Unidentified Gas Modifications
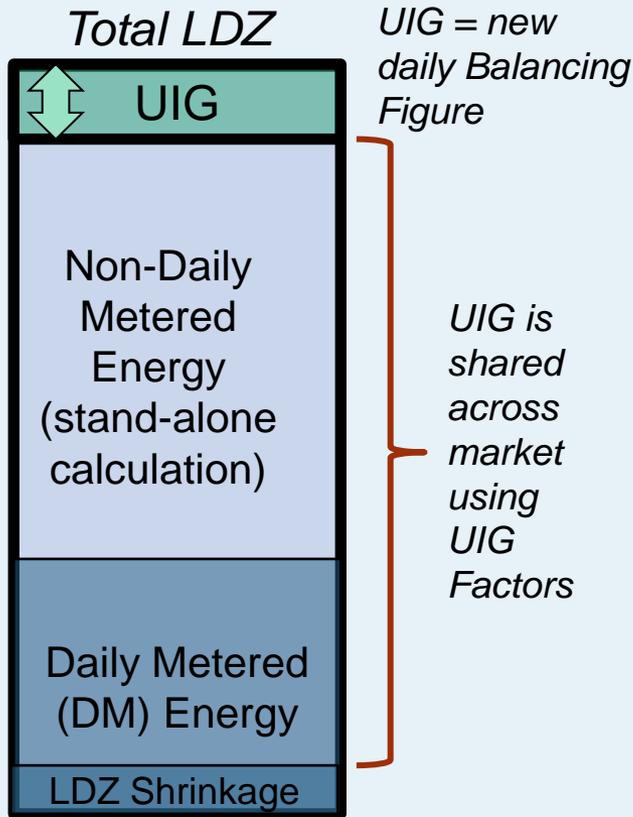
Workgroup Meeting

15 January 2018

Purpose

- Slides represent Xoserve's understanding of the three UIG Modifications, based on
    - Review of Mod proposals as at 11th January
    - Discussions with proposers
    - Discussions/explanations at first UIG Workgroup
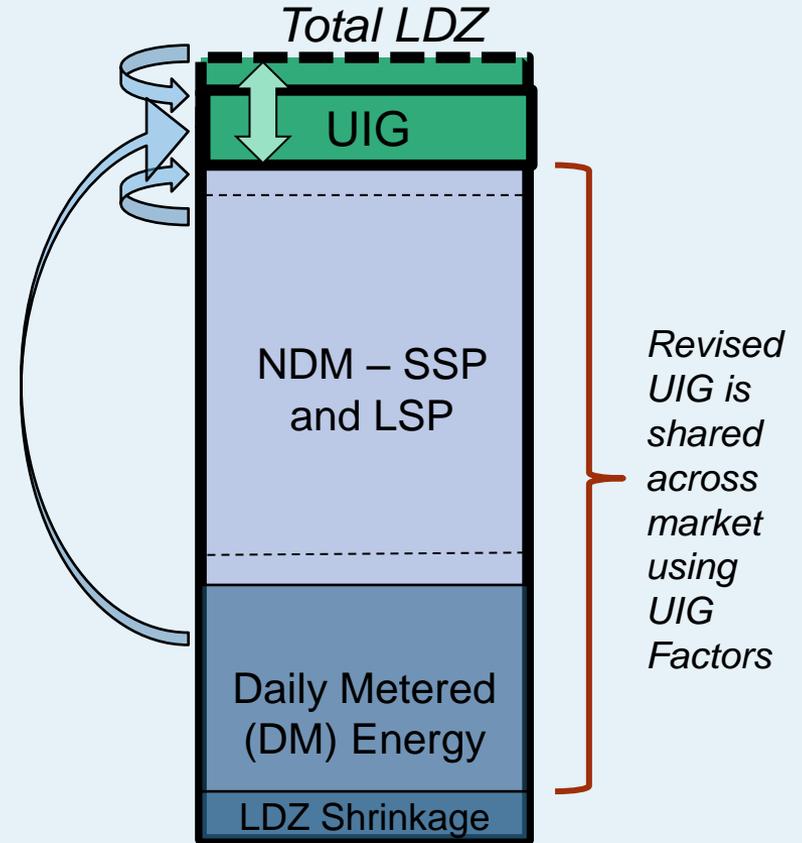- May be subject to change depending on subsequent discussions

Recap: Post-Nexus Allocation and Reconciliation

DAILY ALLOCATION

Total LDZ

UIG
Non-Daily Metered Energy (stand-alone calculation)
Daily Metered (DM) Energy
LDZ Shrinkage

UIG = new daily Balancing Figure

UIG is shared across market using UIG Factors

- AUGE determines Weighting Factors each year for sharing UIG
- UIG shared on basis of daily Throughput and Weighting Factors

MONTHLY RECONCILIATION

Total LDZ

UIG
NDM – SSP and LSP
Daily Metered (DM) Energy
LDZ Shrinkage

Revised UIG is shared across market using UIG Factors

- All meter points are subject to individual reconciliation
- Equal and opposite of all individual reconciliations is applied to UIG and shared in line with latest measurements and Weighting Factors
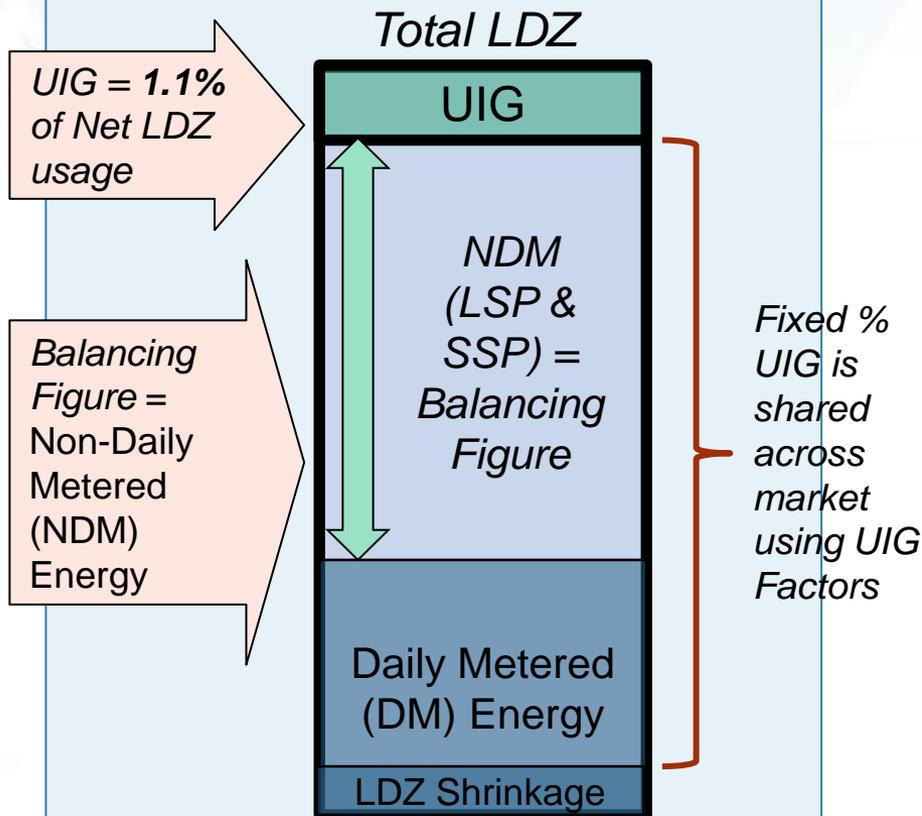
Recap – Current UIG Rec sharing

	M-11	M-10	M-9	M-8	M-7	M-6	M-5	M-4	M-3	M-2	M-1	M
Total of Recs for month	$1/12$	$1/12$	$1/12$	$1/12$	$1/12$	$1/12$	$1/12$	$1/12$	$1/12$	$1/12$	$1/12$	$1/12$

MPR 1 ← Rec · Rec Smear

MPR 2 ← Rec · Rec · Rec

MPR 3 ← Rec Smear · Rec

MPR 4 ← Rec · Rec Smear

MPR 5 ← Rec Smear · Rec

MPR 6 ← Rec Smear

Total Rec energy is summed and divided by 12 to apportion across last 12 months market shares, as adjusted using UIG Weighting Factors.
Shared out regardless of Read/Reconciled status.

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Modification 0642 – Fixed Daily UIG Percentage

DAILY ALLOCATION

Total LDZ

UIG = 1.1% of Net LDZ usage

UIG
NDM (LSP & SSP) = Balancing Figure
Daily Metered (DM) Energy
LDZ Shrinkage

Balancing Figure = Non-Daily Metered (NDM) Energy

Fixed % UIG is shared across market using UIG Factors

- AUGE determines a fixed percentage for UIG each year
- Applied to net LDZ Demand (after Shrinkage)
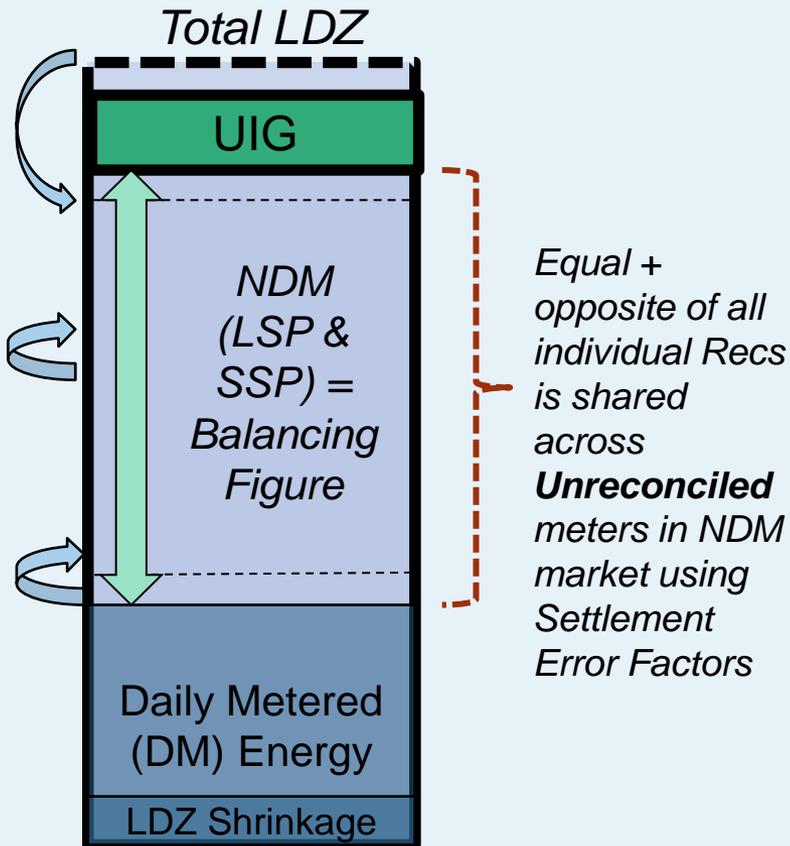- Shared out using Weighting Factors (as current rules)

- Daily Allocation becomes a 5-step process
- STEP 1 - measure total gas used in the LDZ
- STEP 2 – deduct daily Shrinkage quantity
- STEP 3 – calculate UIG as fixed 1.1% of LDZ Demand – Shrinkage
- STEP 4 – calculate NDM Allocations as the balancing figure
    - Weather Correction Factor (WCF) reverts to pre-Nexus formula (i.e. not using weather data)
    - Scaling Factor (SF) reintroduced
- STEP 5 – UIG shared out on basis of allocations using UIG Weighting Factors

Modification 0642 – Fixed Daily UIG Percentage

MONTHLY RECONCILIATION

Total LDZ

UIG

*NDM
(LSP &
SSP) =
Balancing
Figure*

Daily Metered
(DM) Energy

LDZ Shrinkage

*Equal +
opposite of all
individual Recs
is shared
across
Unreconciled
meters in NDM
market using
Settlement
Error Factors*

- Universal individual Meter Point rec still applies
- Daily UIG allocation is not re-opened by Rec
- Equal and opposite of all individual recs is shared to Unreconciled Class 3/4 only
- Sharing based on throughput for the Billing month of Unreconciled meters, adjusted using separate Settlement Error Weighting Factors
- One month pot (as opposed to current 12 month pot)
- Re-reconciliation of an earlier month's read does not remove from current month's sharing
- Extra test applies – if Rec Energy (+/-) > Allocated Energy for the month for the qualifying MPRs in an LDZ, then smear to all sites, regardless of reconciled status

Mod 0642 Settlement Error Rec

	M-11	M-10	M-9	M-8	M-7	M-6	M-5	M-4	M-3	M-2	M-1	M
Total of Recs for month	$1/12$	$1/12$	$1/12$	$1/12$	$1/12$	$1/12$	$1/12$	$1/12$	$1/12$	$1/12$	$1/12$	$1/12$

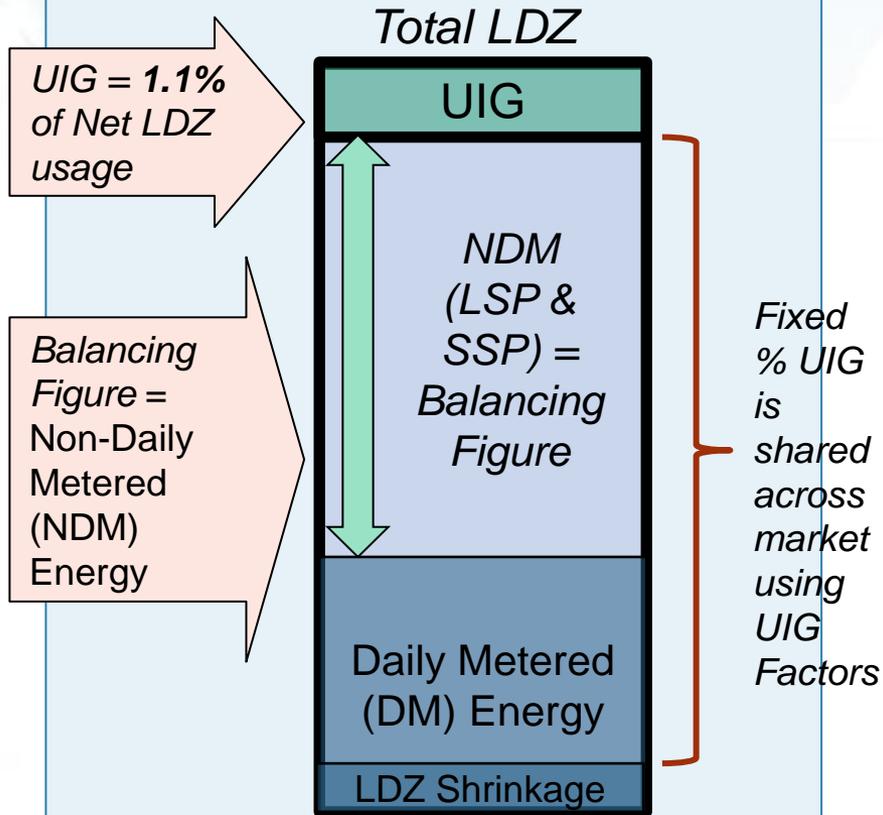| MPR 1 | | Rec |
MPR 2	Re-rec	Rec smear
MPR 3		Rec
MPR 4		Rec
MPR 5		Rec smear
MPR 6		Rec
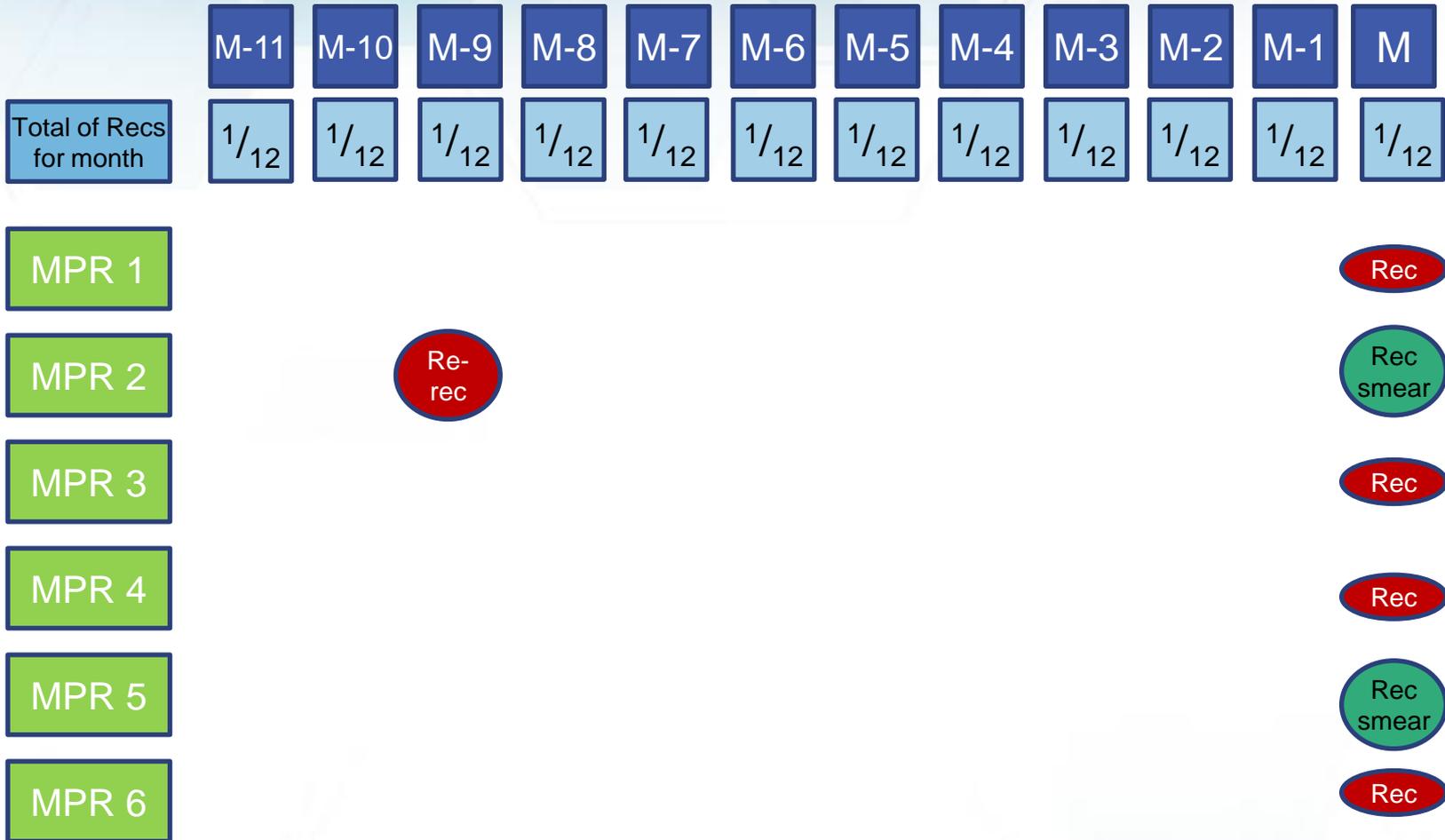
Total Rec energy is shared out over current month's market shares, as adjusted by Settlement Error factors. Only Class 3/4 meters which have not had a Reconciliation in that month pick up a share of Settlement Error Rec.

* Extra test – if Rec Energy (+/-) > Allocated Energy for the month for the qualifying MPRs in an LDZ, then smear to all sites, regardless of reconciled status

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Modification 0643 – Fixed Daily UIG Percentage

DAILY ALLOCATION

Total LDZ

UIG = 1.1% of Net LDZ usage →

UIG
NDM (LSP & SSP) = Balancing Figure
Daily Metered (DM) Energy
LDZ Shrinkage

Fixed % UIG is shared across market using UIG Factors

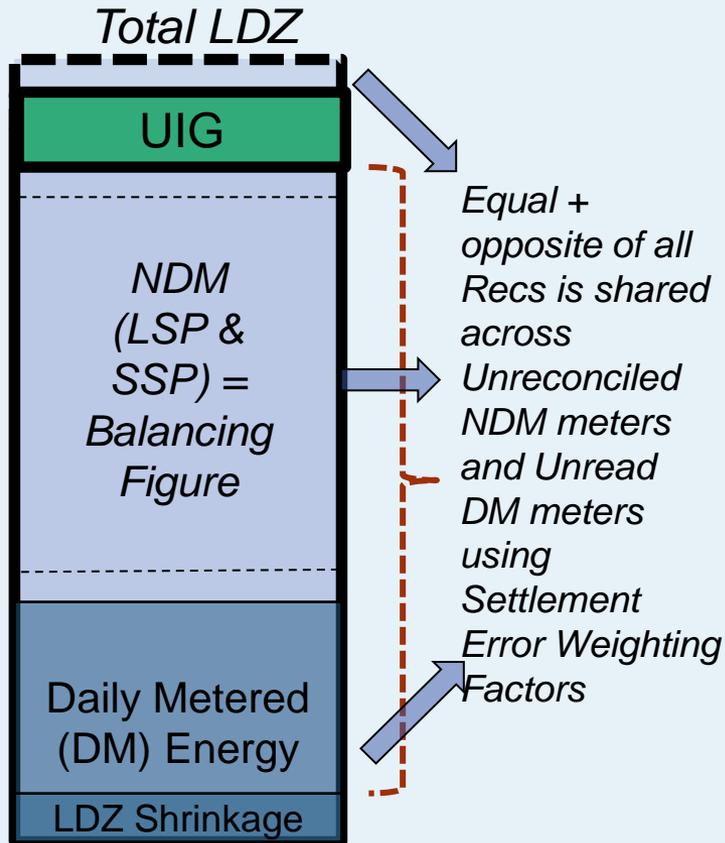**Balancing Figure =** Non-Daily Metered (NDM) Energy →

- AUGE determines a fixed percentage for UIG each year
- Applied to net LDZ Demand (after Shrinkage)
- Shared out using Weighting Factors (as current rules)

- (ALLOCATION PROCESS IS THE SAME AS FOR 0642)

- Daily Allocation becomes a 5-step process
- STEP 1 - measure total gas used in the LDZ
- STEP 2 – deduct daily Shrinkage quantity
- STEP 3 – calculate UIG as fixed 1.1% of LDZ Demand – Shrinkage
- STEP 4 – calculate NDM Allocations as the balancing figure
  - Weather Correction Factor (WCF) reverts to pre-Nexus formula (i.e. not using weather data)
  - Scaling Factor (SF) reintroduced
- STEP 5 – UIG shared out on basis of allocations using UIG Weighting Factors
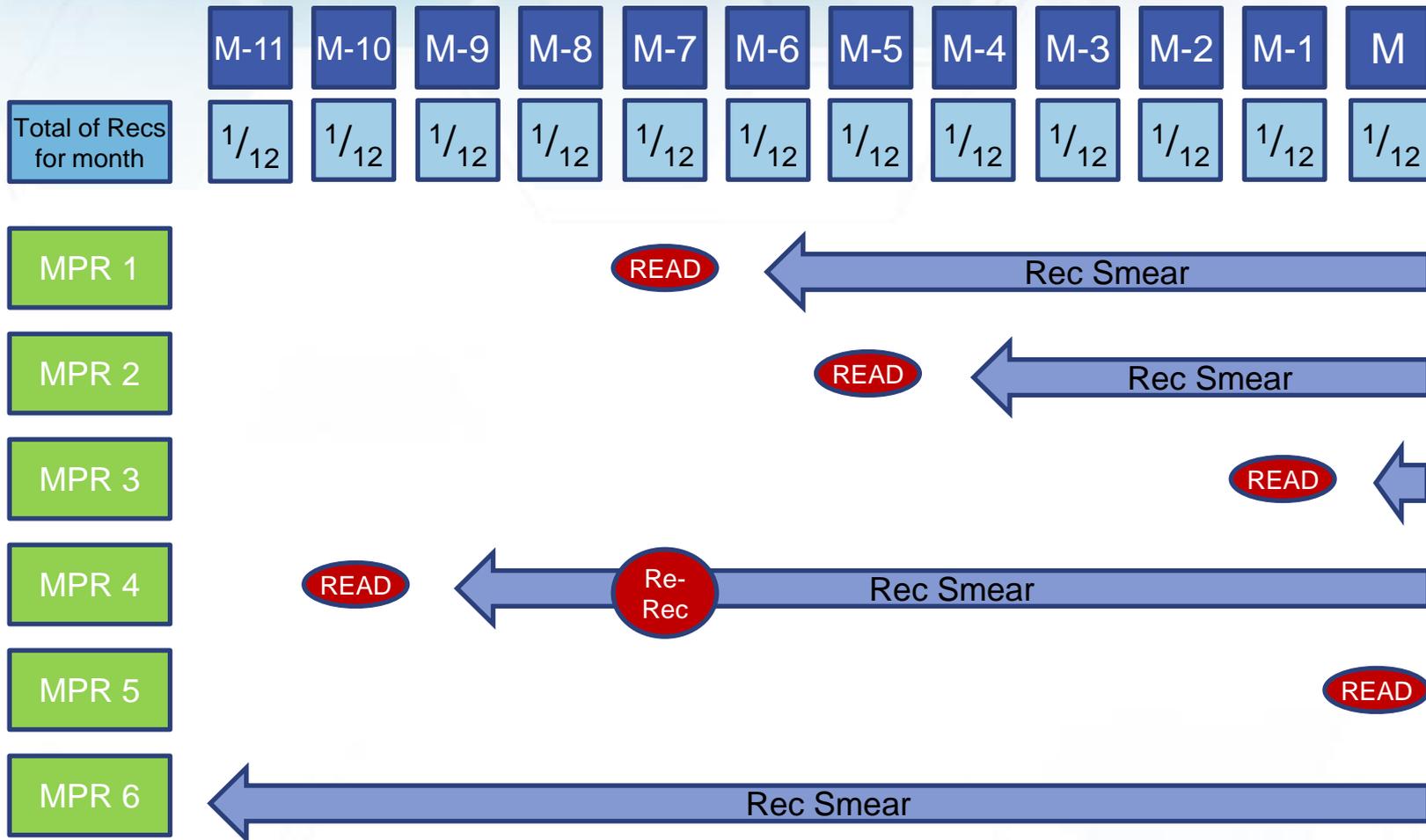
MONTHLY RECONCILIATION

Total LDZ

UIG

NDM (LSP & SSP) = Balancing Figure

Daily Metered (DM) Energy

LDZ Shrinkage

Equal + opposite of all Recs is shared across Unreconciled NDM meters and Unread DM meters using Settlement Error Weighting Factors

- Universal individual Meter Point rec still applies
- Daily UIG allocation is not re-opened by Rec
- Equal and opposite of all individual recs is shared to **Unreconciled Class 3/4 and Unread Class 1/2** only
- Sharing based on throughput for Unreconciled/ Unread meters, using separate Settlement Error Weighting Factors
- 12 month pot, rec/read in this month removes site from all of previous 11
- Re-reconciliation of an earlier month's read does not remove from current month's sharing
- Extra test applies for each smear month and LDZ – if Rec Energy (+/-) > Allocated Energy for the month for the qualifying MPRs in an LDZ, then smear to all sites, regardless of reconciled status
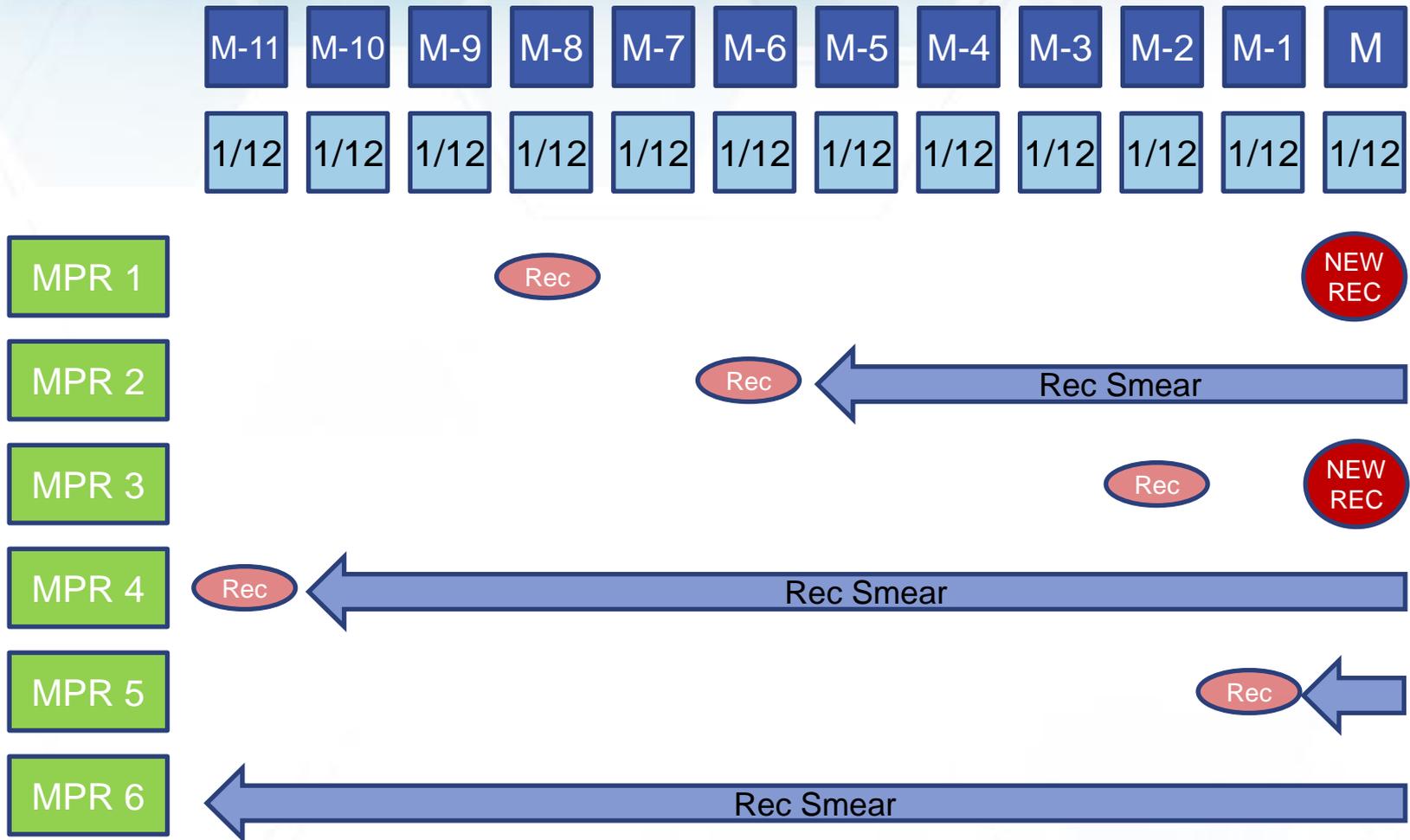
	M-11	M-10	M-9	M-8	M-7	M-6	M-5	M-4	M-3	M-2	M-1	M
Total of Recs for month	$1/12$	$1/12$	$1/12$	$1/12$	$1/12$	$1/12$	$1/12$	$1/12$	$1/12$	$1/12$	$1/12$	$1/12$

MPR 1 — READ ← Rec Smear

MPR 2 — READ ← Rec Smear

MPR 3 — READ ←

MPR 4 — READ ← Re-Rec — Rec Smear

MPR 5 — READ

MPR 6 ← Rec Smear

Total Rec energy is summed and divided by 12 to apportion across last 12 months market shares. Only meters which have not had a reconciliation in or since that month pick up a share of Settlement Error Rec. Here only 1 meter is still picking up Rec energy for the oldest month
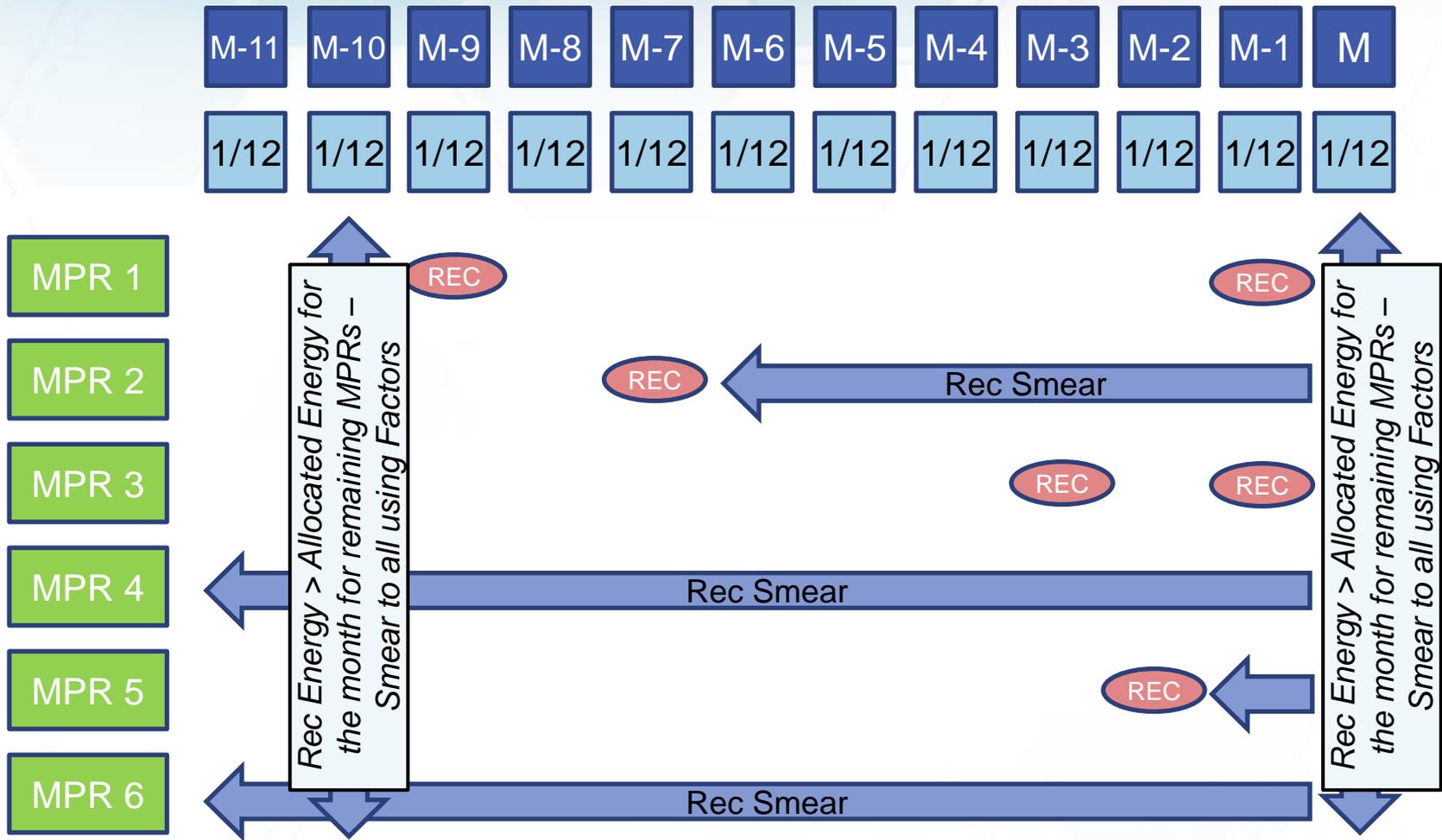* Extra test – if Rec Energy (+/-) > Allocated Energy for each month and LDZ for those MPRs, then smear to all sites, regardless of reconciled/read status

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M-11	M-10	M-9	M-8	M-7	M-6	M-5	M-4	M-3	M-2	M-1	M
1/12	1/12	1/12	1/12	1/12	1/12	1/12	1/12	1/12	1/12	1/12	1/12

MPR 1 Rec **NEW REC**

MPR 2 Rec ← Rec Smear

MPR 3 Rec **NEW REC**

MPR 4 Rec ← Rec Smear

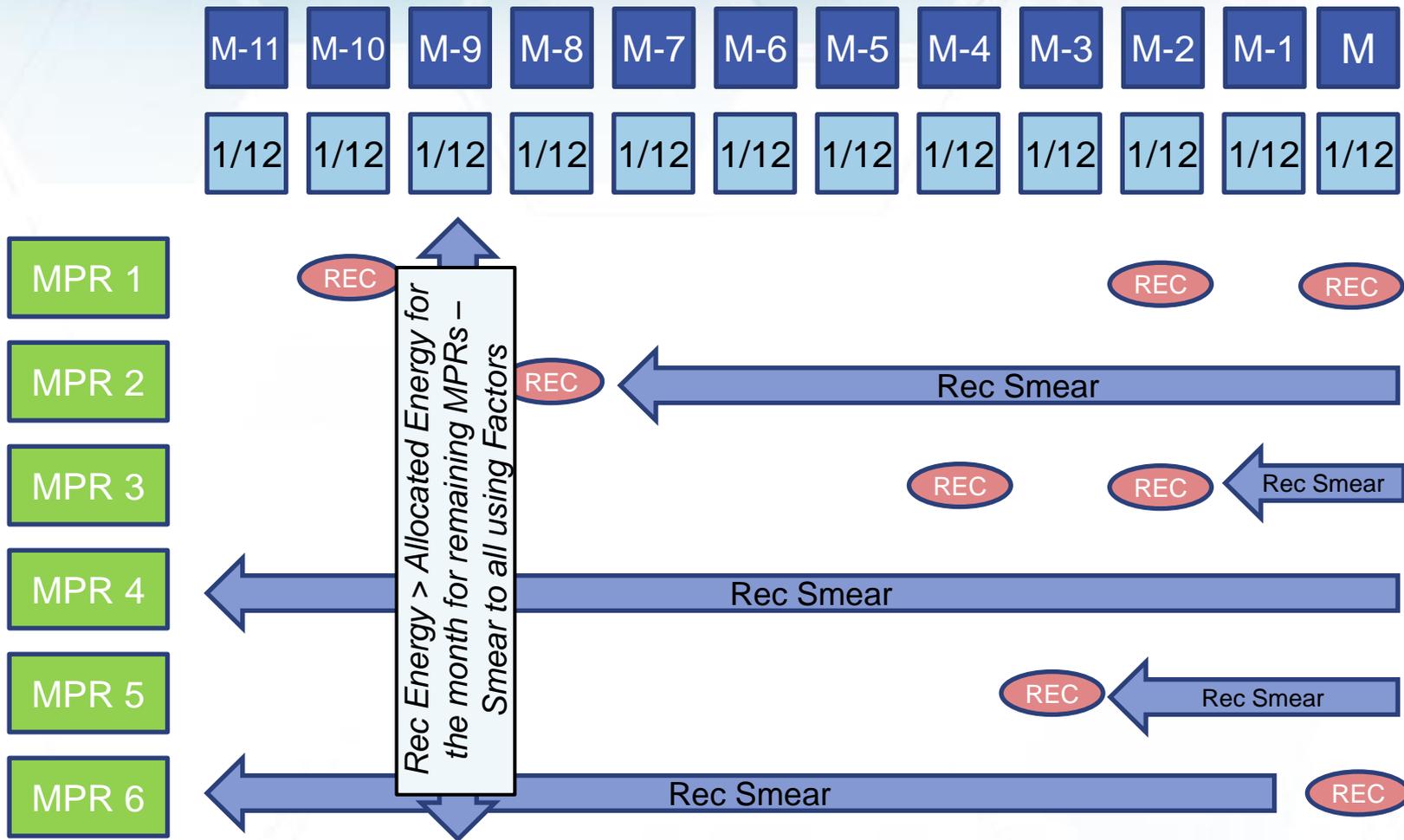**MPR 5** Rec ←

MPR 6 ← Rec Smear

New reads received in the month remove that meter from earlier months' UIG shares. The oldest month's Settlement Error Rec will be smeared to an ever-decreasing pool of meters

M-11	M-10	M-9	M-8	M-7	M-6	M-5	M-4	M-3	M-2	M-1	M
1/12	1/12	1/12	1/12	1/12	1/12	1/12	1/12	1/12	1/12	1/12	1/12

MPR 1

MPR 2

MPR 3

MPR 4

MPR 5

MPR 6

REC

REC

Rec Energy > Allocated Energy for the month for remaining MPRs – Smear to all using Factors

REC

Rec Smear

REC

REC

Rec Smear

REC

Rec Smear

Rec Energy > Allocated Energy for the month for remaining MPRs – Smear to all using Factors

Extra test conditions have been met for current and 2nd oldest month – Rec Energy (+/-) > Allocated Energy for the month for those MPRs, so smear to all sites, regardless of read status (each LDZ considered separately each month)
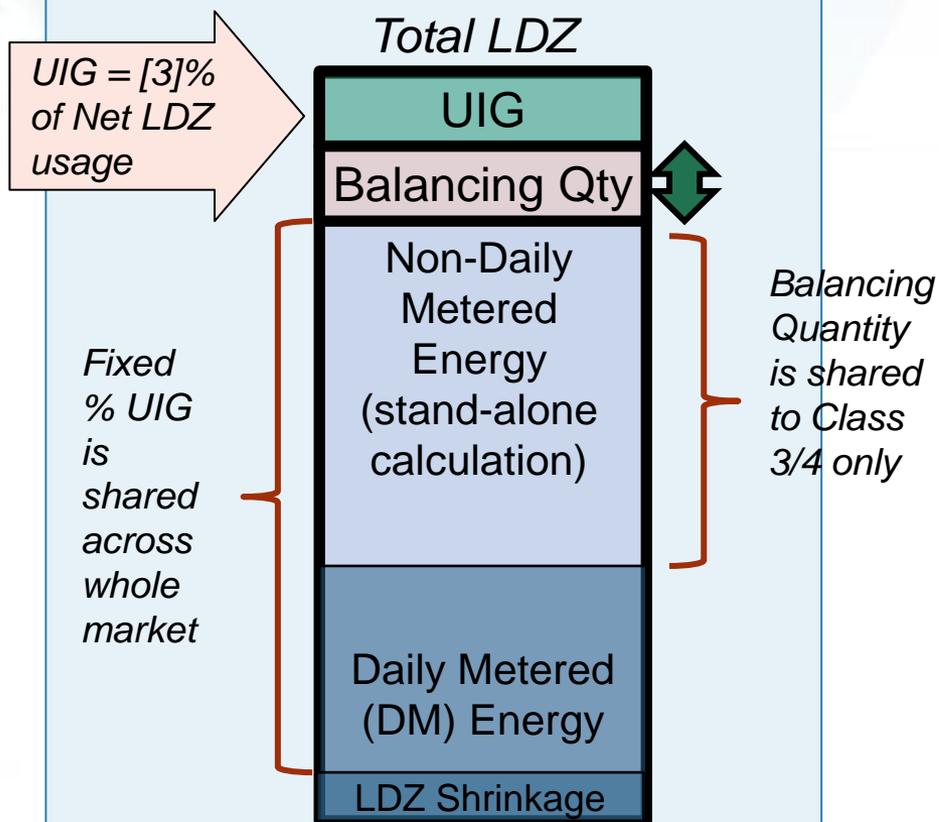
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M-11	M-10	M-9	M-8	M-7	M-6	M-5	M-4	M-3	M-2	M-1	M
1/12	1/12	1/12	1/12	1/12	1/12	1/12	1/12	1/12	1/12	1/12	1/12

MPR 1

MPR 2

MPR 3

MPR 4

MPR 5

MPR 6

REC

REC

REC

REC

REC

REC

REC

REC

REC

Rec Energy > Allocated Energy for the month for remaining MPRs – Smear to all using Factors

Rec Smear

Rec Smear

Rec Smear

Rec Smear

Rec Smear

Extra test conditions have been met for a different month – Rec Energy (+/-) > Allocated Energy for the month for those MPRs, so smear to all sites, regardless of read status (each LDZ considered separately each month)

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Modification 0642A – Fixed Daily UIG Percentage, plus Balancing Quantity

DAILY ALLOCATION

Total LDZ

UIG = [3]% of Net LDZ usage

| UIG |
| Balancing Qty |
| Non-Daily Metered Energy (stand-alone calculation) |
| Daily Metered (DM) Energy |
| LDZ Shrinkage |

Fixed % UIG is shared across whole market

Balancing Quantity is shared to Class 3/4 only

- DESC determines a fixed percentage for UIG each year
- Applied to net Throughput (after Shrinkage)
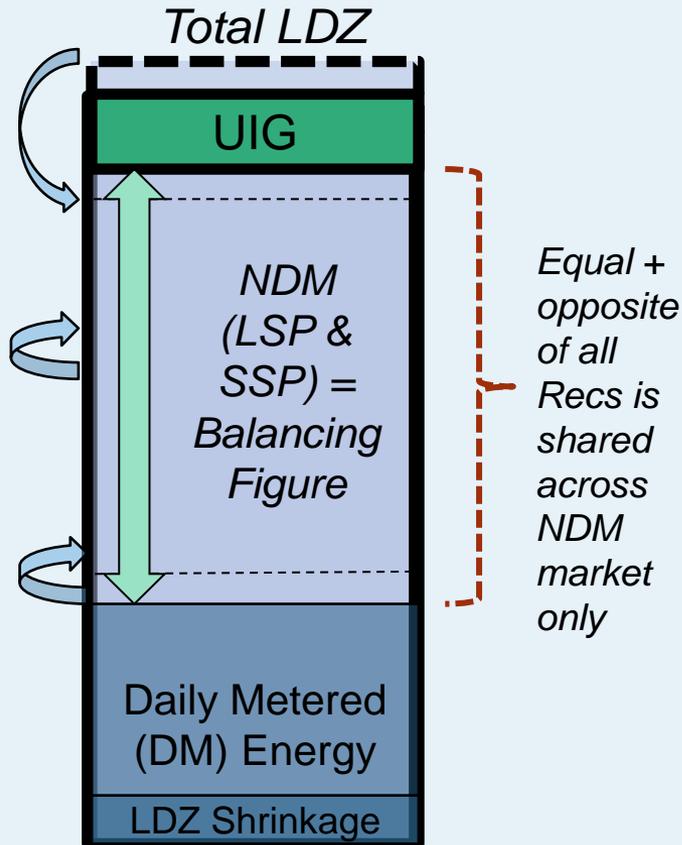- New Balancing Quantity shared out to NDM only without Weighting Factors

- Daily Allocation becomes a 5-step process
- STEP 1 - measure total gas used in the LDZ
- STEP 2 – deduct daily Shrinkage quantity
- STEP 3 – calculate UIG as fixed [3]% of LDZ Demand – Shrinkage, shared to all sites (no Weighting Factors)
- STEP 4 – calculate NDM Allocations using new Nexus Algorithm
  - Current Weather Correction Factor (WCF) i.e. using weather data
  - *(Scaling Factor not required)*
- STEP 5 – new Balancing Quantity calculated and shared out on basis of allocations to Class 3 and 4 only (no UIG Weighting Factors)

Modification 0642A – Fixed Daily UIG Percentage, plus Balancing Quantity

MONTHLY RECONCILIATION

Total LDZ

UIG

NDM (LSP & SSP) = Balancing Figure

Equal + opposite of all Recs is shared across NDM market only

Daily Metered (DM) Energy

LDZ Shrinkage

- Universal individual Meter Point rec still applies
- Daily UIG allocation is not re-opened by Rec
- Equal and opposite of all individual recs is shared to Class 3/4 only
- 12 month pot, no Weighting Factors

Modification 0642A – Reconciliation
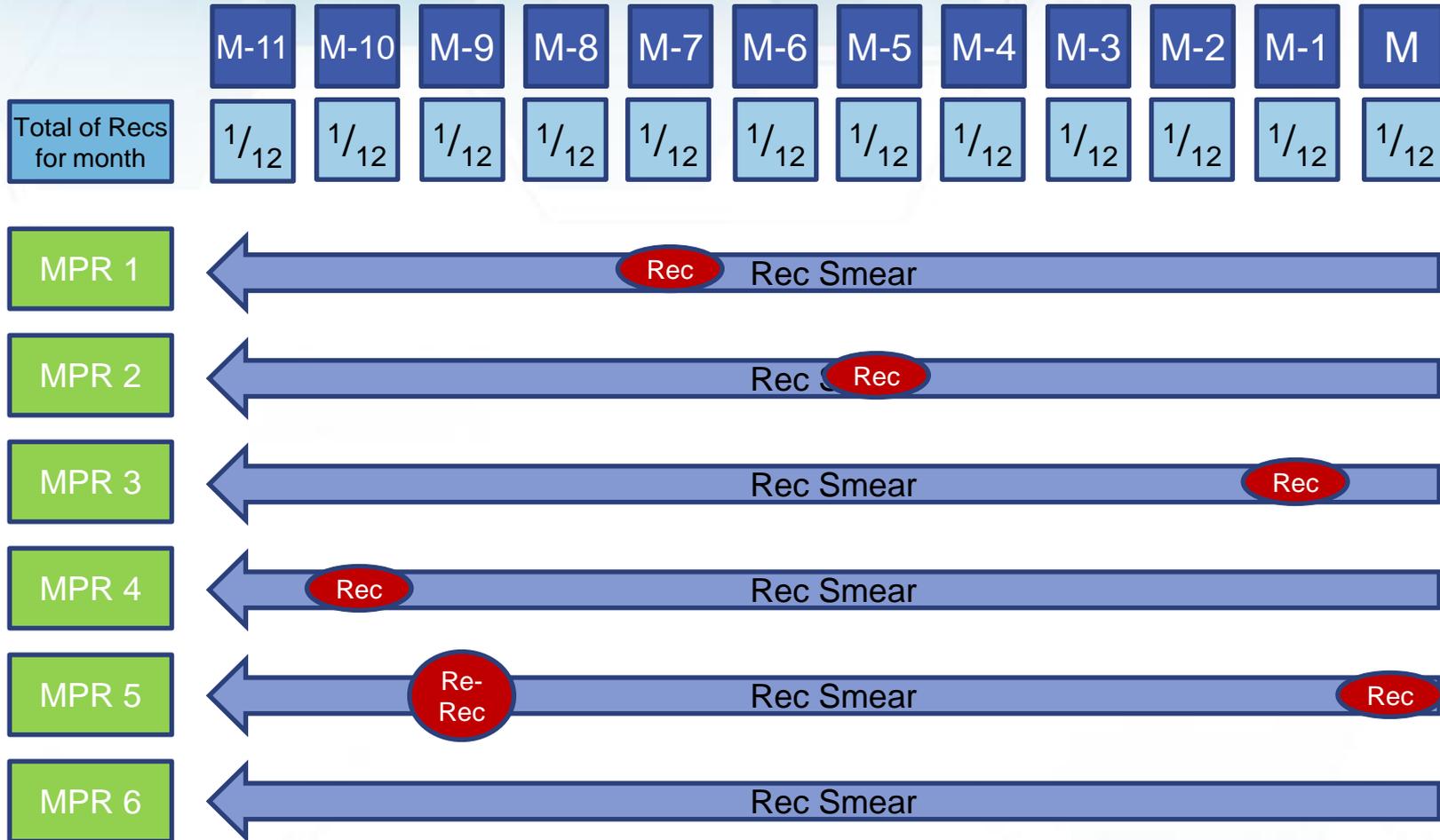
	M-11	M-10	M-9	M-8	M-7	M-6	M-5	M-4	M-3	M-2	M-1	M
Total of Recs for month	$1/12$	$1/12$	$1/12$	$1/12$	$1/12$	$1/12$	$1/12$	$1/12$	$1/12$	$1/12$	$1/12$	$1/12$

MPR 1 — Rec — Rec Smear

MPR 2 — Rec — Rec Smear

MPR 3 — Rec Smear — Rec

MPR 4 — Rec — Rec Smear

MPR 5 — Re-Rec — Rec Smear — Rec

MPR 6 — Rec Smear

Total Rec energy is summed and divided by 12 to apportion across last 12 months market shares, without UIG Weighting Factors.
Shared out regardless of Read/Reconciled status.
Only change is removal of UIG Weighting Factors

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Assumptions

- 0642/3:
  - A Change of Shipper event in a month will remove the meter point from share of Settlement Error rec for that month, regardless whether the read is actual or estimated
  - The UIG and Settlement error weighting factors can vary from LDZ to LDZ
  - LDZ measurement errors (incl Shrinkage corrections) will not result in a change to UIG calculation but will be treated as Settlement Error rec
  - Prevailing AUG Table Weighting Factors apply until AUGE can produce specific Settlement Error factors
- 0642A:
  - The Fixed UIG % can vary from LDZ to LDZ
  - LDZ measurement errors (incl Shrinkage corrections) will not result in a change to UIG calculation but will be treated as Balancing Quantity rec

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Areas for further clarification

- Are the above assumptions all valid?

- Treatment of transition including:
    - Whether new Unreconciled/Unread rules applies to pre-implementation months as well, or just post-implementation – i.e. is there an 11-month transition in rec smearing rules (0643) ?

- Update to AUG Framework document – required to inform a change to the current AUGE's service (or assess whether re-tender required)

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