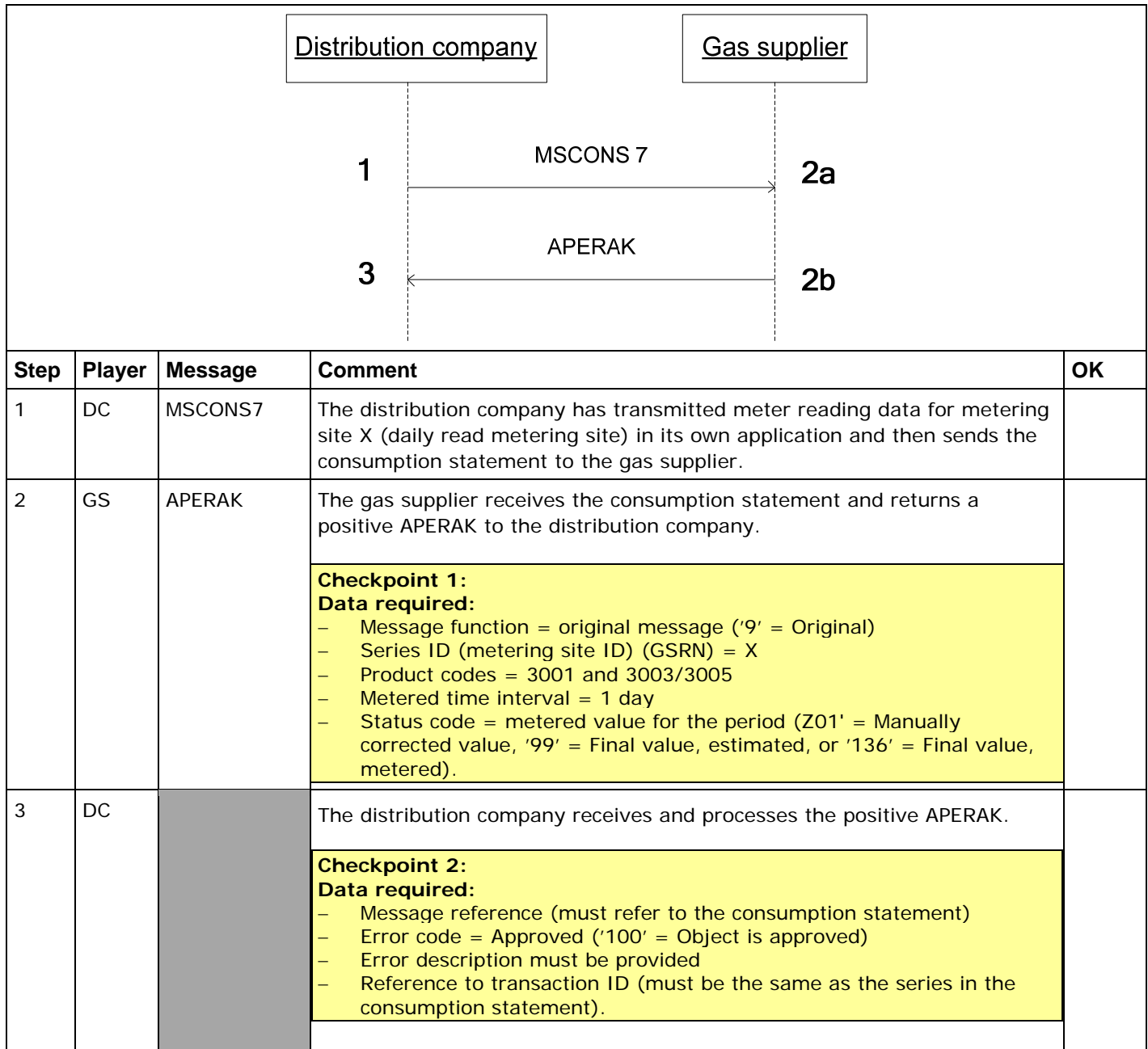


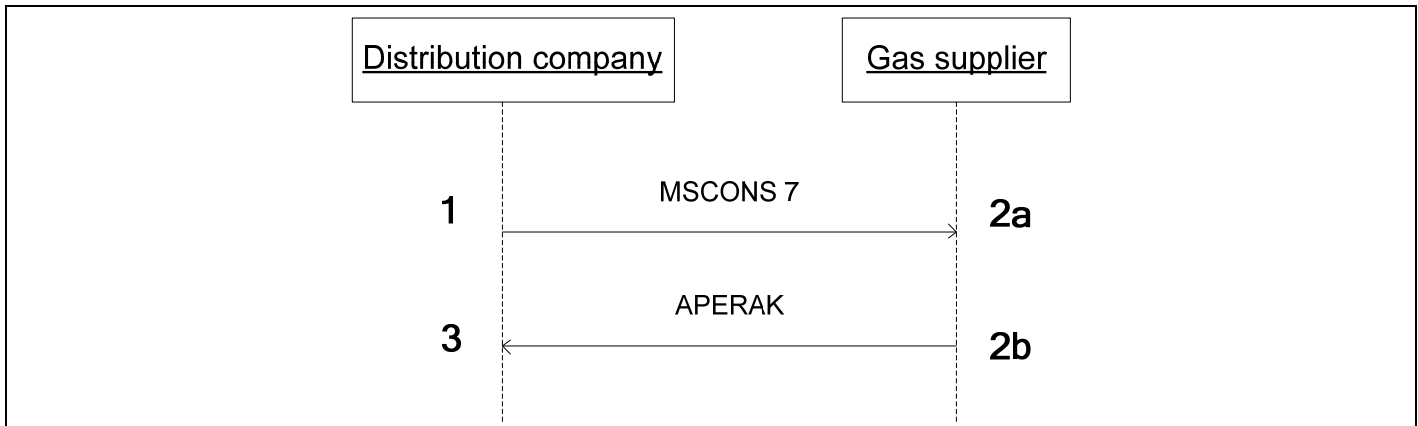
Figure 6: BS-206: Consumption statement for daily read metering site

Test case BS-206-P1: Consumption statement for daily read metering site	Test case ID: L2.39
Description:	BS-206: Consumption statement for daily read metering site, positive scenario
Initiating party (first sender):	Distribution company
Processing party (first recipient):	Gas supplier
Special conditions:	None
Test data:	Metering site = #6
Test scenario (staged) – BT-008 (Phase 1)	



3.8. BS-206: Consumption statement for daily read metering site, negative scenario

Description:	BS-206: Consumption statement for daily read metering site, negative scenario
General conditions:	None
Test scenario (staged) – BT-008	

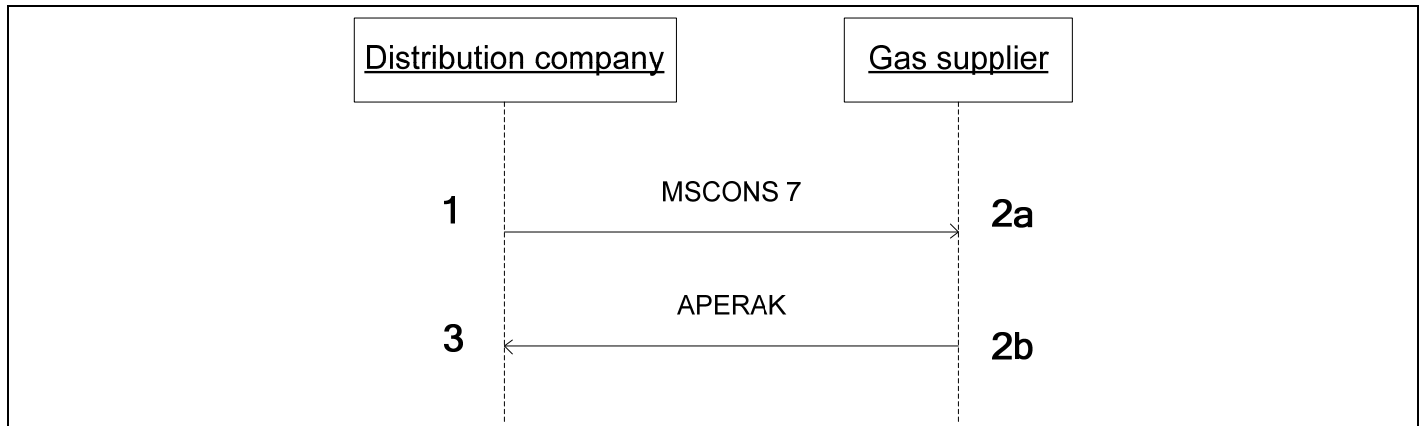


MSCONS 7 Check by supplier				
Test case BS-206-N3: Time period differs from time interval			Test case ID: L2.41	
Special conditions:			This test case relates solely to steps 1-3. Metering site = #6	
Description of purpose (if any):			-	
Step	Player	Message	Comment	OK
1	DC	MSCONS7	Time period not indicated as a time interval.	
2	GS	APERAK	The gas supplier receives the consumption statement and returns a negative APERAK to the distribution company.	
3	DC		The distribution company receives and processes the negative APERAK.	
			Checkpoint 1: Data required:	
			<ul style="list-style-type: none"> - Series ID (metering site ID) (GSRN) = X - Message function (must be '34') - Error code (must be '42') - Error description must be provided. 	
Test case BS-206-N8: Incorrect metering unit			Test case ID: L2.44	
Special conditions:			This test case relates solely to steps 1-3. Metering site = #6	
Description of purpose (if any):			-	
Step	Player	Message	Comment	OK
1	DC	MSCONS7	Metering unit not indicated as 'kWh ₀ ', 'Nm ³ ' or 'm ³ '.	
2	GS	APERAK	The gas supplier receives the consumption statement and returns a negative APERAK to the distribution company.	
3	DC		The distribution company receives and processes the negative APERAK.	
			Checkpoint 1: Data required:	
			<ul style="list-style-type: none"> - Series ID (Metering site ID) (GSRN) = X - Message function (must be stated as '34') - Error code (must be stated as '42') - Error description must be provided. 	

Test case BS-206-N9: Time period outside period metered			Test case ID: L2.45	
Special conditions:			This test case relates solely to steps 1-3. Metering site = #6	
Description of purpose (if any):			-	
Step	Player	Message	Comment	OK
1	DC	MSCONS7	Metered time period or part hereof, which is indicated in 'Time period for quantity', lies outside the start or end time.	
2	GS	APERAK	The gas supplier receives the consumption statement and returns a negative APERAK to the distribution company.	
3	DC		<p>The distribution company receives and processes the negative APERAK.</p> <p>Checkpoint 1: Data required:</p> <ul style="list-style-type: none"> - Series ID (metering site ID) (GSRN) = X - Message function (must be '34') - Error code (must be '42') - Error description must be provided. 	

3.9. BS-206: Consumption statement for daily metering site - correction of data, positive scenario

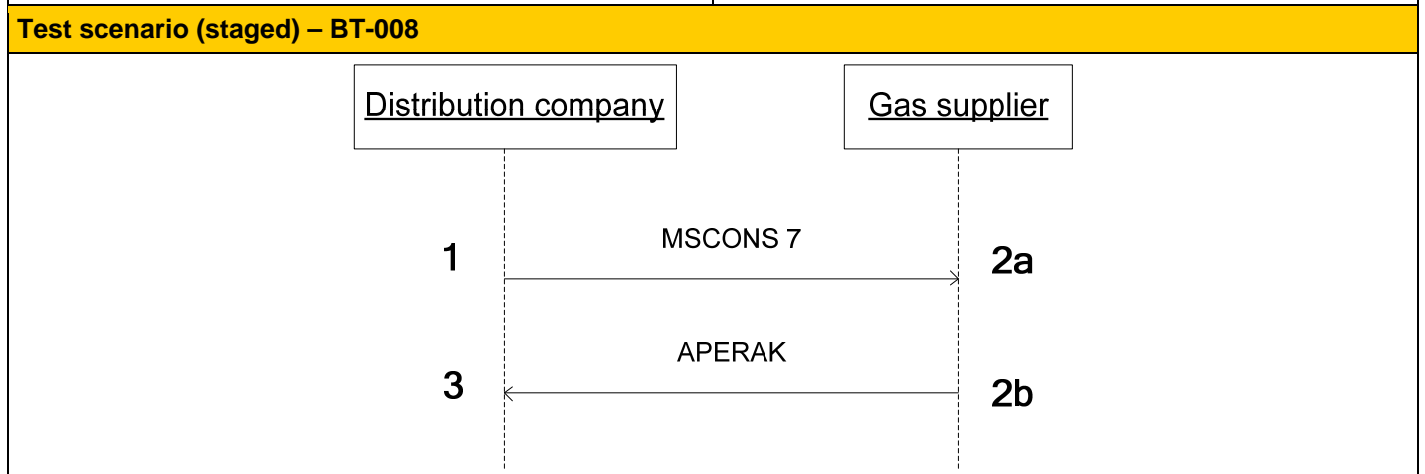
Test case BS-206-P2: Consumption statement for daily metering site - correction of data		Test case ID: L2.46	
Description:		BS-206: Consumption statement for daily read metering site – correction of data, positive scenario	
Initiating party (first sender):		Distribution company	
Processing party (first recipient):		Gas supplier	
Special conditions:		It is a precondition that BS-206: Consumption statement for daily read metering site, positive scenario, has been implemented.	
Test data:		Metering site = #6	
Test scenario (staged) – BT-008			



Step	Player	Message	Comment	OK
1	DC		The distribution company has discovered an error in the previously submitted time series for metering site X (daily metering) and therefore sends an error report by email to the gas supplier.	
2	GS		The gas supplier receives the error report from the distribution company and unlocks the time series concerned so that they can be updated.	
3	DC	MSCONS7	The distribution company then sends a message containing corrected time series for metering site X to the gas supplier.	
4	GS	APERAK	The gas supplier receives the corrected time series and returns a positive APERAK to the distribution company. Checkpoint 1: Data required: <ul style="list-style-type: none"> - Message function = original message ('9' = Original) - Series ID - Metering site ID (GSRN) = X - Product codes = 3001 and 3003/3005 - Metered time interval = 1 day - Time period for quantity = 1 hour - Status code = metered value for the period ('136' = Final value, metered). 	
5	DC		The distribution company receives and processes the positive APERAK. Checkpoint 2: Data required: <ul style="list-style-type: none"> - Message reference (must refer to the consumption statement) - Error code = Approved ('100' = Object is approved) - Error description must be provided - Reference to series ID (must be the same as the series ID in the consumption statement). 	

3.10. BS-206: Consumption statement for daily read metering site, positive scenario

Test case BS-206-P3 Change to daylight saving time	Test case ID: L2.47
Description:	BS-206: Consumption statement for daily read metering site, positive scenario
Initiating party (first sender):	Distribution company
Processing party (first recipient):	Gas supplier
Special conditions:	<i>Submission of the message must be simulated to take place on the day when daylight saving time starts.</i>
Test data:	Metering site = #6

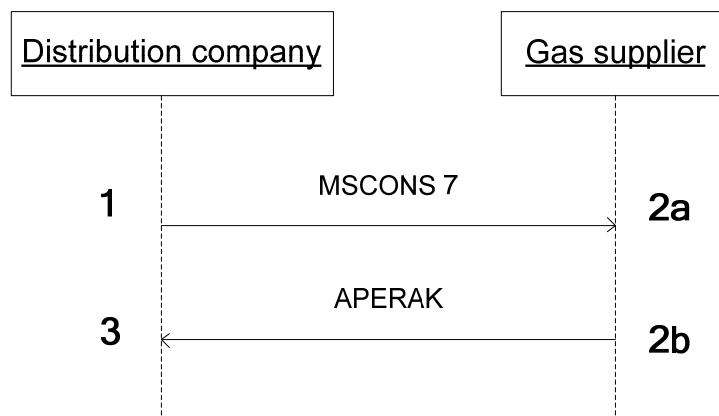


Step	Player	Message	Comment	OK
1	DC	MSCONS7	The distribution company has transmitted meter reading data for metering site X (daily metering) in its own application and therefore sends the consumption statement to the gas supplier. Only 23 hourly values are stated.	
2	GS	APERAK	<p>The gas supplier receives the consumption statement and returns a positive APERAK to the distribution company.</p> <p>Checkpoint 1: Check that: The message does not fail even though it contains only 23 hourly values.</p> <p>Data required:</p> <ul style="list-style-type: none"> – Message function = original message ('9' = Original) – Series ID (metering site ID) (GSRN) = X – Product codes = 3001 and 3003 – Metered time interval = 1 day – Status code = metered value for the period (Z01' = Manually corrected value, '99' = Final value, estimated, or '136' = Final value, metered). 	
3	DC		<p>The distribution company receives and processes the positive APERAK.</p> <p>Checkpoint 2:</p>	

	Data required: <ul style="list-style-type: none"> - Message reference (must refer to the consumption statement) - Error code = Approved ('100' = Object is approved) - Error description must be provided - Reference to transaction ID (must be the same as the series ID in the consumption statement).
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Test case BS-206-P4 Change from daylight saving time	Test case ID: L2.48
Description:	BS-206: Consumption statement for daily read metering site, positive scenario
Initiating party (first sender):	Distribution company
Processing party (first recipient):	Gas supplier
Special conditions:	<i>Submission of the message must be simulated to take place on the day when daylight saving time ends.</i>
Test data:	Metering site = #6

Test scenario (staged) – BT-008



Step	Player	Message	Comment	OK
1	DC	MSCONS7	The distribution company has transmitted meter readings for metering site X (daily metering) in its own application and then sends the consumption statement to the gas supplier. 25 hourly values have been stated.	
2	GS	APERAK	The gas supplier receives the consumption statement and returns a positive APERAK to the distribution company.	
			Checkpoint 1: Check that:	
			The transmission does not fail even though it contains 25 hourly values Data required: <ul style="list-style-type: none"> - Message function = original message ('9' = Original) - Series ID (metering site ID) (GSRN) = X - Product codes = 3001 and 3003 - Metered time interval = 1 day - Status code = value metered for the period (Z01' = Manually corrected value, '99' = Final value, estimated, or '136' = Final value, metered). 	
3	DC		The distribution company receives and processes the positive APERAK.	

			<p>Checkpoint 2: Data required:</p> <ul style="list-style-type: none"> - Message reference (must refer to the consumption statement) - Error code = Approved ('100' = Object is approved) - Error description must be provided - Reference to transaction ID (must be the same as the series ID in the consumption statement). 	
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3.11. BS-210: Disconnection and reconnection of metering site, positive scenario

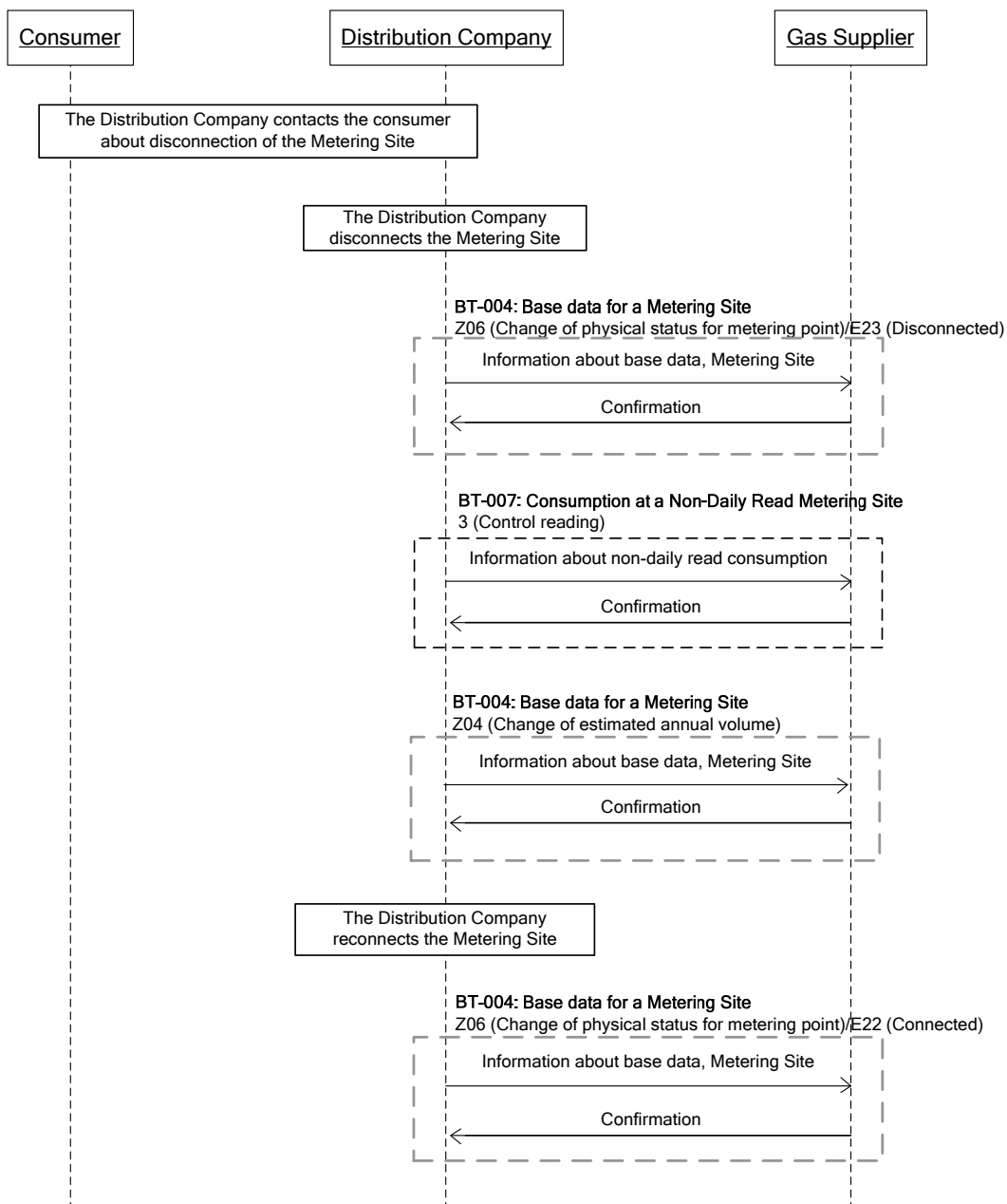


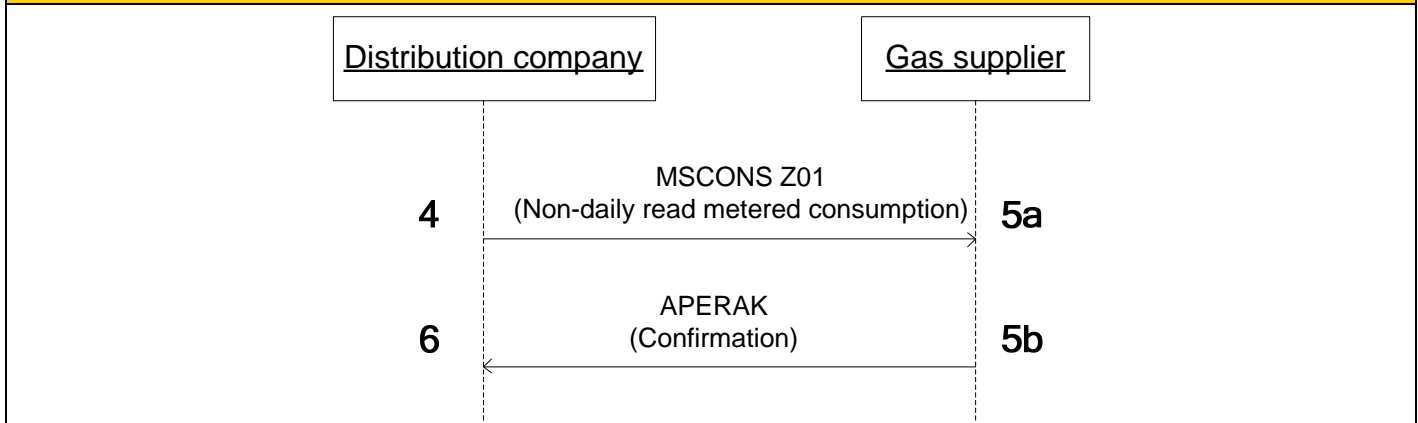
Figure 10: BS-210: Disconnection and reconnection of metering site

Test case BS-210-P1: Disconnection and reconnection		Test case ID: L2.49		
Description:		BS-210: Disconnection and reconnection of metering site, positive scenario		
Initiating party (first sender):		Distribution company		
Processing party (first recipient):		Gas supplier		
Special conditions:		It is assumed that it is a non-daily read metering site and that in this test scenario a consumption statement is sent from the distribution company to the gas supplier.		
Test data:		X = #2		
Test scenario (staged) – BT-004				
<pre> sequenceDiagram participant DC as Distribution company participant GS as Gas supplier DC->>GS: 1 UTILMD E07 (Submission of updated base data) GS-->>DC: 2a GS->>DC: 2b APERAK (Confirmation) DC-->>GS: 3 </pre>				
Step	Player	Message	Comment	OK
1	DC	UTILMDE07	The distribution company has chosen to disconnect metering site X from the natural gas network and therefore sends updated base data for metering site X to the gas supplier with indication of correct transaction cause, physical status of metering site and validity start date. The distribution company checks that the base data message is sent to the gas supplier.	
2	GS	APERAK	The gas supplier receives the base data and returns a positive APERAK to the distribution company.	
Checkpoint 1: Data required: <ul style="list-style-type: none"> – Transaction cause = Change of physical status of metering site ('Z06' = Change of physical status of metering site) – Metering site ID (GSRN) = X – Meter location address (indicated as municipality code (n4); street code (n4); house number (an4); floor (an2); door number/to the right/to the left (an4)) – Settlement method used at metering site – Next scheduled date of reading – Physical status of metering site = disconnected ('E23' = Disconnected) – Validity start date (in this test, the date of disconnection is set to today's date + two days) – Start date of supply (see test data) – Gas supplier (GLN) – Estimated annual consumption 				

			– Consumer party name and possible second consumer party name.	
3	DC		The distribution company receives and processes the positive APERAK.	
			Checkpoint 2: Data required: <ul style="list-style-type: none"> – Message reference (must refer to the submission of base data) – Error code = Approved ('100' = Object is approved) – Error description must be provided – Reference to transaction ID (must be the same as the transaction ID in the base data message). 	

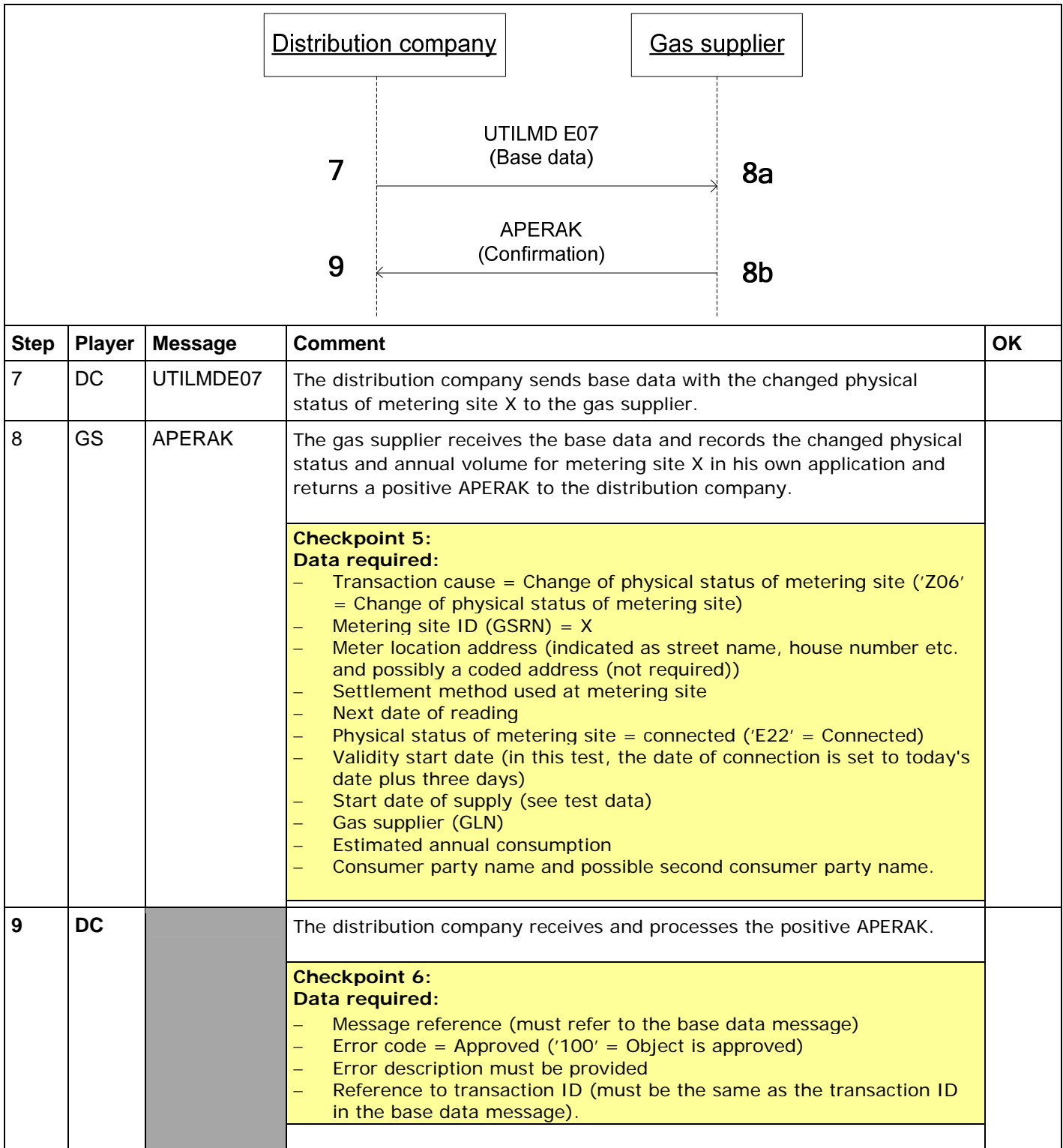
Test scenario (staged) – BT-007

NOTE! The subsequent steps are only to be performed if the site involved is a non-daily read metering site.



Step	Player	Message	Comment	OK
4	DC	MSCONSZ01	The distribution company has computed the consumption and sends a consumption statement for metering site X to the gas supplier.	
5	GS	APERAK	The gas supplier receives the consumption statement for metering site X and records it in his own application. A positive APERAK is sent to the distribution company.	
			Checkpoint 3: Data required: <ul style="list-style-type: none"> – Metering site ID (GSRN) = X – Time period (from end date of latest meter reading until disconnection) – Meter-reading reason = non-periodic ('3' = Statement made outside the period in which periodic reading is effected) – Product codes = 3002 and 3004/3006 – Quantity status = Quantity consumed in the period ('136' = Final value, metered). 	
6	DC		The distribution company receives and processes the positive APERAK.	
			Checkpoint 4: Data required: <ul style="list-style-type: none"> – Message reference (must refer to the message containing the consumption statement) – Error code = Approved ('100' = Object is approved) – Error description must be provided – Reference to series ID (must be the same as the series ID in the message containing the consumption statement). 	

Test scenario (staged) – BT-004

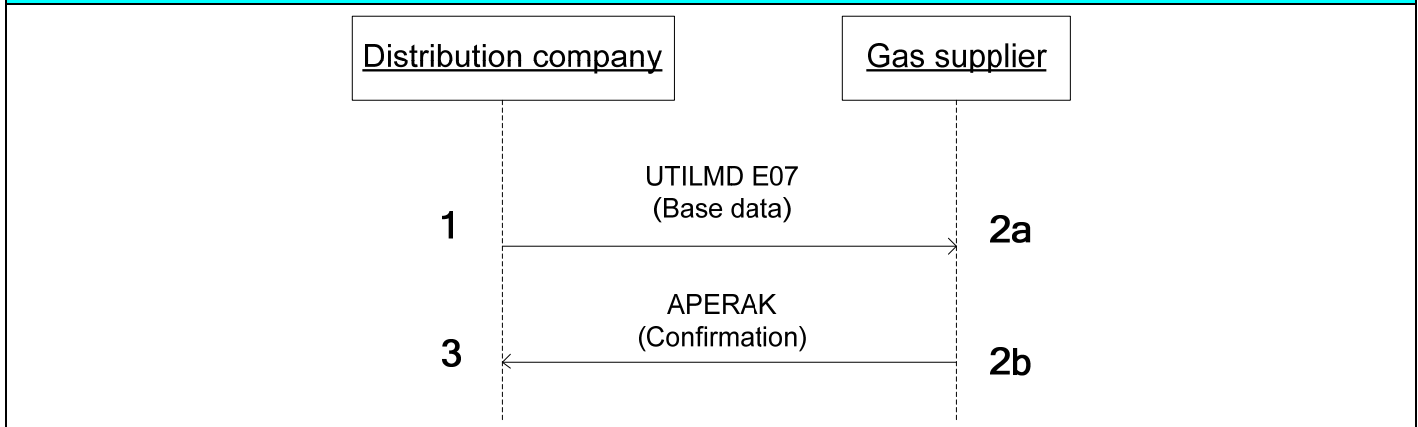


3.12. BS-210: Disconnection and reconnection of metering site, negative scenario

Description:	BS-210: Disconnection and reconnection of metering site, negative scenario
General conditions:	In the following, the steps refer to the original steps in BS-210-P1 (positive scenario for disconnection and reconnection of metering site). It is a precondition that any preceding steps have been carried out, for example if a test case starts with step 2, step 1 must have been completed.

**Test scenario (staged) – BT-004: Base data for metering site
Z06: Change of physical status of metering site**

UTILMD E07 (Check by supplier)



Test case BS-210-N1: No validity start date indicated in case of disconnection **Test case ID: L2.51**

Special conditions: This test case relates solely to steps 1-3.
Test data X = #2

Description of purpose (if any): -

Step	Player	Message	Comment	OK
1	GS	UTILMDE07	Validity start date (date of disconnection) not indicated.	
2	DC	APERAK	The distribution company receives the notification and returns a negative APERAK.	
3	GS		The gas supplier receives and processes the negative APERAK. Checkpoint 1: Data required: <ul style="list-style-type: none"> - Metering site ID (GSRN) = X - Message function (must be '34') - Error code (must be '42') - Error description must be provided. 	

3.13. BS-212: Change of meter-reading method, positive scenario

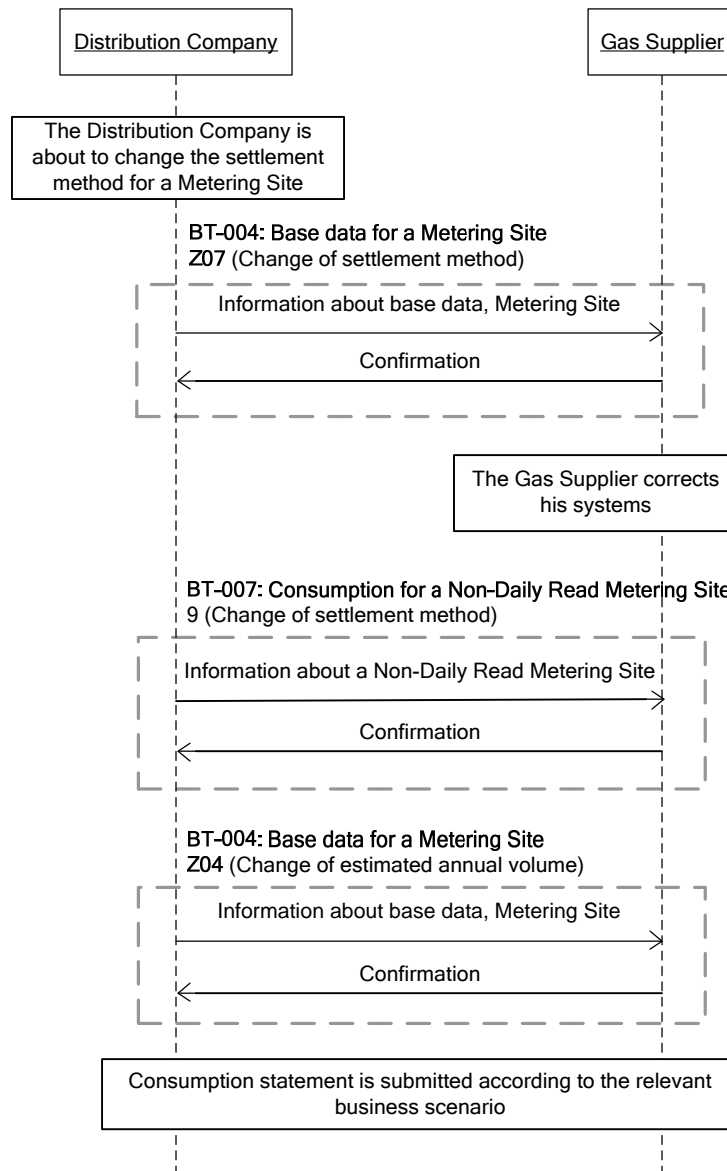


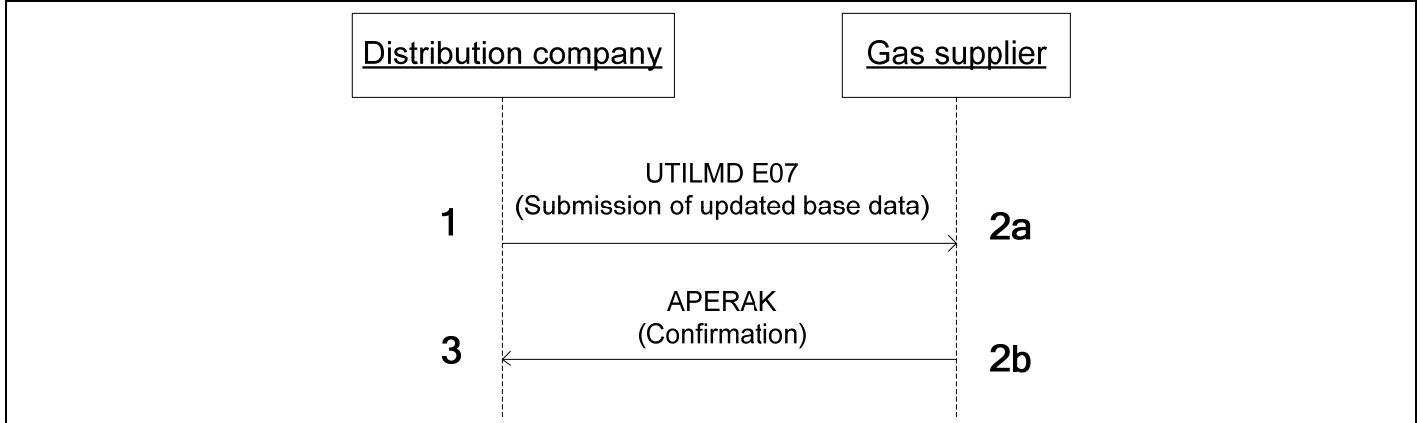
Figure 11: BS-212: Change of meter-reading method

Test case BS-212-P1: Change of meter-reading method	Test case ID: L2.52
Description:	BS-212: Change of meter-reading method, positive scenario
Initiating party (first sender):	Test system (distribution company)
Processing party (first recipient):	Gas supplier
Special conditions:	The test assumes that the meter-reading method is changed from non-daily metering to daily metering. The test also assumes that the distribution company

	changes the consumption when the meter-reading method is changed.
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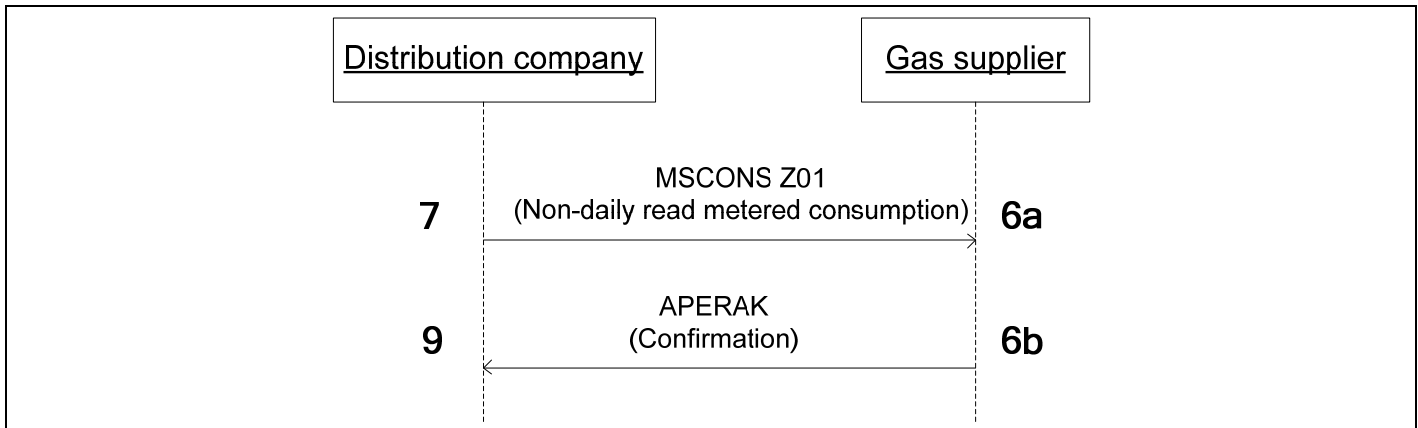
Test data:	X = #1
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Test scenario (staged) – BT-004 (for current supplier)



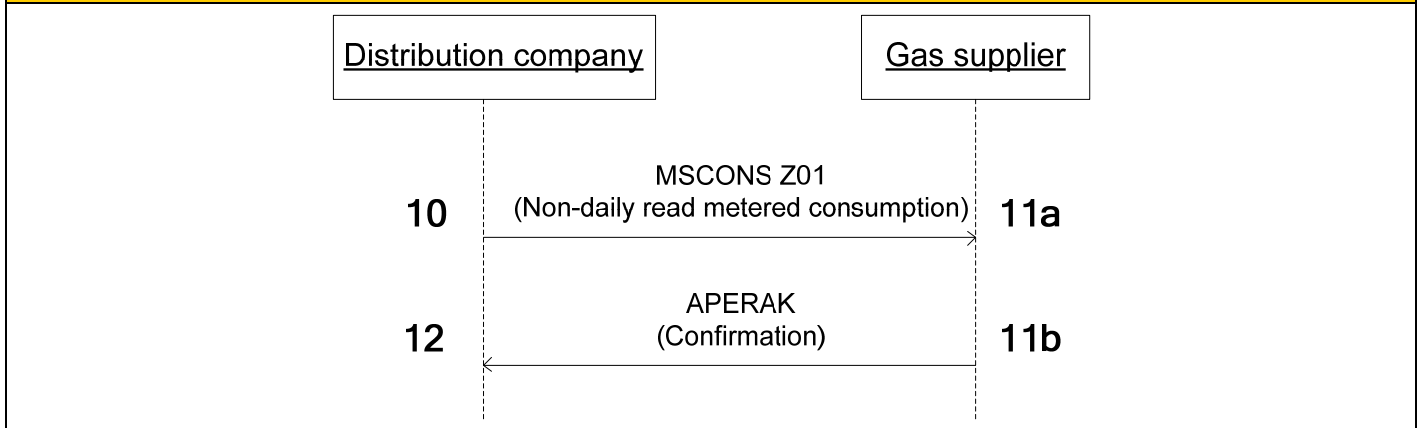
Step	Player	Message	Comment	OK
1	DC	UTILMDE07	The distribution company wants to change the meter-reading method for metering site X and therefore sends updated base data for metering site X to the gas supplier, with indication of correct transaction cause and validity start date. The distribution company checks that the base data message is sent to the gas supplier.	
2	GS	APERAK	<p>The gas supplier receives the base data and returns a positive APERAK to the distribution company.</p> <p>Checkpoint 1: Data required:</p> <ul style="list-style-type: none"> – Transaction cause = Change of meter-reading method ('Z07' = Change of meter-reading method) – Metering site ID (GSRN) = X – Meter location address (indicated as municipal code (n4); street code (n4); house number (an4); floor (an2); door number/to the right/to the left (an4)) – Meter-reading method used at metering site – Physical status of metering site – Validity start date (this month plus two months to the first day of a month) – Start date of supply (see test data) – Gas supplier (GLN) – Estimated annual consumption – Consumer party name and possible second consumer party name. 	
3	DC		Test system receives and processes the positive APERAK.	

Test scenario (staged) – BT-007
NOTE! The subsequent steps are only to be performed if a change is made from a non-daily read metering site to a daily read metering site.



Step	Player	Message	Comment	OK
7	DC	MSCONSZ01	The distribution company has calculated the consumption and sends a consumption statement for metering site X to the gas supplier.	
8	GS	APERAK	The gas supplier receives the consumption statement for metering site X and records it in his own application. A positive APERAK is returned to the distribution company. Checkpoint 2: Data required: <ul style="list-style-type: none"> - Metering site ID (GSRN) = X - Time period (end date = date for change of meter-reading method) - Reason code for reading = 9 - Product codes = 3002 and 3004/3006 - Quantity status = Quantity consumed in period ('136' = Final value, measured) - Quantity in whole kWh. 	
9	DC		The distribution company receives and processes the positive APERAK.	

Test scenario (staged) – BT-004
The following steps are conditional on the distribution company changing the consumption when the meter-reading method is changed.



Step	Player	Message	Comment	OK
10	DC	UTILMDE07	The distribution company sends base data with the changed estimated annual consumption for metering site X to the gas supplier.	
11	GS	APERAK	The gas supplier receives the base data and records the changed estimated annual consumption for metering site X in his own application and returns a positive APERAK to the distribution company.	

			<p>Checkpoint 3: Data required:</p> <ul style="list-style-type: none"> - Transaction cause = Change of estimated annual consumption ('Z04' = Change of estimated annual consumption) - Metering site ID (GSRN) = X - Meter location address (indicated as municipality code (n4); street code (n4); house number (an4); floor (an2); door number/to the right/to the left (an4)) - Meter-reading method used at metering site - Next scheduled date of reading - Physical status of metering site = connected ('E22' = Connected) - Validity start date (this month plus two months to the first day of a month) - Start date of supply (see test data) - Gas supplier (GLN) - Estimated annual consumption - Consumer party name and possible second consumer party name. 	
12	DC		<p>The distribution company receives and processes the positive APERAK.</p> <p>Checkpoint 4: Data required:</p> <ul style="list-style-type: none"> - Message reference (must refer to the base data message) - Error code = Approved ('100' = Object is approved) - Error description must be provided - Reference to transaction ID (must be the same as the transaction ID in the base data message). 	

3.14. BS-213: Submission of market share values, positive scenario

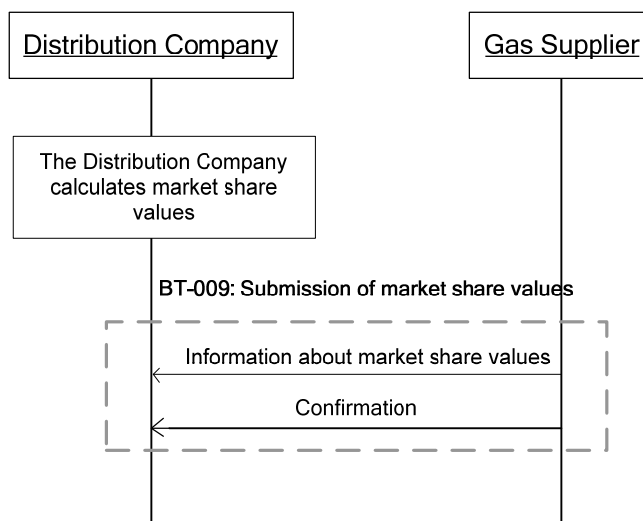


Figure 12: BS-213: Submission of market share values

Test case BS-213-P2: Submission of market share values				Test case ID: L2.55	
Description:				Market share values, positive scenario	
Initiating party (first sender):				Distribution company	
Processing party (first recipient):				Gas supplier	
Special conditions:				<i>(None)</i>	
Test data:				Test data series #18 is applied.	
Test scenario (staged) – BT-009					
<pre> sequenceDiagram participant DC as Distribution company participant GS as Gas supplier DC->>GS: MSCONS 7 GS-->>DC: APERAK </pre>					
Step	Player	Message	Comment	OK	
1	DC	MSCONS7	The distribution company has calculated the market share values and		

			sends them to the gas supplier.	
2	GS	APERAK	<p>The gas supplier receives the message and returns a positive APERAK to the distribution company.</p> <p>Checkpoint 1: Data required:</p> <ul style="list-style-type: none"> - Test data series #18 - Product codes = 3013 and 3014 - Period (1st day of a month) - Status code = 31 Estimated annual consumption. 	
3	DC		The distribution company receives and processes the APERAK.	

3.15. BS-215: Adjusted residual consumption

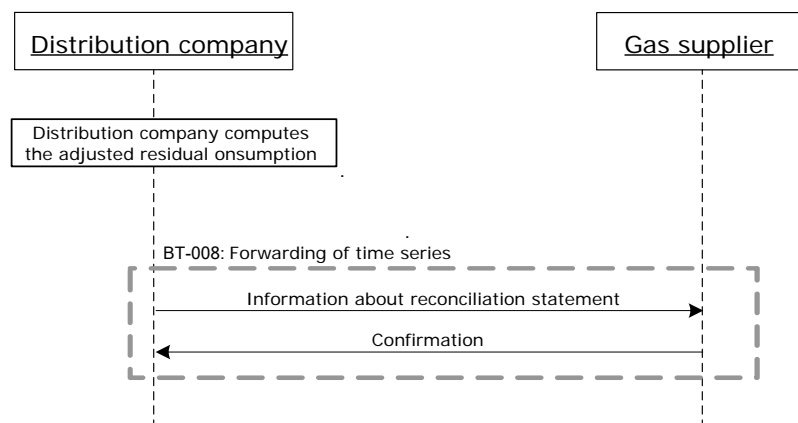
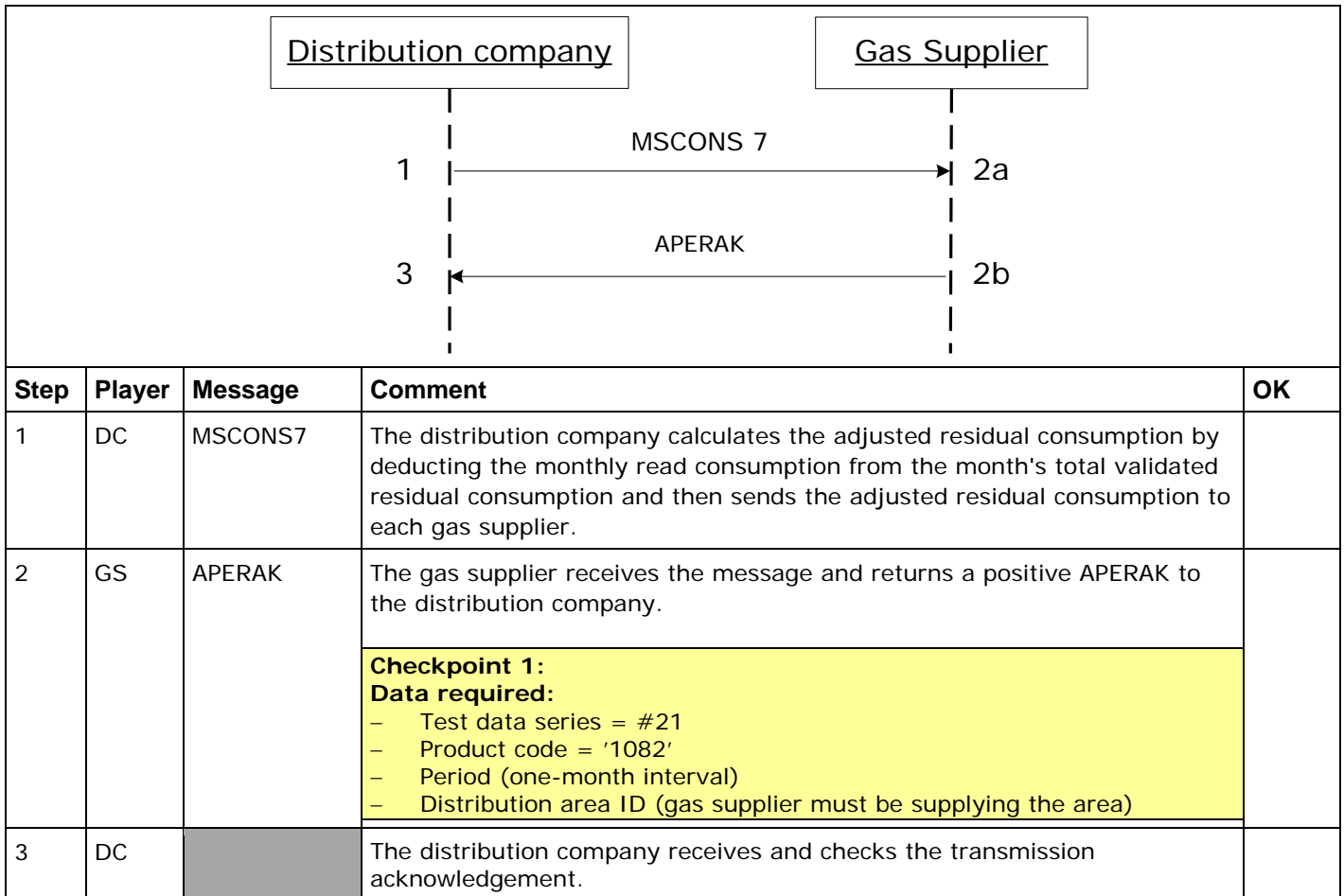


Figure 14: BS-215: Adjusted residual consumption

Test case BS-215-P1: Adjusted residual consumption	Test case ID: L2.56
Description:	The distribution company sends information about the adjusted residual consumption to the gas supplier once a month.
Initiating party (first sender):	Distribution company
Processing party (first recipient):	Gas supplier
Special conditions:	None
Test data:	X = #21
Test scenario (staged) – BT-008	



3.16. BS-216: Aggregated gas consumption

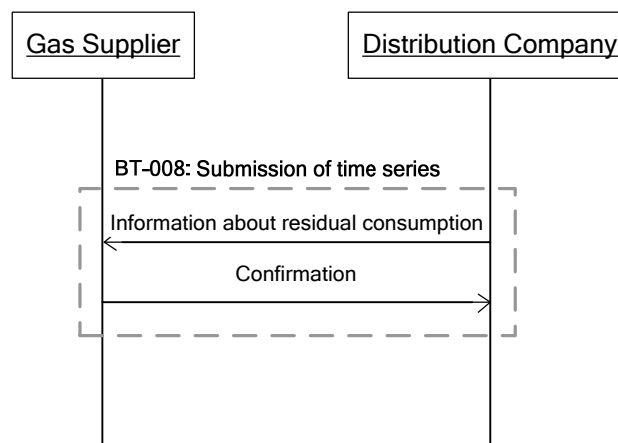
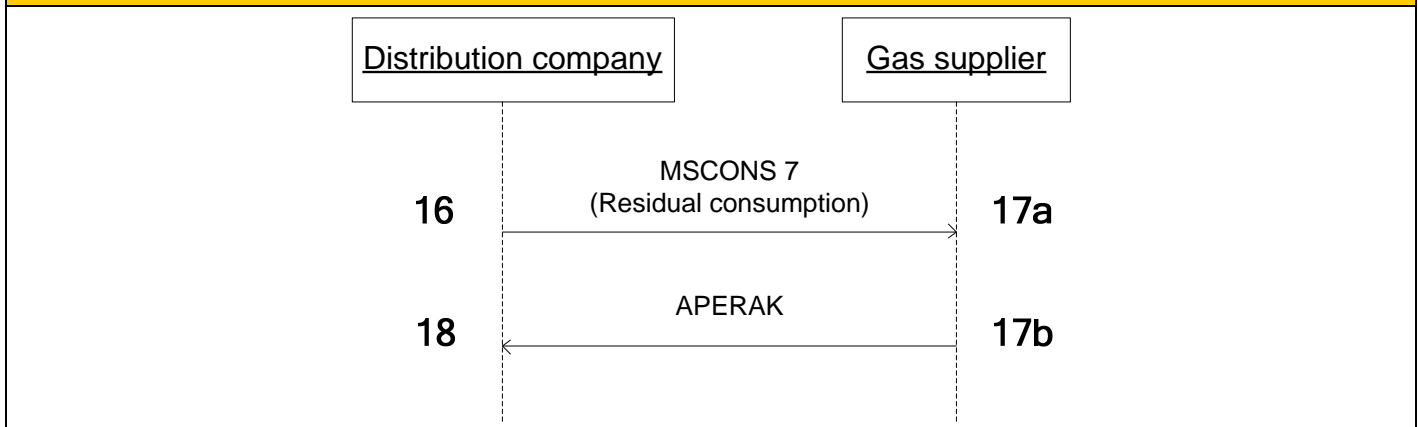


Figure 15: BS-216: Aggregated gas consumption: Phase 6 of total BS

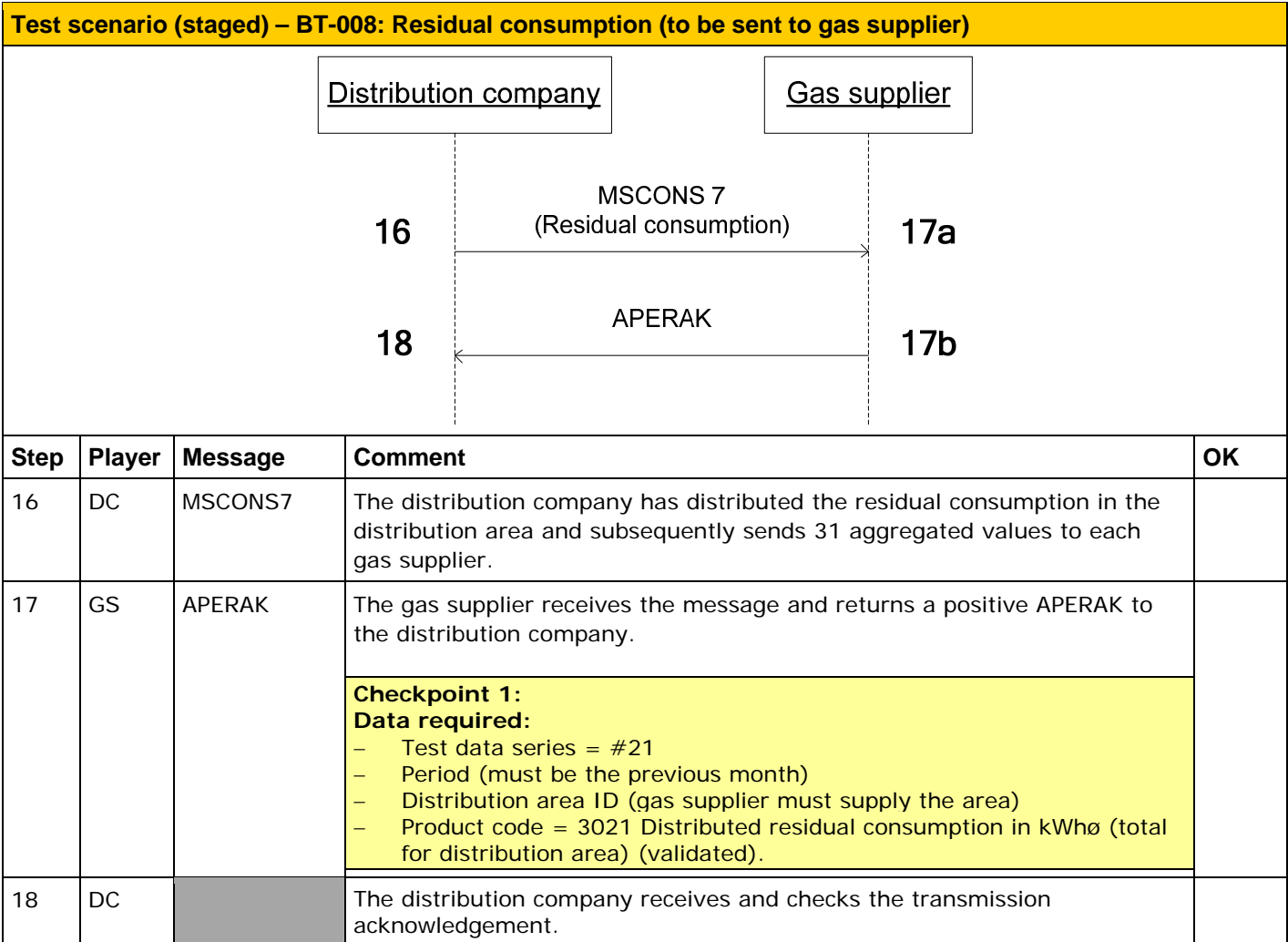
Test case BS-216-P1: Aggregated gas consumption – Overall scenario (Phase 6)	Test case ID: L2.57
Description:	BS-216: Residual consumption (to be sent to gas supplier), positive scenario
Initiating party (first sender):	Distribution company
Processing party (first recipient):	Gas supplier
Special conditions:	<i>None</i>
Test data:	X = #21

Test scenario (staged) – BT-008: Residual consumption (to be sent to gas supplier)



Step	Player	Message	Comment	OK
16	DC	MSCONS7	The distribution company has distributed the residual consumption in the distribution area and subsequently sends one aggregated value to the gas supplier.	
17	GS	APERAK	The gas supplier receives the message and returns a positive APERAK to the distribution company. Checkpoint 1: Data required: <ul style="list-style-type: none"> – Test data series = #21 – Period (must be the previous gas day) – Consumer portfolio no. (GSRN) (must be associated with the zone) – Product code = 3050 Distributed residual consumption in kWhø (total for distribution area). 	
18	DC		The distribution company receives and checks the transmission acknowledgement.	

Test case BS-216-P8: Aggregated gas consumption, monthly statement (6)	Test case ID: L2.58
Description:	Residual consumption (to be sent to gas supplier), positive scenario
Initiating party (first sender):	Distribution company
Processing party (first recipient):	Gas supplier
Special conditions:	<i>(None)</i>
Test data:	X = #21, monthly submission



3.17. BS-217: Reconciliation statement

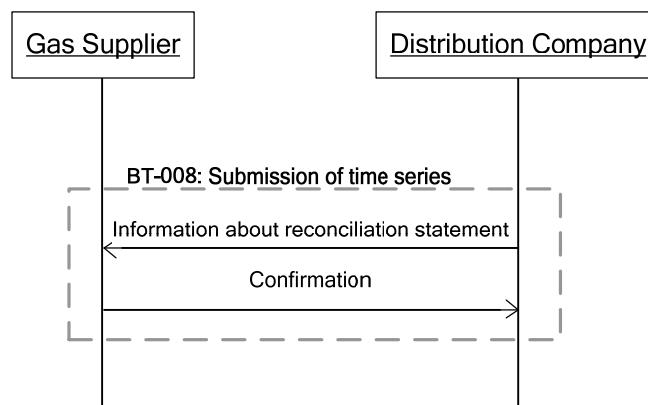
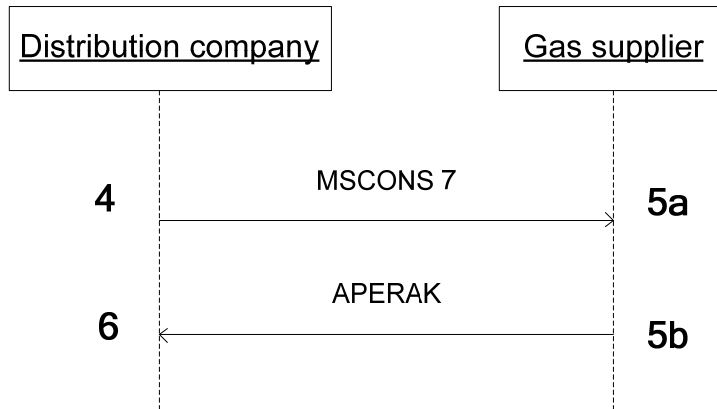


Figure 14: BS-217: Reconciliation statement: Phase 2 of total BS

Test case BS-217-P1: Reconciliation statement	Test case ID: L2.59
Description:	The distribution company sends a reconciliation statement to the gas supplier once a month.
Initiating party (first sender):	Distribution company
Processing party (first recipient):	Gas supplier
Special conditions:	<i>None</i>
Test data:	X = #22

Test scenario (staged) – BT-008



Step	Player	Message	Comment	OK
4	DC	MSCONS7	The distribution company prepares a statement of the periodised consumption and reconciliation quantities for each gas supplier based on the consumption realised 15 months previously and sends it to the gas supplier.	
5	GS	APERAK	The gas supplier receives the message and returns a positive APERAK to the distribution company. Checkpoint 3: Data required: <ul style="list-style-type: none"> – Consumer portfolio no. (GSRN) – Difference in residual consumption (1 value in kWhø with up to 3 decimals and with positive/negative sign). (Product code 3011) – Periodised residual consumption (1 value in kWhø with up to 3 decimals). (Product code 3012) – Distributed residual consumption (in kWhø with up the 3 decimals). (Product code 3053) – Period (one-month interval). 	
6	DC		The distribution company receives and checks the transmission acknowledgement.	

4. L3. – End of supply

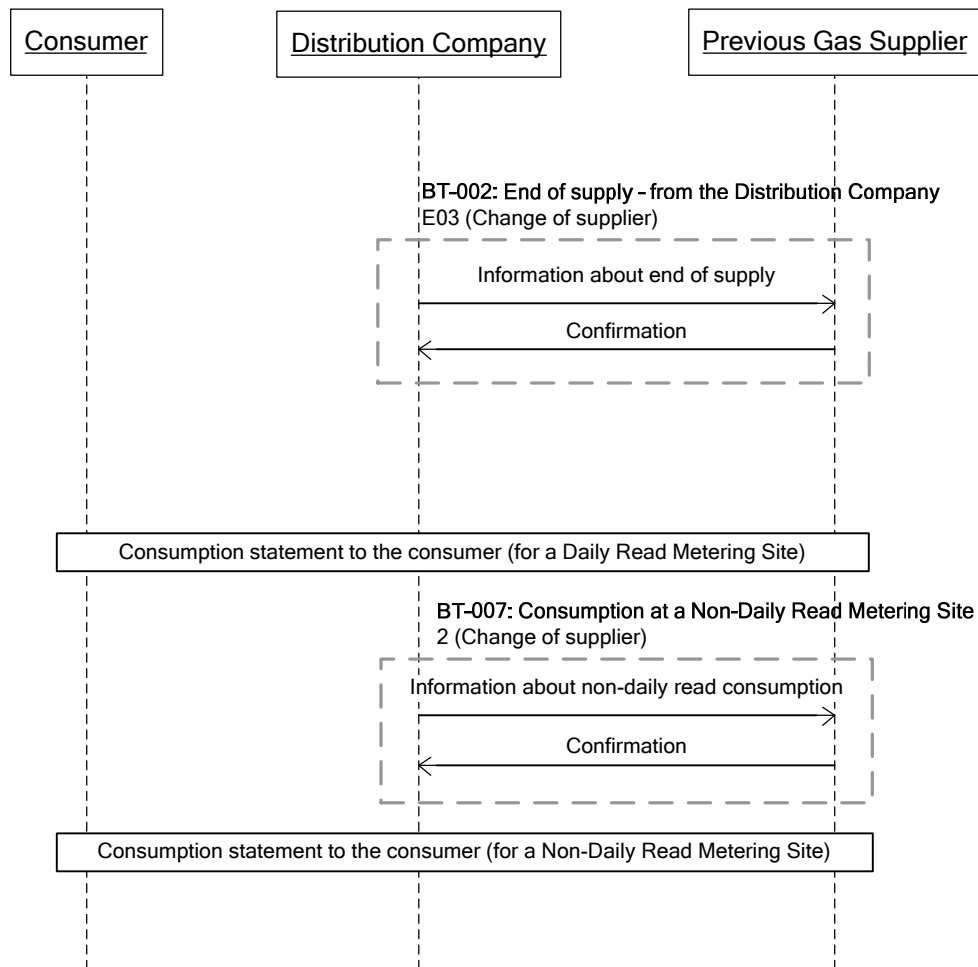
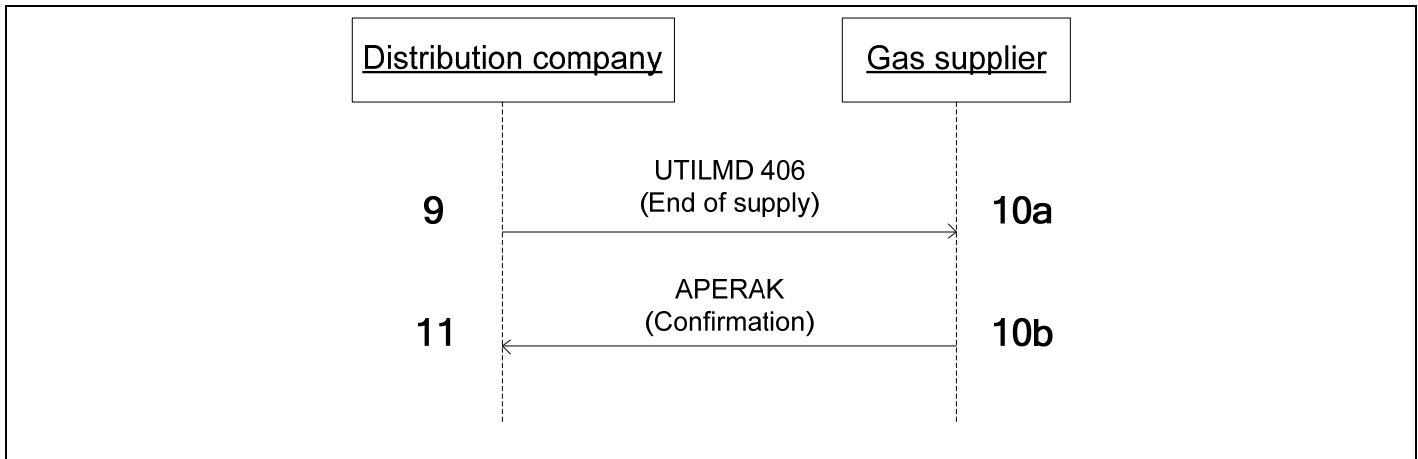


Figure 1b: BS-201: Change of supplier at normal notice: BT-002 and BT-007: End of supply

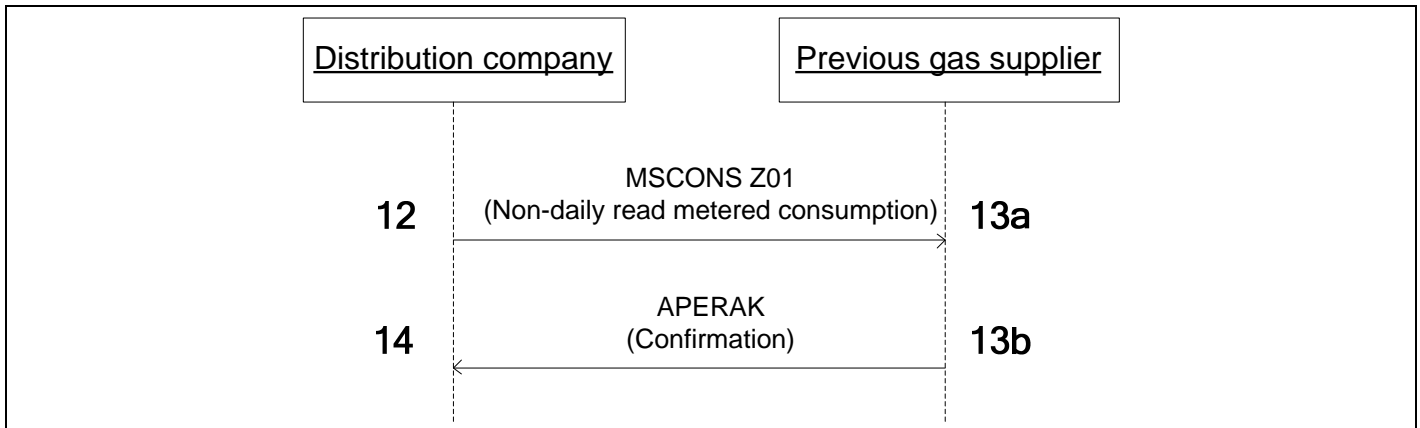
4.1. BS-201: Change of supplier - end of supply, positive scenario

Test case BS-201-P1: Change of supplier for a metering site, information about end of supply	
Description:	BS-201: Change of supplier, positive scenario
Initiating party (first sender):	Distribution company
Processing party (first recipient):	Gas supplier
Special conditions:	None
Test data:	X ₁ = #1 (non-daily metering)
Test scenario (staged) – BT-002	Test case ID: L3.10



Step	Player	Message	Comment	OK
9	DC	UTILMD406	On the sixth, seventh or eighth business day of a month, the distribution company has recorded end of supply for metering site X, with correct end date and with effect from the first day of the following month, in its own application and subsequently sends an end-of-supply message to the gas supplier.	
10	GS	APERAK	<p>The gas supplier receives and processes the end-of-supply message from the distribution company and acknowledges receipt by sending a positive APERAK.</p> <p>The gas supplier records the fact that the supply to the metering site must be discontinued.</p> <p>Checkpoint 1: Check that: The supply is discontinued.</p> <p>Data required:</p> <ul style="list-style-type: none"> – Metering site ID (GSRN) = X – End date (on the first day of the following month). 	
11	DC		<p>The distribution company receives and processes the positive APERAK and records it in his own application.</p> <p>Checkpoint 2: Data required:</p> <ul style="list-style-type: none"> – Error code = Approved ('100' = Object is approved) – Error description must be provided ('Godkendt/Approved'). <p>If possible, check also:</p> <ul style="list-style-type: none"> – Message reference (must refer to the end-of-supply message) – Reference to transaction ID (must be the same as the transaction ID in the end-of-supply message). 	

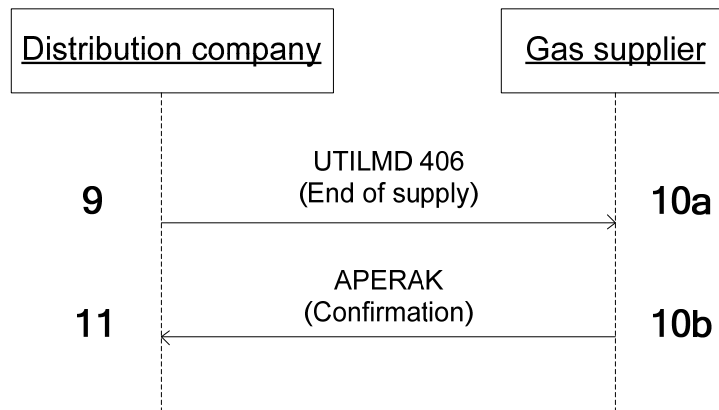
Test scenario (staged) – BT-007 NOTE! The following steps are only to be performed for non-daily read metering sites. **Test case ID: L3.11**



Test data:			X = #1	OK
Step	Player	Message	Comment	OK
12	DC	MSCONSZ01	The distribution company has calculated the consumption and sends a consumption statement for metering site X to the gas supplier.	
13	GS	APERAK	<p>The gas supplier receives the consumption statement for metering site X and records it in his own application. The gas supplier returns a positive APERAK to the distribution company.</p> <p>Checkpoint 1: Data required:</p> <ul style="list-style-type: none"> - Status code = Quantity consumed in period ('136' = Period quantity, reached) - Product codes = 3002 and 3004/3006 - Period = From end date of latest reading to Appointed date - Consumption indicated in kWh₀ and in Nm³/m³. 	
14	DC		The distribution company receives and processes the positive APERAK.	

4.2. BS-201: Change of supplier - end of supply, negative scenario

**Test scenario (staged) – BT-002: End of Supply – from MPA
E03: Change of Supplier**



Test case BS-201-N33: End date expired long ago **Test case ID: L3.13**

Special conditions: **This test case relates solely to steps 9-11.
Test data: X = #5**

Description of purpose (if any): -

9	DC	UTILMD406	Supply end date expired long ago.	
10	GS	APERAK	The gas supplier receives confirmation and returns a negative APERAK.	
11	DC		The distribution company receives and processes the negative APERAK and records it in its own application.	
			Checkpoint 1: Data required: <ul style="list-style-type: none"> - Metering site ID = X - Message function (must be '34') - Error code (must be '42') - Error description must be provided. 	

4.3. BS-202: End of supply, positive scenario

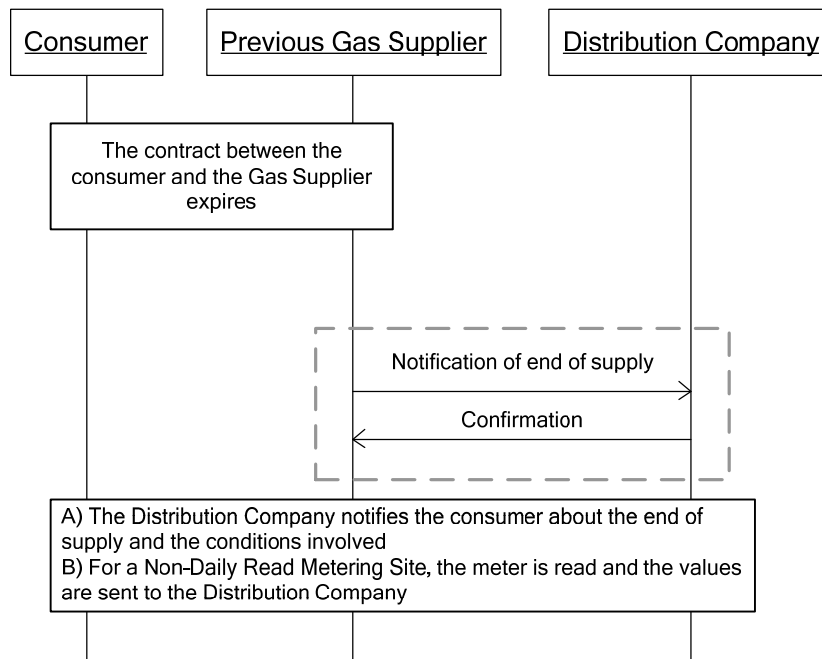


Figure 2 BS-202 End of supply BT-003.

Test case BS-202-P1: End of supply		Test case ID: L3.14		
Description:		BS-202: End of supply, positive scenario		
Initiating party (first sender):		Gas supplier		
Processing party (first recipient):		Distribution company		
Special conditions:		Deadline (see current deadlines) must be ignored. The period up until the appointed date must be ignored.		
Test data:		X = #3		
Test scenario (staged) – BT-003 End of supply				
<pre> sequenceDiagram participant Previous gas supplier participant Distribution company Previous gas supplier->>Distribution company: 1 UTILMD 432 (End of supply) 2a Distribution company-->>Previous gas supplier: 3 UTILMD 406 (Confirmation) 2b </pre>				
Step	Player	Message	Comment	OK
1	GS	UTILMD432	The gas supplier records (not later than on the tenth business day before the requested appointed date) the end of supply for metering site X in his own application and checks that the notification of end of supply is sent to	

			the distribution company.	
2	DC	UTILMD406	The distribution company receives the notification of end of supply and returns the confirmation to the gas supplier.	
			Checkpoint 1: Data required: <ul style="list-style-type: none"> – Metering site ID (GSRN) = X – Appointed date. 	
3	GS		The gas supplier receives the confirmation and records it in his own application.	
			Checkpoint 2: Data required: <ul style="list-style-type: none"> – Metering site ID (GSRN) = X – Appointed date. 	

4.4. BS-207/208/209: Relocation, end of supply

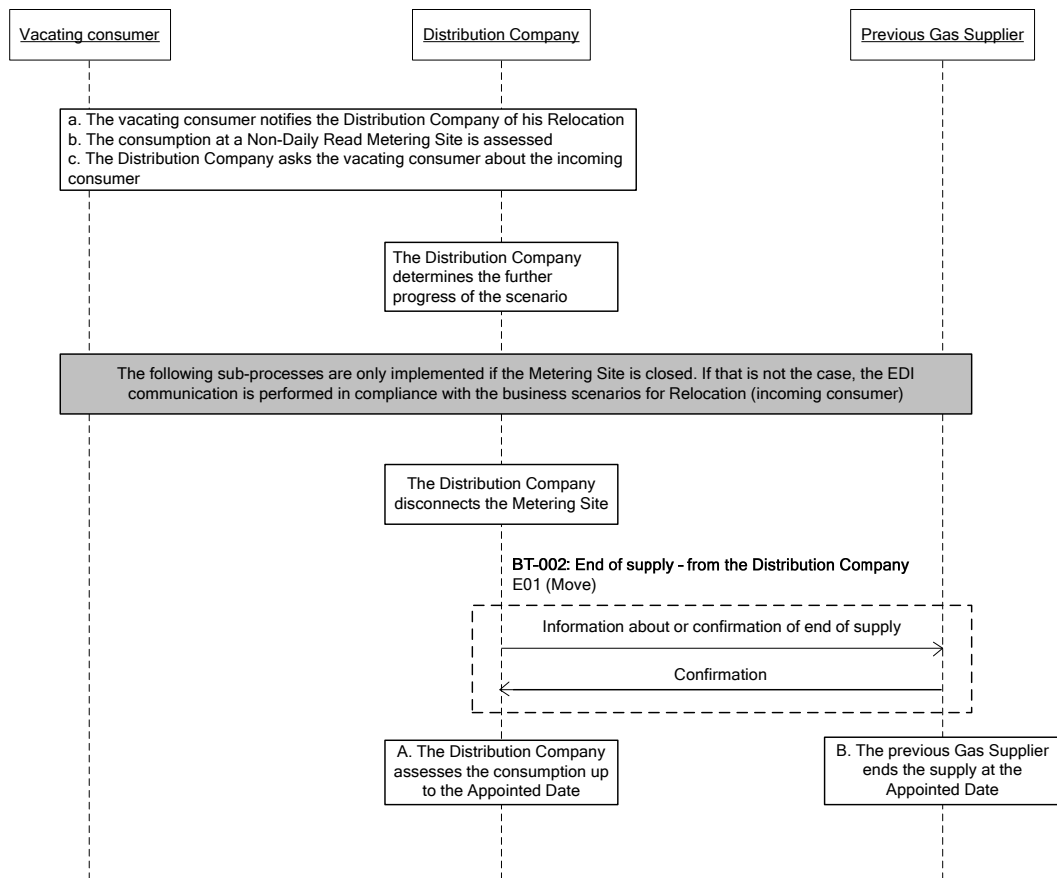
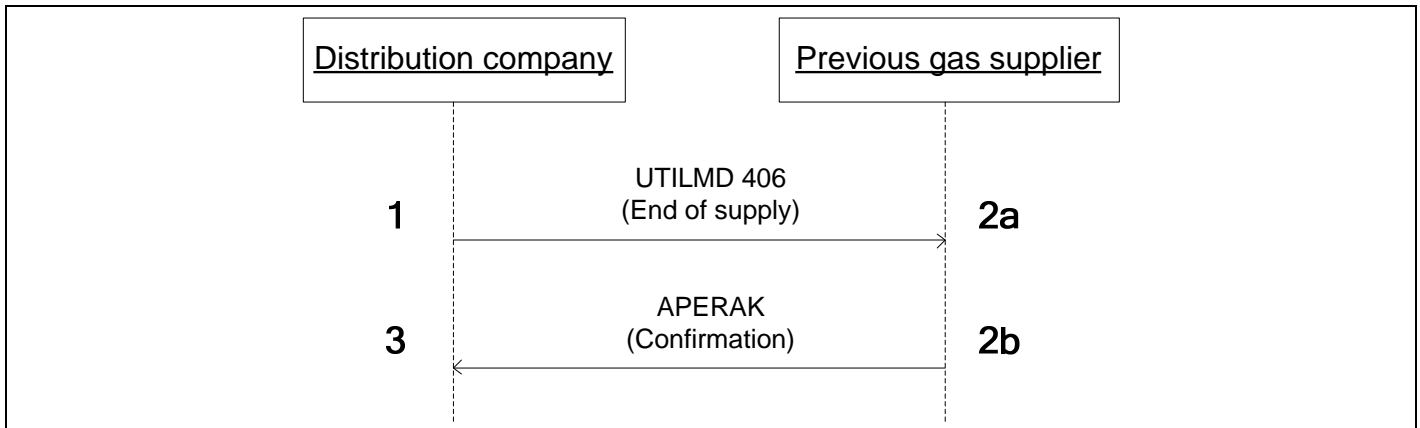


Figure 7: BS-207: Relocation - notified to the distribution company: End of supply BT-002.

Test case BS-207-P1: Relocation, vacating consumer	Test case ID: L3.17
Description:	BS-207: Relocation – notified to the distribution company, positive scenario
Initiating party (first sender):	Distribution company
Processing party (first recipient):	Gas supplier
Special conditions:	None
Test data:	X = #6, in the test the relocation date is set to the 15th day of the current month
Test scenario (staged) – BT-002	



Step	Player	Message	Comment	OK
1	DC	UTILMD406	The distribution company has recorded end of supply for metering site X in its own application and sends an end-of-supply message to the gas supplier.	
2	GS	APERAK	<p>The gas supplier receives and processes the end-of-supply message from the distribution company and sends a positive APERAK as acknowledgement. The gas supplier records that the supply of gas to the metering site is to be discontinued.</p> <p>Checkpoint 1: Check that: The supply is discontinued in the application.</p> <p>Data required:</p> <ul style="list-style-type: none"> - Metering site ID (GSRN) = X - Transaction cause = Relocation ('E01' = Relocation) - End date (for test purposes, the end date is set to the 15th day of a month). 	
3	DC		The distribution company receives and processes the positive APERAK and records it in its own application.	