



UFE Focus Group Meeting #3

31 January 2022

Welcome & Housekeeping

- Welcome
- Housekeeping
 - These meetings will be recorded for minute-taking purposes
 - Please keep yourself on mute when you are not speaking
 - Feel free to use the chat or come off mute should you have any questions or comments
 - Questions which cannot be answered on the day will be captured and answered asap
 - We will endeavour to circulate 'Notes' within a week of the focus groups
 - Actions will be captured, shared and completed as required
 - Any questions, concerns or suggested agenda items can be sent to GSMSDR@aemo.com.au

Agenda

NO	AGENDA ITEM	RESPONSIBLE
1	Welcome	Greg Minney
2	Key Issues <ul style="list-style-type: none">• 5 minute Load profile update• Metering Data delivery	David Ripper Paul Lyttle
3	Progress Since Go-Live- <ul style="list-style-type: none">• Grid Profiles and Local Area Review	Darren Gatty
4	Short-term Priorities <ul style="list-style-type: none">• Participant lead population activities	Paul Lyttle
5	Discussion Topics: <ul style="list-style-type: none">• Approach to embedded networks (Post RWG) - Rule Update material• Outline of items that contribute to UFE Approach to off market settlement• Off market settlements in GS environment	David Ripper Greg Minney Greg / David
6	GS Go-Live Approach	Greg/ Paul
7	Next Steps and General Business	Greg Minney

Attendee	Organisation	Attendee	Organisation	Attendee	Organisation	Attendee	Organisation
Greg Minney	AEMO	Jayden Harrod	BlueNRG	Dean Knight	Powerlink		
Paul Lytle	AEMO	Hasitha Gajanayake	Brave Energy	Dan Hillier	Powershop		
Darren Gatty	AEMO	Sujatha Vutukoor	Brave Energy	Christophe Bechia	Red Energy		
Sarah Pearson	AEMO	Tash Hiko	CleanCo QLD	Arunesh Choubey	Red Energy		
Michael Weuffen	AEMO	Vicki Grant	CleanCo QLD	Mark Reid	Red Energy		
David Ripper	AEMO	Megan Ide	Electranet	Nick Gustafsson	Red Energy		
May Cotoner	AEMO	Dino Ou	Endeavour Energy	Andrew Jackson	SA Water		
Kate Goatley	ActewAGL	Justin Chin	EnergyAustralia	George Raybould	SA Water		
Mark Riley	AGL	Mathew Tanzer	Energy QLD	Robert Larkin	SA Water		
Lori Scarano	AGL	Nick Hickman	Energy QLD	Anatoliy Tsymay	Stanwell		
Maree Madden	AGL	Justin Wearne	Energetiq	Justin King	Stanwell		
Ravi Govindu	Alinta Energy	Zahara Magriplis	Energex	Sara Yakimoff	Stanwell		
Zulfi Syed	Alinta Energy	Ingrid Farah	Ergon	Sudeshna Nanda	Stanwell		
Robert Lo Giudice	Alinta Energy	Lauren Macey	Essential Energy	Angela Sheehy	Stanwell		
Sumitha Thilak	Alinta Energy	Melissa Ferris	Essential Energy	Sue Richardson	Tally Group		
Alexander Riseley	Aurora Energy	Jeff Roberts	Evoenergy	Deepak Sood	Tango Energy		
Kevin Boutchard	Aurora Energy	Anthony Croce	Infigen/Iberdrola	Paul Willacy	TasNetworks		
Craig Steele	Aurora Energy	Carla Adolfo	Intellihub	Paul Greenwood	Vector Metering		
Wayne Turner	Ausgrid	Fergus Stuart	Origin Energy	Heath Winning	ZEN Energy		
Justin Betlehem	Ausnet Services	Matthew Lee	Origin Energy	Pramesha Weerasinghe	ZEN Energy		
Sarah Lawley	BlueNRG	Inger Wills	Powercor				
Hieu Ngo	BlueNRG	Karel Mallinson	Powerlink				

Key Issues

David Ripper

Key Issues – 5MLP Spikes

- 5MLP profiles are continuously monitored for negative 5MLP values and spikes in profiled values.
- Weights were adjusted on 21 December 2021 for profile areas UMPLP (SA) and ENERGEX (QLD) effective 1 Oct 2021. The list of system load NMI's that have weighting applied has been published on the AEMO website.
- Following a review of 5MLP values in profile area TXU (VIC) and subsequent confirmation of actual metering data for system load NMI's, weights were adjusted on 24 January 2022, effective 1 Oct 2021. The updated list of system load NMI's that have weighting applied has been published on the AEMO website.
- Monitoring of 5MLP values indicate some negative values still remaining in UMPLP (SA) for four days in December (25-28 Dec 2021) due to system load NMI's that have weighting applied having zero actual values on these days, requiring a further adjustment to the weights.
- Negative 5MLP values have also been identified for a single day in profile area COUNTRYENERGY. This is currently being verified and weights will be adjusted as required.

Key Issues – Metering Data Quality

- AEMO continues to work with MDPs to ensure all essential NMIs are providing 5 minute reads
 - Still have issues with replacement reads not being 5 minute intervals.
- Current metering data analysis shows a significant improvement in meter read quality
 - However there remains a level of fluctuation during the Preliminary settlement run
 - This generally appears to be corrected in the Final settlement run
- AEMO continues to monitor metering data as part of the standard settlement calculation processes

Meeting Notes

AEMO confirmed that:

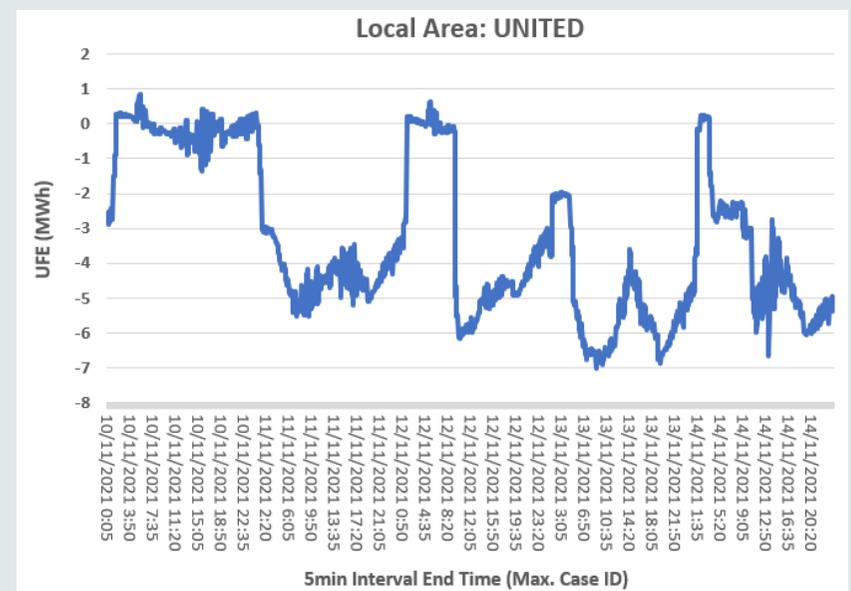
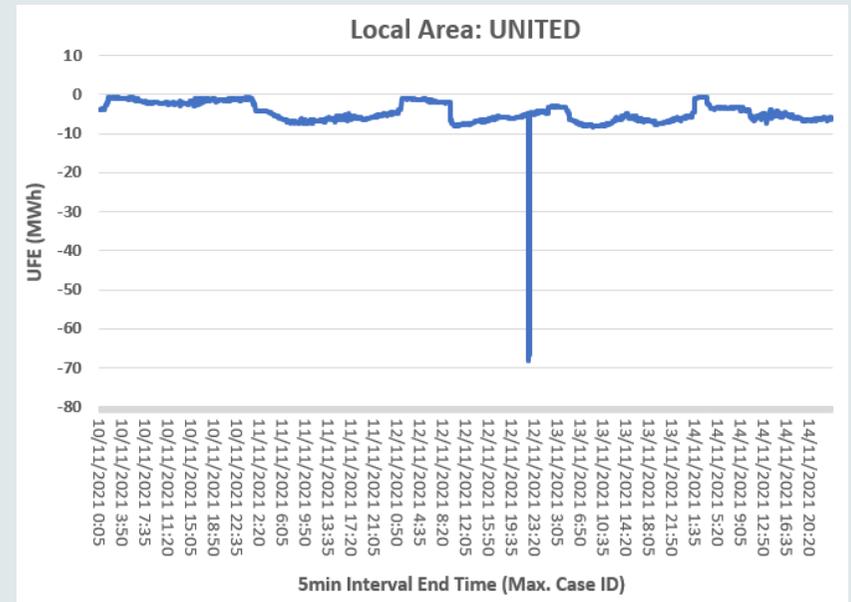
- The factors contributing to UFE, including negative UFE, are still being worked through with the appropriate parties. Ausnet Services raised the possibility of solar PV as a factor, in particular in large industrial settings where solar may have been installed, but not registered with the metering provider. AEMO confirms that such circumstances are a possible contributor, however remnant cross-boundary supply issues should also be considered, with AEMO SMEs noting that where there has been a magnitude of negative UFE, it has often been where cross-boundary supplies have not been set up correctly.
- **Action 3.2.1: Ausnet Services to forward information regarding their identification of unregistered solar PV to AEMO's GSMSDR mailbox.**

Progress Since Go-Live

Darren Gatty

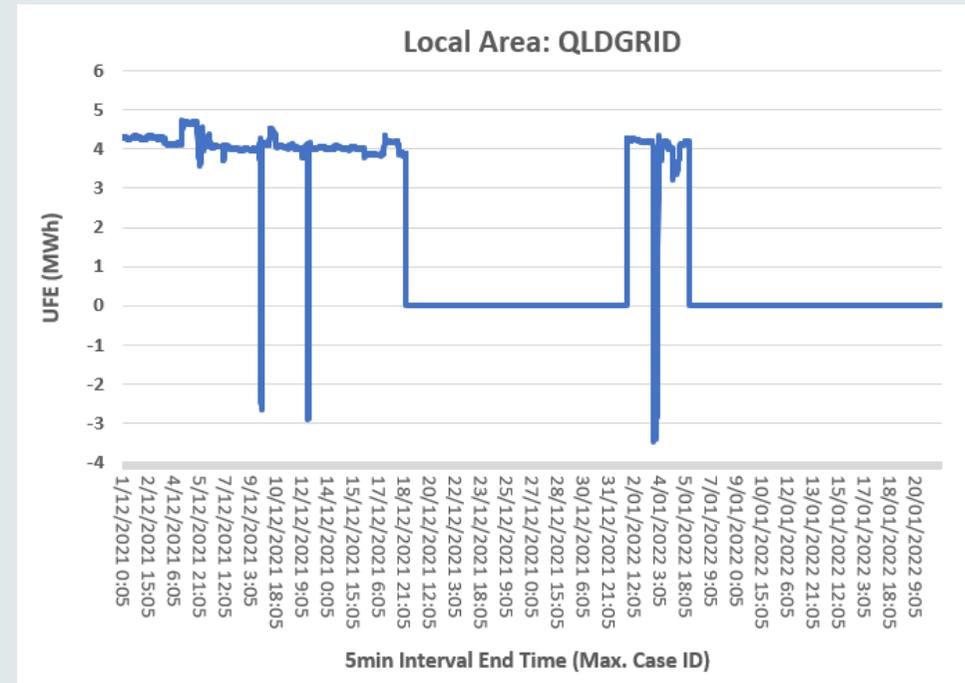
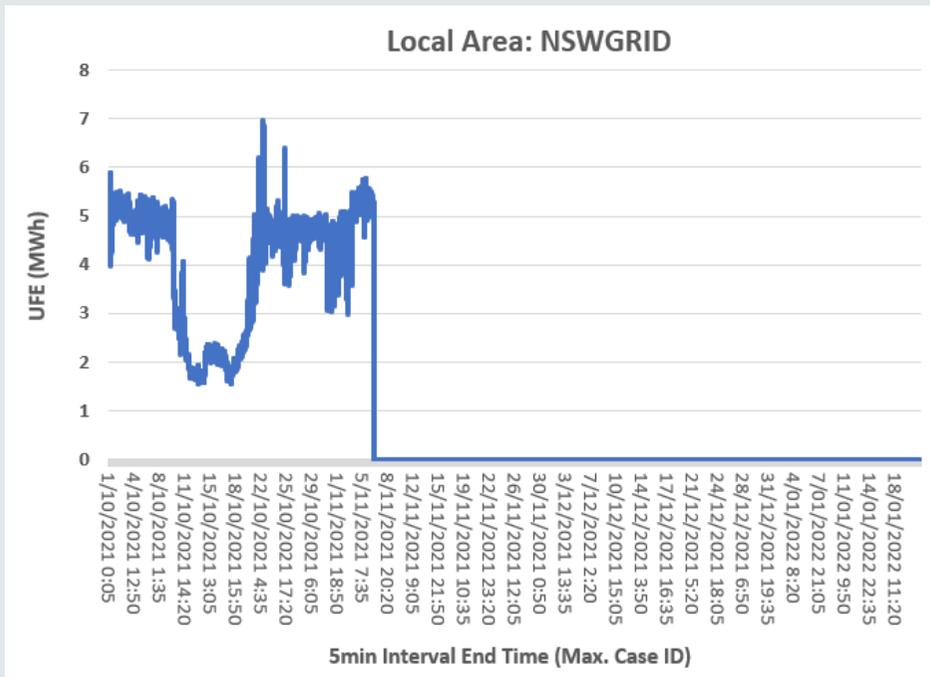
Progress Since Go-Live

- The ENERGETX Local Area TNI QMGL where there was previously TME calculated with no ADME values had NMIs identified which are incorrectly against the TNI QMGB
- Energy QLD is in the process of arranging for them to be transferred to the correct TNI, some ADME is now being recorded on this TNI
- The negative UNITED spike included shown in the above right chart from the previous FG presentation was identified as being caused by a single incorrect 15 minute read on a single NMI
- This has now been corrected by the MDP, as per chart below right



Progress Since Go-Live – Grid Areas

- The NMI configurations resulting in UFE values in the NSWGRID and QLDGRID Local Areas have now been resolved, leading to zero UFE calculations now occurring in all *GRID LA's
- NSWGRID was tested and resolved last year, while QLDGRID was completed this year only, so still has more periods showing non-zero UFE, which will disappear with the future final/revision runs for those dates



Meeting Notes

NO QUESTIONS

Short-term Priorities

Paul Lyttle, Greg Minney & Darren Gatty

Short-term Priorities

- Monitoring Delivery of 5 minute reads for Essential NMI
- Monitoring Tranche 1 meters currently not delivering 5 minute reads
- Monitoring Basic Datastream registration
- Investigating any abnormal UFE spikes
- Working with Participants to update and register BULK and XBOUNDARY connection points

Participant Lead Data Population

- Participant population activities to allow for reflective calculation of UFE
 - All active tier 1 Basic NMs to deliver metering data to AEMO
 - Quantity of outstanding meters for each Profile Area
 - Creation , Activation and data delivery for non contestable unmetered loads
 - Quantity of active NMs for each Profile Area
 - Implementation of cross boundary meters to reflect distribution area to distribution area flows
 - Numbers broken into:
 - Standing data completed and providing Meter data
 - +
 - Standing data requires updating, meter data being provided (should not impact UFE calculation)
 - +
 - NMs have been advised but not registered or providing meter data (assume majority are low impact and scheduled for Feb completion)

Participant lead population activities Current Status

Profile Area	Tier 1 Basic Meter with No Active Datastreams	NCONUML NMs (Completed)	X-Boundary supplying PA	Commentary
ACTEWAGL	147	32	0 + 0 + 0	
AURORA	4	1965	0 + 0 + 0	
CITIPOWER	9	5624	0 + 0 + 17	
COUNTRYENERGY	1	6305	1 + 10 + 0	
ENERGEX	3	32905	4 + 0 + 0	
ENERGYAUST	3	200	6 + 3 + 0	
ERGON1	0	9847	0 + 2 + 0	
INTEGRAL	3	7639	13 + 0 + 0	
POWERCOR	47	9166	4 + 0 + 6	
TXU	3	6074	4 + 3 + 4	
UMPLP	6	9495	2 + 0 + 0	
UNITED	4	8840	2 + 1 + 21	
VICAGL	83	2924	3 + 1 + 0	

Participant Lead Data Population Summary

- Planned Non contestable unmetered load activity completed with metering data delivered
- Tier 1 Basic metering data:
 - Essentially complete, with final cleanup activity in progress
 - Majority of areas with < 10 NMIs active with no active data streams
- Cross Boundary meters
 - Finalisation of setup for NMIs advised but not registered expected by end Feb
 - Cross boundary flows impact UFE allocation between areas.

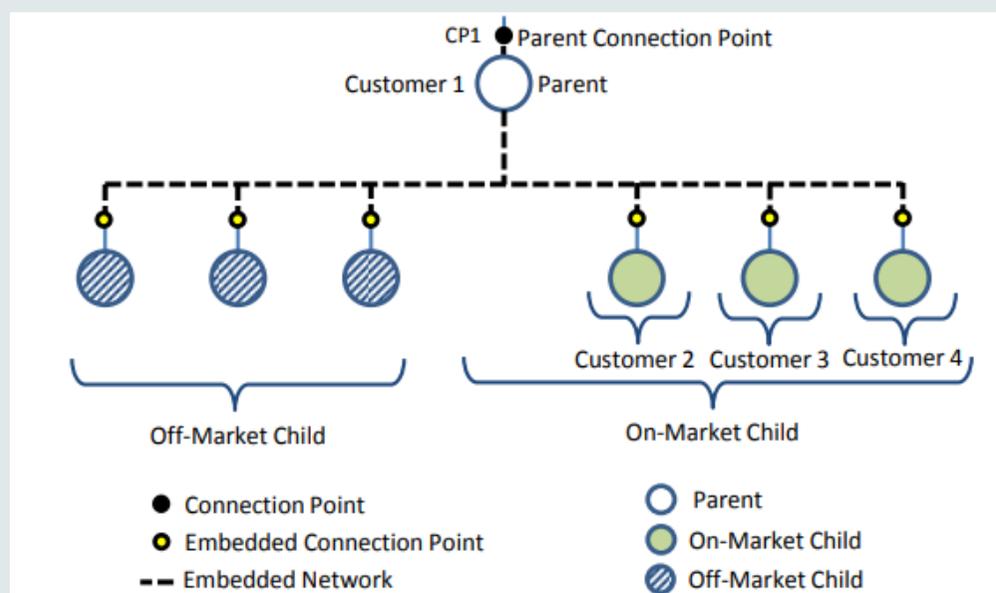
Meeting Notes

NO QUESTIONS

Discussion Topics

Embedded Network Settlement under Global Settlement

- Settlement approach to Embedded Network NMI was considered a component of the Final Determination for Global Settlement (section 6.2)
 - <https://www.aemc.gov.au/sites/default/files/2018-12/Global%20Settlement%20and%20Market%20Reconciliation%20-%20For%20publication.pdf>
- Key Principles:
 - Embedded Networks continue to be settled via Settlement by difference
 - Off Market NMIs are not visible to the settlement process and are accounted for via the parent connection point
 - The settlement by difference calculation will net off the on market child NMIs against the parent connection point
 - Global Settlements, including the allocation of UFE will be applied to the parent connection point (based on the net connection point load) and all on market child NMIs in the embedded network



Components of UFE to be addressed by Industry

- Initial establishment of UFE by local distribution area has required the provision of extra data to that previously utilised in settlement by difference:
 - All tier 1 basic metering data
 - Establishment of profiles for non contestable unmetered loads – not previously addressed
 - Additional metering of energy flows between distribution areas (cross-boundary meters)
- Once established – underlying UFE (which can be surplus or deficit) is represented by:
 - Unaccounted for technical losses, the difference between estimated losses as per DLFs and actual losses in the distribution network
 - Commercial Losses, including theft, malfunctions in meters, unrecorded unmetered loads etc
 - Estimation errors associated with the profiling aspects of the settlement process:
 - Calculation of 5 minute load profile for 30 minute interval meters
 - Profiling of accumulation meters
 - Profiling / calculation of unmetered loads
- Underlying UFE will be the focus of ongoing Industry management – based on identified trends and benchmarks as reported by AEMO

Approach to "Off Market" settlement in GS environment

- Discussion points included following Industry questions regarding off market settlement operation post Global Settlement
- Current framework operates on basis that post Rev 2 AEMO provides data analysis but does not mediate between parties for Off Market Settlements
 - In current settlement by difference these are typically bi-lateral.
 - Settlement policies support on market updates within time limits stipulated in NER 3.15.18 (disputes 6mths post billing week) where participant impacted by >5% (NER 3.15.19)
- Global Settlement is likely to result in more complicated and challenging scenarios given the number of participants potential impacted by an identified issue
- AEMO intends to work with Industry to consider:
 - Application of current framework - within current timeframes and levels of exception
 - Challenges to off market scenarios as a result of GS introduction and likely implications of multi-party impacts
 - Suitability of regulatory framework to support emergent scenarios
 - In the context AEMO positioning as effective market operator

For Discussion:

- What are key points of engagement that Industry is seeking outside current framework?
- What are some of the key scenarios that are of most concern?

Meeting Notes

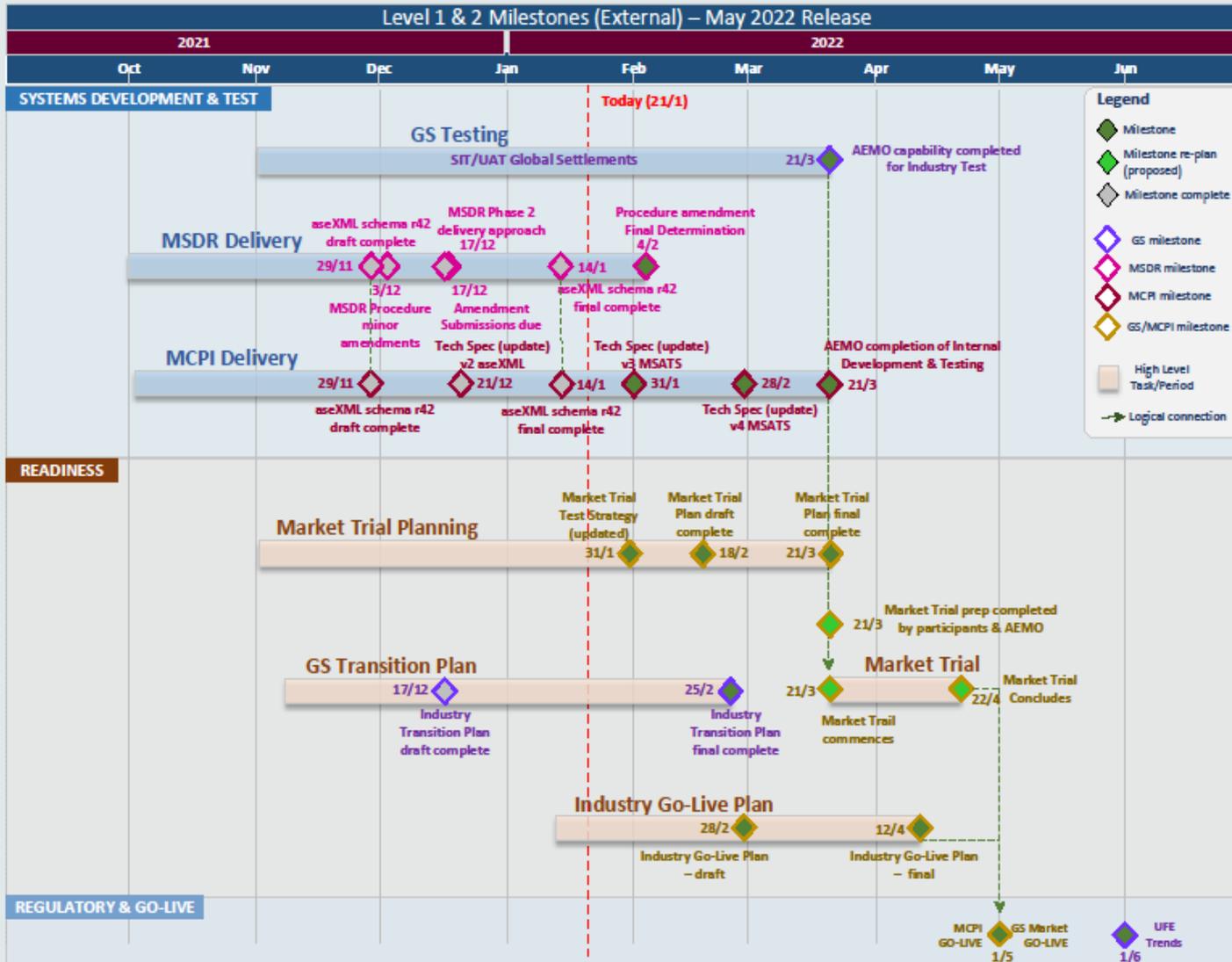
AEMO notes:

- There was in-depth discussion around the material provided in slide 22, “Approach to off-market settlement in GS environment”. There was concern from the industry around the complexity of off-market settlement in a global settlement environment, in particular around CT ratios and commercially sensitive information. AGL suggested an approach of AEMO support in instances of off-market settlement in order to identify all liable parties. AEMO notes that instances of off-market settlement are rare and will become rarer in a global settlement environment, but confirmed the UFE Focus Group would continue to work through the related issues.
- **Action 3.5.1: AEMO to continue discussion on off-market settlement as it relates to global settlement in UFE Focus Group #4 and future sessions.**

GS Transition Approach

Greg Minney & Paul Lyttle

May 2022 Release Timeline and implementation approach



- Market Trial commencement will incorporate GS Transition – with 26th March representing cutover data during Market Trial
- ITWG is determining date for settlement runs – to provide level of comparison to production or focus on transition from settlement by difference to GS, using estimated reads
- Pre-production environment will be refreshed (21st Feb) with production data to support operation of Market trials
- GS Transition plan to be refined based on likely timings – will be updated for participant impacts

Meeting Notes

AEMO confirmed that:

- It was raised by the industry that it would be ideal to run Market Trials in Pre-Production with at least some portion of real data in order to better reflect the actual environment from 1 May 2022. AEMO confirmed that the Industry Testing Focus Group is currently in discussion around this point, with one of two options proposed using a portion of real data for the reasons raised. Feedback from the ITFG on the topic will be ongoing until 15-Feb (ITFG #3 is 16-Feb), and participants are encouraged to discuss this issue with their testing managers and/or nominees to the ITFG.
- **Action 3.6.1: Participants to consult with testing teams internally on the preferred approach for Market Trials.**

Next Steps and General Business

Greg Minney

Next Steps

- Next UFE FG meeting: **Friday, 25 February 2022.**
- Please send through any questions or proposed agenda items to GMSDR@aemo.com.au.

Meeting Notes

In response to participant question regarding impacts and materiality of the weighting to 5MLP being applied AEMO will provide details / links to the impact assessments

- **Action 3.7.1:** AEMO to consider providing information to support industry understanding of UFE trends and/or improvements.

In discussion regarding the engagement through the UFE focus groups a number of participants indicated they felt the sessions provided valuable communication. Participants were encouraged to indicate if there are further topics they wish to have included on the agenda for future workshops

