

Jemena Gas Networks (NSW) Ltd

2015-20 Access Arrangement

Response to the AER's draft decision and revised proposal

Appendix 4.7 - Letter from Ausmeter - metretek

Public

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December 18, 2014.

Attention: Mr. Fred Khalil
Jemena
100 Benelong Parkway,
Sydney Olympic Park, NSW 2127

Dear Mr. Khalil,

As discussed, please find below information relating to the current and future Metretek systems.

A general description of the end to end Metretek system.

DC2009 Meter Data Management Software

Measurement Data and Alarm Handling and Reporting AMR Data Collection, Reporting and System Pressure Monitoring Software. Data collection software suite allows for easy user interaction to remote monitoring and data management. Honeywell offers a data collection software suite that brings the power and flexibility of Microsoft's SQL Server to data management and remote monitoring. DC2009 consists of five data collection sub system applications and an easy to use GUI. The service and support offered from Honeywell completes this product and makes it a must have for your data collection, reporting and management needs.

Product Features:

- Powerful data collection engine
- Automates Regulatory Requirements for complex Billing and Operations needs
- Full communications support for all Mercury Instruments products including legacy Metretek products
- ANSI C12.19 & Modbus communications support
- Two-way Read/Write capabilities to all products.
- Highly Scalable
- PSTN and cellular IP Connectivity
- Inbound and Outbound communications
- Flexible data export options including ODBC connectivity
- LEO satellite option for remote site application.
- Simple enterprise integration for existing Billing, Gas Control, Engineering, Customer Service and Web -based applications
- Improved Data Collection Accuracy
- Enables improved Customer Service Operations and Productivity
- Data Aggregation capabilities



User Applications

- End Point Configuration & Management
- Custom Report Generator to develop unique analysis tools
- Alarm Forwarding
- Data Integrity
- iNETReporter - Secure 3rd Party intranet or internet Web Interface

Alarm Forwarding:

Add-on Software for Use With DC2009

Mercury Instruments Alarm Forwarding application is software for use with Mercury Instruments DC2009, InvisiConnect, MARC, and CPM-II Data Collection and Management Systems. It provides virtually real time notification of events which occur at remote sites being monitored by Mercury Instruments remote unit devices of all types, whether they are data-loggers or flow computers. With Alarm Forwarding, the proper personnel can be notified of events by email, pager or fax. Even visual, audible and network signaling can be configured.

Alarm Forwarding runs 24 hours a day, automatically, so there is no need for an operator to be present. It can notify of almost any event, anywhere, anytime!

Product Features:

- Fully compatible with all Mercury Instruments software and remote devices
- Alarms (events) are selectable by remote unit or by alarm type
- Fault tolerant. LAN and database connectivity failures can also be detected and notification issued
- Keeps a full record of all alarms forwarded
- Shows external communications in real time
- Test mode for initial setup and diagnostics
- Runs continuously after set-up without the need for user intervention

INETReporter:

Web-based, Application for Use With DC2009 Software

INETReporter is a web-based, application for use with Mercury Instruments' DC2009 Data Collection and Management System. It provides secure, controlled access to data reports and polling via an intranet or the Internet. With INETReporter, DC2009 data is accessible using a simple World Wide Web browser, greatly extending the utility of DC2009, without the training cycle or client side software requirements normally needed for DC2009 operators.

Product Features:

- Secure, private, controlled access to account data is easily managed by the DC2009 administrator
- Web browser access to data from any intranet/internet connection
- On-demand, real time polling of data-loggers is supported and measured (telecommunication system permitting)
- Tabular, Graphical and Delimited report formats
- Any DC2009 Custom Report Layout can be replicated to the web, including aggregate accounts, account lists, alarm reports and overdue call reports
- Fast, parallel reporting supports many concurrent users of the site
- Wide array of access and use statistics are recorded and reportable for billing site



users and managing site resources

Description of the Metretek Devices

Commercial Pulse Accumulator (CPA)

The Metretek Commercial Pulse Accumulator (CPA) is specifically designed to remotely read light industrial and commercial size meters. The two-channel CPA accumulates, stores and transmits pulse data via standard voice-grade telephone lines. Data can be either meter reads with peak hour determination or hourly time-tagged intervals. The CPA is programmed and its meter reading synchronized in the field via a serial port and a laptop computer. Power is supplied with either a lithium or alkaline battery. A nominal 4.5 year or 1.5 year battery life can be anticipated respectively.

The CPA will accept data from mechanical or electronic switches, Form A or Form C. The CPA is ideal for meter reading of commercial accounts, load profiles, load surveys and aggregation of transportation customers' consumption volumes.

The CPA is one component of the complete Metretek Automated Meter Reading Solutions and Gas Measurement and System Monitoring System. This PC and telephone based remote-data acquisition system has been designed to insure data accuracy, integrity and reliability. The system approach provides total compatibility through the use of a variety of hardware and software products to address the diverse needs of the Natural Gas Industry.

Note: The CPAs went out of production in 2007. The CPA and modem is a single integrated unit and are replaced as one unit.

Electronic Corrector Interface (ECI)

The (ECI-II) Electronic Corrector Interface is a battery powered PSTN modem. The ECI-II is designed to interface with an Electronic Gas Volume Corrector which is equipped with a serial Channel. The ECI-II receives data from the Electronic Volume Corrector such as the ECAT or Mini-AT and transfers this data to a central computer modem over a standard PSTN telephone line. The ECI-II is capable of operating on telephone line at 300, 1200 and 2400 bits/second. It can operate in either Metretek or Transparent mode. In Metretek mode the ECI-II will communicate with a Metretek data collection system (DC2009) using standard Metretek communication protocol.

ECI's are protocol translators with integrated Modems that convert Mercury protocol to proprietary non-public protocol to transmit data at system-defined intervals. They know how to call "home" which was a deficiency in the older ECAT Electronic Volume Corrector.

The ECI and modem is one integrated unit and are replaced as one unit.

Note: The supplier for the modem used in the ECIs notified Mercury in 2012 that the modem chip was being discontinued. Since then limited production has continued with minimum order quantities of 100. However we now understand that the ECI's will be totally discounted from the end of 2014

The replacement for the ECI and CPA is the Honeywell CNI-2.

Cellular Network Interface (CNI-2)

The CNI-2, is a data logger and serial data communications product with an integral cellular radio transceiver. Pulse signal inputs (dry contact) and alarm inputs can be supplied from an external electronic corrector or other measurement device. An index base option with both a mechanical index display and pulse switch output is available. Serial data communications with a corrector or similar instrument are also possible using an RS-232 connection or optional dual connections. A variety of power options are also available, these include alkaline battery, lithium battery, or an external source such as solar or an ac-to-dc converter.

Batteries will last for a few years for one way communications where calls are instigated from the field. However, we understand that Jemena utilize two way communications. In this case, the same batteries will only last a few weeks, therefore, an external power supply is required.

Numerous pulse counting inputs and alarm trigger inputs are supported.

- Optional meter index base enables direct mounting onto a gas meter.
- Several mounting options provide flexibility to mount to a wall, pipe, meter, etc.
- Cellular radio service options include conventional GSM, CDMA, iDEN and HSPA.
- The internal antenna feature conceals the nature of the wireless device. Where signal strength is a concern, external antenna options are also supported.
- Various power options are available, including alkaline battery, lithium battery, or connections for external sourced power. External power can be either AC mains or solar.
- Power Preservation Mode extends battery backup life during loss of primary power.
- The enclosure is field proven durable and UV resistant against weather effects.
- Over-the-air firmware update capability allows for new feature enhancements as they become available.
- Over-the-air configuration update capability allows for changes in the operating environment once the device is put into service

Expected Life of Metretek devices

Honeywell/Mercury/Metretek have no established standard for product replacement. However the reality is products such as the ECI and CPA reach end of life as suppliers discontinue components used to build them. Honeywell continue to provide support as and when they can. As indicated above, the ECIs and CPAs, which are used by Jemena are no longer supported.

A description of the Lifecycle of the Metretek Software



DC2009 will be moved to a “Not Supported” classification on 5/1/2016 and follows Microsoft’s SQL life cycle for SQL 2005.

Here is the Lifecycle matrix:

Software Version	Release Date	Mainstream Date	Extended Date	Not Supported
DC2000 v3	Not supported			
DC2000 v6	4/1/2002	4/2002 - 4/2006	5/1/2006	9/1/2010
DC2000 v7	3/1/2006	3/2006 - 3/2009	4/1/2009	1/1/2011
DC2009	12/1/2008	12/1/2008 - 3/2014	4/1/2014	5/1/2016
PowerSpring	5/1/2014			

Mainstream Support Definition - Mainstream Support is the first phase of the product support lifecycle. At the supported Release, Mainstream Support includes:

1. No-charge Incident support (at the Support Department’s discretion).
2. Product patch update support.
3. The ability to request software fixes.

Extended Support Definition - The Extended Support phase follows Mainstream. At the supported Release, Extended Support includes:

1. “Best effort” no-charge incident support
2. No charge product patch update support (if available) via Remote session.
3. No new software fixes available.

Not Supported Definition - The “Not Supported” phase follows Extended.

1. At cost “Best effort” support (at the Support Department’s discretion).
2. No software fixes available.

Note: Jemena’s version of DC2009 is release 3.11, the last version of DC2009 to be released was 3.29. When they say that DC2009 will not be supported from 5/1/2016 they mean version 3.29 not 3.11.

As you can see from the table above that DC2000 V6 was released in 2002 and ran until 2011. DC2000 V7 was released in 2006 and ran until 2011. DC2009 was released in 2008 and will reach “Not Supported” classification in 2016.

Compatibility of current Jemena Metretek devices with the NBN.

Our understanding is that products like CPA and ECI, which are used by Jemena, are not compatible with the NBN and therefore require replacement.





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Honeywell's alternative compatible devices are CNI-2 mentioned above. Also Honeywell's alternative to DC2009 which as stated above DC2009 ceased development in early 2014; it will reach "Not Supported" classification in early 2016. The way forward is to migrate from DC2009 to PowerSpring, which was released earlier this year.

PowerSpring (MDM)

Meter Data Management (MDM) is a critical component in realizing the full potential of Advanced Metering Infrastructure (AMI) or Smart Metering, especially for industrial and commercial meters used in the gas distribution business. Honeywell's PowerSpring Meter Data Management System eases IT integration of AMI/Smart Metering and facilitates the distribution of the meter data across the utility enterprise by framing the volumes of metering data retrieved from field meters into manageable and familiar information. PowerSpring MDM provides a database repository and gas distribution business logic to:

- Automate the complex process of collecting meter data from multiple meter data collection technologies
- Evaluate the quality of data and publish it in the appropriate format to utility enterprise systems for billing, metering, operations, engineering, customer service, etc. PowerSpring MDM thus creates an immediate positive impact on gas distribution business processes.

As an MDM system, PowerSpring aggregates large volumes of granular interval meter data, and then pre-processes it smartly and efficiently before such data is commercially processed by various other enterprise utility applications. The sheer volume of meter data from gas meters requires consistent, corporate-wide "best practice" rules for managing the increased potential for data error. With the deployment of smart meters or AMIs, PowerSpring also handles the storage and distribution of non-billing data and messaging such as two-way commands, Hi/Lo pressure alarms, outage alarms, zero flow conditions, tamper alarms, etc. As the gas utility industry evolves, PowerSpring MDM uses state-of-the-art technology to ensure compliance to stringent IT data security standards and user policies without compromising human factors and ease to use.

Yours Sincerely,

R. G. Gestro
CEO

