COMMERCE ACT 1986: BUSINESS TRANSACTION

SECTION 66: NOTICE SEEKING CLEARANCE

3 September 2014

The Registrar
Mergers and Authorisations
Commerce Commission
PO Box 2351
Wellington

Pursuant to section 66(1) of the Commerce Act 1986, Vector Limited hereby gives notice seeking clearance of a proposed business transaction.

EXECUTIVE SUMMARY

1 The proposed transaction takes place in the markets for the provision of advanced metering assets ("smart meters") and data collection/retrieval services to electricity retailers. The advanced metering assets, and related services, are essentially an aspect of electricity retailing that a number of the retailers have chosen to outsource to third party providers.

2 Advanced metering is ancillary to electricity retailing, meaning that competition in advanced metering markets takes a variety of shapes and forms depending on the strategic choices of electricity retailers. Retailers also hold the legal power to appoint or remove a metering provider. Some retailers have developed "in-house" capability to deploy and maintain assets as well as provide related data and maintenance services. Others have retained a third party to provide assets and/or data services. If using a third party, retailers can and do purchase services from a metering services provider where that provider owns the meter, or they can purchase those same services in scenarios where another party (e.g. an electricity distribution company) owns the meter.

3 Many of the larger retailers have conducted periodic auction or bidding contests for the rights to deploy meters at their ICPs, either exclusively or as one of two or three providers, and to then have the successful bidder(s) provide advanced metering services to them using those meters.

4 Competition is on a quality / reliability / price offering. For an electricity retailer, metering relates directly to billing systems and the customer relationship. The quality of the technology and the reliability of its implementation are important, as well as price.

5 A number of significant auction / bidding contests for smart metering have already occurred, including Meridian, which is in the final stages of an RFP process in parallel with the proposed transaction. That will mean about **[redacted]** of all ICPs in New Zealand will have a smart meter installed or be contracted to have one installed.

6 To date, the main players that have deployed advanced metering assets in New Zealand are:

6.1 Vector's businesses AMS and AMA,

6.2 MRP's Metrix,

6.3 Meridian's Arc,

6.4 SmartCo,

6.5 WEL Networks,

6.6 The Lines Company, and

6.7 Counties Power.

7 The primary suppliers of advanced metering services using those advanced metering assets have been Vector, Metrix and Arc, including Vector and Metrix as suppliers of

advanced metering services to third party metering owners (such as SmartCo, Counties Power, and WEL Networks).

8 Arc's share of the advanced metering assets and services markets has been modest (less than **[redacted]**). Its expected EBITDA for 2014 is $**[redacted]**. Overall, Arc has not been a successful or vigorous competitor. In particular:

8.1 Arc has never won a national deployment RFP. Arc's only customer for deployment of smart meters has been its parent company Meridian – for which it has deployed approximately 125,000 meters, with those meters being largely deployed in two specific geographic areas, namely Hawke's Bay and Canterbury. Arc's business now relates primarily to the ongoing provision of services in relation to those meters – although in some cases those services are provided to retailers other than Meridian due to the Meridian retail customer having switched retailer since the deployment of the meter.

8.2 Arc's technology solution has not found favour with other retailers. Both its meter assets and its supporting systems are highly customised and the underlying RF mesh technology is now outdated. Those systems are proprietary and lack extendibility. The proprietary and customised nature of the Arc solution is at a material competitive disadvantage to the extendable and functionally rich off-the-shelf software solutions used by Arc's competitors.

8.3 Arc's RF mesh network is concentrated in Hawkes Bay and Canterbury. It would be difficult for Arc to expand to cost-effectively serve retailers centred in other regions using existing technology. Moving to a new communications technology would involve significant integration costs for Arc and, given Arc's current market position, is not likely in the counterfactual.

8.4 Arc's lack of scale and geographic meter density relative to Vector and Metrix mean that it has a cost to serve disadvantage and will not be able to sustainably match the quality/reliability/price offerings of Vector or Metrix.

8.5 Arc does not have a track record of recent large scale deployment and lacks the capability, processes and field service provider network needed to deploy in other regions.

9 Looking forward, in the short term about **[redacted]** of deployment and service opportunities at retailer ICPs remain "up for grabs". A commercial advanced metering solution will be found for those ICPs over the next 3 years. For the reasons above, in any potential counterfactual Arc would not play a significant role in the competitive process through which such solution is devised.

10 Rather, competition for the remaining market deployment opportunities will continue to be defined by the contest between Vector, Metrix and SmartCo (for asset deployment), and the self-service options of retailers. The fact that Meridian itself is not seeking a solution from Arc is itself evidence of this dynamic playing out in practice.

11 In the medium term (over the next ten years), competition in the advanced metering markets will primarily manifest in rivalry in the advanced metering services market,

as providers help electricity retailers manage the "business-as-usual" (*BAU*) switching of customers and the introduction of service enhancements and new advanced metering functions. The role for Arc in this services market in the counterfactual is likely to be a narrow one, limited largely to the ongoing provision of services for its existing fleet of meters. The limitations of its proprietary and customised software will prevent Arc from providing a compelling and differentiated offering in any future counterfactual.

12 In the longer term (in approximately 10 years and after), the next competitive episodes in the advanced metering markets will occur when:

12.1 Genesis Energy's metering contract for **[redacted]** ICPs comes up for renewal in **[redacted]**; and

12.2 an array of Contact Energy deals, totalling **[redacted]** ICPs, expire in **[redacted]**.

13 These major tenders may well involve replacement equipment, given likely advances in metering and communication technology.

14 At that time, Vector expects that global bidders will tender, attracted by the large size of these contracts. Manufacturers such as EDMI, Landis + Gyr, and technology firms like Silver Spring, GE, Samsung, and Toshiba have recently contested tenders in New Zealand. They will be back, potentially via Australian operations, when the big retailer contracts are put up for renewal.

15 For these reasons, the removal of Arc as an independent market participant will not affect the level of competition in the advanced metering markets in the short, medium, or long term.

GLOSSARY OF TERMS

AMA	Advanced Metering Assets Limited, a subsidiary of Vector Limited
AMI	advanced metering infrastructure
AMS	Advanced Metering Services Limited, a subsidiary of Vector Limited
B2B	business to business
BAU	business as usual
C&I	commercial and industrial
Code	Electricity Industry Participation Code 2010
DG	distributed generation (for example, a residential solar panel)
EA	Electricity Authority
EBITDA	earnings before interest, taxes, depreciation and amortisation
GEMA	United Kingdom Gas and Electricity Markets Authority
GPRS	general packet radio service, a type of telecommunications system used to communicate with advanced meters
ICP	installation control point, generally used to denote a point of connection at which a customer is connected to an electricity distribution network
IM	information memorandum (*IM*) issued by Meridian to prospective bidders for Arc, attached at ***Appendix C***
KCE	King Country Energy Limited, an electricity distribution network in the King Country region
MDMS	meter data management system
MEL	Meridian Energy Limited
MEP	metering equipment provider
MRP	Mighty River Power Limited
MSA	draft MEL metering services agreement between Vector and Arc, attached at ***Appendix B***
OFT	United Kingdom Office of Fair Trading
RF	radiofrequency (for example, an RF mesh network is a type of telecommunications system used to communicate with advanced meters)
RFP	request for proposals
SPA	draft Agreement for the Sale and Purchase of Arc Innovations Limited between Meridian Energy Limited and Vector Limited, attached at ***Appendix A***
WEL	WEL Networks Limited, an electricity distribution network in the Waikato region

PART 1: APPLICANT'S DETAILS

Applicant for clearance

16 Vector Limited (*Vector*) applies for clearance to acquire all of the shares of Arc Innovations Limited (*Arc*).

17 Vector's details are:

Vector Limited
100 Carlton Gore Road
Newmarket
Auckland
www.vector.co.nz

18 Vector's individual responsible for this notice is:

David Thomas, Group General Manager Gas Trading and Metering

Telephone: 09 978 7788
Email: **[redacted]**

19 All correspondence and notices to Vector in respect of this application should be directed in the first instance to:

Chapman Tripp
23 Albert Street
Auckland
Telephone: 04 498 6313 / 09 357 9699
Email: neil.anderson@chapmantripp.com / colin.fife@chapmantripp.com
Attention: Neil Anderson / Colin Fife

20 Relevant Vector related entities include:

20.1 Advanced Metering Services Limited (*AMS*), and

20.2 Advanced Metering Assets Limited (*AMA*).

21 Vector directly or indirectly holds all of the shares in each of AMS and AMA.

22 In this notice, we refer to Vector Limited, AMS and AMA together as *Vector* unless the context requires a reference to a particular entity.

PART 2: OTHER MERGER PARTY'S DETAILS

23 The other transaction party is Meridian Energy Limited (*Meridian),* as present owner of all the shares in Arc. Meridian's contact details are.

Meridian Energy Limited
PO Box 2128
Christchurch
Telephone: **[redacted]**
Email: **[redacted]**
Attention: Jason Stein

24 All correspondence and notices to Meridian and Arc in respect of this application should be directed in the first instance to:

Russell McVeagh
48 Shortland Street
Auckland
Telephone: 09 367 8133 / 09 367 8108
Email: sarah.keene@russellmcveagh.com/troy.pilkington@russellmcveagh.com
Attention: Sarah Keene / Troy Pilkington

PART 3: TRANSACTION DETAILS

Type of transaction

25 Vector is seeking clearance to acquire all of the shares in Arc.

What is being acquired

26 Arc is an electricity metering business which owns advanced electricity meters, ancillary assets and supporting communications infrastructure, serving around 125,000 "installation control points" (*ICPs*), located predominantly in Canterbury and Hawkes Bay. Arc also owns simple aggregation (*legacy*) meters at around 10,000 ICPs.

27 Having originally deployed its metering assets for ICPs controlled by Meridian, Arc now provides advanced metering services to various New Zealand electricity retailers in respect of those 125,000 ICPs (approximately **[redacted]** of which are now controlled by retailers other than Meridian, but at which Arc owns advanced meters). Arc provides those retailers with:

27.1 meter reading and data delivery;

27.2 event services, including disconnections and reconnections;

27.3 field services, including repairs and upgrades, for Arc meters; and

27.4 metering equipment provider (*MEP*) services to enable retailers to fulfil their obligations under the Electricity Industry Participation Code 2010 (the *Code*).

28 Under the transaction, Vector will continue to operate the Arc business as a going concern on a standalone basis. **[redacted]**.

29 Pursuant to an RFP run at the same time as the negotiation of this transaction, Vector expects that it will be awarded the rights to supply advanced electricity metering services for the majority of Meridian's ICPs using both Arc's existing advanced electricity meters and advanced electricity meters to be deployed by Vector at certain Meridian customer premises.[1] That agreement will run until **[redacted]**.

30 In this notice, we refer to Vector's proposed acquisition of Arc as *the transaction* and the proposed metering services agreement as the *MEL metering services agreement*.

Rationale for transaction

31 Vector's commercial rationale for acquiring Arc is to add incrementally to its advanced metering subsidiaries' asset base and provide supporting services in relation to those assets. By doing so, Vector will enhance the overall scope of its operations. Vector also sees the potential of Arc's personnel to make a positive contribution to Vector's metering businesses, given their significant specialist knowledge and expertise in metering.

32 Vector has also been focussed on winning the rights to provide advanced electricity metering services to Meridian not just over Arc's existing meters, but also for ICPs at which Meridian is the retailer but a smart meter has not yet been installed. These

[1] **[redacted]**

Meridian ICPs are one of the few remaining un-contracted advanced metering opportunities among New Zealand retailers. Vector has the view that being the successful bidder for the Arc business should improve its prospects of being successful in the RFP process that is being run in parallel with the transaction. In particular, if Vector owns Arc, Vector expects that Meridian will consider itself likely to secure more favourable commercial terms by aggregating its purchasing power across both the existing Arc meters as well as the new assets to be deployed. That view is supported by the fact that Vector is to be awarded the rights to provide these services at a large proportion of Meridian ICPs pursuant to the MEL metering services agreement.

33 An additional aspect of the commercial rationale for the Arc acquisition is that Arc and Vector have some common customers, including **[redacted]**. Vector presently provides **[redacted]** with data aggregation and billing functions for data from Arc advanced meters. A single interface and a unified service offer will enable Vector to achieve significant cost savings and other synergies in the provision of metering services to **[redacted]**.

Changes in control

34 If clearance is granted, Vector will directly or indirectly acquire all of the shares in Arc and Vector will control Arc.

35 No ownership or control interests in any other Meridian or Arc affiliated parties will change as a result of the transaction.

PART 4: TRANSACTION DOCUMENTS

36 The details of the transaction are set out in the draft Agreement for the Sale and Purchase of Arc Innovations Limited between Meridian Energy Limited and Vector Limited dated **[●]**, attached at ***Appendix A*** (the *SPA*). Subject to resolution of some final differences between them, the parties anticipate they will execute the draft SPA on or about **[date].**

37 In addition, the draft MEL metering services agreement between Vector and Arc dated **[●]** is attached at ***Appendix B***. Again, subject to resolution of some final differences between them, the parties anticipate executing this agreement on or about **[date]**.

38 Meridian issued an information memorandum (*IM*) to prospective bidders for Arc on [**date**], a copy of which is attached at ***Appendix C***.

39 Meridian also issued an RFP for provision of advanced metering services to Meridian Energy Limited on [**date**]. A copy of that RFP is also at ***Appendix C***.

40 All of these documents are confidential.

PART 5: NOTIFICATIONS TO OTHER COMPETITION AGENCIES

41 The proposed transaction involves only New Zealand parties and so no other competition agencies have been notified.

PART 6: HORIZONTAL AGGREGATION

Overlapping services

42 Both Vector and Arc own advanced meters and provide advanced metering assets and services to electricity retailers in New Zealand.

43 New Zealand electricity retailers use a meter installed at a customer's premises to measure the amount of electricity supplied to that customer. A retailer is obliged by law[2] to appoint a metering equipment provider (*MEP*) for its customer ICPs. In practice, that enables a retailer who serves a customer to determine the provider of metering services at that ICP.

44 Until about ten years ago, the only way for a New Zealand retailer to obtain electricity consumption data was to send an agent to a customer's house to read the meter. Many electricity meters are still read in this fashion. These are known as "legacy" meters. But New Zealand retailers (driven in turn by their customers) are increasingly demanding advanced or smart metering services. An "advanced" meter in this context simply means an electricity meter which can be remotely read using some form of telecommunications technology.

45 Retailer demand for advanced metering has been driven by the requirements of the Code.

45.1 Since the late 1990s, electricity retailers have known that the Code requires a meter owner to certify most types of legacy meter installations on or before 1 April 2015.[3] In practice, certification requires a physical inspection of the meter at the ICP and may also require meter replacement.

45.2 Many meter owners, including Vector, sought to use the site visit for certification inspection as an opportunity to deploy an advanced meter for a retailer, given that the costs of inspection (and potentially replacement) were being incurred anyway.

45.3 To install an advanced meter without a retailer contract risked asset displacement if the retailer appointed another metering provider for that ICP. Meter owners, if not related to a retailer, therefore sought the certainty of contractual arrangements to protect investments in advanced meters.

46 Supply of advanced metering services can involve some or all of the provision of:

46.1 advanced metering assets at a customer's premises;

46.2 data collection and remote data reading services;

46.3 event services (or "transactional" services), such as remote disconnection/reconnection (generally provided alongside data services);

46.4 repair and maintenance of smart meters; and

[2] Code, Part 10, clause 10.18(1).

[3] Code, Schedule 10.7, clause 18.

46.5 metering equipment provider (MEP) services to enable retailers to fulfil their obligations under the Code.

47 Vector and Arc provide all of the above services. We describe these services in more detail at para 90 below.

48 Vector and Arc each have:

48.1 legacy and smart meters installed at customer premises;

48.2 computer systems and associated software (generally referred to as the "head end" and "meter data management" systems) for receiving and processing consumption data from advanced meters for billing purposes and also for provision of information to the Electricity Authority Registry in compliance with an MEP's Code obligations; and

48.3 infrastructure for installing and maintaining advanced meters (either their own personnel, or, in Vector's case, subcontracted providers).

49 Arc also has its own proprietary communications layer, including related infrastructure to support its RF mesh technology, whereas Vector procures communications services from Vodafone to support its meters.

50 Vector also provides advanced metering services to commercial and industrial ("C&I") customers. Arc is not currently present in the C&I market, although it, like other potential competitors, could obtain the certifications required to supply services to C&I customers. We comment further on the C&I metering market at para 100 below.

Annual reports and financial statements

Vector Limited

51 Vector is an electricity lines company, gas distributor and retailer, communications, metering and IT services firm. It is based in Auckland, New Zealand and is a public company listed on NZX.

52 Vector's most recent annual report, including its audited financial statements for its technology segment (which includes its metering businesses) can be found online here.

53 In 2014 Vector's total revenue was $1.259B. It employed about 805 full time equivalent staff.

54 Vector's subsidiaries AMS and AMA are advanced electricity metering service providers.

54.1 They individually or together hold advanced metering contracts with several major New Zealand electricity retailers, including Genesis, Contact Energy, and Mighty River Power (Mercury).

54.2 Vector owns and provides services for smart meters, ancillary assets and supporting communications infrastructure, serving over 675,000 customer ICPs around New Zealand. Vector also owns and serves legacy meters at around 200,000 ICPs.

54.3 Under the "Stream" brand, Vector directly provides metering services to about **[redacted]** C&I electricity users. They also provide (under contracts with retailers) services to a further **[redacted]** C&I users. Vector estimates that the total number of C&I users is around **[redacted]** customers.

Arc Innovations Limited

55 Meridian is a public company listed on NZX. Arc is a wholly owned subsidiary of Meridian.

56 Arc is headquartered in Christchurch, New Zealand and presently employs 48 full time staff. In 2014 Arc's expected revenue from continuing operations was **[redacted]**. EBITDA was **[redacted]** and it held net assets of about **[redacted]**. Meridian requests the Arc revenue figures be held in strict confidence by the Commission.

57 Meridian's most recent annual report, including its audited financial statements for its retail segment (which includes the Arc business) can be found online here.

Main competitors

58 There is a range of ways in which various entities can and do compete in the advanced metering markets[4], either by owning metering assets or providing advanced metering services either directly or indirectly to electricity retailers.

59 Retailers have put their metering needs to the market at different times, and the competition for those contracts has been episodic:

59.1 The resulting metering agreements contracts are summarised in the diagram in ***Appendix D.***

59.2 Some of the larger electricity retailers have sought to acquire deployment and advanced metering services from service providers that provide a complete service solution rather than contract separately for advanced metering assets and services.

59.3 Some retailers have also supported alternative commercial models where advanced metering assets and advanced metering services are provided by separate parties – as occurred with SmartCo.

60 Retailers have also been conscious of a need to deal with metering services in an environment where there is constant customer churn. That has required retailers to strike arrangements with all metering services firms to ensure metering services are available when the retailer wins new customers (known within Vector as "switching" contracts).

61 We elaborate on these retailer-led developments at para 98 below.

62 Some Vector and Arc rivals are present only at certain levels of the advanced metering services market – for example, by providing metering asset ownership services or metering data collection and aggregation services.

63 Since 2006, Vector's and Arc's main competitors for retailer contracts have been:

[4] We define the advanced metering markets at para 87 below.

63.1 Deployment of assets and ownership of advanced metering assets: Metrix, WEL, SmartCo, Counties Power, The Lines Company, Nova, and Unison.

63.2 Advanced metering services: Metrix, GE, and SmartCo (via a subcontract to Vector).

64 Details of these competitors are in ***Figure 1***.

FIGURE 1: KEY COMPETITORS

Name	Remarks	Service scope / type	Contact details
Supply and installation of advanced metering assets			
Metrix Limited	Wholly owned subsidiary of Mighty River Power Limited (*MRP*) Metrix provides metering services from predominantly Elster Meters and an Oracle-based head end. Metrix presently has at least 340,000 contracted ICPs. Most of these are Mercury ICPs in the Auckland region. Trustpower and Metrix recently executed a smart metering agreement for 225,000 ICPs.[5] In its 2014 results presentation,[6] MRP outlined its growth aspirations for Metrix: • Providing services to 14 different companies • With Trustpower deal AMI meters increase to 600,000 by FY2018 • Trustpower partnership supports growth plans • Deployment of AMI meters to 225,000 Trustpower customers starting in 2015 • $100m capital expenditure over 3 years • Establishing robust processes, systems and integration • Metrix contracted to roll out 14% of AMI Metering market (285,000 meters)	Advanced metering services including data, maintenance and deployment	42 Olive Road Penrose Auckland New Zealand Postal: Private Bag 92008 Auckland Mail Centre Auckland New Zealand P: (09) 580 3900 F: (09) 580 3901 www.metrixinfo.co.nz

[5] MRP media statement, *Metrix partnership with Trustpower supports growth plans* (3 July 2014). Available online: http://www.mightyriver.co.nz/Media-Centre/Latest-News/Metrix-partnership-with-Trustpower-supports-growth.aspx

[6] MRP *Financial Results Presentation for 12 months ended 30 June 2014* (dated 20 August 2014). Available online: https://www.nzx.com/files/attachments/198765.pdf.

Name	Remarks	Service scope / type	Contact details
SmartCo Limited	SmartCo was established in July 2010 and is owned by a consortium of distribution networks. SmartCo provides metering services at ICPs within its member networks' regions using both mesh technology and Vodafone GPRS. SmartCo holds a retailer agreement with Contact Energy. **[redacted]**. Once it completes deployment, SmartCo will serve around 250,000 retailer ICPs in its member regions. SmartCo's website states: *SmartCo provides high quality smart meter services to energy retailers.* *SmartCo is a joint venture company which will serve more than 250,000 urban and rural consumers across New Zealand. It is owned by electricity lines companies including Alpine Energy, Counties Power, Electricity Invercargill, Network Tasman, Network Waitaki, On Metering, The Power Company and WEL Networks.*	Advanced metering services including data, maintenance and deployment	Level 1, 79 Grafton Road Grafton Auckland 1010 Ph 021 419181
WEL Networks	Owner of: • **[redacted]** (approx.) meters on its own distribution network, which use L+G meters and Silver Spring technology.[7] • **[redacted]** smart meters on the Top Energy network (yet to be deployed), part of the SmartCo	Advanced metering services including limited data, maintenance and deployment. Primarily deployed to service the needs of the network company.	PO Box 925 114 Maui Street, Pukete, Hamilton 3240 Telephone: 07 850 3100 Freephone: 0800 800 935

[7] Vector has based its estimate of WEL Networks' meter numbers on its own data and market intelligence, and is aware that Arc has a different estimate.

Name	Remarks	Service scope / type	Contact details
	consortium. • There is an advanced metering services arrangement with Meridian Energy on which WEL Networks provides a limited set of data **[redacted]** sites).		
The Lines Company	Owner of **[redacted]** EDMI meters on its network, used to measure maximum demand for network billing purposes. No metering services agreement with any retailers are in place for these meters. The Lines Company's EDMI meters also feature integrated load control in the meter. No metering services agreement with any retailers are in place for these meters.	Advanced metering services including limited data, maintenance and deployment. Primarily deployed to service the needs of the network company.	The Lines Company PO Box 281 King Street East Te Kuiti
Unison Networks Limited	Owner of **[redacted]** EDMI advanced meters on its network to provide transformer monitoring services. No metering services agreement with any retailers are in place for these meters.	Advanced metering services including limited (network) data, maintenance and installation. Deployed to service the needs of the network company.	PO Box 555, Hastings 4156 1101 Omahu Road, Hastings +64 6 873 9300 +64 6 873 9311
Counties Power	Has commenced a programme in February 2014 to replace **[redacted]** meters with advanced meters Counties. Vector understands Metrix will use the Counties-owned meters to provide advanced metering services to retailers.		
Data collection and remote data reading services			
Metrix	As above		

Name	Remarks	Service scope / type	Contact details
EMS	A commercial business group within Transpower NZ Ltd. EMS presently only offers advanced metering services for commercial and industrial users.	EMS presently only serves commercial and industrial users, **[redacted]**	Energy Market Services 19th Floor PWC Tower 113-119 The Terrace PO Box 5363 Wellington
GE Digital Energy	A division of GE, the NYSE-listed conglomerate. GE Digital Energy provides smart metering assets and software. In New Zealand GE has supplied, or offered to supply: • advanced metering assets and services • generation equipment • energy networks monitoring • solar and integration of embedded generation capabilities from wind turbines GE also offers industrial battery technologies to support the intermittent DG loads delivered by wind and solar.	Metering, communication and head end	P.O Box 58955 Greenmount - 2141 Auckland, New Zealand Tel: +64(09) 2713810 Fax: +64(09) 2651362
Toshiba / Landis + Gyr	Toshiba is an electronics conglomerate listed on the Tokyo stock exchange. Toshiba's transmission and distribution systems division offers smart grid products and services, including advanced meters and data management systems. Recently acquired Landis and Gyr. L&G is a long standing provider of electricity and gas metering equipment to the New Zealand market, and a provider	Metering and Head End	12 Parkway Drive Mairangi Bay Auckland 0632 Ph: (09) 478 4200

Name	Remarks	Service scope / type	Contact details
	of repair and refurbishment services for meters. Toshiba / L&G has offered New Zealand retailers meter data head-end software services (both off the shelf and hosted offers). **[redacted]**. L&G also offers: • radio mesh telecommunications networks for their electricity and gas meters • water metering advanced services **[redacted]**		
EDMI	EDMI is headquartered in Singapore. Its local subsidiary, EDMI New Zealand Limited, has been a large provider of electricity advanced meters. In 2012 EDMI acquired Energy Intellect and thereby attained capability to offer managed services like those provided by Vector. EDMI also provides a hosted metering software platform as a service to New Zealand electricity distributors and online energy management software. **[redacted]** **[redacted]**	Metering and head end software	EDMI New Zealand Ltd Level 1, 181 Wakefield St Wellington 6011, New Zealand Tel: (64) 4 801 4700 Ph: 027 336 4696
Silver Spring	Silver Spring Networks is an NYSE-listed energy solutions and metering company, with over 18.5 million devices deployed worldwide. It provides smart meters and software, including its "Utility IQ" head end software system. Silver Spring is a service provider to SmartCo using cloud based	Communications (RF) network and head end	Silver Spring Networks Pty Ltd Level 25, 360 Collins Street Melbourne Vic 3000 Australia ABN: 65 132 628 258 Phone +61 3 9236 5222 Fax +61 3 9923 6221

Name	Remarks	Service scope / type	Contact details
	metering data systems.		
iTron	Present in New Zealand by its Australian division	Operate in NZ as a meter equipment manufacturer and a software provider for head-end functionality. Provide advanced gas and water metering solutions in Australia and New Zealand.	Itron Inc. 2111 North Molter Road Liberty Lake WA 99019-9469 USA Sydney, Australia: +61 2 8235 5700
Event services (or "transactional services")			
Same parties as the advanced metering asset owners	MEP services can be contracted to any party participating as an MEP (irrespective of whether or not they own, or are capable of providing, legacy or advanced meters). A full list of MEPs is available from the Electricity Authority website: http://www.ea.govt.nz/operations/industry-participants/participant-register/		
Repair and maintenance services of smart meters			
Vircom EMS Limited	Majority owned by Mainpower Contracts services from all advanced metering providers in New Zealand. Contracts services from most electricity retailers in New Zealand	Physical repair services, nationwide. Testhouse (testing, calibration and certification) services.	172 Fernside Road Rangiora, 7440 New Zealand

Name	Remarks	Service scope / type	Contact details
Wells Group	Privately owned. Contracts services from all advanced metering providers in New Zealand. Contracts services from most electricity retailers in New Zealand	Physical repair services, nationwide. Testhouse (testing, calibration and certification) services. Manual meter reading services.	WELLS Group Ltd Head Office PO Box 379 New Plymouth New Zealand
Delta Utility Services Limited	Council owned corporation, owned by Dunedin City Holdings Limited. Contracts services from all advanced metering providers in New Zealand. Contracts services from most electricity retailers in New Zealand	Physical repair services, nationwide. Testhouse (testing, calibration and certification) services. Manual meter reading services.	Head Office Call free: 0800 4 33582 Office phone: 03 474 0322 10 Halsey Street PO Box 1404 Dunedin 9054
Indeserve Limited	Contracts services from all advanced metering providers in New Zealand. Contracts services from most electricity retailers in New Zealand	Physical repair services, nationwide. Testhouse (testing, calibration and certification) services.	9 Marine Parade Petone Lower Hutt 5012 PO Box 3432 Wellington 6140

Industry associations

Formal and informal links between participants

65 There are a number of formal contractual and other commercial relationships between Vector and Meridian both in the metering sector and the electricity industry more generally. All material commercial relationships are contracted on an arm's length basis and none are directly relevant to the transaction.

66 The only trade association of any mutual relevance to both Vector and Arc is the Electricity Engineers Association.

Key customers

67 Vector's key metering customers are major electricity retailers.

68 A list of Vector's retailer contracts, and a summary of sales revenue for each customer contract, will be provided separately to the Commission as ***Confidential Appendix E*** of this application. Vector emphasises that its key customers' revenue is not generally available to the market and is highly commercially sensitive. It may also be material to Vector's share price. It requests that the Commission hold this information in the strictest confidence.

69 Arc's key customers are also major electricity retailers.

70 A list of Arc's retailer contracts, and a summary of Arc's sales revenue for each customer contract, will be provided separately to the Commission as ***Confidential Appendix F*** of this application. Arc emphasises that the revenue information about its key customers is not generally available to the market and is highly commercially sensitive. It may also be material to Meridian's share price. It requests that the Commission hold this information in the strictest confidence.

Key suppliers

71 Vector and Arc are each primarily service providers, rather than competing buyers. And because Vector and Arc have chosen different meter technologies and head end / data management software, they do not generally compete for the acquisition of goods or services.

72 Vector and Arc do however have some common suppliers, including:

72.1 Vodafone, for telemetry and telecommunications services

72.2 Delta, as a provider of testing and other field services.

73 Vector and Arc expect that together they will comprise only a very small proportion of each common supplier's revenue and/or total sales. So we do not anticipate any competition issues on the acquisition front. Vector and Arc are, however, happy to provide their suppliers' contact details, or further information on the amounts paid to those suppliers, if it would assist the Commission in considering this application.

PART 7: COMPETITION ANALYSIS

Introduction

74 The transaction will result in horizontal aggregation in the advanced electricity metering industry. We describe below the relevant market(s) and trends in those markets, and then explain why the transaction will not have the effect or likely effect of substantially lessening competition in any relevant market.

INDUSTRY TRENDS

- ***By law, retailers are metering decision makers***

75 Retailers have the legal power to appoint a metering equipment provider (*MEP*) at a customer ICP. Under the Code, an advanced metering provider cannot deploy a meter at an ICP unless and until it is appointed by a retailer.[8]

76 Retailers' desire to meet certification requirements, to obtain greater billing certainty and to offer enhanced services to customers have together driven growth in the uptake of advanced meters.

- ***Code changes have driven meter uptake***

77 Smart meter deployment has been driven by regulatory changes requiring meter installation certification.

78 The Code requires a meter owner to ensure certain legacy meter installations are certified on or before 1 April 2015.[9] Both advanced meter deployment and legacy meter certification require a site visit. Any site visit – even if only for the purpose of certification – is relatively costly and time consuming and involves:

78.1 a physical site visit by electrically-qualified contractors, with corresponding time and wage costs (including significant travel time); and

78.2 liaising with a retailer's customer as to an appropriate time to visit a dwelling and, if necessary, to briefly disconnect the electricity at that site.

79 In late 2007 Vector was a large legacy meter owner and so was potentially faced with substantial costs to certify its **[redacted]** meter installations. It took that opportunity to seek the rights from retailers to deploy advanced metering assets rather than simply incur the costs of certification. In doing so Vector, like other meter owners, faced risk of asset loss if a retailer

[8] Code, Part 10, clause 10.12 ("*a participant must not directly or indirectly interfere with a metering installation for which it is not the metering equipment provider, unless … instructed or permitted to do so by the MEP… or the participant has an arrangement with the trader responsible for the metering installation as the gaining MEP who will be responsible for the metering installation*." Clause 10.18 requires a reconciliation participant (i.e. a retailer) to ensure there is an MEP for each connection.

[9] Code, Schedule 10.7, clause 18.

exercised its rights to appoint another metering firm (called meter "displacement" risk).

79.1 Vector sought retailer contracts granting it the right to deploy advanced meters and provide services to retailers, and in such contracts Vector also sought to protect its advanced meters asset investments from displacement. Vector's first such contract was with Contact in relation to its **[redacted]** ICPs on the Orion network – Arc had already won the rights to install smart meters at Meridian ICPs on the Orion network. Then, more significantly, Vector struck an agreement in **[redacted]** with Genesis Energy for advanced meter deployment at **[redacted]** Genesis ICPs. Vector's retailer agreements effectively removed its displacement risk for those retailers, although displacement remained a possibility in some scenarios where a customer switches retailer (an issue discussed in more detail at para 138 below);

79.2 Arc, as a Meridian subsidiary, could undertake an advanced meter deployment at Meridian ICPs with an assurance that those metering assets would not be displaced (again, except for in some switching scenarios). Metrix's rights to deploy, and provide advanced metering services, at MRP ICPs once its meters were installed, were also effectively protected by its corporate link with MRP.

80 For their part, retailers saw a commercial advantage in obtaining advanced metering data to enable half-hourly reconciliation in the settlement market. Retailers were also concerned to ensure that all meters at their ICPs were properly certified as required by the Code.

81 Advanced meters have a number of other advantages for retailers including:

81.1 saving costs through remotely reading meters;

81.2 facilitating the launch of innovative tariff structures that are sensitive to the costs associated with serving peak demand; and

81.3 enabling more frequent collection of consumption data (for example, daily rather than monthly), reducing reliance on estimates in billing customers.

82 As the EA has recognised, New Zealand is unique insofar as its advanced metering rollout has been largely market driven.[10] Retailers have, by their appointment powers, dictated which metering providers received which opportunities. Many other jurisdictions have witnessed regulatory-driven meter deployments.

[10] Electricity Commission *Advanced Metering Infrastructure in New Zealand: Roll-out and Requirements* (3 December 2009), at para 2.4.1.

- ***Retailers have specified preferred functions***

83 Retailers' appointment power has enabled them to pick and choose between metering firms' service offerings, and to select meter functionality and/or asset capability which meet their needs and customer service expectations. For example:

83.1 "Globug" is a Mercury prepaid service which was initially only supported by Metrix. Vector subsequently developed the capability to support the Globug service **[redacted]**;

83.2 import/export is a service supporting the metering and monitoring of distributed generation (such as solar). **[redacted]**; and

83.3 automated disconnection/reconnection, a fully automated business to business (*B2B*) service was requested by **[redacted]**.

84 There are other commercial benefits for retailers from advanced meters. For example:

84.1 the remote connectivity to the meters reduces field costs (through avoided sites visits to complete reconnections, disconnections and tariff changes); and

84.2 remote connectivity also reduces the quantity of bad debt write offs (through speed to disconnection as well as accuracy of customer billing and reduced vacant consumption.

85 In addition, half hourly settlement data allows retailers to accurately settle on the wholesale electricity market at the time-of-use, and to develop accurate profiles for settlement and facilitate better forecast models through data modelling.

MARKET DEFINITION

86 The relevant markets are those for the provision of advanced metering assets and services to electricity retailers.

87 In particular, for the reasons set out in more detail below, Vector considers that the following markets are relevant to the application:

87.1 the national market for the provision of installed advanced electricity meters and associated telecommunications infrastructure[11] (the *advanced metering asset market*); and

87.2 the national market for the provision of data collection/retrieval services using advanced electricity meters and provision of event ("transactional") services using those meters (the *advanced metering services market*),

[11] Note that the *deployment* of those meters (and the provision of other field services) is potentially a separate functional market. We discuss this activity in more detail at para 98 below.

(the advanced metering asset market and the advanced metering services market are together the *advanced metering markets*).

88 It is important to note that, while in many instances transactions in the advanced metering services market are linked to the large-scale deployment of smart meters, that need not be the case. Indeed, advanced metering services can be and are acquired separately by asset owners (subject to some technical limitations – described at para 142 below).

89 We describe the functional, geographic and customer dimensions of these markets below.

Functional dimension: activity-based services

90 The functional levels of the advanced metering markets comprise the various activities involved in provision and delivery of advanced metering services:

90.1 Supply of advanced metering assets and installation of those meters at an electricity customer's premises. Smart meters can be readily acquired from a large global manufacturer (e.g. EDMI or Landis + Gyr) and must be certified by the EA before being used in New Zealand. Deployment is undertaken by certified electrical technicians (in Vector's case being contracted agents) and involves a site visit and a brief supply disconnection.

90.2 Data collection, retrieval and remote data reading services. Data collection occurs through meter functionality that allows electricity usage data to be recorded and stored on a memory chip in the meter. Stored data is then retrieved from memory and transmitted to a central hub using telecommunications capability (e.g. wireless modem, mesh transmitter, or other technology). The data is then aggregated, processed, and provided to a retailer[12]. This function is usually expanded to include the provision of separate MEP services, to enable retailers to fulfil their Code obligations.[13]

90.3 Event services (or "transactional services"), such as disconnection/reconnection and investigations. Event services generally, but not always, use meter capability to deliver a particular meter function via remote control. For example, most smart meters deployed in New Zealand are capable of disconnecting electricity supply by remote command (for example, when a connection is no longer needed, or for a non-paying customer).

[12] We expand on the systems needed for processing at para 109 below.

[13] An MEP's task is primarily an information recording and retention role, and involves meter installation certification (done at time of site visit), recording and retention information about meter assets, and reporting data to the EA registry via an electronic interface. Any party providing metering services is well placed to conduct the MEP function because it generally retains its own records of metering assets deployed, which can easily be transmitted to the EA.

90.4 Repair and maintenance services of smart meters.[14] These types of reactive services are conducted by trained and appropriately certified personnel and may involve a site visit. For example, a malfunctioning meter, loss of a hot water relay, or suspected meter tampering may prompt a retailer to request a site visit. Some metering firms (such as Metrix) elect to subcontract all of their repair and maintenance services to third party providers and others retain internal capability to perform some but not necessarily all of these functions (e.g. Arc)).

91 Most retailers will have a mix of legacy and advanced meters at customer ICPs, meaning that some metering services agreements provide for legacy services if a smart meter is not yet installed at an ICP. With the advent of advanced meters, legacy services are increasingly an interim arrangement undertaken in contemplation of the deployment of advanced meters. In time, almost all legacy meters in New Zealand will be replaced by advanced meters meaning that legacy services have become incidental to advanced metering markets.

Geographic dimension

92 Vector (through AMA and AMS, which are based in Wellington) has national coverage and can install an advanced meter on any network if requested to do so by a retailer.[15] Retailers have customers all over New Zealand and so generally contract for advanced metering services:

92.1 on a national basis; or

92.2 in particular areas, for example a group of customers defined by a distribution network (or networks).

93 Vector does not differentiate its metering services charges by region, **[redacted]**.

94 In addition, metering data processing and aggregation services may be remotely provisioned, including from an offshore (cloud-based) head-end and/or meter data management system. Local metering service providers therefore face the prospect of international competition for some advanced metering services.

95 Therefore, for the purposes of this notice, Vector says the appropriate geographic market is a national one.

Customer dimension

96 The principal users of advanced metering assets and advanced metering services are electricity retailers, who require metering services at ICPs at

[14] Repair and maintenance services may be further categorised as "compliance" and "reactive" services. Both types of service are often provided alongside with event / transactional services (and in practice are always bundled with event and MEP services where the advanced meter owner is also the advanced metering service provider).

[15] **[redacted]**.

which an advanced meter is installed. To date, retailers have adopted different approaches to contracting for metering services:

96.1 Some retailers opted to self-provision advanced metering assets or to become asset owners. For example, in 2010 Pulse launched a smart meter solution under which it deployed **[redacted]** smart meters around New Zealand. **[redacted]** . Smart metering services are then acquired separately.

96.2 Some other retailers, like Meridian and MRP, chose to vertically integrate and establish specialised subsidiaries which operate in the advanced metering markets, including providing advanced electricity metering services to other retailers.

96.3 Other retailers, like Contact Energy and Genesis, have chosen to divest metering assets and contract out all metering services.

96.4 It is also possible to contract for advanced metering provision under a model where advanced metering assets are provided separately to advanced metering services. By way of illustration, in around 2012[16] Contact fostered the emergence of SmartCo (a conglomeration of distribution networks) as a metering asset owner and service provider for retailer ICPs in SmartCo member network areas. SmartCo owns the advanced metering assets **[redacted]**.

97 Retailers participating in competitive downstream markets have strong incentives to ensure they secure advanced metering assets and services on competitive terms. This has manifested in retailers adopting a range of commercial strategies when acquiring metering services, including:

97.1 contracting all ICPs in one go, presumably taking the view that offering a single large contract would provide maximum commercial leverage to achieve a low price and favourable terms. **[redacted]** used this strategy in **[redacted]**; and

97.2 parcelling off tranches of ICPs at different times and to different providers, presumably with a view to maintaining competitive tension between metering firms. Contact Energy has carefully sequenced the ICPs it has put to the market and "allocated" contracts between providers. **[redacted]**

98 The commercial process has driven the establishment of the following arrangements:

98.1 meter deployment contracts, under which a metering firm installs advanced meters and then provides advanced metering services to a retailer using those meters. These contracts are typically for 10 years or longer and are listed in ***Figure 2*** and depicted in the diagram in ***Appendix D***; and

[16] SmartCo was formed in 2010 and ultimately concluded a metering services agreement with Contact in 2013.

98.2 switching arrangements, which take effect to support the ongoing provision of advanced metering services when a customer of an electricity retailer switches to another retailer. To manage this customer switching process without displacing the existing meter (which always remains an option – see for example the Globug displacement discussed as para 83.1 above), the "gaining retailer" may:

(a) contract directly with the range of advanced metering services providers in the market, so that it will already have an arrangement in place with the firm providing advanced metering services in respect of the meter "in situ" (known within Vector as "*switching*" *contracts*), or

(b) rely on a nominated preferred advanced metering services provider to strike suitable contracts with other providers to acquire raw data from any meter at an ICP in respect which the retailer wins a customer which can then be resupplied by that preferred provider to the gaining retailer (known within Vector as "*inter-operability*" *arrangements*).

99 Apart from often playing a significant role as providers of advanced metering assets (such as in the SmartCo arrangements), distribution networks are also potentially acquirers of advanced metering services in their own right. For example, a distributor may wish to use an advanced meter to monitor electricity quality or to measure maximum demand for network billing purposes. But distributor demand for advanced metering services in this context has not yet emerged in New Zealand on a material scale.

C&I

100 Advanced metering services are also used by commercial and industrial electricity customers. Unlike for residential smart metering services (provided to a retailer), some C&I customers directly acquire metering services from a metering firm.

101 C&I metering differs slightly from the provision of services to electricity retailer insofar as:

101.1 C&I customers generally require the provision of time of use (*ToU*) metering data showing their consumption at hourly or half-hourly intervals;

101.2 C&I users often own their meters, and associated assets such as switchgear and transformers, or lease those assets from a metering service provider;

101.3 C&I users may in some cases contract directly with a metering firm for metering services, rather than with a retailer. Other C&I customers obtain metering services under an arrangement between a metering firm and the customer's retailer; and

101.4 C&I users may purchase additional data and analytical services from a metering firm. For example, Vector makes a computer interface available to its C&I customers who require consumption data analysis.

102 Arc is not currently present in the C&I segment, although there do not appear to be any significant barriers to it entering that market segment. In any event the transaction will not materially impact competition in this segment. We say that because:

102.1 C&I users tend to be large, sophisticated buyers with significant countervailing power;

102.2 the main suppliers of data management services to C&I customers are Vector and Transpower's subsidiary EMS. Those players will continue to vigorously compete post-transaction, as they do now;

102.3 there are no material barriers preventing other suppliers from offering services to C&I users, with and without the transaction; and

102.4 Arc is not currently present in this segment and there is no reason to think this would change without the transaction, especially given that its current technology is not readily extendible into the C&I market.

103 For those reasons, we have not considered the C&I segment in any further detail in this notice other than to note that **[redacted]** is a potential participant in the services market, particularly for any retailer looking to arrange for advanced metering services to be provided using advanced metering assets deployed by a firm other than Vector or Metrix.

What is outside the relevant markets

104 The advanced metering markets do not include:

104.1 provision of metering services for other utilities such as gas and water;[17] and

104.2 provision of telecommunications services to third parties. Vector utilises GPRS services from Vodafone to "talk" to its advanced meters. Arc uses a combination of RF mesh technology (effectively a distributed point-to-point communications network) and Vodafone GPRS services. But metering firms do not make telecommunication services independently available to any third parties.

[17] Offering 'advanced' gas or water meter reading would require, at a minimum, the deployment of a new meter or an additional communications module at each customer's premises. A metering provider would then need to charge a retailer at such a level so as to recover the cost of asset + installation, as well as any ongoing data services. Some electricity metering providers appear to be aggressively expanding into the gas and water metering markets in New Zealand. For example, iTron, an American technology conglomerate with an Australian presence, recently appointed a local firm Datacol to provide its data services in the New Zealand water utility sector.

UK approach to market definition

105 Vector's suggested approach to market definition is consistent with the approach taken in the United Kingdom by the Gas and Electricity Markets Authority (*GEMA*) and the Office of Fair Trading (*OFT*). GEMA has found the following gas metering markets (which are analogous to the electricity metering markets under consideration here):[18]

105.1 a market for the provision of installed domestic-sized gas meters (asset market); and

105.2 an ancillary service market, such as meter maintenance (services market).

106 GEMA has also looked specifically at the data service aspect of the smart metering industry,[19] and identified three separate markets:[20]

106.1 data retrieval services on at least a regional level, if not a national level;

106.2 data processing services on a national level; and

106.3 data aggregating services on a national level.

107 Similarly, in the recent acquisition by Macquarie Bank of Utility Metering Services, OFT identified separate national markets for:[21]

107.1 meter asset provision services for smart electricity meters for domestic use;

107.2 meter asset provision services for smart electricity meters for industrial and commercial use;

107.3 meter asset maintenance services for smart electricity meters; and

107.4 meter data collection services.

108 While in New Zealand data collection, retrieval and processing tend to be provided as a single service, data aggregation may be done separately. For example, an "inter-operability" arrangement (discussed further at para 151 below) involves a metering firm receiving a raw data feed from another owner's meter and then aggregating and collating that data for a contracted retailer.

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[18] Decision of the Gas and Electricity Markets Authority, *Investigation into National Grid* (Case CA98/STG/06); National Grid Press Release; CAT ruling, at [3.1] (www.ofgem.gov.uk)

[19] Decision of the Gas and Electricity Markets Authority, *Investigation into EDFE's alleged abuse of dominance by refusing to supply meter data services* (www.gov.uk).

[20] At para [136].

[21] Decision of OFT, *Completed Acquisition by Macquarie Bank Limited (London Branch) of Utility Metering Services Limited*, Decision No ME/5260/11 dated 9 January 2012.

109 Once retrieved, metering data can be transmitted via the internet to a remote processing and aggregation system. These systems are generally referred to as the "head-end" and "meter data management system", and may be located either in dedicated physical assets (i.e. computer servers) or hosted in the cloud. Offshore provision of metering data services is therefore practicable: **[redacted]**.

110 It is also relevant that:

110.1 alternative commercial models have emerged where advanced metering assets and advanced metering services are provisioned by different parties. In around 2012 Contact supported a model under which SmartCo (a conglomeration of distribution networks) acted as metering asset owner with supporting advanced metering services provisioned by Vector. WEL, Counties Power and The Lines Company also own some smart meters or are known to have aspirations to own meters, and either use (or will use) a service provider to deliver data collection and aggregation functions over those meters – or in some cases **[redacted]**;

110.2 retailers' demand for switching and inter-operability contracts indicates that, as deployments conclude at most contracted ICPs, there will continue to be retailer requirements for advanced metering services over third party owned assets;[22] and

110.3 meter maintenance and repair services, and MEP compliance services, may be performed by the advanced metering asset owner, an advanced metering services provider, or subcontracted to third party providers.

111 We explain below why there will be no lessening of competition in the advanced metering markets arising from the transaction.

COUNTERFACTUAL

112 Meridian is conducting a competitive process for the sale of Arc. Therefore likely counterfactuals are:

112.1 Arc continuing to operate stand-alone under Meridian or third party ownership; or

112.2 **[redacted]**.

113 **[redacted]**

114 Accordingly, Vector considers that the first of these counterfactuals (i.e. Arc continues to operate on a stand-alone basis) provides a conservative

[22] A deployment contract can only pertain to those customer ICPs that a retailer serves at that time. But, over time, the retailer will gain (and lose) customers through switching. It must therefore have arrangements in place to deal with the circumstance in which it gains a customer with a meter that is provided by another metering provider (i.e., a provider other than that which won a deployment contract from the retailer).

counterfactual against which to assess the competition effects of the transaction.[23] Accordingly, the notice proceeds on this basis.

COMPETITION EFFECTS OF TRANSACTION

115 The competition effects of this transaction can be observed in each of the advanced metering asset market and the advanced metering services markets. In some instances, particularly large deployment opportunities, specific transactions affect both markets simultaneously. In any event, it is useful to consider Arc's potential role in the counterfactual as a:

115.1 potential bidder for the remaining retailers' deployment and services contracts, if these retailers put those requirements to market; and/or

115.2 a provider of advanced metering assets and/or advanced metering services to retailers both in relation to its own deployed meters and meters owned by other advanced metering services providers.

116 We address these two possibilities in turn.

Deployment and service contracts

- ***Bidding or auction market***

117 To date, the most significant competitive interactions in the advanced metering markets have manifested in an auction or bidding market for the contractual rights to:

117.1 deploy meters at a retailer's ICPs; and

117.2 provide advanced metering services in relation to those deployed meters for that retailer.

118 Each of these "deployment + services" contracts requires the bidder to contract to provide all of the functional activities described at para 90 above. A metering provider does not necessarily have to supply all of the advanced metering services itself, but it must sub-contract with others to provide those services it does not self-supply, e.g., suppliers of field services.

119 Retailers ultimately decide which metering firm to appoint to deploy meters at their customers' ICPs and provision services in relation both to newly deployed and other existing meters. Once an ICP is contracted, a retailer's appointment power means that a rival will not be able to deploy a meter at that ICP (or provision associated services) unless the contract is terminated or the customer switches retailer.[24]

120 The sequence of retailer deployment contracts bidding rounds, and the resulting contracts (where agreed), is summarised in ***Figure 2*** and is also

[23] Commerce Commission *Mergers and Acquisitions Guidelines* (24 July 2013) at [2.40].

[24] Retailer aversion to meter displacement when a customer switches retailers has led to switching and inter- operability contracts. These are discussed in more detail at para 138 below.

depicted in the diagram in ***Appendix D.*** Retailers' present service arrangements (where known) are also shown in ***Figure 2***.

FIGURE 2: ADVANCED METERING SERVICE PROVIDERS TO RETAILERS

[redacted]

121 About **[redacted]** of all retailer ICPs in New Zealand are now or soon will be contracted to an advanced metering firm[25] and have a smart meter installed (or one will be installed). As can be seen in ***Figure 2***, some retailers have not yet awarded a deployment contract and/or appointed an advanced metering provider. However, for the reasons that we set out in more detail below, it is not expected that any of Nova, Pulse or King Country Energy would pursue a commercial solution exclusively involving Arc.

- ***Technology contest to win retailer contracts***

122 From the start of the retailer contract "bidding rounds" in 2006, Vector, Arc and Metrix each chose a different asset technology platform to provide advanced metering services:

122.1 Vector invested in an EDMI platform, both for its meters and head end, supported by Vodafone GPRS telecommunications;

122.2 Metrix opted for Elster G-Rex meters and radio mesh solution for dense urban installations, and selected EDMI GPRS point to point for more rural applications. The AMI platform was based around the first generation Oracle Meter Data Management system; and

122.3 Arc chose a single phase Metec pulse-capable legacy meter, collecting pulse data into a "smart box". This "smart box" was assembled specifically to meet the needs of Meridian's immediate technology and cost drivers.

123 Each firm invested significant resources in adapting its platform for New Zealand use and in developing the expertise to efficiently deploy meters. Some of those service offerings have been deployed extensively with retailers (most notably the services offered by Vector and Metrix) and others have not (most notably the solution offered by Arc).

124 In the early stages of advanced metering market development, metering firms take on substantial technology risk with their proposed solution. As the Electricity Authority has recognised, in the metering context, there is an inherent risk that the chosen technology and/or particular functionality will:[26]

124.1 never be used, as the requirement never arises;

124.2 become too complex to maintain or operate effectively;

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[25] Vector is aware that Arc has a different view of the number of contracted ICPs, presumably based on its own market intelligence. Other market participants will no doubt have their own estimates.

[26] Electricity Commission *Advanced Metering Infrastructure in New Zealand: Roll-out and Requirements* (3 December 2009), at para 2.2.7. See also Electricity Authority *Advanced Metering Policy* (version 1.1, dated 1 November 2010) at para 22.

124.3 be too complex for consumers to operate;

124.4 become technologically redundant relatively quickly; or

124.5 limit the range of products that can be used in conjunction with the technology.

125 These investment risks underpinned metering providers' desire to secure relatively long-term contracts with retailers. A long contract gives a provider certainty that asset costs will be recovered, plus a margin to reflect capital cost and investment risk, over the life of the services arrangement.

126 The advanced meters presently available have an estimated useful life of less than **[redacted]** years. Vector, like other metering providers, must plan investments and calculate expected returns on the basis that replacement will be required at year **[redacted]** or shortly thereafter. Advanced metering asset and service provision also requires a continuous investment in asset upgrades and replacement, and service improvement to meet retailer demands. For example, **[redacted]**:

126.1 **[redacted]**; and

126.2 **[redacted]**.

127 In addition, the telecommunications infrastructure critical to successful advanced metering services has significantly shorter industry re-investment lifetimes. Several telco "lifecycles" typically occur within a 12-15 year meter hardware investment, so investment in development work to stay current with changing telecommunications is essential for the total life of the meter.

- ***Arc as contender for deployment contracts***

128 As can be seen from the ***Appendix D*** diagram, Arc has not been successful in winning deployment contracts tendered since 2006. Arc's primary contract is with its parent Meridian. It has never won a national request for proposal (*RFP*). Arc's current share of the advanced metering markets is therefore underpinned substantially by business it has obtained historically from its parent company. Meridian has decided not to award any further deployment ICPs to Arc, either in connection with this transaction or otherwise, confirming that Meridian considers Arc is likely to be a less satisfactory service provider, on cost and/or other dimensions, than other metering providers in the market.

129 Arc will not be in a position to offer a competitive proposition in the counterfactual because:

129.1 Arc's installed smart metering technology is early generation, which gives rise to a number of functional issues associated with technology that was early in the maturity curve.

129.2 Arc's deployed assets are concentrated in the Canterbury and Hawkes Bay regions and use an RF mesh technology that is heavily reliant on density;

129.3 Arc's services are provided using a highly customised proprietary services stack that is costly to augment in response to ongoing retailer requests for service enhancements; and

129.4 unlike Vector and Metrix, Arc does not have a track record of delivering a geographically extensive deployment – this, in part, may have been due to its technology choices set out above.

130 Any owner of Arc in the counterfactual would not be able to establish a business case to invest the additional capital required to overcome the competitive disadvantage Arc now faces. Put another way, ownership of Arc provides no material advantage compared with de novo entry: its technology is not a viable platform for future service providers in the medium term, and the number of ICPs it services is insufficient to provide competitive scale in the advanced metering services market.

131 These disadvantages are likely to have been key reasons for Arc being unsuccessful in the recent Trustpower RFP (won by Metrix), which is likely to be the last large nationwide deployment opportunity for many years. In Vector's view, this outcome would be repeated in the counterfactual with Arc being unable to compete effectively with Vector, Metrix and global players like GE and Silver Spring for deployment contracts.

132 The absence of an independent Arc in the factual will not materially alter the competitive dynamics in respect of the remaining potential deployment contracts. Arc is best seen as a commercial endeavour which has matured and is unlikely to further expand or develop.

133 The factors described above that have precluded Arc from providing a competitive offering in national RFPs would, in many cases, be even more pronounced in any future contests to supply those smaller retailers who are yet to install smart meters. In order to offer any or all of those smaller retailers a competitive offer, Arc would need to incur significant additional costs, including:

133.1 **[redacted]**;

133.2 **[redacted]**; and

133.3 **[redacted]**

134 Confirmation that Arc will not be a credible bidder for these remaining retailer contracts is provided by Meridian itself determining not to award any further deployment ICPs to Arc. This decision by the retailer best placed to understand the strengths and weaknesses of Arc's service offering is strong evidence that Arc is not well placed as an ongoing supplier of such services in terms of price / quality / reliability.

- ***Retailers continue to have options***

135 Regardless of whether this transaction proceeds, the retailers who are not currently committed to a smart meter deployment (and/or related advanced metering service provision) at a given ICP have a range of options when contracting for their advanced metering requirements at that ICP:

135.1 Those retailers are in a position to drive direct competition for these between Vector and Metrix, each of which has already obtained significant economies of scale and density and will be striving to win incremental meters to drive further efficiencies.

135.2 Alternatively, remaining retailers can pursue alternative "split" models of advanced metering asset ownership and service provision such as the SmartCo model, remote provision of advanced metering services (including via the cloud) and/or the arrangements explored in 2010 by Pulse **[redacted]**.

136 Competition from a global technology player for retailer agreements is also possible. Firms like GE, EDMI, Silver Spring and iTron have already competed or are present in the New Zealand market, as described in ***Figure 1*** and in the diagram at ***Appendix D***. These firms and others are known to be positioning themselves to compete for the large Australian retail contracts which are expected to be tendered in 2015-2016.

136.1 **[redacted]**.

136.2 Alternatively, an advanced metering services provider might seek to win a New Zealand contract as a basis for establishing credibility and then bid for Australian work from there. (Arc would not be an attractive vehicle through which to execute this strategy. As noted earlier, its proprietary and customised technology stack lacks extendibility when compared with other cloud-based options currently emerging.)

137 Episodic competition for larger retailer contracts provides an opportunity for firms with no installed meters in New Zealand to be a significant competitive constraint when an RFP is issued. A single large contract can give a de novo entrant sufficient scale to enter the market.

Competition when a retail customer switches

138 Competition in advanced metering markets can be observed not only in the context of the award of deployment and related services contracts, but also when electricity customers switch between retailers – especially when the

switching customer is at an ICP where an advanced meter has already been deployed by an advanced metering provider other than one with which the gaining retailer has its primary relationship. Retailers have a number of options when faced with a switching scenario:

138.1 *Displacement*: install a new advanced meter, or contract to have a new meter installed, and then either self-provide or procure the provision of advanced metering services from that meter;

138.2 *Switching contracts*: negotiate "switching contracts" with the various providers of advanced metering assets and/or services for ICPs at which a new (switching) retail customer may require services; and

138.3 *Inter-operability*: rely on a preferred provider to provide advanced metering services not just in respect of its "own meters" but also in respect of other providers' advanced meters via "inter-operability" arrangements entered into with the party providing advanced metering services in relation to that meter.

139 The absence of Arc in the counterfactual will not materially alter the competitive dynamics in this scenario.

Asset ownership

140 A retailer would not look to displace an existing meter with an Arc meter. Meridian's decision to sell Arc confirms that Meridian has formed the view that a third party provider can offer superior service to Meridian on cost and/or quality dimensions relative to self-provision via Arc. In any relevant counterfactual, Arc will not win the rights to deploy new meters at any more of Meridian's ICPs. It is implicit in Meridian's divestment that Arc's costs are above those of its rivals and/or its quality / reliability is below that of its rivals, and that Arc's owner does not perceive any material prospect of this changing. In any counterfactual, any further Meridian deployment (including in a displacement scenario) will be awarded to another firm (most likely to Metrix and/or Vector – although there may well be a role for SmartCo as well).

141 Meridian's unwillingness to utilise Arc in any capacity for its remaining ICPs – including as a specialised advanced metering asset owner (an option that was open to it and it decided against) – confirms the implausibility of Arc's fleet of meters expanding beyond its present scale. Previously, Arc has not been present in an "asset-only" role and it has not signalled any intention to do so. It has no track record in this capacity.[27]

142 Any asset owner is also constrained by technical requirements for linking installed meters and modems to a head end and meter data management system. Vector's understanding is that Arc's proprietary metering systems are not capable of easy linkage to other head ends and so may be difficult

[27] Note that if Arc does not obtain additional custom as an asset owner, the size of its metering fleet will gradually deplete over time as customers switch away and/or the meters become obsolescent or are displaced.

for an independent advanced metering service provider to use, in the event Arc offered its advanced metering assets for use by others.

143 In the unlikely event that Arc did "continue on" as a provider of advanced metering assets in the counterfactual, there would be no material effect upon competition relative to the state of the world in which the transaction proceeds. In both instances retailers will continue to have many asset ownership configurations available to them, if they wish to separately procure advanced metering assets. Retailers can:

143.1 select an asset owner from among the many available investors and offerings. "Managed" asset owner are already present in the market (e.g. SmartCo and WEL Networks). WEL Networks recently won the contract to install smart meters across Top Energy's network.[28] "Passive" ownership investors are also known to be interested in New Zealand (including, recently, **[redacted]**). or

143.2 partner with other owners of advanced metering assets such as The Lines Company and WEL Networks;

143.3 follow the path of retailers such as **[redacted]** which have demonstrated aspirations to, or are currently implementing plans to become, metering asset owners; or

143.4 acquire an advanced meter deployment, asset and services package from Vector or Metrix, under which Vector or Metrix would own the meters.

144 Also relevant to the competition assessment of the advanced metering asset market:

144.1 Asset ownership is not constrained by geographic area or network. A meter owner such as SmartCo or WEL Networks can invest in and maintain meters on other networks (as also previously found by the EA).[29] SmartCo and WEL Networks both have experience and credibility as asset owners and maintenance providers.

144.2 Barriers to asset ownership are low: it is effectively a financing role (as previously found by the EA).[30] Evidence of these low barriers is seen through players like **[redacted]** and **[redacted]**, which are known to be interested in smart metering asset business opportunities in New Zealand.

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[28] Northern Advocate *Smart Power meters here* (10 August 2013). Available here. See also WEL's 2014 Annual Report: "Our membership of SmartCo contributed to WEL winning the contract to install smart boxes in the Top Energy lines company network in the far north."

[29] Electricity Commission, *Advanced Metering Infrastructure in New Zealand: Roll-out and Requirements*: final report dated 3 December 2009.

[30] Electricity Commission, *Advanced Metering Infrastructure in New Zealand: Roll-out and Requirements*: final report dated 3 December 2009 at para 8.3.5.

144.3 Now that the technological 'arms race' has largely played out, reliable metering technologies are available and have been adapted for use in the New Zealand retail electricity market and are sufficiently flexible to allow augmentation to keep pace with retailer requirements. A metering asset owner is not required to pick a winner from untested options, and can rely instead on a known asset/technology combination (for example, by purchasing meters from EDMI or L&G which are already utilised in New Zealand). Arc's bespoke technology would not be one of these options, for the reasons described at para 129 above.

145 In this environment, retailers wishing to deploy a new meter will continue to have an array of potential metering asset providers. It follows that Arc's removal will not affect the range of competitive options available to retailers in the factual.

Switching contracts

146 When a customer switches between retailers which have appointed different metering firms to deploy meters at their ICPs and provide services, the "gaining" retailer will not usually want to install its own advanced meter and discard the existing meter (or compel its owner to remove it). Such displacements are costly and disruptive for all involved although, as noted at para 83 above, it does occur from time to time). For this reason, retailers have sought to enter into "switching" contracts, by which a retailer contracts to receive advanced metering services from the full range of metering source providers (not just the metering provider to which it has granted deployment rights). By way of example, Vector has entered into switching contracts with:

146.1 **[redacted]**;

146.2 **[redacted]**;

146.3 **[redacted]**;

146.4 **[redacted]**; and

146.5 **[redacted]** (expired but continuing on an ad hoc basis).**]**

147 Vector is also presently exploring the possibility of, or in the course of negotiating, switching contracts with several other retailers.

148 In the counterfactual, when it is Arc that owns and provides advanced metering services with respect to the meter at any given ICP, it will be Arc providing services to the gaining retailer under a switching contract. In that scenario, Arc would not be providing any advanced metering services to retailers that would not be readily available from any other business that acquired Arc. Further, there is no reason to expect Vector as the acquirer of the Arc business to provide these services on terms any less competitive than those that would otherwise be available from Arc.

149 When Arc does not own or provide services at any given ICP, the gaining retailer will be looking to secure a switching contract from the metering provider that does own the meter and/or provide the services.[31] However, Arc remaining as a standalone operator in the counterfactual would not alter retailers' ability to secure competitive terms from the meter owner or service provider. Retailers' commercial ability to negotiate switching contracts, and metering providers' willingness to enter such deals, is a function of a variety of factors:

149.1 a retailer can threaten that, if a switching agreement is not secured, it will exercise its legal right to appoint another metering provider to install a new advanced meter and displace the existing one. Displacement is in effect a total loss for the existing asset owner but at a cost to the retailer and/or its new metering provider;

149.2 retailers also have the commercial ability to drive switching terms from other ("non-deployment") metering providers by threatening to withhold deployment opportunities with respect to future tranches of ICPs. **[redacted]**.

149.3 for its part, an advanced metering services provider can be expected to prefer a switching arrangement which offers some financial return, rather than risk:

(a) losing its meter by displacement, and with it the future payment stream; and

(b) potentially antagonising a retailer from whom it is looking to win deployment work. **[redacted]**.

149.4 metering providers are also conscious of the likely adverse reaction from both retailers and other industry stakeholders to the significant cost and disruption associated with large-scale displacement activity.

150 Ultimately, retailers' commercial options for switching services are underpinned by a retailers' insistence on advanced metering services and ultimately by the availability of a metering firm willing to deploy a new asset at an ICP. For the reasons at para 141 above, Arc is very unlikely to deploy any new meters for any retailer, whether in a displacement scenario or otherwise (and is particularly unlikely to do so on an ad-hoc basis in dispersed geographic areas, when its mesh is concentrated in Hawkes Bay and Canterbury). In the counterfactual then, the commercial terms struck by retailers with advanced metering services providers in the context of switching will be unaffected by Arc and instead, as in the factual, be

[31] Where an advanced meter is owned by a party other than the service provider (e.g. SmartCo), a retailer could seek to appoint either the asset owner or the service provider as its metering provider under the Code. A retailer would presumably look initially to any existing contractual relationships with either of those parties, in which case the advanced metering asset owner and advanced metering services provider would need to reach their own arrangements to facilitate the provision of services at that retailer's ICPs (as has occurred between Vector and SmartCo for Contact ICPs). Alternatively, a retailer could independently contract with both the asset owner and service provider.

determined by a range of other factors, including the potential for displacement by Vector or Metrix or another asset owner, with advanced metering services provided by Vector or Metrix.

Inter-operability contracts

151 Some retailers (e.g. **[redacted]** and **[redacted]**) adopt an approach of having a "preferred" metering provider. Any such preferred metering services provider can obviously provide services with respect to its own meters but needs interoperability agreements with other advanced metering services providers to facilitate the provision of aggregated services from third party meters. **[redacted]**.

152 If there are no inter-operability arrangements in a particular scenario, metering services are instead provided:

152.1 by the preferred metering provider using its own meter (displacing the existing meter); or

152.2 by another metering provider (under a switching contract).

153 Other retailers (e.g. **[redacted]** and **[redacted]**) do not have a preferred provider but instead go direct to any advanced metering services provider that happens to own/provide services over the meter at an ICP where they have a customer. Some of those providers will have installed the meter pursuant to a deployment contract with that retailer.

154 These two contractual models (i.e. the **[redacted]** model and the **[redacted]** model) are not mutually exclusive in the sense that:

154.1 a retailer could have a "preferred" provider who provides advanced metering services (including data aggregated from owned and third party meters), but also take advanced metering services directly from other metering providers under switching contracts (e.g. to cover the scenario when the preferred provider has not been able to secure inter-operability or just because the retailer prefers to deal directly with some metering providers); and

154.2 a metering provider could secure a role for a retailer that includes the provision of some services in respect of third party advanced meters (via inter-operability arrangements – where they are able to secure them), but also contemplates some services being provided to that same retailer directly via switching providers.

155 In any potential counterfactual, Arc (regardless of ownership) would be available to provide advanced metering services on its own meters for any retailers who wanted to take those services – including under switching contracts, but also potentially indirectly via interoperability arrangements with any metering provider that is preferred by the gaining retailer. Again, Arc's metering fleet will gradually deplete over time as customers switch and/or the meters become obsolete or are displaced. But this is a static role in competition terms. As noted above, the terms available from Vector

under a switching contract in the factual will be at least as favourable as those available from Arc in the counterfactual. In addition, Arc's role under inter-operability will not alter the underlying contractual terms between the retailer and its preferred provider.

156 Also, in the counterfactual Arc will not:

156.1 be available to act as a "preferred metering provider". Vector notes that Arc is no longer entrusted with a preferred provider role by Meridian and there is no reason to expect that it would be successful securing it from other retailers; or

156.2 be available to deploy more advanced meters and provide related services. Arc's scale disadvantage and the fact that its technology path is not favoured by retailers are relevant here too.

157 Vector also notes that in the counterfactual Arc, with its proprietary systems, would be vulnerable to not being in a position to deliver cost-effective solutions pursuant to incremental service requests by retailers. Over time, in the counterfactual, that would likely result in substitution of Arc meters as retailers sought services from metering providers that were in a position to cost-effectively offer the requested functionality.

158 Vector does not contend that Arc is a failing firm. But Arc's failure to win retailer contracts and inability to compete as an asset owner means it does not have a track record of service and delivery that would allow it to be successful in pursuing future opportunities.

Remote service provision

159 Finally, Vector notes that cloud technology is increasingly viable as a method of providing data processing and aggregation services from offshore locations. **[redacted]**.

Contract renewals

160 In the longer term, the next significant competitive episodes in advanced metering will occur when:

160.1 Mercury and Bosco's contracts for an estimated **[redacted]** ICPs come up for renewal[32];

160.2 Genesis Energy's metering contract for **[redacted]** ICPs comes up for renewal in **[redacted]**; and

160.3 when an array of Contact Energy deals, totalling **[redacted]** ICPs, expire in **[redacted]**.

161 Smart meters have an expected usable life of approximately **[redacted]** years. Possible technological obsolescence of existing meter fleets by **[redacted]**, accompanied by retailers' expectations of continuous

[32] Vector's agreement with MRP expires in **[redacted]**; it does not have any information about when Metrix's other contracts are likely to be renewed.

improvements in service offerings for customers, may bolster retailer demands for meter displacement.

162 In the mid-2020s Metrix will compete vigorously against Vector, and it is likely that global bidders will be in the hunt, attracted by the large size of the available retailer contracts. Those bidders will likely include:

162.1 Manufacturers including EDMI and Landis + Gyr: Both of these parties are strong global metering hardware technology providers and have significantly expanded their operations through sales in Singapore, Australia, and the United Kingdom. Most recently both companies are expanding in Japan as EDMI has been acquired by Osaki and Landis & Gyr by Toshiba.

162.2 Diversified technology and infrastructure providers such as GE, HP and IBM: These players bring significant systems integration capability **[redacted]**

162.3 Other players like **[redacted]** and **[redacted]** are known to be interested in smart metering business opportunities in New Zealand, in particular in relation to the provision of advanced metering assets.

163 Vector and Metrix have faced some of those global rivals before. They will be back, potentially via Australian operations, when the big retailer contracts are put up for renewal. Australian retailers are putting large metering contracts to market in 2015 and 2016, and global bidders are known to be positioning themselves for those contracts.

164 Entry by a global technology firm in **[redacted]** would not truly be new entry. Those firms have already contested New Zealand opportunities. That suggests it is likely they will do so again when sufficient incentives are presented.

165 Establishment costs for a New Zealand retailer are expected to be lower in **[redacted]** than they are now. For example, Vector expects that, when **[redacted]** contract comes up for renewal in **[redacted]**, we are likely to have seen the following developments:

165.1 remote provision of advanced metering services will be possible, for example by cloud-based meter data management services based in an offshore location and using leased meters. It is expected that a more distinct separation of the asset and services layer will emerge aided by the increasing number of generic, standardised interfaces between these layers;

165.2 possible technological obsolescence of existing meter fleets and the demands for new services may drive retailer demands for displacement. Continuously evolving customer service requirements are likely to drive retailers' demands for new software applications and/or the upgrading or replacement of smart metering assets (for

example, to enable the provision of more granular consumption information); and

165.3 distributors' use of consumption data for load management and quality monitoring will be more developed, leading to possible distributor demand for data provision (including potentially in real time).

166 Demand for any one of these services would be a powerful incentive for de novo entry.

Vertical Integration

167 Vector is relevantly present in:

167.1 the advanced metering market, though AMS and AMA;

167.2 the electricity distribution market in the Auckland region. Vector's distribution business is regulated under Part 4 of the Commerce Act.

168 Meridian is relevantly present in:

168.1 the advanced metering market, through Arc;

168.2 the electricity generation market; and

168.3 the electricity retail market.

169 There will be no increase in vertical integration as a result of the transaction. In any event, Vector's participation in the distribution market is subject to price/quality regulation, so there should be no concerns about vertical effects from this transaction.

PART 8: CONFIDENTIALITY

The fact of the proposed acquisition

170 Confidentiality is not required for the fact of the proposed acquisition.

Specific information contained in or attached to the notice

171 Confidentiality is requested for all the information deleted from the attached "public version" of this notice on the grounds that the information is commercially sensitive to the Applicant. Disclosure of such information would be likely to unreasonably prejudice the commercial position of the Applicant in terms of section 9(2)(b) of the Official Information Act 1982.

172 In this application, all confidential information is **bold** and enclosed in square brackets.

DECLARATION

I, David Thomas, have prepared, or supervised the preparation, of this notice seeking clearance.

To the best of my knowledge, I confirm that:

- all information specified by the Commission has been supplied;
- if information has not been supplied, reasons have been included as to why the information has not been supplied;
- all information known to me that is relevant to the consideration of this notice has been supplied; and
- all information supplied is correct as at the date of this notice.

I undertake to advise the Commission immediately of any material change in circumstances relating to the notice.

I understand that it is an offence under the Commerce Act to attempt to deceive or knowingly mislead the Commission in respect of any matter before the Commission, including in these documents.

I am a director/officer of the company and am duly authorised to submit this notice.

Name and title of person authorised to sign:

David Thomas, Group General Manager Gas Trading and Metering, Vector Limited

Signed:_____ Date: _____

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APPENDIX A

Agreement for sale and purchase of shares in Arc Innovations Limited

[redacted]

APPENDIX B

Metering services agreement between Advanced Metering Services Limited and Meridian Energy Limited

[redacted]

APPENDIX C

IM for Arc Innovations Limited

[redacted]

APPENDIX C (cont'd)

RFP for provision of advanced metering services to Meridian Energy Limited

[redacted]

APPENDIX D

Retailer contract landscape

[redacted]

CONFIDENTIAL APPENDIX E

Vector key customers and revenue details

[redacted]

CONFIDENTIAL APPENDIX F

Arc key customers and revenue details

[redacted]