

Project Justification - Power of Choice – Embedded Networks

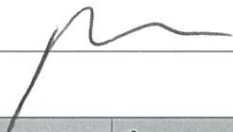
Document Name	Power of Choice Embedded Networks
Reference	PJ27
Version	2.0
Issue Date	17 December 2015
Owner	Basile Sepsakos
Author	Tony Chenco


Document Approval

Approval of the Project Justification for the Power of Choice – Embedded Networks project is provided by the signatories shown below.

Changes to this document will be coordinated and approved by the undersigned or their designated representatives via project change management.

The undersigned acknowledge they have reviewed and approved this document.

Approver Name	Approver Title / Role	
Basile Sepsakos	Head of Information Technology as Delivery Owner	
Signature:		Date: 22/12/15

Approver Name	Approver Title / Role	
Alistair Legge	General Manager, Customer & Technology as Business Sponsor	
Signature:		Date: 23/12/15

Approver Name	Approver Title / Role	
ITEF	IT Executive Forum	
Approved by ITEF - Refer Minutes	Date: December 2015	



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2. Objectives/Purpose

In order to comply with the rule change, this project will implement process and system capabilities to support the following:

- Receive, validate and process transactions relating to the assignment of ENM against an embedded network⁴;
- Receive, validate, and respond to transactions from ENMs as per the B2B Procedures⁵;
- Receive, validate, and process EN second-tier connection point updates from the ENM⁶; and
- Ensure all processes operate correctly for existing UE number range NMI's maintained by the ENM, newly allocated NMI's for ENM and United Energy's existing obligations using the United Energy NMI range.⁷

A set of business and system transition arrangements will also be undertaken by this project by 1 December 2017 to prepare embedded networks that have met the ENM condition trigger. This will include:

- Contacting the embedded network operators who will then nominate their ENM.
- Pre-population or backfilling of all United Energy systems the ENM role against the embedded network.
- Coordinate with the appointed MC the removal of United Energy metering. Details of this activity is documented in the Metering Competition initiative submission (PJ19).
- Pre-population or backfilling of all United Energy systems to reflect the new metering roles resulting from the removal of United Energy's regulated meter.

⁴ Final National Electricity Amendment (Embedded Network) Rule 2015, 17 December 2015, Clause 7.8.2 (ea) and 7.16.2 (c)

⁵ Final National Electricity Amendment (Embedded Network) Rule 2015, 17 December 2015, Clause 7.17.4 (i)

⁶ AEMO Draft Embedded Networks – Detailed Market Design, 8 August 2014, Section 6.

⁷ Final National Electricity Amendment (Embedded Network) Rule 2015, 17 December 2015, Clause 7.8.2 (eb) and (ec)

Capital Expenditure Criteria	UE Project Alignment with Criteria
Demand and Cost inputs	that the new rules commence 1 December 2017. Costs are based on a process by process review, identification of systems impacted and experience delivering comparable projects.

3.2. UE Strategic Themes Alignment

The primary justification for the Embedded Networks project is to meet United Energy's regulatory obligations for the introduction of the Power of Choice reforms.

4. Options

The following options have been considered to implement the Power of Choice – Embedded Networks project:

4.1. Option 0: Do Nothing

Adopting the "Do Nothing" option would result in United Energy not changing its systems and processes to meet requirements of the AEMC. Under this scenario, United Energy would not meet its obligations to participate in the National Electricity Market.

4.2. Option 1: Modify Existing Systems

United Energy's existing customer, market and metering systems were recently implemented and modified to support the requirements of the Victorian AMI roll out. Due to similarity of requirements, these systems could be potentially further modified to support Power of Choice. For this option it is proposed to implement the embedded networks capability by modifying existing systems.

4.3. Option 2: Implement New Systems

The new systems options would involve the development of new systems that would need to be integrated with United Energy's customer, market and metering systems. It is envisaged that this project would be significantly larger and more costly than modifying existing systems. Cloud based providers could be considered in this evaluation.

6. Proposed Solution

It is proposed to select Option 1, Modify Existing Systems, to provide the embedded networks capability to support the Power of Choice reforms. Option 1 is considered to be the least cost and lowest risk solution that provides the necessary capabilities.

Option 0 was not selected as this option does not meet the requirements and would result in United Energy being unable to fully participate in the National Electricity Market. United Energy is obliged under its licence to adhere to the National Electricity Rules. It is considered that selecting this option may place United Energy's licence at risk.

Option 2 was not selected as it is expected to be a higher cost and higher risk than Option 1. The proposed capabilities required are similar to those implemented for the Victorian AMI program therefore it is expected that existing systems could be modified to support the new capabilities at a lower cost than complete replacement. Cloud solutions are not available to meet the specialised functional and integration requirements.

6.1. Requirements

The status of the rule changes for embedded networks is:

- Final rule determination was published on 17 December 2015

This project is to meet the following requirements:

- Support the introduction of Embedded Network Manager (ENM) role:
 - Record the nominated ENM or ENO against the EN Parent NMI, using the data stored under the MSATS NSP2 role. This can change over time and historical information needs to be maintained.
 - Update United Energy systems to handle a new set of NMI numbers or ranges that will be used by AEMO when allocating NMIs to connection points that switch to being on-market (tier-2 children) from 1 December 2017.
 - Apply transaction and business acceptance logic for each B2B or CR message received from an ENM. Ensure that United Energy systems appropriately handle child NMIs based on the NMI number. Tier-2 children created prior to 1 December 2017 will be using the United Energy NMI number range. Tier-2 children from 1 December 2017 will use a new number range defined by AEMO.
 - As the role is contestable, UE needs to support ENM churn.
- Update United Energy's meter data management system to continue receiving meter data for second-tier EN children. The meter data is required so United Energy can continue include second-tier children in the network invoices, billed at zero dollar tariffs.
- Carry out transition activities to enable United Energy to extract itself from providing regulated metering to second-tier EN children.

System and process capabilities required to support the removal of United Energy regulated meters from second- tier NMIs are documented in the Metering Competition rule change submission (PJ19 – Metering Competition).

6.4. Systems Impacted

The following table identifies the systems impacted.

System	Processes	Impact
Connection Point Management	Management of NMI Standing Data	<p>Significant changes will be required on the connection point management system to handle the introduction of EN Manager and the new NMI ranges that will be assigned to second-tier EN children. Currently United Energy systems sometimes rely on the known ranges (e.g. starts with 640 or VEE) to execute system operations.</p> <p>The EN Manager is a contestable role. Changes will be required to support EN Churn.</p>
Meter Data Management	Receipt of meter data for second-tier EN children	<p>United Energy currently receives data for second-tier children so it can support the Retailer's requirement to include them in the network bill (at zero dollar). Changes will be required so United Energy can continue receiving meter data even when the LNSP and NSP2 roles in its systems are populated by the EN Mgr role ID. Currently United Energy is able to receive data from other MDPs because the LNSP/NSP2 values are populated by UNITEDLNSP.</p>
Market Apps	B2B, CATS, Gateway	<p>Enhancements to manage transactions to and from EN Managers. Changes are also required to handle new NMI range for second-tier EN children</p>
Reference Data	Initial data setup and backfilling	<p>Initial setup and backfilling of EN Manager information prior to the commencement of the rule to Enhancements to manage transactions to and from EN Managers. Changes are also required to handle new NMI range for second-tier EN children</p>
E2E	Integration and Bilateral Testing	<p>The introduction of new role and new NMI ranges will require extensive integration testing to ensure no regression occurs.</p> <p>Testing with an EN Mgr will be need to ensure United Energy applications can transact effectively.</p>

No change	Low	Med	High	V. High
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10. Risks and Opportunities

Risk	Cause	Impact
Failure to deliver required capability	<ul style="list-style-type: none"> • Requirements not well defined or understood. • Project scope not well understood. • Poor project delivery methodology • Project team skills not appropriate to task. 	<ul style="list-style-type: none"> • Benefits to consumers not realised. • United Energy's reputation diminished. • Potential market disruption. • Additional cost
Higher market complexity may increase consumer frustration and business cost.	<ul style="list-style-type: none"> • Consumer confusion over which retailer is providing which service 	<ul style="list-style-type: none"> • Potential market disruption. • Consumer frustration.

Appendix C - References:

Embedded Network Detailed Market Design

<http://www.aemc.gov.au/getattachment/22d1bc15-8f2e-4f58-8e5f-3590d2f47436/Detailed-market-design.aspx>

Final Rule Determination

<http://www.aemc.gov.au/getattachment/3ec818f7-38ae-412e-8d7b-b404ee8d7858/Final-rule-determination.aspx>

Final Rule

<http://www.aemc.gov.au/getattachment/338e35d4-40f7-478a-995a-987f982743c9/Final-rule.aspx>

Information Sheet

<http://www.aemc.gov.au/getattachment/04b21dd0-521c-48ca-b575-6fbe6b736a37/Information-sheet.aspx>

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