

# Special Topic Session

## Repricing and Resettlement

Belfast, 27<sup>th</sup> February 2020

# Agenda

## Item

### Repricing

- Overview of repricing*
- Overall approach*
- Communication and engagement*
- Publication and reporting*
- Repricing Process Steps; including 'back up procedures'*
- High level materiality*

### Resettlement

- Active change requests review*
- Release E – Settlements defects review*
- Release E - timelines for resettlement*
- M+4 catch-up - completion month*
- Ad-hoc resettlement – planned approach & start month*

# Repricing

## ❑ Repricing Current Status

- ❑ The approach to repricing at the current time; is to reprice the oldest dates first and settle these in M+13 Resettlement.

## ❑ Rationale

- ❑ Updated prices can be calculated by the Repricing solution.
- ❑ During the testing phase; an issue was encountered where the recalculated NIV tags associated with repricing are not able to be processed by Instruction Profiling;
- ❑ This module determines the Settlement QBOA; and also the PBOA using the NIV tags as input i.e. if the unit will settle on Complex or Simple Data.
  - ❑ This information is then processed and fed into the settlement calculations.
- ❑ We are working with our vendor on a solution to address this; these discussions will determine when we can begin to recalculate new prices; and release a Repricing Calendar.

# Repricing

## Repricing

- ❑ Repricing is a process set out under Section E.3.8 of the TSC;
- ❑ Repricing is triggered based on a manifest error being identified in the calculation of the Imbalance Settlement Price; and the associated price change meeting a materiality threshold.
- ❑ Manifest errors cannot currently be materially assessed outside of the market systems.
- ❑ Only Imbalance Settlement Prices calculated as the average of the Imbalance Price shall be subject to repricing;
  - ✓ Meaning any ISP calculated as the MBuP will not be repriced.
- ❑ New prices calculated via repricing will never result in a MBuP; always based on the average of the six Imbalance Prices for the Imbalance Settlement Period.

## Price Materiality Threshold

- ❑ The materiality threshold for repricing is applied on an individual Imbalance Settlement Period basis;
  - ✓ ISP Change  $\geq 5\%$  then period is Repriced
  - ✓ ISP Change  $< 5\%$  then period is not Repriced

# Modification

## Modification\_23\_19

- Mod\_23\_19 is now effective on the baseline Trading and Settlement Code
- Modification was approved on the 7<sup>th</sup> February 2020.
- Modification is to allow SEMO to seek relief from an obligation under Section E.3.8 of the Trading and Settlement Code in exceptional circumstances; until 1<sup>st</sup> January 2021.

## Next Steps

- ✓ SEMO are in the process of **applying for relief from repricing under section E.3.8.**
- ✓ This will cover the period from 1<sup>st</sup> October 2018 through to 11<sup>th</sup> June 2019.
- ✓ The repricing approach set out in this document relates to the period 12<sup>th</sup> June 2019 onwards.

# Repricing Approach

## Simulation Environment

- Production specification (data and software version)
- Reprice all 5 minute periods that have been disputed
- Environment used to assess ISPs impacted by a manifest error
- Determine what periods meet materiality threshold (5%)

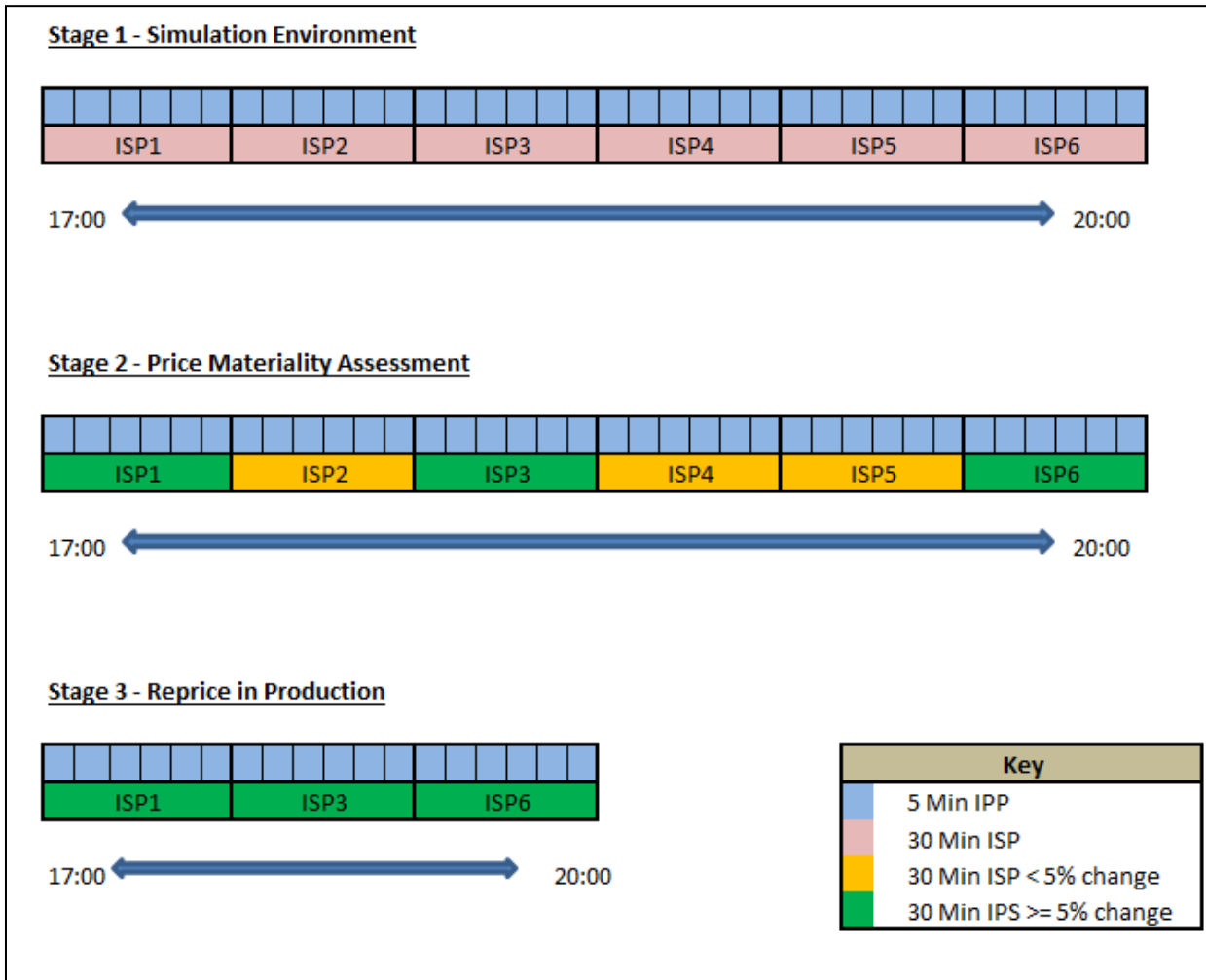
## Production Market Systems

- Recalculate and publish the prices for ISP where threshold has been met
- Repriced periods need to be completed in the same software release versions – i.e. Simulation and Production aligned

## Settlements

- Repricing outputs passed to Settlement and included in Settlement Reruns
- That is all updated prices and data relating to a full Billing Period

# Repricing Stages



# Repricing Approach

- **Billing Period Approach**

- Billing Period is a Settlement week (Sunday to Saturday)
- Intention is to align repricing with the settlement Billing Period;
- Different manifest errors have different resolution timelines;
- All manifest errors in a specific Billing Period would be deferred until they can all be resolved.

- **Benefits of this particular approach**

- Settlement based on the final Imbalance Settlement Prices; and Imbalance Pricing outputs. **Not Indicative.**
- Aligns the repricing and resettlement processes;
- Allows a clear timeline for the resolution of manifest errors;
- A clear schedule that can be tracked by MPs.

- **Repricing Calendar**

- The repricing calendar shall allow participants to track each item through to completion.



# Repricing Approach

## Publication Timelines

### Materiality Assessment

- Target 15 working days in advance of the Settlement Document publication date.

### Repricing Reports

- Target is no later than 10 working days in advance of the Settlement Document publication date.

**Note:** These dates represent the intended latest publication time; and may be published significantly in advance of this.

## Processing Times

- Repricing timelines are similar to the existing Imbalance Price calculation times;
- Takes around 3 minutes to calculate each 5 minute price within a repricing batch;
- Approximately 12 hours to calculate a full Trading Day;
- Depending on the volume of periods that meet the Price Materiality Threshold; the run time in the productions systems may decrease (i.e. relative to the 'assessed period')

# Materiality Assessment

- SEMO will provide Participants with a price materiality assessment;
- Assessment determines which manifest errors will result in repricing; based on a **5% Price Materiality Threshold**.
- It will be provided on a Billing Period basis; but each assessment within this timeframe is performed on each **individual** Imbalance Settlement Period;
- Repricing Calendar shall be updated with the publication date and link to the assessment;
- Only published for the periods where the Price Materiality Threshold has been met;

# Communication & Engagement

- SEMO shall communicate updates to Participants on repricing through a set of pre-defined market message templates;
  - These messages will be set out in the Appendix of the '[Repricing Participant Guide](#)'
- Participants are asked to subscribe to a new '[Repricing](#)' distribution group;
  - Subscribe via the Market Message subscription function on the SEMO Website.
- All messages will be communicated via email alert only;
  - Due to the volume of repricing and associated communications.
  - **Exception:** Dispute; and Notification of Manifest Error messages (Alert and Website)
- Communications shall keep Participants informed on the status of repricing for each manifest error.

[Balancing Market Repricing](#) - subscribe to email alerts about updates for Balancing Market Repricing

Subscribe

# Market Notices

Message ID	Market Notice Summary
MN1	Notification that manifest error has been identified in the market systems.
MN2a	Pricing Materiality Assessment has been completed; and Price Materiality Threshold has been met.
MN2b	Pricing Materiality Assessment has been completed; and Price Materiality Threshold has <b><u>NOT</u></b> been met.
MN3	Reminder of upcoming repricing. Message will be communicated one working day in advance of upcoming repricing.
MN4	Notification of completion of repricing; issued once all reports have been published.
MN5 (Back Up Process)	Market Notice issued in the event of failure of the 5 minute Imbalance Price (Repricing) calculation.

# Publication & Reporting

- A revised set of reports will be published during repricing;

Report Ref#	Report Name	File Names	Timespan
REPT_008	PUB_5MinImbalPrc	PUB_5MinImbalPrc_YYYYMMDDHHMM.xml	5 Minute
REPT_050	PUB_5MinImbalPrcSuppInfo	PUB_5MinImbalPrcSuppInfo_YYYYMMDDHHMM.xml	5 Minute
REPT_009	PUB_30MinAvgImbalPrc	PUB_30MinAvgImbalPrc_YYYYMMDDHHMM.xml	30 Minute
REPT_041	PUB_30MinImbalCost	PUB_30MinImbalCost_YYYYMMDDHHMM.xml	30 Minute

- 5 minute Imbalance Price reports shall be immediately after each new 5 minute price has been calculated in the repricing batch sequence;
- 30 minute Imbalance Settlement Price reports shall be published only once the entire repricing batch has completed;
- New Repricing reports can be determined by the report publication time;
- **Note:**
  - repricing reports shall overwrite existing reports; both on the Balancing Market Interface and the SEMO Website.
  - There is no change to the structure and format of the reports ([ISEM Technical Specification – Volume C](#)).

# Repricing Calendar

- Repricing Calendar will be published that will allow Participants to track every manifest error through to completion.

**Balancing Market Repricing Calendar**

The Balancing Market Repricing Calendar shall be used as a supporting tool to facilitate the tracking of Repricing and associated Settlement Rerun of manifest errors in the calculation of the Imbalance Settlement Price.

This calendar should be used in conjunction with Balancing Market Repricing Participant Guide [[hyperlink](#)].

Trading Day	Imbalance Settlement Period(s)	Billing Period End Date	Manifest Error ID	Materiality Assessment	Reprice Publication Date <sup>1</sup>	Resettlement Publication Date
e.g. 07/01/2018	23:00 to 02:00	07/01/2018 (Week1)	#EG1	11/02/2020 [ <a href="#">link</a> ]	18/02/2020	28/02/2020 (M13)

- **When is it updated?**
  - When new information is made available (*new manifest error, confirmed publication date, link to completed materiality assessments etc*)
- **Note:** ‘Resettlement Publication Date’ only for reference. Settlement Calendar should be used for all information pertaining to Settlement Reruns.

# Manifest Errors

## Manifest Errors Summary Table

Manifest Error ID	Manifest Error Summary	Release Date [If Applicable]	Count of Days Impacted
RPC3	Dispatch Instruction not applied to the Imbalance Pricing calculation.	NA	7
RPC4	Wind Dispatch Instruction not applied to the Imbalance Pricing calculation.	NA	18
RPC5	Incorrect calculation of QBOA for a Unit; correct initial conditions not applied.	NA	1
6104	QAO periodically dropping out during the Minimum On Time of a Unit.	Release E.	42
6076	Physical Notifications dropping out of the Imbalance Pricing calculation for isolated Imbalance Pricing Periods.	In Analysis	4
141769	IARAMP Constraint applied to Imbalance Pricing, when the Constraint should have been off.	NA	5

## Reporting of Manifest Errors

- ✓ Manifest error detail will be included in with the Repricing Calendar document.
- ✓ Track each manifest error and the periods impacted.
- ✓ Any new identified manifest errors will be appended to the list.

# Repricing Process Steps

#	Step	Step Description	Outputs	Timing
1	Manifest Error Encountered	<p>SEMO identifies that a manifest error has been found in the calculation of the Imbalance Settlement Price(s); and issues a Market Notice.</p> <p>SEMO shall also update the Repricing Calendar to reflect the manifest error.</p>	Market Notice ( <b>MN1</b> ) issued to Participants and Repricing Calendar (SEMO Website)	Within 5WD of the impacted Imbalance Settlement Periods.
2	Determination of Materiality	<p>SEMO performs a price materiality assessment on the manifest error and;</p> <ol style="list-style-type: none"> <li>Where the Price Materiality Threshold <u>has</u> been met: <ul style="list-style-type: none"> <li>communicates to Participants the outcome of that assessment (MN2a); for the subset of periods where the Price Materiality Threshold has been met (proceed to Step 3); and</li> <li>update the Repricing Calendar with the intended Repricing Publication Date</li> </ul> </li> <li>Where the Price Materiality Threshold <u>has not</u> been met: <ul style="list-style-type: none"> <li>communicates to Participants informing that Repricing is not required (MN2b). <b>End Process.</b></li> </ul> </li> </ol>	Market Notice ( <b>MN2a</b> or <b>MN2b</b> ) and Materiality Assessment (SEMO Website)	As soon as possible after the manifest error has been declared; and no later than 15 WD before the Settlement Rerun.
3	Notice of Repricing in Production	SEMO shall issue a Market Notice reminder to Participants confirming the Repricing Publication Date.	Market Notice ( <b>MN3</b> )	1WD before Repricing Publication Date



# Repricing Process Steps

#	Step	Step Description	Outputs	Timing
4	Recalculate and Publish Updated Prices	SEMO shall recalculate and publish updated 5 minute Imbalance Prices and 30 minute Imbalance Settlement Prices where the Price Materiality Threshold has been met; as per Step 2.	Balancing Market Interface and SEMO Website	<p>On Repricing Publication Date; and no later than 10 WD before the Settlement Document publication date; for the relevant Settlement Rerun.</p> <p>Imbalance Prices (after the completion of each 5 minute price calculation)</p> <p>Imbalance Settlement Prices (after the completion of the last 5 minute price calculation for the period).</p>
5	Notice of Completion of Repricing	On successful publication of Repricing; SEMO shall issue a Market Notice advising that Repricing has completed.	Market Notice ( <b>MN4</b> )	Within 1WD of the completion of Repricing.
6	Settlement of Repriced Dates	SEMO shall complete a Settlement Rerun; as per the Settlement Calendar.	Settlement Calendar (SEMO Website)	As per Settlement Calendar timetable.

# Repricing 'Back Up' Process Steps

#	'Back up' Scenario	'Back up' Process Steps
<b>RPC1</b>	5 Minute Imbalance Price Calculation Failure	<p>In the event that the Repricing workflow stops before the final 5 minute Imbalance Price has been calculated; then the repricing process will be deemed terminated.</p> <p>Under this scenario, 5 minute Imbalance Price Reports will be published up to the point of failure, but no new Imbalance Settlement Prices shall be calculated.</p> <p>SEMO shall:</p> <ol style="list-style-type: none"> <li>1. Communicate Market Notice (<b>MN5</b>); advising that Repricing did not complete; advising which 5 minute reports were published but should be ignored; and</li> <li>2. Update the Repricing Calendar; and communicate a revised Repricing Publication Date.</li> </ol>
<b>RPC2</b>	Incorrect Repricing Results	<p>On completion of Repricing in the production systems; SEMO shall perform an analysis of the Repricing results.</p> <p>Should there be an error in the recalculated prices; SEMO shall:</p> <ol style="list-style-type: none"> <li>1. Communicate Market Notice (<b>MN1</b>) that Repricing is incorrect, as per section E.3.8 of the Trading and Settlement Code;</li> <li>2. Declare a manifest error for the corresponding Imbalance Settlement Periods;</li> <li>3. Update the Repricing Calendar, and communicate a revised Repricing Publication Date; and</li> <li>4. Recalculate and publish the corrected prices.</li> </ol>

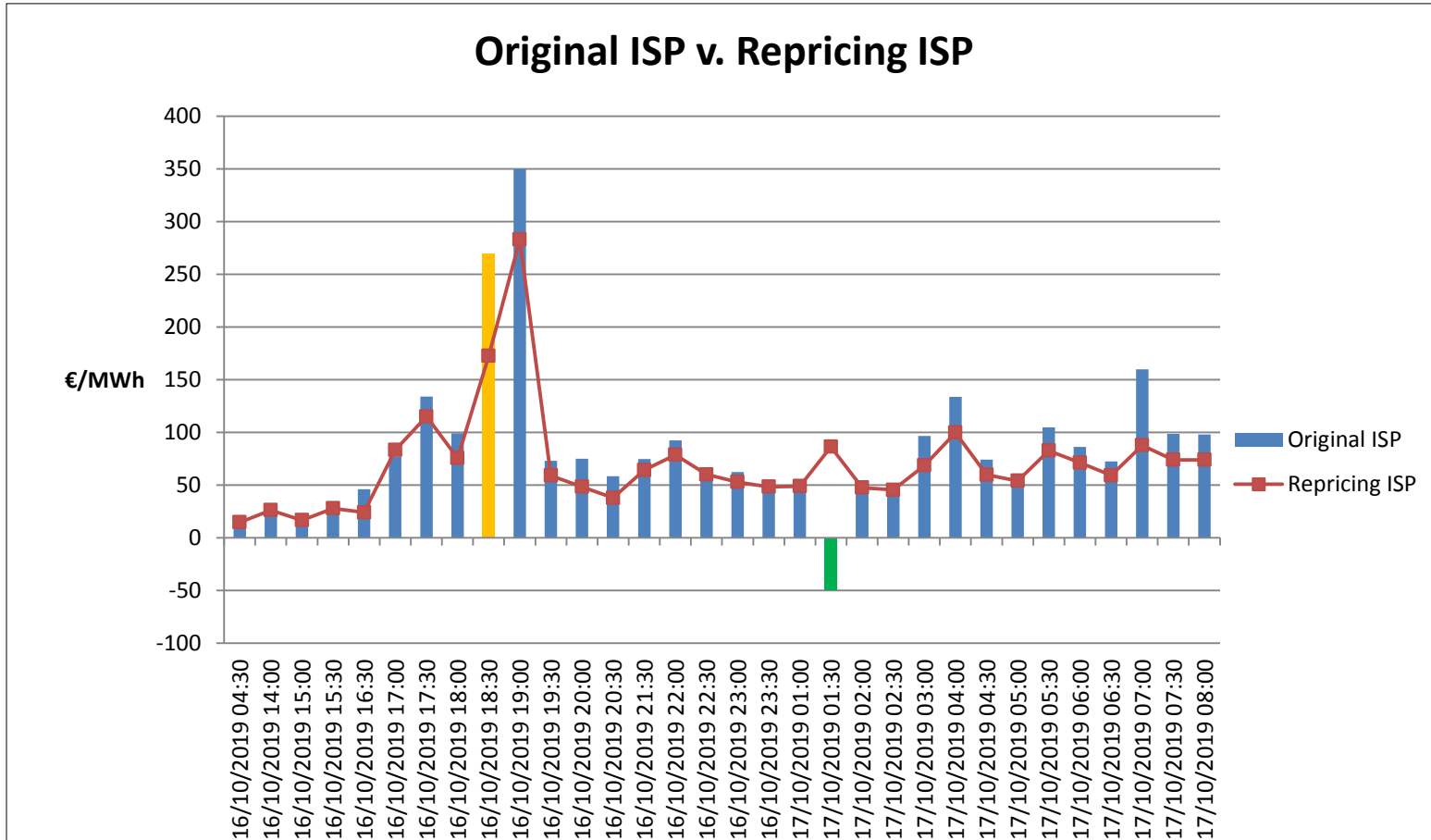
# Materiality Review

- A indicative materiality assessment was carried out on the period **03:30** on **16/10/2019** to **10:00** on **17/10/2019**.
- This manifest error was the result of wind DIs not feeding the Imbalance Pricing calculation.

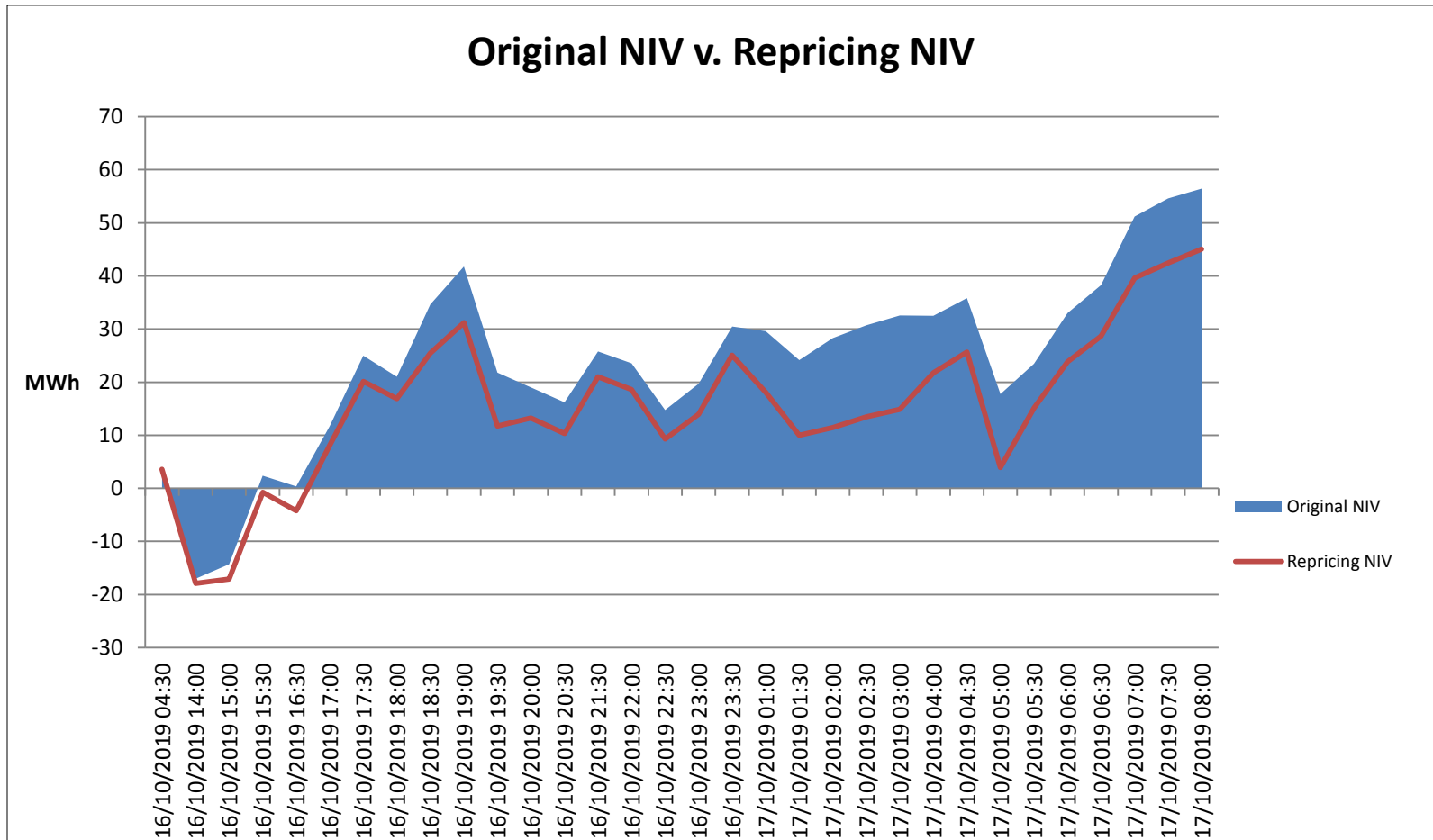
## Summary Table (indicative only)

Summary Changes	Value
Total Periods Assessed	62
Total Periods >= 5%	32
Average Price Change	-€ 14.34
Max Price Increase	€ 135.75
Max Price Decrease	-€ 97.41
Lowest Price Change	€ 0.84
Average Repriced ISP	€ 70.20
Average Original ISP	€ 84.54

# Materiality Review (Imbalance Settlement Price)



# Materiality Review (NIV)



# Agenda

## Item

### Repricing

- Overview of repricing*
- Overall approach*
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- High level materiality*

### Resettlement

- Active change requests review*
- Release E – Settlements defects review*
- Release E - timelines for resettlement*
- M+4 catch-up - completion month*
- Ad-hoc resettlement – planned approach & start month*

## Active Change Requests

ID (KIR)	CR Name	Description	Status
CR 76 135705 MOD_05_19	Amendment to Uninstructed Imbalance Charge (CUNIMB) to correct for negative price scenarios	Where the Imbalance Price and/or a Bid Offer Price are negative this can result in the Uninstructed Imbalance Charge becoming a payment	Release E <b>PASSED SIT</b>
CR 89 5772 / 6072	Use of Annual Capacity Exchange Rate in Settlement	CCC, CCP and CSOCDIFFP settlement for NI units not applying the Annual Capacity Exchange rate as per G.1.3.5 & G.1.3.6. Balancing market FX rate incorrectly being applied.	Release E <b>PASSED SIT</b>
CR 118 6066	Inclusion of Zeros in Settlement Reports	Where data is not present in CSB , a default value of zero shall apply within the settlement calculations to allow for the full calculation, publication of 48 trading periods that is to be reflected within statements , reports. A default value is not being applied resulting is missing trading periods.	Release E <b>In-Progress SIT</b>
139,296 (CR 091) MOD_19_19	Setting System Operator Flags to zero for the purposes of Settlement	Change Request drafted. Pending T&SC modification approval	Release F TBC
MOD 17_19 CR128	DSU State Aid Compliance	Change Request submitted: DSU State Aid Compliance (interim approach)	Release F TBC
139,479 (CR 92) MOD (TBC)	Application of Loss Factors for Interconnectors in Settlement	Change Request drafted. Pending T&SC modification approval	Release F TBC

## Settlement Defects - Release E

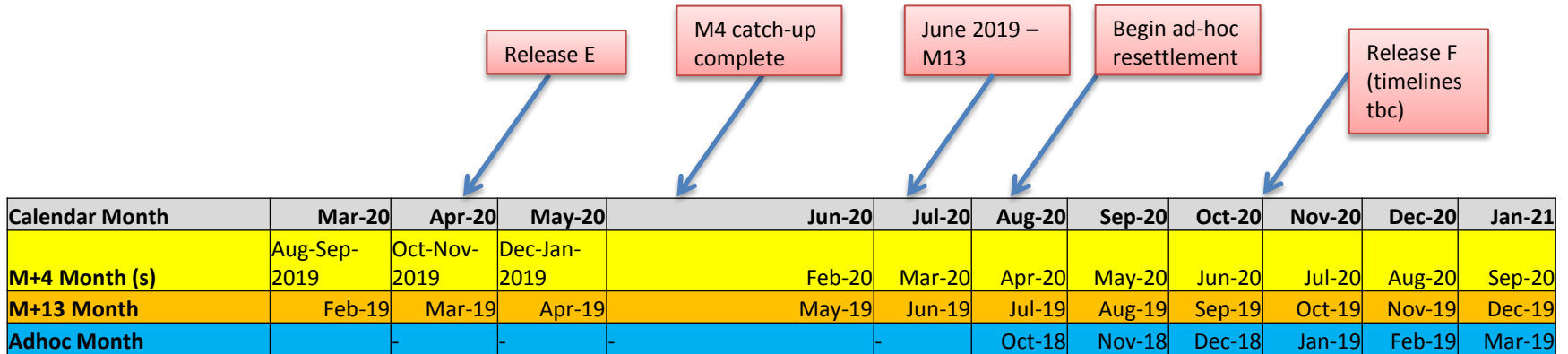
Defect ID (KIR)	Description	SIT Status
6112	QABBPO & QAOOPO are being published within REPT_044. REPT 044 to remove determinant QABOPO as this determinant is also reported as QABBPO  #124,553: The term QABOPO on REPT 044 is a duplicate of QABBPO. The term QABOPO in UI BOA Details equals the term QABBPO in the TSC.	PASSED SIT
6083	M4 re-settlement: unexpected values in QABBIAAS volume i.e. much lower than expected	PASSED SIT
6077	Settlement Document Total Previous Purchases and Total Previous Sales are not populated in SD Details Screen in CSB (Billing System)	PASSED SIT
6065	Corrected the application of Within Day Difference Charges from calculating for DSU's - not being reflected in re-settlement (125624)	IN-PROGRESS
6060	CFC calculation for CNL is not fetching meter values for the last day of the week, causing calculation to be incorrect. This is very material and leading to a <u>weekly CFC (CNL) underpayment of ~€300K</u>	PASSED SIT
6055	Socialization and shortfall calculation is including values for intervals prior to market Start	PASSED SIT
6054	CFC calculation is including values for intervals prior to Market Start ( <u>Material - €600K recovery</u> )	PASSED SIT
6047	Biased BOAs (QABBIAAS, QAObIAS) being calculated in CSB above what they should be (also captures QBIAS being calculated too low in resettlement)	PASSED SIT
6044	QD determinant missing from REPT_44 in indicative & initial reports for a range of units and dates (No QD Data in REPT_44 if no RO). Mainly affecting WFPS	PASSED SIT
5953	REPT_044 missing 'Accept time' for QAO and QAB determinants	PASSED SIT



## Settlement Defects - Release E Continued

Defect ID (KIR)	Description	SIT Status
5808	FMOC FX rate applied not aligned with the Trade and settlement code 1.3.9. FMOC is applying the trading day exchange rate of the last day of the month. It should apply the exchange rate on the day of Invoicing as per the TSC 1.3.9.	PASSED SIT
5632	Settlement Document Not Transferred to Dynamics - Participant Deactivation Scenario Settlement Document not transferred to Dynamics and Participant xml not created if the Participant is deactivated – Workaround implemented in production to change end date.	PASSED SIT
5563	Change the unit for QTDA determinant on REPT_044 from "MWh" to "MW".	PASSED SIT
5332	The Market Operator Costs UI uses a Monday-Sunday week, when it should use Monthly.	PASSED SIT
5314	The time stamp on the record is incorrect, it contains a second which it should not. Timestamp on certain charge values in REPT_043 incorrectly includes seconds.	PASSED SIT
4481	CSB Settlement Document UI does not sum Total Charges Received and Total Payments Received to a EURO amount.	PASSED SIT
6137	MISTLY_DLY_PUSH changes – View changes for Performance (MMS)	PASSED SIT

# Resettlement planning - 2020



**Key Events:**

- Release E into production in April 2020
- M+4 double up due for completion end of June 2020
- Planned start of ad-hoc resettlement in August 2020
- Release F into production – timelines tbc

**Key Assumptions:**

- M4 double up keeps on schedule
- M13 resettlement keeps on schedule
- Release E on schedule
- IP re-runs required for Release E (Ad-hoc)
- Release F to be assessed for IP re-runs

Close

- SEMO Website: <http://www.sem-o.com/>
- Semopx Website: <http://www.semopx.com/>
- Queries: [Info@sem-o.com](mailto:Info@sem-o.com); [Info@semopx.com](mailto:Info@semopx.com)

***Thank you for your attendance.***