



Smarter energy use on Australian dairy farms

Lessons learnt from remote assessments

Since 2012 almost 1,400 dairy shed energy assessments have been conducted in all dairy regions across Australia as part of the national Dairy Australia project *Smarter energy use on Australian dairy farms*, funded by the Department of Industry and Science as part of the Energy Efficiency Information Grants Program.

As part of this project, three energy assessments were conducted using remote technology, such as Skype and/or Facetime. This fact sheet summarises the lessons learnt from this approach.

Technology used for remote assessments

A number of different technologies were used to communicate between the farmer and the remote energy assessor, Chris Wish-Wilson. The experiences for all three remote assessments were all different and have been summarised below.

Leon Minnett, Landsdown NSW

The audit started well, using the Skype on the Wi-Fi at the house to 'connect' the energy assessor and Leon. The dairy was only 50m from the house however the Wi-Fi would not reach and the signal dropped out. As the phone signal was not strong enough to run the Skype program, the remainder of the assessment was conducted via the phone. This was an issue as the assessor could not visually inspect the system.

Pictures and video of the dairy were then taken and emailed direct to the assessor in real time. Overall, the assessment was completed, but not without some difficulties.

Adam and Donna Darley, Dorigo NSW

At Adam and Donna's the connectivity was great and the assessment started in the dairy using the iPhone with Facetime. This gave excellent clarity and using the iPhone, the assessor was able to see images of the dairy shed equipment to help identify any issues. Adam had pre-filled most of the required information out on the sheet provided, which helped the assessment along.

Peter and Joy Hurrell, Comboyne NSW

Service at Peter and Joys was average and dropped out in parts of the dairy. Facetime was also used on this occasion to give overview of the dairy and systems, but due to connectivity it dropped in and out in quality. Once the assessor had an understanding of the dairy and systems we switched to conventional call (no video) to discuss the final required information. The phone operates on less service than Facetime so there were no further issues.

Lessons learnt

An iPhone or iPad were used to 'show' the assessor the components of the dairy in real time. There was some difficulty with service, which required some technical skills to deal with, but otherwise all three remote audits were extremely beneficial, with the farmers happy with the process and thankful for the time put into their business.

Some key learnings

- › Service is an issue. Skype does not work on low signal. In marginal service area's one option could be for the farmer to take a comprehensive video of the dairy, listing key parts that need to be filmed (for example cooling system, vat, hot water system, silos, augers, the pit, lights, compressors, etc.) that can be sent to the assessor prior to the assessment. This gives the assessor time to understand the dairy and its layout, with the remaining part of the assessment to be conducted over the phone.
- › Use of multiple technologies helped get the result, for example, use of pictures, emails, video, Skype and text message.
- › It is beneficial (especially in the case of remote assessments) that farmers have some idea of their electricity system and are able to pre-fill the required information (electricity bills and the milk production figures) prior to the assessment being conducted.

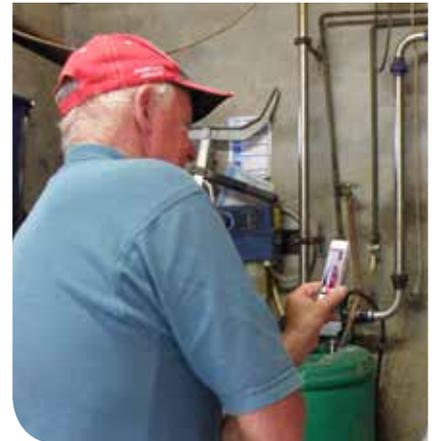
- › Where possible, it would be useful to have someone 'on the ground' at the farm, to bring the communication together. Some farmers could do this on their own but most would need help. One suggestion was that electrician contractors could build the remote energy audit into their visits.

Farmer feedback

- › Benchmarking information was really useful – being able to benchmark parts of the business especially effluent and washout was a positive.
- › It may be some time for the savings to be realised – farmers were able to implement some changes, but others may not happen immediately (for example, it would depend on further investigation of payback periods).
- › Follow up phone call with the assessor is useful – the assessor was professional, patient and knowledgeable.
- › The assessment could benefit through simplifying the spreadsheet – the information collected is useful, however it is important that farmers understand and are able to prefill the information.



Josh Hack, Dairy Australia, showing Peter Hurrell how to use the Facetime technology to communicate with the remote energy auditor



Peter Hurrell viewing motors on the feeders for the auditor

Acknowledgements

Department of Industry and Science - This Activity received funding from the Department of Industry and Science.

Dairy Australia - Dairy Australia gratefully acknowledges the contributions made by many people in producing this factsheet. Dairy Australia also acknowledges the co-funder which made this factsheet possible, the Department of Industry and Science.

Disclaimers

Department of Industry and Science - The views expressed herein are not necessarily the views of the Commonwealth of Australia, and the Commonwealth does not accept responsibility for any information or advice contained herein.

Dairy Australia - Whilst all reasonable efforts have been taken to ensure the accuracy of the *Smarter energy use on Australian dairy farms: Lessons learnt from remote assessments* fact sheet, use of the information contained herein is at one's own risk. To the fullest extent permitted by Australian law, Dairy Australia disclaims all liability for any losses, costs, damages and the like sustained or incurred as a result of the use of or reliance upon the information contained herein, including, without limitation, liability stemming from reliance upon any part which may contain inadvertent errors, whether typographical or otherwise, or omissions of any kind.

© Dairy Australia Limited 2015. All rights reserved.