GUIDELINE: CONSUMED ENERGY SCENARIOS (DISTRIBUTOR TO RETAILER) VICTORIA

DOCUMENT REF: PROJECT-80-23

VERSION: 2.0

DATE: 30 July 2012

FINAL

Contents

Version Release History

VERSION	DATE	BY	CHANGES
0.1	19 Aug 2010	S. Monaco	Initial Version
2.0	20 May 2012	C.Williamson (Multinet)	Scenario changes for Multinet (effective 30 July 2012)

1 Introduction and Background

In accordance with Attachment 6 clause 2.1 of the Retail Market Procedures (Victoria), AEMO receives consumed energy from the Distribution Businesses in accordance with the Consumed Energy Scenarios (Victoria).

This document details the validation rules that will apply with respect to the consumed energy data that Retailers receive from Victorian Distribution Businesses.

The Distribution Businesses must adjust any Estimated Consumed Energy value provided, with a new Consumed Energy whenever a subsequent Actual reading is available, as per Retail Market Procedures (Victoria) clause 2.4.3. The Consumed Energy Scenarios (Victoria) outlines a set of diagrams which represent scenarios associated with the validation of consumed energy data provided by the Distributor and transferred to AEMO.

In section 2 of this document, the Distribution Businesses have agreed a set of scenarios which detail valid transactions to manage the delivery of actual readings, estimated readings and adjustments to previously supplied readings to retailers.

The codes supplied will be the same as those supplied, by each Distribution Business, to each of the Retail Businesses and AEMO as part of the billing data stream viz:

“A” – assigned to an actual meter index reading;

“S” – assigned to a substituted index reading and where an actual meter index reading will most likely never occur;

“E” assigned where an estimated index reading was calculated as an actual meter index reading was not achieved on this occasion; or

“C” assigned where a customers own reading has been provided as an actual meter reading was not possible on this occasion.

The scenarios described in Section 2 may generate three possible validation results, they are:

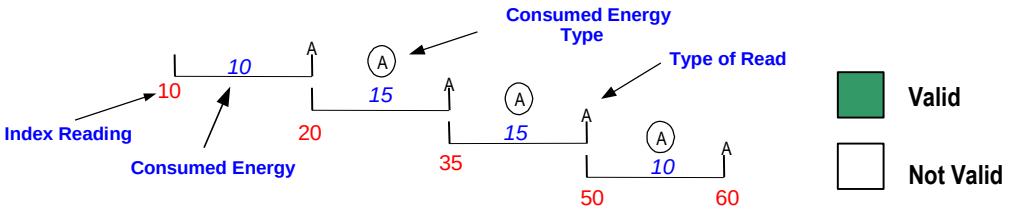
Valid data;

Invalid data, determined during the import process, and rejected by the Retail Businesses and AEMO for resubmission by Distribution Business; or

Incomplete data delivery, arising from integrity checks to identify data that has been missing for more than 70 days.

2 Consumed Energy Scenarios – Distributor to Retailer

2.1 Case 1A – Actual Reads (Previous Actual Reads)

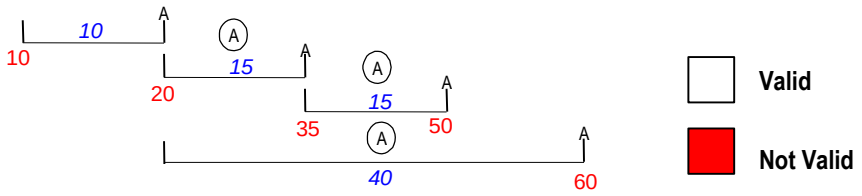


Comments

Standard scheduled reads or scheduled and special reads situation.

Data Element	Multinet	SP AusNet	Envestra
NMI	1234567890	1234567890	1234567890
NMI_Checksum	1	1	1
RB_Reference_Number			
Reason_for_Read	SCH	SCH	SCH
Gas_Meter_Number	AB1234	AB1234	AB1234
Gas_Meter_Units	M	M	M
Previous_Index_Value	50	50	50
Previous_Read_Date	2003-01-01	2003-01-01	2003-01-01
Current_Index_Value	60	60	60
Current_Read_Date	2003-03-01	2003-03-01	2003-03-01
Volume_Flow	10	10	10
Average_Heating_Value	37.5	37.5	37.5
Pressure_Correction_Factor	1.0109	1.0109	1.0109
Consumed_Energy	379	379	379
Type_of_Read	A	A	A
Estimation_Substitution_Type			
Estimation_Substitution_Reason_Code			
Meter_Status	Turned on	Turned on	Turned on
Next_Scheduled_Read_Date	2003-05-01	2003-05-01	2003-05-01
Hi_Low_Failure	N	N	N
Meter_Capacity_Failure	N	N	N
Adjustment_Reason_Code	NC	NC	NC
Energy_Calculation_Date_Stamp			
Energy_Calculation_Time_Stamp			

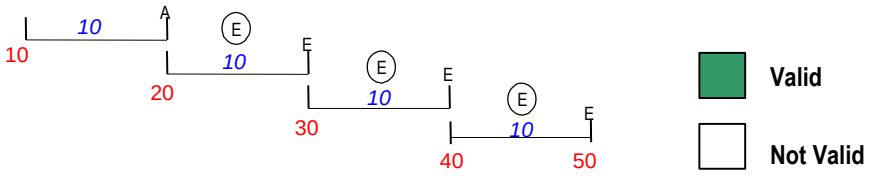
2.2 Case 1B – Actual Reads (Adjust Previous Actual Reads)



Comments

Distributors will not adjust actuals. Data will be delivered as per Case 1A.

2.3 Case 2 – Estimated Reads (Previous Estimated Reads)

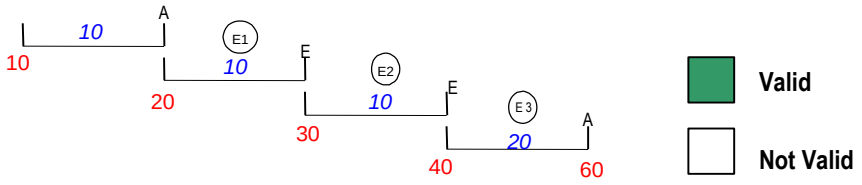


Comments

This is a standard scheduled read situation with no access or other read issue.

Data Element	Multinet	SP AusNet	Envestra
NMI	1234567890	1234567890	1234567890
NMI_Checksum	1	1	1
RB_Reference_Number			
Reason_for_Read	SCH	SCH	SCH
Gas_Meter_Number	AB1234	AB1234	AB1234
Gas_Meter_Units	M	M	M
Previous_Index_Value	40	40	40
Previous_Read_Date	2003-01-01	2003-01-01	2003-01-01
Current_Index_Value	50	50	50
Current_Read_Date	2003-03-01	2003-03-01	2003-03-01
Volume_Flow	10	10	10
Average_Heating_Value	37.5	37.5	37.5
Pressure_Correction_Factor	1.0109	1.0109	1.0109
Consumed_Energy	379	379	379
Type_of_Read	E	E	E
Estimation_Substitution_Type	E1	E1	E1
Estimation_Substitution_Reason_Code	09	09	09
Meter_Status	Turned on	Turned on	Turned on
Next_Scheduled_Read_Date	2003-05-01	2003-05-01	2003-05-01
Hi_Low_Failure	N	N	N
Meter_Capacity_Failure	N	N	N
Adjustment_Reason_Code	NC	NC	NC
Energy_Calculation_Date_Stamp			
Energy_Calculation_Time_Stamp			

2.4 Case 3A – Actual Read (Previous Estimate Read(s))

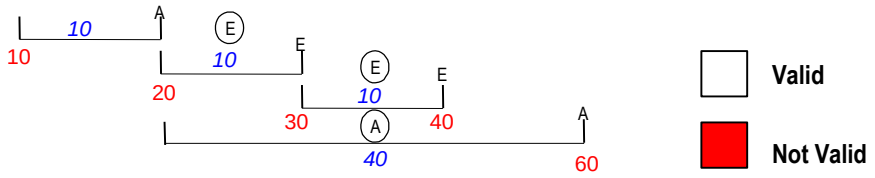


Comments

This is a standard cycle read using an Actual Read or could be a Special Read (i.e. Current Read could be Special Read).

Data Element	Multinet	SP AusNet	Envestra
NMI	1234567890	1234567890	1234567890
NMI_Checksum	1	1	1
RB_Reference_Number			
Reason_for_Read	SCH	SCH	SCH
Gas_Meter_Number	AB1234	AB1234	AB1234
Gas_Meter_Units	M	M	M
Previous_Index_Value	40	40	40
Previous_Read_Date	2003-01-01	2003-01-01	2003-01-01
Current_Index_Value	60	60	60
Current_Read_Date	2003-03-01	2003-03-01	2003-03-01
Volume_Flow	20	20	20
Average_Heating_Value	37.5	37.5	37.5
Pressure_Correction_Factor	1.0109	1.0109	1.0109
Consumed_Energy	758	758	758
Type_of_Read	A	A	A
Estimation_Substitution_Type			
Estimation_Substitution_Reason_Code			
Meter_Status	Turned on	Turned on	Turned on
Next_Scheduled_Read_Date	2003-05-01	2003-05-01	2003-05-01
Hi_Low_Failure	N	N	N
Meter_Capacity_Failure	N	N	N
Adjustment_Reason_Code	NC	NC	NC
Energy_Calculation_Date_Stamp			
Energy_Calculation_Time_Stamp			

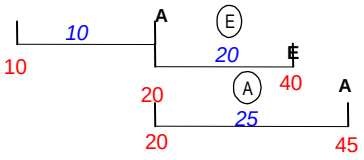
2.5 Case 3B – Actual Read (Adjust Previous Estimate Reads)



Comments

Distributors will not adjust except for Case F. Data will be delivered as per Case 3A. For SP AusNet and Multinet exceptions, refer to Case 3C.

2.6 Case 3C – Actual Read (Adjust Previous Estimate Reads)



SP AusNet & Multinet Valid in some circumstances

Not Valid most circumstances

Comments

SP AusNet will generally respond to this situation as per Case 3A i.e. will not "adjust" previous Estimate Read(s); however, SP AusNet under some circumstances will respond as per this Case. These circumstances are as follows:

- A read route or reads within a route have not been loaded for some reason, for example, an equipment failure. The SP AusNet system will generate and send Estimation_Substitution_Type of 1 or 2 with an "Estimation_Substitution_Reason_Code" of "10" = Delayed Read.
- A read exceptions in SP AusNet's system and requires SP AusNet action to rectify. SP AusNet may initiate the sending of an estimate with an "Estimation_Substitution_Reason_Code" of "10" = Delayed Read if the delay to rectify is assessed as likely to be longer than our data obligation.

When the reads are received by SP AusNet system, provided it is within 5 business days of the previously generated estimate system will generate flows and consumptions back to the previous read as illustrated above.

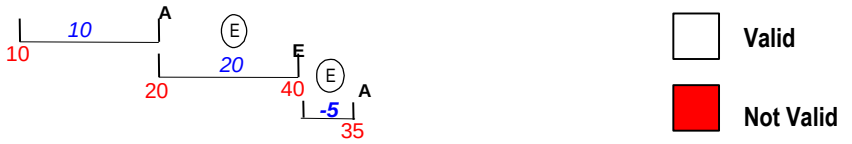
Multinet will apply the same logic as SP Ausnet in these circumstances.

Envestra agree with the scenario SP Ausnet have quoted above eg. Faulty meter reading equipment.

Data Element	Multinet	SP AusNet	Envestra
NMI	1234567890	1234567890	
NMI_Checksum	1	1	
RB_Reference_Number			
Reason_for_Read	SCH	SCH	
Gas_Meter_Number	AB1234	AB1234	
Gas_Meter_Units	M	M	
Previous_Index_Value	20	20	
Previous_Read_Date	2003-01-01	2003-01-01	
Current_Index_Value	45	45	
Current_Read_Date	2003-03-04	2003-03-04	
Volume_Flow	25	25	
Average_Heating_Value	37.5	37.5	
Pressure_Correction_Factor	1.0109	1.0109	
Consumed_Energy	948	948	
Type_of_Read	A	A	
Estimation_Substitution_Type			
Estimation_Substitution_Reason_Code			
Meter_Status	Turned on	Turned on	

Next_Scheduled_Read_Date	2003-05-01	2003-05-01
Hi_Low_Failure	N	N
Meter_Capacity_Failure	N	N
Adjustment_Reason_Code	SC	SC
Energy_Calculation_Date_Stamp		
Energy_Calculation_Time_Stamp		

2.7 Case 3D – Actual Read (Lower than Previous Estimate Read)



Comments

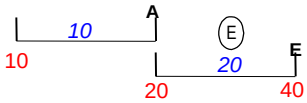
Distributors will not send "negative" consumptions.

If the situation occurred where an actual read arrived with an index value less than the previous estimated index value:

- SP AusNet and Envestra will respond as specified in Case 3E. That is, will "deactivate" the previous estimate read in their system and send the new actual with the first available previous read index that causes the consumption to be positive.
- Multinet will respond as specified in Case 3E where the period between the estimate and the new actual is less than 5 days for the last effected period. For all other cases and previous periods it will generate and send new estimates based on a linear allocation of load across impacted periods as per the sequence 3Da (see below).

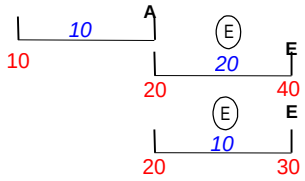
2.8 Case 3Da – Actual Read (Lower than Previous Estimate Read – Multinet Solution)

Original Estimate



Data Element	Multinet	SP AusNet	Envestra
NMI	1234567890		
NMI_Checksum	1		
RB_Reference_Number			
Reason_for_Read	SCH		
Gas_Meter_Number	AB1234		
Gas_Meter_Units	M		
Previous_Index_Value	20		
Previous_Read_Date	2003-01-01		
Current_Index_Value	40		
Current_Read_Date	2003-02-01		
Volume_Flow	20		
Average_Heating_Value	37.5		
Pressure_Correction_Factor	1.0109		
Consumed_Energy	758		
Type_of_Read	E		
Estimation_Substitution_Type	E1		
Estimation_Substitution_Reason_Code	02		
Meter_Status	Turned on		
Next_Scheduled_Read_Date	2003-03-01		
Hi_Low_Failure	N		
Meter_Capacity_Failure	N		
Adjustment_Reason_Code	NC		
Energy_Calculation_Date_Stamp			
Energy_Calculation_Time_Stamp			

Multinet Step 1 – Re-estimate



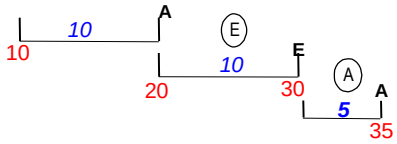
Multinet - Adjustment Estimate Sent:

When the lower Actual Read is received, it will initially be flagged as invalid. The business will report on these readings and automatically re-estimate the previous reading to a proportional amount (based on the total consumption and number of days between the previous read date of the Estimate Read and the Current Read Date of the Actual Read). This re-estimate will be sent to the Retailers and AEMO.

Initial Estimate Sent: When the estimate is first created, it is sent to the Retailer.

Data Element	Multinet	SP AusNet	Envestra
NMI	1234567890		
NMI_Checksum	1		
RB_Reference_Number			
Reason_for_Read	SCH		
Gas_Meter_Number	AB1234		
Gas_Meter_Units	M		
Previous_Index_Value	20		
Previous_Read_Date	2003-01-01		
Current_Index_Value	30		
Current_Read_Date	2003-02-01		
Volume_Flow	10		
Average_Heating_Value	37.5		
Pressure_Correction_Factor	1.0109		
Consumed_Energy	379		
Type_of_Read	E		
Estimation_Substitution_Type	E3		
Estimation_Substitution_Reason_Code	02		
Meter_Status	Turned on		
Next_Scheduled_Read_Date	2003-03-01		
Hi_Low_Failure	N		
Meter_Capacity_Failure	N		
Adjustment_Reason_Code	OE		
Energy_Calculation_Date_Stamp			
Energy_Calculation_Time_Stamp			

Multinet Step 2 Send Actual

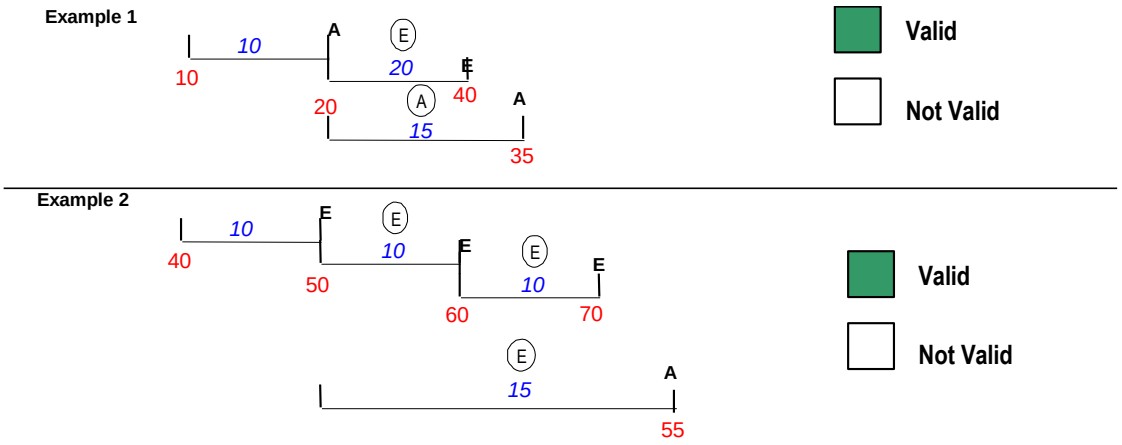


Actual Read Sent

The Actual Read will then be verified since it is now greater than the previous reading. This will result in the Actual Read being sent to the Retailer and AEMO.

Data Element	Multinet	SP AusNet	Envestra
NMI	1234567890		
NMI_Checksum	1		
RB_Reference_Number			
Reason_for_Read	SRA		
Gas_Meter_Number	AB1234		
Gas_Meter_Units	M		
Previous_Index_Value	30		
Previous_Read_Date	2003-02-01		
Current_Index_Value	35		
Current_Read_Date	2003-02-15		
Volume_Flow	5		
Average_Heating_Value	37.5		
Pressure_Correction_Factor	1.0109		
Consumed_Energy	189		
Type_of_Read	A		
Estimation_Substitution_Type			
Estimation_Substitution_Reason_Code			
Meter_Status	Turned on		
Next_Scheduled_Read_Date	2003-03-01		
Hi_Low_Failure	N		
Meter_Capacity_Failure	N		
Adjustment_Reason_Code	NC		
Energy_Calculation_Date_Stamp			
Energy_Calculation_Time_Stamp			

2.9 Case 3E – Actual Read (Lower than Previous Estimate Read)



Comments

Multinet – This case will usually occur if a pending read is overdue and is estimated. After the estimate is sent the actual read is received but the meter was read after the expected read date.

For example 1 Multinet will behave as shown in this example where the adjusting read is received within 5 days of the estimate being sent.

For example 2 Refer sequence shown in Case 3Da.

This case will usually occur if a pending read is overdue and is estimated. After the estimate is sent the actual read is received but the meter was read after the expected read date

- SP AusNet - Scenario: a meter reader could not obtain a real reading due to say Access Overgrown. Then the Retailer issues a Check Read request through the SpecialReadRequest. An Actual Read is obtained and passed back to the Retailer with SpecialReadReasonCode of Check Read (SRR (Special Reference Read)). This reading creates negative consumption if the previous estimate is used as the base reading, therefore SP AusNet will search for the next reading in the readings history which produces a positive consumption.

Note:

- Envestra - Agreed Scenario – Adjustment code of OE.

Data Element	Multinet	SP AusNet	Envestra
NMI		1234567890	1234567890
NMI_Checksum		1	1
RB_Reference_Number			
Reason_for_Read		SRR	SCH
Gas_Meter_Number		AB1234	AB1234
Gas_Meter_Units		M	M
Previous_Index_Value		20	20
Previous_Read_Date		2003-01-01	2003-01-01
Current_Index_Value		35	35
Current_Read_Date		2003-03-01	2003-03-01

Volume_Flow		15	15
Average_Heating_Value		37.5	37.5
Pressure_Correction_Factor		1.0109	1.0109
Consumed_Energy		569	569
Type_of_Read		A	A
Estimation_Substitution_Type			
Estimation_Substitution_Reason_Code			
Meter_Status		Turned on	Turned on
Next_Scheduled_Read_Date		2003-05-01	2003-05-01
Hi_Low_Failure		N	N
Meter_Capacity_Failure		N	N
Adjustment_Reason_Code		OE	OE
Energy_Calculation_Date_Stamp			
Energy_Calculation_Time_Stamp			

2.10 Case 3F – Actual Read (Earlier than Previous Estimate Read)

Comments

- SP AusNet – this could occur if a read taken before the NSRD is delayed in the field and an estimate is generated for the NSRD.

  SP AusNet will "deactivate" the estimate read in their system and the next read will commence with a previous read of 35.

Multinet foresees this event could occur in two situations

a) If a read route or reads within a route have not been loaded for some reason, for example, an equipment failure. The Multinet system will have generated and sent an Estimation_Substitution_Type of 1 or 2 with an Estimation_Substitution_Reason_Code" of "10" = Delayed Read.
   Multinet will "deactivate" the estimate read in their system and provide an MDN up to the new read date, the next read will commence from that read.

b) If a read taken in the field outside of normal business processes is updated into systems after the estimate read has already generated and sent to the market.
   Multinet will send the actual read, and then re-estimate from the date of the actual read to the previous estimation date..

- Envestra – would not adjust the read if an earlier Actual read is obtained and that Envestra had to estimate (no access) at the Scheduled read date.

2.11 Case 4A – Estimate Read (Adjust Previous Estimate Read)

Comments

- SP AusNet - Will only replace an estimate with another estimate when advised by the Retailer that a customer own read has occurred (or where Retailer can present reasonable argument of bad estimate) and SP AusNet chooses to accept the proposed read. The following sample data refers to the instance when this occurs via Meter Data Verify Request.
- Envestra and Multinet – This is a valid scenario – would use Type 3 Estimation Methodology – agreed value between Retailer and Distributor.

Data Element	Multinet	SP AusNet	Envestra
NMI	1234567890	1234567890	1234567890
NMI_Checksum	1	1	1
RB_Reference_Number			
Reason_for_Read	SCH	MDV	SCH
Gas_Meter_Number	123546	123555	123546
Gas_Meter_Units	M	M	M
Previous_Index_Value	20	20	20
Previous_Read_Date	2003-01-01	2003-01-01	2003-01-01
Current_Index_Value	40	40	40
Current_Read_Date	2003-03-01	2003-03-01	2003-03-01
Volume_Flow	20	20	20
Average_Heating_Value	37.5	37.5	37.5
Pressure_Correction_Factor	1.0109	1.0109	1.0109
Consumed_Energy	758	758	758
Type_of_Read	E	E or C	E
Estimation_Substitution_Type	E3	E3	E3
Estimation_Substitution_Reason_Code	02	11	02
Meter_Status	Turned on	Turned on	Turned on
Next_Scheduled_Read_Date	2003-05-01	2003-05-01	2003-05-01
Hi_Low_Failure	N	N	N
Meter_Capacity_Failure	N	N	N
Adjustment_Reason_Code	UE	UE	UE
Energy_Calculation_Date_Stamp			
Energy_Calculation_Time_Stamp			

2.12 Case 4B – Estimate Read (Earlier than Previous Estimate Read)

Comments
Nil

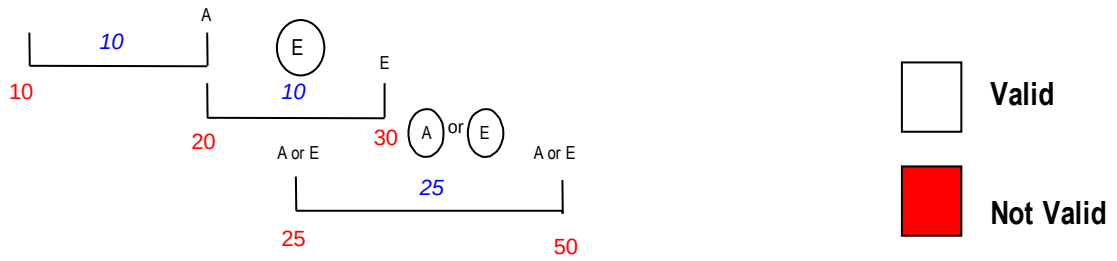
2.13 Case 5A – Estimate Read (Adjust Previous Actual Read)

Comments

- Envestra and Multinet – This case cannot occur.
- SP AusNet – This may occur when a meter has stopped and the Actual Read is no longer representative of actual gas usage at the premise. Therefore a meter remove read estimate with a reason of damaged meter is sent to replace it and a meter install read will be sent next.

Data Element	Multinet	SP AusNet	Envestra
NMI		1234567890	
NMI_Checksum		1	
RB_Reference_Number			
Reason_for_Read		REM	
Gas_Meter_Number		AB1234	
Gas_Meter_Units		M	
Previous_Index_Value		20	

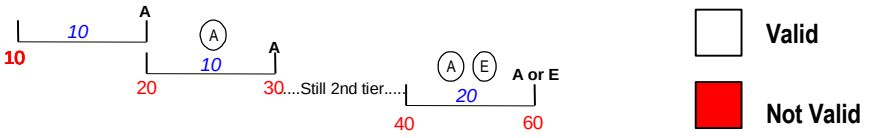
2.14 Case 6 – Actual or Estimate Read (Not aligned with previous read end date)



Comments

Distributors will not send transaction with non contiguous data. Data would be sent as Case 1A or Case 3A.

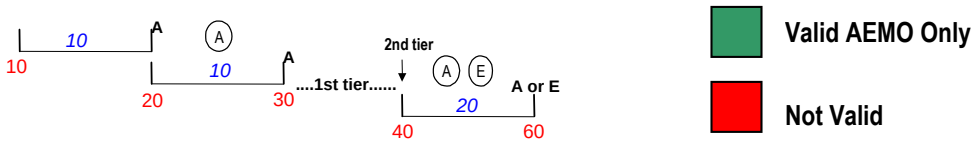
2.15 Case 7A – Actual or Estimate Read start date not aligned with previous read end date (2nd Tier)



Comments

Distributors will not send transaction with non contiguous data. Data would be sent as Case 1A or Case 3A.

2.16 Case 7B – Actual or Estimate Read start date not aligned with previous read end date (1st Tier)



Comments

Distributors will not send transaction with non contiguous data. Data would be sent as Case 1A or Case 3A.

Data Element	Multinet	SP AusNet	Envestra
NMI	1234567890	1234567890	1234567890
NMI_Checksum	1	1	1
RB_Reference_Number			
Reason_for_Read	SCH	SCH	SCH
Gas_Meter_Number	AB1234	AB1234	AB1234
Gas_Meter_Units	M	M	M
Previous_Index_Value	40	40	40
Previous_Read_Date	2003-01-01	2003-01-01	2003-01-01
Current_Index_Value	60	60	60
Current_Read_Date	2003-03-01	2003-03-01	2003-03-01
Volume_Flow	20	20	20
Average_Heating_Value	37.5	37.5	37.5
Pressure_Correction_Factor	1.0109	1.0109	1.0109
Consumed_Energy	758	758	758
Type_of_Read	A	A	A
Estimation_Substitution_Type			
Estimation_Substitution_Reason_Code			
Meter_Status	Turned on	Turned on	Turned on
Next_Scheduled_Read_Date	2003-05-01	2003-05-01	2003-05-01
Hi_Low_Failure	N	N	N
Meter_Capacity_Failure	N	N	N
Adjustment_Reason_Code	NC	NC	NC
Energy_Calculation_Date_Stamp			
Energy_Calculation_Time_Stamp			