

# UFE Reporting Guidelines

## FIRST STAGE CONSULTATION PARTICIPANT RESPONSE TEMPLATE

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## 1. Context

This template is to assist stakeholders in giving feedback on the content of the initial draft version of the *UFE reporting guidelines* that will form the basis of UFE Trends Reports in accordance with NER 3.15.5B.

## 2. Questions

Section	Description	Participant Comments
	Business Needs for UFE reporting	<p>In considering the content and timing of the UFE reports to be prepared and published, there should be some consideration of the business need which these reports will meet and support.</p> <p>The following are clear outcomes arise from UFE and UFE reporting:</p> <ol style="list-style-type: none"> <li>1. Need for retail businesses to forecast likely UFE amounts so that the impact can be included in business processes (hedging, consumer products, retailer supply obligations, etc);</li> <li>2. The need to budget for the forecast amount of UFE; and</li> <li>3. Identify and mitigate / minimise UFE.</li> </ol>

Section	Description	Participant Comments
		<p><b>Outcomes 1 and 2</b></p> <p>As many business budgets and regulatory processes are undertaken post December (generally around March) it would be valuable for AEMO to publish monthly or quarterly downloadable data sets (and graphs) on UFE, to allow businesses to process consistent UFE data and prepare volume and forecast budgets and feed information into pricing processes.</p> <p>These data sets may comprise 5-minute data sets for each day of the quarter and would be updated showing initial settlement values and final settlement values. Given the time frame between the initial data and final data, it is likely that the information would need to cover a rolling two-year period.</p> <p><b>Outcome 3</b></p> <p>Outcome 3 is the longer-term analysis and reduction / resolution of sources of UFE. It is expected that this analysis will take longer, and rectification is likely to involve changes to data, processes or capital expenditure (eg metering or other systems).</p> <p>As such, it seems that this analysis should be undertaken through the year and reported in the annual UFE report, which would then feed into longer term business activities (eg procedure changes, process changes, capital expenditure).</p> <p>Further, true analysis of UFE activities will be more dependent on final revision data than initial meter data. So, while the initial meter data may trigger some considerations, the longer term impact and management of UFE is more likely to be captured through the revision data.</p>

Section	Description	Participant Comments
1.1	<p>Purpose and scope</p> <p>AEMO intends to publish each UFE Trends Report by 1 June each year covering a 12 month reporting period (For the (year “x”) UFE Trends Report the reporting period is 1 May (year “x-1”) to 30 April (year “x”).</p> <p>Q1. Do stakeholders require a different reporting timeframe?</p> <p>Q2. If so, what reporting timeframe is appropriate? What benefits will be realised through a different reporting timeframe?</p>	<p>As discussed above, it would be valuable to show over a longer term period both initial data and post revision data.</p> <p>Noting that while the RM46 and potentially other data sources may be available, it is expected they would comprise initial meter data sets. A rolling 24 monthly data set, with minimal / no analysis, could be released monthly, with some associated information published quarterly.</p> <p>This proposal would ensure that there was a common set of public information available, especially for December and March each year to support budgeting, forecasting and pricing activities and Regulatory processes (eg VDO &amp; DMO development).</p> <p>This data set would comprise the initial data and any revised data as settlements is updated. It would be preferable that the data sets contain the initial data as well as any settlements revised data so that industry can consider the changes in UFE as meter data is revised. This will become important in the longer-term actions to mitigate UFE, as it will help separate the initial impact of profiling from systemic UFE causes.</p> <p>The Annual reports could focus on longer term periods – eg 5 years – but using predominantly revision data, although the more recent two years may also show the various categories of data (eg initial, final, revised) as a guide to how temporary variances are appearing.</p>

Section	Description	Participant Comments
2	<p>Summary of analysis of UFE</p> <p>Charts in this section provide a summary of the UFE calculation components for each local area. The current proposal is to provide UFE component charts for the current reporting period based on FINAL version metering data. Q1. Should the corresponding charts for the previous reporting period also be included? If so, what benefits will be realised?</p>	<p>See comments above.</p> <ol style="list-style-type: none"> <li>1. The need to undertake budgetary and forecasting assessments, mean that UFE needs to be considered at the initial data stage, as this will be the amounts allocated during the initial settlement processes.</li> <li>2. The use of final settlements data allows analysis of the profiling processes used on the initial data and is likely to show the more correct UFE for a distribution network. This will also allow users to consider the impact of the initially allocated UFE vs the likely final allocated UFE.</li> </ol> <p>As interval meters are installed (and converted to 5ms) and basic meters removed, this issue should start to decrease. However, current discussions indicate that the interval meter rollout will take between 10 and 15 years, so this is not an issue which will disappear quickly.</p>
3	<p>UFE benchmark analysis</p> <p>AEMO proposes to publish the median, average, upper limit and lower limit UFE values as benchmarks for each local area per reporting period. Q1. Is there a better methodology to determine benchmarking for a <i>local area</i>? If so, provide details of that methodology.</p>	<p>The average and median UFE provide one view of the how much UFE is being allocated, but the max / min bandwidth around those trends, should also be provided as this shows the range the UFE is likely to move between. An initial thought is that a large UFE range means multiple causes are at play, while a small UFE range, means that there are less significant issues impacting UFE. Comparison of different networks UFE ranges, may in themselves be useful indicators of potential causes, and may help identify outlier days, which can be further investigated.</p>

<p>4</p>	<p><b>UFE source analysis</b></p> <p>Areas of UFE source analysis are related to variables that modify metering data, as identified in section 4 of the Initial Draft <i>UFE reporting guidelines</i>.</p> <p>Q1. Are there other variables that modify metering data that should be included in the <i>UFE reporting guidelines</i>? If so, provide details of the other variables and their effect on metering data</p> <p>Q2. Should the importance/effect of these variables be ranked? If so, which variables should be analysed initially?</p>	<p>For clarity, the mix of interval and basic meters in a distribution network is a useful indicator.</p> <p>Consider how much of the total load is metered by interval meters vs accumulation meters and how much energy is being profiled (which is also be driving the settlement spike issue):</p> <ol style="list-style-type: none"> <li>1. For example – SA has ~ 28% Type 4 meters vs ~72 % type 6 meters</li> <li>2. 25% of energy is profiled from basic; 10 % is profiles from interval (15/30) meters;</li> </ol> <p>Other variables which will affect UFE calculations are:</p> <ul style="list-style-type: none"> <li>• for some days are the use of unmetered large generators (eg small townships) by DNSPs to reduce consumer outages or switching between networks which does not involve a boundary meter;</li> <li>• Completion of updating TNIs for all distribution services supplied by a different network (eg citipower boundaries);</li> <li>• Audit UMS energy calculations for standard devices (eg public lighting);</li> </ul> <p>Ranking – At this stage AGL would suggest that the ranking be undertaken on the volume of energy impacted (ie 80/20 rule). This will allow the drivers with the biggest volumes to be identified and actioned in order of impact. It may be that until there is a full year of data available for consideration (both initial and final) it may not be possible to rank any causes, however, it is likely that profiling is one fo the bigger impacts, and DLFs are potentially the next biggest cause, noting that so many of the UFEs are negative.</p>
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Section	Description	Participant Comments
5	<p>Recommendations – UFE visibility improvements</p> <p>Q1. What are the benefits in reporting UFE values at a more granular level than at the local area? Noting that reporting at TNI level is not meaningful for local areas that have virtual TNIs.</p> <p>Q2. Should the seasonal variance information be presented in another way? If so, how should this information be presented and what will be the benefits of presenting the information in this alternative way?</p>	<p>UFE at a network level is caused by a significant number of factors which will be difficult to separate, action and be sure of the outcome.</p> <p>Undertaking more granular analysis in some defined areas (ie test areas) it should be possible to observe the impact of making changes to specific causes of UFE to determine the impact / benefit. It is noted that these test areas may be required for some years or ongoing, so that changes can be assessed against initial and final settlements data and interval data.</p>



Section	Description	Participant Comments
6	<p>Recommendations – UFE reduction actions</p> <p>Q1. Are there other actions which should be explored to reduce UFE?</p> <p>Q2. Who holds the information to support these actions?</p>	<p>In order to reduce UFE, the causes need to be understood. Given the volumes of energy which need to be impacted to drive particular outcomes at this point in time, the most likely causes at present are profiling (basic to 5ms, 15/30 to 5 ms) and DLFs.</p> <p>The impact of the profiling issue can be measured through the replacement of basic meters with interval meters and the conversion of meters and the updating of 15/30 meters to 5ms meters.</p> <p>The potential impact of DLFs is substantially more complex and effectively rely on the accuracy of the meter data amongst other things as a key input. There has been discussion about DLFs being more dynamic and this is potentially an area which could be further explored.</p> <p>The responsible party will be dependent on the UFE cause. For instance, DLFs are the domain of the DNSPs. Profiling methodologies are within AEMO’s domain. Meter replacement is a combination of DNSP meter testing and retailer/MC capability to install meters and retailer led rollout capability. UMS load calculations are the domain of DNSPs etc.</p>

<p>Appendix A.1</p>	<p>UFE analysis supporting information.</p> <p>Additional information to support UFE analysis in each local area. These charts are:</p> <ul style="list-style-type: none"> <li>• UFE for the local area</li> <li>• UFE for the local area as a percentage of local area ADME</li> <li>• UFE for the local area by metering data version, i.e. Prelim, Final, Rev 1 and Rev 2.</li> </ul> <p>Q1. Do the proposed charts, provide sufficient information, in conjunction with the charts in Section 2. to facilitate UFE analysis?</p> <p>Q2. If not, which other additional information is required? Provide details of other additional information required and the benefits of providing the additional information.</p> <p>Q3. Who holds the additional information?</p>	<p>In considering UFE there are four views of the data that could to be considered:</p> <ol style="list-style-type: none"> <li>1. A high level / long term view to determine whether UFE is trending in the right direction – eg monthly across multiple years.</li> <li>2. A mid-level view of Monthly UFE across a year - to identify whether UFE is being changes by seasonal impacts (eg solar panels, heat, cold) eg daily for a month;</li> <li>3. A lower-level view of UFE by day in a month, to determine if specific events on a day are driving UFE – eg unusual switching; large scale generation usage;</li> <li>4. A more granular view to determine what events may be impacting UFE; eg interval within a day</li> </ol> <p>AGL supports the proposed analysis and suggest that a 24 month rolling data set be used and made available (industry and public) to meet this analysis.</p> <p>Within those charts (and data sets) the median/average and hi/lo boundaries could also be presented and modelled over revisions.</p> <p>As UFE is an item to be managed and reduced some longer-term trending (likely updating) should also be shown. Eg UFE from global start and initially started with initial data, which could be updated with final data to provide the long-term view of whether UFE is trending in the right direction.</p> <p>AEMO should be advised by the networks of any unusual switching events (eg emergency switching) which will impact UFE quantities, and which should be identified and published within the UFE data sets.</p> <p>AEMO could review consistency of UMS calculations of identical devices by DBs to look for substantial variation – eg standard public light, NBN assets, Telstra assets, etc</p>
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### 3. Other Issues Related to the UFE Reporting Guidelines

Stakeholders to provide details of other UFE related aspects that have not been included in the proposed *UFE reporting guidelines* and provide details of the benefits of these additional reporting items.

Topic	Participant Comments
Other relevant information	<ul style="list-style-type: none"> <li>• Flags to identify unusual network switching, so that the daily data can be reviewed / excluded as necessary</li> <li>• Comparison of Hi/Lo Boundaries – to see which DBs have tight boundaries vs wide boundaries</li> <li>• For 2022-2023 track the conversion of meters from 30/15 to 5 min to see if there’s an impact on UFE</li> </ul> <p>Ongoing reporting on meters by type for each DB – eg type 6, 5, 4 (15/30), 4 (5ms) etc</p>
Workshop	<p>AGL supports the concept of a workshop during the consultation on the development of the UFE report form.</p> <p>AGL also suggests that AEMO consider some sort of discussion workshop post each annual report (eg 1 month post release) to discuss trends / issues / industry actions and whether further changes are needed in the reporting, much like the Dynamic Quarterly workshops/briefings. AGL suggest that some adjustments to UFE reporting will be required, particularly in the initial years as many issues are currently being bedded down at this time (eg global settlements, meter conversion). As such, ongoing engagement with industry will be beneficial in supporting this process.</p>