

Draft Edward River Council Business Paper

Extraordinary Council Meeting 12.30pm Wednesday June 7, 2017

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Declaration of Meeting Open

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2. SUBJECT: ASSET RENEWAL - WATER METERS AND OPPORTUNITY TO INTRODUCE ASSOCIATED ELECTRONIC READING, TRANSMISSION AND RECEIVING EQUIPMENT

**FROM: ACTING DIRECTOR INFRASTRUCTURE
Mark Dalzell**

RECOMMENDATION:

That Council:

- a) Note the advantages of implementing an electronic reading, transmission and receiving system for customer service and for better reticulated water management for Deniliquin.
- b) Proceed with option 1a to apply for Smart Cities Funding for the Digital Electronic Meters and make a deferred decision on implementation based on the grant application outcome
- c) Apply for Smart Cities Grant Funding for introduction of the subject system and its technology.
- d) Consider the related tender report on “Water Meter Supply Tender”.

BACKGROUND:

Edward River Council supplies water to residents and businesses under Division 2 Part 3 Chapter 6 of the *Local Government Act 1993*. Currently this infrastructure includes over 115 kilometres of water mains, and more than 5500 other forms of water assets (including Treatment Plant, reservoirs, hydrants, valves and meters) to the township of Deniliquin.

Council’s existing fleet of water meters is largely over fifteen years old, and 2/3 of its meters were installed prior to July 2004. There is a need to address renewal of Council’s meters and several options ranging from simple replacement to implementing a sophisticated automatic electronic reading, transmission and data management system are available.

To advance the replacement of Council’s aged water meters and understand the costs and benefits of introducing new technology and asset management improvements, two tenders were prepared and invited for the automatic electronic system.

However, before awarding a contract, Council should consider its options and their benefits, impacts and costs.

This report covers the options available. Council can resolve to introduce the new system (Option 1), or alternatively replace meters only (Options 2 & 2a). If it resolves to adopt Option 1, it can also consider a confidential tender report and resolve to accept or not, the recommended tender.

It should be noted that in addition to the subject tender, **a separate tender has also been invited for the removal of the old meters, and installation of the new meters with integral digital electronic transmission devices.** This further tender would also be reported to Council later, following the tender and assessment periods.

THE NEED FOR REPLACEMENT OF METERS:

Water meters are known to have a limited life and typically lose accuracy as they age. Meters that have higher volumes flowing through them are also known to have a shorter effective life than those with lesser flows.

Replacement of meters in a planned strategic approach is good asset management. It avoids the need for costly reactive maintenance that diverts staff and resources by replacing meters before they fail completely, or when customers make complaint.

It also ensures that meters are reading within regulated tolerances. Confidence in the meters used for commercial water charges is important to customers and required by regulators. It also addresses equity and fairness principles. Australian water metering has been undergoing progressive reform including changes to the National Trade Management Regulations 2009 that require meters to be *pattern approved* and *verified*. This requirement applies differently to different categories of meters and to those installed at different times. However, the requirement is progressively capturing most categories and ages of meters.

Water industry practice is for meters to be replaced after they have been in service for around eight years, or after they have been subject to 1,920 kL of flow. Edward River Council has a fleet of over 3,700 meters ranging from the most frequently used 20mm meters up to 100 and 150 mm meters. Two thirds of Council's current meters have been in service for 15 or more years and over 80% have been in service for eight or more years.

Deniliquin experiences a higher than state average for water use per household. The average rate of water use means that in theory, the water meters here should be replaced to meet accuracy and asset management objectives, after they have been in service around four or less years. In practice renewal is generally not this frequent.

Therefore, due to the age of Council's fleet, most of the meter fleet should be replaced as soon as possible, and programmed replacement of newer meters not replaced at this time, included in Council's asset management plan future program. It is noted that an allocation for regular meter replacement is normally included in the budget. However, this has not occurred over the last financial year due to the decision to wait for clarity in terms of what system and meters are to be used.

INTRODUCTION OF DIGITAL ELECTRONIC METER READING, TRANSMISSION AND RECEIVING:

More sustainable use of water resources, information that can assist customers better manage their water use, and reduced cost and resources for quarterly meter reading and administrative tasks, are all able to be achieved using new technologies increasingly used in the water industry.

Meters and supporting transmission, receiving and data management systems, are now affordably available in the market. Smart meters as they are sometimes called, read and automatically transmit daily and up to hourly readings to low power receiver networks. This data is then able to be used to give invaluable information to customers and to water service managers.

For example, a web portal can be made available via Council's website, that give users who choose to access the portal, information such as;

- Daily water use;
- How much their water use is costing on a daily or periodic basis;
- Allow users to set targets and receive email or SMS alerts if they are exceeded; and
- Help to identify possible leaks through variations to individual users' metrics.

While some users do not choose to use these types of information portals, those who do can better understand and manage their water use and therefore charges.

Water authority staff can better manage valuable water resources and asset management. The automatically collected data allows more detailed analysis, real time data to identify customer-side leaks, non-revenue water losses, improved customer service and reduced operating costs. It can also provide data that when used with other information can inform demand prediction/planning associated with weather, rainfall, seasonal, maintenance, community and other factors.

Currently staff are diverted each quarter from their maintenance, customer service and other duties to manually read meters, download and process readings from every assessable properties. Automatic reading and transmission eliminates the major resourcing demands currently requiring approximately six persons to be diverted for about eight weeks per year. Currently, these staff are all normally fully occupied delivering the annual capital works and renewal programme or other skilled roles. Reading meters takes them away from those roles. If they were not required to undertake quarterly meter reading, more works could be completed by Council's teams and savings made due to less projects having to be contracted externally.

SMART CITIES AND SUBURBS GRANT OPPORTUNITY

The Federal Government has announced a competitive Smart Cities and Suburbs Program to support projects that apply innovative technology based approaches to improve the liveability of cities and their suburbs.

A competitive round is currently open (closes 30 June 2017). Edward River Council is an eligible applicant. A review of its objectives, and merit criterion indicate that the introduction of digital electronic meter reading and transmission system with a fixed receiver network and associated sustainable water management and customer portal is likely to meet the criterion.

It is not known if an application from Edward River Council would be successful. However, if successful, the grant amount would make the introduction of the innovative system in Option 1 a positive business case.

The results of any grant application are expected to be known later in the first half of the 2017/18 financial year.

OPTIONS

There are several options available to the Council regarding the replacement of its aged water meters. The options include the following.

Option 1 Replace all its meters with meters that automatically read and transmit.

Tenders have been invited and assessed for the supply of water meters, including attached digital electronic meter reading and transmission devices, a fixed receiver network, associated components, commissioning, and staff training.

If Council was to adopt this option, the system would be able to meet the following essential criteria:

- Give automatic daily readings (note that both tenders received provide automatic hourly readings);
- Readings on demand (eg when property settlements occur etc);
- Detect reverse flow, backflow, tampering, leakage, high flow alarm;
- Detect register error;
- Low battery alarm;
- Read and transmit from difficult areas including pits;
- Minimum battery life of at least 10 years;
- Plug and play capability to allow integration with all other devices and applications;
- High level of security;
- Compatible with Council's billing software;
- Provide a customer portal via Council's webpage;
- Able to replace existing telemetry systems used for major water and sewer infrastructure.

The costs of supplying the meters, transmitters, receiver network, and software and services to process data and billing information are known because tenders have been received. Removal of the existing meters and replacement with the new meters fitted with transmission devices is subject to a further tender. At this stage the cost of the replacement is an estimate only.



The estimated total cost of replacing all the meters and implementing a transmission/receiver network, software and providing support and ongoing billing and data services is approximately \$1 million plus an ongoing recurrent cost of \$55k pa.

A business case analysis has been undertaken using several scenarios. Depending on changes in revenues due to more accurate metering, the savings due to not having to manually read meters, offset against the capital and recurrent costs of the automatic system may or may not result in a net positive financial outcome.

While significant improvements in customer service as well as sustainable water and asset management would result from implementing such a system, the net reduction or increase in business costs and revenues is therefore not able to be confirmed.

Option 1a. Apply for Smart Cities Grant Funding and make a deferred decision based on the grant application outcome.

The advantages of renewing water meters with a system that includes digital electronic meter reading and transmission devices, a fixed receiver network, associated components, commissioning, and staff training, could be achieved with greater certainty regarding the financial benefits if a grant was achieved.

The successful tenderer could be informed that Council wishes to proceed with the contract subject to the outcomes of the grant process. This would be subject to agreement by the tenderer and if acceptable, they could assist with the preparation of the technical content of the grant application. Willingness to assist Council with preparing grant applications was a condition included in the tender specification.

Option 2. Replace the aged meters and do not implement an automatic reading/transmission system.

Replacement of the aged meters is strongly recommended. While taking the opportunity to implement the automated system at the same time as replacing the meters offers savings compared to retrofitting electronic devices later, simply replacing the meters would cost significantly less than Option 1.

Option 2 would address accuracy and asset renewal objectives and requirements, but would not provide the other benefits associated with Option 1 above, including the diversion and cost of directing staff to manually read meters every quarter.

Option 2a. Replace the aged meters and contract meter reading to an external provider.

The diversion of staff away from their normal work and demands such as undertaking the annual capital works programme and asset maintenance, could be avoided if meter reading was undertaken through an external contract. A number of utility authorities contract meter reading rather than undertaking it in-

house. Specialist providers or local businesses could potentially provide these services.

It is noted however, that this was pursued about two years ago. At that time interested contractors were not found that would provide the service at Deniliquin. Combining the reading of water meters with the contracted electricity meter reading services currently occurring was also pursued. The contract for reading electricity meters was a large regional contract and despite the obvious efficiencies, reading water and electricity meters in Deniliquin at the same time would have compromised the provider's contractual performance standards.

The cost of contracting meter reading would be an additional cost to Council. However, the diversion of Council's staff to read meters means that they often have to externally contract capital and other renewal/maintenance work. The cost of the work that is contracted out should be offset against any costs of contracting meter reading. In addition, the type of work undertaken by Council's work crews can often be undertaken at a lesser cost than that charged by contractors.

In any case, the cost of Option 2a. would cost significantly less than Option 1.

SUMMARY/CONCLUSIONS:

Council's fleet of water meters should be replaced due to their age, the likelihood that they are inaccurate, and the need for planned asset renewal. Regulated reforms have and continue to be introduced to ensure that meters used for commercial purposes are verified and therefore accurate.

Automated electronic reading, transmission, receiving, data processing and internal and customer information access portals are available that could provide benefits to the Council and its customers. Due to the age of Council's meter fleet, most of them require replacement and it is a logical time to introduce such a system while the meters are being replaced.

Council can decide to simply replace the aged meters only, or to replace them with meters and supporting systems to provide automated reading transmission and information systems.

The cost of introducing the new technology, rather than simply the meters alone, provides savings and efficiencies. However, the cost of the system initially and its recurrent costs offset the savings. The net financial business case is not clear due to factors including the changes that accurate readings might make to revenues.

Federal (Smart Cities and Suburbs) grants are available that could provide a significant contribution toward the introduction of the new technology. If successful, a grant would provide the financial means to introduce the system and its benefits.

This report recommends applying for the grant and considering the introduction of the new technology when the grant results are known.

A tender for the provision of the meters and associated system is reported in another(confidential) report to Council.

ATTACHMENTS:

There are no attachments to this report.

3. SUBJECT: CONTRACT 2.19.235: SUPPLY OF WATER METERS AND ASSOCIATED ELECTRONIC READING, TRANSMISSION AND RECEIVING EQUIPMENT

**FROM: ACTING DIRECTOR INFRASTRUCTURE
Mark Dalzell**

RECOMMENDATION:

That the Council consider a report on this matter while the meeting is closed to the public as it contains information that is considered confidential pursuant to Section 10A (2)(c) and 10A(2)(d) of the Local Government Act 1993, which permits the meeting to be closed to the public for business relating to the following:

Information that would if disclosed, confer a commercial advantage on a person with whom Council is conducting (or proposes to conduct) business; commercial information of a confidential nature that would, if disclosed:

- (i) prejudice the commercial position of the person who supplied it, or
- (ii) confer a commercial advantage on a competitor of the council, or
- (iii) reveal a trade secret

- 4. SUBJECT: INNOVATION FUND FUNDING APPLICATIONS**
- FROM: GENERAL MANAGER
Adam McSwain**

RECOMMENDATION:

That Council submit the following applications to the Innovation Fund:

- Edward River Council, Renewable Energy Scoping Study, Council financial contribution of \$28,998
- Edward River Council, Thinking differently to achieve more for our community, Council financial contribution of \$34,131

BACKGROUND:

The Innovation Fund is a NSW State Government funding program that supports small Councils to improve their performance to benefit local communities. The program allows Councils to apply for funding for innovative projects that improve service delivery and enhance infrastructure.

The funding program requires Council to contribute 30% of the overall project cost, this can include an in-kind contribution. Funding of up to \$150,000 is available for single Council applications and up to \$400,000 for partner Council applications.

It is proposed that Edward River Council submit two funding applications under this program:

- 1. Renewable Energy Scoping Study** - A project focused on scoping the renewable energy opportunities available to Council and the community. The overarching focus of the project is to identify a series of investments that will provide a positive Return on Investment (ROI), lead to reduced operating expenditure and limit Council and the communities' exposure to increasing energy costs.

This project will focus on completing a series of feasibility assessments on Council and community infrastructure to look at the renewable energy opportunities available. The project will then look at the capacity for Council to develop a large scale solar development to fully 'offset' Council's energy consumption requirements. Finally, the project will complete a series of building audits to identify small,

medium and large improvements that could be made to increase energy efficiency.

At the end of the project Council will have a series of investment opportunities that are expected to provide long term cost savings to Council and ultimately the community. The project has been costed to allow for assessment of 20 buildings, it is expected that this will allow a mixture of both Council and community buildings to be assessed.

Total Project Cost - \$96,660

Council Contribution - \$28,998

Innovation Fund - \$67,662

- 2. Thinking differently to achieve more for our community** – This project focuses on delivering an internal training program across Council.

The project focuses on delivering targeted training to Council staff in the areas of commercial acumen, Lean process improvement and project management. The training will provide Council staff with the skills and ability to create a culture of continuous improvement, enhance service delivery and improve response times.

This project will empower staff at all levels of the organisation to make changes to service delivery, that enhance operational effectiveness and allow the re-investment of financial savings into improved infrastructure and long-term Council financial sustainability.

Total Project Cost - \$113,769

Council Contribution - \$34,131

Innovation Fund - \$79,638

STRATEGIC IMPLICATIONS:

These projects align with the State Government Fit for the Future and Stronger Communities frameworks. It aligns with the current Community Strategic Plan documents by placing a focus on financial sustainability and improving service delivery.

BUDGETARY IMPLICATIONS:

Council's contributions towards these grant applications are proposed to be funded by:

Renewable energy project – Council contribution of \$28,998 will be funded through the 2017/18 General Manager Consultant budgeted item.

Continuous improvement project – Council contribution of \$34,131 will be funded through the 2017/18 internal and external staff training budgets.

Both funding sources are included within Council’s proposed 2017/18 budget.

POLICY IMPLICATIONS:

Nil

LEGISLATIVE IMPLICATIONS:

Nil

CONCLUSION:

The two proposed projects will help to ensure Edward River Council is a financially sustainable and high performing Local Government.

ATTACHMENTS:

There are no attachments to this report.

- 5. SUBJECT: CONFIDENTIAL REPORTS**
- FROM: GENERAL MANAGER
Adam McSwain**

Section 10A(4) of the Local Government Act provides as follows:-

A council, or committee of a council, may allow members of the public to make representations to or at a meeting, before any part of the meeting is close to the public, as to whether that part of the meeting should be closed.

RECOMMENDATION:

That the Council consider the following reports while the meeting is closed to the public as it contains information that is considered confidential pursuant to Section 10A (2) (c) of the Local Government Act 1993, which permits the meeting to be closed to the public for business relating to the following:

10A(2) (a) personnel matters concerning particular individuals (other than Councillors)

10A(2) (c) information that would, if disclosed, confer a commercial advantage on a person with whom the council is conducting (or proposes to conduct) business,

10A(2) (d) commercial information of a confidential nature that would, if disclosed:

- (i) prejudice the commercial position of the person who supplied it, or
- (ii) confer a commercial advantage on a competitor of the council, or
- (iii) reveal a trade secret

On balance, the public interest in preserving confidentiality of these matters outweighs the public interest in openness and transparency of Council decision making as public disclosure of the information at this stage may adversely affect those proposed activities.