

The Senate

Environment, Communications
and the Arts
References Committee

Energy Efficient Homes Package
(ceiling insulation)

July 2010

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Committee members

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Recommendations

Recommendation 1

2.70 That a Royal Commission be held into the Home Insulation Program to investigate the development and implementation of the Program, including:

- **gross and systematic failures in the development and implementation of the Program;**
- **planning and design of the Program, particularly the extent of consideration given to it by relevant ministers and senior executives;**
- **the safety and fire risks resulting from the installation of insulation under the Program;**
- **the adequacy of ministerial and senior executive oversight and responsiveness to advice given or developments in implementation;**
- **the loss of life and injuries to untrained workers contracted under the Program;**
- **given the haste, scale, unprecedented and other circumstances of the implementation of this Program:**
 - **the adequacy of industry product standards and workplace training;**
 - **the complete failure of workplace training;**
- **the extent to which pressures to deliver the Program as an immediate economic stimulus measure were expressed or implied, by whom and how they impacted appropriate program development and delivery; and**
- **the warnings received within or by the government in the months leading up to and following the implementation of the Program.**

Recommendation 2

4.43 The government must inspect every home which had insulation installed under the Home Insulation Program for fire and safety risks.

Recommendation 3

4.45 The government's safety checks under the Home Insulation Safety Program and the Foil Insulation Safety Program must ensure that any shortcomings in relation to product quality or installation standards are rectified.

Recommendation 4

4.46 The government should put in place a mechanism to check work undertaken through the Foil Insulation Safety Program and the Home Insulation Safety Program to ensure that all safety standards and requirements are adhered to.

Recommendation 5

4.63 The government must pursue, finalise and publicly account for every case of fraud under the Home Insulation Program.

Recommendation 6

5.23 The government should establish a dedicated and industry-independent program to research insulation systems and help develop efficient and effective insulation policy.

Recommendation 7

5.28 That Standards Australia consider amending its funding mechanism so as to disallow contributions from any stakeholders with a potential commercial interest in any Australian Standard.

Recommendation 8

5.30 That Standards Australia consider reconfiguring its technical committee arrangements to prevent commercial interests from being seen to unduly dominate decisions which should be based on scientific evidence.

Recommendation 9

5.32 Standards Australia consider responding publicly and in detail to the scientific criticisms of AS/NZS 4859.1, and if necessary undertake an independent review of the standard.

Recommendation 10

5.49 The Australian Building Codes Board should consider:

- **making public the submissions received during the consultation on the recent changes to the energy efficiency requirements of the Building Code of Australia;**
- **responding publicly and in detail to the concerns raised in this inquiry, and any related issues raised in submissions to the recent consultation, about the treatment of insulation in the energy efficiency requirements of the Building Code of Australia; and**
- **explaining the basis upon which BCA has not adopted suggestions that roof/ceiling R-value standards in the BCA (volume 2, table 3.12.1.1a) should include, in warm climate zones, maximum up values for naturally ventilated houses as well as minimum down values.**

Recommendation 11

6.26 That the Government form a small advisory group, representative of all of the different components of the insulation industry, to:

- **develop and consider policies or measures necessary to maintain a viable insulation industry in Australia;**
- **consider policies or measures to maximise the energy efficiency for Australia's building stock in safe and measured ways;**
- **proceed with the necessary research and changes to standards required to provide clarity around the efficiency of different forms of insulation for different climates; and**
- **review industry standards and workplace practices to ensure high quality standards across all jurisdictions and rebuild public confidence in the sector.**

Committee comments

The following material draws together selected comments made by the committee throughout the body of the main report.

Outcomes of the Home Insulation Program

2.68 The Home Insulation Program markedly failed to deliver the potential benefits that the government promised would flow from the program and, as a result of design and implementation failures, appears to have left the insulation industry worse off than before the development of the HIP.

2.69 Concerns about the Home Insulation Program relate mostly to:

- whether the program was adequately designed and managed to mitigate risks identified during the program development phase; and
- whether the responses to the hazards and improprieties that unfolded were appropriate and effective.

Design and implementation timeframe

3.10 The haste in rolling out the full program by 1 July 2009 was a major cause of problems that subsequently arose. The government had clear and unambiguous warnings of this in Minter Ellison's suggestion that the interim (reimbursement) program should be extended by three months, in order to allow more time to properly address the identified program risks.

3.11 It is clear that the Office of the Co-ordinator General, operating within the Department of the Prime Minister and Cabinet with direct and regular reporting to the then Prime Minister, Minister Arbib and the relevant sub-committee of Cabinet applied pressure to roll out the program quickly, in spite of the forecast risks.

3.12 By and large, federal bureaucrats do their professional best to implement the will of the government of the day.

3.13 Due to a failure to comply with requests for the release of all briefings and relevant information, coupled with understandable hesitancy of lower ranking public servants to speak 'on the record', the committee could not sufficiently test allegations that junior to middle-ranking departmental officers issued early, repeated warnings to senior departmental ranks. Nor could the committee satisfactorily test allegations such as those aired on the Four Corners program that such warnings went unheeded by senior departmental officers, swept aside by government-dictated exigencies of haste to get taxpayer dollars out the door.

3.14 In the absence of such 'testing', and in any event, responsibility for any bureaucratic shortcomings properly falls at the feet of respective Ministers and Prime Ministers.

3.15 In the committee's view, then Prime Minister, the Hon Kevin Rudd, then Deputy Prime Minister Gillard who was responsible for workplace training, and the Minister Assisting the Prime Minister for Government Service Delivery, Senator Arbib (who had oversight of fiscal stimulus spending), bear significant responsibility for the consequences of the HIP, particularly due to their apparent role in placing speed of delivery before the safety of implementation.

3.16 This is in addition to the responsibility borne by Minister Garrett, and the responsibilities Minister Combet now has to neutralise the negative consequences of the HIP. Regrettably in rejecting invitations to appear before the committee, these Ministers failed to avail themselves of opportunities to provide evidence to the contrary.

Adequacy of DEWHA's experience, administration and resources

3.27 The government's move to commission an independent review of the HIP (the Hawke Review) was too little, too late and should have been undertaken earlier so that the findings could be used to improve the HIP. Such a comprehensive, independent assessment of the program structure and the capacity to deliver it should have been undertaken at the beginning and used to inform the development of such a large and untested program.

3.36 It appears that the management structures needed within DEWHA to handle such a large and complex program were not instituted until far too late. The committee endorses Dr Hawke's comments which it reiterates:

The opportunity to step back from the day to day management of the program, ask hard questions and test assumptions was not taken until late in proceedings. Resources were tied up with crisis management. DEWHA is not unique in this regard, but it is a lesson that is not easily learned by busy departments under pressure to deliver large programs.

3.37 In relation to briefs from the DEWHA to Minister Garrett, which the committee requested, the committee records its strong dissatisfaction that DEWHA has not provided these without giving adequate reasons. On 9 June 2010, pursuant to a Senate Procedural Order, the committee sought the referral of these and other related matters to relevant ministers.

3.38 In the absence of evidence to the contrary, the committee can only conclude a level of negligence on the part of ministers or senior officials that detailed information on risks (including Minter Ellison's recommendation to defer the starting date) were either never communicated to or never acted on by the highest levels of the government.

Adequacy of DEWHA's risk management

3.55 For a program of the HIP's nature, Minister Garrett should have requested the conduct of a risk assessment, a copy of it once done, and an action plan identifying how each risk was being addressed, when and by whom. The Risk Register should have been provided to Minister Garrett earlier than February 2010 for his consideration and government action. The extent to which important information was allegedly not shown to the minister appears to be reflective of a 'don't show–don't tell' culture.

3.56 In the committee's view the government's risk management activities through DEWHA fell breathtakingly short. It failed to anticipate or respond with sufficient urgency to the extremely high risks created by the haste, scale, demand-driven and national roll-out of an ambitious program involving an industry with standards and rules, simply inadequate for a program for which the government's overriding goal was to drive demand and rapidly rollout such a large program.

3.57 These risks were sufficiently flagged in Minter Ellison's April 2009 Risk Register and had been raised with the government by various industry stakeholders as early as February 2009.

3.58 The committee comments particularly on the electrical and fire risks which have since become a critical concern. Industry associations had raised these risks as early as February 2009. For example concerns were raised:

- by the National Electrical and Communications Association (NECA), February 2009: 'There is a significant risk of electrical equipment overheating especially in the event of downlights in ceilings being covered if insulation is installed inappropriately';
- at stakeholder meeting, 18 February 2009: '...in New Zealand...a similar program had to be suspended because three people electrocuted themselves';
- by NECA to Minister Garrett, March 2009: 'Whilst not the only safety issue by far the most dangerous is the risk of fire associated with installing thermal insulation over or in close proximity to recess luminaires';
- by Master Electricians Australia in May 2009: '...incorrectly installed insulation created a very serious fire risk, especially in older homes'.

3.59 From the evidence presented to the committee it is clear that DEWHA and government ministers received various written and oral warnings of the serious risks posed by the program prior to its large-scale deployment in July 2009. It is also clear that these warnings were either ignored or not taken sufficiently seriously at the Cabinet or departmental level, in the rush to commence this flawed and ill-conceived stimulus measure.

Adequacy of training and installation standards

3.71 The committee acknowledges DEWHA's efforts to establish some training standards in an industry which had not had them previously but finds these efforts to be grossly inadequate given the scale of inexperienced start-up operations that were anticipated under the HIP.

3.72 Shortcomings in the detail of formal training and competency requirements were exacerbated by a systematic failure to adequately implement, enforce and communicate to the industry and workforce.

3.73 In the committee's view DEWHA did not adequately respond to the high risk created by the huge influx of inexperienced workers. As submissions commented:

Master Electricians Australia knew from its more than 70 years representing the electrical contracting industry that if you combined unskilled labour with electrical cabling then tragedy would not be far away.

The competency based training that was implemented should have been satisfactory, however the inconsistent delivery of this training, and the large amount of exemptions, meant that the training was not enough.

3.74 Arguably the key mistake was failing to ensure from the outset that all personnel involved in installation (not only supervisors) were properly trained. It was not adequate to allow a trained/qualified registered installer to oversee what could be an unlimited number of untrained workers. In this situation it was unreasonable and irresponsible to assume that written warnings about fire and electrical safety would effectively reach the actual workers in the roof.

3.75 It was counter-intuitive to exempt from training requirements a number of building trades which had little direct experience with insulation yet were now likely to interface with it.

3.76 Stakeholders gave both DEWHA and the government strong warnings of these risks from as early as February 2009. Similar warnings were expressed in a stakeholder consultation meeting on 18 February 2009. Neither DEWHA nor the government paid enough attention to these warnings. Making the standards more stringent in the last few months of the program was too little, too late.

3.77 The fact that the authorities felt the need to amend the installers' pocket book extensively after the first program-related fatality in October 2009, to upgrade the warnings on electrical and fire risks, does not inspire confidence in the adequacy of the earlier edition.

3.78 The committee expresses its deep concern and disappointment about DEWHA's and the government's failure to adequately minimise risks or respond effectively to the first tragic fatality in October 2009. It was not until February 2010 that the training requirement for all installers took effect. It appears that the option of mandating safety switches as a condition of participation was never considered.

Similarly, despite the best endeavours of the Fuller family, the simple step of requiring the household's power to be switched off during installation was never mandated. Steps along these lines may have helped avoid at least one of the subsequent fatalities. The committee finds this both tragic and deplorable.

3.79 The committee is not expert in insulation or electricity. However, it considers it incumbent upon the government to counter criticism that the government should have mandated:

- (a) turning off the power before entering the roof;
- (b) the use of plastic staples with foil, as had been recommended in New Zealand since 2007; and
- (c) a condition of HIP insulation that a house had a safety switch (residual current detector).

3.80 In the committee's view, by October 2009, DEWHA and the government had received sufficient written and oral warnings of the serious risks posed by the program that it should have been suspended immediately following the first fatality. However disturbingly, these warnings were either ignored or not taken sufficiently seriously. Again, the desired speed of spending appears to have superseded safety considerations.

The maximum rebate and the Medicare billing model

3.89 Arguably many of the problems of the program resulted from the government's role, in and quest for, driving demand, culminating in an overwhelming deluge in the second half of 2009. In terms of market-place drivers, it seems to have been driven more by marketing by installers, taking advantage of the fact that installations were free for most dwellings, than by the initiative of householders.

3.90 As householders had no motivation (and almost certainly no expertise) to check the quality of the work, it left the way open to program abuses by unscrupulous newcomers to the industry who encouraged a large influx of inexperienced installers. This in turn was a contributor to the deaths, safety risks and other poor program outcomes described in more detail in chapter 4.

3.91 The committee considers it incumbent on government to explain why it did not spread the program over a considerably longer time frame and promote 'buy in' by householders by:

- reducing the level of the subsidy offered;
- requiring a co-payment, that is the householder pays some part of the price; and/or
- requiring the householder to pay the price of installation upfront and then be reimbursed a portion of the price.

3.92 The committee finds that the excessive value of the initial \$1600 rebate (above the industry average at the time) was always going to promote profiteering and, with it, bring about the low standards, short cuts and shonks that inevitably come from those solely attracted by a 'quick buck'.

3.93 The committee further finds that effectively making insulation 'free' for a period of time was never likely to provide lasting benefits to the industry as it was structured to create a boom-bust cycle, without leaving consumers with any understanding or appreciation of the real 'value equation' that underlies the installation of insulation.

3.94 A reimbursement or co-payment scheme might have moderated demand, and may have helped to deliver some longer term sustainability. However, it is unlikely of itself to have seen improved long term environmental effects or to have reduced risks to installers and householders without commensurate higher standards.

The safety of work carried out under the program

4.30 The committee acknowledges that, as in many areas of the building and construction sector, there are inherent risks associated with installing insulation. There are risks to both installers working in hot and confined spaces containing electrical wiring; and to householders if the insulation is not properly installed.

4.31 The consequences of these inherent risks are very high and in the extreme can result in the loss of both lives and property.

4.32 However, the committee is of the view that with adequate and appropriate risk management—for example, fully informed and properly trained and competent installers, and the use of safety equipment such as downlight covers—these risks can be significantly mitigated.

4.33 Roof/ceiling insulation is safe provided it is of appropriate standard, properly installed with full knowledge of the possible hazards and with effective safety arrangements in place. This applies to both bulk materials and foil. The fire and electrocution problems which have occurred resulted from inadequate training and unsafe work practices.

4.34 The committee acknowledges DEWHA's attempts to ensure suitable training standards and work practices. However, too many of these attempts were a case of playing catch-up to problems in both the formal requirements and with their inadequate and flawed implementation.

4.35 In the committee's view DEWHA did not adequately anticipate the high risk created by the huge influx of inexperienced and unqualified workers. When issues did emerge, DEWHA's responses were both slow and often inadequate. DEEWR, meanwhile, appears to have been missing in action, despite being members of the

Project Control Group and, logically, having a key responsibility for workplace safety and training issues.

4.36 Arguably the key mistake was failing to ensure from the outset that all personnel involved in installation (not only supervisors) were properly trained and fully understood the risks associated with installing insulation.

4.37 Making the requirements more stringent in the last few months of the program was too little, too late. For example, DEWHA's reaction to the unfolding safety issues after the first death on 14 October 2009 was tardy. The ban on metal staples for foil insulation took effect on 2 November 2009. The requirement for a mandatory risk assessment of each job took effect only on 1 December 2009. The requirement for all installers, not only supervisors, to have training took effect only on 12 February 2010. At no stage was there a firm requirement to turn off the power during installation, a simple step which arguably would have greatly reduced electrical risk to the installer (though not to the householder afterwards).

4.38 The committee notes the government's statements that there have always been fires associated with poorly installed ceiling insulation. The intended inference seems to be that some increase in the number of fires is to be expected because of the huge increase in the number of installations.

4.39 On the available figures it is impossible to say whether the rate of defective-installation-causing-fire is higher or lower in HIP jobs than in earlier jobs. However, the committee notes that a targeted inspection of 15 000 installations has found that 7.6 per cent of them have fire safety hazards. The committee notes the government's contention that these figures may not be representative of all installations, as inspections to some degree have been targeting installations by firms with a poor compliance record. However, even if this figure is discounted by half, given the one million-plus houses that have had insulation installed under the HIP, this would mean that in the order of 38 000 homes face the risk of a house fire. The committee considers this to be an unacceptably high figure, and creates a massive time-bomb for tens of thousands of Australian households.

4.40 In any case, the government cannot somehow excuse the incidence of HIP-related fires by pointing to precedents prior to the program. If anything, the incidence of insulation related fires prior to the HIP should have served as another warning to the government and should have provided further cause for care and caution in the development of the new program. The government's aim should have been to have no fires resulting from work which the government had encouraged and which taxpayers have funded.

4.41 DEWHA was, and the government should have been, aware of the risks before the commencement of the program, both through the Minter Ellison Risk Register, which DEWHA expressly commissioned, and through the various approaches to government by concerned stakeholders. Despite being told of such risks, they appear to have been brushed aside in pursuit of other priorities.

4.42 While acknowledging that DEWHA may not have known the precise scope and magnitude of the risks, the committee is nevertheless of the view that its response in addressing the risks before the program's commencement was wholly insufficient. It did nothing to address certain risks. The committee is also of the view that as the identified risks manifested as serious problems, both DEWHA and the government's responses were overwhelmingly and perhaps tragically deficient.

The level of fraud and abuse

4.60 The rate of fraud and abuse in the HIP is unclear. However, it is uncontested that it occurred, and at an unacceptable level. The results of the survey and targeted inspections mentioned at paragraphs 4.50ff paint a picture far more concerning than DEWHA's statement that only '0.65' per cent of installations have resulted in a complaint.

4.61 While the government had and still has auditing and compliance activities, it is unclear how well they are informed, targeted or resourced in proportion to the need. The committee notes evidence that more resources have been put into auditing and compliance recently.

4.62 In the committee's view the incidence of fraud and abuse was a predictable outcome of a program which encouraged an influx of new businesses into a small and largely unregulated industry, and was designed in a manner open to profiteering around the premise that the householder should not be out of pocket (the subsidy amount was expected to cover the whole price in most cases). Ignorant of the risks, householders were lured into thinking they needn't have a stake in ensuring that the job was well done (quite apart from the fact that most would not have the knowledge to do so).

The level of imported and non-compliant materials

4.77 The committee agrees with submissions that the high level of imports was regrettable, and is potentially detrimental to the Australian insulation manufacturing industry in the medium term.

4.78 The committee notes the evidence that thermally non-compliant Chinese imports are likely to be about three per cent of total HIP materials. However, the overall level of non-compliant imported materials is uncertain (since there is no evidence on the extent of non-compliance in imports other than the Chinese). Nevertheless, the committee finds it wholly inadequate for DEWHA or the government to dismiss this issue by saying that householders with non-compliant materials should complain to state/territory fair trading offices. Householders are not likely to know whether their insulation materials are compliant or not. The government, having encouraged householders to take up the subsidy, has a duty to ensure that materials installed are compliant. This should be part of the inspection of every insulated home.

4.79 The use of these non-compliant imports failed the test of good public policy at almost every level. It failed as an economic stimulus by sending dollars overseas; it failed as an environmental measure as the standard of insulation provided was unsatisfactory and will not deliver the intended energy efficiency dividend; and it failed to deliver for many unfortunate homeowners, who will be left with little energy savings but will face the cost of removing these inferior products if they are to install quality insulation at a later stage.

Adequacy of advice on different types of insulation

4.98 The extent of any inappropriate use of bulk materials is unclear. However the committee is concerned that householders may not have had adequate advice on this matter.

4.99 Nothing in the program guidelines justify DCCEE's statement at paragraph 4.97 that 'the installer was required to assess what type of insulation would best suit the householder'. The guidelines quoted at paragraph 4.96 clearly put the onus for this on the householder. The installer's only obligation in this regard was to follow the table of minimum R-values. The whole point of concern about this issue is that the table of R-values (like the Building Code of Australia) ignores the problem of bulk materials in hot climates keeping naturally ventilated houses hot at night.

4.100 The referenced Your Home Technical Manual, which (it was implied) householders should have consulted, is a large document which contains this solitary relevant comment on page 103:

The most important thing to remember is that in high humid [tropical] climates where houses are naturally ventilated, high down values and lower up values are appropriate for roofs and ceilings.

4.101 The reason for this advice (to help the house cool naturally at night) is not given. Nor is any advice given about the relative effectiveness of bulk insulation in different climates.

4.102 In the context of a program—an attempt by government to roll out insulation to people who have never before thought about the different varieties and their respective performance—it is unrealistic to expect that householders would notice this advice—particularly as the Your Home Technical Manual was not mentioned in the HIP guidelines. If they did notice it, given the brief and incomplete nature of the advice, it is unrealistic to expect they would realise its importance.

4.103 The committee considers that householders should have been given better and more accessible consumer advice about appropriate insulation for their situation. The committee does not think it is adequate to rely on asking householders to refer to a large technical manual accessed by weblink.

4.104 The committee is not qualified to opine on these technical issues, but considers it unacceptable that the government failed to settle them before embarking on the HIP.

The consequences were, once again, a less than optimal outcome for taxpayers, homeowners and the environmental objectives allegedly behind the program. Regulatory changes should be pursued to address these issues following extensive industry and scientific consultation leading to amendment to the relevant Australian Standards and the Building Code of Australia where appropriate.

4.105 The committee comments on the obvious disagreement between foil interests and bulk insulation interests on this issue: it is regrettable that there continues to be dispute among the various industry groups over issues theoretically capable of settled scientific conclusion.

Issues for renters and low income earners

4.112 Submissions on this matter focussed on landlords and tenants; however the problems of access to the program by low income homeowners should not be forgotten. Once again, these issues highlight the ill-designed nature of the incentives offered under the HIP.

Issues relating to Australian Standards

5.19 Considering the importance of insulation to the energy efficiency of Australian homes, it is most regrettable that there is no independent scientific facility in Australia able to research the properties of the various systems and advise on insulation policy in context of overall energy efficient housing goals. It is unfortunate that the dispute the different forms of insulation, about basic science to do with the suitability of the different systems, has endured for so long without resolution. It appears that the lack of a suitable research vehicle has been one of the reasons for this.

5.20 CSIRO's new test facility, since it will only test in accordance with AS/NZS 4859.1, will not resolve the wider arguments about the appropriateness of the standard or desirable policy on ceiling insulation.

5.21 The committee agrees that there should be a dedicated and independent research facility able to research insulation systems and advise on insulation policy. Where it should be housed would a matter for further consideration.

5.22 This should be regarded as an essential part of any future government initiative to improve home insulation, in order to ensure that the investment is directed most efficiently.

Issues relating to the Building Code of Australia

5.48 Determining concerns about increased insulation requirements in the Building Code of Australia and inadequate treatment of 'heat box' and condensation issues in the Building Code of Australia is beyond the expertise of the committee. The Australian Building Codes Board should be asked to respond.

Abbreviations

ABCB	Australian Building Codes Board
ACIMA	Australian Cellulose Insulation Manufacturers Association
AFIA	Aluminium Foil Insulation Association
AFP	Australian Federal Police
BCA	Building Code of Australia
DCCEE	Department of Climate Change and Energy Efficiency
DEEWR	Department of Education, Employment and Workplace Relations
DEWHA	Department of Environment, Water, Heritage and the Arts
EEHP	Energy Efficient Homes Package
FISP	Foil Insulation Safety Program
Hawke review	<i>Review of the Administration of the Home Insulation Program</i> , 6 April 2010
HIP	Home Insulation Program
HISP	Home Insulation Safety Program
ICANZ	Insulation Council of Australia and New Zealand
LEAPR	Low Emission Assistance Plan for Renters
NECA	National Electrical and Communications Association
PIMAA	Polyester Insulation Manufacturers Association of Australia
REBS	Renewable Energy Bonus Scheme
Risk Register	Minter Ellison, <i>Risk Register and Management Plan</i> , 9 April 2009

Chapter 1

Introduction

Conduct of the inquiry

1.1 The Senate referred this inquiry to the committee on 29 October 2009. The inquiry was prompted by concerns about the management and effectiveness of the Energy Efficient Homes Package program, and in particular by the government's apparent failure to completely consider and/or address escalating warnings about risks to safety (including through fires and electrocutions) and to program compliance (including through fraud and rorting).

1.2 The terms of reference are:

1. The Federal Government's Energy Efficient Homes Package (ceiling insulation), with particular reference to:

i. the level of ceiling and wall insulation in Australian residences, state by state, prior to the announcement of the Energy Efficient Homes Package and the adequacy of the Building Code to ensure comprehensive roll out in future.

ii. the administration of the program from a pricing, probity and efficiency perspective, including:

- A. the basis on which the Government determined the size of the rebate for ceiling insulation;
- B. regulation of quoting and installation practices;
- C. protection against rorting and abuse of the rebate;
- D. the impact of the program in pushing up insulation prices;
- E. the level of imported insulation to meet demand;
- F. ensuring value for money for taxpayers;
- G. waste, inefficiency and mismanagement within the program;
- H. ensuring the program achieves its stated aims as part of the government's stimulus package; and
- I. the consultation and advice received from current manufacturers regarding their ability to meet the projected demand.

iii. an examination of:

- A. the employment and investment in insulation production and manufacturing resulting from the program;
- B. what advice was provided to the Government on safety matters, particularly in relation to fire and electrocution risks and to what degree the Government acted on this advice.
- C. the costs and benefits of extending the scheme to include other energy efficiency products including wall and floor insulation, draft stoppers and window treatments;

- D. the costs and benefits of changing or extending the scheme to make small and medium sized businesses eligible for installations;
- E. the extent to which imported insulation products met Australian standards and the method used to make that determination; and
- F. what advice was provided to the Government on occupational health and safety matters, particularly in relation to training for installers; including:
 - i. to what degree the Government acted on this advice; and
 - ii. identification and examination of fires and electrical incidents resulting from the Government's Home Insulation Program.

iv. an analysis of the effectiveness of the package as a means to improve the efficiency of homes and reduce emissions of greenhouse gases, including comparison with alternative policy measures;

2. Consideration of measures to reduce or eliminate waste and mismanagement, and to ensure value for money for the remainder of the program, noting the planned \$2.7 billion to be distributed under the program in total.

3. Other related matters.

1.3 The committee advertised the inquiry in *The Australian* and on its website, and wrote to relevant peak bodies inviting submissions. The committee received 53 submissions (see Appendix 1) and various supplementary comments (see Appendix 2). The committee held four public hearings (see Appendix 3) and one *in camera* (confidential) hearing.¹

1.4 The committee acknowledges the contributions of submitters and witnesses. In particular the committee thanks Mr and Mrs Kevin and Christine Fuller, parents of installer Matthew Fuller who was electrocuted on 14 October 2009. Mr and Mrs Fuller gave evidence before the committee on 17 March 2010.

1.5 The committee also places on record its profound sympathy to the families and friends of the other installers tragically killed, as well as those injured; those Australians suffering loss as a result of house fires; and the many legitimate businesses and employees who have suffered losses related to this program.

1.6 Environment Minister, the Hon Peter Garrett MP, ended the Energy Efficient Homes Package (EEHP) on 19 February 2010 citing safety and compliance concerns about the ceiling insulation component.²

1 The confidential hearing occurred on 17 March 2010 with Mr and Mrs Kevin and Christine Fuller, the parents of installer Matthew Fuller who was electrocuted on 14 October 2009. Later, the committee agreed to publish most of the transcript of the hearing.

2 The solar hot water rebate is still available.

1.7 Some comments in submissions and evidence, which pre-date 19 February 2010, may have been superseded by events, but should be read as applying to the situation at the time.

1.8 On 8 March 2010, responsibility for energy efficiency programs was transferred from the Department of Environment, Water, Heritage and the Arts (DEWHA) to the Department of Climate Change, which was renamed Department of Climate Change and Energy Efficiency (DCCEE). References to DEWHA around the time of changeover should be read as references to DCCEE (as relevant).

1.9 The committee heard evidence from DEWHA (and DCCEE after the transfer of responsibility) on 22 February, 26 February and 25 March 2010.

1.10 Either during the hearings or shortly afterwards DEWHA/DCCEE took 133 questions from the committee on notice.³ While the committee acknowledges that its agreed response deadlines were relatively tight, only two per cent of the responses were received by the respective deadlines set by the committee.⁴ This was not helpful to the work of the committee. As at 6 July 2010, six of the questions remain unanswered. The longest overdue responses are now 17 weeks past their deadline.

1.11 By contrast, although there were fewer questions placed on notice, the Department of the Prime Minister and Cabinet and the Department of Education, Employment and Workplace Relations responded to questions put on notice to them in a much more timely fashion.

1.12 Many of the responses received from DEWHA/DCCEE were uninformative. Others claimed legal professional privilege or Cabinet confidentiality, without adequate justification. Senator Guy Barnett sought advice from the Clerk of the Senate on the department's failure to meet the committee's deadlines and use of claims of legal professional privilege, as a reason for withholding information. The Clerk's advice was tabled during the hearings of 25 March 2010 and is included at Appendix 4.

1.13 The committee records, in the strongest terms possible, its dissatisfaction with the inadequate responsiveness of DEWHA and DCCEE in providing either informative or timely answers to questions taken on notice. This significantly hampered the committee's ability to conduct this inquiry in a constructive and effective manner.

1.14 Due to this failure by DEWHA/DCCEE and similar unsatisfactory responses from the Prime Minister's department, the committee considered ministerial responses appropriate. Consequently, the committee invited the Prime Minister and Ministers

3 See www.aph.gov.au/senate/committee/eca_ctte/eehp/submissions.htm.

4 The committee asked for answers to questions on notice arising from the 22 February hearing by 24 February; from the 26 February hearing by 9 March; and from the 25 March hearing by 9 April 2010.

Garrett, Combet and Arbib to give evidence at a public hearing. Each of the ministers declined to appear.⁵ In respect of Senator Arbib declining to appear, the committee reports this fact to the Senate pursuant to Standing Order 177(2).⁶

1.15 Since the last hearing of the inquiry on 25 March 2010 there have been a number of related developments:

- the government released Dr Allan Hawke's review of the Home Insulation Program (22 April 2010);
- the government announced that the planned insulation component of the replacement Renewable Energy Bonus Scheme will not proceed (22 April 2010);⁷
- the government released certain correspondence between the Prime Minister and Minister Garrett about the Home Insulation Program, which had been the subject of orders of the Senate relating to production of documents (27 May 2010);⁸
- the government has progressed various actions arising from the closure of the Home Insulation Program, including the Home Insulation Safety Program (HISP) and Foil Insulation Safety Program (FISP); industry assistance measures for displaced insulation workers and businesses; and fraud and compliance work including appointment of KPMG as forensic auditors (details are in chapter 2).⁹

1.16 Although these matters could not be the subject of questioning at hearings, the committee comments on them where appropriate in the report based on the public record.

1.17 In light of developments of 27 May 2010, the committee repeated its invitation to then Prime Minister Rudd, Ministers Garrett and Combet and extended

5 The committee has published the respective correspondence on its website, see www.aph.gov.au/senate/committee/eca_ctte/eehp/submissions.htm.

6 Standing Order 177(2) provides: 'If a committee requires the attendance of a senator as a witness, the chairman shall, in writing, request the senator to attend, and if the senator declines to attend or to give evidence, the committee shall report the matter to the Senate.'

7 Hon. G. Combet, Minister Assisting the Minister for Climate Change and Energy Efficiency, *Insulation component of the Renewable Energy Bonus Scheme will not proceed*, media release 22 April 2010.

8 Letters from Minister Garrett to the Prime Minister of 27 August, 28 October and 30 October 2009 and related letters; received out of session 27 May 2010; tabled in the Senate on 15 June 2010 pursuant to orders of the Senate 775 and 776 of 12 May 2010.

9 Hon. G. Combet, Minister Assisting the Minister for Climate Change and Energy Efficiency, *Home Insulation Safety Plan*, media release 1 April 2010; *Tax relief for insulation industry*, media release 20 April 2010; *Applications open for insulation industry assistance*, media release 6 May 2010; *Foil Insulation Safety Program underway*, media release 6 May 2010; *Home Insulation Safety Plan update*, media release 15 June 2010.

an invitation to then Deputy Prime Minister Gillard to appear before the committee. Each declined (see correspondence on the committee's website).

Structure of the report

1.18 Chapter 2 of this report describes the Home Insulation Program, including the various changes during the second half of 2009, and actions arising from the closure of the program on 19 February 2010.

1.19 Chapter 3 discusses issues arising from the program design and administration.

1.20 Chapter 4 discusses the main concerns raised in submissions about program outcomes.

1.21 Chapter 5 discusses related matters to do with the adequacy of the relevant Australian Standards and the energy efficiency provisions of the Building Code of Australia.

1.22 Chapter 6 contains concluding comments.

Chapter 2

Background and description of the Home Insulation Program

Home insulation before the Energy Efficient Homes Package (EEHP)

2.1 Before the commencement of the EEHP, retrofitting insulation to existing homes was a minor proportion of the insulation market. According to the Insulation Council of Australia and New Zealand (ICANZ), before the EEHP the market for building insulation was:

- new homes—50 per cent;
- commercial/industrial—40 per cent;
- retrofitting existing homes—10 per cent.¹

2.2 Glasswool and rockwool comprised about 70 per cent of the Australian market and involved two local manufacturers: CSR Bradford and Fletchers Insulation. The rest of the market was made up of other materials including cellulose, polyester and foils, involving around 30 manufacturers in Australia.²

2.3 According to the Australian Bureau of Statistics, in dwellings with ceiling insulation in 2008, the material was:

- bulk batts (fibreglass/wool/polyester) 65.8 per cent;
- loose fill 15.2 per cent;
- sisalation/reflective foil 5.2 per cent;
- other 2.0 per cent; and
- 'don't know' 11.9 per cent.³

2.4 ICANZ estimated that before the EEHP up to 40 per cent of dwellings other than apartments, that is up to 2.7 million homes, had no or inadequate ceiling

1 About 5 per cent of the total product was imported. ICANZ, *Submission 18*, p. 4.

2 ICANZ, *Submission 18*, p. 4.

3 Australian Bureau of Statistics, cat. 4602.0.55.001, *Environmental issues: energy use and conservation*, March 2008, table 2.16. The sisalation/reflective foil proportion varies considerably across the country from 1 per cent in the ACT to 12.1 per cent in Queensland and 22.1 per cent in the Northern Territory.

insulation.⁴ This proportion has been gradually declining as minimum energy efficiency levels in new homes have been required in the Building Code of Australia since 2003.⁵ ICANZ also estimated that before the EEHP retrofitting of ceiling insulation in existing homes was approximately 65–70 000 per annum.⁶

2.5 Before the EEHP, retrofitting insulation was largely unregulated, with little to no control over products, and limited registration or training standards for installers (applicable only in South Australia).⁷ ICANZ explained this as:

The value of the product being put in was considered a minor renovation... Having insulation put in your home could often be done for under \$1,000, so it flew under the radar completely.⁸

2.6 However, state and territory workplace and occupational health and safety laws have applied throughout.⁹

2.7 The EEHP transformed the dynamics of the retrofitting insulation industry in unprecedented ways, resulting in pressure points and consequences with which the EEHP and its custodians did not cope.

Summary of the Energy Efficient Homes Package¹⁰

2.8 The EEHP was announced by the Prime Minister on 3 February 2009.¹¹ At \$3.9 billion it represented approximately 9 per cent of the government's \$42 billion

4 ICANZ, *Submission 18*, p. 6. The estimate assumes that most 'don't know' responses are from residents with no or inadequate insulation. An ABS 2008 survey had responses 'with insulation' 61.5 per cent; 'without insulation' 19.2 per cent; 'don't know' 19.3 per cent: ABS cat. 4602.0.55.001, *Environmental issues: energy use and conservation*, March 2008, table 2.12. See also DEWHA, *Submission 19*, pp 10–11.

5 Since 1 January 2003 in most states. Victoria has had thermal performance requirements (overall ceiling/roof R-value of 2.2) since 1983. NSW implemented thermal performance requirements over 2004–2007. DEWHA, *Energy Efficient Homes Package - Frequently Asked Questions*, www.environment.gov.au/energyefficiency/faqs.html accessed 9 February 2010.

6 ICANZ, *Submission 18*, p. 11.

7 ICANZ, *Submission 18*, p. 12. DEWHA, *Submission 19*, p. 5. In South Australia installers must be licensed. The requirements of the Building Code of Australia apply only to new construction.

8 Mr D. D'Arcy (ICANZ), *Committee Hansard*, 17 February 2010, p. 70.

9 DEWHA, *Submission 19*, p. 5.

10 This section is mostly sourced from Department of the Environment, Water, Heritage and the Arts (DEWHA), *Submission 19*.

11 Hon. K. Rudd MP, Prime Minister, *Energy Efficient Homes – ceiling insulation in 2.7 million homes*, media release, 3 February 2009.

Nation Building and Jobs Plan, which was part of the government's response to the global recession triggered by the global financial crisis.¹²

2.9 The government stated that the aims of the EEHP were to:

- generate economic stimulus and support jobs for trades people and workers employed in the manufacturing, distribution and installation of residential ceiling insulation and solar hot water systems;
- improve the energy efficiency, comfort and value of homes;
- help households save on their heating and cooling energy bills; and
- reduce greenhouse gas emissions.

2.10 The program focussed on two ways of improving the energy efficiency of homes: installing ceiling insulation (the Home Insulation Program), and replacing electric storage hot water heaters (the Solar Hot Water Rebate). These were chosen because space heating and cooling and water heating are typically the two greatest energy uses in Australian homes.¹³

2.11 The EEHP was initially administered by the Department of Environment, Water, Heritage and the Arts (DEWHA).

2.12 As announced on 3 February 2009, key components of the EEHP were:

- Home Owner Insulation Program (later Home Insulation Program - HIP):¹⁴ This was a \$2.7 billion program to provide a rebate of up to \$1600 for owner-occupiers to install ceiling insulation in existing homes. It was to run from 3 February 2009 to 31 December 2011 or until the funds were fully allocated. It was expected to affect 2.2 million homes.
- Low Emission Assistance Plan for Renters (LEAPR): This provided \$612.5 million to increase existing assistance to landlords to install insulation from \$500 to up to \$1000 per home. It was to run from 3 February 2009 to 30 June 2011 and was expected to affect an estimate 500 000 rented homes.
- Solar Hot Water Rebate: \$507 million was provided to increase an existing rebate from \$1000 to \$1600. The previous means test was removed. It was to run from 3 February 2009 until 30 June 2012.

2.13 The package was not means tested. Householders could claim either insulation or hot water assistance for one address, but not both.

12 Hon. K. Rudd MP, Prime Minister, *\$42 billion nation building and jobs plan*, media release 3 February 2009. See also Senate Economics References Committee, *Government's Economic Stimulus Initiatives*, October 2009, pp 3–4, for information on the government's stimulus measures.

13 DEWHA, *Submission 19*, p. 33.

14 The name was changed in September 2009 when the separate LEAPR was discontinued and landlords and tenants became eligible for the HIP.

2.14 The program was demand driven and intended to continue until the completion date or until program funds were fully allocated. The Home Insulation Program was expected to be fully expensed by December 2011.

2.15 This report focuses solely on the Home Insulation Program.

Further details of the Home Insulation Program (HIP)

2.16 During 'phase 1' of the program (3 February to 30 June 2009) householders paid the installer and claimed reimbursement from DEWHA. Phase 1 of the program was intended as an interim measure while the main program ('phase 2') was developed. In this time DEWHA consulted with industry and state/territory governments, arranged the Medicare payment system, and developed training materials with the Construction and Property Services Industry Skills Council.¹⁵

2.17 The main program (phase 2) commenced five months after phase 1, on 1 July 2009, when arrangements were changed so that installers were paid directly through Medicare's claim processing system. As a result, householders paid nothing for insulation installed under the HIP if the contracted price was less than the \$1600 rebate limit.

2.18 From 1 July 2009, installers had to be registered to obtain work under the program (conditions of registration are described at paragraph 2.25). The work could be done by a registered installer or by an employee or subcontractor of a registered installer.

2.19 Apart from the \$1600 rebate limit, there was no control over the cost of the installation and no requirement to seek a second quote.¹⁶ Installers could advertise their services, for example by local advertising or telemarketing.

2.20 Householders were responsible for choosing a suitable installer and insulation type, and then entered a contract with the installer. Householders were also responsible for ensuring they were satisfied with the service provided. If satisfied, they signed a Work Order Form, to enable the installer to be paid through the online payment system.

2.21 The R-value of the insulation materials (the amount of resistance to transfer of heat) had to comply with standards shown in the program guidelines. The standards were similar though not identical to the standards in the Building Code of Australia (BCA).¹⁷ The required standard varied according to the climate zone:

15 DEWHA, *Submission 19*, p. 7. A. Hawke, *Review of the Administration of the Home Insulation Program*, 6 April 2010, pp 2–3.

16 A requirement for a second quote was introduced on 1 December 2009.

17 The standards in the Building Code of Australia (BCA) are at paragraph 5.36. The BCA does not apply to retrofitting existing buildings.

Table 1—Home Insulation Program: R-value requirements by climate zone

climate zone ¹	1	2 below 300m	2 300m or more	3	4	5	6	7	8
minimum R-value ²	3.0	3.0	3.0	3.0	3.5	3.5	3.5	4.0	4.0
direction of heat flow	down	down	down & up	down & up	up	up	up	up	up

¹ climate zones: as defined in the Building Code of Australia, from 1 hottest to 8 coldest: see Appendix 5.

² R-value: resistance to heat flow. The R-value can be either material R-value, or total R-value approach outlined in the Building Code of Australia. If using the total R-value approach, the minimum R-value must still meet the requirements of the table.

Source: Department of Environment, Water, Heritage and the Arts, *Energy Efficient Homes Package—Home Insulation Program—Program Guidelines version 5*, 1 December 2009.

Changes during the program – overview

2.22 After the start of the fully developed program on 1 July 2009, the government made a number of significant changes including:

- On 1 September 2009 the Low Emission Assistance Plan for Renters (LEAPR) was discontinued because of slow take-up, and landlords and tenants were 'rolled into' the Home Insulation Program.
- On 2 November 2009 the maximum rebate for insulation was reduced from \$1600 to \$1200. This reduced the program's overall budget by \$250 million, from the initial \$2.7 billion to \$2.45 billion.¹⁸
- Various changes were made to allegedly reduce opportunities for fraud and abuse:
 - From 1 September 2009 a pricing table was included in the guidelines, and installers charging above the listed prices without reasonable grounds were liable to be removed from the installers register.¹⁹
 - From 1 December 2009 new guidelines required householders to obtain two quotes and a site inspection (the two quote requirement had applied from 3 February to 30 June 2009 but had been removed with the full

18 Hon. P. Garrett, Minister for the Environment, Heritage and the Arts, *Insulation changes: safety, consumer protections and value for money*, media release, 1 November 2009. Contracts made before 2 November remained eligible for up to \$1600 providing the work was done on or before 16 November.

19 HIP program guidelines version 5, 1 December 2009, p. 10. DEWHA, *Submission 19*, p. 8.

program launch on 1 July 'to allow the market and householders to interact without the involvement of the department').²⁰

- From 1 December 2009 installers were required to agree to the publication of their names if deregistered for non-compliance.²¹
- From 24 December 2009 materials had to be on the list of Approved Products maintained by DEWHA. Installers were also required to affix the product label to a visible and accessible part of the roof cavity, and to the householder's copy of the work order form, to facilitate auditing.²²

2.23 In late 2009 and early 2010 further changes were made, supposedly in response to concerns about electrical safety: see paragraph 2.34.

2.24 The Minister for the Environment, the Hon Peter Garrett MP, ultimately cancelled the program on 19 February 2010, citing safety concerns and compliance issues, as discussed further below.

Registration and training requirements

2.25 From 1 July 2009, installer businesses were required to be registered with DEWHA. DEWHA claimed that registered installers had to demonstrate minimum trade related competencies and occupational health and safety training, hold appropriate insurance and comply with the relevant Australian Standards for insulation materials and installation.²³

2.26 DEWHA submitted that the trade related competencies required by the program could be:

- a trade specific competency: licensed builder, electrician, carpenter, bricklayer, plasterer, painter or plumber, or equivalent where no licensing requirements exist; or
- insulation specific competency: a statement of attainment from a Registered Training Organisation against the BCG03 or CPC08 Training Package relating to insulation installation; or
- two years' work experience installing insulation.²⁴

2.27 Registered installers' employees and subcontractors did not need to have the trade related competencies, providing installers attested that employees/

20 This requirement was relaxed for remote locations. DEWHA, *Submission 19*, p. 15. HIP program guidelines version 5, 1 December 2009, p. 5.

21 DEWHA, *Submission 19*, p. 9.

22 DEWHA/DCCEE, answer to question on notice 104 from hearing 26 February 2010 (received 23 March 2010).

23 Installer Advice No. 9, 29 September 2009; and No. 12, 26 October 2009.

24 Installer Advice No. 9, 29 September 2009.

subcontractors were supervised by a person who had the competencies and signed off the Work Order Form. However all persons involved in installation had to have general occupational health and safety training.²⁵

2.28 Later changes included publicising the deregistration of non-compliant installers from December 2009, and minimum training or skill requirements for all persons involved in installation (not only supervisors) from 12 February 2010 which transpired just days before the suspension of the entire program.²⁶

2.29 However, the committee is not satisfied that the government implemented any timely and systematic testing of the veracity or integrity of claims made by installers in their registration forms.

2.30 The committee is concerned that the deregistration process was more ad hoc than rigorous.

2.31 DEWHA contracted the Construction and Property Services Industry Skills Council to produce a range of training resources for Register Training Providers, including a 'pocket book' for installers which was available from 1 August 2009. The pocket book contained information about common installation hazards including electrical hazards.²⁷

Health and safety requirements

2.32 The program's health and safety requirements included:

- mandatory minimum occupational health and safety training for all personnel involved in installation;
- installers to comply with state/territory occupational health and safety laws; and
- installation practices to be governed by the relevant Australian Standards and state/territory regulations for laying thermal insulation and working around electrical wiring.²⁸

2.33 In late October and early November 2009, following a number of serious incidents including the death by electrocution of an installer on 14 October, DEWHA with the relevant industry skills councils upgraded the training program. The installers' Pocket Book was updated, particularly to give more prominence to the

25 DEWHA, *Energy Efficient Homes Package – competency requirements for registration on the Installer Provider Register*, September 2009.

26 DEWHA, *Submission 19*, pp 6, 9 and 16.

27 CPSISC, *Submission 5*, p. 2. *Construction industry pocket book – resource for installers of ceiling insulation*.

28 DEWHA, *Submission 19*, p. 26.

instructions about electrical safety, and copies were sent to all registered installer businesses and to registered training organisations to distribute to installers.²⁹

Safety concerns and closure of the program

2.34 On 1 November 2009, after the tragic death of an installer, and following concerns about fires started by overheated downlights, Minister Garrett announced additional safety and compliance measures including:

- a ban on metal fasteners for foil insulation, from 2 November;
- mandatory installation of covers over downlights and other ceiling appliances, from 2 November;³⁰
- a mandatory risk assessment for each job before work started, from 1 December (this involved filling in a form which prompted the installer to look for the listed hazards, and gave advice on how to respond to them); and
- a targeted electrical safety inspection of Queensland homes with foil insulation installed under the program.³¹

2.35 On 30 November 2009, Minister Garrett announced that training requirements would apply beyond supervisors, to all personnel involved in installation. This took effect from 12 February 2010.³²

2.36 On 9 February 2010, Minister Garrett suspended the use of foil insulation from the program because of concerns about electrical safety where foil is not properly installed. On 10 February, Minister Garrett announced that all houses with foil installed under the program (about 50 000) would be required to have an electrical safety inspection.³³

2.37 Finally, on 19 February 2010, Minister Garrett announced the closure of the Home Insulation Program from that day, because of safety and compliance

29 DEWHA, *Submission 19*, p. 8.

30 This made the program requirement more stringent than the relevant Australian Standard, which is satisfied by providing a clearance around downlights: see paragraph 5.7.

31 Hon. P. Garrett, Minister for the Environment, Heritage and the Arts, *Insulation changes: safety, consumer protections and value for money*, media release, 1 November 2009. *Update on insulation training requirements*, media release, 17 December 2009.

32 Hon. P. Garrett, Minister for the Environment, Heritage and the Arts, *Insulation safety standards to get a further boost*, media release, 30 November 2009. *Update on insulation training requirements*, media release, 17 December 2009.

33 Hon. P. Garrett, Minister for the Environment, Heritage and the Arts, *Foil insulation suspended from Home Insulation Program*, media release, 9 February 2010. *Electrical safety inspections for foil insulation*, media release, 10 February 2010.

concerns.³⁴ The announcement came after the death of a fourth installer and the first hearing of this committee's inquiry into the program.

2.38 At that time the government announced an intention to replace the HIP with a Renewable Energy Bonus Scheme (REBS) to operate from 1 June 2010. This was supposedly planned to subsidise solar hot water systems and ceiling insulation, with more stringent conditions than the HIP.³⁵ However, following the advice of Dr Allan Hawke's review of the HIP, the government announced on 22 April 2010 that the insulation component of REBS would not proceed:

Dr Hawke has advised the Government that he has “grave concerns about the wisdom of proceeding with any further government supported home insulation program.” In his report he notes that “the safety and quality risks cannot be fully abated and both the Government’s efforts and those of reputable industry players will be largely deployed on the Government’s rectification program, which must proceed as soon as possible.”...

It is because of these concerns about the development of an appropriate risk management framework in regards to safety and compliance issues that the Government has made the decision that REBS will proceed without the insulation component.³⁶

Actions arising from closure of the Home Insulation Program

2.39 On 10 March 2010, Minister Combet announced a range of supposed rectification and remediation actions to deal with the closure of the HIP. Further details were provided on 1 April 2010.³⁷ They were stated to be:

- The Foil Insulation Safety Program: the removal of foil insulation, or installation of safety switches, in the 50 000 homes which had foil installed. The government expected that this would take about 6 months after commencement to complete. An initial inspection of around 1000 homes fitted with foil insulation found that:
 - about 3 per cent had electrical safety risks;

34 The solar hot water rebate continued to be available. Hon. P. Garrett, Minister for the Environment, Heritage and the Arts, *Significant changes to Commonwealth environmental programs*, media release, 19 February 2010. The reason for closing the Home Insulation Program is not clearly stated in this media release, but appears from other comments around that time: for example Hon. G. Combet, Minister Assisting the Minister for Climate Change and Energy Efficiency, *House of Representatives Hansard*, 10 March 2010, p. 2149ff.

35 Hon. P. Garrett, Minister for the Environment, Heritage and the Arts, *Significant changes to Commonwealth environmental programs*, media release, 19 February 2010.

36 Hon. G. Combet, Minister Assisting the Minister for Climate Change and Energy Efficiency, *Insulation component of the renewable energy bonus scheme will not proceed*, media release, 22 April 2010. Dr Hawke's review is described further below.

37 Hon. G. Combet, Minister Assisting the Minister for Climate Change and Energy Efficiency, *House of Representatives Hansard*, 10 March 2010, p. 2149ff. *Home insulation safety plan*, media release, 1 April 2010.

- 5 per cent had fire safety risks;
 - 20 per cent had pre-existing electrical safety risks not related to the insulation; and
 - 33 per cent involved use of metal staples after they had been prohibited under the program.³⁸
- The Home Insulation Safety Program involves targeted inspections of at least 150 000 homes which had non-foil insulation installed. These inspections are targeted at the homes which are most likely to have safety issues, and will include 'simple remediation work' such as fitting downlight covers. In addition, any household that has safety concerns can request an inspection. 15 000 targeted inspections showed that:
 - 66 per cent of installations were fully compliant;
 - 7.6 per cent had fire safety hazards;
 - 16 per cent had other quality issues including non-compliant insulation product and incomplete installations;
 - 0.5 per cent involved potential fraud;
 - 9.5 per cent of inspections could not be completed for various reasons.³⁹

2.40 The government appointed an expert panel of industry, employee and regulatory representatives to advise on the inspections programs, including Dr Ron Silberberg, ex-Managing Director of the Housing Industry Association; Mr Peter Tighe, National Secretary of the Electrical Trades Union; and Mr Tony Arnel, Victoria's Building and Plumbing Commissioner and chair of the Green Building Council of Australia.⁴⁰

2.41 The funding to meet the government's commitments under the Home Insulation Safety Program and the Foil Insulation Safety Program will come from within the existing budget of the Home Insulation Program.⁴¹

38 Hon. G. Combet, Minister Assisting the Minister for Climate Change and Energy Efficiency, *House of Representatives Hansard*, 10 March 2010, p. 2153.

39 Hon. G. Combet, Minister Assisting the Minister for Climate Change and Energy Efficiency, *House of Representatives Hansard*, 10 March 2010, p. 2153. The government noted that these survey results may not be representative of all installations, because inspections have to some degree been targeting firms with a poor compliance record.

40 Hon. G. Combet, Minister Assisting the Minister for Climate Change and Energy Efficiency, *House of Representatives Hansard*, 10 March 2010, p. 2154.

41 Hon. G. Combet, Minister Assisting the Minister for Climate Change and Energy Efficiency, *Home insulation safety plan*, media release, 1 April 2010.

2.42 According to Dr Hawke, there may be very little of the approximately \$1 billion unspent from the HIP's total allocation of \$2.45 billion, after the safety inspections are carried out:

Early indications of the compliance work [being undertaken under the Foil Insulation Safety Program and the Home Insulation Safety Program] are that significantly more houses may require inspection and potential rectification. These demands may leave little available funding for the Renewable Energy Bonus Scheme (REBS).⁴²

2.43 The 2010–11 Budget allocated \$66 million for the Foil Insulation Safety Program and \$295 million for the Home Insulation Safety Program in 2010–11, but also allocated \$365 million over 2010–11 and 2011–12 for ongoing costs associated with the Home Insulation Program, which the committee was told could be used to meet further rectification costs.⁴³ According to the Department of Climate Change and Energy Efficiency, to 15 June 2010, 24 624 foil houses and 36 930 non-foil houses have been inspected. About 2000 homes are being inspected per week. It is unclear whether these figures include or are in addition to auditing and compliance inspections done during the currency of the HIP, or the targeted inspections which Minister Combet noted in his 10 March 2010 statement to Parliament (see paragraph 2.39).⁴⁴

2.44 In addition, the government established a number of industry assistance measures explained as:

- a \$41.2 million Insulation Workers Adjustment Package, consisting of support to workers to retain their current job, or assistance to find alternative jobs or training places where suitable employment is not available;⁴⁵
- a \$15 million Insulation Industry Assistance Package for firms with appropriate compliance records to assist in meeting the cost of insulation stock-holdings;⁴⁶ and
- other assistance to firms by allowing them, on conditions, to participate in home inspections; and deferral of GST payment obligations.⁴⁷

42 Dr A. Hawke, *Review of the Administration of the Home Insulation Program*, 6 April 2010, p. xiii.

43 Climate Change and Energy Efficiency Portfolio, *Portfolio Budget Statement 2010–11*, p. 24.

44 Department of Climate Change and Energy Efficiency, *Insulation update—15 June 2010*. See also DCCEE, answers to questions on notice 68 and 69 from hearing 26 February 2010 (received 25 March and 5 May 2010); and *Committee Hansard*, 27 May 2010 (Environment, Communications and the Arts Legislation Committee, DCCEE Estimates hearing), p. 71.

45 This involves various activities by the Department of Education, Employment and Workplace Relations: see *Committee Hansard*, 25 March 2010, p. 65ff.

46 Eligible businesses, to 4 June 2010, could apply for a one-off cash payment of 15 per cent of the value of their insulation stock holding at 30 April 2010, up to a maximum of \$500 000.

2.45 The government has advised that to 10 June 2010, 760 applications have been received under the Insulation Industry Assistance Package; 98 applications worth \$6.1 million have been approved; 44 applications have been rejected; and 618 applications are being considered.⁴⁸

2.46 The government has appointed KPMG as forensic auditors and moved additional staff and resources within DCCEE into audit and compliance work.⁴⁹

2.47 After numerous requests from the opposition, the government has asked the Auditor-General to audit the program as a matter of priority. The Auditor-General's report is expected by September 2010.⁵⁰

Outcomes of the Home Insulation Program

Installation rates

2.48 Over 1.2 million homes were insulated under the program, at a cost to government of approximately \$1.5 billion in rebates.⁵¹ This may be compared with an estimated 2.7 million homes which, before the program, had no or inadequate ceiling insulation, and with the historical rate of insulation retrofitting of about 65–70 000 per year.⁵²

2.49 ICANZ estimated that retrofit ceiling insulation was about 10 per cent of the market before the HIP, and was about 50 per cent of the market during the HIP.⁵³

2.50 Activity increased enormously in the months after July 2009, when payments could be made directly to installers through Medicare without the householder being

47 Hon. G. Combet, Minister Assisting the Minister for Climate Change and Energy Efficiency, *House of Representatives Hansard*, 10 March 2010, p. 2152. *Home insulation safety plan*, media release, 1 April 2010. *Applications open for insulation industry assistance*, media release, 6 May 2010.

48 Department of Climate Change and Energy Efficiency, *Insulation update—15 June 2010*.

49 KPMG were appointed in April 2010 and are expected to complete their work in July: Dr M. Parkinson & Mr M. Bowles, *Committee Hansard*, 27 May 2010, pp 97 and 104 (Environment, Communications and the Arts Legislation Committee, Budget Estimates hearing). Hon. G. Combet, Minister Assisting the Minister for Climate Change and Energy Efficiency, *Home insulation safety plan*, media release, 1 April 2010.

50 Hon. G. Combet, Minister Assisting the Minister for Climate Change and Energy Efficiency, *Home insulation safety plan*, media release, 1 April 2010.

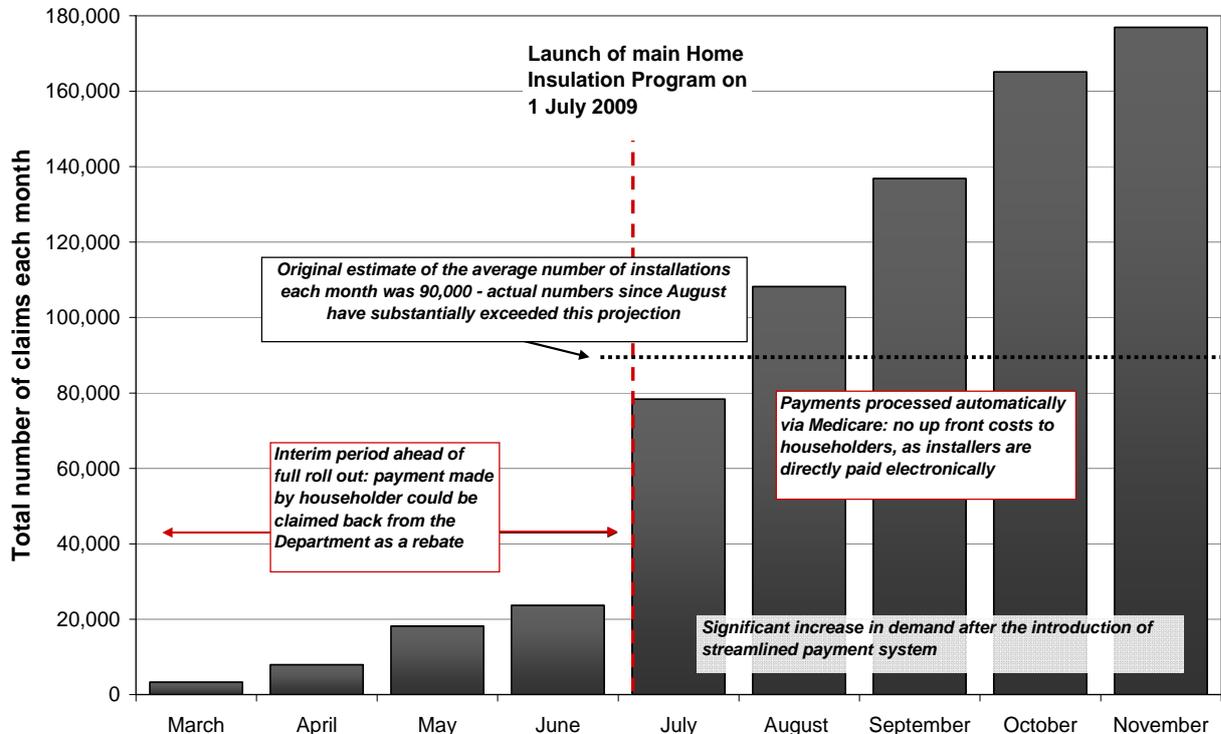
51 DEWHA/DCCEE, answer to question on notice 53 from hearing 26 February 2010 (received 22 April 2010). Based on claims lodged to 28 February 2010. At the time of the answer claims processing was not complete.

52 ICANZ, *Submission 18*, p. 6. Hon. G. Combet, Minister Assisting the Minister for Climate Change and Energy Efficiency, *House of Representatives Hansard*, 10 March 2010, pp 2149–2151.

53 Mr D. D'Arcy (ICANZ), *Committee Hansard*, 17 February 2010, p. 55.

out of pocket (see Figure 1). For example, in November 2009 alone there were nearly 180 000 claims, or nearly three times as much as the pre-HIP *annual* activity.

Figure 1—Home Insulation Program claims, March to November 2009



Source: DEWHA, *submission 19*, p. 5. The graphed figures are: March 3321; April 7917; May 18 175; June 23 642; July 78 375; August 108 169; September 136 838; October 165 104; November (to 23 November) 176 972; total 718 513. Later figures are: November (total) 209 267; December 136 402; January 2010 139 850; February 186 095.⁵⁴

2.51 This unprecedented level of activity, compared with the relatively stable state of the industry previously, appears to have contributed to the safety and compliance problems that arose in the second half of 2009.

Environmental outcomes

2.52 At best, the environmental outcomes of the program are uncertain, particularly given the circumstances and consequences of its closure. According to DEWHA, when the program was announced in February 2009 preliminary estimates indicated that the combination of the Home Insulation Program, Low Emissions Assistance Plan for Renters and the Solar Hot Water Rebate would yield cumulative greenhouse gas savings of approximately 49.4 million tonnes of CO₂e by 2020.

2.53 Subsequent analysis by the Department of Climate Change in December 2009 indicated annual emissions savings in the order of 4.5 million tonnes of CO₂e in the

54 DCCEE, answer to question on notice 86 from hearing 26 February 2010 (received 13 May 2010). Figures show claims lodged to 17 March 2010.

year 2020.⁵⁵ Given the greatly reduced number of homes that were insulated compared to the number originally envisaged (ie 1.2 million rather than 2.7 million)⁵⁶ this abatement figure would appear to significantly overestimate the annual savings, perhaps by as much as 50 per cent.

2.54 DEWHA noted that it was too soon to estimate the effect of the program on greenhouse gas emissions, but noted that 'ceiling insulation is considered the most effective form of insulation.'⁵⁷ Dr Allan Hawke in his review of the program commented, 'the precise quantification of carbon emissions abatement generated from the HIP has been questioned and there would be value in testing this further.'⁵⁸

2.55 The Department of Climate Change and Energy Efficiency provided an updated estimate of greenhouse gas abatement for the Energy Efficiency Homes Package in March 2010. It estimated that 27 million tonnes CO₂-e will be saved by 2020.⁵⁹

2.56 In any event, evidence put to or able to be sourced by the committee suggests that any estimate to date of alleged emission savings fails to take into account homes wrongly insulated or 'de-insulated' as a result of the HIP. As well, the environmental costs of discarding insulation materials (including materials that may be dumped in public areas) appear not to have been considered.

Employment outcomes

2.57 At best, the employment outcomes of the program are hazy. ICANZ estimated that prior to the EEHP there were around 200 companies retrofitting insulation. DEWHA submitted that as at 6 December 2009, there were 6313 active installer companies and estimated that the installer workforce was more than double this. Officials from the Department of Education, Employment and Workplace Relations could not provide a more accurate estimate and also indicated they had no independent means of verifying DEWHA's estimate. ICANZ estimated that the EEHP has created over 6000 new jobs across Australia.⁶⁰

55 DEWHA, *Submission 19*, p. 34.

56 DEWHA, *Submission 19*, p. 6 and answer to question on notice 53 from hearing of 26 February 2010 (received 22 April 2010).

57 DEWHA, *Submission 19*, p. 34

58 Dr A. Hawke, *Review of the Administration of the Home Insulation Program*, 6 April 2010, p. xiv.

59 DEWHA/DCCEE, answer to question on notice 74 from hearing 26 February 2010 (received 30 April 2010). This estimate is calculated for the Energy Efficiency Homes Package and includes the Home Insulation Program and the Solar Hot Water Rebate Program.

60 DEWHA, *Submission 19*, pp 21–23. ICANZ, *Submission 18*, p. 10. Mr Robert Griew, Associate Secretary, Department of Education, Employment and Workplace Relations, *Committee Hansard*, 26 February 2010, p. 41.

2.58 DEWHA estimated that over two thirds of program expenditure generated employment downstream of the manufacturers in distribution, warehousing, installation and support services. ICANZ estimated that for each manufacturing job created there have been 20–30 downstream jobs created, although no figures were provided on the number of manufacturing positions created. DEWHA submitted that installing insulation is labour intensive, and is an effective stimulus measure in terms of supporting domestic employment, notwithstanding the use of a level of imported materials.⁶¹

2.59 Dr Allan Hawke in his review of the program commented, 'at its peak (in November 2009), the program had registered over 10,000 installers employing thousands of largely low-skilled workers...' and that 'an HIP objective was to support jobs in the insulation industry and this objective was met.'⁶²

2.60 However, the early closure of the program has had a range of negative employment impacts. Minister Combet has acknowledged that:

...the decision to terminate the program prematurely has been influenced by the conduct of a number of unscrupulous operators. Their behaviour has resulted in widespread harm to legitimate businesses and the redundancy of many employees.⁶³

Business distress

2.61 There has been significant distress among affected businesses as a result of the negative consequences of HIP itself, including unjustified tarnishing of industry reputations from its unexpected closure, as well as the government's April 2010 decision to renege on its February 2010 promise to establish a replacement program. In short, the calamities concertinaed. For example:

I am the owner of a now destroyed insulation manufacturing and installing business that has been operating for 16 years. I have done only two jobs since the 19th Feb [2010].... I have spent over \$30,000 keeping my business afloat without income since Feb 19th, while waiting for the announced new rebate program to begin on June 1st [2010], which didn't happen... The Insulation Rebate program has left me with a legacy of a non viable business, no income, a business loan established in May 2008 [9 months before the program began] against the equity in my family home and now no means to repay it, expensive but now idle and valueless plant and equipment, industrial shed rents and truck registrations to pay, future advertising and vehicle lease commitments, excessive stock levels with no value now etc, etc, etc... I now have to sell our home of 15 years in order to

61 DEWHA, *Submission 19*, pp 21–23. ICANZ, *Submission 18*, p. 10.

62 A. Hawke, *Review of the Administration of the Home Insulation Program*, 6 April 2010, p. xiii, 35.

63 Hon. G. Combet, Minister Assisting the Minister for Climate Change and Energy Efficiency, *House of Representatives Hansard*, 10 March 2010, p. 2154.

repay the loan and will be left with nothing after all of the associated losses have been factored in. I am 57 years old. I am married and have 3 school age children. Total immediate losses for me are well in excess of \$350,000 plus the loss of my income... The Workers Adjustment package offered little if nothing in the way of real assistance...⁶⁴

2.62 There have been complaints about delays in payments from the government, by both HIP installers as well as inspectors subsequently doing 'rectification' work under the HISP and FISP programs.⁶⁵ According to media reports in late May 2010, Minister Combet advised that about 100 000 claims had been paid out since the closure of the program, and a further \$50–60 million worth of claims were outstanding but subject to investigation because they were incomplete or incorrectly completed.⁶⁶ On 27 May 2010, DCCEE advised that there are about 50 000 outstanding invoices of which almost half relate to compliance activities.⁶⁷ On 15 June 2010, DCCEE advised that about 31 000 claims under the Home Insulation Program had not been processed. Of these, 6000 were incomplete and require clarification, and about 25 000 were being withheld for investigation for possible fraud or non-compliance.⁶⁸

2.63 In relation to FISP inspections, DCCEE has advised that it aims for a 30 day turn around of payment of valid claims. To 25 June 2010 about 19 000 of the 24 000 claims received had been processed and paid, but some delays had occurred 'due to the volume of claims received, a high proportion of incorrectly completed claims and extra workload generated from duplicate claims'.⁶⁹

Review of Home Insulation Program by Dr Allan Hawke

2.64 As already touched upon, the government asked former senior public servant Dr Allan Hawke to conduct an independent review of the design and administration of the Home Insulation Program.⁷⁰

2.65 On the positive side, Dr Hawke found that:

64 R. Palfery, *Submission 53*. Similarly M. Delany, *Submission 51*.

65 P. Karvelas, 'Furious insulators to rally in Canberra', *The Australian*, 24 May 2010, p. 4. N Berkovic, 'Sparkies angry at delay on payments', *The Australian*, 10 June 2010, p. 7.

66 *Australian Financial Review*, 25 May 2010, p. 7.

67 Mr M. Bowles, *Committee Hansard* 27 May 2010 (Environment, Communications and the Arts Legislation Committee, DCCEE Estimates hearing), p. 71.

68 Department of Climate Change and Energy Efficiency, *Insulation update—15 June 2010*.

69 Department of Climate Change and Energy Efficiency, *Foil Insulation Safety Program*, www.climatechange.gov.au/government/programs-and-rebates/hisp/foil-insulation.aspx (last updated 25 June 2010).

70 Hon. G. Combet, Minister Assisting the Minister for Climate Change and Energy Efficiency, *House of Representatives Hansard*, 10 March 2010, pp 2155 and 2157.

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- there were 'solid achievements' against the program objectives, including over one million homes insulated, with the prospect of significant future savings in energy bills;
 - for the first time there was a national focus on safety standards in the industry; and
 - the partnership with Medicare was successful.

2.66 On the negative side, Dr Hawke found that:

- despite some safeguards against fraud, no-one foresaw the possible extent of potential malfeasance;
- program management infrastructure and expertise at DEWHA were not sufficient to support the at times unanticipated demands made on them;
- a higher level of senior management oversight should have been assigned;
- given the scale of the program, it demanded more attention from the Office of the Coordinator General than it received;
- many of the risks of the chosen delivery model could never be fully mitigated, and remained high throughout delivery of the program; and
- implementation of the audit and compliance framework lagged behind.⁷¹

2.67 As mentioned earlier, after considering the advice of Dr Hawke's review, the government decided not to proceed with the home insulation component of the REBS.

Committee comment

2.68 As is demonstrated in the following chapters, the Home Insulation Program markedly failed to deliver the potential benefits that the government promised would flow from the program and, as a result of design and implementation failures, appears to have left the insulation industry worse off than before the development of the HIP.

2.69 Concerns about the Home Insulation Program relate mostly to:

- whether the program was adequately designed and managed to mitigate risks identified during the program development phase; and
- whether the responses to the hazards and improprieties that unfolded were appropriate and effective.

These issues are discussed in the following chapters.

Recommendation 1

71 Dr A. Hawke, *Review of the Administration of the Home Insulation Program*, 6 April 2010, p. 7ff.

2.70 That a Royal Commission be held into the Home Insulation Program to investigate the development and implementation of the Program, including:

- **gross and systematic failures in the development and implementation of the Program;**
- **planning and design of the Program, particularly the extent of consideration given to it by relevant ministers and senior executives;**
- **the safety and fire risks resulting from the installation of insulation under the Program;**
- **the adequacy of ministerial and senior executive oversight and responsiveness to advice given or developments in implementation;**
- **the loss of life and injuries to untrained workers contracted under the Program;**
- **given the haste, scale, unprecedented and other circumstances of the implementation of this Program:**
 - **the adequacy of industry product standards and workplace training;**
 - **the complete failure of workplace training;**
- **the extent to which pressures to deliver the Program as an immediate economic stimulus measure were expressed or implied, by whom and how they impacted appropriate program development and delivery; and**
- **the warnings received within or by the government in the months leading up to and following the implementation of the Program.**

Chapter 3

Issues relating to program design and administration

3.1 This chapter discusses how aspects of the program design, administration and risk management contributed to the serious problems that arose during the Home Insulation Program (HIP). It considers:

- the design and implementation timeframe;
- the adequacy of DEWHA's administration and resources;
- the adequacy of DEWHA's risk management;
- in particular, the adequacy of training and competency standards for installing insulation;
- the effect of the maximum rebate and the Medicare billing model.

Design and implementation timeframe

3.2 The HIP was developed in the limited timeframe between the Prime Minister's announcement on 3 February 2009 and the start of the fully developed program on 1 July 2009. The HIP was part of the \$42 billion Nation Building and Jobs Plan stimulus measure. A dominant, if not overriding instruction to the Commonwealth Coordinator General (within the Department of the Prime Minister and Cabinet), who oversaw the Nation Building and Jobs Plan, was to 'break red tape and get work happening on the ground as quickly as possible'.¹

3.3 This short time frame created significant and arguably insurmountable risks. A risk assessment prepared by Minter Ellison for DEWHA in April 2009 (the Risk Register) noted that the 'scale' of the task was 'new' to the Department. It advised of risks of 'delays or total non-delivery; substantial increased costs; increases in other risks including fraud and political fallout'.²

3.4 The Risk Register identified a number of mitigating actions – for example, 'simplify business model where possible to reduce time constraints'. However it regarded the effectiveness of the proposed mitigating actions as 'weak', and the residual risk value after mitigating actions as 'extreme'. It suggested as an additional action 'extend rebate scheme to 30 September [2009]'.³ The Risk Register is discussed further from paragraph 3.39.

1 *Nation Building Economic Stimulus Plan - Commonwealth Coordinator-General's Progress Report 3 February 2009–30 June 2009*, p. 12.

2 Minter Ellison, *Risk Register and Management Plan*, 9 April 2009, p. 1.

3 Minter Ellison, *Risk Register and Management Plan*, 9 April 2009, p. 1. 'Rebate scheme' refers to the 'phase 1' program which operated until 30 June 2009, in which householders paid installers and sought reimbursement from DEWHA.

3.5 There is evidence that much of the pressure to roll out the program quickly came from the Department of the Prime Minister and Cabinet. According to the minutes of an industry consultation meeting on 18 February 2009, a representative of the Office of the Coordinator General informed the meeting that '\$2.7 billion worth of funding is in part structured around the Government going into deficit for a short period of time. Clear statements from Treasurer and the Prime Minister state that funding is required to be spent within 2.5 years with a cap of \$1600 per household.'⁴

3.6 Mr Mrdak (former Coordinator General) said in evidence:

The government had clearly set out a very ambitious program for the rollout of a number of these infrastructure initiatives... The time frames were set out in the National Partnership Agreement, which was agreed by COAG... There certainly was a strong view by government and by senior officials that we should continue to press on to meet the time frames that had been set out by the government.⁵

3.7 The tight time frame was a significant factor in the choice to use a demand driven model in which installers would register for the program, contract directly with householders, and claim payment through Medicare.⁶

3.8 On Minter Ellison's suggestion to defer the start of the program by three months, DEWHA commented:

[deferring the start date] was considered only in the context of the risk which was put on the table by Minter Ellison. We addressed those risks and, as a result, given the model which we adopted, there was no need to make a deferral.⁷

3.9 Dr Hawke's review commented that 'while the model was delivered, implementation of the audit and compliance framework lagged behind...'

...The opportunity to step back from the day to day management of the program, ask hard questions and test assumptions was not taken until late in proceedings. Resources were tied up with crisis management.⁸

4 ICANZ, answers to questions on notice from hearing 17 February 2010 (received 16 March 2010): minutes of a stakeholder consultation meeting 18 February 2009.

5 Mr M. Mrdak (former Coordinator General), *Committee Hansard*, 26 February 2010, p. 10. Similarly Mr M. Forbes (DEWHA), *Committee Hansard*, 25 March 2010, p. 13.

6 DEWHA, *Submission* 19, p. 7. Mr M. Mrdak (former Coordinator General), *Committee Hansard*, 22 February 2010, p. 11; 26 February 2010, p. 14, 37. Dr A. Hawke, *Review of the Administration of the Home Insulation Program*, 6 April 2010, p. 26. Another payment model had been considered in which DEWHA would manage delivery through regional head contractors.

7 Mr M. Forbes (DEWHA), *Committee Hansard*, 22 February 2010, p. 61.

8 Dr A. Hawke, *Review of the Administration of the Home Insulation Program*, 6 April 2010, pp xi–xii.

Committee comment

3.10 The haste in rolling out the full program by 1 July 2009 was a major cause of problems that subsequently arose. The government had clear and unambiguous warnings of this in Minter Ellison's suggestion that the interim (reimbursement) program should be extended by three months, in order to allow more time to properly address the identified program risks.

3.11 It is clear that the Office of the Co-ordinator General, operating within the Department of the Prime Minister and Cabinet with direct and regular reporting to the then Prime Minister, Minister Arbib and the relevant sub-committee of the Cabinet applied pressure to roll out the program quickly, in spite of the forecast risks.

3.12 By and large, federal bureaucrats do their professional best to implement the will of the government of the day.

3.13 Due to a failure to comply with requests for the release of all briefings and relevant information, coupled with understandable hesitancy of lower ranking public servants to speak 'on the record', the committee could not sufficiently test allegations that junior to middle-ranking departmental officers issued early, repeated warnings to senior departmental ranks. Nor could the committee satisfactorily test allegations such as those aired on the *Four Corners* program⁹ that such warnings went unheeded by senior departmental officers, swept aside by government-dictated exigencies of haste to get taxpayer dollars out the door.

3.14 In the absence of such 'testing', and in any event, responsibility for any bureaucratic shortcomings properly falls at the feet of respective Ministers and Prime Ministers.

3.15 In the committee's view, then Prime Minister, the Hon Kevin Rudd, then Deputy Prime Minister Gillard who was responsible for workplace training, and the Minister Assisting the Prime Minister for Government Service Delivery, Senator Arbib (who had oversight of fiscal stimulus spending), bear significant responsibility for the consequences of the HIP, particularly due to their apparent role in placing speed of delivery before the safety of implementation.

3.16 This is in addition to the responsibility borne by Minister Garrett, and the responsibilities Minister Combet now has to neutralise the negative consequences of the HIP. Regrettably in rejecting invitations to appear before the committee, these Ministers failed to avail themselves of opportunities to provide evidence to the contrary.

9 'A Lethal Miscalculation', *Four Corners*, ABC Television, 26 April 2010.

Adequacy of DEWHA's experience, administration and resources

3.17 DEWHA very quickly began to experience the management, capability and capacity risks identified by the Risk Register for DEWHA's looming role in the management of the HIP.¹⁰

3.18 In short, the government tasked a bureaucracy better experienced and equipped for policy development than program implementation, with defying forecast risks to implement an unprecedented and ambitious demand-driven program largely on the run and across the states.

3.19 The tight time frame for developing the full program exacerbated problems DEWHA already faced. Before the HIP, DEWHA had little to no experience in running a program of this size and nature. It did not have staff with any detailed knowledge of the insulation industry. Management of the program was undertaken in a division with significant other responsibilities (the Renewables and Energy Efficiency Division). The relevant Deputy Secretary was also responsible for other major portfolio activities including the Antarctic Division, the Marine Division, the Land and Coasts Division, and Parks Australia Division.

3.20 A management structure more suitable to the size of the program, with reduced responsibilities for the Deputy Secretary, was established only in November 2009, by which time the HIP had run for about three quarters of its ultimate duration.¹¹

3.21 While measures were taken to second staff both internally and from other agencies with at least some relevant experience (eg the Australian Tax Office), capacity issues remained significant throughout the program. Staffing numbers ramped up during the period, but there was a heavy reliance on contracted staff.

3.22 According to Dr Hawke 'internal project management infrastructure and departmental experience were insufficient to support the (at times unanticipated) demands placed on them.'¹²

3.23 The frequent changes to the program details during the second half of 2009 created ongoing difficulties:

The program developed incrementally and reactively through this period... These frequent changes increased complexity and often involved transitional arrangements...that absorbed additional effort and resources,

10 For example, see items 3 and 4 of the Risk Register (see Appendix 6).

11 Dr A. Hawke, *Review of the Administration of the Home Insulation Program*, 6 April 2010, pp 33, 59–60.

12 Dr A. Hawke, *Review of the Administration of the Home Insulation Program*, 6 April 2010, p. 60.

leaving DEWHA with more 'catch up' on top of day to day work and process improvement.¹³

DEWHA consultations

3.24 DEWHA consulted with stakeholder groups and with state/territory governments in the first half of 2009 during the development of the 'phase 2' program.¹⁴ Not all groups were happy with the level of consultation. ICANZ appeared to be satisfied,¹⁵ but some of the smaller players were less satisfied. The Polyester Insulation Manufacturers Association of Australia thought that the program was 'rushed and needed greater consultation.'¹⁶ Mr Tikey of the Aluminium Foil Insulation Association said:

We were never consulted right at the start. Had we been consulted and had some of the areas we raised concerns about been taken on board, we would not be where we are today.¹⁷

3.25 Autex, a manufacturer of polyester insulation, in its submission argued that 'until it was highlighted that ICANZ only represented the interests of the fibreglass and rockwool industries, statements from this organisation were regarded by government as representative of the industry as a whole.'¹⁸

3.26 Dr Hawke reported that the states/territories felt they had had minimal input during the development of the program, and they would have preferred more engagement and a better flow of information.¹⁹

Committee comment

3.27 The government's move to commission an independent review of the HIP (the Hawke Review) was too little, too late and should have been undertaken earlier so that the findings could be used to improve the HIP. Such a comprehensive, independent assessment of the program structure and the capacity to deliver it should have been undertaken at the beginning and used to inform the development of such a large and untested program.

13 Dr A. Hawke, *Review of the Administration of the Home Insulation Program*, 6 April 2010, pp xii and 8.

14 DEWHA, *Submission 19*, p. 7. Mr M. Forbes (DEWHA), *Committee Hansard*, 22 February 2010, p. 39.

15 ICANZ, *Submission 18*, p. 12.

16 Mr J. Liaskos (PIMAA), *Committee Hansard*, 17 February 2010, p. 3.

17 Mr B. Tikey (AFIA), *Committee Hansard*, 17 February 2010, p. 35.

18 Autex, *Submission 10*, p. 3.

19 Dr A. Hawke, *Review of the Administration of the Home Insulation Program*, 6 April 2010, p. 17.

Communications with ministers

3.28 DEWHA briefed Minister Garrett on the Home Insulation Program 62 times between 6 February 2009 and 25 February 2010. The Department of Climate Change and Energy Efficiency (DCCEE), which has taken over responsibility for the program, refused to provide these briefs to the committee. In relation to ten briefs, DCCEE claimed various public interests reasons for withholding the information. In relation to the remaining 52 briefs, DCCEE gave no reason for refusing to provide them.²⁰ The department referred the 52 briefs to Minister Combet for his consideration of these matters. In relation to the 52 briefs the minister advised the committee that:

It is my view that they should not be released. I have come to this view on the following two grounds. Firstly, as the Secretary of the Department of Climate Change and Energy Efficiency noted in his letter of 1 April 2010 to the Committee, there is a level of ambiguity about whether their release would be in the public interest. In view of the Secretary's opinion, I have decided that it would not be in the public interest to release documents about which there is doubt. Secondly, it is my view that the documents are deliberative in nature, and therefore pertain to the deliberative processes involved in the functions of Government. Disclosure would therefore be contrary to the public interest.²¹

3.29 Neither of these claims meets the standard of past Senate practice. In response to his claims, Clerk of the Senate, Dr Rosemary Laing provided advice to the committee which states that:

Against this background, it is clear that the responses provided by Minister Combet do not meet the standards set by past Senate practice. Ambiguity about whether the disclosure of a document would be in the public interest has never been accepted by the Senate as a ground for non-disclosure. Paragraph (c)(4) of the Senate's resolution of 13 May 2009 requires a minister to consider whether the harm that may result from the public disclosure of a document would also result from its provision to a committee *in camera*. If there is ambiguity about this matter then the committee may wish to press the Minister further and ask whether the ambiguity could be addressed by provision of the documents to the committee *in camera*.

The second ground that has been advanced by the Minister for non-disclosure of the documents, namely, that they are deliberative in nature and pertain to the deliberative processes involved in the functions of

20 Dr M. Parkinson (DCCEE Secretary), correspondence 1 April 2010. In relation to the 52 briefs, the letter says that 'there remains a level of ambiguity about whether their release would be in the public interest'.

21 Hon. G. Combet MP, Minister Assisting the Minister for Climate Change and Energy Efficiency, correspondence 2 July 2010.

government has also not been accepted by the Senate as a “just and proper” claim of privilege.²²

3.30 According to evidence from DEWHA, Minister Garrett did not ask for, and was not given, the Minter Ellison Risk Register until February 2010.²³ DEWHA explained that:

The standard practice is for departments to actually look into risk assessment as part of good program design. By contracting Minter Ellison I do not think we necessarily indicated to the minister’s office who we were actually contracting but we certainly indicated we were undertaking appropriate risk assessments and seeking the appropriate expertise in this area to help us.²⁴

[The minister] would have been advised, as I think he has indicated, that there were risks in the program and that mitigation strategies would have been put in place to deal with those risks.²⁵

3.31 The extent of ministerial awareness of the early risks identified in documents, such as the Risk Register, or of the problems that rapidly emerged with the program are difficult to deduce given the refusal of the government to reveal contents of briefings. However the committee does note that both DEWHA and the Office of the Co-ordinator General acknowledged the provision of regular briefings about the HIP to Ministers Garrett and Arbib respectively.²⁶

Communication between ministers

3.32 Four letters from Minister Garrett to the Prime Minister concerning planned changes to the program were mentioned in evidence. The letters, dated 14 August, 27 August, 28 October and 30 October 2009, had been first mentioned by the Prime Minister in the House of Representatives. The committee sought further information about the letters. DCCEE replied that they were 'of a Cabinet-in-Confidence nature'.²⁷ On 12 May 2010 the Senate ordered production of the letters.²⁸

22 Advice from the Clerk of the Senate to the Chair of the Senate Environment, Communications and the Arts Committee, Senator Mary Jo Fisher, 9 July 2010.

23 Mr M. Thompson (DEWHA), *Committee Hansard*, 22 February 2010, p. 10. DEWHA, answer to question on notice 5 from hearing 22 February 2010 (received 22 February 2010).

24 Mr M. Forbes (DEWHA), *Committee Hansard*, 22 February 2010, p. 8.

25 Ms R. Kruk (DEWHA), *Committee Hansard*, 22 February 2010, p. 11.

26 DEWHA, answer to question on notice 11 from hearing 22 February 2010 (received 25 February 2010); and PM&C, answer to question on notice 2 from hearing 26 February 2010 (received 12 March 2010).

27 DEWHA, answer to question on notice 15 from hearing 25 March 2010 (received 4 May 2010).

28 *House of Representatives Hansard*, 11 March 2010, p. 2292. *Committee Hansard*, 25 March 2010, pp 47–8. DCCEE, answer to question on notice 15 from hearing 25 March 2010 (received 4 May 2010). Orders of the Senate No. 775 and 776 of 12 May 2010.

3.33 On 27 May 2010 the government released the letters of 27 August, 28 October and 30 October 2009, claiming that because much of the information was already in the public domain, no public immunity interest was claimed. These letters brief the Prime Minister about planned changes to the program conditions.²⁹

3.34 The government continues to withhold the fourth letter (14 August 2009), claiming that it formed an under the line submission to cabinet and therefore its release would be contrary to the public interest, in keeping with the convention of cabinet confidentiality.³⁰

3.35 In the absence of evidence to the contrary, the committee is entitled to deduce that the government considers that this letter contains information not yet in the public domain. Given the extent of public concern about this program the committee again urges the government, in the name of transparency and accountability to release this letter and all other briefings, reports or correspondence relevant to the HIP.

Committee comment

3.36 It appears that the management structures needed within DEWHA to handle such a large and complex program were not instituted until far too late. The committee endorses Dr Hawke's comments which it reiterates:

The opportunity to step back from the day to day management of the program, ask hard questions and test assumptions was not taken until late in proceedings. Resources were tied up with crisis management. DEWHA is not unique in this regard, but it is a lesson that is not easily learned by busy departments under pressure to deliver large programs.³¹

3.37 In relation to briefs from the DEWHA to Minister Garrett, which the committee requested, the committee records its strong dissatisfaction that DEWHA has not provided these without giving adequate reasons. On 9 June 2010, pursuant to a Senate Procedural Order, the committee sought the referral of these and other related matters to relevant ministers.³²

3.38 In the absence of evidence to the contrary, the committee can only conclude a level of negligence on the part of ministers or senior officials that detailed information on risks (including Minter Ellison's recommendation to defer the starting date) were

29 Hon J. Ludwig, Manager of Government Business in the Senate, correspondence to the President of the Senate, 26 May 2010. The letters were received out of session on 27 May 2010.

30 Hon J. Ludwig, Manager of Government Business in the Senate, correspondence to the President of the Senate, 26 May 2010. The letters were received out of session on 27 May 2010. See paragraph 1.14.

31 Dr A. Hawke, *Review of the Administration of the Home Insulation Program*, 6 April 2010, p. 18.

32 These letters were sent pursuant to the Senate's procedural order of continuing effect No. 8 concerning public interest immunity claims. See www.aph.gov.au/Senate/pubs/standing_orders/d04.htm#8 (accessed 9 June 2010).

either never communicated to or never acted on by the highest levels of the government.

Adequacy of DEWHA's risk management

Minter Ellison's Risk Register

3.39 In mid-March 2009 DEWHA commissioned from Minter Ellison a risk assessment of the program. The key outcome of this was a 'Risk Register and Management Plan' which was received by the department in early April 2009.³³ It listed many extreme and serious risks, and recommended mitigation measures to minimise the probability that the unwanted outcome would occur. To take one example:

Risk 5: Fraud: inadequate controls may allow fraudulent or inappropriate behaviours:

- Ineligible people accessing the program
- Industry quoting above actual cost of job
- Households double dipping between Commonwealth, State and Territory Programs above out of pocket costs
- Applicant accessing both SHWR and HIP programs
- Installer theft/ vandalism/ professionalism
- Internal/ staff member process integrity

Recommended Management Plan:

- Develop specific fraud strategy based on a capacity to outsource the risk
- Review processes to test specifically for control over possible fraud/incorrect payments... [and five other dotpoints: see Appendix 6]³⁴

3.40 The Risk Register listed 19 individual risks, which in summary were:³⁵

1. Extremely limited time to determine and implement effective project methodology and delivery/business model post 1 July 2009.
2. Procurement processes/timeframes; 1 July 2009 deadline for full program; scale of task is new to Department.
3. Time available to develop and implement the program in a properly controlled way may be inadequate.
4. Quality of installation/ control by installers and compliance structures may be inadequate.
5. Inadequate controls may allow fraudulent or inappropriate behaviours

33 A companion document referred to in evidence as the 'risk assessment' was tabled in the Senate on 22 February 2010. The contents of the Risk Assessment document are repeated in full in the Risk Register. See Appendix 6.

34 Minter Ellison, *Risk Register and Management Plan*, 9 April 2009, p. 2.

35 Some of these headings were enlarged with a few dotpoints not repeated here. See Appendix 6.

6. Multiple policy goals, vested commercial interests may hamper the efficient delivery of the program.
7. A variety of failures in the process, system, project deliverables etc may have significant indirect political/ public confidence impact.
8. Inadequate planning and communication may create poor delivery of communications strategy (internal and external).
9. Complex legal issues associated with the program may not be fully understood or dealt with.
10. Capacity to develop, staff, control and deliver the program on time may be insufficient.
11. The existing regulatory framework may not adequately support the program's goals.
12. Industry's capacity to produce and deliver sufficient quality materials and installations may be inadequate.
13. Actual outcomes (eg number of households included, long term savings), may not eventuate.
14. Delivery structure may result in overcentralisation, poor allocation and political/economic fallout.
15. Program may not achieve its objectives through poor uptake/program awareness.
16. Training mechanisms: capacity/control over installer network skills may be inadequate.
17. Risk of focussing on specific tasks and pressure groups may result in inadequate attention to all stakeholders and their interests.
18. Structure of program may impact on capacity of the industry both in the short and longer term.
19. Product quality may not be of adequate standard.

3.41 The Risk Register also listed relevant current activities, and gave an estimate of how serious each risk was; how effective mitigation steps were likely to be; and additional suggestions.

3.42 For example, in relation to risk 3 in the list above—the time to develop the program may be inadequate for a desired 1 July 2009 rollout—the risk was estimated as 'extreme', the effectiveness of mitigating actions was regarded as 'weak'; the residual risk after mitigating action was regarded as 'extreme'; and the suggested 'additional action plan' was 'extend rebate scheme to 30 September'.³⁶

3.43 Minter Ellison advised that even after mitigating actions, six matters had a 'high' or 'extreme' residual risk, as follows:

36 Minter Ellison, *Risk Register and Management Plan*, 9 April 2009, p. 1.

Table 2—Extracts of the Minter Ellison Risk Register of 9 April 2009

No.	Risk description ³⁷	Risk today	Effectiveness of mitigators	Residual risk value	Is residual risk value tolerable	Additional action plan
2	Procurement/licensing: needs for entire program duration to be determined and fulfilled by 1/7/09	Extreme	Weak	Extreme	No	Extend rebate scheme to 30 September 2009...
3	Time: time available to develop and deliver the program in a properly controlled way may be inadequate	Extreme	Adequate	Extreme	No	Extend rebate scheme to 30 September 2009...
5	Fraud: inadequate controls may allow fraudulent or inappropriate behaviour	Extreme	Adequate	High	Yes	
7	Political: a variety of failures in the process, system, project deliverables etc may have significant political fallout	Extreme	Adequate	Extreme	No	High level political/ stakeholder coordination and monitoring required
10	Internal capacity: capacity to develop, staff, control and deliver the program on time may be insufficient	Extreme	Adequate	High	Yes	
11	Regulation: the existing regulatory framework may not adequately support the program's goals	Extreme	Weak	High	Yes	

3.44 The risks to the safety of persons and property, subsequently one of the program's key shortfalls, are covered in the Risk Register under the heading 'installation quality and compliance':

[Risk 4] Risk description: Installation quality and compliance: quality of installation/ control by installers and compliance structure may be inadequate:

- poor quality installations
- compliance cost (to department or industry) may be excessive and process may be ineffective
- safety – house fire/damage
- insufficient number of auditors

Risk today: Extreme

Recommended management plan:

- Consider these issues in developing the business model

37 Under each of these headings more detailed dot points were given. See Appendix 6.

- Ensure business model transfers fraud risk from Commonwealth to providers where possible and allows effective monitoring
- Develop effective processes for registration of installers. Cover both financial viability and technical capacity in registration process
- Alternatively let third party contracts to do this; set up monitoring and reporting processes to identify emerging provider stress
- Ensure contract structure provide capacity to monitor and take action on poor performing providers
- Ensure installers are properly insured and consider requiring installers to indemnify the Commonwealth against claims/loss arising from installers' actions
- Review mitigation strategies in light of the agreed business model.

Effectiveness of mitigators: Strong

Residual risk value: Medium

Is residual risk value tolerable: Yes³⁸

3.45 DEWHA advised that the April 2009 Risk Register was updated over time.³⁹ Later versions of the Risk Register used by the interdepartmental Project Control Group in July, September and October 2009 noted the risk of 'unsafe or incorrectly installed product leads to fire/damage, injury or death', and listed various 'ongoing' mitigating actions, including:

- Additional compliance audit activity
- Enhance compliance education activity including proactive communications to educate installers on compliance requirements
- DEWHA communication tools (guidelines, website, installer packs, call centre) clearly explain policy requirements. Communications through public relations is consistent and includes info about the quality of materials.
- Mandatory training competency checking in desktop audits
- Liaise closely with DEEWR on management of installer skills...
- All companies to be responsible for ensuring supervision of staff in their employ (liaison)...⁴⁰

3.46 The Risk Assessment and the Risk Register (at 9 April 2009) are at Appendix 6.

3.47 It is noteworthy that at the relevant item 4 in the April 2009 Minter Ellison Risk Register the fire risk is dismissed with four words ('safety - house fire/damage')

38 Minter Ellison, *Risk Register and Management Plan*, 9 April 2009, p. 1.

39 Mr M. Forbes (DEWHA), *Committee Hansard*, 26 February 2010, p. 63.

40 DEWHA/DCCEE, answer to question on notice 28 from hearing 26 February 2010 (received 5 May 2010). The quoted text is from a 1 October 2009 version. There were very similar comments in 31 July and 17 September versions.

and the electrocution risk is not mentioned at all (see paragraph 3.44).⁴¹ The recommended risk management actions depended strongly on uncertain future conditions (for example 'review mitigation strategies in light of the agreed business model'), and they had a strong focus on minimising the Commonwealth's responsibility, rather than actually ensuring safe outcomes.

3.48 Training needs are mentioned elsewhere in the Risk Register;⁴² but the most obvious action to mitigate risks to personal safety—'ensure adequate training of all personnel'—is not mentioned at item 4. This suggests that at this time risks to personal safety were not being adequately considered.

DEWHA's management of risk

3.49 In April 2009, DEWHA established a Project Control Group with representatives of the Commonwealth agencies involved. They were DEWHA; Department of Education, Employment and Workplace Relations; and Department of the Prime Minister and Cabinet; Medicare Australia; and the Australian Taxation Office. The Department of the Prime Minister and Cabinet was involved in the form of the Office of the Coordinator General which was responsible for monitoring stimulus spending projects.⁴³

3.50 The Project Control Group met generally weekly from April to December 2009, with standing agenda items including the project's schedule, monitoring and reporting, risk management, stakeholder management, communications and compliance.⁴⁴

3.51 Commenting on risk management in evidence, DEWHA emphasised that the risk assessment was not a prediction of what would happen (with implication that the government would be negligent for persevering over its strong warnings), but rather a prudent hypothetical of what might happen in the absence of preventative action.⁴⁵ DEWHA argued that as the program rolled out 'significant measures were put in place systematically and progressively in an effort to manage those risks'—for example, in using the Medicare system for payments.⁴⁶ DEWHA admitted that the short timeframe for implementing the program (which Minter Ellison had flagged as creating an 'extreme' risk) was 'challenging':

41 The treatment of these risks was strengthened in later versions of the risk register, as noted at paragraph 3.34.

42 Minter Ellison, *Risk Register and Management Plan*, 9 April 2009, p. 4, item 16.

43 The Department of Human Services was also involved for a period. DEWHA, *Submission 19*, p. 22. DEWHA/DCCEE, answer to question on notice 28 from hearing 26 February 2010 (received 5 May 2010). Mr M. Forbes (DEWHA), *Committee Hansard*, 22 February 2010, p. 16.

44 Mr M. Forbes (DEWHA), *Committee Hansard* 25 March 2010, p. 3.

45 For example Ms R. Kruk (DEWHA), *Committee Hansard*, 26 February 2010, p. 60.

46 Ms R. Kruk (DEWHA), *Committee Hansard*, 22 February 2010, p. 3.

It was an ambitious program. Basically, the issue was to use a range of strategies to minimise that risk...the risks of the program were consistently discussed with the minister. The time frame in which it was being rolled out was one component of those and that was actually quite influential in the selection of the business model that was ultimately rolled out, as I indicated in relation to Medicare.⁴⁷

3.52 Commenting recently on DEWHA's risk management strategy, Minister Combet argued that 'the level of demand created significant difficulties not only for the administration of the program but also for the management of audit and compliance...'

...During the program design process, potential risks were canvassed in the Minter Ellison report received by the department in April 2009. Attached to each of the risks identified in the report were proposed mitigation actions. The risk register tracked these actions. I am advised that this information, along with other inputs, informed the overall program design. Notwithstanding the best endeavours of those responsible for the program design, the behaviour of unscrupulous operators led to the realisation of a number of these risks in the delivery of the program—most notably concerning the quality of installations and fraud.⁴⁸

3.53 Dr Hawke's recent review of the HIP, commenting on the 'high' and 'extreme' residual risks, said:

The first two of these risks and the last ['needs for entire program duration to be determined and fulfilled by 1/7/09'; 'time available to develop and deliver the program in a properly controlled way may be inadequate'; 'the existing regulatory framework may not adequately support the program's goals' - see paragraph 3.43] were addressed by the revised delivery model, but the remainder were risks that had to be managed through the life of the HIP.⁴⁹

3.54 Dr Hawke commented generally on DEWHA's risk management:

DEWHA established a strong risk management framework and then had in place a number of mechanisms to address and mitigate the risks...When issue arose, DEWHA and the Minister worked quickly to address them...Warnings were heeded; however this was largely reactive. Internal management structures, particularly early in the program, did not provide the necessary senior management oversight or allow for considered review at appropriate times. A program of the profile and significance of the HIP

47 Ms R. Kruk (DEWHA), *Committee Hansard*, 22 February 2010, pp 21 and 33. Similarly Mr M. Mrdak (former Coordinator General), *Committee Hansard*, 26 February 2010, pp 12ff and 37.

48 Hon. G. Combet, Minister assisting the Minister for Climate Change and Energy Efficiency, House of Representatives *Hansard*, 10 March 2010, p. 2155.

49 Dr A. Hawke, *Review of the Administration of the Home Insulation Program*, 6 April 2010, p. 32.

involving an industry that had minimal regulation warranted very close attention. It is acknowledged, however, that some of the issues flowing from the extreme level of demand could not be anticipated.⁵⁰

Committee comment

3.55 For a program of the HIP's nature, Minister Garrett should have requested the conduct of a risk assessment, a copy of it once done, and an action plan identifying how each risk was being addressed, when and by whom. The Risk Register should have been provided to Minister Garrett earlier than February 2010 for his consideration and government action. The extent to which important information was allegedly not shown to the minister appears reflective of a 'don't show–don't tell' culture.

3.56 In the committee's view the government's risk management activities through DEWHA fell breathtakingly short. It failed to anticipate or respond with sufficient urgency to the extremely high risks created by the haste, scale, demand-driven and national roll-out of an ambitious program involving an industry with standards and rules, simply inadequate for a program for which the government's overriding goal was to drive demand and rapidly rollout such a large program.

3.57 These risks were sufficiently flagged in Minter Ellison's April 2009 Risk Register and had been raised with the government by various industry stakeholders as early as February 2009.

3.58 The committee comments particularly on the electrical and fire risks which have since become a critical concern. Industry associations had raised these risks as early as February 2009. For example concerns were raised:

- by the National Electrical and Communications Association (NECA), February 2009: 'There is a significant risk of electrical equipment overheating especially in the event of downlights in ceilings being covered if insulation is installed inappropriately';⁵¹
- at stakeholder meeting, 18 February 2009: '...in New Zealand...a similar program had to be suspended because three people electrocuted themselves';⁵²
- by NECA to Minister Garrett, March 2009: 'Whilst not the only safety issue by far the most dangerous is the risk of fire associated with installing thermal insulation over or in close proximity to recess luminaires';⁵³

50 Dr A. Hawke, *Review of the Administration of the Home Insulation Program*, 6 April 2010, p. 43.

51 NECA, *Submission 39*, attachment, media release 16 February 2009.

52 ICANZ, answers to questions on notice from hearing 17 February 2010 (received 16 March 2010): minutes of a stakeholder consultation meeting 18 February 2009, p. 5.

53 NECA, *Submission 39*, attachment, letter to Minister Garrett 9 March 2009.

- by Master Electricians Australia in May 2009: '...incorrectly installed insulation created a very serious fire risk, especially in older homes'.⁵⁴

3.59 From the evidence presented to the committee it is clear that DEWHA and government ministers received various written and oral warnings of the serious risks posed by the program prior to its large-scale deployment in July 2009. It is also clear that these warnings were either ignored or not taken sufficiently seriously at the Cabinet or departmental level, in the rush to commence this flawed and ill-conceived stimulus measure.

Adequacy of training and installation standards

3.60 The required training and work standards in the program are summarised at paragraphs 2.25ff. DEWHA submitted that comprehensive safety requirements were always fundamental to the program:

- Supervisors were required to have training (this had never before been required in the retrofit insulation business), and to comply with state/territory occupational health and safety laws.⁵⁵
- Training materials were developed with the advice of industry stakeholders.
- Training materials covered the full range of hazards. For example, the installers pocket book issued in August 2009 gave detailed warnings in relation to electrical and fire safety. Safety warnings were upgraded in a new edition of the pocket book released in November 2009.
- Installations had to comply with the relevant Australian Standards for insulation materials and installation. The standards included requirements for clearances around downlights.^{56, 57}

Submissions on training and competency standards for installing insulation

3.61 Submissions generally approved of the new training standards and training materials, and stressed that they were an advance in a business which had previously

54 Master Electricians Australia, *Submission 20*, attachment, media release 18 May 2009.

55 The program rules were strengthened to require training for all person involved in installation (not only supervisors), from 12 February 2010. In South Australia installers must be licensed. DEWHA, *Submission 19*, pp 5 and 9.

56 DEWHA, *Submission 19*, pp 7–8, 26ff. Construction and Property Services Industry Skills Council, *Submission 5*. Mr M. Hoffman (Department of the Prime Minister and Cabinet), *Committee Hansard*, 26 February 2010, p. 25.

57 AS/NZS 4859.1:2002, *Materials for the thermal insulation of buildings*. AS 3999-1992: *Thermal insulation of buildings - bulk insulation - installation requirements*. AS/NZS 3000:2007 *Electrical installations (known as the Australian/New Zealand Wiring Rules)*. In relation to clearances around downlights, the more stringent requirements of AS/NZS 3000:2007 applied, before downlights covers were made compulsory from 2 November 2010. Note that there is no Australian Standard for installation of foil insulation.

not had any training or licensing requirements (except in South Australia, which has licensing requirements for insulation installers).⁵⁸

3.62 South Australia was the only state that had a requirement for installers to be licensed, but still had to deal with 'fly-by-nighter' installers who worked illegally.⁵⁹

3.63 A key issue was how well any trade-related competencies were actually transferred to workers in the roof cavity. Some witnesses thought the main concern was that all personnel involved in installation, not only supervisors, should have been required to demonstrate trade-related competencies. For example:

It [was] not mandatory for all installers to have insulation-specific competencies (only for the supervisor). In practice, this [meant] that a supervisor [could] have a large crew of untrained people performing the installations and just 'swing by' each installation to sign off on the form.⁶⁰

While in the past the industry had always relied on staff learning how to work safely on the job, it appears that this was no longer good enough with so many new staff – and, more importantly, new companies – in the system.⁶¹

3.64 Witnesses suggested that brief formal training could not adequately replace supervised experience:

What we should have was a condition such that, every time a worker goes in a roof, there should be at least one person there who is either a tradesperson, or who has at least six months experience in the industry, who has danger sense. You cannot teach that in six hours or in two days... Youngsters do not know that.⁶²

Most of us in the insulation industry would not have allowed our installers to go out only having been on a two-day course.⁶³

58 For example Australian Cellulose Insulation Manufacturers Association, *Submission 8*, p. 2. ICANZ, *Submission 18*, p. 13. In South Australia insulation installers (persons or businesses) must have a building work contractor's licence with insulation in its scope, and must nominate a registered supervisor/s who will be present for all work and who has insulation in their scope of competencies. This requirement predates the Home Insulation Program. Department of the Prime Minister and Cabinet, answer to question on notice 9 from hearing of 26 February 2010 (received 12 March 2010).

59 Mr Rod Hook, South Australian Coordinator General, ABC Radio Adelaide, 11 February 2010.

60 Sky green, *Submission 12*, p. 10.

61 Amalgamated Metal Industries, *Submission 25*, p. 2.

62 Mr M. Bostrom (Amalgamated Metal Industries), *Committee Hansard*, 17 February 2010, p. 51.

63 Mr A. Arblaster (Australian Cellulose Insulation Manufacturers Association), *Committee Hansard*, 17 February 2010, p. 21.

Up until this stage [October 2009] the training was scant to non-existent for most installers, and as there were many new entrants into the market very few had experience to fall back on.⁶⁴

3.65 At the same time, exemptions from competency requirements defied logic and were seen to give a 'free pass' to a number of trades which seem to have limited direct dealings with insulation:

Stupid thing is if you have a trade, ie; brick layer, you are exempt. What does a brick layer know about installing insulation materials??⁶⁵

3.66 There was criticism of 'tick and flick' forms, such as the mandatory risk assessment template that was used from 2 December 2009:

The latest tick-and-flick sheet is too large, too black-and-white and too technical... More likely as they are paid by the job, they would tick and flick without checking – take the risk, as they knew no-one would ever check.⁶⁶

3.67 There was implied criticism of training materials as likely to be too complicated for the intended readership:

The Government did accept recommendations from industry and training experts in the revision of the training materials and associated risk assessment forms, to include visual aids to assist those without a firm grasp on the English language. It is unfortunate that these changes appear to be a case of too little, too late.⁶⁷

3.68 In relation to installation standards, particular criticisms or suggestions included:

- there should have been a mandatory requirement to turn off the power before entering the roof;⁶⁸
- plastic staples should have been mandated;⁶⁹ and
- there should have been an electrical inspection before installation.⁷⁰

64 Master Electricians Australia, *Submission 20*, p. 3.

65 AFIA, *Submission 23*, p. 6.

66 K. & C. Fuller, *Submission 43*, pp 4–5.

67 National Electrical and Communications Association, *Submission 39*, p. 4.

68 K. & C. Fuller, *Submission 43*, p. 3.

69 K. & C. Fuller, *Submission 43*, p. 5 & attachment: New Zealand Ministry of Economic Development, *Installing under floor thermal insulation - electric shock hazard*, 21 June 2007. See www.energysafety.govt.nz/templates/Page_27749.aspx (accessed 29 April 2010). Mr & Mrs Fuller noted that in New Zealand they have been strongly recommended since 2007, after electrocutions from using metal staples.

70 National Electrical and Communications Association, *Submission 39*, p. 3. Mr M. Bostrom (Amalgamated Metal Industries), *Committee Hansard*, 17 February 2010, p. 53–4.

3.69 The National Electrical and Communications Association (NECA) recommended in February 2009 that a licensed electrician should check wiring before installation. NECA suggested this again at an industry consultation meeting on 12 November 2009, after the first death linked with the program, but told the committee that 'the response to this suggestion was that there was not enough money available'.⁷¹

3.70 On the other hand, ICANZ did not support compulsory electrical inspections, as 'experienced insulation installers know what to do and have managed this safely over the years'.⁷²

Committee comment

3.71 The committee acknowledges DEWHA's efforts to establish some training standards in an industry which had not had them previously but finds these efforts to be grossly inadequate given the scale of inexperienced start-up operations that were anticipated under the HIP.

3.72 Shortcomings in the detail of formal training and competency requirements were exacerbated by a systematic failure to adequately implement, enforce and communicate to the industry and workforce.

3.73 In the committee's view DEWHA did not adequately respond to the high risk created by the huge influx of inexperienced workers. As submissions commented:

Master Electricians Australia knew from its more than 70 years representing the electrical contracting industry that if you combined unskilled labour with electrical cabling then tragedy would not be far away.⁷³

The competency based training that was implemented should have been satisfactory, however the inconsistent delivery of this training, and the large amount of exemptions, meant that the training was not enough.⁷⁴

3.74 Arguably the key mistake was failing to ensure from the outset that all personnel involved in installation (not only supervisors) were properly trained.⁷⁵ It was not adequate to allow a trained/qualified registered installer to oversee what could be an unlimited number of untrained workers. In this situation it was unreasonable and irresponsible to assume that written warnings about fire and electrical safety would effectively reach the actual workers in the roof.

71 National Electrical and Communications Association, *Submission 39*, p. 3.

72 ICANZ, *Submission 18*, p. 17.

73 Master Electricians Australia, *Submission 20*, p. 3

74 National Electrical and Communications Association, *Submission 39*, p. 4.

75 A requirement for all personnel involved in installation to be trained took effect from 12 February 2010.

3.75 It was counter-intuitive to exempt from training requirements a number of building trades which had little direct experience with insulation yet were now likely to interface with it.

3.76 Stakeholders gave both DEWHA and the government strong warnings of these risks from as early as February 2009. Similar warnings were expressed in a stakeholder consultation meeting on 18 February 2009.⁷⁶ Neither DEWHA nor the government paid enough attention to these warnings. Making the standards more stringent in the last few months of the program was too little, too late.

3.77 The fact that the authorities felt the need to amend the installers' pocket book extensively after the first program-related fatality in October 2009, to upgrade the warnings on electrical and fire risks, does not inspire confidence in the adequacy of the earlier edition.

3.78 The committee expresses its deep concern and disappointment about DEWHA's and the government's failure to adequately minimise risks or respond effectively to the first tragic fatality in October 2009. It was not until February 2010 that the training requirement for all installers took effect.⁷⁷ It appears that the option of mandating safety switches as a condition of participation was never considered. Similarly, despite the best endeavours of the Fuller family, the simple step of requiring the household's power to be switched off during installation was never mandated.⁷⁸ Steps along these lines may have helped avoid at least one of the subsequent fatalities. The committee finds this both tragic and deplorable.

3.79 The committee is not expert in insulation or electricity. However, it considers it incumbent upon the government to counter criticism that the government should have mandated:

- a. turning off the power before entering the roof;⁷⁹

76 ICANZ, answers to questions on notice from hearing 17 February 2010 (received 16 March 2010): minutes of a stakeholder consultation meeting 18 February 2009.

77 This requirement was announced on 30 November 2009: Hon. P. Garrett, Minister for the Environment, Heritage and the Arts, *Insulation safety standards to get a further boost*, media release, 30 November 2009.

78 K. & C. Fuller, *Submission 43*, p. 3. Turning off the power was discussed, or suggested as a risk mitigating action, in some of DEWHA's installer advices and in the risk assessment template which applied from December 2009. However it was never explicitly mandated. See installer advice no. 11, 19 October 2009, and no. 12, 26 October 2009. The committee notes that turning off the power during installation would not prevent a stapled wire from enlivening foil insulation when the power is turned back on, which would create an ongoing hazard.

79 This was recommended by the manufacturer of the product which was being installed by Matthew Fuller, who was electrocuted on 14 October 2009. K. & C. Fuller, *Submission 43*, attachment, Silvercell building insulation fitting instructions.

- b. the use of plastic staples with foil, as had been recommended in New Zealand since 2007;⁸⁰ and
- c. a condition of HIP insulation that a house had a safety switch (residual current detector).⁸¹

3.80 In the committee's view, by October 2009, DEWHA and the government had received sufficient written and oral warnings of the serious risks posed by the program that it should have been suspended immediately following the first fatality. However, disturbingly, these warnings were either ignored or not taken sufficiently seriously. Again, the desired speed of spending appears to have superseded safety considerations.

The maximum rebate and the Medicare billing model

3.81 According to DEWHA, industry estimates at the time of the announcement of the HIP indicated the cost of installation could range between \$660 and \$1600 per dwelling.⁸² When the program was launched the maximum rebate was set at the upper end of this range, that is \$1600.

3.82 DEWHA said that this provided 'the greatest scope for strong take-up by eligible households. This was designed to achieve maximum impact in line with the economic stimulus and employment objectives of the program.'⁸³ DEWHA advised that a study commissioned by ICANZ had estimated that the average cost of insulating a home would be \$1200; and subsidies at the lower end of the spectrum (ie towards \$660) would not be likely to create enough demand for the program to achieve its goal of insulating enough houses in the two year time frame.⁸⁴

3.83 ICANZ estimated in 2007 that an average home would cost from \$1200 to \$1500 to have ceiling insulation professionally installed, and a \$500 rebate could achieve a 28 per cent uptake over 3 years. ICANZ submitted that 'in order for the government to achieve a high initial take up, and the objectives of creating jobs and insulating all uninsulated housing stock, a rebate of up to \$1600 was necessary to get

80 New Zealand Ministry of Economic Development, *Installing under floor thermal insulation - electric shock hazard*, 21 June 2007.

81 A safety switch detects current flowing through the body and cuts the electricity supply to prevent injury. Safety switches are now compulsory in new homes and new circuits in existing homes. A safety switch may not protect all wiring and does not protect against all faults.

82 DEWHA, *Submission 19*. p. 14. The program was announced on 9 February 2009.

83 DEWHA, *Submission 19*. p. 14.

84 Deloitte Insight Economics, *An economic assessment of the benefits of retrofitting some of the remaining stock of uninsulated homes in Australia. Summary of ICANZ's \$500 subsidy proposal*. June 2007, p. 6.

full participation.' ICANZ submitted that with a \$1600 maximum most people would have paid nothing.⁸⁵

3.84 After extensive allegations of profiteering and abuse, the rebate was reduced to \$1200 from 2 November 2009. DEWHA said that this 'recalibrated the level of assistance in line with increasing consumer confidence'. The average claim between 1 July and 6 December 2009 was \$1389.⁸⁶

3.85 The evidence suggests that the scheme in which installers claimed the rebate directly through Medicare was chosen primarily to facilitate rolling out the program in a tight time frame. However it had the effect that householders, as well as paying nothing if the cost was below the maximum rebate, would not be out of pocket at any time. This was probably a significant driver of the huge increase in demand once this system started on 1 July 2009 (see Figure 1 at paragraph 2.50).

3.86 Many submissions argued that the excessive emphasis on 'free insulation' was detrimental. For example United Bonded, submitted that:

The EEHP has had an enormous take up because it offers "free" insulation rather than necessarily because of the utility or efficacy of the program as a nation building tool or as a mechanism to reduce energy consumption and greenhouse gas emissions.⁸⁷

3.87 The Polyester Insulation Manufacturers Association of Australia suggested that requiring a co-payment would have encouraged 'buy-in' by householders:

Introduce the requirement for a co-payment within the scheme requiring the householder to, say, pay the first 25 per cent of the cost of insulation (less than 12 months payback, and which could be funded by the green loans scheme) so that there is a return to rational decision making behaviour of consumers and some "buy-in" from them in the outcome.⁸⁸

3.88 Dr Hawke's review commented that 'the lack of an upfront payment and no requirement for quotes (between June and November 2009) meant there was little incentive for householders to take the normal level of responsibility for the quality and performance of the installers.'⁸⁹

85 ICANZ, *Submission 18*, p. 11. Mr D. D'Arcy (ICANZ), *Committee Hansard*, 17 February 2010, p. 72

86 DEWHA, *Submission 19*, p. 15

87 United Bonded, *Submission 9*, p. 3.

88 PIMAA, *Submission 11*, p. 6. Similarly Autex, *Submission 10*, p. 6.

89 Dr A. Hawke, *Review of the Administration of the Home Insulation Program*, 6 April 2010, p. 29.

Committee comment

3.89 Arguably many of the problems of the program resulted from the government's role, in and quest for, driving demand, culminating in an overwhelming deluge in the second half of 2009. In terms of market-place drivers, it seems to have been driven more by marketing by installers, taking advantage of the fact that installations were free for most dwellings, than by the initiative of householders.

3.90 As householders had no motivation (and almost certainly no expertise) to check the quality of the work, it left the way open to program abuses by unscrupulous newcomers to the industry who encouraged a large influx of inexperienced installers. This in turn was a contributor to the deaths, safety risks and other poor program outcomes described in more detail in chapter 4.

3.91 The committee considers it incumbent on government to explain why it did not spread the program over a considerably longer time frame and promote 'buy-in' by householders by:

- reducing the level of the subsidy offered;
- requiring a co-payment, that is the householder pays some part of the price; and/or
- requiring the householder to pay the price of installation upfront and then be reimbursed a portion of the price.

3.92 The committee finds that the excessive value of the initial \$1600 rebate (above the industry average at the time) was always going to promote profiteering and, with it, bring about the low standards, short cuts and shonks that inevitably come from those solely attracted by a 'quick buck'.

3.93 The committee further finds that effectively making insulation 'free' for a period of time was never likely to provide lasting benefits to the industry as it was structured to create a boom-bust cycle, without leaving consumers with any understanding or appreciation of the real 'value equation' that underlies the installation of insulation.

3.94 A reimbursement or co-payment scheme might have moderated demand and may have helped to deliver some longer term sustainability. However, it is unlikely of itself to have seen improved long term environmental effects or to have reduced risks to installers and householders without commensurate higher standards.

Chapter 4

Other issues affecting program outcomes

4.1 This chapter discusses the problems and concerns that arose during the Home Insulation Program (HIP), and where relevant, DEWHA's responses to them at the time.

4.2 The main matters raised in submissions concerned:

- the safety of insulation once installed, particularly electrical and fire safety;
- the level of fraud and abuse, including non-compliant installations, associated with the influx of new installers;
- the level of imported materials, including complaints that imported materials were often non-compliant with Australian Standards;
- the adequacy of consumer advice concerning the different types of insulation; and
- the adequacy of the program for low income earners, particularly renters.

The safety of work carried out under the program

4.3 Typically, electrical risk arises where there are pre-existing faults in wiring in the roof space (for example, old wiring with degraded sheaths or exposed connections); or where wiring is damaged during installation; or where wires are breached by fixings such as metal staples. The risks are greatest where aluminium foil is installed improperly as the foil is a conductor of electricity.¹

4.4 Fire risk arises where insulation covers wiring or devices such as transformers which should be ventilated to dissipate heat,² or where insulation is placed close to downlights without adequate clearance or downlight covers.

4.5 The HIP has been associated with the deaths of four installers, three by electrocution and one by heat exhaustion. As at 16 June 2010, HIP installations have also been linked to 174 house fires across Australia since October 2009.

4.6 A recent targeted inspection of 15 000 HIP-insulated homes found that 7.6 per cent had fire safety hazards. The government indicated that this result may not be

1 Master Electricians Australia, *Submission 20*, p. 3. Hon. P. Garrett, Minister for the Environment, Heritage and the Arts, *Foil insulation suspended from Home Insulation Program*, media release, 9 February 2010.

2 The problem of heat dissipation from wires applies to older wiring. Dr R. Aynsley, *Committee Hansard*, 17 February 2010, p. 27.

representative of all HIP installations, since inspections to date have to some degree targeted installations by firms with a poor compliance record.³

Submissions on electrical risks

4.7 The National Electrical and Communications Association (NECA) advised that it had given early warning of the risks arising from an influx of unskilled labour:

As early as 16 February 2009, NECA provided advice and clear warnings to the Government regarding safety issues related to the installation of insulation...⁴

4.8 NECA also recommended mandatory electrical safety inspections:

[In February 2009] We also strongly recommended a licensed electrical contractor be consulted to ensure that existing electrical wiring and other installations are protected... NECA did participate in a meeting on 12 November 2009 where again we suggested the involvement of a licensed electrician to sign off on any installation. The response to this suggestion was that there was not enough money available.⁵

4.9 Master Electricians Australia in October 2009 also called for far greater training for installers on the correct installation techniques when working around electrical cables.⁶

4.10 On the other hand ICANZ did not support calls for an electrician to attend every job for a preliminary safety inspection:

We submit that in dealing with this issue, common sense must also prevail. Generally, insulation batts do not create electrocution risks and experienced insulation installers know what to do and have managed this safely over the years.⁷

4.11 Foil industry interests argued that foil has been used safely for 50 years, with the implication that the recent fatalities associated with foil have been caused by the influx of inexperienced workers.⁸ Other submissions argued that foil should not be made the scapegoat for pre-existing electrical problems.⁹

3 Hon. G. Combet, Minister assisting the Minister for Climate Change and Energy Efficiency, *House of Representatives Hansard*, 10 March 2010, p. 2153.

4 National Electrical and Communications Association, *Submission 39*, p. 3.

5 National Electrical and Communications Association, *Submission 39*, p. 3.

6 Master Electricians Australia, *Submission 20*, p. 3

7 ICANZ, *Submission 18*, p. 16.

8 Amalgamated Metal Industries, *Submission 25*, p. 2. Mr B. Tikey (Aluminium Foil Industry Association), *Committee Hansard*, 17 February 2010, p. 78. Mr T. Renouf (Wren Industries), *Committee Hansard*, 17 February 2010, p. 78.

9 Ultrashield Insulation, *Submission 40*. Silverline Insulation, *Submission 41*.

4.12 Mr and Mrs Kevin and Christine Fuller (parents of the first installer to be electrocuted), submitted that training standards based on a registered, trained person supervising an unknown number of untrained workers were inadequate. They submitted that 'tick and flick' risk assessment forms were 'too large...too technical' and were 'designed to absolve the government'. The Fullers also argued that state and territory health and safety regulators, which the program relied on to a large extent to oversee health and safety issues, were under-resourced to cope with the program:

Workplace Health and Safety departments around the country stated early on that: 'It doesn't matter how perfect your regulations are going to look on paper, we simply do not have the wherewithal, the manpower, the expertise to deliver on this.'¹⁰

4.13 The Fullers noted that there was no requirement to turn off the power before entering the ceiling, even though this was recommended by the manufacturer of the product which Matthew Fuller was installing.¹¹

Submission on fire risks post installation

4.14 The National Electrical and Communications Association (NECA) warned of the fire risks, both publicly by media release and by letter to Minister Garrett, in February and March 2009:

[Halogen downlights] run at very high temperatures and the incorrect installation of thermal insulation nearby has been the cause of many fires... The Australian Standard dealing with the installation of electrical equipment now has specific requirements for clearance of thermal insulation from such lighting sources. The problem is not insurmountable and special protective barriers are now commercially available to ensure that these minimum distances are maintained.¹²

4.15 The Master Electricians Australia also gave early warnings of the fire risks:

As early as 18 May 2009...MEA issued a media release warning of the dangers of house fires being caused by the incorrect installation of woollen batts.¹³

4.16 ICANZ submitted that the fires which have occurred resulted from human error and from not following the required Australian Standards:

Ceiling fires and electrocution occurred prior to the EEHP. The increase in the number of ceiling fires and electrocution are a result of the significant increase in the number of jobs undertaken.¹⁴

10 K & C Fuller, *Submission 43*, p. 6.

11 K & C Fuller, *Submission 43*, pp 3–5.

12 National Electrical and Communications Association, *Submission 39*, attachment, letter to Minister Garrett, 9 March 2009.

13 Master Electricians Australia, *Submission 20*, p. 3.

4.17 ICANZ also submitted that all insulation materials should either meet Australian Standard 1530.1 for non-combustibility, or should require downlights covers as well as a clearance space.¹⁵

4.18 From 2 November 2009 the HIP mandated covers over downlights and other ceiling appliances, although this is not required by Australian Standards.¹⁶

4.19 At the time NECA tendered its submission to the inquiry (19 February 2010), it argued that the government should urgently consult with industry on how to address the increased potential for ceiling fires. It noted the increased level of urgency by stating:

As summer finishes, earlier sunsets and colder temperatures will increase the use of downlights and ceiling heating devices such as those used in bathrooms.¹⁷

4.20 The Construction and Property Services Industry Skills Council commented generally on the risks inherent in the construction industry and specifically the insulation industry:

Commonsense in the workplace, quality training by providers and employers and employees taking responsibility for their own workplace safety is the way to reduce further fatalities. The Construction industry is high risk with an average of 35 fatalities a year in Australia despite great OH&S standards and severe penalties for non compliance. With up to 10,000 homes a day being insulated and people working in confined spaces, with heat issues, close to electrical wires and at heights there remains the risk of further injuries.¹⁸

DEWHA's response to emerging problems

4.21 The training and installation requirements relevant to safety are described at paragraphs 2.25ff and discussed at paragraphs 3.60ff. In summary: supervisors were

14 ICANZ, *Submission 18*, p. 17.

15 ICANZ, *Submission 18*, p. 16.

16 Hon. P. Garrett, Minister for the Environment, Heritage and the Arts, *Insulation changes: safety, consumer protections and value for money*, media release 1 November 2009. The relevant Australian Standard is AS 3999-1992, *Thermal insulation of dwellings - bulk insulation - insulation requirements*. This requires only a gap of 25mm around downlights. The more recent AS/NZS 3000:2007 (the Wiring Rules) requires greater clearances. The HIP program guidelines, before the 2 November change, required installers to follow the Wiring Rules in relation to downlights. There is concern among industry stakeholders that AS3999 should be amended, and Standards Australia is now consulting stakeholder groups about this. Standards Australia, *Submission 26*, p. 2; answers to questions from hearing 17 February 2010 (received 15 March 2010).

17 National Electrical and Communications Association, *Submission 39*, p. 5

18 CPSISC, *Submission 5*, p. 2.

required to have training; training materials were developed which covered the range of hazards; and installations had to comply with the relevant Australian Standards.

4.22 Shortly after the first fatality (which occurred on 14 October 2009), safety warnings were upgraded in a new edition of the installers pocketbook released in November 2009. Around 20 000 copies were sent to registered installers and registered training organisations. Around this time DEWHA also issued a major alert to all installers by SMS, email and the 'installer advice' newsletters posted on the program's website.¹⁹

4.23 Additional safety measures were put in place on 2 November 2009:

- a ban on metal fasteners for foil insulation;
- mandatory downlight covers; and
- a targeted electrical safety inspection program of foil installations in Queensland.²⁰

4.24 From 1 December 2009 a mandatory formal risk assessment of every installation was required. This involved filling in a form which prompted the installer to look for the listed hazards, and gave advice on how to respond to them.²¹

4.25 On 9 February 2010 Minister Garrett suspended the use of foil insulation from the program citing concerns about electrical safety where foil is not properly installed.²² On 10 February 2010 Minister Garrett announced that all of the approximately 50 000 houses that had foil insulation installed under the program would have an electrical safety inspection.²³

4.26 From 12 February 2010 the competency and training requirements applied to every person involved in installation, not only to supervisors (this had been announced on 30 November 2009).²⁴

19 DEWHA, *Submission 19*, p. 26ff. Installer Advice No. 12, 26 October 2009. Construction and Property Services Industry Skills Council, *Submission 5*. Mr M. Hoffman (Department of the Prime Minister and Cabinet), *Committee Hansard*, 26 February 2010, p. 25.

20 Hon. P. Garrett, Minister for Environment, Heritage and the Arts, *Insulation changes: safety, consumer protections and value for money*, media release, 1 November 2009.

21 Hon. P. Garrett, Minister for Environment, Heritage and the Arts, *Deregistered installer list goes live*, media release, 2 December 2009.

22 Hon. P. Garrett, Minister for the Environment, Heritage and the Arts, *Foil insulation suspended from Home Insulation Program*, media release 9 February 2010.

23 Hon. P. Garrett, Minister for the Environment, Heritage and the Arts, *Electrical safety inspections for foil insulation*, media release 10 February 2010.

24 DEWHA, *Submission 19*, p. 9; Installer advice No. 19, 17 December 2009; Hon. P. Garrett, Minister for the Environment, Heritage and the Arts, *Insulation safety standards to get a further boost*, media release 30 November 2009.

4.27 Following the closure of the HIP on 19 February 2010, in response to continuing electrical and fire risks, the government established:

- a Foil Insulation Safety Program (FISP), which will remove foil insulation, or install safety switches, in 50 000 homes which had foil installed; and
- a Home Insulation Safety Program (HISP), which involves targeted inspections of at least 150 000 homes which had non-foil insulation installed, and will include simple remediation work such as fitting downlight covers.

4.28 The cost of these activities will be met from the existing budget of the HIP.²⁵ The 2010–11 Budget allocated \$66 million for the Foil Insulation Safety Program and \$295 million for the Home Insulation Safety Program in 2010–11.²⁶

4.29 In relation to the FISP, the committee notes that there is disagreement among electrical associations about whether it is safer to remove foil or to install a safety switch. It has been reported that it is the government's preference for foil to be removed; but that Master Electricians Australia is concerned that staples left behind could still cause electrocution. The committee supports householders being allowed to choose their preferred option, based on the advice of the electrical inspector but questions the basis of the advice to the householder when the government has not empirically resolved the diverging industry opinion on this issue.²⁷

Committee comment on electrical and fire risks

4.30 The committee acknowledges that, as in many areas of the building and construction sector, there are inherent risks associated with installing insulation. There are risks to both installers working in hot and confined spaces containing electrical wiring; and to householders if the insulation is not properly installed.

4.31 The consequences of these inherent risks are very high and in the extreme can result in the loss of both lives and property.

4.32 However, the committee is of the view that with adequate and appropriate risk management—for example, fully informed and properly trained and competent installers, and the use of safety equipment such as downlight covers—these risks can be significantly mitigated.

4.33 Roof/ceiling insulation is safe provided it is of appropriate standard, properly installed with full knowledge of the possible hazards and with effective safety

25 Hon. G. Combet, Minister assisting the Minister for Climate Change and Energy Efficiency, *Home insulation safety plan*, media release 1 April 2010.

26 Climate Change and Energy Efficiency Portfolio, *Portfolio Budget Statement 2010–2011*, p. 24.

27 'Foil removal won't fix death traps', *The Australian*, 16 April 2010, p. 2. 'Confusion over foil insulation solution', *The Australian*, 17 May 2010, p. 6. FISP guidelines can be found at www.climatechange.gov.au/en/government/programs-and-rebates/hisp/foil-insulation.aspx (accessed 8 July 2010).

arrangements in place. This applies to both bulk materials and foil. The fire and electrocution problems which have occurred resulted from inadequate training and unsafe work practices.

4.34 The committee acknowledges DEWHA's attempts to ensure suitable training standards and work practices. However, too many of these attempts were a case of playing catch-up to problems in both the formal requirements and with their inadequate and flawed implementation.

4.35 In the committee's view DEWHA did not adequately anticipate the high risk created by the huge influx of inexperienced and unqualified workers. When issues did emerge, DEWHA's responses were both slow and often inadequate. The Department of Education, Employment and Workplace Relations meanwhile, appears to have been missing in action, despite being members of the Project Control Group and, logically, having a key responsibility for workplace safety and training issues.

4.36 Arguably the key mistake was failing to ensure from the outset that all personnel involved in installation (not only supervisors) were properly trained and fully understood the risks associated with installing insulation.

4.37 Making the requirements more stringent in the last few months of the program was too little, too late. For example, DEWHA's reaction to the unfolding safety issues after the first death on 14 October 2009 was tardy. The ban on metal staples for foil insulation took effect on 2 November 2009. The requirement for a mandatory risk assessment of each job took effect only on 1 December 2009. The requirement for all installers, not only supervisors, to have training took effect only on 12 February 2010. At no stage was there a firm requirement to turn off the power during installation, a simple step which arguably would have greatly reduced electrical risk to the installer (though not to the householder afterwards).²⁸

4.38 The committee notes the government's statements that there have always been fires associated with poorly installed ceiling insulation. The intended inference seems to be that some increase in the number of fires is to be expected because of the huge increase in the number of installations.

28 Turning off the power during installation would not prevent a stapled wire from enlivening foil insulation when the power is turned back on, which would create an ongoing hazard.

4.39 On the available figures it is impossible to say whether the rate of defective-installation-causing-fire is higher or lower in HIP jobs than in earlier jobs.²⁹ However, the committee notes that a targeted inspection of 15 000 installations has found that 7.6 per cent of them have fire safety hazards.³⁰ The committee notes the government's contention that these figures may not be representative of all installations, as inspections to some degree have been targeting installations by firms with a poor compliance record.³¹ However, even if this figure is discounted by half, given the one million-plus houses that have had insulation installed under the HIP, this would mean that in the order of 38 000 homes face the risk of a house fire. The committee considers this to be an unacceptably high figure, and creates a massive time-bomb for tens of thousands of Australian households.

4.40 In any case, the government cannot somehow excuse the incidence of HIP-related fires by pointing to precedents prior to the program. If anything, the incidence of insulation related fires prior to the HIP should have served as another warning to the government and should have provided further cause for care and caution in the development of the new program. The government's aim should have been to have no fires resulting from work which the government had encouraged and which taxpayers have funded.

4.41 DEWHA was, and the government should have been, aware of the risks before the commencement of the program, both through the Minter Ellison Risk Register, which DEWHA expressly commissioned, and through the various approaches to government by concerned stakeholders. Despite being told of such risks, they appear to have been brushed aside in pursuit of other priorities.

4.42 While acknowledging that DEWHA may not have known the precise scope and magnitude of the risks, the committee is nevertheless of the view that its response in addressing the risks before the program's commencement was wholly insufficient. It did nothing to address certain risks. The committee is also of the view that as the identified risks manifested as serious problems, both DEWHA and the government's responses were overwhelmingly and perhaps tragically deficient.

29 In the second half of 2009 insulation was being done at an average rate about 7–8 times greater than the pre-HIP norm (average 133 000 per month July to November, compared with previously 65–70 000 retrofit plus about 150 000 new builds per year). The stock of previously insulated houses is about 4 million, while the stock of HIP insulated houses is about 1.2 million. To compare the rate of defective-installation-causing-fire between the two groups would require knowledge of the average 'incubation period' of an insulation-related fire. ICANZ, *Submission 18*, p. 6. ABS, *Building Activity*, cat. 8752.0, table 18. Hon. G. Combet, Minister assisting the Minister for Climate Change and Energy Efficiency, *House of Representatives Hansard*, 10 March 2010, p. 2151. DCCEE, answer to question on notice 53 from hearing 26 February 2010 (received 22 April 2010).

30 Hon. G. Combet, Minister assisting the Minister for Climate Change and Energy Efficiency, *House of Representatives Hansard*, 10 March 2010, p. 2153.

31 Hon. G. Combet, Minister assisting the Minister for Climate Change and Energy Efficiency, *House of Representatives Hansard*, 10 March 2010, p. 2153.

Recommendation 2

4.43 The government must inspect every home which had insulation installed under the Home Insulation Program for fire and safety risks.

4.44 The committee notes comments by Mr Ian Hunter of the Melbourne Metropolitan Fire Brigade that every home that has been insulated under the HIP should be inspected.³² The committee agrees that this would be necessary in view of the fire risk that may arise from improperly installed insulation.

Recommendation 3

4.45 The government's safety checks under the Home Insulation Safety Program and the Foil Insulation Safety Program must ensure that any shortcomings in relation to product quality or installation standards are rectified.

Recommendation 4

4.46 The government should put in place a mechanism to check work undertaken through the Foil Insulation Safety Program and the Home Insulation Safety Program to ensure that all safety standards and requirements are adhered to.

The level of fraud and abuse

4.47 The committee was given examples of fraud and abuse of the program by installers, including:

- insulation installed in ineligible properties (such as those that were already insulated);
- fraudulently claiming a rebate where insulation had not been installed;
- removing older insulation to make the customer appear eligible;
- unreasonably high quotes for straightforward works;
- use of non-compliant materials;
- batts cut in half to spread them further, or thrown into the roof without being laid properly, on the basis that clients (particularly elderly people) would not be able to look in the roof;
- batts laid over downlights; and
- downlight covers not installed (after 2 November 2009, when they became mandatory).³³

32 *Four Corners*, ABC TV, 26 April 2010.

33 For example *Submission 3*, name withheld. Skygreen, *Submission 12*, p. 1. See also submissions 27, 28, 29, 30, 32, 34 for examples of consumer complaints.

4.48 In August 2009 DEWHA noted in advice to installers that 'there has been negative coverage in the media and serious complaints received from householders regarding over-charging and incorrect installation.'³⁴

4.49 There is conflicting evidence on the extent of these abuses. Despite DEWHA's evidence that only a small proportion (0.65 per cent) of participants complained about their experience,³⁵ there appears to have been widespread examples of abuse and fraud.

4.50 For example, a survey by the Australia Institute found that, among householders who had been approached by insulation businesses in the previous 12 months, 16 per cent were told that insulation needs to be replaced regularly (which is not true, and thus suggests an attempt to defraud the Commonwealth).

4.51 In the same survey, among householders who had had insulation installed in the previous 12 months, while the majority of respondents described the installer as 'competent', 'skilled' or 'professional', 13 per cent described the installer as 'amateur', 13 per cent as 'inexperienced', and 8 per cent as 'disreputable'.³⁶ This suggests a level of dissatisfaction orders of magnitude higher than that suggested by DEWHA's 0.65 per cent level of complaint.

4.52 A targeted inspection of 15 000 installations has found that 66 per cent were fully compliant, 7.6 per cent had fire safety hazards, 16 per cent had other quality issues, and 0.5 per cent involved potential fraud. The government points out that these figures may not be representative of all installations as inspections to some degree have been targeting installations by firms with a poor compliance record.³⁷

4.53 In addition, by April 2010, 961 cases where more than one insulator had submitted a claim for payment for insulating the same premises had been referred to DEWHA for investigation.³⁸

DEWHA's handling of the fraud risk

4.54 The potential for fraud and abuse was raised in the Minter Ellison Risk Register (see chapter 3). The suggested risk management actions were:

34 Installer advice No. 4, 6 August 2009.

35 Mr M. Thompson (DEWHA), *Committee Hansard*, 22 February 2010, p. 24.

36 Australia Institute, *Submission 46*, pp 2–3. Respondents could use more than one description. 77 per cent of respondents described the installer as 'competent'; 73 per cent as 'skilled'; and 72 per cent as 'professional'.

37 Hon. G. Combet, Minister assisting the Minister for Climate Change and Energy Efficiency, *House of Representatives Hansard*, 10 March 2010, p. 2153.

38 Medicare Australia, answer to question on notice 9 from hearing 26 February 2010 (received 9 April 2010).

- Develop specific fraud strategy based on a capacity to outsource the risk;
- Review processes to test specifically for control over possible fraud/ incorrect payments;
- Liaise with the Department's enforcement and compliance/ legal experts in developing controls;
- Ensure effective monitoring of possible fraud areas in place (identify data needs and include in process development);
- Review internal processes for possible internal fraud opportunities;
- Review eligibility guidelines and review processes for possible fraud opportunities; and
- Risk Manager to sign off on processes and policies after reviewing for possible fraud opportunities.³⁹

4.55 DEWHA described its arrangements for minimising fraud and abuse:

- the installer registration requirements (described in chapter 2);
- insurance check;
- computerised pre-payment checks which identified anomalies showing potentially non-compliant installers;
- post-payment checks of claim trends, for example to identify installers who claimed in advance or who claimed for complete streets or for large numbers of houses in one area;
- external intelligence, for example from fire brigades, work safety authorities and state offices of fair trading;
- desktops audits (targeted and random), in which installers were required to provide information about their registration and work practices;
- field audits of an installer's workplace to check work practices and insulation type and quality;
- roof inspections;
- feedback from householders.⁴⁰

4.56 DEWHA's audit and compliance effort was ramped up from September 2009. To 6 December 2009, 7962 roof inspections were conducted and as a result 183 installer companies were deregistered for failing to abide by the program's terms and conditions. To early March 2010 there were about 15 000 roof inspections and 1000

39 Minter Ellison, *Risk Register and Management Plan*, 9 April 2009, p. 2.

40 DEWHA, *Submission 19*, pp 17–18.

desktop audits.⁴¹ DCCEE advised that the number of inspectors varied during the program subject to requirements, and at certain times there have been over 100 inspectors. DCCEE advised that the Home Insulation Safety Program and the Foil Insulation Safety Program 'will involve a dramatic increase in the number of inspectors'.⁴²

4.57 On 27 May 2010 DCCEE advised that there are about 50 000 outstanding invoices of which almost half relate to compliance activities.⁴³ DCCEE has appointed KPMG as forensic auditors to prepare briefs for the Australian Federal Police (AFP). To 27 May three cases have been referred to the AFP.⁴⁴

4.58 In relation to overquoting, DEWHA advised that:

- From 1 September 2009 a pricing table based on claims experience was included in the guidelines. Installers charging above the listed prices were subject to review. 'The pricing table helped filter out the small number of unscrupulous quotes affecting the market.'
- Further, from 1 December 2009 new guidelines required two independent quotes and a site inspection (with exemptions for remote areas).
- From 24 December 2009 materials had to be on a list of approved products maintained by DEWHA.⁴⁵

4.59 On 10 March 2010, Minister Combet committed the government to pursue unscrupulous operators. The Department of Climate Change and Energy Efficiency (which has taken over control of the program from DEWHA) advised that it is developing a compliance categorisation model to target fraud and non-compliance more effectively, and has boosted its resources in fraud investigations.⁴⁶

41 DEWHA, *Submission 19*, p. 19. Mr M. Hoffman (Department of the Prime Minister and Cabinet), *Committee Hansard*, 26 February 2010, p. 24. Hon. G. Combet, Minister assisting the Minister for Climate Change and Energy Efficiency, *House of Representatives Hansard*, 10 March 2010, p. 2153.

42 DEWHA/DCCEE, answer to question on notice 88 from hearing 26 February 2010 (received 30 April 2010).

43 Mr M. Bowles, *Committee Hansard*, 27 May 2010 (Environment, Communications and the Arts Legislation Committee, DCCEE Estimates hearing), p. 71.

44 Dr M. Parkinson and Mr M. Bowles (DCCEE), *Committee Hansard*, 27 May 2010 (Environment, Communications and the Arts Legislation Committee, DCCEE Estimates hearing), pp 96–8.

45 DEWHA, *Submission 19*, p. 8, 15.

46 Hon. G. Combet, Minister assisting the Minister for Climate Change and Energy Efficiency, *House of Representatives Hansard*, 10 March 2010, p. 2150. Dr M. Parkinson (DCCEE), *Committee Hansard*, 25 March 2010, p. 33.

Committee comment

4.60 The rate of fraud and abuse in the HIP is unclear. However, it is uncontested that it occurred, and at an unacceptable level. The results of the survey and targeted inspections mentioned at paragraphs 4.50ff paint a picture far more concerning than DEWHA's statement that only '0.65' per cent of installations have resulted in a complaint.

4.61 While the government had and still has auditing and compliance activities, it is unclear how well they are informed, targeted or resourced in proportion to the need. The committee notes evidence that more resources have been put into auditing and compliance recently.⁴⁷

4.62 In the committee's view the incidence of fraud and abuse was a predictable outcome of a program which encouraged an influx of new businesses into a small and largely unregulated industry, and was designed in a manner open to profiteering around the premise that the householder should not be out of pocket (the subsidy amount was expected to cover the whole price in most cases). Ignorant of the risks, householders were lured into thinking they needn't have a stake in ensuring that the job was well done (quite apart from the fact that most would not have the knowledge to do so).

Recommendation 5

4.63 The government must pursue, finalise and publicly account for every case of fraud under the Home Insulation Program.

The level of imported and non-compliant materials

4.64 Submissions raised concerns about the volume of imported products (given that the purpose of the program was to stimulate the Australian economy), and about claims that too many of the imports were not compliant with Australian Standards.

Incidence of imported materials

4.65 The amount of imported insulation materials used for the program is not officially known, as import statistics do not separate glasswool batts from other fibreglass products.⁴⁸ ICANZ estimated that about 40 per cent of HIP installations used imported products, from China, the USA, UK, Malaysia and Thailand.⁴⁹

4.66 It appears that DEWHA did not expect this high level of imports. An industry consultation meeting on 18 February 2009 minuted the issue thus:

47 Dr M. Parkinson (DCCEE), *Committee Hansard*, 25 March 2010, p. 33.

48 DEWHA, *Submission 19*, p. 21.

49 ICANZ, answers to questions on notice from hearing 17 February 2010 (received 16 March 2010).

Industry expectation is to insulate 500,000 homes per annum. If demand is at this level then the industry participants suggested that reliance on imports will be minimal.⁵⁰

4.67 It appears also that the high level of imports arose from the higher than expected program take up in the second half of 2009.⁵¹

4.68 Submitters generally regretted the need to have such a high level of imports given that the purpose of the program was to stimulate the Australian economy:

Why did we stimulate the economies of China and the USA?⁵²

4.69 The Aluminium Foil Insulation Association (AFIA) noted that it had warned the government as early as February 2009 that the program would 'open the door to many cheap imports that will not be approved to AS/NZS 4859.1 or compliant to the Building Code of Australia.'⁵³

4.70 DEWHA and ICANZ, defending the program as a stimulus measure, stressed that most employment in insulation is downstream of the manufacturers.⁵⁴ DEWHA also noted that Australia's WTO free trade obligations prevented restrictions on imports.⁵⁵ However ICANZ had concerns about the longer term effect on Australian manufacturing:

As local manufacturers with significant and long term commitments in Australia, we would prefer to see a lower incidence of imported product and more even and sustained levels of demand over an extended timeframe... the high level of current demand will end at the conclusion of this program. We can expect that the large uninsulated homes market will be satisfied, and that many downstream jobs will also be shed. Future local manufacturing jobs and the justification for further investment in manufacturing capacity is also at risk.⁵⁶

50 ICANZ, answers to questions on notice from hearing 17 February 2010 (received 16 March 2010): minutes of an industry consultation meeting, 18 February 2009.

51 ICANZ, *Submission 18*, p. 14. See also ICANZ, answers to questions on notice from hearing 17 February 2010 (received 16 March 2010): minutes of an industry consultation meeting, 7 August 2009.

52 K&C Fuller, *Submission 43*, p. 4.

53 AFIA, *Submission 23*, attachment, letter to Prime Minister 9 February 2009, p. 2.

54 ICANZ, *Submission 18*, p. 14. DEWHA, *Submission 19*, p. 21. Ms R. Kruk (DEWHA), *Committee Hansard*, 25 March 2010, p. 26.

55 Ms R. Kruk (DEWHA), *Committee Hansard*, 25 March 2010, p. 26.

56 ICANZ, *Submission 18*, p. 14. Similarly Amalgamated Metal Industries, *Submission 25*, p. 1: 'Most of the sales of imported insulation represent a direct long-term loss to the Australian industry.'

The quality of imported products

4.71 For most submitters who commented on the level of imports, the more important concern was the claim that imported products were of inferior quality.

Much of the flood of imports in the market has been of products that do not meet Australian Standards. These products could not be effectively marketed in a normal market: end-users who are parting with their own money are more wary; and in normal times regulators, including the ACCC, are able to keep a closer eye on product claims.⁵⁷

4.72 Under program guidelines, imported products, like all HIP materials, had to comply with Australian Standards.⁵⁸ There was disagreement about the extent of non-compliance. Some submissions described their own observations of non-compliant imports, or spoke generally of a 'flood' of non-compliant imports.⁵⁹ The Polyester Insulation Manufacturers Association of Australia (PIMAA), speaking generally, not only about imports, claimed that 30–40 per cent of homes contain non-compliant products.⁶⁰

4.73 ICANZ strongly disputed claims that 30–40 per cent of products are non-compliant:

We estimate that we supply 68 per cent of the Home Insulation Program. We know all our products are compliant. That statement means that every other product that is going into this program is non-compliant. That is clearly nonsense.⁶¹

4.74 ICANZ estimated that about 8 per cent of HIP materials were Chinese, and about 40 per cent of the Chinese materials—thus about 3 per cent of the HIP total—failed thermal claims. An additional 30 per cent of the Chinese materials failed labelling requirements.⁶²

4.75 In evidence there was no suggestion that imports other than Chinese imports were significantly non-compliant, although this question was not directly addressed.⁶³

57 Amalgamated Metal Industries, *Submission 25*, p. 3.

58 DEWHA, *Submission 19*, p. 30.

59 United Bonded Fabrics, *Submission 9*, p. 3. Autex, *Submission 10*, p. 4. Amalgamated Metal Industries, *Submission 25*, p. 3. Mr B. Tikey (AFIA), *Committee Hansard*, 17 February 2010, p. 43.

60 Mr T. Zuzul (PIMAA), *Committee Hansard*, 17 February 2010, p. 10.

61 Mr R. Thompson (ICANZ), *Committee Hansard*, 17 February 2010, p. 58.

62 ICANZ, answers to questions on notice from hearing 17 February 2010 (received 16 March 2010). See also Mr R. Thompson (ICANZ), *Committee Hansard*, 17 February 2010, p. 58.

63 ICANZ did assert that the US product was 'world class'. There was no comment in evidence on the quality of imported materials from other places. Mr R. Thompson (ICANZ), *Committee Hansard*, 17 February 2010, p. 58.

4.76 On this issue DEWHA noted that all HIP products had to comply with Australian Standards, and also that any complaint by householders about non-compliant materials would be a matter for state/territory fair trading authorities.⁶⁴ PIMAA argued that this attitude was too blasé:

So when we highlighted these examples [of non-compliant products] to the government it was met with a nonchalant attitude, in that they were not going to be the police in this scenario... If the householder was not happy with the level of benefit provided by the insulation, they could go to fair trade. In all honesty, Mr and Mrs Smith would have no idea if something works or it does not work.⁶⁵

Committee comment

4.77 The committee agrees with submissions that the high level of imports was regrettable, and is potentially detrimental to the Australian insulation manufacturing industry in the medium term.

4.78 The committee notes the evidence that thermally non-compliant Chinese imports are likely to be about three per cent of total HIP materials. However, the overall level of non-compliant imported materials is uncertain (since there is no evidence on the extent of non-compliance in imports other than the Chinese). Nevertheless, the committee finds it wholly inadequate for DEWHA or the government to dismiss this issue by saying that householders with non-compliant materials should complain to state/territory fair trading offices. Householders are not likely to know whether their insulation materials are compliant or not. The government, having encouraged householders to take up the subsidy, has a duty to ensure that materials installed are compliant. This should be part of the inspection of every insulated home.

4.79 The use of these non-compliant imports failed the test of good public policy at almost every level. It failed as an economic stimulus by sending dollars overseas; it failed as an environmental measure as the standard of insulation provided was unsatisfactory and will not deliver the intended energy efficiency dividend; and it failed to deliver for many unfortunate homeowners, who will be left with little energy savings but will face the cost of removing these inferior products if they are to install quality insulation at a later stage.

Adequacy of advice on different types of insulation

Effects of the HIP on sectors other than fibreglass batts

4.80 Some submitters argued that the program has been detrimental to them because it encourages the use of the insulation with the lowest upfront costs,

64 DEWHA, *Submission 19*, p. 30.

65 Mr T. Zuzul (PIMAA), *Committee Hansard*, 17 February 2010, p. 14.

regardless of long term costs and benefits. The Polyester Insulation Manufacturers Association of Australia (PIMAA) said:

Polyester insulation is initially more expensive to buy, but has a lower cost to install, and is a lower cost option over the extended life and utility of the media... The reduction of the maximum rebate [from \$1600 to \$1200 on 2 November 2009] has resulted in a flight of new installer entrants away from the initially more expensive to buy Polyester Insulation; a decision driven by short term profit imperatives... Consequently the demand for Polyester insulation has significantly reduced under this Program.⁶⁶

4.81 PIMAA suggested that the rebate should be on a sliding scale recognising the lifecycle benefits of the different insulation materials.⁶⁷

4.82 Similarly, the Australian Cellulose Insulation Manufacturers Association (ACIMA) submitted that cellulose is superior on a life-cycle analysis basis 'given its manufacture is a comparatively low-energy process, from recycled paper-based waste'; yet its market share has decreased under the HIP 'due to the large influx of new installers who have chosen batt-type insulation, due to the substantial installation equipment cost barriers facing new entrants to the cellulose sector'.⁶⁸

Claimed inappropriate use of bulk materials in hot climates

4.83 Foil supporters argued that the program has had the effect of encouraging the use of bulk insulation in hot climates where they argue it is inappropriate.

4.84 This debate arises because foil has a different R-value down and up: it blocks downwards radiant heat, but allows heat to escape upwards. In hot climates this helps houses to cool down at night. According to Dr Aynsley, a senior academic expert on insulation:

It is often overlooked that radiant barriers [such as foil], while highly efficient at controlling downward heat flow in summer, have a much lower resistance to upward heat transfer after sundown. This has the effect of providing excellent protection from solar heat gain during the day but allowing rapid cooling of the interior of the building after sundown... Relying solely on bulk insulation in roofs will slow down the cooling of

66 PIMAA, *Submission 11*, pp 2, 5. Similarly United bonded, *Submission 9*; Autex, *Submission 10*; and Mr J. Liaskos (Polyester Insulation Manufacturers Association of Australia), *Committee Hansard*, 17 February 2010, p. 20.

67 PIMAA, *Submission 11*, p. 6.

68 ACIMA advised that the market share of cellulose was 25 per cent pre-HIP and 12 per cent during HIP. ACIMA, *Submission 8*, p. 1.

buildings in winterless climates after sundown (BCA Climates zones 1 and 2).⁶⁹

4.85 However, the program's standard for insulation R-values (see Table 1, paragraph 2.21), and the Building Code of Australia (BCA) from which it derives, do not acknowledge this point. For hot climates the standards specify a minimum downwards R-value (to keep heat out during the day); but it was argued that they should also specify a maximum upwards R-value (so that heat can escape at night).

Before the Energy provisions of the BCA were prepared, Professor Aynsley, former Head of the Australian Institute of Tropical Architecture, advised the Australian Building Codes Board to specify minimum R-value for heat flow down together with a maximum R-value for heat flow up.⁷⁰

4.86 Some foil industry supporters argued that the failure to do this has been caused by pressure from the fibreglass industry:

To my knowledge, the impact of such a regime was never modelled in preparing the BCA amendment, once again presumably because it would have excluded bulk insulation from consideration, even though it would have led to a superior result in terms of comfort and energy savings for the Australian community.⁷¹

4.87 The 'BCA amendment' (changes to the energy efficiency provisions of the Building Code of Australia, published in March 2010) is discussed further at paragraphs 5.35ff.

4.88 A related problem is that under the relevant Australian Standard – AS/NZS 4859.1 – the R-value of bulk materials is tested at a standard mean temperature of 23 degrees.⁷² Foil industry supporters argue that this is inappropriate

69 Dr R. Aynsley, *Submission 17*, p. 2. Similarly Aluminium Foil Insulation Association (AFIA), *Submission 23*, p. 4. Similarly in *Insulation Management - guide for residential building*, Australian Greenhouse Office 2001, p. 7, advice for naturally ventilated houses in hot humid climates: 'Sufficient insulation is needed under roofs and/or ceilings and walls to avoid excessive radiant heat gains inside the house. The added insulation will need to be sufficient to allow the building to cool adequately at nights.' Similarly Australian Housing Research Council, *Thermal performance of housing units in Queensland*, 1981, p. 174: 'Mineral wool ceiling insulation greatly improves daytime performance in summer, but keeps unconditioned houses hotter on summer nights.'

70 Amalgamated Metal Industries, *Submission 25*, p. 5.

71 Amalgamated Metal Industries, *Submission 25*, p. 5.

72 AS/NZS 4859.1, *Materials for the thermal insulation of buildings*, clause 2.3.3.3. The standard test measures the transfer of heat between test plates at temperatures of 13 degrees and 33 degrees, thus a mean of 23 degrees.

because actual conditions in roof spaces are often much hotter,⁷³ and as the temperature increases the achieved R-value falls:

The R-values that are being quoted around here today from the testing that is outlined in that standard do not represent the R-value that is achieved in the roof... There have been studies done here and some at the University of South Australia that dramatically show that there is a big difference between what people are sold in terms of an R-value and what they actually get. That is even when they comply with standard 4859. There is an urgent need to update that.⁷⁴

4.89 The combination of these issues, it was argued, makes bulk insulation inappropriate in hot climates:

Too much [bulk] insulation in the summer will not only induce “heat sink” conditions within the attic space as temperatures climb to say 60DegC where the bulk insulation breaks down in its ability to halt heat transfer...but that in the evening as the night sky cools down there remains trapped within the living environment excess high temperature which can then only be cooled down by mechanical means such as air-conditioning.⁷⁵

4.90 A further problem raised in submissions is that in hot climates condensation problems can occur when warm humid roof-space air touches a cooler ceiling; or at night when it touches a cooler metal roof. Condensation can cause serious structural damage. It was argued that the damage can be worsened by bulk insulation, which acts as a sponge and prevents the condensate from evaporating again. The moisture also reduces the R-value of the insulation:

If no vapour barrier is present, moisture will condense from air infiltrating through the insulation when it reaches the “dew line”... Over time the water builds up, absorbed by the bulk insulation like a giant sponge, until eventually serious structural damage can result...⁷⁶

Recent increases in the amount of insulation installed in buildings has increased the risk of condensation. More insulation in a roof means that there will be a greater temperature difference across the insulation. This can increase the possibility of the dewpoint temperature occurring within the insulation leading to interstitial condensation within the insulation. This degrades the R-value of the insulation and promotes mould growth and wood rot.⁷⁷

73 Dr Aynsley submitted that on a comfortable overcast day a low pitched metal roof may be at a temperature of up to 60 degrees, and on a hot day up to 90 degrees. *Submission 17*, p. 3. See also Mr T. Renouf, *Committee Hansard*, 17 February 2010, p. 81.

74 Dr R. Aynsley, *Committee Hansard*, 17 February 2010, p. 25.

75 Aluminium Foil Insulation Association, *Submission 23*, p. 4.

76 Amalgamated Metal Industries, *Submission 25*, p. 5.

77 Dr R. Aynsley, additional information 16 April 2010. Similarly *Committee Hansard*, 17 February 2010, pp 24–25.

4.91 Foil supporters believe that the program has encouraged use of bulk materials in situations where they are inappropriate:

There is a very strong case for banning bulk insulation in Zones 1 and 2 (coastal climates North of Port Macquarie) entirely on the grounds that they retain heat at night. Together with the condensation issues when inadequate – or, much more commonly, no – vapour barriers are used, the case for banning bulk insulation in these climates is overwhelming.⁷⁸

What will the government do when complaints come in saying that the insulation [using bulk materials in climate zones 1 and 2] is making the house hotter?⁷⁹

4.92 Wren Industries argued that 'a small proportion of the [\$2.7 billion] approved for the program should have been allocated to determine what insulation materials are best suited to hot climates.'⁸⁰

4.93 ICANZ (which represents the major manufacturers of bulk insulation⁸¹) argued in reply that 'bulk insulation is suitable for all climates':

High levels of insulation will not create a hot box when ventilation is adequate (not perfect) and heat gains through windows are moderated (but not eliminated)... [I]nsulating reduces [daytime] heat gains by more than it slows night time heat loss.⁸²

4.94 On the condensation problem ICANZ submitted:

With regard to claims that bulk insulation absorbs moisture in tropical climates thus reducing its effectiveness, this is certainly not the case with mineral wool bulk insulation which have <1% moisture absorption rates and therefore insignificant impact on thermal performance... Managing condensation is critical in warmer climates and a vapour barrier such as reflective foil is generally recommended to provide this barrier but to keep the temperature above the dew point bulk insulation generally needs to be added.⁸³

78 Amalgamated Metal Industries, *Submission 25*, p. 5.

79 Wren Industries, *Submission 15*.

80 Wren Industries, *Submission 15*.

81 The members of ICANZ are CSR Bradford and Fletcher Insulation. ICANZ members manufacture glasswool, rockwool and reflective foil insulation. ICANZ members manufacture around 75 per cent of all reflective foil made in Australia, have 5 mineral wool bulk insulation plants and supply most other insulation products except sheep's wool and cellulose fibre. ICANZ, *Submission 18*, p. 4; additional information 19 April 2010, p. 1. ICANZ's competitors argued that ICANZ represents primarily the fibreglass batts industry: for example Autex, *Submission 10*, p. 3; AFIA, *Submission 23*, p. 1 and attachment 1, p. 9.

82 Mr R. Thompson (ICANZ), *Committee Hansard*, 17 February 2010, p. 74. ICANZ, additional information, 19 April 2010, p. 14.

83 ICANZ, additional information 19 April 2010, pp 1–2.

4.95 The 'heat box' issue had been considered at an industry consultation meeting on 18 February 2009, where 'there was general support for the consumer to be allowed to make the judgment as to which product and which supplier to use':

One of the participants suggested it would be useful to have an independent fact sheet in regards to R-values. The chair proposed the insulation section in the "Your Home" manual be used, and this was agreed by all.⁸⁴

4.96 The result was that the program guidelines did not specify any particular materials. The guidelines said:

A range of insulation products may be installed under the program. It is important that householders familiarise themselves with the range of products available to ensure the product's suitability to individual circumstances, which includes the location of the dwelling and the roof type.⁸⁵

4.97 DCCEE submitted that 'program Guidelines outlined the importance of householders familiarising themselves with the range of products available to suit their circumstances and advised householders to seek advice from www.environment.gov.au/energyefficiency'.⁸⁶ DCCEE further submitted that:

There is also the Your Home Technical Manual...if a householder has a concern [about whether suitable materials have been used] then they should be discussing that with their installer, because their installer was required to follow those program guidelines and assess what type of insulation would best suit the householder.⁸⁷

84 ICANZ, answers to questions on notice from hearing 17 February 2010 (received 16 March 2010): minutes of a stakeholder consultation meeting 18 February 2009, p. 4.

85 HIP program guidelines versions 3, 4 and 5, September to December 2009.

86 DEWHA/DCCEE, answer to question on notice 74 from hearing 26 February 2010 (received 30 April 2010).

87 Mr A. Hughes (DCCEE), *Committee Hansard*, 25 March 2010, p. 42. Versions 2 and 3 of the HIP program guidelines (June to October 2009) also said 'It is suggested that householders contact a number of installers on the Installer Provider Register to explore a range of insulation and installation options.' Brief relevant comment is in DEWHA's *Your Home Technical Manual*, however the program guidelines did not mention the manual.

Committee comment

4.98 The extent of any inappropriate use of bulk materials is unclear.⁸⁸ However the committee is concerned that householders may not have had adequate advice on this matter.

4.99 Nothing in the program guidelines justify DCCEE's statement at paragraph 4.97 that 'the installer was required to assess what type of insulation would best suit the householder'. The guidelines quoted at paragraph 4.96 clearly put the onus for this on the householder. The installer's only obligation in this regard was to follow the table of minimum R-values. The whole point of concern about this issue is that the table of R-values (like the Building Code of Australia) ignores the problem of bulk materials in hot climates keeping naturally ventilated houses hot at night.

4.100 The referenced *Your Home Technical Manual*, which (it was implied) householders should have consulted, is a large document which contains this solitary relevant comment on page 103:

The most important thing to remember is that in high humid [tropical] climates where houses are naturally ventilated, high down values and lower up values are appropriate for roofs and ceilings.⁸⁹

4.101 The reason for this advice (to help the house cool naturally at night) is not given. Nor is any advice given about the relative effectiveness of bulk insulation in different climates.

4.102 In the context of a program—an attempt by government to roll out insulation to people who have never before thought about the different varieties and their respective performance—it is unrealistic to expect that householders would notice this advice—particularly as the *Your Home Technical Manual* was not mentioned in the HIP guidelines. If they did notice it, given the brief and incomplete nature of the advice, it is unrealistic to expect they would realise its importance.

4.103 The committee considers that householders should have been given better and more accessible consumer advice about appropriate insulation for their situation. The committee does not think it is adequate to rely on asking householders to refer to a large technical manual accessed by weblink.

88 Australia-wide, foil installations as a proportion of total installations have been about the same under the HIP as the pre-HIP norm. HIP: 50,300 out of 1.1 million (4.5 per cent). Pre-HIP shown by ABS survey: 5.2 per cent (in ceilings) in Australia (12 per cent in Queensland and 22 per cent in the Northern Territory). Hon. G. Combet, Minister assisting the Minister for Climate Change and Energy Efficiency, *House of Representatives Hansard*, 10 March 2010, p. 2152. ABS Cat. 4602.0.55.001, *Environmental issues: energy use and conservation*, March 2008, table 2.16.

89 Department of Environment, Water, Heritage and the Arts, *Your Home Technical Manual*, 4th edition, 2008, p. 103.

4.104 The committee is not qualified to opine on these technical issues, but considers it unacceptable that the government failed to settle them before embarking on the HIP. The consequences were, once again, a less than optimal outcome for taxpayers, homeowners and the environmental objectives allegedly behind the program. Regulatory changes should be pursued to address these issues following extensive industry and scientific consultation leading to amendment to the relevant Australian Standards and the Building Code of Australia where appropriate. Related discussion is in chapter 5.

4.105 The committee comments on the obvious disagreement between foil interests and bulk insulation interests on this issue: it is regrettable that there continues to be dispute among the various industry groups over issues theoretically capable of settled scientific conclusion.

Issues for renters and low income earners

4.106 Submissions argued that incentives are needed for landlords to invest in insulation and other energy efficiency measures. One in four households are in private rental or public housing. Low income households typically spend a bigger proportion of their income on energy than wealthier households, and they are less able to invest in energy efficiency measures such as insulation. Rental properties tend to be older houses, which are more likely to be uninsulated.⁹⁰

4.107 The Low Emission Assistance Plan for Renters, which operated beside the Home Insulation Program from February 2009, was discontinued from 1 September 2009 because of poor take-up. Landlords and tenants were rolled into the renamed Home Insulation Program.⁹¹ The Tenants Union of Victoria advised that only one rental property accessed the scheme for every 14 accessing the homeowners' scheme, and 'this poor performance reflects the similarly poor take up rate of other untargeted schemes...'

In our view this poor performance is due to a lack of targeting toward rental properties and the lack of compulsion for landlords to consent to the installation of insulation under the package.⁹²

4.108 Submissions argued that the key problem inhibiting energy efficiency improvements in rental housing is 'split incentives': landlords have no incentive to invest in improvements, since they are not paying the energy bill; and tenants have little incentive to invest in improvements if they are not sure how long their tenancy will be. The Tenants Union of Victoria argued that the 'hassle factor' of the

90 Australian Conservation Foundation and Australian Council of Social Service, *Submission 6*, p. 3. Tenants Union of Victoria, *Submission 13*, p. 3.

91 DEWHA, *Submission 19*, p. 9.

92 Tenants Union of Victoria, *Submission 13*, p. 1.

landlord/tenant relationship magnifies other impediments to improvements (such as inadequate information about costs and benefits).⁹³

4.109 Australian Bureau of Statistics surveys have found that among households without insulation, by far the most important reason for not installing it was 'not the homeowner'.⁹⁴

4.110 It might be suggested that, with rational economic behaviour, the landlord's investment in insulation could be repaid by commanding a higher rent, or that landlords and tenants could contract to share the costs and benefits. In practice information barriers and transaction costs limit this.⁹⁵ As well, submissions argued that in the present tight rental market the imbalance of power between landlords and tenants gives landlords no incentive to do this:

Because of increased demand, landlords have even less inducement to make improvements to their properties in order to attract potential tenants... [W]e do not believe mandatory disclosure at the point of lease will be an effective mechanism for improving the energy efficiency of rental properties as it is predicated on tenants having the ability to exercise choice.⁹⁶

4.111 The Tenants Union of Victoria recommended that future assistance should be targeted to low-cost rental stock in the private rental market, with a targeted information campaign to promote take-up. The Australian Conservation Foundation and ACOSS suggested that property managers should be offered an incentive payment to encourage landlords to insulate.⁹⁷

Committee comment

4.112 Submissions on this matter focussed on landlords and tenants; however the problems of access to the program by low income homeowners should not be forgotten. Once again, these issues highlight the ill-designed nature of the incentives offered under the HIP.

93 Tenants Union of Victoria, *Submission 13*, p. 4. ICANZ, *Submission 18*, p. 6. See also Productivity Commission, *The Private Cost Effectiveness of Improving Energy Efficiency*, 2005, p. 105.

94 ABS cat. 4602.2, *Environmental issues: people's views and practices*, March 2005, table 2.19: the main reason for not installing installation: not home owner/not responsible was 33.8 per cent; cost was 15.5 per cent; other reasons were 12.4 per cent or less.

95 Productivity Commission, *The Private Cost Effectiveness of Improving Energy Efficiency*, 2005, p. 105.

96 Tenants Union of Victoria, *Submission 13*, p. 2. Mr T. Archer (Tenants Union of Victoria), *Committee Hansard*, 17 February 2010, p. 96. Similarly ICANZ, *Submission 18*, p. 9.

97 Tenants Union of Victoria, *Submission 13*, p. 5. Australian Conservation Foundation and ACOSS, *Submission 6*, p. 3.

Other matters: effect on the cost of insulation materials

4.113 Evidence on this question was mixed. DEWHA submitted that the cost of installing insulation remained relatively stable throughout the program, suggesting that any spikes in production costs were isolated examples rather than general trends.⁹⁸

4.114 Other submissions said that the cost of products rose 50 per cent in two months; or 70 per cent over two months in the case of imported fibreglass (August to October 2009).⁹⁹

4.115 It should be noted that the high subsidy cap of \$1600 (later reduced to \$1200) is unlikely to have placed any competitive tension in the marketplace, which would have tended to artificially drive up the price of insulation.

98 DEWHA, *Submission 19*, p. 20.

99 *Submission 2*, name withheld. United Bonded, *Submission 9*, p. 4.

Chapter 5

Other matters

5.1 This chapter considers some related matters raised in submissions:

- the adequacy of the relevant Australian Standards, which the program referred to; and
- the appropriateness of the energy efficiency provisions in the Building Code of Australia which informed the program's R-value conditions.

Issues relating to Australian Standards

5.2 Standards Australia is a non-government, not-for-profit organisation. It is the descendent of the Australian Commonwealth Engineering Standards Association (established 1922) and became a public company in 1999. According to Standards Australia, it is Australia's peak standards body, which develops internationally aligned Australian Standards and related publications to help ensure the safety, reliability and performance of products, services and systems. Standards are developed by technical committees representing a range of stakeholders. There are about 7000 Australian Standards, and 450 projects are now active.¹

5.3 Australian Standards relevant to the Home Insulation Program were:

- AS/NZS 4859.1:2002: *Materials for the thermal insulation of buildings*
- AS 3999-1992: *Thermal insulation of dwellings—bulk insulation—installation requirements*

5.4 The HIP also referred to AS/NZS 3000:2007: *Electrical installations (known as the Australian/New Zealand Wiring Rules)*, so that it took precedence over AS 3999 in relation to safe treatment of downlights.

5.5 The main relevant standard is AS/NZS 4859.1. This standard covers mostly procedural matters to do with the testing and labelling of materials. It does not itself set minimum insulation levels in houses—that is done by the Building Code of Australia (considered below).

5.6 Concerns raised in submissions about Australian Standards were:

- AS 3999-1992 needs revision;
- In AS/NZS 4859.1, it is inadequate to set labelling standards referring only to material R-values under standardised test conditions, without considering the performance in real conditions, which may be much different;

1 Standards Australia, *Submission 26*, attachment. Answers to questions on notice from hearing 17 February 2010 (received 15 March 2010), p. 5. *Annual review 2008–2009*, p. 2.

- there is no suitable Australian research establishment to inform this issue; and
- Standards Australia is excessively influenced by the fibreglass batts industry.

Claims that AS 3999-1992 needs revision

5.7 AS 3999-1992 (installation requirements for bulk insulation) requires bulk insulation to be 25 mm clear of downlights. The more recent AS/NZS 3000:2007 (the Wiring Rules) requires either downlight covers or a default clearance of 200 mm.² The Home Insulation Program required compliance with AS 3999 generally, but required compliance with the more stringent AS/NZS 3000 in respect of downlights (before it made downlight covers compulsory from 2 November 2009).

5.8 AS 3999 has been criticised as being outdated. Standards Australia advised that it is now going through a consultation process in relation to possible changes.³

Difference between stated and achieved R-values

5.9 In AS/NZS 4859.1 the advertised R-value of bulk materials may be determined by laboratory tests at a standard mean temperature of 23 degrees.⁴

5.10 Critics argued that this is inadequate, since the effectiveness of the insulation in real conditions in the roof may be far less than the stated material R-value. Two points are relevant:

- typical Australian roof conditions may be much hotter than the standard 23 degrees. At higher temperatures bulk insulation becomes less effective.⁵
- performance may be degraded by 'thermal bridging' – the tendency for heat to pass through less insulated pathways. This effect increases as the amount of insulation increases.⁶

5.11 Dr Aynsley, an academic expert on insulation, said:

There have been studies done [in Australia] that dramatically show that there is a big difference between what people are sold in terms of an

2 Other conditions may comply if consistent with the design of the light. AS/NZS 3000:2007, clause 4.5.2.3. See Arrowform Pty Ltd, *Submission 14*, attachment 2.

3 Ms K. Riley-Takos (Standards Australia), *Committee Hansard*, 17 February 2010, pp 88–9. Standards Australia, *Submission 26*, p. 2; answers to questions on notice from hearing 17 February 2010, (received 15 March 2010), p. 5.

4 AS/NZS 4859.1, clause 2.3.3.3. In the 'American test method' the material is sandwiched between plates at temperatures of 13 and 33 degrees, and the flow of heat is measured. Mr T. Renouf (Wren Industries), *Submission 15*; *Committee Hansard*, 17 February 2010, p. 79.

5 Mr T. Renouf (Wren Industries), *Submission 15*; *Committee Hansard*, 17 February 2010, p. 81.

6 Wren Industries, *Submission 15*, Australian Foil Insulation Association, *Submission 23*, p. 5.

R-value and what they actually get. That is even when they comply with standard 4859.1.⁷

5.12 A recent South Australian study found that a typical 200 square metre house, having the roof insulated with R3 material, would expect to have an achieved total R-value at least 30 per cent lower than that, mostly because of thermal bridging and minor installation defects. According to the study 'this gap increases significantly with increased levels of bulk insulation.'⁸

5.13 Some submissions argued that this situation has arisen because of pressure from the fibreglass batts industry. For example:

Regulation of the insulation industry has been bedevilled by the continuing use of the description "Material R-value" on most bulk insulation products. This relates to the thermal resistance of a product itself considered in isolation and measured in a laboratory under controlled conditions... This use of material R-values in regulation has come about due largely to the influence of the fibreglass lobby and constitutes a departure from the current internationally accepted practice of writing codes and standards in terms of relevant performance criteria. The relevant performance criteria here, of course, being the performance of the building system in situ, not that of a component of the system in a lab.⁹

Lack of a suitable Australian insulation research facility

5.14 Critics argued, in relation to the points above, that 'the central problem is that no testing facility exists in Australia for realistic thermal measurement for both cold and hot climates.'¹⁰ Accordingly to Dr Aynsley:

The standard which I was involved in writing [AS/NZS 4859.1] calls for a whole lot of testing. The situation at the moment is that there is not a certified laboratory in Australia that can do a lot of that testing. CSIRO used to be able to do the testing long ago. It cannot do it anymore... I think it is an embarrassment, really, that a small country like New Zealand can maintain a building research institute like BRANZ [formerly Building Research Association of New Zealand] to test buildings and provide that sort of independent verification. We cannot do that here anymore.¹¹

7 Dr R. Aynsley, *Committee Hansard*, 17 February 2010, p. 25.

8 Australian Foil Insulation Association, *Submission 23*, attachment 6: M. Belusko, F. Bruno, W. Saman, *Thermal Resistance of Australian Roofing Systems*, paper to Australian Building Codes Board international conference, 20–23 September 2009.

9 Amalgamated Metal Industries, *Submission 25*, p. 4.

10 Wren Industries, *Submission 15*.

11 Dr R. Aynsley, *Committee Hansard*, 17 February 2010, pp 25–26. BRANZ (formerly Building Research Association of New Zealand) is 'an independent and impartial research, testing, consulting and information company providing resources for the building industry'. See www.branz.co.nz.

5.15 Mr Bostrom of Amalgamated Metal Industries argued that 'not only academia but testing and development have been run down in the name of economic rationality...':

...We have abolished the CSIRO testing facility... The Australian Institute of Tropical Architecture, which Professor Aynsley headed, was shut down...when we need to renew our cyclone code I guess we are going to have to apply to the University of Edinburgh, where they still have an institute of tropical architecture—unlike Australia...while the rest of the world's standards have become immensely more professional over the last 25 years...in Australia we have gone backwards.¹²

5.16 The Institute of Tropical Architecture at James Cook University Townsville closed in 1999,¹³ and the CSIRO insulation testing facility within the Division of Materials Science and Engineering closed in 2004–05.

5.17 CSIRO advised that it is in the process of re-establishing a commercial laboratory for testing bulk insulation material in accordance with AS/NZS 4859.1. This facility will be limited to testing insulation materials and will not provide research capabilities for insulation materials or address installation. CSIRO research in the area of energy efficient building design continues to be carried out by the Division of Sustainable Ecosystems.¹⁴

5.18 ICANZ agreed that there should be a 'proper, independent building research facility' able to investigate claims about insulation.¹⁵

Committee comment

5.19 Considering the importance of insulation to the energy efficiency of Australian homes, it is most regrettable that there is no independent scientific facility in Australia able to research the properties of the various systems and advise on insulation policy in context of overall energy efficient housing goals. It is unfortunate that the dispute between the different forms of insulation, about basic science to do with the suitability of the different systems, has endured for so long without resolution. It appears that the lack of a suitable research vehicle has been one of the reasons for this.

12 Mr M. Bostrom (Amalgamated Metal Industries), *Committee Hansard*, 17 February 2010, p. 46.

13 Pers. comm. Dr R. Aynsley, 21 April 2010.

14 Pers. comm. M. Burgess, Research Program Leader, CSIRO Materials Science and Engineering. 29 April 2010. The insulation testing facility will be operated by the Industrial Research Services Group, which also tests other aspects of building materials (for example acoustic, fire resistance, slip resistance). See www.csiro.au/services/Building-and-construction-testing-services.html.

15 Mr D. D'Arcy (ICANZ), *Committee Hansard*, 17 February 2010, p. 56.

5.20 CSIRO's new test facility, since it will only test in accordance with AS/NZS 4859.1, will not resolve the wider arguments about the appropriateness of the standard or desirable policy on ceiling insulation.

5.21 The committee agrees that there should be a dedicated and independent research facility able to research insulation systems and advise on insulation policy. Where it should be housed would be a matter for further consideration.

5.22 This should be regarded as an essential part of any future government initiative to improve home insulation, in order to ensure that the investment is directed most efficiently.

Recommendation 6

5.23 The government should establish a dedicated and industry-independent program to research insulation systems and help develop efficient and effective insulation policy.

Claims that Standards Australia's decisions can be unduly influenced by the sectional interests

5.24 Some witnesses argued that the Standards Australia technical committee BD–58, which developed AS/NZS 4859.1, is too dominated by sectional industry interests:

The committees are dominated by commercial interests. At the last meeting of the committee on insulation, three prominent scientists in the field, who expressed opinions as to what a suitable amendment would be, were completely disregarded and a vote was taken, largely amongst fibreglass salesmen, as to what the appropriate measures should be.¹⁶

You have in-house fighting all of the time on the technical aspects. In my opinion, standards for the insulation industry need to go out of house from Standards Australia to a more technical expert organisation like AIRAH [Australian Institute of Refrigeration, Air-conditioning and Heat]. Then you would remove the commercial aspect of a company that sits at the table on that committee.¹⁷

5.25 In response to these claims, Standards Australia advised that standards are developed by technical committees which 'consist of individuals nominated by organisations that represent the views of large groups of interested and affected parties with a common interest.' Technical committees aim to have a balanced cross section of groups that have an interest in the standard—for example, consumers, employers, government, industry, research and academic organisations.¹⁸

16 Mr M. Bostrom (Amalgamated Metal Industries), *Committee Hansard*, 17 February 2010, p. 46. Similarly Mr T. Renouf (Wren Industries), *Committee Hansard*, 17 February 2010, p. 82.

17 Mr B. Tikey (AFIA), *Committee Hansard*, 17 February 2010, p. 32.

18 Standards Australia, answers to questions on notice from hearing 17 February 2010, (received 15 March 2010), p. 5–6.

5.26 Standards Australia pointed to the large number of organisations (23) that were represented on the technical committee (BD-58) which developed AS/NZS 4859.1. Standards Australia advised that after AS/NZS 4859.1 was amended in 2006, following complaints by the foil industry, it conducted an independent review of the process and was satisfied that due process had been followed.¹⁹

5.27 In relation to claims of conflict of interest for Standards Australia itself between its own commercial and standard-setting activities, Standards Australia advised that it divested its publication and certification business in 2003 to focus on standards development:

The separation was designed to avoid the potential problem or at least perception that decisions about the need for standards or priorities may be influenced by considerations about what was best for the other related commercial activities... Standards Australia's operations are now partly funded via the return on investment from the sale of those assets, royalties received by the sale of material licensed to SAI Global and direct contributions from stakeholders wishing to develop specific Australian Standards.

It ought to be highlighted, however, that the mechanism of funding for development of an Australian Standard does not alter the due process required for the successful publication of that Australian Standard.²⁰

Recommendation 7

5.28 That Standards Australia consider amending its funding mechanism so as to disallow contributions from any stakeholders with a potential commercial interest in any Australian Standard.

5.29 Whilst Standards Australia's technical committees may be based on a 'balanced cross section' of interest groups: this can be seen to allow blurring of scientific and policy questions. It would seem logical for scientific matters in standards to be decided by appropriate experts, with the policy questions that arise from the science to be decided by a larger group that includes industry interests.

Recommendation 8

5.30 That Standards Australia consider reconfiguring its technical committee arrangements to prevent commercial interests from being seen to unduly dominate decisions which should be based on scientific evidence.

5.31 In relation to the points of dispute noted above, the committee notes that Standards Australia's responses focussed on procedural matters, not the actual points

19 Standards Australia, answers to questions on notice from hearing 17 February 2010, (received 15 March 2010), p. 8. Ms K. Riley-Takos (Standards Australia), *Committee Hansard*, 17 February 2010, p. 94.

20 Standards Australia, answers to questions on notice from hearing 17 February 2010, (received 15 March 2010), p. 11.

of technical dispute (for example, the extent to which R-values in real conditions fall short of material R-values determined according to the standard). The committee recommends that Standards Australia should respond publicly on the points of scientific debate.

Recommendation 9

5.32 Standards Australia consider responding publicly and in detail to the scientific criticisms of AS/NZS 4859.1, and if necessary undertake an independent review of the standard.

Issues relating to the Building Code of Australia

5.33 The Building Code of Australia sets building standards which the states/territories implement through regulations. It contains minimum requirements for roof/ceiling insulation.²¹ Although it applies only to new buildings, it is relevant to the inquiry as:

- the levels of insulation required in the HIP (see paragraph 2.21) were modelled on it (though they were not identical); and
- some submitters raised concerns about the adequacy of the Building Code of Australia's provisions on insulation, particularly in light of recent changes which will increase the roof/ceiling insulation requirement.²²

5.34 The concerns raised in submissions were:

- the new, increased insulation requirements are not based on sound analysis of costs and benefits, and go beyond what is worthwhile; and
- the BCA does not adequately deal with the problems of bulk materials in hot climates and condensation in roof spaces.

21 A building can be designed to satisfy the BCA through a number of pathways. Most homes use either an energy rating assessment (star rating) or the 'deemed to satisfy' acceptable construction practices set out in the BCA. The minimum insulation standards in the BCA are 'deemed to satisfy' provisions. Housing Industry Association, *Submission 16*, p. 2.

22 The new standard is part of various changes to the BCA's energy efficiency provisions, initiated by the Council of Australian Governments in 2009 as part of the National Strategy for Energy Efficiency. The Australian Building Codes Board released a Consultation Regulation Impact Statement in September 2009. BCA amendments were released on 11 March 2010. The states/territories have undertaken to implement the changes in their regulations by May 2011. COAG communiqué 30 April 2009. Australian Building Codes Board, *Consultation Regulation Impact Statement – Proposal to revise the energy efficiency requirements of the Building Code of Australia for residential buildings – classes 1, 2, 4 and 10*, September 2009. Hon. Kim Carr, Minister for Innovation, Industry, Science and Research, *COAG commitment on new building energy efficiency fulfilled*, media release 22 January 2010.

Concerns about increased insulation requirements in the Building Code of Australia

5.35 New insulation requirements are part of various changes to the Building Code of Australia's energy efficiency provisions which will increase the energy efficiency requirement for new residential buildings from five to six stars or equivalent. The roof/ceiling insulation requirements before and after the recent changes are shown in the following table:

Figure 3—Roof and ceiling insulation: minimum total R-values¹ for class 1 buildings²

climate zone ³	1	2 below 300m	2 300m or more	3	4	5	6	7	8
2009	2.7	2.7	3.0	2.7	3.5	3.2	3.7	4.3	4.8
2010 ⁴	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	6.3
	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	6.3
	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	6.3
direction of heat flow	down	down	down & up	down & up	up	up	up	up	up

Notes:
¹ Total R-value: the sum of the R-values of the individual component layers in a composite element including any building material, insulation material, airspace and associated surface resistances.
² Class 1 buildings: detached houses and attached dwellings separated by fire-resistant walls and not above or below another dwelling; also certain boarding houses, guesthouses and the like.
³ Climate zones are defined in the Building Code of Australia, from 1 hottest to 8 coldest: see Appendix 5.
⁴ The 2010 standard varies according to the solar absorptance of the upper surface of the roof. The three figures are the standard where the roof has an upper surface solar absorptance of – not more than 0.4; not more than 0.6; and more than 0.6.

Source: *Building Code of Australia*, 2009, volume 2, table 3.12.1.1; 2010, volume 2, table 3.12.1.1a.

5.36 Several submissions argued that the increased insulation requirements are not soundly based:

The Housing Industry Association considers that the current minimum standards set out in Part 3.12 of the Building Code of Australia (BCA) are sufficient... In separate submissions to the Australian Building Codes Board during 2009, HIA has outlined a range of significant concerns in relation to these future changes... HIA has called on the Government to recognise that there is a range of more cost-effective options for new homes to achieve improved energy efficiency.²³

The Australian Building Codes Board have planned to also introduce new higher insulation R-values into the 2010 BCA Energy Efficiency

Amendments also without justifying or validating the modelling outcomes from rigorous field research... This decision by the ABCB is made in the face of an over whelming reaction of dismay and rejection submitted by many industry stakeholders including those of the likes of the HIA, Master Builders Association and National architects bodies.²⁴

5.37 Expert witnesses described the 'law of diminishing returns' from more insulation:

The intention of the Building Code of Australia to double insulation levels from May 1, 2010, should be seriously reviewed.... Increased insulation is subject to diminishing returns.... The 20mm extra (insulation) will cost roughly twice as much for the extra insulation and will have only half as much effect as the first 10mm.²⁵

The correct choice is that choice that gives the minimum lifecycle cost... there is a level where extra R will actually cause an increase in life-cycle energy costs and greenhouse gas costs.²⁶

5.38 Further, as the amount of insulation increases, the loss of efficiency through 'thermal bridging' (tendency of heat to pass through less insulated pathways) increases:

The initial insulation added to a surface makes the most significant effect. As extra insulation is added an increasing proportion of the total heat transfer occurs through paths that have not been insulated; doors, windows etc. It is better to consider all of the heat paths in a particular building rather than to insulate one of them heavily.²⁷

5.39 Further, it was argued that increased insulation requirements will worsen the 'heat box' problem in warm climates mentioned at paragraph 4.83ff (tendency for bulk insulation in warm climates to keep naturally ventilated houses hotter at night):

Queensland's climate zones 1 and 2 are about to get a 100 per cent increase in R-value. That is completely unjustified... It is very, very serious, because the houses will stay hotter longer.²⁸

5.40 On the other hand, the Australian Building Codes Board (ABCB), in its Regulation Impact Statement for the recent changes, said, 'studies carried out show a benefit in more roof insulation in all locations.'²⁹

24 Aluminium Foil Insulation Association, *Submission 23*, p. 3.

25 Dr R. Aynsley, *Submission 17*, p. 1. Similarly Dr R. Aynsley, additional information 20 April 2010; Mr T. Renouf, additional information 16 June 2010.

26 Autex, *Submission 10*, appendix A, report by James Fricker.

27 CSIRO Division of Building, Construction and Engineering, *Notes on the Science of Building*, NSB-162, August 1991, par. 7.02.

28 Mr T. Renouf (Wren Industries), *Committee Hansard*, 17 February 2010, p. 84.

5.41 ICANZ argued that 'by moving to 6 stars, Australia is simply bringing its standard closer to those countries with similar conditions.'³⁰ ICANZ submitted that references to diminishing returns are an 'oversimplification', because:

- labour is a major part of the installation cost, and this does not vary significantly with the thickness of material, so installing thicker material has diminishing marginal cost;
- given the likely higher costs of energy in future, 'it is often sensible to choose a high level of insulation, as the disbenefit [of going beyond today's proscribed levels] is so small at today's costs.'³¹

5.42 Concerns about the uncertain cost-effectiveness of more stringent energy efficiency requirements are also raised in some submissions to a recent government discussion paper on national building energy standard-setting.³² For example, the Master Builders Association said:

Increasing the energy efficiency requirements for new homes is subject to the law of diminishing returns... it is simply not cost-effective to mandate any more than a 6-star rating for homes.³³

Claimed inadequate treatment of 'heat box' and condensation issues in the Building Code of Australia

5.43 Submissions on inappropriate use of bulk materials in warm climates, and the problem of condensation in warm climates, are described in chapter 4.

5.44 Several submissions argued that the Building Code of Australia pays insufficient attention to these matters. It was suggested that the table of R-values by climate zone in the BCA should include, as well as minimum R-values, a maximum

29 Australian Building Codes Board, *Consultation Regulation Impact Statement – Proposal to revise the energy efficiency requirements of the Building Code of Australia for residential buildings – classes 1, 2, 4 and 10*, September 2009, p. 133.

30 ICANZ, *Submission 18*, p. 5.

31 ICANZ, additional information 19 April 2010, pp 7–8.

32 Department of Climate Change and Energy Efficiency, *National Building Energy Efficiency Standard-Setting, Assessment and Rating Framework–Public Discussion Paper*, March 2010.

33 Master Builders Association, submission 42 to National Building Energy Efficiency Standard-Setting, Assessment and Rating Framework discussion paper, May 2010, p. 12. Similarly Housing Industry Association, submission 73, p. 8: 'HIA would not support any changes to the BCA stringency for building energy efficiency without a clear target being established for new residential buildings, and evidence being provided that shows the changes will provide a positive cost-benefit...' Australian Institute of Refrigeration, Air Conditioning and Heating, submission 40, p. 1: 'There is a push to continually improve the energy efficiency of buildings, but there is very little evidence that the regulations are delivering the desired outcomes.' See www.climatechange.gov.au/government/submissions/building-framework-paper.aspx (accessed 20 June 2010).

up R-value for naturally ventilated houses in hot climates so that heat can escape from the house at night:

Before the Energy provisions of the BCA were prepared, Professor Aynsley, former Head of the Australian Institute of Tropical Architecture, advised the ABCB to specify minimum R-value for heat flow down together with a maximum R-value for heat flow up [in tropical and sub-tropical climates]. To my knowledge, the impact of such a regime was never modelled in preparing the BCA amendment, once again presumably because it would have excluded bulk insulation from consideration, even though it would have led to a superior result in terms of comfort and energy savings for the Australian community.³⁴

5.45 Dr Aynsley submitted:

'Studies carried out show a benefit in more insulation in all locations' is based on computer modelling using the discredited Accurate energy rating software. This software does not adequately model latent heat exchanges, or energy exchanges and thermal comfort in naturally ventilated or evaporatively cooled building or the cooling effects of elevated air speeds.³⁵

5.46 In relation to condensation problems: the Building Code of Australia's energy efficiency sections have a few relevant comments, but they do not give clear direction on the interaction of condensation and insulation in naturally ventilated warm climate houses.³⁶

5.47 ICANZ submitted that 'high levels of insulation will not create a hot box when ventilation is adequate (not perfect) and heat gains through windows are moderated (not eliminated)'—because 'insulating reduces heat gains [during the day] by more than it slows night time heat loss':

34 Amalgamated Metal Industries, *Submission 25*, p. 5.

35 Dr R. Aynsley, additional information 16 April 2010. The 'studies carried out' are those referred to in the ABCB's statement quoted at paragraph 5.41 above. See also M. Kordjamshidi et al. 'Modelling efficient building design: a comparison of conditioned and free-running house rating approaches', *Architectural Science Review*, vol. 50.1, 2007, pp 52–59. Similarly see submissions 65 (Tropical Green Building Network) and 53 (Prof. T. Williamson) to the Department of Climate Change and Energy Efficiency's National Building Energy Efficiency Standard-Setting, Assessment and Rating Framework March 2010 discussion paper: see www.climatechange.gov.au/government/submissions/building-framework-paper.aspx (accessed 20 June 2010).

36 *Building Code of Australia*, 2009, volume 2, part 3.12. The most relevant comments in volume 2 of the BCA are at 3.12.1.1: 'Artificial cooling of buildings in some climates can cause condensation to form inside the layers of the building envelope... Effective control of condensation is a complex issue. In some locations a fully sealed vapour barrier may need to be installed...' Also 3.12.1.2: 'In some climate zones insulation should be installed with due consideration of condensation and associated interaction with adjoining building materials.'

If a house does not heat up as much during the day the fact that it can't cool down as quickly during the night is not important if it is more comfortable inside because it never got as hot in the first place.³⁷

Committee comment

5.48 Determining concerns raised above is beyond the expertise of the committee. The Australian Building Codes Board should be asked to respond.

Recommendation 10

5.49 The Australian Building Codes Board should consider:

- **making public the submissions received during the consultation on the recent changes to the energy efficiency requirements of the Building Code of Australia;**
- **responding publicly and in detail to the concerns raised in this inquiry, and any related issues raised in submissions to the recent consultation, about the treatment of insulation in the energy efficiency requirements of the Building Code of Australia; and**
- **explaining the basis upon which BCA has not adopted suggestions that roof/ceiling R-value standards in the BCA (volume 2, table 3.12.1.1a) should include, in warm climate zones, maximum up values for naturally ventilated houses as well as minimum down values.**

5.50 It is regrettable that there continues to be uncertainty and dispute about such basic energy efficiency provisions. This reinforces the need for independent building research facility able to research into and advice about the efficiency of insulation systems and, as recommended at paragraph 5.23.

37 ICANZ, additional information 19 April 2010, pp 9 and 14.

Chapter 6

Conclusions

6.1 Overall the committee is of the view that the program has been a breathtaking and disastrous waste of more than a billion dollars of tax-payer's money which has had devastating consequences for many honest and hard-working Australian families.

6.2 Firstly, it has caused massive disruptions for many genuine insulation companies. Through their direct participation in the program or in the industry generally, it has unjustifiably ruined many small businesses and their reputations, and tarnished the reputation of its products and standards more broadly.

6.3 Secondly, it has left thousands upon thousands of householders with the uncertainty of not knowing whether or not their roof space is a safety fire or electrical risk. Too many householders and families have already learned of the tragic fire risk in their homes too late.

6.4 Thirdly and most significantly, it has been associated with the deaths of four young installers, and shattered the lives of their families and their friends. It has also injuring an unknown number of others.

6.5 Finally, it has also sullied the waters for future large-scale government driven environmental programs.

6.6 The design and delivery of this program has been a monumental failure with serious and lasting consequences of the highest magnitude.

6.7 This program was ill-conceived and poorly thought through, despite it being initiated at the highest levels of government by the then Prime Minister (Mr Rudd), then Deputy Prime Minister (Ms Gillard), Treasurer (Mr Swan) and Minister for Finance (Mr Tanner). While ultimate responsibility rests with the minister charged with the delivery of this program (Mr Garrett), they, along with the Parliamentary Secretary and later Minister with responsibility for stimulus spending (Senator Arbib), must shoulder a significant degree of responsibility for these dire consequences,

6.8 The program has also exposed significant failings within DEWHA and the other agencies involved in development and delivery, notably the Office of the Coordinator General and DEEWR. Their Ministers (Mr Garrett, Senator Arbib and Ms Gillard) as well as their senior executives are guilty of gross failings of good risk management practices.

6.9 In the committee's view the problems of the Home Insulation Program arose from four primary areas:

- the government's insistence upon rapid roll-out;
- certain program design elements which increased risks;

- DEWHA's ineffective risk management procedures and administration; and
- ambiguity about and conflicts inherent in the program's purpose.

Rapid roll-out created serious risks

6.10 In the committee's view a key factor in the problems of the Home Insulation Program arose from trying to roll it out too quickly. The government did this deliberately in order to encourage quick program up-take to bolster its impact as a stimulus measure. However, this caused a huge influx of inexperienced installers, with what should have been predictable detriments to safety and quality of work.

6.11 Government imposed haste had negative consequences for the workforce, sourcing of insulation materials generally, and overrode consideration of ensuring the right insulation product was used for the right purpose.

6.12 The insulation industry (quite apart from the problems created by the unexpected closure of the HIP) is left with fears for the longer term downsides of a decade's worth of retrofit business being crammed into a short period using a high proportion of imported materials.¹

Aspects of the program's design increased risk

6.13 The program's design clearly increased safety risks for both installers and households. A key mistake was failing to ensure from the outset that all personnel involved in installation (not only supervisors) were properly trained. It was not adequate to allow a trained/qualified registered installer to supervise what could be an unlimited number of untrained workers. In this situation it was unreasonable and irresponsible to assume that written warnings about fire and electrical safety would effectively reach the actual workers in the roof.

6.14 A further key risk factor was that the Medicare billing system, designed specifically so that most householders would not be out of pocket, meant that householders had little stake in the quality of the work. It encouraged direct marketing of 'free insulation', which left ill-informed householders vulnerable to the disingenuous practices of a small number of unscrupulous operators.

DEWHA's risk management and administration

6.15 In the committee's view a program of this scale with its government imposed imperatives proved beyond DEWHA's capacity to implement. DEWHA did not respond with sufficient urgency to the risks created by the hasty roll-out of such a large program.

1 ICANZ suggested that the program should have been taken over 4–5 years: *Submission 18*, p. 13.

6.16 Stakeholders gave DEWHA strong warnings of the electrical and fire safety risks from as early as February 2009. DEWHA did not pay enough attention to these early warnings. Furthermore, as issues emerged over electrical and fire safety, and non-compliance and fraud, DEWHA's responses were both slow and often inadequate. Making the standards more stringent in the final few months of the program was too little, too late.

6.17 Details of risks were either not satisfactorily conveyed to senior executives and ministers or, if conveyed, were not acted on. The committee considers that either the failure to seek more comprehensive briefings as problems were highlighted by industry and media, or the failure to more effectively act on such briefings, stands as acts of gross ministerial negligence. Regardless of whether it was a case of not knowing or not acting, Minister Garrett stands condemned for his inaction.

6.18 It appears that for most of the period DEWHA's management structure was inadequate for the scale of the program. A management structure more suitable to the size of the program, with fewer other responsibilities for the relevant Deputy Secretary, was established only in November 2009.

Ambiguity about the program's purpose

6.19 In the committee's view a key mistake was the balance struck between the program's goals as a stimulus measure and an environmental program. Too much focus was placed on the program as a stimulus measure to the detriment of its potential environmental outcomes. A more balanced approach between these two goals should have been achieved.

6.20 In the committee's view a better balance of the two intended goals would have implied:

- a lower, more orderly rate of activity over a longer period;
- more attention to researching and promoting appropriate forms of insulation, with better information for consumers;
- measures to achieve some buy-in by householders without excessively dampening the take-up (for example co-payment; payment by reimbursement; compulsory safety switches);
- more attention to skills and training; and
- more attention to auditing and compliance.

The future

6.21 The committee considers a royal commission imperative.

6.22 Only a royal commission with appropriate powers and terms of reference could overcome the obstacles encountered by this committee in seeking evidence from ministers who were also members of the House of Representatives. As a matter of comity between the Houses and possibly as a matter of law, it may be that the Senate

does not have the power to summon such persons whereas a royal commission could be empowered to do so. A royal commission would also have quicker and more readily applicable remedies to deal with the problems encountered by the committee, including:

- Ministers unwilling to volunteer testimony and/or answer questions;
- Documents kept secret to government, on questionable or unprecedented grounds; and
- Conflicting, vague and/or unhelpful answers to questions.

6.23 When it was first announced in late February 2010, the committee had concerns about the apparent rush to implement the Renewable Energy Bonus Scheme (REBS) by 1 June 2010. This would have led to a rate of activity still much higher than the pre-HIP norm, and it is hard to see how, with the short preparatory times again proposed, it could avoid a repetition of the poor outcomes of the HIP. These concerns were addressed when the Government dropped the insulation component of the REBS (in spite of the fact that the government thus reneged on a commitment made only two months earlier to insulate 1.9 million homes by 2011).² This was also a realisation by the government that the remaining funds allocated were, unfortunately, overwhelmingly required for the clean-up programs required to address the failing of the HIP.

6.24 The committee hopes the systemic failure of the HIP will not disparage future energy efficiency initiatives. The committee strongly supports measures to improve the energy efficiency of buildings, including by insulation. It is most regrettable that the publicity given to the adverse outcomes of the HIP has raised doubts about the safety of insulation in the public's mind.

6.25 The committee stresses that roof insulation is a very valuable energy efficiency measure, that should be safe and effective if properly installed. The committee hopes that future governments will work with the insulation industry to restore and rebuild its reputation and longer term security.

Recommendation 11

6.26 That the Government form a small advisory group, representative of all of the different components of the insulation industry, to:

- **develop and consider policies or measures necessary to maintain a viable insulation industry in Australia;**
- **consider policies or measures to maximise the energy efficiency for Australia's building stock in safe and measured ways;**

2 Hon. P. Garrett, Minister for the Environment, Heritage and the Arts, *Significant changes to Commonwealth environmental programs*, media release, 19 February 2010.

- **proceed with the necessary research and changes to standards required to provide clarity around the efficiency of different forms of insulation for different climates; and**
- **review industry standards and workplace practices to ensure high quality standards across all jurisdictions and rebuild public confidence in the sector.**

**Senator Mary Jo Fisher
Chair**

Government Senators' Minority Report

Government Senators welcome scrutiny of the Home Insulation Program. We note that there are a number of processes underway or concluded, including the Hawke Review, the Auditor-General's performance audit, and this Senate Inquiry.

There are also a number of coronial inquiries that will be conducted into the deaths that have been associated with the Program.

These inquiries mean that the Home Insulation Program is one of the most scrutinised Government programs, which is appropriate. We also note that such a level of scrutiny rarely, if ever, applied to programs under the previous Government.

We acknowledge the contributions by companies, associations and individuals to the proceedings of the Senate Inquiry. In particular, we note the efforts of Kevin and Christine Fuller in making their submission, and in appearing before a hearing, following the tragic death of their son installing insulation.

The deaths of four young Australians installing insulation under the HIP is a terrible tragedy. Minister Combet has already indicated that these four fatalities are independently the subject of workplace safety authority investigations and reports, police investigations, and will also be the subject of coronial inquiries, and that the Government will do what is necessary and appropriate to support these inquiries.¹

We would also like to acknowledge the cooperation that we received from Government Departments during this inquiry.

These Departments including the Department of the Prime Minister and Cabinet; the Department of Environment, Water, Heritage and the Arts; the Department of Climate Change and Energy Efficiency; and the Department of Education, Employment and Workplace Relations all contributed their time freely and generously.

The Committee requested an enormous amount of information from these Departments. We would like to acknowledge, contrary to comments from the Coalition Senators, that the Departments involved in the inquiry gave many hours of their time and submitted literally hundreds of pages of information in responses to questions from the Committee. We would also note that such cooperation was not always forthcoming under the previous Government.

1 Hon. G. Combet, Minister Assisting the Minister for Climate Change and Energy Efficiency, *House of Representatives Hansard*, 10 March 2010, p. 2150.

In our view, Government officials have fully cooperated with the requests of the Senate Inquiry into the Home Insulation Program and have helped the inquiry reach the conclusions we have.

Just because the information provided by the Departments to the inquiry did not fit the political agenda of the Coalition, this in no way detracts from the very professional cooperation Departmental officials gave us, often under very trying circumstances.

The Home Insulation Program

It should at the outset be noted that there were serious problems with the roll out of the Home Insulation Program including under-resourcing, high staff turnover and underestimation of the number of disreputable players who would enter the market.

These issues have been have been examined by Dr Hawke as well as by this Committee and have been acknowledged by the Government on a number of occasions.

It will be very important that the Government draws on the lessons to be learnt from those aspects of this Program that failed and focus its efforts on the remediation of the Program.

However, it is also important the Home Insulation Program is placed in context.

The Home Insulation Program was designed as part of the Government's response to the global financial crisis. The potential for the crisis to impact severely on the lives of all Australians meant that the Government had to implement measures to stimulate the economy in a short timeframe.

The Home Insulation Program was a part of the stimulus measures. Despite some of the issues mentioned the stimulus has had very positive impact on the economy and employment, which was made clear in evidence given to the Committee.

In addition to the impact on the economy as a whole, the Home Insulation Program led to the registration at the peak of installation activity of over 10,000 installation firms, employing many thousands of workers.

The Program also delivered the first ever national training program for ceiling insulation employees, with over 3,700 workers completing the new training package. Prior to the program this was a largely unregulated industry with little incentive for workers to be properly trained.

Attitude of Coalition Senators

Government Senators also wish to note the unfortunate fact that Coalition Senators on this inquiry appear more intent on making a political argument against the Government's Home Insulation Program than reviewing it in a considered and responsible manner.

The Majority Report, in sections, reads far more like a political diatribe than any thoughtful and considered analysis of the Program.

Also the Majority Report is full of speculation and assertions that are not substantiated and have no evidence attached to them. In fact, the only reason for them to be present in the report is to add to the Coalition's political agenda.

It is frankly disappointing that the Coalition has sought to trivialise this inquiry through such blatant point scoring.

However, it should be clearly noted, that during hours of evidence and numerous submissions, the Committee heard no evidence to establish any wrongdoing from the then Minister.

Indeed, the evidence tendered to this Committee clearly and unambiguously backs the conclusion of Dr Hawke in his report when he said that responses to issues raised under the Program by Minister Garrett and DEWHA were both appropriate and timely.²

While this may not fit the narrative that the Coalition is trying to create it is very important that such a conclusion is noted in the report of this Committee. Any alternative conclusion is not backed by evidence.

We would also like to note that the Coalition's repeated attempts to discredit the program has caused significant damage to the reputation of reputable installers and also has contributed to a fall in public confidence of insulation products.

We would now like to address some of the specific recommendations contained in the majority report.

Recommendation 1 – Royal Commission

Government Senators reject Recommendation 1 of the Majority report.

Given the high level of scrutiny being applied to the program and the numerous inquiries into the Program we do not believe that it is appropriate that a Royal Commission is held.

We welcome scrutiny of the program and believe that inquiries currently underway should be finalised and those that have been completed should be considered in full and responded to by the Government.

Therefore we believe that Recommendation 1 should be rephrased to say:

2 Dr Allan Hawke, *Review of the Administration of the Home Insulation Program*, April 2010, p. xii.

New Recommendation 1

The Committee welcomes the high level of scrutiny being applied to the Home Insulation Program.

The Committee believes that the Government should respond in full to the findings of completed inquiries and also undertake to respond in a prompt and comprehensive way to those that are yet to be finalised.

The Government should prioritise its response to this Senate Inquiry and the Australian National Audit Office's inquiry into the design and implementation of the Program.

Lessons drawn from these inquiries should be applied to future Programs run by the Government.

Recommendation 2 – Inspections of homes

Government Senators reject Recommendation 2 of the Majority report.

The Government has made clear that safety is its first priority in regards to the inspection program.

The Government has committed to inspecting a minimum of 150,000 houses with non-foil insulation in addition to every house where the householder requests an inspection. All 50,000 houses with foil insulation will be inspected.

The Government has also made clear that it will inspect more houses if its risk assessment deems it necessary to do so.

In addition any householder who wants an inspection can ring the Safety Hotline and will received one.

This commitment balances the need to reassure the public that their houses are safe, without causing unnecessary fear in the community or damage to the brand of reputable insulation installers.

While the Government acknowledges that there have been a number of installation firms who have not installed the insulation safely, the majority of the insulation was installed by industry players who are reputable and have been long standing in the business.

Some of these firms have issued guarantees on their product and workmanship and to suggest that all homes need to be inspected is tarnishing the name of these legitimate businesses and the industry as a whole.

New Recommendation 2

Given potential fire and safety risks, the Government should proceed with its program to inspect as many homes as necessary for potential fire and safety risks, which had insulation installed under the Home Insulation Program.

Recommendation 3 – Issues around the quality of insulation installed

Government Senators reject Recommendation 3 of the Majority report.

The Government has consistently stated its priority was acting to mitigate safety and fire hazard risks.

For example, in his speech to Parliament on 10 March 2010, Minister Combet stated that the intent of the inspection program was “to identify and address the extent of safety and fire hazard concerns, to mitigate risk, and thereby reassure householders who have had their homes insulated under the Program”.³

It is the view of Government Senators that the priority focus of the Government’s inspection program must remain on safety. To focus instead on issues of product quality (where there are no safety implications) would divert resources from the key objectives of the safety inspection program.

New Recommendation 3

The priority focus for the Government’s household safety inspections should continue to be to identify and address safety and fire hazard concerns, and to mitigate such risks.

Recommendation 5 – Fraud under the Home Insulation Program

Government Senators reject the wording of Recommendation 5 of the Majority Report.

The Senate Inquiry rightly identifies this as a key issue that needs to be addressed as quickly as possible.

Government Senators believe that the Government is taking all practical and appropriate steps to ensure that people will be made to account for their unscrupulous behaviour.

3 Hon. G. Combet, Minister Assisting the Minister for Climate Change and Energy Efficiency, *House of Representatives Hansard*, 10 March 2010, p. 2151.

In his statement to Parliament on 10 March 2010, Minister Combet reinforced the extent to which fraud may have been carried out under the Home Insulation Program.⁴

He also provided a firm commitment to investigate program-related fraud and pursue through all possible means those unscrupulous operators who flagrantly abused the trust of many Australians.

Government Senators note that upon assuming ministerial responsibility for the Home Insulation Program, Minister Combet initiated two major steps to assist in this process. First, he invited the Auditor General to undertake an audit of the program.

Second, Minister Combet directed that an independent forensic audit of the program be undertaken to determine the extent of the fraud and to assist in compiling evidence for further investigation and action.

As we have heard the Department of Climate Change and Energy Efficiency has engaged the firm KPMG to undertake this work.

Government Senators welcome the fact that the Government has undertaken to provide more details on its strategy to pursue these individuals when the forensic audit is completed.

This will necessarily involve cooperation from agencies such as the Australian Federal Police, State and Territory police, state fair trading and other regulatory bodies as appropriate.

We also note evidence that on a day-to-day basis, potential fraud is being identified through on-going compliance checking and other information received from the public, fire brigades, work safety authorities and offices of fair trading.

The Government has also made clear that consideration will also be given to recouping monies paid to proven fraudulent companies.

Given these actions we propose a rephrasing of Recommendation 5.

New Recommendation 5

The Committee welcomes the actions taken by the Government to address issues relating to fraud under the Home Insulation Program.

The Government should continue to pursue the strongest possible action against unscrupulous operators who are found to be guilty of fraudulent activities. When appropriate the Government should publicly report on these activities.

4 Hon. G. Combet, Minister Assisting the Minister for Climate Change and Energy Efficiency, *House of Representatives Hansard*, 10 March 2010, p. 2150.

Other recommendations

With respect to the remaining recommendations the Government Senators believe these are outside the expertise of the Committee and therefore look forward to the Government's response.

Remediation of the Home Insulation Program

In his statement to Parliament on 10 March 2010 Minister Combet outlined his four key priorities. They included:⁵

- To put in place a household inspection program to identify and address the extent of safety and fire hazard concerns, to mitigate risk and reassure householders;
- To assist industry and employees to adjust to the termination of the Program;
- To identify and put in place processes to deal with issues of non-compliance and fraud; and
- To identify any failures of administrative processes within Government associated with the design and failure of the program.

Although it is not strictly related to the terms of reference for this inquiry, in concluding, it is worth reflecting on what has happened over the last few months against these priorities as this goes to the heart of what the Government is doing to address many of the issues we have raised.

First, the two safety inspection and rectification programs established by the Government are successfully alleviating safety issues for those Australian households who have been concerned about their installation. Over 60,000 inspections have been completed over the last four months. Importantly, these programs have been developed in consultation with industry experts and are using qualified, experienced people to undertake the required work.

The Government has committed to inspecting at least 200,000 households. All 50,000 households that had foil installed under the Home Insulation Program will be inspected. During that inspection householders will have the option of either removing that foil or installing safety switches based on the advice of a qualified electrician. Under the Home Insulation Safety Program a minimum of 150,000 households with non-foil insulation will be inspected. Furthermore, the Government has guaranteed that those people who want a safety inspection will be provided with one.

Second, the Government has provided \$56 million in assistance to the insulation industry. Under the Insulation Workers' Adjustment Package \$41 million has been allocated to help those workers impacted by the closure of the Home Insulation

5 Hon. G. Combet, Minister Assisting the Minister for Climate Change and Energy Efficiency, *House of Representatives Hansard*, 10 March 2010, p. 2149.

Program readjust to new employment. A further \$15 million has been provided to reputable home ceiling insulation businesses for inventory held when the Home Insulation Program was terminated on 19 February 2010.

Third, the Government has taken significant steps to identify fraud under the Program, particularly with the commissioning of an independent forensic audit by KMPG. This process will provide the information needed to assist in tracking down and prosecuting individuals who have deliberately committed fraud against the Commonwealth.

Fourth, the Government has encouraged and supported independent and open scrutiny of program development and administration. The Hawke Report provided an independent, fair and comprehensive assessment of the Home Insulation Program and identified both its strengths and weaknesses. The Government has also invited the ANAO to undertake an independent audit of the Home Insulation Program.

Across any measure, the Government is making significant progress in addressing the priorities outlined by Minister Combet on 10 March 2010.

We believe that the Majority Report has failed to adequately acknowledge this progress and in many cases, is recommending actions that have already commenced. This duplication is both unnecessary and unproductive.

The support provided to the Hawke Report, the ANAO investigation and the Senate Inquiry demonstrates that the Government remains committed to ensuring accountability and due diligence in its programs.

As much as possible, we believe that the Government's focus and current efforts should remain in making people's homes safe and providing appropriate support to the industry.

Senator Anne McEwen

Senator Dana Wortley

The Greens' Dissenting Comments

The tragic mismanagement of the government's well-intentioned insulation roll-out has resulted in deaths and house fires. It has left many high-profile people and business casualties in its wake, not to mention people who are fearful of the consequences for their homes. One of those casualties is public confidence in what is a vital tool for reducing emissions, saving money and energy.

There are many lessons to be learnt from the failure of the scheme in terms of governance regimes and preparation at both departmental and ministerial levels, but it is critical that that failure is not used as a reason to abandon insulation. The government should be actively promoting insulation instead of allowing a negative image to take hold in the public mind.

When moving again to encourage the roll-out of insulation across the country, it is critical that the government ensures that high standards are in place and enforced and that all installers are trained through properly accredited registered training organisations. Proper audit functions need to be built in at the start of any future programme.

Although the failings in administration and project management of the Energy Efficient Homes Package were serious, and the Greens share the Opposition's frustration with the lack of transparency of the Departments of Environment, Water, Heritage and the Arts, the Department of Climate Change and Energy Efficiency and the Department of the Prime Minister and Cabinet, and the refusal of the relevant Ministers to appear before the Inquiry, we believe that it is premature to call upon the extraordinary powers of a Royal Commission.

What is clear is systemic failure across both the Home Insulation and the Green Loans schemes to act on warnings and identified risks. The Greens believe that the most important cause was a refusal by the Department of the Prime Minister and Cabinet to heed repeated warnings about unacceptable levels of risk and their stubborn adherence to an unrealistic timeframe for roll out. Political imperatives relating to the roll out of the stimulus package took precedence over the proper design and implementation of these programmes.

The Greens believe that the Government's administration of the Insulation scheme should not be seen in isolation from the Green Loans Scheme and that both should be the subject of further consideration by the Senate once the Auditor General's reports into both schemes have been released and the Coroner's reports into the deaths of the installers have been completed.

Senator Christine Milne
Greens Spokesperson on Climate Change and Energy

Appendix 1

Submissions

- 1 Mr Malcolm Moore
- 2 Name Withheld
- 3 Name Withheld
- 4 H & K Ryan & Associates – example of ceiling insulation defects
- 5 Construction and Property Services Industry Skills Council (CPSISC)
- 6 Australian Conservation Foundation and Australian Council of Social Service
- 7 Confidential
- 8 Australian Cellulose Insulation Manufacturers Association (ACIMA)
- 9 United Bonded Fabrics Pty Ltd
- 10 Autex Pty Ltd
- 11 Polyester Insulation Manufacturers Association Australia PIMAA
- 12 Skygreen
- 13 Tenants Union of Victoria
- 14 Arrowform Pty Ltd
- 15 Wren Industries Pty Ltd
- 16 Housing Industry Association
- 17 Dr Richard Aynsley, Building Energetics Pty Ltd
- 18 Insulation Council of Australia and New Zealand
- 19 Department of the Environment, Water, Heritage and the Arts
- 20 Master Electricians Australia
- 21 Department of Education, Employment and Workplace Relations
- 22 Mr Brad Lindsay, Horizon Energy Systems (United States)
- 23 Aluminium Foil Insulation Association Inc
- 24 Horizon Energy Systems (Australia)
- 25 Amalgamated Metal Industries Pty Ltd
- 26 Standards Australia
- 27 Mrs Lorna M Mears
- 28 Name Withheld
- 29 Mr Eric Davidson
- 30 Mr Kenneth Royan

- 31 Confidential
- 32 Mr Mervyn Dionysius
- 33 Mrs Margaret Jackson
- 34 Mr David Hill
- 35 A&B Mintec A Division of Bradflo
- 36 Mr Paul Johnson
- 37 Mr Tom Gordon
- 38 Name Withheld
- 39 National Electrical and Communications Association
- 40 Ultra-Shield Insulation Pty Ltd
- 41 Amalgamated Metal Industries Pty Ltd
- 42 Mr Peter R Crawford
- 43 Mr Kevin Fuller
- 44 Australian Bathroom & Waterproofing Association
- 45 Sustainable Home Designs & Assessments
- 46 The Australia Institute
- 47 Confidential
- 48 Kenneth Vaughan
- 49 Mr Graham B Ware
- 50 Mr Michael Cunich
- 51 Mr Mark Delany, T/as Stimulus Insulation
- 52 Ms Barbara Matthies
- 53 Mr Rick Palfery, Rite Temp Cellulose Fibre

Appendix 2

Tabled documents, additional information, correspondence and answers to questions taken on notice

Documents tabled at public hearings

Polyester Insulation Manufacturers Association of Australia: industry consultation meeting outcomes; correspondence; flyer, tabled by Mr Tino Zuzul, on 17 February 2010.

Dr R. Aynsley: speaking notes, tabled on 17 February 2010.

Aluminium Foil Insulation Association: recommended improvements to the HIP, tabled by Mr Brian Tikey, on 17 February 2010.

Wren Industries: various papers, tabled by Mr Tim Renouf, on 17 February 2010.

Senator Guy Barnett – advice received on two matters from the Clerk of the Senate dated 25 March 2010.

Additional information accepted as public inquiry evidence

Standards Australia, correspondence, 19 March 2010.

Dr R. Aynsley, additional information concerning condensation and insulation, 16 April 2010. Attachment: Kordjamshidi et al, 'Modeling Efficient Building Design: A Comparison of Conditioned and Free-Running House Rating Approaches', *Architectural Science Review*, vol. 50.1, pp. 52–59.

Insulation Council of Australia and New Zealand, various additional information, 19 April 2010.

Dr R. Aynsley, additional information concerning economic justification of thickness of bulk insulation, 20 April 2010. Attachment: P. Harris, 'Economic thickness of insulation: an easier way', *Australian Refrigeration, Air Conditioning and Heating*, May 1985.

Mr T. Renouf (Wren Industries), various additional information, 16 June 2010.

Deloitte Insight Economics, An economic assessment of the benefits of retrofitting some of the remaining stock of uninsulated homes in Australia. Summary of ICANZ's \$500 subsidy proposal, June 2007.

Dr R. Aynsley, various additional comments, 23 June 2010.

Insulation Council of Australia and New Zealand, various additional comments, 29 June 2010.

Correspondence

- 1 Invitations to the Prime Minister, Minister Combet, Minister Garrett and Minister Arbib to appear at a public hearing.
- 2 Responses from the Prime Minister, Minister Combet, Minister Garrett and Minister Arbib to letters sent regarding their appearance at a public hearing.
- 3 Invitations to the Prime Minister, Minister Gillard, Minister Combet and Minister Garrett to appear at a public hearing.
- 4 Responses from the Prime Minister, Minister Gillard, Minister Combet and Minister Garrett to letters sent regarding their appearance at a public hearing.

Answers to questions taken on notice

- 1 Covering email from the Department of the Environment, Water, Heritage and the Arts dated 22 February 2010.
- 2 Department of the Environment, Water, Heritage and the Arts: Risk Register and Management Plan at 2.00 p.m. 9 April 2009 provided on 22 February 2010.
- 3 Department of the Environment, Water, Heritage and the Arts: Departmental Secretary's opening statement 22 February 2010.
- 4 Department of the Environment, Water, Heritage and the Arts: Answers to questions taken on notice from public hearing of 22 February 2010.
- 5 Department of Education, Employment and Workplace Relations: Answers to questions taken on notice from public hearing 26 February 2010.
- 6 Department of the Prime Minister and Cabinet: Answers to questions taken on notice from public hearing 26 February 2010.
- 7 Polyester Insulation Manufacturers Association of Australia: Answers to questions taken on notice from public hearing 17 February 2010.
- 8 Insulation Council of Australia and New Zealand: Answers to questions taken on notice from public hearing 17 February 2010.
- 9 Standards Australia: Answers to questions taken on notice from public hearing 17 February 2010.
- 10 Aluminium Foil Insulation Association: Answers to questions taken on notice from public hearing 17 February 2010.
- 11 Department of the Environment, Water, Heritage and the Arts: Answers to questions taken on notice from public hearing 26 February 2010 (received 19 March 2010).

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- 12 Mr Tim Renouf, Wren Industries Pty Ltd: Answers to questions taken on notice from public hearing 17 February 2010.
 - 13 Department of the Environment, Water, Heritage and the Arts/Department of Climate Change and Energy Efficiency: Answers to questions taken on notice from public hearing 26 February 2010 (received 24 March 2010).
 - 14 Department of Environment, Water, Heritage and the Arts/Department of Climate Change and Energy Efficiency: Answers to questions taken on notice from public hearing 26 February 2010 (received 25 March 2010).
 - 15 Department of the Environment, Water, Heritage and the Arts/Department of Climate Change and Energy Efficiency: Answers to questions taken on notice from public hearing 26 February 2010 (received 30 March 2010).
 - 16 Department of Climate Change and Energy Efficiency: Letter from Dr Martin Parkinson, Secretary, dated 1 April 2010, regarding questions on notice numbers 7, 9 and 84.
 - 17 Medicare Australia: Answers to questions taken on notice from public hearing 26 February 2010 (received 9 April 2010).
 - 18 Department of Climate Change and Energy Efficiency: Answers to questions taken on notice from public hearing 26 February 2010 (received 15 April 2010).
 - 19 Department of Education, Employment and Workplace Relations: Answers to questions taken on notice from public hearing 25 March 2010 (received 15 April 2010).
 - 20 Office of the Coordinator-General, Department of the Prime Minister and Cabinet: Answers to question on notice from public hearing 25 March 2010 (received 19 April 2010).
 - 21 Department of Climate Change and Energy Efficiency: Answer to question taken on notice from public hearing 26 February 2010 (received 16 April 2010).
 - 22 Department of the Environment Water Heritage and the Arts/Department of Climate Change and Energy Efficiency: Answers to questions taken on notice from public hearing 26 February 2010 (received 21 April 2010).
 - 23 Department of the Environment, Water, Heritage and the Arts/Department of Climate Change and Energy Efficiency: Answers to questions taken on notice from public hearing 26 February 2010 (received 23 April 2010).
 - 24 Department of the Environment, Water, Heritage and the Arts/Department of Climate Change and Energy Efficiency: Answers to questions taken on notice from public hearing 26 February 2010 (received 30 April 2010).
 - 25 Department of the Environment, Water, Heritage and the Arts/Department of Climate Change and Energy Efficiency: Answers to questions taken on notice from public hearing 26 February 2010 (received 3 May 2010).
 - 26 Department of the Environment, Water, Heritage and the Arts/Department of Climate Change and Energy Efficiency: Answers to questions taken on notice from public hearing 25 March 2010 (received 4 May 2010).

- 27** Department of the Environment, Water, Heritage and the Arts/Department of Climate Change and Energy Efficiency: Answers to questions taken on notice from public hearing 26 February 2010 (received 5 May 2010).
- 28** Department of the Environment, Water, Heritage and the Arts/Department of Climate Change and Energy Efficiency: Answers to questions taken on notice from public hearing 26 February 2010 (received 6 May 2010).
- 29** Department of the Environment, Water, Heritage and the Arts/Department of Climate Change and Energy Efficiency from public hearings: Answers to questions taken on notice from public hearing 26 February 2010 (received 13 May 2010).
- 30** Department of the Environment, Water, Heritage and the Arts/Department of Climate Change and Energy Efficiency: Answers to questions taken on notice from public hearing 26 February 2010 (received 18 May 2010).
- 31** Department of the Environment, Water, Heritage and the Arts/Department of Climate Change and Energy Efficiency: Answers to questions on notice from public hearing 26 February 2010 (received 19 May 2010).

Appendix 3

Public hearings

Wednesday, 17 February 2010 – Melbourne

Australian Cellulose Insulation Manufacturers Association

Mr Andrew Arblaster, President

Polyester Insulation Manufacturers Association of Australia

Mr Tino Zuzel, Director, Martini Industries Pty Ltd; and Executive Committee Member

Mr Jim Liaskos, Member

Dr Richard Aynsley (Private capacity)

Aluminium Foil Insulation Association Inc

Mr Brian Tikey, President

Amalgamated Metal Industries

Mr Michel Boström, Managing Director

Insulation Council of Australia and New Zealand

Mr Anthony Tannous, President

Mr Dennis D'Arcy, Chief Executive Officer

Mr Raymond Thompson, Director

Wren Industries

Mr Timothy Renouf, Managing Director

Standards Australia

Ms Karen Riley-Takos, Relationships Manager

Tenants Union of Victoria

Mr Toby Archer, Policy and Liaison Worker

Australian Conservation Foundation

Ms Monica Richter, Sustainable Australia Program Manager

Australian Council of Social Service

Mr Tony Westmore, Senior Policy Officer

Monday, 22 February 2010 – Canberra

Department of the Environment, Water, Heritage and the Arts

Ms Robyn Kruk, Secretary

Mr Malcolm Thompson, Deputy Secretary

Mr Malcolm Forbes, First Assistant Secretary, Corporate Strategies Division

Ms Anne-Marie Delahunt, Assistant Secretary, Renewable Energy Branch, Energy Efficiency Taskforce

Mr Aaron Hughes, Assistant Secretary, Home Energy Branch, Energy Efficiency Taskforce

Ms Claire Howlett, Acting Assistant Secretary, Energy Compliance Branch, Energy Efficiency Taskforce

Friday, 26 February 2010 – Canberra

Office of the Coordinator-General, Department of the Prime Minister and Cabinet

Ms Glenys Beauchamp, Commonwealth Coordinator General

Mr Martin Hoffman, First Assistant Secretary, Head of Office of the Coordinator-General

Mr Michael Mrdak, Secretary, Department of Infrastructure, Transport, Regional Development and Local Government (former Commonwealth Coordinator General)

Department of the Prime Minister and Cabinet

Dr Paul Grimes, Associate Secretary

Mr John Cairns, First Assistant Secretary, Ministerial Support Unit

Dr Rhondda Dickson, First Assistant Secretary, Industry, Infrastructure and Environment

Mr Dominic English, First Assistant Secretary, Economic Division

Mr Subho Banerjee, Executive Director, Strategy and Delivery Division

Department of Education, Employment and Workplace Relations

Mr Robert Griew, Associate Secretary

Ms Sandra Parker, Deputy Secretary

Ms Jennifer Taylor, Group Manager, Tertiary Skills and Productivity

Wednesday, 17 March 2010 – Canberra

Mr Kevin Fuller and Mrs Christine Fuller

Thursday, 25 March 2010 – Canberra

Project Control Group

Mr Paul Beerworth, Assistant Director, Climate Change and Green Skills Taskforce, Department of Education, Employment and Workplace Relations

Mr Craig Downsborough, Adviser, Department of the Prime Minister and Cabinet

Mr Anthony Fernando, Acting Group Manager, Tertiary Skills and Productivity Group, Department of Education, Employment and Workplace Relations

Mr Malcolm Forbes, First Assistant Secretary, Corporate Strategies Division, Department of the Environment, Water, Heritage and the Arts

Mr Martin Hoffman, Head, Office of the Coordinator-General, Department of the Prime Minister and Cabinet

Mr Scott Hooper, Assistant Secretary, Home Energy Branch, Department of Climate Change and Energy Efficiency

Ms Jacqueline Hughes, Manager, Government Business Delivery Branch, Medicare Australia

Dr Melissa McEwen, Director, VET National Regulator Policy, Department of Education, Employment and Workplace Relations

Ms Carolyn McNally, General Manager, Renewable Energy, Medicare Australia

Ms Raelene Vivian, Chief Operating Officer, Australian Taxation Office

Department of Climate Change and Energy Efficiency/Department of the Environment, Water, Heritage and the Arts

Mr Martin Bowles, Deputy Secretary, Department of Climate Change and Energy Efficiency

Mr Malcolm Forbes, First Assistant Secretary, Corporate Strategies Division, Department of the Environment, Water, Heritage and the Arts

Mr Aaron Hughes, Assistant Secretary, Home Energy Branch, Department of Climate Change and Energy Efficiency

Ms Robyn Kruk, Secretary, Department of the Environment, Water, Heritage and the Arts

Dr Martin Parkinson, Secretary, Department of Climate Change and Energy Efficiency

Mr Malcolm Thompson, Deputy Secretary, Department of Climate Change and Energy Efficiency

Safework Australia

Mr Wayne Creaser, Branch Manager, Research and Data

Ms Julie Hill, Director, Data and Analysis

Department of Education, Employment and Workplace Relations

Mr Anthony Fernando, Acting Group Manager, Tertiary Skills and Productivity Group

Mr Robert Griew, Associate Secretary

Ms Margaret Kidd, General Manager, Jobs Strategies Group

Department of the Prime Minister and Cabinet

Mrs Glenys Beauchamp, Deputy Secretary, Governance, and Commonwealth Coordinator-General

Mr John Cairns, First Assistant Secretary, Ministerial Support Unit

Mr Martin Hoffman, Head, Office of the Coordinator-General

Mr Mike Mrdak, Secretary, Department of Infrastructure, Transport, Regional Development and Local Government (former Commonwealth Coordinator General)

Dr Wendy Southern, First Assistant Secretary, Cabinet Division

Mr Kim Terrell, Assistant Secretary, Cabinet Implementation Unit

Medicare Australia

Ms Malisa Golightly, Deputy Chief Executive Officer

Mr Mark Jackson, General Manager, Business Framework

Ms Carolyn McNally, General Manager, Renewable Energy

Appendix 4

Clerk's advice on answers to questions, 25 March 2010



rm.let.17179

25 March 2010

Senator Guy Barnett
The Senate
Parliament House
CANBERRA ACT 2600

Dear Senator Barnett

You have asked for advice on two matters arising out of the current inquiry by the Environment, Communications and the Arts References Committee into the administration of the home insulation program. The first matter relates to the committee's options for further action arising from the failure of the relevant departments to meet the committee's deadline for responding to questions taken on notice at the hearings on 22 and 26 February 2010.

From the data supplied by the secretariat, I understand that the Department has answered 21 out of 26 questions taken on notice at the 22 February hearing but has answered only 22 out of 86 questions taken on notice at the 26 February hearing.

The first option would be for the committee to seek an explanation from the Department for the late provision of answers and, if the committee considers the explanation to be reasonable, to set a new deadline for the outstanding answers.

A second option would be to raise the outstanding answers in the Senate and seek an explanation from the Minister for the Department's failure to respond on time. This could be done by way of a question without notice at Question Time. The minister's answer could then be the subject of a motion to take note of answers after Question Time.

A further option would be to give notice of a motion for an order for the production of the answers to the outstanding questions. Should the response be outstanding 30 days after the due date, you then have access to the procedure under standing order 164 which enables you to seek an explanation from the minister at the end of Question Time and move a motion without notice to take note of the explanation or, in the event that an explanation is not provided, to move a motion in relation to the minister's failure to provide either an answer or an explanation. This procedure allows serious matters of non-compliance with Senate orders

to be brought to the Senate's attention. A similar procedure would be available to you if you put the questions on notice in the Senate.

The department's performance in failing to respond adequately to questions taken on notice could also be the subject of critical commentary in the committee's report.

The second matter you raise is the acceptability of answers to questions about legal advice which rely on legal professional privilege as the basis for not answering the question. You have asked whether this is an acceptable ground. As has frequently been pointed out in the past, any particular claim not to answer questions must be assessed in the particular circumstances. In this case, the Senate has referred to the committee detailed terms of reference requiring it to inquire into the administration of the home insulation scheme. The answers by the Department in which legal professional privilege has been claimed as a ground for not producing legal advice were to questions relating to the tragic deaths of four installers and to a number of house fires possibly attributable to faulty insulation. The questions go, in some part, to the potential liability of the Department and the Minister in relation to these matters.

It has never been accepted in the Senate, nor in any comparable representative assembly, that legal professional privilege provides a ground for a refusal of information in a parliamentary forum. The first question in response to any such claim is: to whom does the legal advice belong, to the Commonwealth or some other party? Usually it belongs to the Commonwealth. Legal advice to the federal government, however, is often disclosed by the government itself. Therefore, the mere fact that information is legal advice to the government does not establish a basis for this ground. It must be established that there is some particular harm to be apprehended by the disclosure of the information, such as prejudice to pending legal proceedings or to the Commonwealth's position in those proceedings. If the advice in question belongs to some other party, possible harm to that party in pending proceedings must be established, and in any event the approval of the party concerned for the disclosure of the advice may be sought.

There may well be cogent reasons for the department declining to produce the advice in these circumstances. For example there may be legal proceedings instituted against the Commonwealth in relation to these matters, and the publication of the legal advice may prejudice those proceedings, either by influencing magistrates, jurors or witnesses in their evidence or decision-making, or by creating material which, by reason that it is unexaminable in court proceedings because of parliamentary privilege, could create difficulties in any pending court proceedings. To invoke this ground, however, there should be set out the nature of the pending proceedings and the relationship of the information sought to those proceedings.

In any event, the committee should seek some elaboration of this ground because of the mere citation of the phrase 'legal professional privilege' does not provide the committee with an explanation for the department's refusal.

I also draw your attention to the resolution of the Senate of 13May 2009 which sets out the proper process for senators, committees and witnesses to follow in making and determining claims of public interest immunity. In its answers to the questions taken on notice, the Department has not followed these procedures and they should be drawn to the Secretary's attention. I have attached a copy of the resolution to this advice for information.

Please let me know if I can provide any further assistance.

Yours sincerely

(Rosemary Laing)

8 Public interest immunity claims

That the Senate—

(a) notes that ministers and officers have continued to refuse to provide information to Senate committees without properly raising claims of public interest immunity as required by past resolutions of the Senate;

(b) reaffirms the principles of past resolutions of the Senate by this order, to provide ministers and officers with guidance as to the proper process for raising public interest immunity claims and to consolidate those past resolutions of the Senate;

(c) orders that the following operate as an order of continuing effect:

(1) If:

(a) a Senate committee, or a senator in the course of proceedings of a committee, requests information or a document from a Commonwealth department or agency; and

(b) an officer of the department or agency to whom the request is directed believes that it may not be in the public interest to disclose the information or document to the committee,

the officer shall state to the committee the ground on which the officer believes that it may not be in the public interest to disclose the information or document to the committee, and specify the harm to the public interest that could result from the disclosure of the information or document.

(2) If, after receiving the officer's statement under paragraph (1), the committee or the senator requests the officer to refer the question of the disclosure of the information or document to a responsible minister, the officer shall refer that question to the minister.

(3) If a minister, on a reference by an officer under paragraph (2), concludes that it would not be in the public interest to disclose the information or document to the committee, the minister shall provide to the committee a statement of the ground for that conclusion, specifying the harm to the public interest that could result from the disclosure of the information or document.

(4) A minister, in a statement under paragraph (3), shall indicate whether the harm to the public interest that could result from the disclosure of the information or document to the committee could result only from the publication of the information or document by the committee, or could result, equally or in part, from the disclosure of the information or document to the committee as in camera evidence.

(5) If, after considering a statement by a minister provided under paragraph (3), the committee concludes that the statement does not sufficiently justify the withholding of the information or document from the committee, the committee shall report the matter to the Senate.

(6) A decision by a committee not to report a matter to the Senate under paragraph (5) does not prevent a senator from raising the matter in the Senate in accordance with other procedures of the Senate.

(7) A statement that information or a document is not published, or is confidential, or consists of advice to, or internal deliberations of, government, in the absence of specification of the harm to the public interest that could result from the disclosure of the information or document, is not a statement that meets the requirements of paragraph (1) or (4).

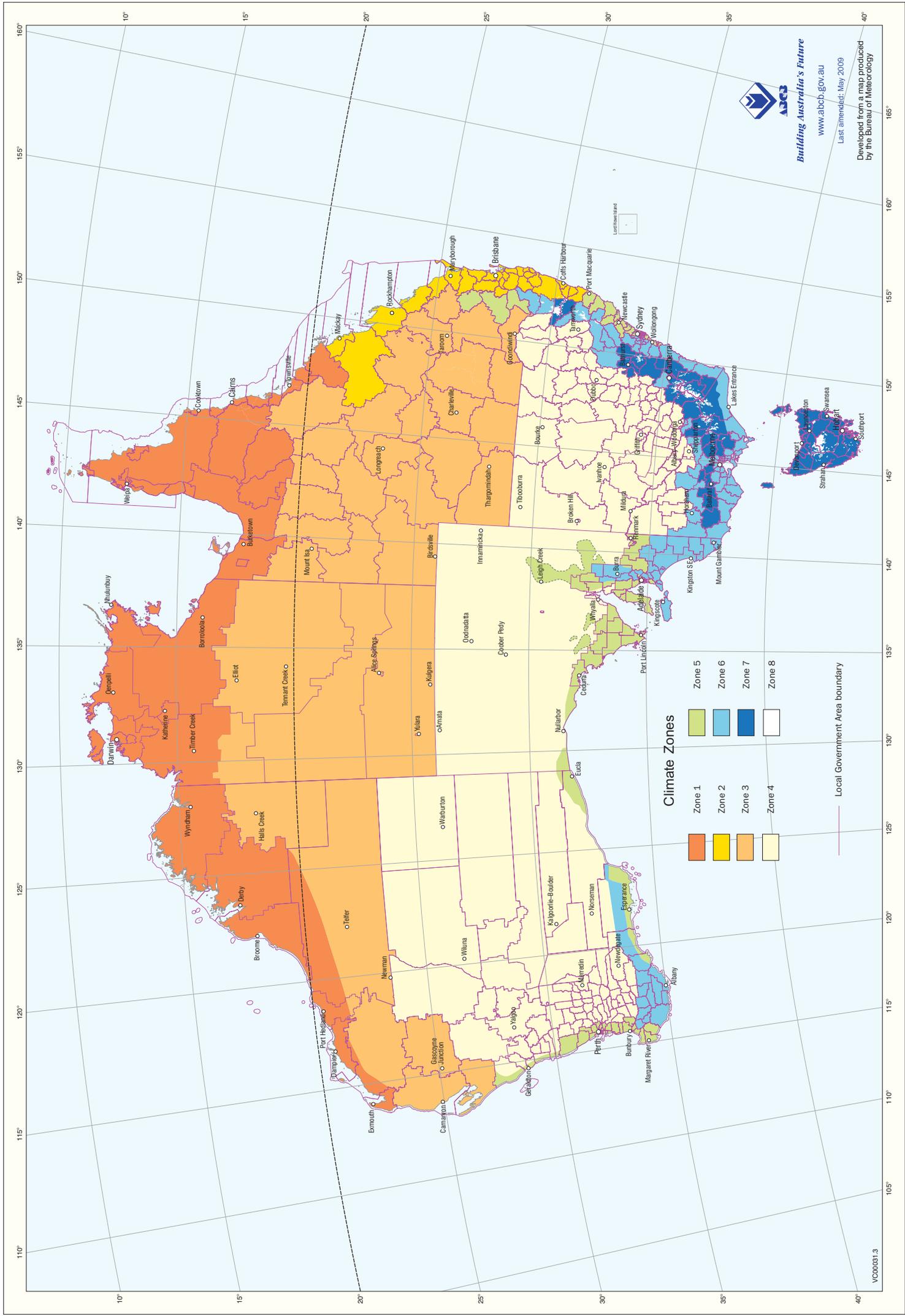
(8) If a minister concludes that a statement under paragraph (3) should more appropriately be made by the head of an agency, by reason of the independence of that agency from ministerial direction or control, the minister shall inform the committee of that conclusion and the reason for that conclusion, and shall refer the matter to the head of the agency, who shall then be required to provide a statement in accordance with paragraph (3).

(d) requires the Procedure Committee to review the operation of this order and report to the Senate by 20 August 2009.

(13 May 2009 J.1941)

Appendix 5

Climate zones as defined in the Building Code of Australia



Building Australia's Future

www.abc.gov.au

Last amended: May 2009

Developed from a map produced by the Bureau of Meteorology

Climate Zones

- Zone 1
- Zone 2
- Zone 3
- Zone 4
- Zone 5
- Zone 6
- Zone 7
- Zone 8
- Local Government Area boundary

Appendix 6

Minter Ellison's Risk Assessment and Risk Register documents

Risk Assessment

This document described as 'Risk assessment of the insulation components under the Energy Efficient Homes Package – report by Minter Ellison Consulting' was tabled in the Senate on 22 February 2010. References in evidence to the 'risk assessment' are mostly references to this document.

The contents of this document are repeated in full in the Risk Register and Management Plan.

Risk Register and Management Plan, 9 April 2009

The Department of Environment, Water, Heritage and the Arts advised that the content of the cell at row 15, column 10 ('recommended management plan') is wrong because of a typographical error. This cell should read:

- Develop detailed take-up strategy as part of Program methodology
- Specifically address monitoring and support structures in outsourcing contracts to achieve take-up targets
- Monitor take-up against this plan and adjust other program aspects as required

**Department of the Environment, Water, Heritage and the Arts:
Risk Assessment of the Insulation Components under the
Energy Efficient Homes Package**

1. Project methodology and business model - post 1 July:

- Extremely limited time to determine and implement
 - effective project methodology and
 - delivery / business model post 1 July

Recommended Management Plan	Current Activities
<ul style="list-style-type: none"> • Put in place an integrated project methodology that effectively links complex inter-related tasks and streams of work • Develop delivery / business model that addresses key Program objectives and risks • Base the final plan on this integrated methodology • Review all actions in the project plan against this methodology and each other as they are developed • Understand interactions within the project and monitor these as part of monitoring processes • Monitor progress closely and identify any inconsistencies or time lapses to ensure early correction and any impact on the methodology or other tasks • Test project's ability to maintain a hybrid business model post 1/7/09, retaining the rebate process whilst the referred ongoing business model is implemented progressively 	<ul style="list-style-type: none"> • Departmental Tier 1 project management framework in place • Recognised project methodology in place • Project Control Group established • Planning workshops underway • Project Plan in place • Project scheduler mapping interdependencies • KPMG working on alternate business models post 1/7/09 • Stakeholder consultation program in place contributing to Business Model and project methodology analysis • Strategy being developed to encourage take-up by low income / vulnerable households

2. Procurement / Licensing: needs for entire Program duration to be determined and fulfilled by 1/7/09

- Procurement processes/timeframes, 1/7/09 deadline for full program
- Scale of task is new to Department

Recommended Management Plan	Current Activities
<ul style="list-style-type: none"> • Identify procurement thresholds and constraints • Identify the most appropriate procurement / licensing model (e.g. Multi-user panels, issue of licenses, etc) as part of the Business Model considerations • Consider staged implementation of residual procurement needs to reduce time pressures • Develop a specific procurement/licensing strategy within the business model and project methodology • Develop an implementation timetable ensuring legal risks are dealt with effectively and allocate sufficient resources able to scope needs and assess capacity as the procurement / licensing processes are implemented • Monitor progress, including probity considerations closely 	<ul style="list-style-type: none"> • Business Model planning underway with KPMG. This will specifically consider ways to minimise formal procurement needs • Obligations under the Commonwealth procurement guidelines are being reviewed • Considering multi-user list and installer register and alternates to formal procurement • Licensing standards etc are partly developed within the rebate system already in place • Training etc is being outsourced – discussions are in hand with DEEWR et al

3. Time: time available to develop and deliver the program in a properly controlled way may be inadequate

- Tight timeframes to develop all elements of the program's Delivery model by 1 July
- An appropriate launch is required mid-year for the package

Recommended Management Plan	Current Activities
<ul style="list-style-type: none"> • Develop detailed project delivery / business model • Consider timing constraints / limitations in developing implementation strategies to reduce risk where possible whilst retaining core objectives • Clearly define <ul style="list-style-type: none"> • What will be in place 1/7/09 as a minimum delivery set and aspects that can be deferred / melded with others • Minimum requirements vs those that industry needs to deal with as part of its operation • Have industry leaders participate in developing guidelines / standards processes through early involvement in the program • Simplify business model where possible, to reduce time constraints • Closely monitor resourcing, project delivery targets etc • Adjust resources quickly as any shortfalls are identified • Use external resource where necessary to reduce time constraints • Focus resourcing on prior experience, capacity to pick up new tasks quickly, self-starting 	<ul style="list-style-type: none"> • KPMG working on alternate business models, including strategies to reduce time constraints • Potential for using Centrelink as payment agency being explored • Ministerial consultations in place • Industry Working Groups in place to develop detail of the agreed business model • Discussions with DEEWR re training programs in place • Scheduler finalising all tasks into project plan including risk treatments • Tight project controls in place to monitor timing risks and development of mitigation action impact on timing

4. Installation (quality and compliance): quality of installation / control by installers and compliance structures may be inadequate

- Poor quality installations
- Compliance cost (to Dep't or industry) may be excessive and process may be ineffective
- Safety - house fire/damage
- Insufficient number of auditors

Recommended Management Plan	Current Activities
<ul style="list-style-type: none"> • Consider these issues in developing the business model • Ensure business model transfers fraud risk from Commonwealth to providers where possible and allows effective monitoring • Develop effective process for registration of installers. Cover both financial viability and technical capacity in registration process • Alternatively let third party contracts to do this; Set up monitoring and reporting processes to identify emerging provider stress • Ensure contract structures provide capacity to monitor and take action on poor performing providers • Ensure installers are properly insured and consider requiring installers to indemnify the Commonwealth against claims/loss arising from installers' actions • Review mitigation strategies in light of the agreed business model 	<ul style="list-style-type: none"> • Developing links with ACCC and other regulatory bodies • Information available through call centre and is being reviewed as the business model is being developed • Strategic communications strategy in place • Communications channels with industry have been identified and are being developed • Regular communications with States and Territory regulatory bodies in place • Early installation guidelines include specific quality and safety requirements – installers must be verified – hooked into Australian Standards • Breach reporting system in place. Site inspections – planned to begin early 09/10 • Assessing training requirements and discussing with DEEWR • Internal compliance and monitoring system under development • Technical Working Groups with industry covering safety and quality of product

5. Fraud: inadequate controls may allow fraudulent or inappropriate behaviours

- Ineligible people accessing the program
- Industry quoting above actual cost of job
- Households double dipping between Commonwealth, State and Territory Programs above out of pocket costs
- Applicant accessing both SHWR and HIP programs
- Installer theft/vandalism/ professionalism
- Internal / staff member process integrity

Recommended Management Plan	Current Activities
<ul style="list-style-type: none"> • Develop specific fraud strategy based on a capacity to outsource the risk • Review processes to test specifically for control over possible fraud / incorrect payments • Liaise with the Department's enforcement and compliance/legal experts in developing controls • Ensure effective monitoring of possible fraud areas in place (identify data needs and include in process development) • Review internal processes for possible internal fraud opportunities • Review eligibility guidelines and review processes for possible fraud opportunities • Risk Manager to sign off on processes and policies after reviewing for possible fraud opportunities 	<ul style="list-style-type: none"> • KPMG developing fraud strategy as part of business model considerations • Consultation with and assistance from Departmental Fraud staff in place • Internal process for capturing and mitigating fraud risk in place (e.g. cross checking data for homeowners claiming both insulation and SHW rebates) • Full time legal officer in place – further resources are being added currently • Current rebate forms facilitate follow up where information incomplete/incorrect • Internal follow up for claim issues including evidence of payment in place

6. Program complexity: Multiple policy goals, vested commercial interests may hamper the efficient delivery of the Program.

- Governance and planning gaps may reduce the capacity of the project to deliver
- Ineffective internal decision making, resource allocation and ownership (Project Governance)
- Industry structure not properly addressed

Recommended Management Plan	Current Activities
<ul style="list-style-type: none"> • Utilise effective integrated project methodology and develop fit-for-purpose Business Model to mitigate risk • Ensure scale of timing and project methodology (i.e. how the tasks fit together and impact on each other) mitigate risk and reduce complexity • Ensure clarity of rules through effective internal and external communication strategies • Set up tight internal communication structures • Set up conflict resolution process within project to identify and resolve potential conflicts 	<ul style="list-style-type: none"> • Business model planning in place is addressing complexity as a key goal • Project Control Group in place • Stakeholder Working Groups in place • Scheduler working on project plan and interdependencies • External communication strategy drafted and internal communications strategy commenced • Recently clarified eligibility guidelines • Draft stakeholder management plan prepared

7. Political: a variety of failures in the process, system, project deliverables etc may have significant indirect political/public confidence impact

- Policy changes or interactions and political scrutiny
 - Commonwealth
 - State & Territories
- Leaks about program performance
- Household demand management
- Applies in broadest sense of "political"

Recommended Management Plan	Current Activities
<ul style="list-style-type: none"> • Include political/ public confidence consideration in development of and monitoring of project methodology and Business Model • Identify political risks (e.g. impact on public confidence) and develop a communication strategy and monitoring process that includes capacity to keep track of these • Develop a mitigation strategy for politically sensitive risk and closely monitor developments • Actively manage expectations through communication strategies, including <ul style="list-style-type: none"> • Market • Installers • Community • Press • Other stakeholders • Clearly communicate key aspects of the Program, e.g. eligibility and program requirements • Manage expectations through Working Groups (e.g. Industry) and regular meetings with key stakeholders 	<ul style="list-style-type: none"> • Communications strategy, reporting steams and 3rd party communications strategy • Formal consultation with social welfare and environmental groups • Reporting and monitoring plan under development including around data collection to facilitate reporting • Technical workshops on safety etc – working with industry • Weekly meeting with Parliamentary Secretary and advisers • Close engagement with Minister, Minister's Office, Prime Minister and Cabinet, Coordinator-General • Industry and community consultations groups in place • Arms length communication strategy is being developed

8. Communication and planning: inadequate planning and communication may create poor delivery of communication strategy (internal and external)

- Excessive media attention on non-compliance
- Consistency of information on suppliers
- Households' lack of program awareness

Recommended Management Plan	Current Activities
<ul style="list-style-type: none"> • Develop separate communication strategy and set up detailed monitoring processes • Include specific communication issues and strategies in the project methodology • Develop integration processes to improve monitoring and rectification actions as needed • Develop research and integrated data collection strategy 	<ul style="list-style-type: none"> • Internal and external communications strategy developed • Tight control over delivery timetable for public communication campaign • Intra-DEWHA communication through the Project Control Group • Intra-Commonwealth communication underway (eg Finance, ANAO) • These issues are also being addressed as part of the mitigation of Risk 1 above • Developmental research has been undertaken to ensure correct messages are delivered to the community • Campaign tracking research is planned to ensure messages are getting through and any adjustments required can be made expediently • Comprehensive information package developed to assist with consistent responses to public enquiries • Information being developed for special audiences (NESB, vision/hearing impaired, indigenous) • Internal assessment of communication needs for disabled/multilingual groups being made

9. Legal: complex legal issues associated with the Program may not be fully understood or dealt with

- Insurable risk may not be fully covered and monitored
- Contracts don't clearly specify responsibilities or allocate risk
- Privacy, safety, liability issues

Recommended Management Plan	Current Activities
<ul style="list-style-type: none"> • Develop a separate legal risk management plan and implement • External review of plan and key contracts • Focus on outsourcing major risks while retaining capacity to monitor and regulate the key relationships through contracts • Review impact of legal risk as part of decisions on the appropriate business model 	<ul style="list-style-type: none"> • Currently drafting a Legal Risk Management Plan • Investigating legal issues to inform the Business Model • Full time senior legal officer • Recruiting junior legal officer on secondment

10. Internal capacity: capacity to develop, staff, control and deliver the program on time may be insufficient

- Human Resources: recruitment, induction, training and integration of many new staff
 - adequate numbers and capabilities of staff
 - burn out
 - turnover/loss of corporate knowledge
 - rebate payment delays

Recommended Management Plan	Current Activities
<ul style="list-style-type: none"> • Develop a resourcing strategy in conjunction with the project Methodology and business model • Integrate resourcing strategy with the project methodology and schedule • Monitor resourcing needs weekly as the plan unfolds • Include resourcing reviews in all phases of the detailed project development • Focus resourcing on prior experience, capacity to take up new tasks quickly, self-starting, understanding of public probity, ability to work with little supervision, team player • Maintain a flexible internal structure to respond to emerging needs quickly 	<ul style="list-style-type: none"> • Issue is being addressed in the short-term in project planning processes currently in place • High level of internal executive support • External recruitment underway • Extensive/ senior internal secondments • Flexible/dynamic structure adjusted to changing business model • Divisional restructure to meet requirements • Private sector resources brought in to meet gaps • Information sharing through regular team meetings

11. Regulation: the existing regulatory framework may not adequately support the Program's goals

- Reliance on contracts rather than legislative enforcement
- Regulation required through third party contractors

Recommended Management Plan	Current Activities
<ul style="list-style-type: none"> • Choose a regulatory approach consistent with the Program Methodology and implementation timetable based on outsourcing model and commercial contracts • Likely need to include specific regulatory aspects into contracts as the core focus of regulation • Consider need and constraints if administrative regulation path is chosen • Monitor effectiveness of regulation structures weekly and adjust if possible • Address regulatory requirements as part of the development of the project methodology and business model • Assess exiting regulatory frameworks to determine intersections with Program needs • Link regulatory requirements to the business model and align processes with state/territory regulatory process for the industry • Consider how licensing requirements will support broader regulatory requirements of this Program • Consider options for incentives and penalties in contracts / agreements with suppliers 	<ul style="list-style-type: none"> • Developing business Code of Conduct and Australian Standards in guidelines (already in place for rebate system) • Consulting with regulators (ACCC) • Consulting with industry • Aligning program specific regulation with State/Territory etc Regulation

12. Capacity: Industry's capacity to produce and deliver sufficient quality materials and installations may be inadequate

- Demand for materials exceeds supply
- Transport – capability of supply chain
- Capability of installer workforce
- Development of bottlenecks.

Recommended Management Plan	Current Activities
<ul style="list-style-type: none"> • Develop product supply strategy and installer availability strategy in conjunction with industry and outsourcing contractors • Develop monitoring processes to identify emerging supply issues and a framework to deal with these • Integrate supply and communication strategies in the program methodology 	<ul style="list-style-type: none"> • Industry consultation through formal roundtable meetings has commenced • Monitoring imports of insulation materials • Business Model decision will consider impact on this risk

13. Outcomes: Actual outcomes (e.g. number of households included, long-term savings) may not eventuate

- Household benefits don't materialise in energy savings
- Household demand - cost of insulating household above program budget

Recommended Management Plan	Current Activities
<ul style="list-style-type: none">• Review program methodology to identify specific strategies to ensure full take-up and to encourage a balanced progression of take-up• Put in place monitoring processes to identify emerging trends in take-up quickly• Adjust strategy and actions in response to emerging trends• Retain flexibility in outsourcing structures	<ul style="list-style-type: none">• Business Model decision will consider impact on this issue, in particular the structures necessary to ensure distribution and availability, quality of products delivered• Monitoring processes being put in place will provide feedback on progress and data on where differences are occurring• Communication strategy actively supports this issue• Specific strategies being developed for low income / vulnerable households and remote / regional areas

14. Delivery method: delivery structure may result in over-centralisation, poor allocation and political / economic fallout

- Government interventions versus free market
- Inefficiency in delivery Over-centralisation through one-stop shop
- Fairness in allocation of work between Installers (especially broker system in Phase 2)

Recommended Management Plan	Current Activities
<ul style="list-style-type: none"> • Develop integrated project methodology and delivery strategy • Review as processes are developed; put in place monitoring processes to identify and correct any developing issues 	<ul style="list-style-type: none"> • Issues of access and equity are included in communication strategy with suppliers • Access for specific needs groups the subject of separate focus in planning and delivery structures • Business model will address key aspects of this risk • Timelines are being developed to meet the 1/7/09 deadline • Current discussions with Centrelink, Medicare and State / Territory Offices of Fair Trading to coordinate responses and utilise existing processes where available • Discussions with industry in place to address free market aspects of the business model • Considering options for multiple information access points for home owners

15. Take-up: program may not achieve its objectives through poor uptake / program awareness

- Level of take-up is inadequate
- Insufficient installers in regional / remote / Indigenous areas
- LEAPR incentive insufficient for landlord uptake

Recommended Management Plan	Current Activities
<ul style="list-style-type: none"> • Develop detailed take-up strategy as part of Program methodology • Specifically address monitoring and support structures in outsourcing contracts to achieve take-up targets • Monitor take-up against this plan and adjust other program aspects as required 	<ul style="list-style-type: none"> • Well targeted communications strategy to raise awareness to be delivered from end June 2009 • Take-up issues are being considered in Business Model considerations • Reporting is being considered in negotiations with Centrelink, et al • Targeted media launch being developed as part of communication strategy • Medicare will provide reports on take-up, quality assurance and compliance as part of its delivery proposals • Development of strategies to encourage take-up by low income / vulnerable households underway • Benchmarking and weekly reporting on uptake being developed with Medicare

16. Training mechanisms: capacity / control over installer network skills may be inadequate

- Demand for installer training may exceed capacity
- Inability to attract enough people to train to become installers
- Inability to 'fund' training for installers

Note: DEEWR will oversee

Recommended Management Plan	Current Activities
<ul style="list-style-type: none"> • Develop process for registration of installers (arrange through third party outsourcing contractors) • Cover both financial viability and technical capacity (allow third party contracts to do this) • Set up monitoring and reporting processes to identify emerging provider stress • Ensure contract structures provide capacity to monitor and take action on poor performing providers • Closely liaise with DEEWR on development and rollout of training capacity initially, and of retraining/exist strategies in second half of Program 	<ul style="list-style-type: none"> • Communication strategy to raise awareness of training availability amongst potential suppliers to be delivered from end June 2009 • Agreement with Medicare to host installer registration web-site • Legal parameters for the register have been developed • Insurance requirements for installers are being developed • Code of conduct requirements being developed • Industry Skills Council in DEEWR being consulted re training program development • States being consulted re training delivery – NSW is almost ready

17. Stakeholder management: risk of focussing on specific tasks and pressure groups may result in inadequate attention to all stakeholders and their interests

- Diversity of stakeholders and challenge in managing their expectations
- Industry ownership / buy-in
- National Coverage – Indigenous /Remote

Recommended Management Plan	Current Activities
<ul style="list-style-type: none"> • Develop integrated project strategy and methodology • Set up tight internal communication structures • Set up conflict resolution process within project to identify and resolve potential conflicts • Have all stakeholders agree on Terms of Reference , e.g. through State and Territory working groups • Conduct regular meetings (face-to-face and teleconferences) 	<ul style="list-style-type: none"> • Opportunity for internal and external communication (e.g. press releases) • Departmental Executive provide secretarial and support resources • Communications Strategy drafted • Regular and open communications with States and Territory Working Group • Developing intranet site • Process to develop strategies for servicing remote areas and for low income / vulnerable households underway

18. Industry impact: structure of program may impact on capacity of the industry both in the short and longer-term

- Inflated insulation prices for a period
- Industry boom and bust – workers and product not required at end of program

Recommended Management Plan	Current Activities
<ul style="list-style-type: none"> • Include industry structure impact in program methodology • Develop an exit strategy for the Program at the end of 2.5 years • Develop specific aspects of communication strategy to support steady implementation of the program supported by supply capacity • Develop monitoring strategies to keep oversight of supply (materials and installers) and build-up and run-down of the industry • Develop specific re-training / redeployment strategy and communication program for run-down at 2.5 years with DEEWR 	<ul style="list-style-type: none"> • The media plan under development as part of the Communications Strategy will control the rate of information flow to members of the community • DEEWR and State / Territory training programs will enable the training to be easily transferred to other parts of the industry after the Program is completed • Planning and monitoring strategies are part of the development of the Business Model, data collection being negotiated with Centrelink and Medicare

19. Product: Product quality may not be of adequate standard

- Product does not meet thermal efficiency standards
- Product does not meet safety standards

Recommended Management Plan	Current Activities
<ul style="list-style-type: none"> • Set product quality guidelines with industry • Put in place regulatory framework (based on outsourcing contracts) to monitor quality and identify exceptions • Set up third party process for dealing with quality exceptions, including rectification by alternate providers as required • Put in place monitoring processes to monitor the overall quality and delivery standards for the Program • Put in place arrangements with other agencies, particularly ACCC, to ensure their active involvement in ensuring industry members comply with relevant legal requirements 	<ul style="list-style-type: none"> • Negotiating with Centrelink to act as payment agency and to hold the installer register. • State and Territory Offices of Fair Trading to act as regulators through existing processes and structures • Guidelines and product fact sheets in place as part of the current rebate system • Number of industry briefings have been held with industry bodies • Technical Working Groups in place and have met • Looking at safety elements of the Standards • Have technical consultants in place • Developing a product testing model (preferably with access to 2 laboratories) • Technical evaluation is considering a series of construction models to apply to the major housing types.

Risk Register and Management Plan at 2.00 pm 9 April 2009

Identification				Assessment			Risk Trend			Management Plan			Currency			
Risk Description	Likelihood	Consequence	Inherent risk quantification	Inherent risk value	Risk - 4 Months ago	Risk - 2 Months ago	Risk Today	Recommended Management Plan A/E - allocate single point responsibility for each extreme and high risk. Develop each mitigation plan into a strategy; monitor progress against the strategy	Current activity at 9 April 2009	Effectiveness of Mitigators Weak/Incomplete/Adequate/strong/Over-controlled	Residual risk value	Is residual risk value tolerable Yes/No	Progress in Last Reporting Period	Additional Action Plan	Predictive Indicators	Date Last Updated
<p>Program methodology - post 1 July:</p> <ul style="list-style-type: none"> Extremely limited time to determine and implement effective Program methodology post 1 July 	5	5	Substantial non-delivery, Admin costs & conflict; Poor control of processes and financial outcomes \$40-95m Costs, non-delivery, fraud etc	E	E	E	E	<ul style="list-style-type: none"> Put in place an integrated project methodology that effectively links complex inter-related tasks and streams of work Develop delivery / business model that addresses key Program objectives and risks Base the final plan on this integrated methodology Review all actions in the project plan against this methodology and each other as they are developed Understand interactions within the project and monitor these as part of monitoring processes Monitor progress closely and identify any inconsistencies or time lapses to ensure early correction and any impact on the methodology or other tasks Test project's ability to maintain a hybrid business model post 1/7/09, retaining the rebate process whilst the referred ongoing business model is implemented progressively 	<ul style="list-style-type: none"> Departmental Tier 1 project management framework in place Recognised project methodology in place Project Control Group established Planning workshops underway Project Plan in place Project scheduler mapping interdependencies KPMG working on alternate business models post 1/7/09 Stakeholder consultation program in place contributing to Business Model and project methodology analysis Strategy being developed to encourage take-up by low income / vulnerable households 	Strong	3 3 M	Yes				
<p>Procurement/ Licensing: needs for entire Program duration to be determined and fulfilled by 4/7/09</p> <ul style="list-style-type: none"> Procurement processes/timeframes, 1/7/09 deadline for full program Scale of task is new to Department 	5	5	Delays or total non-delivery, substantial increased costs; increase in other risks incl fraud & political fallout; litigation risk \$20-60m Substantial political fallout	E	E	E	E	<ul style="list-style-type: none"> Identify procurement thresholds and constraints Identify the most appropriate procurement / licensing model (e.g. Multi-user panels, issue of licenses, etc) as part of the Business Model considerations Consider staged implementation of residual procurement needs to reduce time pressures Develop a specific procurement/licensing strategy within the business model and project methodology Develop an implementation timetable ensuring legal risks are dealt with effectively and allocate sufficient resources able to scope needs and assess capacity as the procurement / licensing processes are implemented Monitor progress, including probity considerations closely 	<ul style="list-style-type: none"> Business Model planning underway with KPMG. This will specifically consider ways to minimise formal procurement needs Obligations under the Commonwealth procurement guidelines are being reviewed Considering multi-user list and installer register and alternates to formal procurement Licensing standards etc are partly developed within the rebate system already in place Training etc is being outsourced - discussions are in hand with DEWR et al 	Weak	4 5 E	No	<p>Extend rebate scheme to 30 September</p> <p>2009; possible hybrid model allowing full implementation as planned on 1 July 2009 in Metro Sydney/Melbourne</p>	<p>Project schedule falling behind; procurement finalisation slips beyond 1 July 2009</p>		
<p>Time: time available to develop and deliver the program in a properly controlled way may be inadequate</p> <ul style="list-style-type: none"> Tight timeframes to develop all elements of the program's Delivery model by 1 July An appropriate launch is required mid-year for the package 	5	4	Poor control; poor communication; overruns; non-delivery, early termination \$20-145m Costs; political fallout; early termination	E	E	E	E	<ul style="list-style-type: none"> Develop detailed project delivery / business model Consider timing constraints / limitations in developing implementation strategies to reduce risk where possible whilst retaining core objectives Clearly define What will be in place 1/7/09 as a minimum delivery set and aspects that can be deferred / melded with others Minimum requirements vs those that industry needs to deal with as part of its operation Have industry leaders participate in developing guidelines / standards processes through early involvement in the program Simplify business model where possible, to reduce time constraints Closely monitor resourcing, project delivery targets etc Adjust resources quickly as any shortfalls are identified Use external resource where necessary to reduce time constraints Focus resourcing on prior experience, capacity to pick up new tasks quickly, self-starting 	<ul style="list-style-type: none"> KPMG working on alternate business models, including strategies to reduce time constraints Potential for using Centrelink as payment agency being explored Ministerial consultations in place Industry Working Groups in place to develop detail of the agreed business model Discussions with DEWR re training programs in place Scheduler finalising all tasks into project plan including risk treatments Tight project controls in place to monitor timing risks and development of mitigation action impact on timing 	Adequate	4 4 E	No	<p>Extend rebate scheme to 30 September</p> <p>2009; possible hybrid model allowing full implementation as planned on 1 July 2009 in Metro Sydney/Melbourne</p>	<p>Project schedule falling behind; procurement finalisation slips beyond 1 July 2009; insufficient resources in place to carry out Management Plan</p>		

Identification		Assessment		Risk Trend		Management Plan		Currency	
4	<p>Installation quality and compliance: quality of installation / control by installers and compliance structures may be inadequate</p> <ul style="list-style-type: none"> Poor quality installations Compliance cost (to Dept or industry) may be excessive and process may be ineffective Safety - house fire/damage Insufficient number of auditors 	<p>Poor quality installation; make-good costs; additional intervention (regulatory, process control, direct intervention into delivery); poor access for marginal groups; major political fallout; early termination; litigation risk</p> <p>\$20-50m Early termination</p>	E	E	<ul style="list-style-type: none"> Consider these issues in developing the business model Ensure business model transfers fraud risk from Commonwealth to providers where possible and allows effective monitoring Develop effective process for registration of installers. Cover both financial viability and technical capacity in registration process Alternately let third party contracts to do this. Set up monitoring and reporting processes to identify emerging provider stress Ensure contract structures provide capacity to monitor and take action on poor performing providers Ensure installers are properly insured and consider requiring installers to indemnify the Commonwealth against claims/loss arising from installers' actions Review mitigation strategies in light of the agreed business model 	Strong	3 3 M Yes		
5	<p>Fraud: inadequate controls may allow fraudulent or inappropriate behaviours</p> <ul style="list-style-type: none"> Ineligible people accessing the program Industry quoting above actual cost of job Households; double dipping between Commonwealth, State and Territory Programs above out of pocket costs Applicant accessing both SHWR and HIP programs <ul style="list-style-type: none"> Installer theft/vandalism/ professionalism Internal / staff member process integrity 	<p>Complexity; many sources; Time to develop controls is limited; risk of delay / non-delivery if controls are excessive</p> <p>\$10-30m Fraud losses Political fallout</p>	E	E	<ul style="list-style-type: none"> Develop specific fraud strategy based on a capacity to outsource the risk Review processes to test specifically for control over possible Fraud / incorrect payments Liaise with the Department's enforcement and compliance/legal experts in developing controls Ensure effective monitoring of possible fraud areas in place (Identify data needs and include in process development) Review internal processes for possible internal fraud opportunities Review eligibility guidelines and review processes for possible fraud opportunities Risk Manager to sign off on processes and policies after reviewing for possible fraud opportunities 	Adequate	3 4 H Yes		
6	<p>Program complexity: Multiple policy goals; vested commercial interests may hamper the efficient delivery of the Program.</p> <ul style="list-style-type: none"> Governance and planning gaps may reduce the capacity of the project to deliver Ineffective internal decision making; resource allocation and ownership (Project Governance) Industry structure not properly addressed 	<p>Poorly structured program; program fails to meet objectives; inadequate communication; increased costs; poor delivery; political fallout; early termination</p> <p>\$15-60m Early termination</p>	E	E	<ul style="list-style-type: none"> Utilise effective integrated project methodology and develop fit-for-purpose Business Model to mitigate risk Ensure scale of timing and project methodology (i.e. how the tasks fit together and impact on each other) mitigate risk and reduce complexity Ensure clarity of rules through effective internal and external communication structures Set up tight internal communication structures Set up conflict resolution process within project to identify and resolve potential conflicts 	Adequate	3 3 M Yes		
7	<p>Political: a variety of failures in the process, system, project deliverables etc may have significant political fallout</p> <ul style="list-style-type: none"> Policy changes or interactions and political scrutiny <ul style="list-style-type: none"> Commonwealth State & Territories Leaks about program performance Household demand management Applies in broadest sense of "political" 	<p>Loss of good will; non-delivery of program; major loss in outcomes</p> <p>Not quantifiable Early termination</p>	E	E	<ul style="list-style-type: none"> Communications strategy; reporting streams and 3rd party communications strategy Formal consultation with social welfare and environmental groups Reporting and monitoring plan under development including around data collection to facilitate reporting Technical workshops on safety etc - working with industry Weekly meeting with Parliamentary Secretary and advisers Close engagement with Minister, Minister's Office, Prime Minister and Cabinet, Coordinator-General Industry and community consultations groups in place Arms length communication strategy is being developed 	High level political stakeholder coordination and monitoring required	Increased media attention; ministerial; negative stakeholder feedback	3 5 E No	

Identification		Assessment		Risk Trend		Management Plan			Currency			
8	<p>Communication and planning: inadequate planning and communication may create poor delivery of communication strategy (internal and external)</p> <ul style="list-style-type: none"> Excessive media attention on non-compliance Consistency of information on suppliers Households: lack of program awareness 	3	5	<p>Poor take-up; poor delivery (consumer and installer confusion); conflict; increased communication and regulatory costs; major political fallout</p> <p>\$8-20m Costs Political fallout \$500m Funds not utilised Poor take-up</p>	E	E	<ul style="list-style-type: none"> Develop separate communication strategy and set up detailed monitoring processes Include specific communication issues and strategies in the project methodology Develop integration processes to improve monitoring and rectification actions as needed Develop research and integrated data collection strategy 	<ul style="list-style-type: none"> Internal and external communications strategy developed Tight control over delivery timetable for public communication campaign Intra-DEWHA communication through the Project Control Group Intra-Commonwealth communication underway (eg Finance, ANAO) These issues are also being addressed as part of the mitigation of Risk 1 above Developmental research has been undertaken to ensure correct messages are delivered to the community Campaign tracking research is planned to ensure messages are getting through and any adjustments required can be made expeditiously Comprehensive information package developed to assist with consistent responses to public enquiries Information being developed for special audiences (NESB, vision/hearing impaired, indigenous) Internal assessment of communication needs for disabled/multilingual groups being made 	2 3 L	Yes		
9	<p>Legal: complex legal issues associated with the Program may not be fully understood or dealt with</p> <ul style="list-style-type: none"> Insurable risk may not be fully covered and monitored Contracts don't clearly specify responsibilities or allocate risk Privacy, safety, liability issues 	4	4	<p>Litigation; substantial additional costs to rectify consequences of poor legal risk management including paying damages; political fallout; early termination</p> <p>\$15-30m Litigation costs Early termination</p>	E	E	<ul style="list-style-type: none"> Develop a separate legal risk management plan and implement External review of plan and key contracts Focus on outsourcing major risks while retaining capacity to monitor and regulate the key relationships through contracts Review impact of legal risk as part of decisions on the appropriate business model 	<ul style="list-style-type: none"> Currently drafting a Legal Risk Management Plan Investigating legal issues to inform the Business Model Full time senior legal officer Recruiting junior legal officer on secondment 	3 3 M	Yes		
10	<p>Internal capacity: capacity to develop, staff, control and deliver the program on time may be insufficient</p> <ul style="list-style-type: none"> Human Resources: recruitment, induction, training and integration of many new staff adequate numbers and capabilities of staff burn out turnover/loss of corporate knowledge rebate payment delays 	4	4	<p>Poor processes and controls; inadequate regulatory framework; poor delivery; early termination</p> <p>\$20-125m Early termination</p>	E	E	<ul style="list-style-type: none"> Develop a resourcing strategy in conjunction with the project Methodology and business model Integrate resourcing strategy with the project methodology and schedule Monitor resourcing needs weekly as the plan unfolds Include resourcing reviews in all phases of the detailed project development Focus resourcing on prior experience, capacity to take up new tasks quickly, self-starting, understanding of public probity, ability to work with little supervision, team player Maintain a flexible internal structure to respond to emerging needs quickly 	<ul style="list-style-type: none"> Issue is being addressed in the short-term in project planning processes currently in place High level of internal executive support External recruitment underway Extensive/senior internal secondments Flexible/dynamic structure adjusted to changing business model Divisional restructure to meet requirements Private sector resources brought in to meet gaps Information sharing through regular team meetings 	4 3 H	Yes		
11	<p>Regulation: the existing regulatory framework may not adequately support the Program's goals</p> <ul style="list-style-type: none"> Reliance on contracts rather than legislative enforcement Regulation required through third party contractors 	4	4	<p>poor control of costs; poor delivery quality; increased fraud; political fallout; early termination</p> <p>\$15-50m Early termination</p>	E	E	<ul style="list-style-type: none"> Choose a regulatory approach consistent with the Program Methodology and implementation timetable based on outsourcing model and commercial contracts Likely need to include specific regulatory aspects into contracts as the core focus of regulation Consider need and constraints if administrative regulation path is chosen Monitor effectiveness of regulation structures weekly and adjust if possible Address regulatory requirements as part of the development of the project methodology and business model Assess exiting regulatory frameworks to determine intersections with Program needs Link regulatory requirements to the business model and align processes with state/territory regulatory process for the industry Consider how licensing requirements will support broader regulatory requirements of this Program Consider options for incentives and penalties in contracts / agreements with suppliers 	<ul style="list-style-type: none"> Developing business Code of Conduct and Australian Standards in Guidelines (already in place for rebate system) Consulting with regulators (ACCC) Aligning program specific regulation with State/Territory etc Regulation 	4 3 H	Yes		

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12	<p>Capacity: industry's capacity to produce and deliver sufficient quality materials and installations may be inadequate</p> <ul style="list-style-type: none"> - Demand for materials exceeds supply - Transport - capability of supply chain - Capability of installer workforce - Development of bottlenecks 	3	4	H	<p>Non-delivery or delayed delivery of product; reduced installation quality; profiteering; conflict; political fallout; loss of public confidence in the Program</p> <p>\$15-30m Costs Political fallout</p>	H	<ul style="list-style-type: none"> Develop product supply strategy and installer availability strategy in conjunction with industry and outsourcing contractors Develop monitoring processes to identify emerging supply issues and a framework to deal with these Integrate supply and communication strategies in the program methodology 	H	Adequate	2 3 L	Yes	
13	<p>Outcomes: Actual outcomes (e.g. number of households included, long-term savings) may not eventuate</p> <ul style="list-style-type: none"> - Household benefits don't materialise in energy savings - Household demand - cost of insulating household above program budget 	3	4	H	<p>Poor outcomes: poor controls; poor media; political fallout; additional admin costs; \$5-10m Costs Early termination Political fallout</p>	H	<ul style="list-style-type: none"> Review program methodology to identify specific strategies to ensure full take-up and to encourage a balanced progression of take-up Put in place monitoring processes to identify emerging trends in take-up quickly Adjust strategy and actions in response to emerging trends Retain flexibility in outsourcing structures 	H	Strong	3 3 M	Yes	
14	<p>Delivery method: delivery structure may result in over-centralisation, poor allocation and political / economic fallout</p> <ul style="list-style-type: none"> - Government interventions versus free market - Inefficiency in delivery Over-centralisation through one-stop shop - Fairness in allocation of work between installers (especially broker system in Phase 2) 	3	4	H	<p>Administrative costs; delays in delivery; non-delivery; fraud; loss of industry support for the program</p> <p>\$500K Admin costs</p>	H	<ul style="list-style-type: none"> Develop integrated project methodology and delivery strategy Review as processes are developed; put in place monitoring processes to identify and correct any developing issues 	H	Incomplete	2 3 L	Yes	
15	<p>Take-up: program may not achieve its objectives through poor uptake / program awareness</p> <ul style="list-style-type: none"> - Level of take-up is inadequate - Insufficient installers in regional / remote / Indigenous areas - LEAP incentive insufficient for landlord uptake 	3	4	H	<p>Poor take-up; additional costs to catch up; excessive support and delivery costs; loss to industry; extensive political fallout</p> <p>\$10-25m Costs Political fallout</p>	H	<ul style="list-style-type: none"> Issues of access and equity are included in communication strategy with suppliers Access for specific needs groups the subject of separate focus in planning and delivery structures Business model will address key aspects of this risk Timelines are being developed to meet the 1/7/09 deadline Current discussions with Centrelink, Medicare and State / Territory Offices of Fair Trading to coordinate responses and utilise existing processes where available Discussions with industry in place to address free market aspects of the business model Considering options for multiple information access points for home owners 	H	Incomplete	3 3 M	Yes	
16	<p>Training mechanisms: capacity / control over installer network skills may be inadequate</p> <ul style="list-style-type: none"> - Demand for installer training may exceed capacity - Ability to attract enough people to train to become installers - Ability to 'fund' training for installers <p>Note: DEEWR will oversee</p>	3	4	H	<p>Poor quality installation; make-good costs; additional intervention (regulatory, process control, direct intervention into delivery); poor access for marginal groups; major political fallout; early termination; litigation risk</p> <p>\$20-50m Early termination</p>	H	<ul style="list-style-type: none"> Develop process for registration of installers (arrange through third party outsourcing contractors) Cover both financial viability and technical capacity (allow third party contracts to do this) Set up monitoring and reporting processes to identify emerging provider stress Ensure contract structures provide capacity to monitor and take action on poor performing providers Closely liaise with DEEWR on development and rollout of training capacity initially, and of retraining/exist strategies in second half of Program 	H	Strong	2 3 L	Yes	

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17	<p>Stakeholder management: risk of focussing on specific tasks and pressure groups may result in inadequate attention to all stakeholders and their interests</p> <ul style="list-style-type: none"> Diversity of stakeholders and challenge in managing their expectations Industry ownership / buy-in National Coverage – Indigenous / Remote 	<p>Poorly structured program; inherent conflicts; increased admin. Costs \$5-10m Admin costs Political fallout</p>	H	H	<ul style="list-style-type: none"> Develop integrated project strategy and methodology Set up tight internal communication structures Set up conflict resolution process within project to identify and resolve potential conflicts Have all stakeholders agree on Terms of Reference, e.g. through State and Territory working groups Conduct regular meetings (face-to-face and teleconferences) 	<ul style="list-style-type: none"> Opportunity for internal and external communication (e.g. press releases) Departmental Executive provide secretarial and support resources Communications Strategy drafted Regular and open communications with States and Territory Working Group Developing intranet site Process to develop strategies for servicing remote areas and for low income / vulnerable households underway 	Incomplete	3 3 M	Yes
18	<p>Industry impact: structure of program may impact on capacity of the industry both in the short and longer-term</p> <ul style="list-style-type: none"> Inflated insulation prices for a period Industry boom and bust – workers and product not required at end of program 	<p>Poor delivery; increased admin costs and conflict; price blow-out through insufficient supply; regulatory cost increases \$2-10m Costs</p>	H	H	<ul style="list-style-type: none"> Include industry structure impact in program methodology Develop an exit strategy for the Program at the end of 2.5 years Develop specific aspects of communication strategy to support steady implementation of the program supported by supply capacity Develop monitoring strategies to keep oversight of supply (materials and installers) and build-up and run-down of the industry Develop specific re-training / redeployment strategy and communication program for run-down at 2.5 years with DEEWR 	<ul style="list-style-type: none"> The media plan under development as part of the Communications Strategy will control the rate of information flow to members of the community DEEWR and State / Territory training programs will enable the training to be easily transferred to other parts of the industry after the Program is completed Planning and monitoring strategies are part of the development of the Business Model, data collection being negotiated with Centrelink and Medicare 	Strong	3 2 L	Yes
19	<p>Product: Product quality may not be of adequate standard</p> <ul style="list-style-type: none"> Product does not meet thermal efficiency standards Product does not meet safety standards 	<p>Conflict; regulatory pressures; additional costs to control; political fallout \$5 mill costs</p>	H	H	<ul style="list-style-type: none"> Set product quality guidelines with industry Put in place regulatory framework (based on outsourcing contracts) to monitor quality and identify exceptions Set up third party process for dealing with quality exceptions, including rectification by alternate providers as required Put in place monitoring processes to monitor the overall quality and delivery standards for the Program Put in place arrangements with other agencies, particularly ACCC, to ensure their active involvement in ensuring industry members comply with relevant legal requirements 	<ul style="list-style-type: none"> Negotiating with Centrelink to act as payment agency and to hold the installer register. State and Territory Offices of Fair Trading to act as regulators through existing processes and structures Guidelines and product fact sheets in place as part of the current rebate system Number of industry briefings have been held with industry bodies Technical Working Groups in place and have met Looking at safety elements of the Standards Have technical consultants in place Developing a product testing model (preferably with access to 2 laboratories) Technical evaluation is considering a series of construction models to apply to the major housing types. 	Adequate	2 4 M	Yes