

# ***Realising the Benefits of Smart Meters***

Tabled 16 September 2015

The Auditor-General provides assurance to Parliament on the accountability and performance of the Victorian Public Sector. The Auditor-General conducts financial audits and performance audits, and reports on the results of these audits to Parliament.

On 16 September 2015, the Auditor-General tabled his performance audit report, *Realising the Benefits of Smart Meters*.

## Overview

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- Examined whether deficiencies have been addressed and consumer benefits being realised.
- The audit found:
  - substantial net cost to consumers over life of program
  - only 80% of benefits expected.
- Focus on maximising benefits so consumers get the most out of what they have paid for.

This audit examined whether the deficiencies identified in our 2009 audit have been addressed and whether the Advanced Metering Infrastructure (or AMI) program is achieving expected consumer benefits.

The audit found:

- that there will be a substantial net cost to consumers over the life of the program
- that only 80 per cent of the full benefits are expected to be achieved, and that
- the state cannot directly control many of the costs and benefits.

The government must now focus on:

- Improving transparency and reporting of costs and benefits
- consumer education to encourage behaviour change, and
- maximising the benefits to consumers.

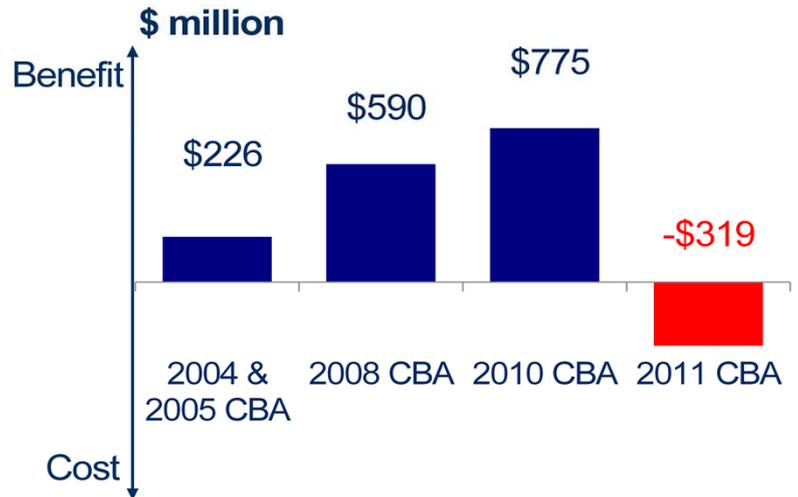
This is important to help consumers get the most out of what they have paid for.

## Background

### Advanced Metering Infrastructure (AMI) Program:

- Smart meters for every household and small business by end of 2013.
- 2009 VAGO audit highlighted serious flaws.
- 2011 decision to continue the rollout despite net cost to consumers.

### Results of cost-benefit analyses (CBA)



In 2006, the Victorian Government mandated the rollout of smart meters to all households and small businesses across Victoria, to replace manually read accumulation meters.

In 2009, VAGO tabled its report Towards a 'smart grid'—the roll-out of Advanced Metering Infrastructure, which was highly critical of the original business case and made a number of recommendations.

In 2011, the government reviewed the program and the 2011 cost-benefit analysis made it clear there would now be a likely net cost of \$319 million to consumers. Nevertheless, the continuation of the rollout was announced and this was said to be the 'better option' for Victoria.

## Focus of this audit

### Key areas examined:

- Implementation of 2009 VAGO recommendations
- Whether AMI program is delivering consumer benefits

### Audit scope

- Department of Economic Development, Jobs, Transport & Resources (the department) as it is delivering the AMI program
- Department of Treasury and Finance's role in 2011 government review and Gateway Review Process
- Focus from 2009 to present

The audit examined whether the Department of Economic Development, Jobs, Transport & Resources (or the department):

- effectively addressed VAGO's 2009 recommendations
- can demonstrate that the AMI program is delivering expected consumer benefits, and
- is set up to maximise longer-term benefits.

The department was the primary focus of the audit as it manages the AMI program.

The Department of Treasury and Finance was involved only as it was responsible for the 2011 government review and administers the Gateway Review Process.

## Addressing the 2009 recommendations

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- Addressed seven recommendations:
  - governance and risk management
  - consumer education.
- One partly addressed.



**Despite actions to improve the AMI program, the state cannot directly control many of the costs and benefits.**

The department addressed seven of our eight recommendations from 2009, and improved program governance and risk management, as well as communications with consumers.

One recommendation was assessed as 'partly met'. This related to engagement with the regulator on benefits transfer. However, the outcome of the key process for passing network efficiency benefits on to consumers is not yet known.

The 2009 audit found that when the AMI program was designed, the resultant benefits and costs were not adequately considered.

While improvements have been made, they do not change the fact that the state cannot directly control many costs and benefits, or alter the significant deficiencies that underpinned the original program design.

## Costs of the AMI program

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- \$2.239 billion by the end of 2015, including rollout
- The department does not monitor or know exact cost
- 'Off-budget' item as consumers pay through bills
- Net cost \$319 million, which may rise



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**Transparent tracking and reporting of costs is essential for consumers and to understand value of program.**

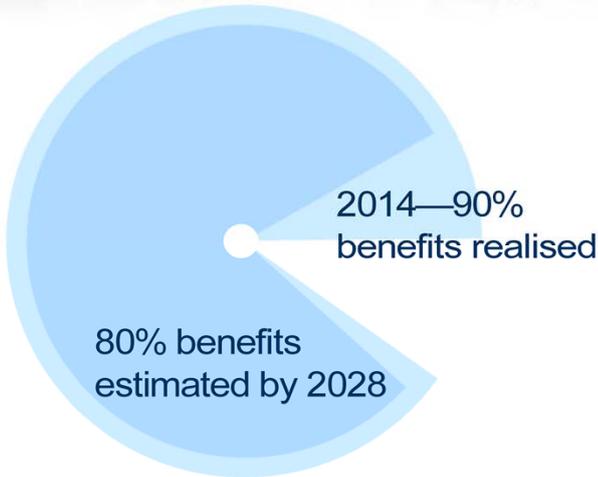
By the end of 2015, Victorians will have paid an estimated \$2.239 billion in metering charges, including the cost of the rollout and connection of smart meters.

However, the department does not know the exact cost of the program. This is because the department does not monitor these costs. They are an 'off budget' item, and consumers pay through their electricity bills, not through tax dollars.

Consumers are entitled to clear and transparent reporting on costs. Particularly as they had no choice in paying for the rollout, and costs are not reported through the usual government processes.

The 2011 cost-benefit analysis found a net cost of \$319 million, which may rise.

## Benefits realisation



- 2014—benefits realisation fallen behind levels forecasted (90%).
  - Avoided costs of accumulation meters is largest benefit.
- Only 80% of long-term benefits expected to 2028—if all issues and risks are effectively mitigated.
- Department is re-evaluating benefits to 2028.

**Benefits realisation is behind the 2011 forecast and there is a risk that all expected benefits will not be achieved.**

Ninety per cent of benefits expected by the end of 2014 have been achieved.

Most of these benefits—approximately 80 per cent—are avoided costs of the old accumulation meters. However, these costs have been replaced by higher costs.

Current forecasts predict consumers will only achieve approximately 80 per cent of the full program benefits by 2028. However, this depends on all issues and risks being effectively mitigated, all of which are not within the direct control of the department.

The department is re-evaluating the benefits in the 2011 cost-benefit analysis and this may lead to changed benefits targets.

## Benefits realisation – continued

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Benefit category	2011 CBA forecast benefit 2008–14 (\$ million)	Actual benefit realised 2008–14 (\$ million)	Percentage of 2008–14 forecast realised	Contribution to \$746.58 million realised by Dec 2014
Avoided cost of accumulation meters	\$579.31	\$591.99	102.19%	79.30%
Network operational efficiency	\$218.94	\$107.98	49.32%	14.46%
Tariffs, products and demand management	\$9.19	\$0.23	2.50%	0.03%
<b>Total</b>	<b>\$807.44</b>	<b>\$700.20</b>	<b>86.72%</b>	<b>93.79%</b>

This slide shows the major benefits achieved to the end of 2014 against their expected target to be achieved at this time.

As you can see in the third column:

- all of the expected benefits in avoided costs have been realised
- around half of the expected network operational efficiencies have been realised
- however, only 2.5 per cent of the expected benefits in tariffs, products and demand management have been realised.

## Maximising consumer benefits

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Improve consumer education to encourage behaviour change.



Ensure that benefits are effectively and efficiently passed on to consumers.



Transparently report on benefits realisation and costs.

**The department must focus its efforts on actions that will enhance future consumer benefits.**

Approximately one quarter of the total expected benefits rely on 75 per cent of Victorian residential customers taking up flexible tariffs and changing their consumption behaviour. Therefore, consumer action is a key determinant of future benefits realisation from the AMI program. On current rates of take up, it is doubtful this 75 per cent will be achieved.

Therefore a key role for the department is in improving communications to encourage the required behaviour change.

Furthermore, most smart meter benefits are realised first by retailers and distributors before consumers are able to realise them. Ensuring these benefits are passed on is therefore critical to the realisation of consumer benefits.

The department must also transparently report on benefits realisation to consumers, as well as the costs.

## Recommendations

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		Accept
That the department:		
1.	develops Budget Paper measures that report performance against the objectives and publicly report costs and benefits	partly
2.	improves its consumer education	✓ ?
3.	works with distributors and retailers to identify and implement systems and processes for monitoring the changes in energy consumption and peak demand	✓ ?
4.	works with distributors and retailers to develop and implement systems and processes to more effectively measure and track network benefits that can be passed on to consumers.	✓ ?

We made seven recommendations. They focus on

- publicly reporting on costs and benefits
- improving consumer education
- and, improving the pass through of benefits to consumers.

## Recommendations – continued

		Accept
That the department:		
5.	effectively influences the Australian Energy Regulator's: <ul style="list-style-type: none"> <li>• decisions related to the passing on of network efficiency benefits to consumers in the 2016–2020 distribution price review</li> <li>• annual process for assessing whether excess costs are efficient and prudent and should be passed on to consumers</li> </ul>	✓
6.	works with relevant stakeholders to analyse the impact of network tariff reform on consumer groups	✓
7.	develops a customer engagement program about network tariff reform that enables consumers to make informed decisions and minimise any unfair disadvantage.	✓ ?

We also recommend that the department understands the impact of tariff reform and informs consumers to enable them to make informed decisions and minimise any unfair disadvantage.

## Recommendations – continued

		Accept
That the department:		
8.	identifies and implements actions to protect Victorian consumers from additional costs associated with the pending rollout of new competitive metering processes, and ensures that essential AMI program benefits are preserved	✓
9.	in conjunction with industry and the Essential Services Commission, considers options to improve the information available to consumers on electricity bills.	?

And that the department protects consumers from additional costs associated with pending competitive metering, and considers options to improve information for consumers on electricity bills.

The department's response fails to satisfactorily respond to the issues raised in the report. It has not clearly accepted all recommendations, or clearly outlined actions to implement them. The Auditor-General's comments urge the department to review its position in the interests of all consumers, and to fully address the recommendations. The Auditor-General will also closely monitor the department's progress in this regard.

## Key messages

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**Despite actions to improve the AMI program, the state cannot directly control many of the costs and benefits.**

**Transparent tracking and reporting of costs is essential for consumers and to understand value of program.**

**Benefits realisation is behind the 2011 forecast and there is a risk that all expected benefits will not be achieved.**

**The department must focus its efforts on actions that will enhance future consumer benefits.**

This slide highlights the key messages from the audit.

## Overall message

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**There is a risk that the net cost of \$319 million to consumers will increase and that full expected benefits will not be achieved.**

This slide highlights the overall message from the audit.

## Relevant audits

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- *Towards a 'smart grid' – the roll-out of the Advanced Metering Infrastructure (November 2009)*

Our 2009 audit is listed on this slide.

## Contact details

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For further information on this presentation please contact:

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