METERING COMPETITION
EMBEDDED NETWORKS
METER REPLACEMENT PROCESSES

PROCEDURE CONSULTATION

SECOND STAGE PARTICIPANT RESPONSE TEMPLATE

Participant: *Energy Intelligence*

Completion Date: *15/11/2016*

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1. Glossary and Framework

Please delete any rows where there are no particpant comments

(note: only sections that have changed as part of Work package 2 are listed in the table below)

Clause	Heading	Participant Comments
1.2	Definitions and Interpretation	
1.3	Related AEMO Documents	
2.2	Structure of Retail Electricity Market Procedures	
2.3	Metrology Procedure	
2.5.5	NMI Procedure	
2.7	Qualification Procedure	
2.8	Metering Service Level Procedures	
2.9	Service Level Procedure for Embedded Network Managers	
2.10	Default & Deregistration Procedure	

2.11	Exemptions	
3	Glossary Term: Default and Deregistration Procedure	
3	Glossary Term: Exemption Guideline	
3	Glossary Term: Exemption Procedure	
3	Glossary Term: HV	
3	Glossary Term: LV	
3	Glossary Term: MDM Contributory Suffix	
3	Glossary Term: Meter Register Status Code	
3	Glossary Term: MSATS Procedures	
3	Glossary Term: NMI Procedure	
3	Glossary Term: Qualification Procedure	
3	Glossary Term: Service Level Procedure (ENM)	
3	Glossary Term: Unmetered Load Guideline	

2. Default & Deregistration Procedure (MP, MDP, ENM, MC)

Please delete any rows where there are no particpant comments

Clause	Heading	Participant Comments
1	Introduction	
1.1	Purpose and Scope	
1.2	Definitions and Interpretation	
1.3	Related AEMO Documents	
2	BREACH OF THE NER OR PROCEDURES UNDER THE NER	
3	DETERMINATION OF TYPE OF BREACH	
3.1	Immaterial Breach	
3.2	Significant Breach	
3.3	Material Breach	

4	ISSUE OF BREACH NOTICE	
5	REVIEW OF CAPABILITY FOR ONGOING COMPLIANCE	
5.1	Remediation Plan	
5.2	Past Conduct	
5.3	Organisation Structure	
5.4	Other Relevant Considerations	
6	AEMO ACTION FOLLOWING REVIEW	
6.1	Material Breach	
6.1.1	MP, MDP, or ENM	
6.1.2	MC	
6.2	Non-Material Breach	
6.2.1	Actions taken by AEMO	
6.2.2	Warnings	

6.2.3	Escalation	
7	EXERCISE OF AEMO DISCRETION	
7.1	Relevant Considerations	
7.2	Constraints	
8	CONSEQUENCES OF AEMO ACTION	
8.1	MP, MDP or ENM	
8.1.1	Material Breach	
8.1.2	Non-Material Breach	
8.2	MC	
8.3	Other Impacts	
9	VOLUNTARY DEREGISTRATION	
9.1	Application	
9.1.1	Embedded Network Manager	

9.1.2	Metering Providers and Metering Data Providers	
9.1.3	Metering Coordinators	
9.2	Process	
9.2.1	All Applicatns	
9.2.2	Embedded Network Managers	
9.2.3	AEMO Review of Application	
APPENDIX A	NOTICE OF BREACH	
APPENDIX B	METERING COORDINATOR DEFAULT NOTICE	
APPENDIX C	NOTICE TO APPOINTERS	
APPENDIX D	OUTCOME OF REVIEW	
APPENDIX E	NOTICE TO AFFECTED PARTIES	

3. Exemption Procedure (Metering Installation Malfunctions)

Please delete any rows where there are no particpant comments

Clause	Heading	Participant Comments
1	INTRODUCTION	
1.1	Purpose and Scope	
1.2	Definitions and Interpretation	
1.3	Related AEMO Documents	
2	APPLICATION PROCESS	
2.1	Applicant	
2.2	Timing of Application	
2.3	AEMO's Determination	
2.4	Matters taken into Consideration	
2.5	Grant of Exemption	

2.6	Application Unsuccessful	
2.7	Extension to Exemption	
2.8	Current MC's Obligations during the Exemption Period	
2.9	Expiry of Exemption	
3	RECTIFICATION PLAN	
3.1	Timing	
3.2	Contents	
APPENDIX A	APPLICATION FOR EXEMPTION	
APPENDIX B	APPLICATION FOR EXTENSION	

4. MSATS Procedures: National Metering Identifier

Please delete any rows where there are no particpant comments

Clause	Heading	Participant Comments
1	INTRODUCTION	
1.1	Purpose and Scope	
1.2	Definitions and Interpretation	
1.3	Related AEMO Documents	
2	ALLOCATION AND ISSUE OF NMIS	
2.1	NMI Allocation by AEMO	
2.2	Issue of NMIs by LNSPs and ENMs	
3	NMI STRUCTURE	
4	NMI REGISTERS	
5	NMI CHECKSUM	

6	DATASTREAM SUFFIX	
7	DATASTREAM SUFFIX FOR INTERVAL METERING DATA	
7.1	Datastream Suffix for Accumulated Metering Data	
7.2	Wholesale Connection Points	
8	CONNECTION POINTS WITH TYPE 1 METERING	
9	CONNECTION POINTS WITH TYPE 2 METERING	
10	NMI RULES	
10.1	Data Delivery to AEMO (MSATS System)	
11	UTILISATION OF NMI FOR AEMO DATA	
11.1	Data Delivery to AEMO (MSATS System)	
12	EXAMPLES OF NMI APPLICATION – INTERVAL METERING DATA	
12.1	One End User metered on the secondary side of transformer	

12.2	One End User, multiple metered on the secondary side of transformer	
12.3	One End User, previously two tariff metering, eg general supply & off-peak on secondary side of transformer	
12.4	One End User, two controlled loads, one twin element meter	
12.5	One End User, two twin element meters	
12.6	One End User, multiple meters on secondary side of multiple transformers in the same substation building and LV switchboard in common switchroom	
12.7	Three End Users, metered on secondary side of multiple transformers in the same substation building	
12.8	One End User, two separate HV supplies to two separate substations, both metered on secondary side of the transformers	
12.9	One End User, two separate substations adjacent to each other or one single substation with two separate transformers in a single substation, with a “normally open” point	

	separating the HV supplies into two sources	
12.10	One End User, two separate substations adjacent to each other or one single substation with two separate transformers, with the HV supply originating from a single source	
12.11	One End User, two separate substations not adjacent to each other but on same premises	
12.12	Multiple End Users, High rise building	
12.13	One End User with multiple supply points	
12.14	One End User with Standby Supply	
12.15	One End User or Participant, Wholesale Metering at Transmission Node	
12.16	One End User or Participant, Wholesale Metering at Transmission Node	
12.17	One End User, Wholesale Metering at Transmission Node	
12.18	Street Lighting (Type 7 Metering Installation)	
13	EXAMPLES OF NMI APPLICATION – ACCUMULATED ENERGY DATA	

13.1	Single Meter with Single Datastream	
13.2	Two Meters each with Single Datastream	
13.3	Two Meter Installation, One Meter Recording Consumption for a Controlled Load	
13.4	Three Datastream Meter with Single Measurement Element	
13.5	Multi-function Meter	
13.6	Two Multi-function Meters	
14	ENERGY DIRECTION FLOWS	
15	ALLOCATION OF NMIS FOR TYPE 7 METERING INSTALLATIONS	
15.1	Common Requirements across the NEM	
APPENDIX A	SAMPLE JAVA CODE FOR NMI CHECKSUM	
APPENDIX B	EXAMPLES	

5. Qualification Procedure

Please delete any rows where there are no particpant comments

Clause	Heading	Participant Comments
1	INTRODUCTION	
1.1	Purpose and Scope	
1.2	Definitions and Interpretation	
1.3	Related AEMO Documents	
2	PREPARATION	
2.1	Mandatory Requirement	
2.2	Pre-Reading	
2.3	Pre-Application Meetings	
3	QUALIFICATION PROCESS	
3.1	Application	

3.2	Accreditation Checklists	• We note that ENMs have a single category for accreditation and registration, however, the accreditation checklists for ENMs are not currently available
3.3	Application Fees	• We are concerned that the proposed ENM accreditation fee is very high given the relatively small customer base
3.4	Queuing Policy	
3.5	Review for Completeness	
3.5.1	Inadequate Responses or Missing Information	
3.5.2	Application in Abeyance	
3.6	Pre-Production Assessment	
3.6.1	General	• AEMO requires that the applicant's IT systems and processes are ready to interact with AEMO's systems safely and securely and to deliver data in the appropriate formats and timeframes after accreditation and registration. Due to the smaller customer numbers that ENMs are likely to manage, we suggest AEMO should consider a web portal/interface suitable for ENMs to enter all the required data. The interface should also have functionalities to convert and send/receive files to MASATs and other

		systems in the appropriate formats. • The nature of the systems and processes may set a high barrier for entry in relation to costs, for a new applicant
3.6.2	MarketNet	
3.6.3	MSATS	
3.6.4	Applicant System Testing	
3.6.5	Test Results	
3.7	Independent Review	
3.7.1	On-Site Risk-Based Review	
3.8	Final Accreditation Review	
3.9	Completion of Review	
3.9.1	AEMO Accredits and Registers Applicant	• AEMO has not provided any time limit that it may typically take in the process of ENM accreditation , leaving an uncertainty and burden on the applicants
3.9.2	Application not Successful	

4	MAINTENANCE OF ACCREDITATION AND REGISTRATION	
5	RE-ACCREDITATION AND REGISTRATION	
APPENDIX A	APPLICATION FORM	

6. Service Level Procedure – Embedded Network Manager

Please delete any rows where there are no particpant comments

Clause	Heading	Participant Comments
1	INTRODUCTION	
1.1	Purpose and Scope	
1.2	Definitions and Interpretation	
1.3	Related AEMO Documents	
2	OBLIGATIONS	
2.1	Embedded Network Management Services	• We are unclear of the proposal for an ENM to maintain and manage relevant EN wiring information and meter arrangements [2.1 (k) Embedded Network Management Services] . The type of EN wiring and meter arrangements should be clearly stated. In some scenarios this information may not be available to the ENM (Eg. Single line diagrams), hence it should not be a mandatory requirement for ENMs to maintain this information.

2.2	Use of Sub-Contractors	
2.3	Insurance	
3	SYSTEMS AND ADMINISTRATION	
3.1	Systems and Interface Requirements	• The provision of any documents, plans or other information required to be kept by the ENM (information), regardless of form, and provided by ENM to AEMO or any other person could potentially raise security concerns (Eg., customer information)
3.2	Embedded Network Information	
3.3	Audits Undertaken by AEMO	
3.3.1	ENM to Assist	
3.3.2	Timing of Audits	• We consider the proposed auditing requirements excessive consider the small number of customers ENMs are likely to manage. This has a significant impact in terms of cost and time for the entry/small participants

3.3.3	Notice of Audit	
3.4	Other Audits	• We have fundamental concerns that AEMO may undertake audits at any time upon a request from a registered participant. AEMO should clearly state the circumstances under which a registered participant could request for an audit.
3.5	Review of Accreditation	
3.6	Disputes	
4	MARKET INTERFACE FUNCTIONS	
4.1	NMI Allocation	
4.2	Distribution Loss Factors and Transmission Node Identity	
4.2.1	Site specific DLF	
4.2.2	Small load DLF	
4.2.3	TNI	

4.3	MSATS Setup	
4.3.1	Market Exit	
4.3.2	Resumption as Child Connection Point	
4.3.3	Physical Rewiring to Join an Embedded Network	
4.3.4	Network Tariff Code Update	
5	DELIVERY OF INFORMATION UPON DEREGISTRATION	

7. Unmetered Load Guideline

Please delete any rows where there are no particpant comments

Clause	Heading	Participant Comments
1	INTRODUCTION	
1.1	Purpose and Scope	
1.2	Definitions and Interpretation	
1.3	Related AEMO Documents	
2	APPLICATION PROCESS	
2.1	The process	
2.2	The Outcome	
3	DISCLAIMER	
4	MATERIAL TO SUPPORT APPLICATION	
4.1	Generally	

4.2	Determination of a Single Unmetered Device Load Value for Controlled Unmetered Devices	
4.3	Determination of Annual Energy Consumption for Uncontrolled Unmetered Devices	
4.4	Load value	
4.5	Control Equipment	
4.6	Sampling for LED devices	

8. Other Issues Related to Consultation Subject Matter

Document	Clause	Heading	Participant Comments