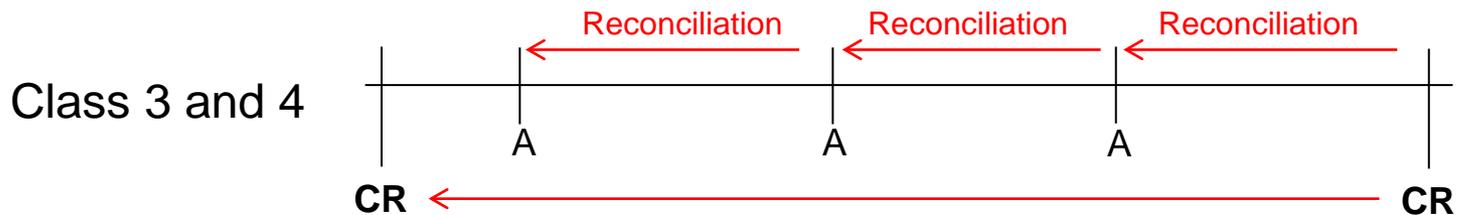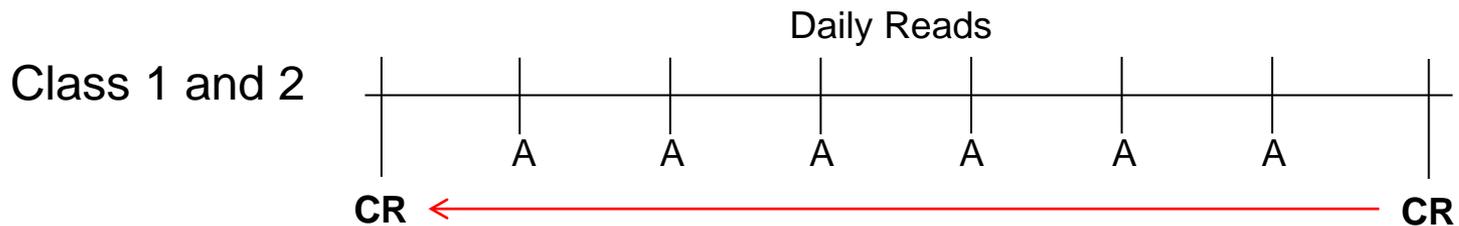# Class Changes
## 24th October 2014

- This presentation aims to provide an overview of the process for Class change specifically the reconciliation and Check Read processes.

- The presentation also covers scenarios where there is a Shipper Transfer and Class change combined.

- Where a combined change of Shipper and Class change is associated with DRE/AMR equipment the focus is around apportioning the drift following a Check Read.

# Why have a Check Read?

- Check Reads are required where equipment (AMR) is installed that derives the reads from the meter.

- The Check Read identifies where the meter and the equipment are not synchronised and will detect any drift between the meter and the equipment. Any drift is then apportioned across the relevant period.

# Class Change

| Process Description | Process for initial Allocation | Process for Energy Balancing close-out | Read Submission Timescales | Type of Read Submission | AQ Calculation | Reconciliation |
|---|---|---|---|---|---|---|
| **Class 1 – Daily Metered Time Critical Readings** | Uses daily read | Uses daily read | By 11am on GFD+1 | All reads daily on GFD+1 | Monthly using Optimum Read | Meter Point level following a site visit or estimate |
| **Class 2 - Daily Metered not Time Critical Readings** | Transporter estimate | Uses daily read | By end of GFD+1 (05.59 am) | All reads daily by end of GFD+1 | Monthly using Optimum Read | Meter Point level following a site visit or estimate |
| **Class 3 – Batched Daily Readings** | Allocation Profiles | Allocation Profiles | Daily Reads in batches | All daily reads in batches | Monthly using Optimum Read | Daily Rec at Meter Point level on receipt of a batch of reads |
| **Class 4 – Periodic Readings** | Allocation Profiles | Allocation Profiles | Periodic | Periodic reads | Monthly using Optimum Read | Meter Point level at receipt of read |

# Terms Used

- **DRE:** Daily Read Equipment

- **AMR:** Automatic Read Equipment

- **GFD:** Gas Flow Day

- **CR:** Check Read

- **A:** Actual Read

- **N:** Cyclic Read

- **E:** Estimate Read

- **D:** Effective date of the Class Change

# General Principles

- Where DRE/AMR is installed for Class 2, 3 & 4 the kit is not changed on a Class change only event.

- For a change in Class an Actual read is required to close out the outgoing Class.

- The Actual Read provided for the effective date of the Class change will not be subject to the read tolerance validations only standard asset validation (serial number, dials and units etc.)
  - This is because the read may not follow on from the previous read due to the difference between the on-site reading and the derivable reads.

- On Class Change only event the Check Read will reconcile back to the previous Check Read or AMR/DRE Installation Read.

- When AMR/DRE equipment is installed the first Check Read received will reconcile back to the previous Check Read or the Installation date.

# General Principles - Reconciliation

- There are 3 steps for energy allocation/reconciliation for Class 3 and 4 Supply Meter Points where AMR equipment is installed

  a) Daily Allocations are based on the Demand Estimation Formula.

  b) An Actual Read received will trigger reconciliations.

    - Daily for Class 3

    - Periodic for Class 4

  c) Following receipt of a Check Read reconciliation will be triggered back to the previous Check Read

    - In the cases of a Shipper Transfer this will be the opening read.

- Where AMR/DRE is fitted on a Class 3 or 4 Reconciliation will be processed first followed by the Check Read Reconciliation (apportion the drift across the period).

- For Class 1 and 2 any replaced meter readings received outside of close-out will trigger Reconciliation.

# General Principles – Shipper Transfer

- For Class 1 and 2, any reads received following a Shipper Transfer that fail validation will generate an Estimated Read. On receipt of a valid actual read the Estimated Reads will be re-calculated (better estimates) back to the Shipper Transfer/Class change day.

- If the Check Read is not provided for the Class change date for a Shipper Transfer within the UNC timescales then an Estimate Read will be calculated and treated as a Check Read.
  - Class 2 within GFD+5
  - Class 3 & 4 within GFD+10

- For a Shipper Transfer where the outgoing Class is Class 1 or 2 the D-1 volume
  will be estimated for Allocation purposes, either using D-7 or AQ/365.
  - This is to ensure that the drift is allocated to the correct period (previous Check Read) rather than the total drift allocated to the day before the Class change

- On Shipper Transfer where AMR/DRE equipment is fitted the Opening Read received will be treated as a Check Read and therefore will trigger Reconciliation back to the last Check Read. This will close out the position for the Outgoing Shipper.

# Files Formats

- The reads will be provided on the following communication methods:

**Incoming Methods:**

| Class Type | File |
|---|---|
| Class 2 | UDR |
| Class 3 | UBR |
| Class 4 | UMR |
| Class 2 Site Visit Details | Web Services |
| Class 3 & 4 Site Visit Details | SFN |

# Same Shipper Class change, Class 2 to 3, DRE/AMR fitted.

## Scenario A: Opening read provided

Class Change Day

Class 2                                              Class 3

D-2      D-1      D

Allocated Energy    Allocated Energy

A      A      A      A      A      A      A

Reconcile A→A

CR ←————————————————————————————→ CR

Reconcile between CR and CR

## Scenario A: Opening read not provided



Class Change Day

Class 2

Class 3

D-2  D-1  D

D-7

Allocated Energy  Allocated Energy

A  A  A  A  E  A  A

Reconcile  E→A

CR  ←  →  CR

Reconcile between CR and CR
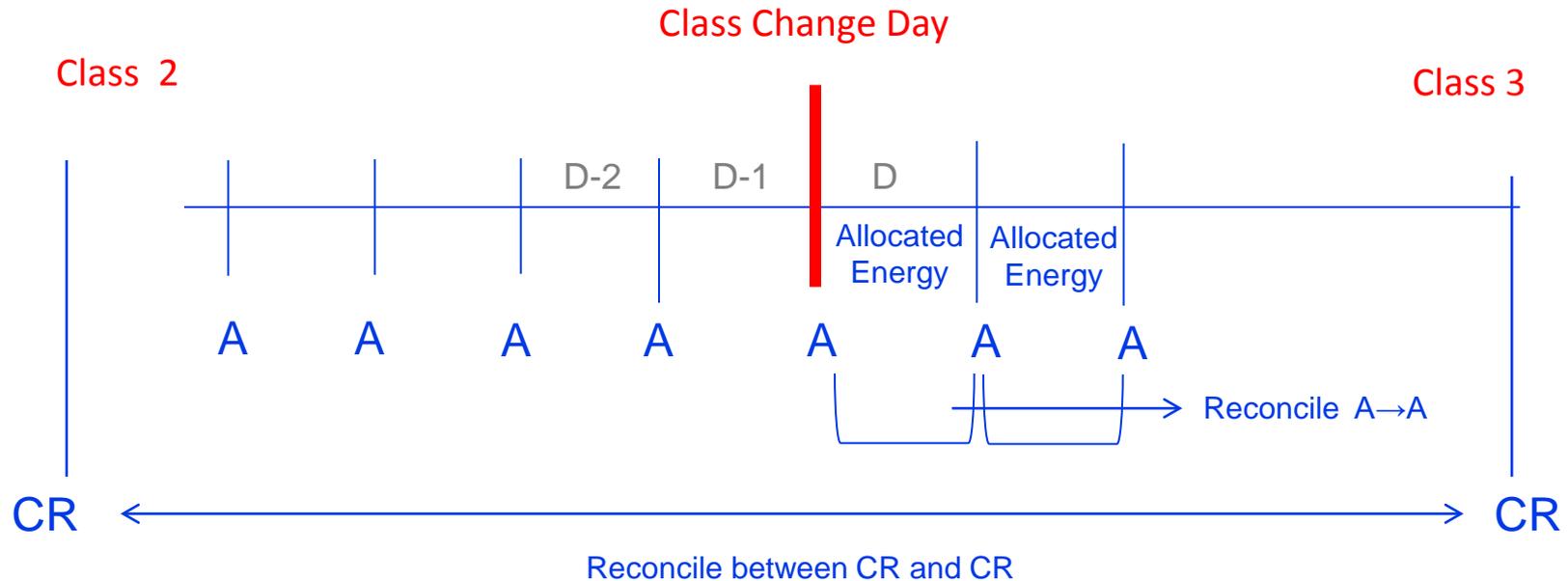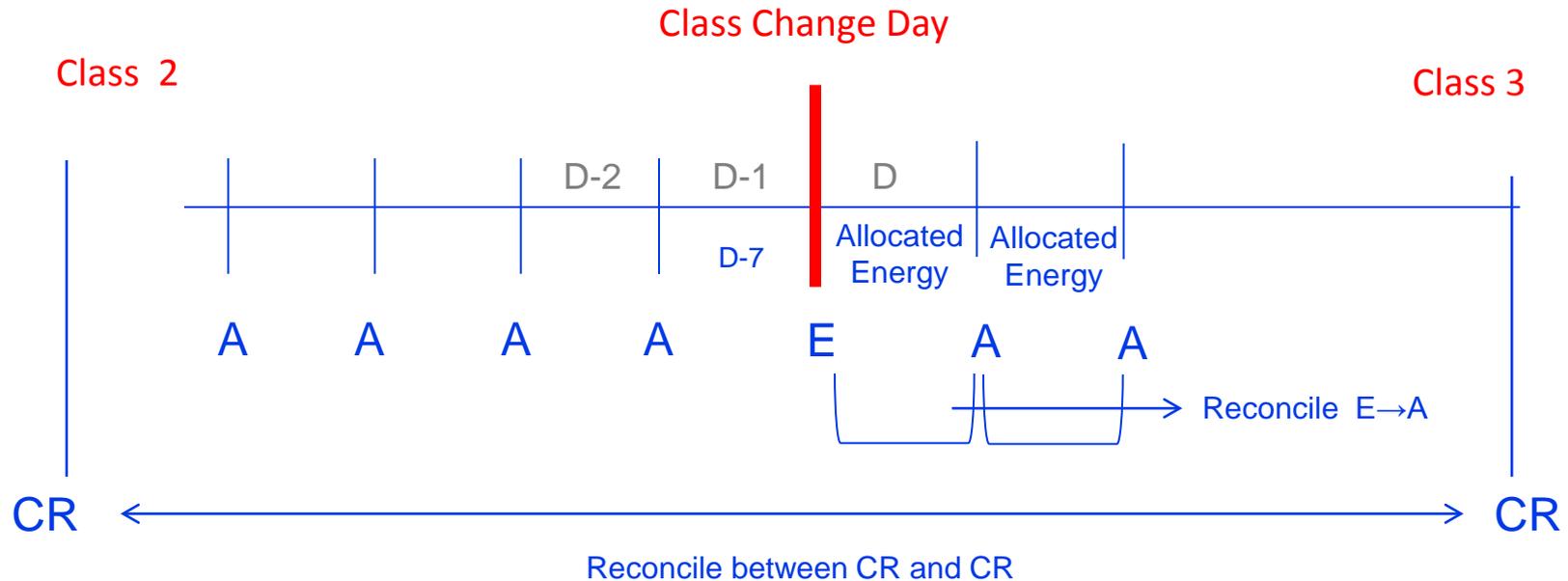
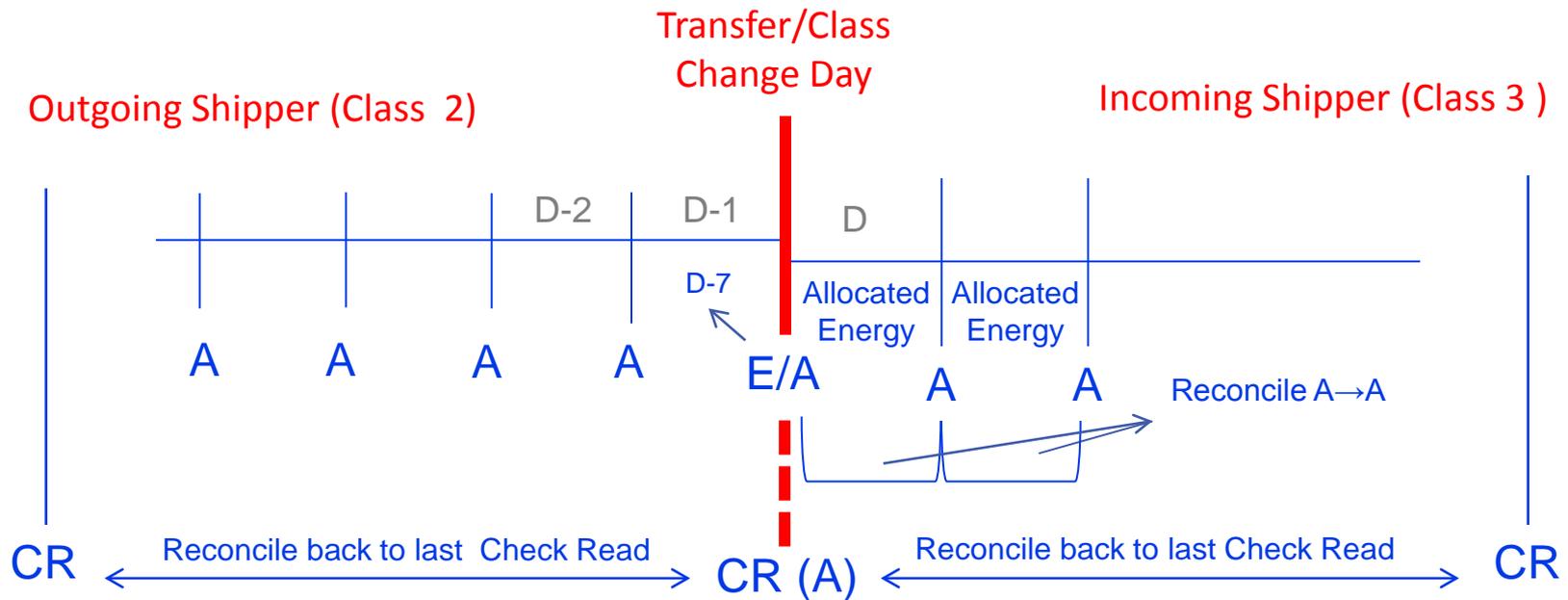## Same Shipper Class Change, Class 2 to 3, DRE/AMR fitted.

1. If the Shipper provides a closing read for the Class 2 period, the read will be rejected.
2. If an actual opening read is provided for class 3, the closing volume for class change day will be an actual volume and feed D-1 allocations for class 2.
3. The class change read will start the incoming Class 3 reconciliation position.
4. The class change read will be subject to all read validations as no change in reading equipment
5. If no Actual opening reading is received for the Class Change date an estimate will be calculated.
6. The estimate or actual read will NOT be treated as a Check Read and will not be used for reconciliation.
7. The next check read for class 3 will trigger reconciliation back to last Check Read in the class 2 period

# Shipper Transfer with Class Change, Class 2 to 3, DRE/AMR fitted, Opening Read provided by Incoming Shipper.

Transfer/Class Change Day

Outgoing Shipper (Class 2)

Incoming Shipper (Class 3 )

D-2    D-1    D

D-7

Allocated Energy    Allocated Energy

A    A    A    A    E/A    A    A    Reconcile A→A

CR    Reconcile back to last Check Read    CR (A)    Reconcile back to last Check Read    CR

# Shipper Transfer - Class Change

**Shipper Transfer with Class Change, Class 2 to 3, DRE/AMR fitted, Opening Read provided by Incoming Shipper.**

**Process Class 2:**

1. If the Outgoing Shipper provides a read for Class Change gas flow day the read will be rejected.

2. The D-1 day volume will always be an estimated volume, for allocation purposes, either using D-7 or AQ/365.

3. The opening read will trigger reconciliation back to the last Check Read, reconciliation is based on check to check reconciliation rules and closes the outgoing class 2 period.

# Shipper Transfer - Class Change

**Shipper Transfer with Class Change, Class 2 to 3, DRE/AMR fitted, Opening Read provided by Incoming Shipper.**

## Process Class 3:

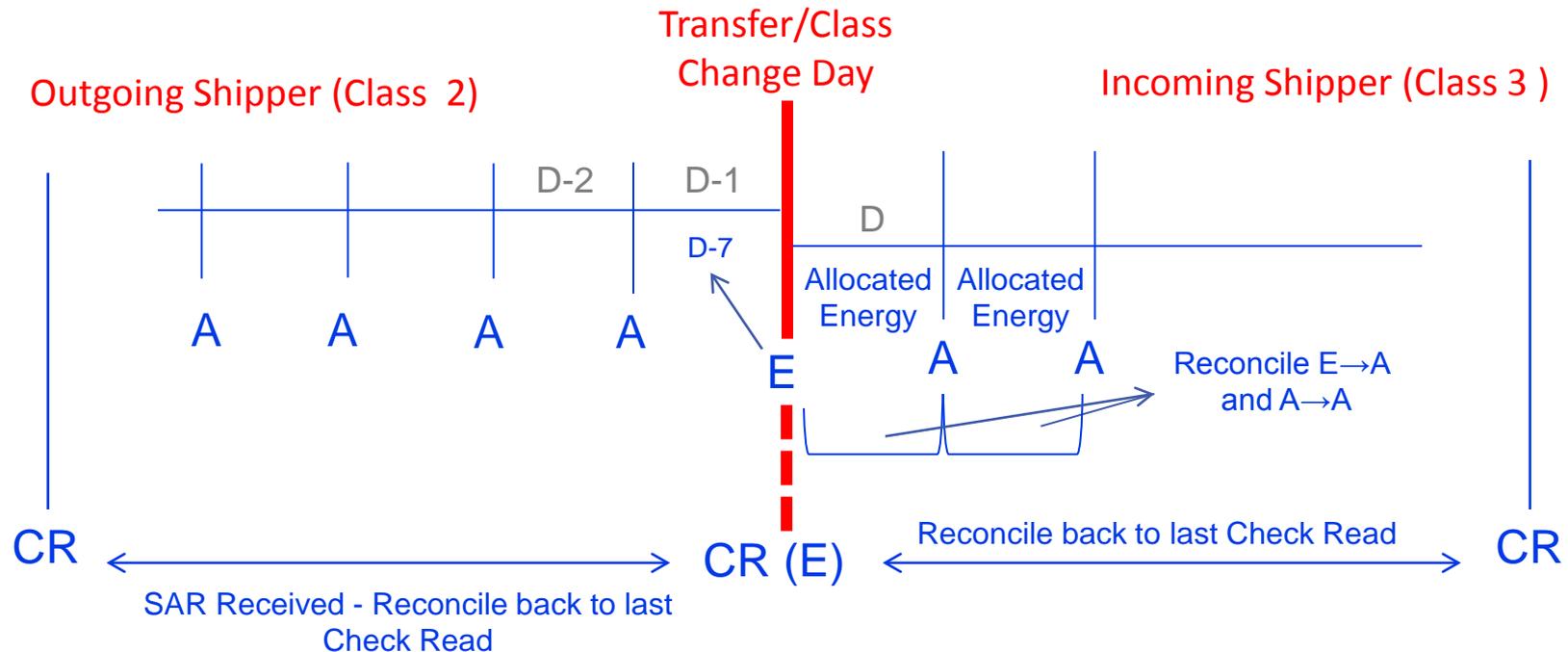1. Actual Read provided for the effective date of the Class change:

   a) The read will undergo basic check read validations (serial number, dials and units etc).

2. Energy Calculations

   a) Daily Allocations for Class 3 are based on the deeming profile.

   b) The opening (Actual) read is the start read for subsequent daily reconciliations (received by D+5).

   c) Following receipt of the next check read reconciliation will be triggered back to the opening read (Check Read).

Transfer/Class Change Day

Outgoing Shipper (Class 2)

Incoming Shipper (Class 3 )

D-2   D-1

D-7

D

Allocated Energy   Allocated Energy

A   A   A   A

E

A   A

Reconcile E→A and A→A

CR

CR (E)

CR

SAR Received - Reconcile back to last Check Read

Reconcile back to last Check Read

# Shipper Transfer - Class Change

**Shipper Transfer with Class Change, Class 2 to 3, DRE/AMR fitted, No Opening Read provided by Incoming Shipper.**

**Process Class 2:**

1. If the Outgoing Shipper provides a read for Class Change gas flow day (within D+5) the read will be rejected.

2. The D-1 day volume will always be an estimated volume, for allocation purposes, either using D-7 or AQ/365.

3. If a Shipper Agreed Read (SAR) from Shipper is received for the class change day (after close out) it will be used to reconcile backwards.

# Shipper Transfer - Class Change

**Shipper Transfer with Class Change, Class 2 to 3, DRE/AMR fitted, No Opening Read provided by Incoming Shipper.**

## Process Class 3:

1.  An estimate will be calculated for the class change day
    a)  The estimate will be based on the class 2 estimation logic (D-7 or AQ/365)
    b)  If a Shipper Agreed Read (SAR) from Shipper is received for the class change day (after close out) it will be used to reconcile backwards and forwards.
    c)  The first subsequent Actual read will be subjected to all read validations based on the estimated opening read and will trigger reconciliation back to the estimated opening read. The read will be rejected where validation fails.
2.  Energy Calculations
    a)  Allocations for Class 3 are based on the daily deeming profile.
    b)  The opening (estimated check) read is the start read for subsequent daily reconciliations.
    c)  Following receipt of the next check read reconciliation will be triggered back to the opening read (Check Read).
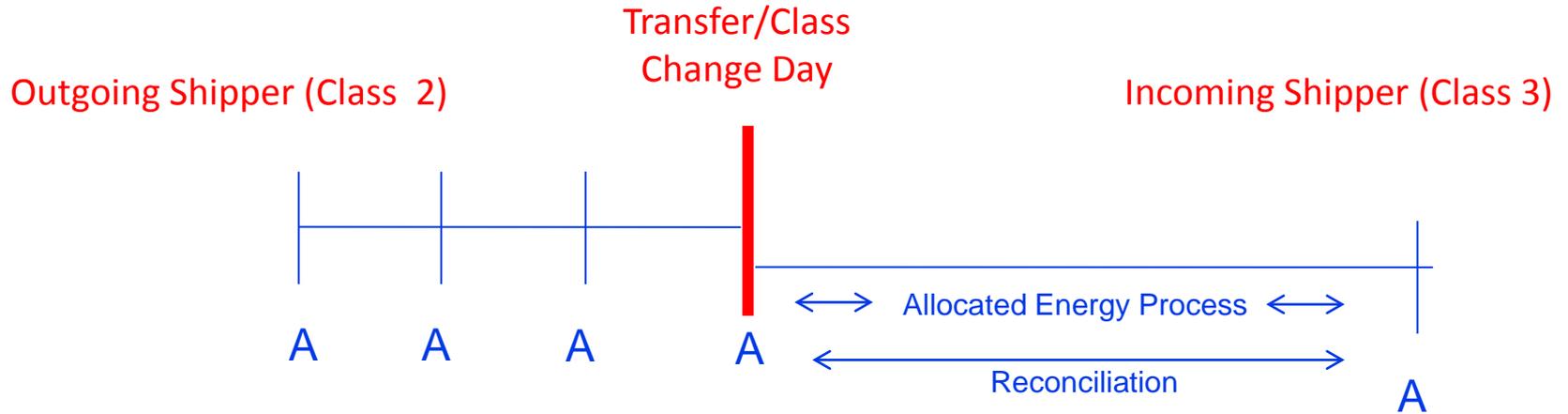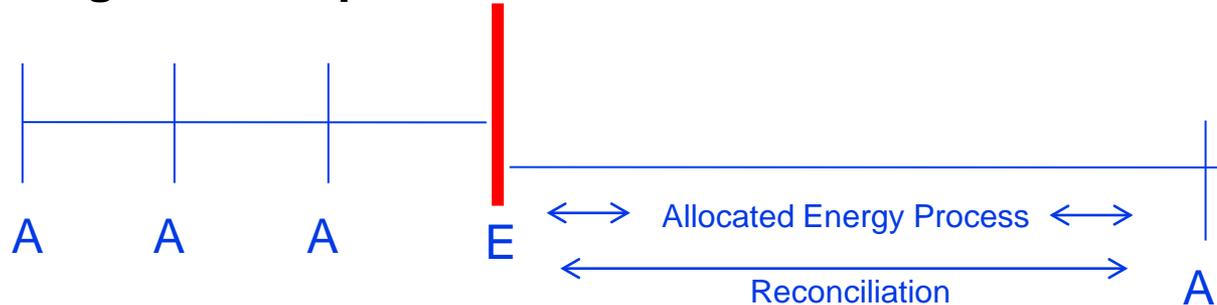
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# Shipper Transfer with Class Change, Class 2 to 3, No DRE/AMR fitted.

**Scenario A: Opening read provided**

Transfer/Class Change Day

Outgoing Shipper (Class 2)

Incoming Shipper (Class 3)

A     A     A     A

←→ Allocated Energy Process ←→

Reconciliation

A

**Scenario B: Opening read Not provided**

A     A     A     E

←→ Allocated Energy Process ←→

Reconciliation

A

## Generic Rules for the Class Change Process where no DRE/AMR is fitted:

## Class 2 to 3

- If the Outgoing Shipper provides a read for Class Change gas flow day the read will be rejected.

- Where an opening read is provided by the incoming shipper/class the read will undergo basic check read validations (no index check or energy tolerance check) and will be marked as check read.

- The D-1 day volume will be an estimated volume, for allocation purposes, either using D-7 or AQ/365.

- Where an opening read is provided by the incoming shipper/class the read will start the reconciliation period for the incoming shipper/class.

- Reconciliation for the outgoing class 2 is based on daily reconciliation principles therefore an actual or estimate is needed to close out the outgoing class 2 reconciliation period.

## Shipper Transfer with Class Change, Class 2 to 3, No DRE/AMR fitted.

1. Where the class change read is provided it will be used for reconciliation purposes.
2. Where the class change read is not provided the estimated volume will feed allocations, using D-7 or AQ/365
3. Subsequent reconciliation will be between the transfer read and the next actual read or cyclic read.
4. When DRE/AMR is fitted the read will be marked as a check read and reconciliation will be triggered:
   a) To the last Actual read
   b) Shipper Transfer date were only Estimate reads exist
   c) Shipper Transfer date with a Class Change
   d) Same Shipper Class Change
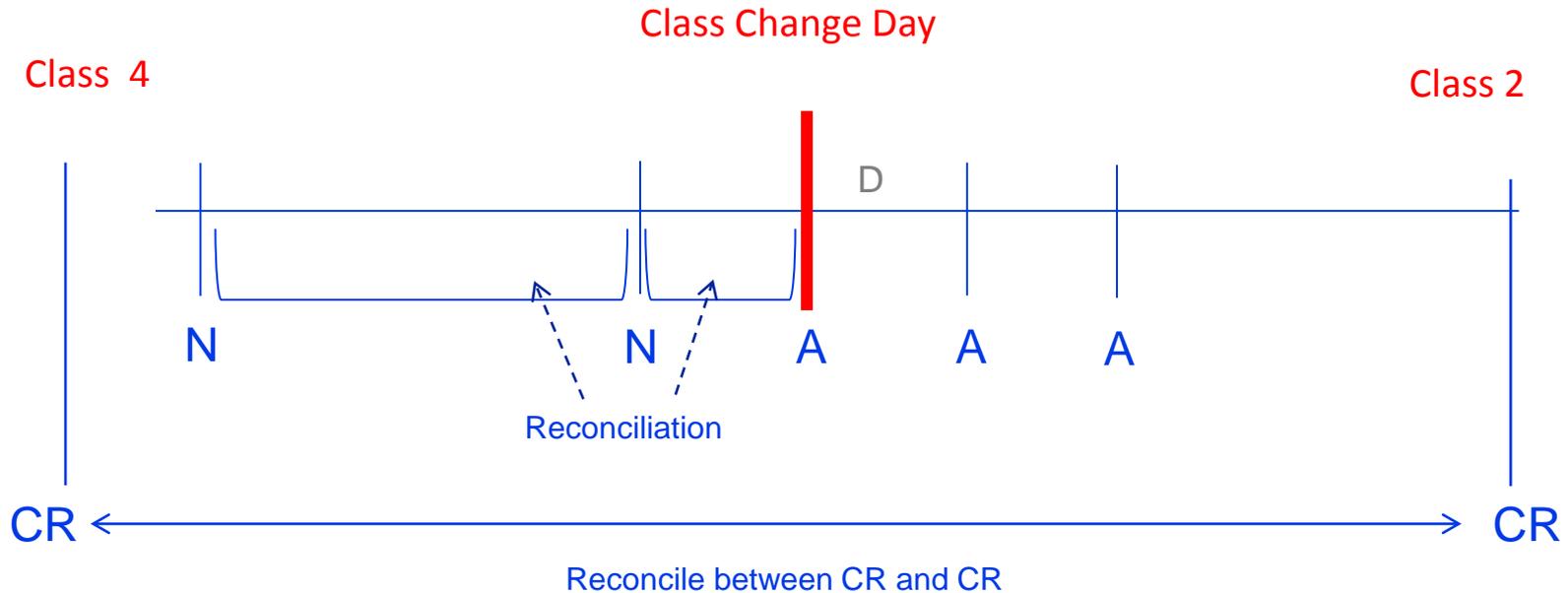   e) Asset Update date
   f) Primary meter reconciliation date

## Scenario A: Opening read provided – AMR/DRE Fitted



Class Change Day

Class 4

Class 2

D

N          N     A     A     A

Reconciliation

CR ←————————————————————→ CR

Reconcile between CR and CR

## Scenario B: Opening read not provided – AMR/DRE Fitted
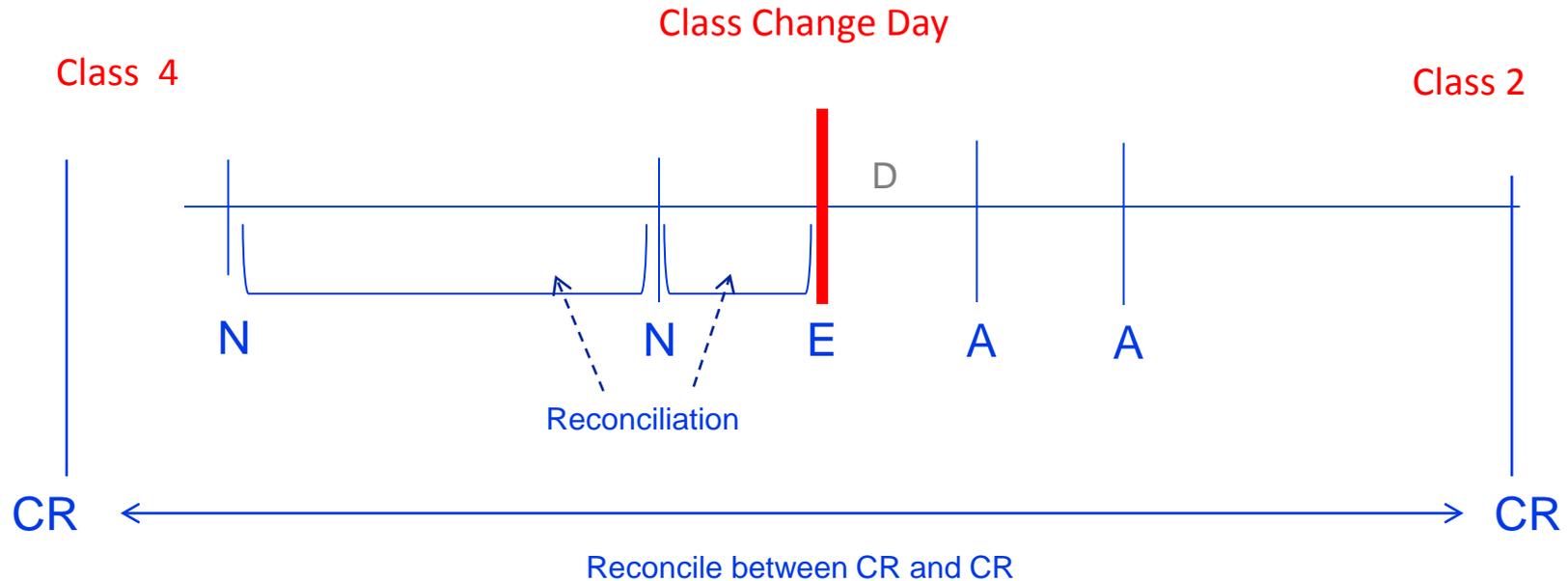


Class Change Day

Class 4

Class 2

D

N

N

E

A

A

Reconciliation

CR

CR

Reconcile between CR and CR

## Scenario C: Opening read provided – No AMR/DRE Fitted
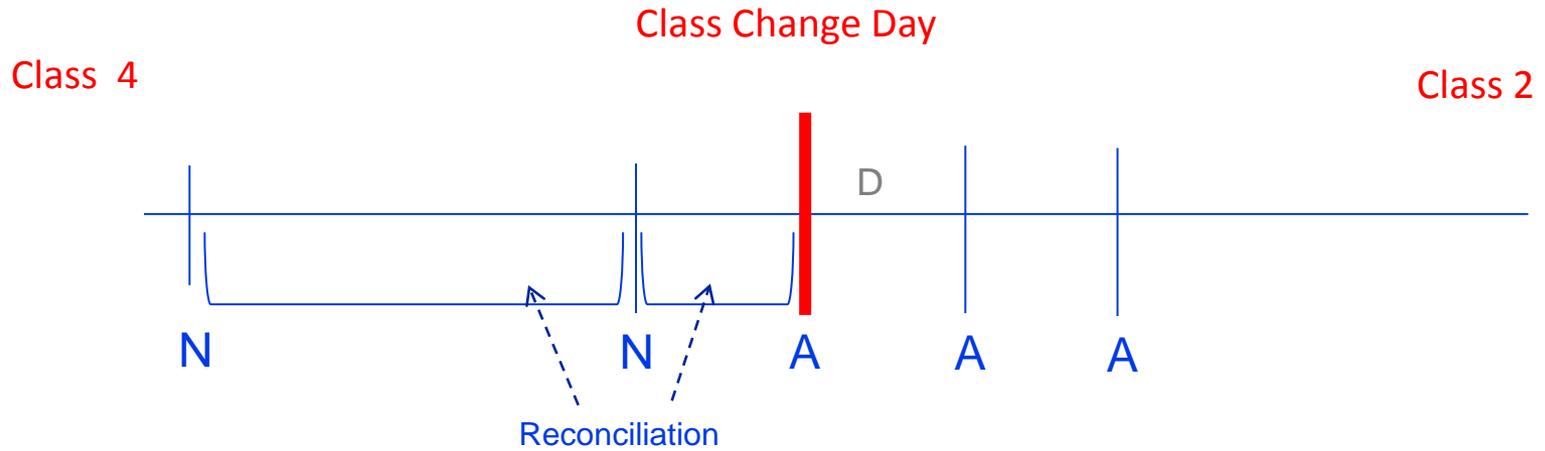


Class Change Day

Class 4

Class 2

D

N        N        A        A        A

Reconciliation

## Scenario D: Opening read not provided – No AMR/DRE Fitted

Class Change Day

Class 4                                                                    Class 2

D

N                    N              E           E           E           A

Reconciliation                                B           B

On receipt of a valid actual read
better estimates will be created
back to the transfer/class change
day.
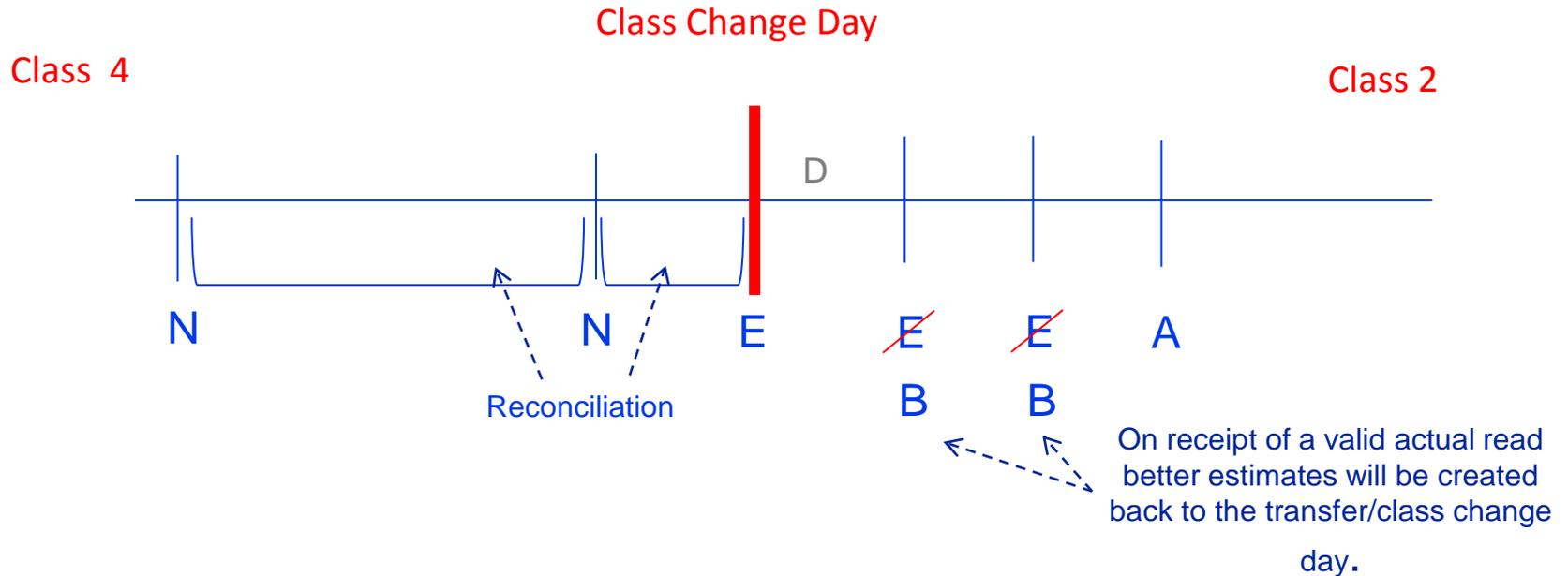
If subsequent Actual reads following the Class change date fail
validation Estimated Reads will be generated. When the next valid
Actual is received the estimated reads will be replace with better
estimates.

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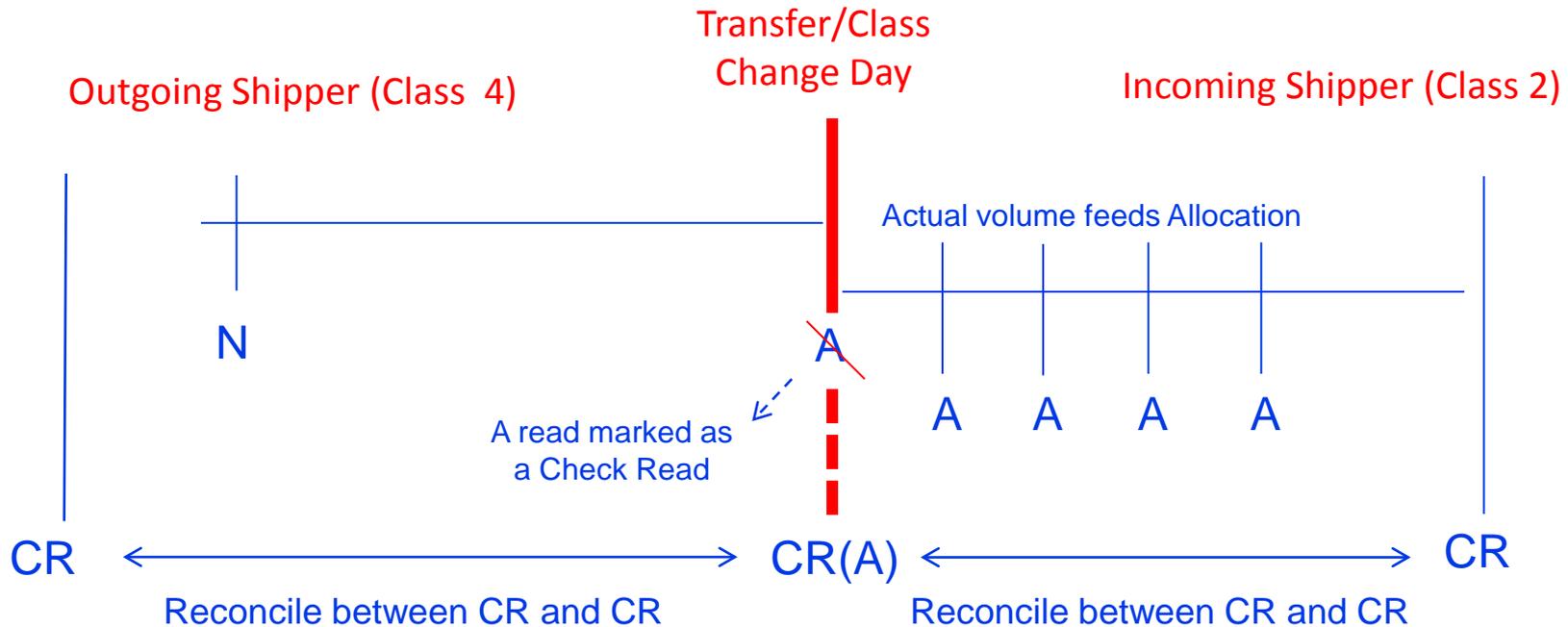*Same Shipper Class Change, Class 4 to 2, DRE/AMR fitted.*

1.  If no Actual read is received an estimate will be calculated.

2.  The Estimate or Actual read will NOT be treated as a Check Read and will not be used for reconciliation.

3.  The class change read will be subject to all read validations as no change in reading equipment.

4.  The class change read will start the incoming Class 2 reconciliation position.

5.  Any reads following the class change day that fail validation, an estimate will be generated. On receipt of a valid actual read better estimates will be created back to the transfer/class change day.

# Shipper Transfer with Class Change, Class 4 to 2, DRE/AMR fitted, Opening Read provided by Incoming Shipper.



Transfer/Class Change Day

Outgoing Shipper (Class 4)

Incoming Shipper (Class 2)

Actual volume feeds Allocation

N

A

A read marked as a Check Read

A    A    A    A

CR          CR(A)          CR

Reconcile between CR and CR

Reconcile between CR and CR

# Shipper Transfer - Class Change

*Shipper Transfer with Class Change, Class 4 to 2, DRE/AMR fitted, Opening Read provided by Incoming Shipper.*

## Process Class 2:

1. Actual Read provided for the Class Change Day:
   1. The read will undergo basic check read validations (serial number, dials and units etc).
   2. The read will be marked as a Check Read.
2. Energy Calculations
   1. The opening read will be used to commence calculations for daily allocations.
   2. Following receipt of the next check read reconciliation will be triggered back to the opening read (Check Read).

# Shipper Transfer - Class Change

*Shipper Transfer with Class Change, Class 4 to 2, DRE/AMR fitted, Opening Read provided by Incoming Shipper.*
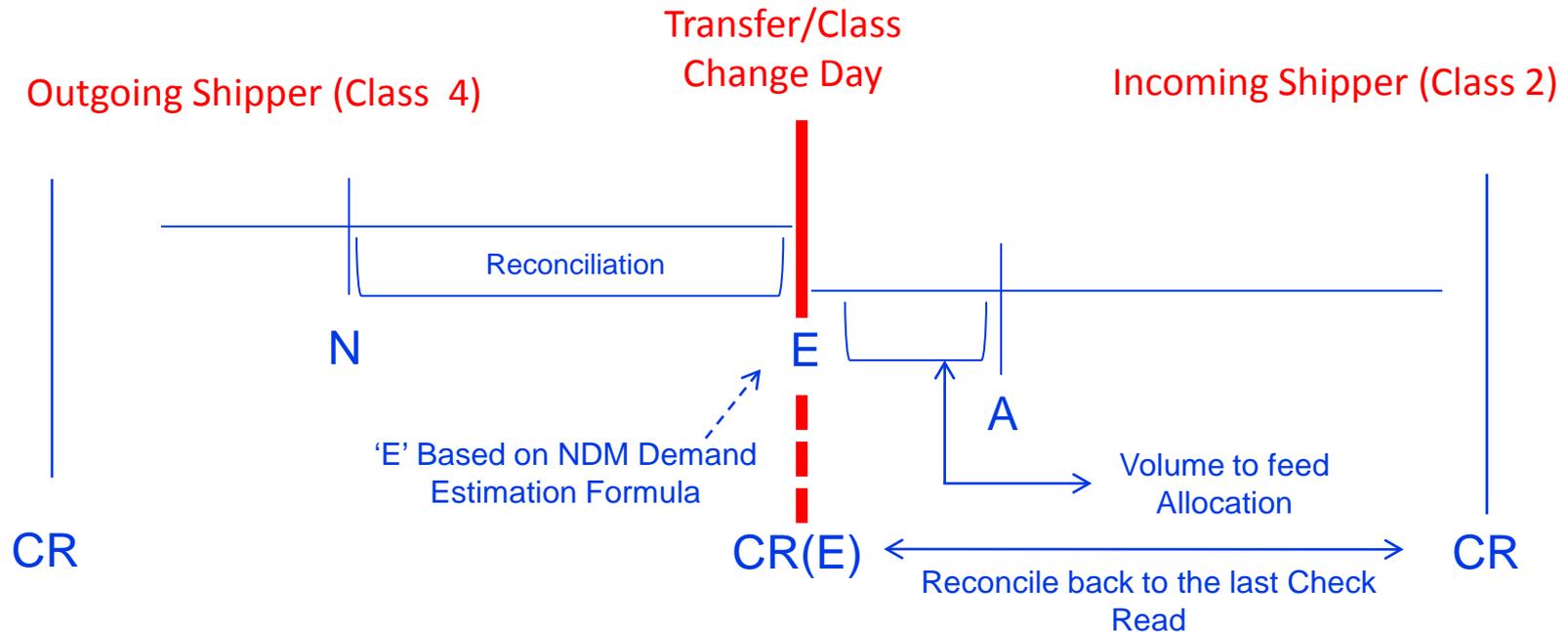
**Process Class 4:**

1. If the Outgoing Shipper provides a read for Class Change gas flow day the read will be rejected.

2. The opening read will trigger reconciliation back to the last Check Read, reconciliation is based on check to check reconciliation rules and closes the outgoing class 4 period.

# Shipper Transfer with Class Change, Class 4 to 2, DRE/AMR fitted, No Opening Read provided by Incoming Shipper.

Transfer/Class Change Day

Outgoing Shipper (Class 4)

Incoming Shipper (Class 2)

Reconciliation

N

E

'E' Based on NDM Demand Estimation Formula

A

Volume to feed Allocation

CR

CR(E)

Reconcile back to the last Check Read

CR

# Shipper Transfer - Class Change

*Shipper Transfer with Class Change, Class 4 to 2, DRE/AMR fitted, No Opening Read provided by Incoming Shipper.*

## Process Class 2:

1. An estimate will be calculated for the class change day
   1. The estimate will be based on the NDM algorithm.
   2. The estimated read will be marked as a check read.
   3. The first subsequent Actual read will be subjected to all read validations based on the estimated opening read and will trigger reconciliation back to the estimated opening read. The read will be rejected where validation fails.
   4. If a Shipper Agreed Read (SAR) from Shipper is received for the class change day (after close out) it will be used to reconcile backwards and forwards.
2. Energy Calculations
   1. The opening estimated read will be used to commence calculations for daily allocations.
   2. Following receipt of the next check read reconciliation will be triggered back to the opening read (Check Read).

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# Shipper Transfer - Class Change

*Shipper Transfer with Class Change, Class 4 to 2, DRE/AMR fitted, No Opening Read provided by Incoming Shipper.*

**Process Class 4:**

1. If the Outgoing Shipper provides a read for Class Change gas flow day the read will be rejected.

2. Reconciliation will be triggered between the estimated transfer read and the last cyclic reading (N) to close out the Class 4 period.
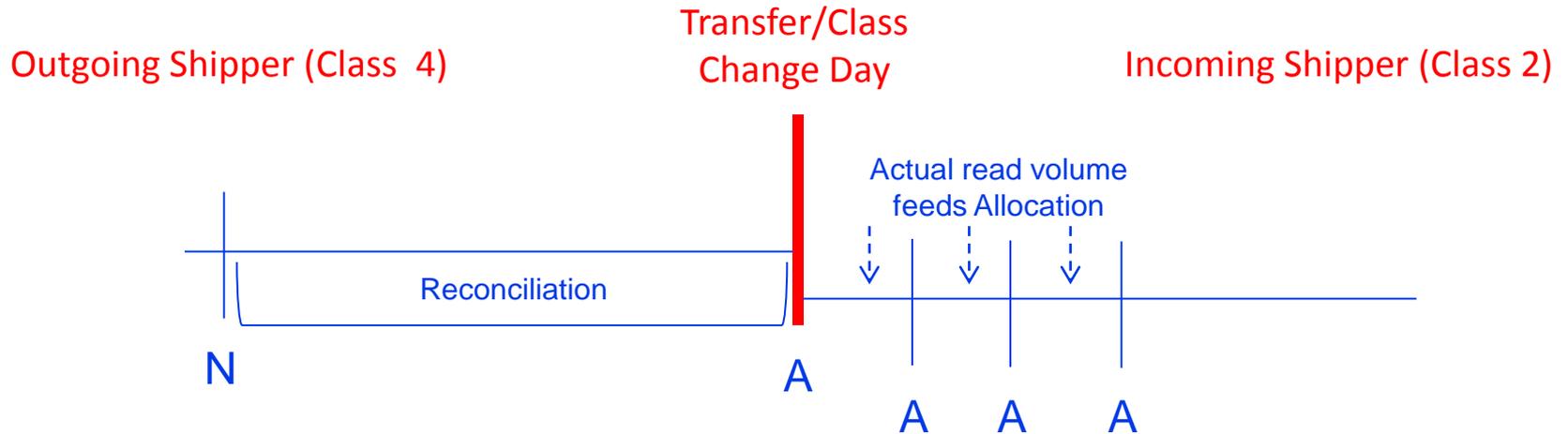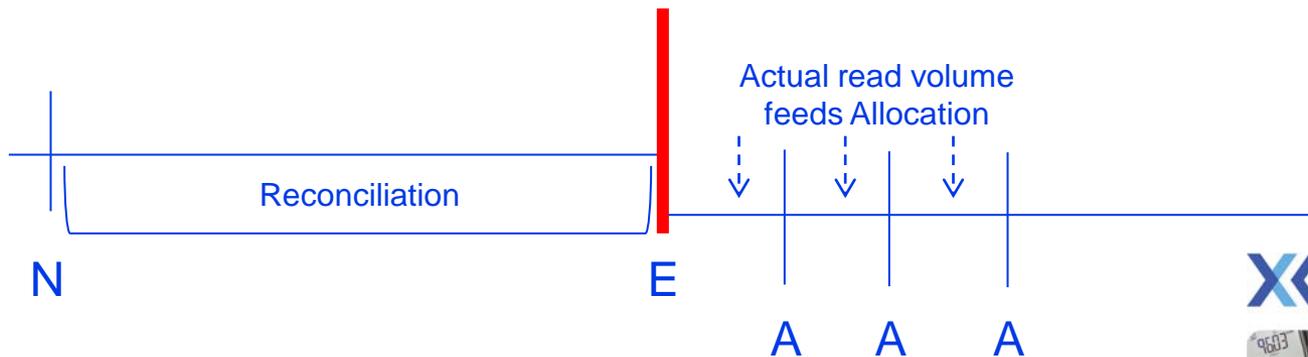
# Shipper Transfer with Class Change, Class 4 to 2, No DRE/AMR fitted.

## Scenario A: Opening read provided

Transfer/Class Change Day

Outgoing Shipper (Class 4)

Incoming Shipper (Class 2)

Actual read volume feeds Allocation

Reconciliation

N

A

A   A   A

## Scenario B: Opening read not provided

Actual read volume feeds Allocation

Reconciliation

N

E

A   A   A

## Generic Rules for the Class Change Process where no DRE/AMR is fitted:

## Class 4 to 2

- If the Outgoing Shipper provides a read for Class Change day the read will be rejected.

- Where an opening read is provided by the incoming shipper/class the read will undergo full check read validations.

- Where an opening read is provided by the incoming shipper/class the read will start the reconciliation period for the incoming shipper/class.

*Shipper Transfer with Class Change, Class 4 to 2, No DRE/AMR fitted.*

1. Where the class change read is provided it will reconcile back to the last Cyclic Read and close out the outgoing period for a class 4.
2. Where the class change read is not provided an estimated read is generated based on the NDM algorithm.
3. Subsequent reconciliation will be between the transfer read and the next actual read.
4. When DRE/AMR is fitted the read will be marked as a check read and reconciliation will be triggered:
   a) To the last Actual read
   b) Shipper Transfer date were only Estimate reads exist
   c) Shipper Transfer date with a Class Change
   d) Same Shipper Class Change
   e) Asset Update date
   f) Primary meter reconciliation date
5. Any reads following the transfer that fail validation an estimate will be generated. On receipt of a valid actual read better estimates will be created back to the transfer/ class change day.
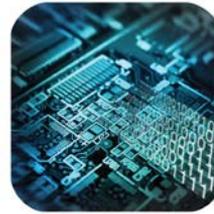
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# Consumption Adjustments

- For Class 2, Consumption Adjustments can be provided for:

  a) A day

  b) For a period - per day between two Check Reads

- Submission of a Consumption Adjustment for Class 1 and 2 Supply Meter Points will be via:

  a) Within Submission of GFD+5 via Web Services

  b) Outside GFD+5 through CMS

- Submission of Consumption Adjustments for Class 3 and 4 Supply Meter Points will be submitted via CMS.

  a) The Consumption Adjustments are provided as a total between two read dates