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Senate Standing Committee on Environment, Communications and the Arts

Inquiry into the Green Loans Program

Submission by Sustainability Advice Team Pty Ltd

14 April 2010

Introduction

This submission is made by Sustainability Advice Team Pty Ltd. Our aim is to provide relevant information about the experience of engagement with the Green Loans Program, from the perspective of an established business with many years of prior experience in conducting home sustainability assessments under other publicly funded programs.

Our involvement with the Program has been both as an organisation delivering assessor training and as an organisation which employs staff who are accredited assessors and undertake assessments.

Our involvement as a trainer started with our selection in November 2008 as one of six organisations contracted by the Department to deliver the pilot phase of training of assessors for the Green Loans Program. We delivered several courses during the first three months of 2009 and at the end of March, as required by our contract with the Department, provided a report on our experiences. We delivered further courses during the next six months, and ceased delivering courses in early October 2009. In total we trained about 220 assessors during this time. Our comments relate mainly to the

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experiences and observations of our staff attending two train the trainer courses presented by ABSA.

Our involvement as assessors under the Green Loans Program started in July 2009 when, again, several of our staff were selected to deliver assessments on a pilot basis. We have continued to deliver assessments in the ACT and surrounding areas since then. Our business model involves employing assessors/auditors as employees, not sub-contractors, because we consider it facilitates the establishment and retention of a skilled professional workforce able to provide quality services and it enables us to provide much better quality assurance. Our comments relate both to the experience of our assessors in delivering assessments and using the assessment tool, and our experience as a business in trying to deliver quality assessments in a cost effective manner.

Finally, we provide some information about the phone calls we have received, as the operator of the ACT Home Energy Advisory Service, about the practices of other companies and individual assessors delivering Green Loan Assessments in the ACT.

Background experience of Sustainability Advice Team

Sustainability Advice Team Pty Ltd was established in January 2009, to carry on the energy auditing and advice services previously provided by Energy Strategies Pty Ltd, which was re-structured at that time. Energy Strategies had been conducting residential energy audits in the ACT since 2004 under two separate programs, both of which were and are funded mainly by the ACT government.

The Water and Energy Savings in the Territory (WEST) program commenced in 2004. It provides energy audits, limited retrofits (materials to a value of about \$500) and energy efficiency advice to low income households with significant utility debt. Households are selectively referred onto the program. We have conducted some hundreds of energy audits, mainly for tenant households, under this program.

The much larger energy advice and audit program started in 1998. Energy Strategies took over the contract in 2002, and re-branded the program as HEAT (Home Energy Advice Team). At that time the program was confined to the provision of advice and information, not including energy audits or home visits. In late 2004 the scope of the program was expanded to include a subsidised home energy audit, plus a \$500 rebate towards the cost of energy efficiency improvements to the house. Since then, Energy Strategies/ Sustainability Advice Team has conducted energy audits on well over four thousand ACT houses.

In order to be able to deliver these programs at the required level of professionalism, Energy Strategies recruited and trained all its staff, who were engaged as employees. Recruits were required to have a good technical understanding of energy and heat transfer (corresponding roughly to a minimum of school physics) together with a strong interest in and commitment to sustainability and energy efficiency, with some knowledge of relevant building principles, practices and materials also being highly desirable. The course we developed consisted of two full days of small group class work (maximum eight trainees at a time), followed by an “apprenticeship” in which the trainees undertake two audits in the company of an experienced auditor. Our full audit team is then required to attend in-

house half day update course about three times a year. In addition, they are at all times supported in the office by our technical adviser, who is a senior electrical engineer with over thirty years professional experience, plus the experience of having designed and supervised the construction of his own highly energy efficient house.

Training

Our staff attended two train the trainer courses presented by ABSA staff. The first was in Sydney, in late 2008, at which four of our staff were trained to deliver the pilot phase of assessor training. The second was in Perth in June 2009, when one further staff member was trained. This was when delivery of training was about to be opened up to any organisation which wished to have its staff trained by ABSA. We have the following observations.

Prior qualifications of trainee trainers

- The conditions of tender to be one of the pilot HSAS training organisations required that all staff members we put forward to be trained as trainers by ABSA a Certificate IV in Workplace Assessment and Training, or equivalent qualification. In addition, our business was required to be, or be linked to, an RTO. We were and are strongly in favour of these requirements.
- At the Perth course there was no requirement for trainees to hold a Cert. IV or equivalent and no requirement to be linked to an RTO. This means that nobody whom they subsequently trained can be given Recognition of Prior Learning should they wish to upgrade their skills after the end of the Green Loans Program.
- At the Sydney training trainees from four of the five organizations selected to deliver the pilot training, including our own staff, were highly experienced and knowledgeable about technical issues involved in sustainability assessment. However, trainees from the fifth organization appeared to have no technical knowledge or background, made negligible input during sessions, could not answer any of the questions posed in the classroom, and were unable to participate in the informal conversations held around technical issues. Nevertheless, they were passed through as capable trainers.
- At the Perth training, the great majority of trainees, with only a couple of exceptions, had no prior experience of performing home energy assessments, and most of them, again with a couple of exceptions, had no teaching or training experience or qualifications. Our staff member was the only trainee who had both. It should have been compulsory to have had experience in at least one or the other field.

Quality of training materials

- At the Sydney training, materials were inadequate, training lasted much longer than was necessary for the skilled and experienced people from our company, the material was not sufficiently specific to the assessment process, and many of the slides held incorrect information.
- At the Perth training, the course itself was not particularly well run and the use of material from the founder of the Church of Scientology was inappropriate. Our overall

assessment was that the course material was not useful from the point of view of someone who knew the subject matter, and that the course material was significantly inferior to our own in-house training material (for training assessors/auditors, not trainers).

Assessment of trainees

- In late 2008, before we started offering training, we developed, in collaboration with one of the other five organisations contracted to deliver the pilot training, an assessment/examination process for all people taking our course. This consisted of five elements:
 - initial assessment of the person's suitability in terms of prior qualifications and/or experience,
 - observation of trainees during the course,
 - a homework assignment,
 - a field trip, comprising conduct of an actual assessment of a house near the training venue,
 - a written examination at the end of the course.
- Neither the Sydney nor the Perth train the trainer courses attended by our staff included any formal assessment process to determine the competence of those undertaking the course to ascertain their competence to become trainers. At the end of the Perth course, participants were told they had completed the course and that they could in principle start training the next day.

Numbers of trainers and of assessors

- During the pilot training there was no restriction on the number of assessors being trained nationally. We raised with DEWHA our concern about the numbers of assessors who would be trained and the need to cap this.
- During the training course in Perth, the issues of a limit to the number of assessors who could be trained was raised, but no numbers were given other than mention of a "few thousand".
- We had estimated at the outset of the program that the ACT could support about 50 assessors and Australia 1000, based on there being 360,000 assessments. By the time of the Perth course there were already more than enough accredited trainers to train 1,000 assessors and ABSA were training more trainers to train even more assessors, and it was clear to us that the number of 1,000 trained assessors had already been well exceeded.
- We were of the opinion that ABSA should have been reporting this issue to the department. We do not know whether or not such reporting did in fact occur.
- We were also aware that training had become very lucrative and that many trainers were charging \$2,000 per trainee for short, poor quality courses.

Administration of the Program -

From a business perspective

- As a business with extensive experience, a highly qualified workforce and some brand recognition in the ACT and surrounding areas, we had hoped to be able to use these assets to win a significant amount of Green Loans assessment work. The design of the Program made it impossible to manage our accredited assessors as a business. There was no business logon to the calendar to see a complete lists of our accredited staff and their postcodes. While auditors could manage their own bookings, this was hard to regulate from a business perspective and the assessors did not want to be responsible for this process; we have lower skilled administrative staff who undertake equivalent tasks relateding to the other programs which we deliver. We understand from press reports, and from statements made in Parliament, that one company, FieldForce, was given these rights.
- Phoning to book assessments was extremely difficult. At the worst, hold times were well over an hour. Between December and the end of February we made a total of 201 calls, many very lengthy, to the 1800 Green Loans line in order to try and register our assessments, from which we eventually booked about 30 assessments. From the 9th of February to the 9th of March we made 136 calls to undertake a total of 10 assessments.
- Limiting the number of bookings per phone call to five was a ridiculous waste of time and resources from a business perspective. Wait times also meant that some business was lost as we could not get booking numbers.
- Inadequate operation of the Department's booking system meant that on a number of occasions assessors did not receive email alerts of an assessment booked by the system until the day of the booking or even, on some occasions, after the assessment was supposed to be conducted. This made the business delivering the assessments, and the individual assessor, look very poor.
- These aspects of the Program administration constitute a strong incentive for a business such as ours to engage assessors as sub-contractors rather than employees. As previously noted, we do not do this because we believe it makes it much more difficult to deliver a consistently high quality service to clients.
- The change in the software of the online calendar resulted in some audits conducted and allocated to individual auditors not appearing in the new calendar. This has obvious and potentially very damaging implications for our business, should we be audited.
- The software did not require booking numbers to be confirmed against the identity of households and, in addition, we have found, through making an inadvertent data entry error, that assessments were able to be invoiced and paid for with incorrect booking numbers. Again, this has potentially negative implications, should our business be audited.

- The Department ceased providing hard copies of workbooks. These were the only paper record of the assessment having been conducted (other than the declaration form, which does not prove that the assessment has actually been conducted) and the system provides no electronic record to the assessor or his/her employer. Potential negative consequences in the event of an audit are again obvious.

From an audit perspective

- The two hour time allowed for the assessment and travel is insufficient to do a competent and complete job of collecting and entering the very large amount of data required by the assessment tool, except for very small houses.
- Even then, there is no time for engagement with the householder to explain about behavioural issues that affect energy use, which are such an important part of a properly conducted energy audit and essential for getting best value out of an audit (as clearly stated in AS/NZS 3598:2000). From our experience in delivering the ACT government funded programs, we estimate that on average about half the reductions in energy consumption that result from the audit/assessment come from changes in the building envelope and in energy using appliances and equipment (hardware) and half from changes in behavior. Note that behavioural changes do not involve any reduction in comfort or amenity, but simply understanding how to operate the house and appliances with optimal efficiency and effectiveness.
- It is very easy to input fictitious data to the software tool.
- It is also easy to just leave out a lot of data in the report (leave all optional data as standard). The result is that reports are not tailored to the house at all but are purely generic, i.e. just an indication of the default values in the software.
- We had, and continue to have, a large number of concerns about the detailed workings of the software tool. Our initial concerns are set out in the Attachment. When we sent these, in early October 2009, we were told that they would be addressed in an upgrade, then underway. In the event, a few were, but most were not.
- Some further examples of software deficiencies, for example,
 - the only way to get a recommendation for an external blind on an west facing window was to say that the home had PV panels installed;
 - more broadly, there seems to be a strong bias towards installing PV, rather than reducing the amount of energy the house is using/wasting.
- More broadly, the complete reliance on the tool alone to generate recommendations and advice seriously undermines the professional skills and experience of our staff. It is for this reason that many of them have said that they are not willing to underake any further Green Loans assessments unless the assessment process is fundamentally changed.

Complaints received

- As the operator of the ACT home energy advisory service, our company has since December 2009 received about twenty calls on the advisory call centre number from householders concerned about some aspect of a Green Loans assessment. We receive these calls because ACT residents know that we will give a considered response and do not know where else to call.
- Summary information about all such calls is recorded and passed on to the ACT Department of Environment, Climate Change and Water. However, where relevant, we also try to resolve the issues raised, as part of the service we provide, even though the issues have nothing to do with our company or, for that matter, with the ACT government.
- Issues causing concern have included the following:
 - obvious lack of professional skills and competence displayed by assessors;
 - aggressive cold calling from lists apparently compiled as a result of previously supplying compact fluorescent light bulbs under the NSW Greenhouse Gas Abatement Scheme, followed by setting times against the will of the householders (a particular concern of elderly householders);
 - aggressive selling of hardware, such as “free” insulation, solar hot water and photovoltaic systems;
 - failure of assessment reports to arrive after a number of months.

Dr Hugh Saddler
Managing Director

ATTACHMENT

Document sent to the Manager of the Green Loans Program, Department of Environment, Heritage and the Arts, on 2 October 2009

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Problems experienced with the Green Home Loans assessment tool.

In using the GHG assessment tool, our team of accredited assessors, all of whom have extensive prior experience in conducting residential energy audits, have identified very significant problems. These are of great concern to our staff and our company, because they are potentially damaging to our professional integrity and reputation. They are also highly likely to damage, possibly severely, the reputation of the program as a whole.

There are problems with both the inputs to and the outputs from the tool.

Problems with data inputs

While acknowledging that ultimately the data inputs are only as good as the auditor and the information provided by the householder, the sheer volume of data required and the small per audit payment provide a strong incentive for auditors to cut corners. We are fairly certain that a significant number of audits are completed by auditors (not our staff of course) ticking boxes as fast as possible rather than taking the time to observe, analyse and record accurate assessments of the matter they are inspecting. Some of the larger players are paying auditors \$90 in total for an audit that takes at least 2 hours to do it at a flat run and then there is travel time on top plus the costs and effort of getting trained, insured and accredited to recover. Our highly skilled and experienced auditors find that it takes them between one and a half and two hours, and sometimes even more, simply to answer all the questions. The data input and other administration can then take up to an hour as well.

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We understand that the original intention of the tool designers was to be as comprehensive as possible with questions, but that the operation of the tool would not require all questions to be answered. In other words, assessors would be expected to exercise their professional judgment about which matters were important for the energy consumption of an individual house, and just answer questions relevant to those matters, ignoring, for example, many questions about appliances which make only a minor contribution to energy consumption. That is not how trainers have been told to teach, and not how DEWHA is instructing auditors to use the forms; there are firm instructions to complete all questions.

Conversely, our assessors have found that some matters very important to energy consumption and thermal performance in winter heating climates are not included. There is nothing about exhaust fans and other types of penetration. Nor is there anything about halogen downlights and the way the need for clearance above and around them to avoid overheating and risk of fire degrades the effectiveness of ceiling insulation.

Another example relates to hot water systems. The input does not ask for the age of the existing system, which is one of the most important determinants of whether it is cost effective to replace a lower efficiency or high emission system with a superior alternative. Nor does it ask for condition, lagging etc. Consequently, reports output by the tool can recommend that brand new systems be replaced.

Some specific practical problems with data input include:

1. The copy function does not work, so similar information still has to be added for each room
2. Insulation- if 'None' is entered the auditor still have to fill in subsequent responses that would only apply if there was some insulation in place. The same applies to a lot of other inputs; for windows, doors, chimneys etc you have to answer subsequent questions even if there is none of that particular feature in that space.
3. If the house has gas boosted solar HWS auditors still have to answer questions about electric HWS.
4. The question about windows and the % having internal/external shade should probably just have external shade – internal shade is not relevant (demonstrating the paucity of understanding that has gone into the actual design of questions) – and only if the windows are east or west facing, or really just ask for west facing ones.
5. Roman blinds are common now but not mentioned, nor are things like pelmets and blackout for curtains, all of which have considerable relevance to thermal performance.
6. Toilet flush numbers don't match the workbook.
7. What do the dishwasher wash program numbers mean? Place settings don't match workbook.
8. The order of the rooms in the calculator should match the workbook for ease of transferring data.

Problems with data outputs

The terrible results with the outputs are of even greater concern, suggesting that the quality of the inputs is almost not relevant. Several of our skilled audit team, who are accredited GHL

assessors and have each individually done well over a hundred residential energy audits under the ACT Energy Wise program (which our company has been delivering on behalf of the ACT Government for the past five years) have used the GHL tool on ACT houses. In some cases they have conducted parallel assessments, using both the GHL tool and our own pro forma, developed in house over the past five years. The outputs from the GHL tool have been proven to be both inaccurate and misleading.

As one example, comprehensive data was provided by a senior professional colleague with great expertise in energy efficiency house design, who owns and occupies a new 6 star EER house. This house was designed and built to his detailed specifications. The outcomes of the assessment were essentially meaningless. The report that was generated by the ‘calculator’ contained 7 eligible items. Four of the 7 were either superfluous or wrong and of the remaining 3 only 1 was actually necessary, the other 2 being general.

Some examples from other GHL assessments undertaken by our staff include the following.

1. A house with R5 ceiling insulation was recommended to install R3, which was also wrong for this climate zone given that the standard in the zone in question requires R4.
2. A house with gas boosted solar water heating was recommended to replace it with an instantaneous gas system.
3. A house, which the tool had been “told” is already connected with gas, was recommended to connect to gas.
4. A house with an efficient gas ducted heater, heating the central living areas only, was recommended to replace this with a gas space heater or RCAC.
5. Every assessment generated a recommendation to install a rainwater tank
6. Every assessment also recommended PV panels, even when it was noted in the report that the building was facing the wrong way AND was entirely overshadowed by taller buildings. It was not until PVs were stated as already being installed that the ‘calculator’ stopped recommending them.
7. Conversely, tool outputs ignored existing insulation on every assessment.
8. Finally, the most useful and cost effective thing that can be done to a house in a cool climate is draught stripping. We know this to be the case, both from the experience of our auditors, and for thermal modeling based studies we have undertaken, e.g. for the ACT and SA governments, yet most of the GHL assessments we have done do not include draught stripping in the recommendations. In some cases it was forced, by inputting false data – notably saying that the house already had PV installed. This is patently ridiculous; even with the generous feed-in tariff in the ACT, draught stripping is an order of magnitude more cost effective than PV. Draught stripping should be high on, if not top of the list of recommendations for every cool climate house.

Professional and highly experienced auditors are not happy about these reports being produced in their own names because the GHL reports are not giving homeowners useful and specific recommendations about their house.

It is misleading for the homeowner and damaging to the entire intent of the program to have a qualified HSA visit a home and then produce a report that the homeowner should not really

rely on. Homeowners believe they have had an audit, have been given a report that recommends action and that money be spent, and most of the actions at this point do not appear to achieve cost effective energy efficient outcomes, but the homeowner is likely not to pick up on that. Energy efficiency outcomes will not be high, or at worst could be completely counterproductive, if the 'recommendations' are followed. Money will be wasted and the exercise has high potential for extremely perverse outcomes.

In fact, we have been able to get the tool to generate reports that are 90% the same as the one that comes out with all the data input to it, just by putting in the year the house was built. Clearly, the operation of the algorithms within the tool is fundamentally defective, and appears not to take most of the data input into account in delivering a report and recommendations.

Hugh Saddler
Managing Director

1 October 2009