QUEENSLAND COURTS

OFFICE OF THE STATE CORONER

FINDINGS OF INQUEST

CITATION:	**Inquest into the deaths of Matthew James FULLER, Rueben Kelly BARNES and Mitchell Scott SWEENEY**
TITLE OF COURT:	Coroner's Court
JURISDICTION:	Brisbane
FILE NO(s):	COR2009/2456, COR2009/2845, COR2010/430
DELIVERED ON:	04 July 2013
DELIVERED AT:	Brisbane
HEARING DATE(s):	6 December 2012, 29 January 2013, 11-14 March 2013; and 7-10 May 2013
FINDINGS OF:	Mr Michael Barnes, State Coroner
CATCHWORDS:	CORONERS: Insulation, metal staples; Home Insulation Program; workplace health and safety

REPRESENTATION:

Counsel Assisting:	Mr Ralph Devlin SC Ms Melinda Zerner
Family of Matthew Fuller:	Mr Richard Perry SC (instructed by Norton Rose Australia)
Father of Rueben Barnes:	Mr Bill Potts (Potts Lawyers)
Siblings of Rueben Barnes:	Ms Geraldine Dann (instructed by Norton Rose Australia

Family of Mitchell Sweeney:	Mr Robert Reed (instructed by Maurice Blackburn Lawyers)
Commonwealth of Australia:	Mr Johns McKenna SC with Mr Gim del Villar (instructed by AGS)
Office of Fair & Safe Work QLD:	Mr Peter Major
Titan Insulation Pty Ltd:	Mr Michael Trim (instructed by Sparke Helmore Lawyers)
CEO of Australian Construction Training Services Pty Ltd:	Ms Samantha Betzien (Minter Ellison Lawyers)
Attorney General of QLD:	Mr Kevin Parrott (Crown Law)

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The *Coroners Act 2003* provides in s. 28 an inquest may be held into a reportable death if the coroner investigating the death is satisfied it is in the public interest to hold the inquest. I originally decided not to hold an inquest due to the number of investigations, which have already occurred into the circumstances surrounding the deaths of the deceased. However, pursuant to s. 27(1) of the *Coroners Act 2003* the Attorney General and Minister for Justice directed that I hold an inquest into the death of **Matthew James Fuller**. As I result, I decided to hold a joint inquest to include the other two young men who also died whilst installing insulation as part of the Federal Government, Home Insulation Program ('HIP').

These are my findings in relation to the deaths of **Matthew James Fuller** ('Matthew'), **Rueben Kelly Barnes** ('Rueben') and **Mitchell Scott Sweeney** ('Mitchell'. They will be distributed in accordance with the requirements of the Act and posted on the web site of the Office of the State Coroner.

Introduction

Just prior to 12.54pm on **14 October 2009**, **Matthew Fuller,** 25, collapsed in the ceiling cavity of a residential property at 21 Buttercup Court, Meadowbrook. He had been laying metal-based insulation sheeting. Matthew was electrocuted and despite resuscitation attempts by the Queensland Ambulance Service ('QAS') and the Logan Hospital, he was declared deceased at 1.40pm.

QHI Installations Pty Ltd ('QHI') employed Matthew. QHI was a subcontractor to Vision and Network Australia Pty Ltd ('Vision') trading as Countrywide Insulation ('Countrywide') and Queensland Home Insulation, a registered installer under the HIP.

Matthew commenced working for QHI on 2 October 2009. On the day of the incident he was working with his 19 year old girlfriend, Monique Pridmore. Monique had commenced working with QHI on 9 October 2009.

At or around 9.40am on **18 November 2009**, Rueben Barnes, 16, collapsed in the ceiling cavity of a residential property at 127 Cocks Road, Stanwell. He had been laying fibreglass insulation batts. He was electrocuted and despite resuscitation attempts by the QAS he was declared deceased at the scene at 10.10am.

Rueben was employed by Arrow Property Maintenance Pty Ltd ('Arrow'). Arrow was a registered installer under the HIP. Rueben commenced working for Arrow on 28 October 2009 (he died on 18 November 2009). On the day of the incident he was working with Gaven Feeney and Bruce Callaghan.

At or around 8.00am on **4 February 2010**, **Mitchell Sweeney,** 22**,** collapsed in the ceiling cavity of a residential property at 13 Wattle Street, Milla Milla. He had been laying metal based insulation sheeting. Mitchell was electrocuted and despite resuscitation attempts by the QAS, Mitchell was unable to be revived and was declared deceased at the scene.

Mitchell had been a subcontractor to Titan Insulations Pty Ltd ('Titan'). Titan was a registered installer for the HIP. Mitchell took out public liability insurance on 25 September 2009 and completed insulation training on 2 October 2009. He commenced working for Titan on or around 29 September 2009.

All of the deceased had been installing insulation as part of the HIP, a component of the Federal Government Energy Efficient Homes Package.

The investigation into the deaths revealed, among much else, that:

- The deaths of Matthew, Rueben and Mitchell occurred between October 2009 and February 2010, in the context of a Program, which resulted in over one million homes being insulated in almost exactly a year.

- The three deceased were low-skilled installers with limited experience and minimal supervision.

- Foil laminate insulation and metal staples were in use in 2 of 3 of the deaths.

- Power was not turned off in the work space, in any of the houses involved.

- The aim of the HIP was to secure a fast roll-out and allow for low-level entry of workers, subject to appropriate supervision and skill level of the supervisors, together with the surveillance thought to be offered to this large-scale venture by the regulatory safety framework offered by the States and Territories.

- At the outset of the HIP the significance of electrical risk was not appreciated. It took Matthew Fuller's death for this to occur.

- The supervision requirements under the HIP were not defined. As a result the supervision of untrained and unskilled workers was not to the standard assumed by the HIP.

- While industry and DEWHA recommended mandatory specific training for all new entrants into the industry in the planning stages of the program, this did not occur due to the tight timeframe in which the program was to be rolled out.

The issues explored at the inquest included:

- The approval process, registration and obligations placed on Arrow Property Maintenance Pty Ltd ('Arrow'), Titan Insulations Pty Ltd, and Vision & Networking Pty Ltd ('Vision') as installers registered under the Home Insulation Program ('HIP').

- Why metal staples were allowed to be used in combination with electrically conductive insulation when New Zealand had banned the use of metal staples in 2007.

- Why it was not mandatory to turn the power off or isolate power, or take other such precautionary steps prior to installing insulation in a residential roof cavity.

- The induction and training provided to Rueben Barnes, Matthew Fuller and Mitchell Sweeney, including what induction and training was required for work under the HIP.

- The adequacy of supervision provided to Rueben Barnes, Matthew Fuller and Mitchell Sweeney.

- The immediate circumstances leading up to the deaths of Rueben Barnes, Matthew Fuller and Mitchell Sweeney.

- The immediate response of each of the relevant State and Federal Government Departments to each of the deaths, looked at individually and cumulatively, including any measures taken to prevent future deaths from occurring in similar circumstances.

- The progress of the Queensland Government's Regulatory Assessment Statement, '*Extension of mandatory requirements for fitting of safety switches in residential accommodation*' released in March 2012.

- Whether Standards Australia have amended or propose to amend:
    a) AS 3999-1992 Thermal Insulation of dwellings – Bulk insulation – Installation requirements; and
    b) AS/NZ 3000-2007 Electrical Installations.
- Whether an administrative tool kit on compliance/audit for new Federal Government programs has been developed.

- The progress of the Federal Government's 'Safety Plan', including the progress of the Foil Insulation Safety Program.

In addition to considering the issues, these findings:

- confirm the identity of the deceased persons, the time, place and medical cause of the deaths and determine how they died;

- consider whether any changes to procedures or policies could reduce the likelihood of deaths occurring in similar circumstances or otherwise contribute to public health and safety or the administration of justice.

Jurisdiction

The *Coroners Act 2003* at section 8 defines '*reportable death'* to mean:

> *…(2)(a) the death happened in Queensland–*
>
> *……*
>
> *…(3)(b) the death was violent or otherwise unnatural death.*

Pursuant to s.8(5), an unnatural death includes the death of a person who dies at any time after receiving any injury that (a) caused the death; or (b) contributed to the death and without which the person would not have died.

Whilst in accordance with s.28 of the Coroners Act 2003, there is discretion as to whether to hold an inquest, I was directed in accordance with s.27(1)(b) the *Coroners Act 2003* to hold an inquest.

The investigation

Representatives from Workplace Health and Safety and the Electrical Safety Office investigated the deaths. A detailed report on each of the respective investigations and conclusions into each death were tendered at the inquest.

The details of each of the investigations is canvassed below. I am satisfied that all relevant exhibits and documentation from the respective investigations were obtained and tendered at the inquest. I thank the respective investigators for their assistance and commend them for their work.

The Inquest

Pre-inquest conferences were held on 6 December 2012 and 29 January 2013. Mr Devlin SC and Ms Zerner were appointed counsel assisting. Leave to appear was granted to the family of each of the deceased, the Commonwealth of Australia, Titan Insulations Pty Ltd, the Queensland Attorney General and the Office of Fair and Safe Work Queensland. The inquest commenced on 11 March 2013 to 14 March 2013. A second sitting was held from 7 May 2013 to 10 May 2013. During the first sitting of evidence leave to appear was granted, on a limited basis, to appear on behalf of chief executive officer (CEO) of the Australian Construction Training Services Pty Ltd.

Twenty-seven (27) witnesses gave oral evidence.

In total 770 statements, records of interview, reports, photographs and materials gathered during the investigation and inquest were tendered into evidence and became exhibits

The evidence

There was voluminous material presented to the inquest. It is not possible for me to comment on all of the evidence provided. I instead provide a summary of the relevant evidence, which has informed my findings, and attach a detailed chronology of the events surrounding the deaths to these findings.

The HIP

The HIP was a component of the Energy Efficient Homes Package, which was a part of the $42 billion ‘Nation Building – Economic Stimulus Plan’. The Economic Stimulus Plan was in response to the global recession triggered by the global financial crisis. It included installation of ceiling insulation and solar hot water. The aim of the program was to:

- Generate economic stimulus and support jobs for trades people and workers employed in the manufacturing, distribution and installation of residential ceiling insulation and 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.

The HIP was planned to have two phases. The first phase ran from 3 February to 30 June 2009 and was the early installation phase. The second phase was the main program and ran from 1 July 2009 until the program was terminated. The plan was for the HIP to run for two and a half years. However, due to safety concerns the program ended on 19 February 2010. Following termination of the HIP, the program moved into a third phase, which was the implementation of the safety remediation programs. That is, the Foil Insulation Safety Program (‘FISP’) and the Home Insulation Safety Program (‘HISP’).

The design of the models of delivery between phase one and phase two of the HIP had some significant differences. These included registration of installers with the HIP and payment directly to installers in phase two, versus payment to the householder in phase one of the program. The change in delivery model was to facilitate an increase in the number of installations and faster payment of claims. Throughout phase two, a number of changes were made in response to safety and quality concerns. These included changes to installer competencies and training requirements, a reduction in the rebate amount, and the implementation of a compliance and audit framework.

The Department of Environment, Water, Heritage and the Arts (‘DEWHA’) (as it was then called) were responsible for administering the program, with an expectation of a rapid rollout. Insulation installers needed to be registered under the HIP. DEWHA did not have a significant knowledge of the insulation industry or its business environment. It therefore consulted with relevant stakeholders in the project design.

Medicare Australia was used for the registration and payment of installers. A service agreement was signed between Medicare and DEWHA on 1 July 2009.

The Federal Government through the Department of Education, Employment and Workplace Relations (‘DEEWR’) retained the Construction and Property Services Skills Council (‘CPSISC’) to develop training materials for the HIP. CPSISC is the national skills council responsible for preparing national training packages and for workforce development activities in the construction and property services industries. It covers around 526,000 enterprises and approximately 1.8 million employees. Further, CPSISC provides careers advice and industry intelligence reports to Government.

PricewaterhouseCoopers (PwC) was retained by the Federal Government to provide the HIP audit and compliance service. Desktop audits commenced in the week of 21 September 2009. Further, it commenced a roof inspection regime conducted through UGL Services. The inspection regime sought to complete 11,000 roof inspections of random and targeted homes by the end of December 2009. In order to achieve the volume targets, inspections were at first limited to metropolitan areas on the east coast.

Communication with registered installers was via ‘Installer Advice Notices’. All Installer Advice Notices were sent directly to the Registered Installer’s nominated email address and were available on the website. During the HIP, 25 Installer Advice Notices were issued to installers. From 16 December 2009, installers were also sent SMS messages to their nominated phone advising an installer notice was available.

Prior to the HIP, the home insulation sector had no mandated training or skill requirements, training levels and barriers to new entrants. At the inception of the HIP, South Australia was the only State with licensing requirements for insulation installers.

Employers were required to meet State and Territory workplace and occupational health and safety laws. Prior to the commencement of the HIP, Queensland had in place an insulation installers audit project which was in response to the potential fire hazard cause by bulk thermal insulation materials being in close proximity to electrical equipment such as down lights.

The Commonwealth had no regulatory powers to enforce compliance with any laws. However, it could deregister an installer from the HIP if they breached guidelines. Householders were responsible for entering into a contractual relationship with an installer on the basis that they were satisfied with the services of an installer and the quoted price.

The HIP was terminated on 19 February 2010. At its conclusion over one million homes had been insulated, and at its peak (November 2009), the program had registered over 10,000 installers employing many thousands of largely low-skilled workers.

Requirements under the HIP

Registration

In phase two of the HIP, the Commonwealth established the Installer Provider Register. Installers wishing to participate in the program applied to be included on the Register and had to comply with Terms and Conditions of Registration. MapDataSciences Pty Ltd and Medicare maintained the Register under a contractual arrangement with DEWHA.

The Terms and Conditions of Registration stated that Registered Installers were to accept and comply with a range of requirements, including, but not limited to:

- installation product requirements;
- installation standards;
- completing the Work Order form;
- record keeping and provision of records to the Commonwealth if requested;
- accuracy of electronic and claim information;
- program guidelines; and
- insurance requirements.

One of the requirements of the Terms and Conditions of Registration was that the Installer had to comply with specified skills, experience and training competencies in relation to installing ceiling insulation. The competency requirements were detailed in the document, Competency requirements for registration on the Installer Provider Register. There were three versions of the document all made available on the DEWHA website when released on 1 July 2009, 1 September 2009, and 1 December 2009 (only the latest version of 1 December 2009 was able to be located by the Commonwealth).

Once registered, installers were allocated a unique Energy Home Package (‘EHP’) number which was the installers’ identification number when logging onto the online claims lodgement system. Installers, with the householder, were required to complete a Work Order form following the completion of the installation of the insulation. Each Work Order form had a unique identification number which referenced each dwelling where insulation was installed.

Training and supervision

Mr Carter, the First Assistant Secretary of the Home Energy Branch of DEWHA and Mr Keeffe, the Assistant Secretary of the Home Energy Branch of DEWHA, both acknowledged that supervision and training were two of the cornerstones to the program. There was also reliance on the existing state and territory safety and regulatory regimes.

Mr Keeffe was of the view DEWHA had guidelines in place for eligibility of installers and that people had to comply with those guidelines. He said on this basis DEWHA had a regulatory role, but a light touch regulatory role that enabled rapid market uptake.

DEWHA established an industry stakeholder group who met regularly to discuss the various elements of the HIP. One of the groups was the Training group. Initially, industry proposed mandatory training for installers. Mr D’Arcy, the from Insulation Council of Australia and New Zealand (‘ICANZ’) said that a basic training would be required before letting anybody in the roof. He said prior to the HIP, installers had experience and worked through a contractor and had appropriate supervision and experience. He said ICANZ recommended the program be grown “organically”, which was how people traditionally entered the industry.

CPSISC was retained to develop the training material for the program. Mr Ross of CPSISC explained that CPSISC is one of 11 national skills councils funded by the Commonwealth Government.

The Commonwealth said it was for CPSISC to consult with ElectroComms and Energy Utilities Industry Training ('EE-Oz') in the development of the program materials. In an email dated 27 February 2009, EE-Oz recommended minimum standards necessary for insulation installers to carry out retro-fits. These included 'Document occupational hazards and risks in electrical work' and 'Identify building techniques, methods and materials used in electrotechnology work activities'.

However, EE-Oz only provided verbal feedback on the Pocket Book, it was not asked for any advice on any other components of the training program developed by CPSISC. EE-Oz says it identified electrical risks to the Federal Government and they were ignored.

Version 1 of the Pocket Book is dated July 2009. As to electrical risks, it stated:

> *Electrical hazards are a major concern for installers of ceiling insulation. Laying insulation in the ceiling space over cables and in the vicinity of electrical equipment such as downlights and exhaust fans poses many risks. Risks for the installer can be life threatening if live wires are cut or touched.* ***Warning: the practice of stapling RFLs to ceiling joists poses a high risk of electrocution…****If you suspect the wiring in the ceiling does not conform to AS/NZS 3000-2007 Electrical installations, or the building was constructed prior to 1989, you should seek advice form a licensed electrical contractor or electrical inspecting authority to determine whether the cables are suitable for surrounding in thermal insulation.*
> *(Emphasis added)*

Mr Ross conceded the Pocket Book did not address the possibility of electrocution, however he was of the view the booklet made it very clear that if you're crawling around a roof cavity, there are extreme electrical hazards in doing so. While there was an intention to print and post the Handbook to Registered Training organisations and Registered Installers, Version 1 of the Pocket Bock was not available for download until 12 August 2009. A link to the Pocket Book was included in the Installer Advice of 26 October 2009.

Mr Ross explained that EE-Oz had sought a contract to develop the training materials but was unsuccessful. EE-Oz had been advised they would have to go through CPSISC to provide input into the program. EE-Oz raised a number of concerns with CPSISC following the release of the training materials in August 2009. These concerns related to the electrical safety elements of the program. EE-Oz believed they needed to be strengthened. Those amendments were included in the second version of the training material and Pocket Book, which was released in early January 2010. Mr Ross said he had discussions with DEWHA about EE-Oz's concerns. The changes to the training material are helpfully summarised in a table. Significant additions were added concerning electrical safety.
Mr Ross advised that the usual process in developing a new program is for it to go through a formal endorsement. This is quite a detailed process involving State

sign off by every State training authority and then signing off by the National Quality Council. Mr Ross advised that this was the first national program ever developed by CPSISC that did not go through the usual formal endorsement process. He believed the timeframe of two months allowed to produce the material was not a reasonable timeframe and that in normal circumstances a lot longer period would be required.

The training material included:

- Delivery Guide, A Resource for Trainers;
- Assessment Guide, Resources for Assessor;
- Assessment Instrument; and
- Recognition Application, A Self Assessment Tool for Learners.

The Delivery Guide provided guidance for training organisations to design a course, which meets the required standards and the individual needs of the learner. Each training organisation was responsible for designing and customising a delivery process for the program.

CPSISC recommended the structure of the program needed to be flexible, however could comprise approximately two to three days of face-to-face delivery, and an on-the-job component. The duration of the on-the-job component was dependant on the individual learner and their employer. This is consistent with the view held at the Energy Efficient Homes Package Training Workshop of 3 April 2009, where the attendees agreed on three to five days training including the one day OHS induction training, although some Australian Cellulose Insulation Manufacturers' Association ('ACIMA') participants considered that the training would take much longer than this (CPSISC had not been invited to attend these meetings until 30 April 2009).

The only training stipulation required of persons employed or subcontracted by an installer to install insulation was that they were to have completed the relevant one day Occupational Health and Safety induction course in their relevant State or Territory. It wasn't until 17 December 2010 that Minister Garrett announced new mandatory training and minimum requirements for the HIP, effective from 12 February 2010.

Mr Carter said that while it was originally the intention at the beginning of the program that everyone would undergo the insulation training, this position changed due to the time constraints in rolling out the program. However, he explained there were the existing safety and regulatory regimes in place to mitigate the risks in the existing industry.

Mr Keeffe agreed that the fundamental cornerstones upon which the program was established were that new entrants into the industry would be trained and supervised and abide by state and territory regulatory requirements. As outlined above, the specific installer training did not end up being compulsory until 1 December 2010, with registered installers needing to provide evidence demonstrating all installers had the necessary competency requirements by 12 February 2009. Mr Carter accepted the same proposition.

Mr Keeffe said that in or around April 2009 it was his view, and it was recommended, that all installers should have training. However, there was a whole of government decision that it should only be the supervisor. He said this was because one of the goals of the program was to stimulate jobs and to get people into work very quickly.

Mitchell Sweeney was the only one of the deceased who had completed a Ceiling Installers Program. Matthew Fuller had been booked in to complete a course but it had been postponed due to a prior personal commitment.

Mr Keeffe said it was the Department's "assumption" that using the common definition of supervision that the supervisor would be on site. As incidents occurred they realised at times this was not occurring and the supervisor was signing off without full attention and diligence to that requirement. Mr Carter said there was an "assumption" that supervisors would be on site at various points, but maybe operating a number of jobs in a given day. It subsequently came to light that even that wasn't happening.

Mr Innes of WH&SQ explained as a part of his investigation into Matthew's death he contacted Mr Aaron Hughes of DEWHA to ask if the HIP provided a definition of what "supervision" was and Mr Hughes advised there was no information given as to what supervision entailed.

Mr Keeffe said that the HIP proceeded on the assumption that the supervisor would be on site while insulation work was being carried out. Mr Carter also agreed they he had assumed supervisors would be present while the work was being carried out.

In the eleventh Installer Advice of 19 October 2009, Registered Installers were reminded that employers and supervisors are responsible for ensuring that all employees were safe from injury and risk to health. They were reminded of their statutory OH&S obligations.

On 12 November 2009 at the HIP meeting of industry, training organisations and regulators, it was agreed to clarify the term "supervision". While there is reference to "supervision" in Installer Advice seventeen, it does not specifically require the supervisor to be on site. Version 5 of the guidelines says that registered installers must provide adequate training and supervision, particular for workers who are inexperienced in relation to the safety and effective installation of ceiling insulation. Again, the exact meaning of "supervision" is not specified.

Mr Innes agreed that given the high risk of electrocution in installing insulation, supervision is an important control measure. He said in light of installers having a lack of experience it was his personal expectation, to ensure a safe workplace, that supervision would be in place.

The New Zealand experience and risk management

DEWHA had no experience in the business of insulation prior to the HIP. It therefore consulted industry in the development and implementation of the program.

On 18 February 2009, the first Energy Efficient Homes Package Industry Consultation Meeting occurred. Meeting participants included representatives from the Insulation Council of Australasia and New Zealand ('ICANZ'); the Australian Cellulose Insulation Manufacturers' Association ('ACIMA'); AFIA, Polyisocyanurate Insulation Manufacturers Association (PIMA); Small Business, the Housing Industry of Australia ('HIA'); Master Builders Australia ('MBA'); and Australian Building Codes Board ('ABCB'). In addition, there were representatives from insulation companies. There were no representatives from the electrical industry.

Mr Keeffe, the Assistant Secretary of the Home Energy Branch of DEWHA said that this meeting was the first opportunity they had to get all of the industry stakeholders together in one place. Mr Carter, the First Assistant Secretary of the Renewables and Energy Efficiency Division of DEWHA, said that the department didn't have a deep knowledge of the practicalities of the industry and installation of insulation. It therefore needed to seek industry feedback and industry involvement in the program.

At the meeting, Mr Peter Ruz of Fletcher Insulation advised of electrocutions. The record states;

> *Peter Ruz provided an example in NZ, where a similar program had to be suspended because three people electrocuted themselves. The majority strongly recommended mandatory training for insulation installers. It was agreed that a common training regime should be given to new entrants to ensure safety and quality*.

The Inquest heard that on or around 2007, there was a fatality in New Zealand of a man who was stapling aluminium foil to floor joists under his home. As a result, a Coroner was critical of the New Zealand government for doing little to warn of the dangers of do-it yourself insulation.

Mr Keeffe of DEWHA said that he recalled reading a New Zealand news media article about the deaths in New Zealand. The Department investigated it and Mr Keefe recalled having a discussion as to whether it was applicable to Australia. Mr Keefe said the advice received was that the New Zealand experience was in relation to do-it-yourself homeowners. He did not consider it was applicable because at that stage he envisaged the HIP would have mandatory training programs for people installing insulation.

Mr Keeffe agreed that in or around February 2009 he and Dr Tony Delbridge along with the policy group discounted the risk of something similar occurring in Australia. The two premises for this were that those participating in the New Zealand program were unsupervised and untrained. To mitigate the risk, they were operating on three assumptions: that there would be a supervisor on site;

there would be adequate training; and that there would be strict adherence to all State and Territory regulations and requirements.

Mr Carter recalled some discussion about the New Zealand program being related to under floor insulation but said he was not across the detail in relation to what had occurred.

Mr Keeffe said that the design of the HIP was not intended to favour one form of insulation over another but was rather intended as a job stimulus package with significant energy efficiency benefits. The industry was made up of competitive and fragmented players who spoke up for their own products and against all others. Foil was seen as the preferred choice in tropical and sub-tropical regions where the cathedral roof style of architecture was common. To ban one product would have eliminated jobs in some sectors and prevented a large number of homes from being insulated. He recalled at the first industry meeting some discourse between industry players, with criticism of each other's products.

In addition to the reference to the New Zealand experience, prior to the death of Matthew Fuller, the potential risk to installers was identified at an Energy Efficient Homes Package Technical Workshop held on 3 April 2009. The Meeting summary stated:

> *The work involved in installation could result in a high level of exposure for the Government due to hazards of existing buildings, hazardous materials and occupational health and safety. The program poses a high likelihood of catastrophic consequences (death or serious injury). Workshop participants noted that a risk assessment of the installation process is required to determine a tolerable level of risk both for the community and the cost to the Government.*

Despite the above risk being identified there was no evidence a risk assessment on the installation process was ever undertaken.

On 13 March 2009, DEWHA retained Minter Ellison Consultants (Canberra) Pty Ltd ('Minter Ellison'). Ms Margaret Coaldrake was the consultant charged with the task of developing a risk matrix for the HIP. After completing the risk matrix, on 23 April 2009, Ms Coaldrake was retained as the HIP Strategic Risk Advisor for the program. According to the Deed of Agreement, the Additional Services included:

> *On an hourly basis, provided support and assist the nominated Risk Manager appointed by the Department…to support the development and implementation of any necessary ongoing adjustments to the existing Risk Register and Risk Management Plan.*

Ms Coaldrake confirmed that from the outset of her retainer she was aware the program was targeting people who were new to the insulation industry. Ms Coaldrake denied ever seeing the meeting of the minutes of the 3 April 2009 Technical Workshop. She said she was reliant on the information that went to the Project Control Group.

Mr Carter also did not recall the minutes of the 3 April 2009 Technical Workshop meetings. He too was reliant on the information provide to the Project Control Group and does not recall the issue being raised.

Ms Coaldrake was of the view installer safety was not a 'Commonwealth risk' and that for some reason the Commonwealth was trying to manage further than they were strictly expected to. Ms Coaldrake explained she relied on the Commonwealth to identify the risks to her and the issue of installer safety was never raised as a risk for consideration. However, Mr Keeffe was of the view DEWHA had commissioned Minter Ellison to conduct a global or complete risk assessment. Mr Keeffe confirmed the focus of DEWHA in relation to the high likelihood of catastrophic consequences was concerning death due to fire, not electrocution. Ms Coaldrake accepted the risk of fire was included in the Risk Register was because people might sue the Commonwealth in respect of a fire.

The inquest was provided with most of the updated Risk Registers throughout the life of the HIP. None of the Risk Registers specially addressed installer safety, and more specifically, electrical risk for installers.

Mr Keeffe accepted that it wasn't until after Matthew's death that the risk of electrical safety had been identified as a significant risk.

Mr Carter conceded if the risk assessment of the installer process had been undertaken, some of the control measures that were subsequently implemented over the life of the HIP may have been identified at an earlier stage.

Prior to Matthew's death, the Queensland Government through the Electrical Safety Office Queensland became aware of electrical safety issues concerning the use of foil laminate and metal staples in installing insulation.

On 5 August 2009, ESO were notified of an incident at Victoria Point concerning an insulation installer receiving a shock when an electric cable was hit with a metal staple.

On 6 August 2009, ESO were notified of an incident at Deception Bay concerning an insulation installer receiving a shock when a metal staple penetrated an electric cable.

By mid August 2009, Mr Carter was aware the HIP was being deluged by untrained and unskilled people, and knew complaints were being made about the quality of the insulation and the installation of the insulation.

Further, in mid August 2009, at an ESO Senior Management meeting, mention was made by the Director of Compliance of an incident with foil insulation. It was agreed to extend the ESO compliance audit process and to undertake an electrical safety information program for insulation installers in Queensland. None of the ESO inspectors had come across foil insulation for ceiling insulation and it was viewed as a rare occurrence. Mr Gibson, the Director of Electrical Safety Compliance with the Office of Fair and Safe Work Queensland said that he spoke with a lot of inspectors with lots of years of experience at around that time and none had seen foil used in the capacity it was being used in the HIP. Up until the first incident they were not aware that foil was a product available under the HIP. An investigation into the incidents and use of foil ensued over a period of time. This included speaking with representatives from the Foil Insulation Association. At the time the ESO thought the incidents were isolated events.

Following the ESO meeting in mid August 2009, ESO amended its insulation audit tool to include a question in relation to foil insulation. The new question stated: "*Procedures in place to ensure electrical equipment is not damaged when installing metal foil*". Mr Gibson said that as soon as ESO became aware that foil was being used, they quickly made the change to the audit to highlight to the inspectors the additional safety aspect that they had become aware of.

In addition to making the changes to the audit, on or around 19 September 2009, ESO conducted an Insulation Installer talk to 18 participants. The talk included a PowerPoint presentation, which included slides showing photographs of a staple through electrical cable with foil.

ESO did not report the incidents concerning foil and the use of metal staples until after Matthew's death.

Communication with Queensland prior to the deaths

On 26 February 2009, Mr Tony Leverton, the Director, Electrical Safety Policy, of the ESO, sent an email to Mr Ian Jennings of the Queensland Building Services Authority ('BSA') raising his concerns, particularly in relation to fire safety. He stated:

Given the likely flood of insulation activity from 1 July 2009, I'd appreciate the BSA's views on what additional advices/action (if any) might need to be taken to ensure that licensed installation installers (with large backlogs of work) undertake a competent and safe job.

Mr Leverton did not receive a response from the BSA.

In April 2009, fair training and consumer affairs representatives from the states and territories met with representatives from the Commonwealth to discuss the development of a compliance framework for the HIP. The minutes of the meetings were not provided to the inquest. Representatives from ESO Queensland deny being consulted or formally advised of the HIP by any State or Commonwealth agency.

On 1 April 2009, Mr Chris Boyle, the Executive Manager, Policy, Legislation, Research and Support Services of the Queensland Building Services Authority ('BSA') wrote to Ms Julie Yeend of the Department of the Prime Minister and Cabinet about concerns regarding ceiling insulation being included in the Federal Government economic stimulus package. The email included the concerns by ESO regarding the installation of insulation around down-lights/luminaries. Mr Boyle stated:

Given the likely flood of insulation activity from 1 July 2009, I'd appreciated your views on what additional advice/action (if any) might be taken to ensure that licensed installation installers (with large backlogs of work) undertake a competent and safe job.

Mr Boyle did not receive a response from the Department of Prime Minister and Cabinet.

On 16 July 2009, Dr Tony Delbridge from the HIP Insulation Technology and Evaluation group sent an email to Mr Tim Campbell of the Queensland Government. At the time, Mr Campbell was holding the position of Acting Manager, Construction Strategy Group, Workplace Health and Safety Queensland. Dr Delbridge identified an issue of concern, being a consistent failure by insulation installers to comply with safe working practises, the primary ones being safe working at heights and safe materials handling. Dr Delbridge extended an invitation for Workplace Health and Safety Queensland to work with DEWHA and Work Safe Australia in taking a nationally co-ordinated approach to the issue.

On 10 August 2009, Ms Samantha Kortt of the HIP Policy Team wrote to Mr Campbell in Queensland. Her email stated:

Given the unprecedented size of the insulation programs, OH&S issues when installing ceiling insulation have been raised as a potential area of concern. Therefore, we are keen to open up a dialog with your agency regarding OH&S issues in the insulation industry and in particular, we would like to discuss the opportunity to establish an information sharing MOU with your agency, where we could ask questions about specific installer's and companies that have been the subject of investigations and prosecutions for breaching relevant safe work and OH&S legislation.

Mr Campbell recalled meeting with Tony Leverton of ESO about the requests from DEWHA. Mr Leverton did not recall seeing the emails or having a meeting with Mr Campbell about the requests from DEWHA.[1] He said if he had been aware of those requests he would have welcomed the engagement. There is no evidence of any further follow-up by DEWHA.

While Mr Keeffe did not recall the specific emails to Mr Campbell he did recall the context in which they were sent. He said it has been agreed to provide the states with a general overview of the program and to ensure consistency where possible. It was to make the states and territories aware of the program and the issues that would arise from it.

Mr Carter acknowledged that one of the fundamental elements of the program was the reliance on existing state and territory occupational health and safety laws. He was not able to explain why the safety regulators had not been consulted prior to the death of Matthew Fuller. Mr Carter accepted nothing proactive was done from DEWHA's perspective and that it was simply an assumption that the states would be able to regulate the HIP.

[1] Exhibit Z

The Death of Matthew

Matthew's employer

Jude Kirk was the sole director of Vision, which was a telemarketing company. In relation to the HIP, Vision traded under two business names, Queensland Homes Insulation ('QHI') and Countrywide Insulation ('Countrywide'). The manager of Countrywide and QHI was Kevin O'Sullivan.

Countrywide was registered with the HIP on or around 17 September 2009. It appears this was in error and that it should not have been validated (it is not clear what the issue was). Despite this, on 1 October 2009, Countrywide's registration with HIP was confirmed. Countrywide (Vision) listed Ben McKay amongst a number of other persons as its employed installers when it did not employ any installers. Mr Kirk admitted that none of the persons listed on the HIP Competency Requirements form were employed by Vision or its trading businesses. He was not able to confirm who completed the form.

Vision's two businesses would quote on insulation installations and then subcontract out successful jobs to installers, such as QHI. Vision or its two businesses did not install any insulation. However, Mr Kirk and Mr O'Sullivan completed the Master Builders Installation of Insulation course so they had an understanding of what was required.

QHI was registered with the Australian Securities Commission ('ASIC') as a company on 21 September 2009 and started operating on 1 October 2009.

The director of QHI was Christopher William McKay ('Christopher McKay') who at the relevant time was 19 years of age. He was listed as the director because his father Christopher John McKay ('Chris McKay') had entered into a Part 10 of the Bankruptcy Act arrangement after losing in excess of $2 million dollars in the building industry. Chris McKay ran and managed the company. Christopher McKay was an insulation installer and as necessary, a trainer/supervisor of new staff.

Chris McKay also ran another company, BCE Group Pty Ltd, that his daughter, who resides in Melbourne, was the director of. Chris McKay's daughter had no involvement in the company BCE Group Pty Ltd. Chris McKay is an electrician by trade. He described the HIP as an opportunity of a lifetime. He said he saw it as a long-term venture and hoped other work would flow from the insulation work as the building trade was slow.

Benjamin McKay ('Ben McKay'), another son of Chris McKay, was the day-to-day supervisor within QHI. Prior to working with QHI, Ben had been working in London for a year as an electrician, and prior to that he completed his electrical apprenticeship. He said on his return from overseas, electrical work in his father's electrical business was quiet and his father asked him if he would run QHI. He said he was reluctant because he did not enjoy working in ceiling cavities. Ben McKay said he was to be the on site supervisor and not an installer. He had seen sarking before but had never seen foil insulation used in a roof before.

Christopher McKay said that Ben did not want to be the director of QHI as he could lose his house and because Christopher had 'nothing to lose' he was made the director. Christopher admitted he had no idea what obligations a director had or what the duties of a director were. He said that his father made all the management decisions about the company.

Chris McKay was introduced to Mr Kirk as a sizeable electrical contractor (Chris McKay's partner worked for Vision). Chris McKay said that when he and Ben met with Mr Kirk he told him of his previous experience with insulation and that he was a licensed electrician. They discussed how many houses a week they expected to do; what they would supply; how much they would pay; and what their expectations were for the quality of work. Ben McKay attended this first meeting and discussed the payments and how many houses they could do. QHI had not employed any installers prior to this first meeting with Mr Kirk. However, Vision referred staff to them to be employed.

Chris McKay said that there were probably three or four meetings with Vision before they commenced installing insulation. The meetings were with Kevin O'Sullivan who was the manager of Vision's insulation businesses. They were to nut out the terms of the agreement. Ben McKay said that he didn't really see it as a subcontract arrangement as he felt more like an employee because of how the arrangement was set up. He said Vision was the marketer, they had people supplying the insulation and they had people installing the insulation. They were the installers.

Chris McKay thought Vision had its own insulation team but it seems it may have been another subcontractor. Ben McKay recalled that there was another company who was subcontracting to Vision.

Chris McKay said that the initial agreement for payment was a metreage rate but it then went to a house rate of around $300.00 for an average house and up to $450.00 for a bigger house. There was an expectation that QHI would do about 20 houses per day.

Mr McKay recalled being told that the supervisor would need to do the ceiling insulation installation course but that the other staff didn't have to. He also recalls being told he would need to supervise. Chris McKay recalled receiving some HIP paperwork that he had to read through. He appointed Ben McKay and John Pellezaro, another qualified electrician, as QHI's supervisors.

Chris McKay saw the installer guidelines. He understood that staff had to have an occupational health and safety card, which he said all his staff did, and that the supervisor had to have completed the insulation course. His understanding of supervision was for the work to be organised, for the foil to be picked up and delivered on site, to give staff their orders in the morning and to go from site to site to pick up the paperwork. Otherwise, the staff were to contact the supervisor if they had any problems. While he didn't think staff required training under the 'rules' he planned to have all his staff undertake the ceiling insulation course.

Mr Chris McKay organised for Ben and Christopher to do the Master Builder ceiling insulation installation course.

At a meeting on or about 24 September 2009, Jude Kirk said that it was agreed with QHI that the contractor/supervisor for QHI would complete the Master Builders Insulation Installation Course and that it was mandatory that all employees of QHI who were to install insulation were to have Blue or White Cards. According to Mr Kirk, before installation commenced the following were agreed:

- Installation procedures and guidelines;
- Safety in attic spaces;
- Work method statements;
- Full detailed and practical training provided to all QHI staff ahead of installation; and
- Assurances that all employees of QHI who were to install insulation would have required competency and skills to safely complete such installation.

There was an informal sub-contract arrangement between Vision and QHI. Jude Kirk said that as a result of the QHI director’s background and experience as electrical contractors (Mr Kirk was not aware Mr McKay’s 19 year old son was the sole director of the company), Vision contracted with QHI to undertake the bulk of the insulation installations. Mr Kirk was of the view that QHI was a fairly large electrical contracting company and it would be better skilled in the area of insulation. He said that Vision relied heavily on the fact QHI were experienced electrical contractors who had the experience of working in roofs. Mr Kirk said the McKay’s constantly assured him that a qualified electrician was supervising everything.

Mr Kirk said Kevin O’Sullivan would meet with Ben McKay and discuss the inspections with him and how the electricians were attending to the installations. Mr Kirk spoke with Mr O’Sullivan on a number of occasions in regard to the number of electricians that were inspecting and supervising the homes.

Mr Chris McKay denied giving any such undertakings to Mr Kirk or Mr O’Sullivan concerning supervision.

Mr Ben McKay understood that once an employee had done the course they could work on their own with a partner and they planned for all staff to be trained. He said in the beginning he would work with the installers and go through the houses to see how they were going with the plan, the intention being that they would eventually work on their own. He said he relied on the ceiling insulation installer course as to what they could or couldn’t do. He said that Vision did not give them any guidelines regarding what supervision was required.

Mr Kirk said that all Installer Advices and information they were provided about the HIP were passed on to QHI. Mr Kirk said this was in addition to the meeting they had, two to three times a week, when QHI came to pick up the insulation material. Ben McKay denied receiving such information.

Mr Kirk advised that they constructed a skeleton of a roof inside Vision's premises in Fortitude Valley for the installers to use for training purposes. He said the contractors had input into the design. Mr Kirk said QHI came in and put the insulation in the mock roof and would discuss how to do it. He said this occurred on a regular basis. Mr Kirk said the mock roof was also used for installers to time themselves to work out how much they would charge Vision for the work. Chris McKay denied that this service was offered to QHI prior to Matthew's death. Ben McKay said they were called in for a demonstration when they had been having problems with a new product and that the mock roof came after Matthew's death. Prior to that, there was no mock roof.

Mr Kirk said that he and Mr O'Sullivan would have been aware of QHI's procedures and would have made sure there was a manual on how to operate. Mr Kirk did not believe he and O'Sullivan were qualified to be questioning a large electrical contracting company on their procedures.

Mr Kirk confirmed that a follow up call was made to the homeowner after the work was undertaken, but it was really a customer satisfaction call rather than an audit of the work completed by QHI.

Between 2 October 2009 and 14 October 2009, QHI employed 21 workers. The installers worked in teams of two.

On 9 October 2009, Vision trading as Queensland Home Insulation quoted on the residence where Matthew was electrocuted. The quotation was for 117m2 of insulation at a cost of $1,595.00. It is unclear who completed the quotation.

Training and Supervision

Matthew was employed by QHI on 2 October 2009. At the time, the minimum training requirement if the installer was being 'supervised' by a person who had either completed the ceiling insulation course; had two years industry experience; or who had another recognised trade; was for the installer to have completed the one-day OH&S generic training.

Chris McKay was of the view the laying of foil insulation with metal staples was not a high risk practise for him as an electrician or for someone who had been appropriately trained. He said he thought it was so easy not to put a staple through foil and through a cable. Despite his knowledge that piercing a cable with a metal staple could cause death and that electricians have extensive training over four years, he believed Matthew had sufficient training.

On 25 September 2009, Ben McKay and Christopher McKay attended a Master Builders Ceiling Installers Program (it was not necessary for Ben to complete this course as he was a qualified electrician).

The training course was a four-hour training program. Ben McKay confirmed that the risk of electric shock injuries was discussed during the training. However, he says the topic about electrical risks and installing reflective foil was not discussed very much. He said that a person who attended the course told the participants he had hit a cable, got a shock and went to hospital. Ben McKay is of the opinion the course focussed on bats and did not cover “electrical” enough.

Similarly, Mr Kirk was critical of the Master Builders course. He was of the view it was extremely soft with what they were looking to do. Mr Kirk said the instructor was giving people the answers to the worksheets and nobody failed.

Master Builders said that its course was based on the three units of competency from the National Construction Plumbing and Services Training package – CPCO8. Further, it said that the training material was developed by CPSISC. The trainer was a contract trainer, Mr Greg Birchley.

Mr Birchley was issued with the course material and briefed by the Training Manager. He did not have any input into the content or development of any of the training material. Mr Birchley did not access the CPSISC documents prior to conducting the training. Mr Birchley recalled questioning the four-hour duration of the course, which included the assessment component, but was advised that it was designed for people with industry knowledge and background and from the Master Builders member base. Mr Birchley advised he did not have any input into which candidates were approved for the training, he would just turn up and deliver the course.

The Master Builder’s power point presentation detailed the concept of a risk assessment and identified ‘electrical’ as a hazard. On the slide ‘Electrical Hazards and Safety’, it listed:

- *AS3012 Test and tag three (3) Monthly;*
- *Protect leads and shroud plugs;*
- *RCD protection;*
- *Work at least 1 metre from domestic supply;*
- *Work at least 3 metres from cables in street (more on towers and high voltage);*
- *Switchboard doors closed and leads fed through the base of switchboard and tied off.*

Further, on the slide ‘Placing insulation about fittings, wiring and flue’ it stated:
Control of Risks:

- *It’s important that foils are prevented from touching any electrical fittings and contacts as they will conduct electricity. Some wiring and appliances, if covered by bulk insulation, may overheat;*
- *Where possible, place wiring above the insulation, or use a spacer to create an air gap;*
- ***The practice of stapling RFL’s to ceiling joists poses a high risk of electrocution***
- *Old wiring should be replaced to comply with government regulations before insulation is installed, by a qualified electrician.*

Mr Birchley said that he discussed various control measures concerning electrical hazards during the course. The ‘control’ options in the ‘Hierarchy of Control’ included:

- *Switch off electrical supply to the premises;*
- *Switch off the electricity supply using artificial sources of light eg. Use head torches, self powered lamps or torches;*
- *Switch off electrical supply to the premises and use an electrical lead to borrow power from an adjoining premises; and*
- *Use an electrical generator.*

Mr Birchley said that as part of his usual practice he would have discussed each dot point on the PowerPoint slides, including the dot point relating to RFLs and risk assessment practices.

The Master Builder's assessment package did not specifically address the piercing of an electrical cable and potential consequences, control measures to avoid such events, for example turning off the power to the property and checking the ceiling is not live. Similarly, the Master Builder's manual 'Ceiling Insulation Installer Program' did not articulate the safety issues concerning foil insulation and live electrical cables.

Ben McKay said the workers at QHI were warned of electrocution and shock injuries during the course, but were not told to turn the power off, as there was no rule in place at that time. Further, he said they did not think people would disrespect electricity enough not to check for the cables, especially after they had been warned day after day. Ben McKay advised that after the electrocution incident, six workers completed the Master Builder's course. They told him that QHI had given them better information about electrical than they had been given in the same course.

Chris McKay said that after Matthew's death the training course was increased to five hours but said he thought that there was no difference to the course concerning electrical safety.

On 13 and 14 October 2009, the Queensland Department of Education and Training conducted an audit of the Master Builders training programs. The audit found: there was no evidence of a strategy for training and assessment of the course; Mr Birchley did not hold the necessary vocational qualifications; and the assessment tools did not go anyway toward meeting the requirements of the four units of competency. In response to the audit, Master Builders was required to provide rectification evidence concerning the course. Mr Birchley denied he did not hold the necessary qualifications and on providing his updated credentials this allegation was withdrawn. He did not conduct any other insulation installer courses after the course Ben and Christopher McKay attended.

QHI advised that Matthew's training consisted of:

- a meeting on 1 October 2009 to discuss pay rates, the insulation product, the dangers, what the workers needed and what QHI would supply them with;
- a demonstration by Phil Price (an installer from a different company who did not get paid but had the benefit of the trainee installers to assist him on site) on 2 October 2009;

- working with other QHI employees, including Ben McKay and Christopher McKay from 5 to 8 October 2009; and
- working with other QHI employees, including Monique on 9 October 2009 which included a discussion before commencing work warning of the cables and to watch for putting their feet through the ceiling.

Chris McKay said that Countrywide (Vision) made an appointment with Phil Price and that they would basically arrange to go and work alongside him. Mr Kirk referred to Phil Price as Silver Cell's training officer and that he introduced Phil to QHI. He said Phil had many years of experience. Chris and Ben McKay relied on the practical training provided to their staff by Phil.

Mr Kirk said that in addition to introducing QHI to Phil, they were provided with the insulation guide from Silver Cell and a DVD. Mr Kirk was shown the Silver Cell installer guidelines provided to WH&S investigators and denied ever seeing those guidelines. Mr Kirk said they just relied on the DVD but was not able to clarify when he obtained the DVD.

The DVD was obtained and played during the proceedings. It did not address any safety issues concerning the installation of foil. Chris McKay said that he was not provided any product guidelines or the DVD from Vision. Similarly, Ben McKay denied receiving a DVD from Vision and did not recognise it but could not say 100% that he hadn't seen it before.

Chris McKay indicated the Silver Cell insulation was a lot thicker than insulation he had used before. He said it was so thick you could not run your hands over it and feel the cables; you had to be very careful. He conceded this was an extra level of risk. The technique of only stapling the ends of the sheets of foil began after Matthew's death.

Phil Price is an insulation installer with Incentive Insulation. He said that on occasions he had shown other people how they installed insulation at Incentive and said it is not training but a demonstration. He said it was one session and there was no formal program. Phil did not recall the names of the QHI employees or providing a demonstration on 2 or 3 October 2009, but said he was doing insulation work on 2 October and roofing work on 3 October. He said his diary did not record anything about doing a demonstration. However, he said his supervisor usually let him know at the beginning of the day that a couple of people would be joining him on the job. Mr Price confirmed he did not turn the power off when installing insulation but constantly warned participants to watch out for cables. Christopher McKay said the demonstration by Mr Price was just a couple of hours of rolling foil out and stapling it down. They were told to keep the power on so they could turn the lights on so they could see.

As outlined above, Mr Ben McKay was aware of the risks of working with live power, foil and metal staples. He said that after his training with Mr Price he thought if he stressed it with staff enough, they would not hit a cable. He admitted it was his biggest concern and he would be "at staff" every day about it. He did not stress frequently to staff that they could die from hitting a cable, because he never linked death with work. Ben said staff were well aware anyway, because “most people have a healthy fear of electricity”.

Chris McKay explained that they organised a “soft start” where there were groups of four of five to get up in the roof for short periods to get used to it. He said there was no pressure on anyone and they were paid a day rate instead of a piece work rate, which they referred to as a training rate. This was in excess of what they were being paid by Vision. For example, if there were four people working in a roof, it would cost QHI $800.00 but they were only receiving between $300 to $400 per house. He said the four main safety issues, which were talked about with staff, were confined spaces, electrical hazards, heat stroke and dehydration.

On the first day of installing, Ben McKay took two staff with him to lay insulation whilst the other installers attended the demonstration by Mr Price. This was the first day Ben McKay had laid foil insulation and he was showing the staff how to do it.

Christopher McKay became the trainer for new staff who had not attended the demonstration with Mr Price. He said he was not the designated trainer. He had had one weeks experience in installing insulation bats before doing the Master Builders course and attending the demonstration by Mr price. He said he would just show people around the roofs making sure they were safe and confident to do the job. He did not train Matthew because Matthew had attended the demonstration with Mr Price. Christopher McKay said he was not required to train Monique because it was his understanding that Matthew was going to show her what to do.

Christopher McKay saw Ben McKay as the organiser, sending them out to the jobs. Christopher said Ben could not make it to every site.

Monique did not receive any training prior to commencing work with QHI. QHI maintain she was provided with a demonstration on 9 October 2009 when she was working with Matthew, Garth Croft and Augusto Gasparetto. QHI’s expectation was that Matthew would provide Monique with a demonstration and training. Ben reminded Matthew that Monique was on light duties as a trainee until she got used to the work. Ben was of the view Monique did not need to attend the demonstration by Mr Price as the workers had done a couple of houses and the guys should have known how to do a roof. Ben McKay was of the view it was not a difficult job to do, just a physically demanding job.

Monique said that on her first day, which was Friday, 9 October 2009, she and Matthew met with Ben McKay, Gus and Garth on an oval in Ipswich. Monique denied being provided any information about the foil insulation or being told anything. She recalled it was Matthew, Gus and Garth’s third or fourth day on the job. Monique said that for the following job on the Monday, Matthew and she were formed into a team of two. They again met on the oval in Ipswich before starting. She recalled being told each day to make sure they didn’t fall through the roof or it would cost them $1,500 to $1,900 a site. They were told to make sure it was neat and tidy otherwise they would have to go back to rectify it at their own cost.

Prior to the incident, Monique had experience as a painter since the age of 14. She was familiar with an induction - it entailed the site supervisor detailing safety precautions, safety equipment, work tasks and restrictions on site. It involved completing a test and if you didn't pass then you weren't allowed on site. She denied receiving any induction or training from QHI. She said that when she commenced on her first day, she went into the roof cavity and asked what they wanted her to do and she was told, "*grab that piece of material and staple it down*". Monique denied ever being told to turn the power off before she commenced working in a ceiling.

A colleague of Matthew's, Garth Croft said that he was told to keep an eye out for the cables and to make sure he did not hit the cables when stapling the insulation. He was not told about the insulation being electrically conductive or the risk of electrical shock injury if it became live. He did not recall seeing any QHI policy documents.

Other QHI employees have advised that they were shown a book of photographs on how to lay the insulation, were buddied up with another installer to show them what had to be done, told to be careful of the wires, and not specifically told to turn the power off. A number of the installers did not realise that the consequence of stapling a cable was possible death.

Mark Daly, an employee of QHI, said that he was advised the insulation was electrically conductive but that he was not made aware that you could die from stapling a cable through it. He was instructed to turn the power off before commencing and that if they had any problems whilst installing, for example, coming across an exposed wire, they were to contact Ben McKay as he was an electrician by trade. Mark said Ben would come out and fix the problem.

Jayden Linsdsell, another QHI employee, said in his second or third day on the job (which would have been shortly after Matthew started work) he had hit a cable and the power went off. He contacted Ben McKay who came out and fixed the problem while they moved on to the next job. Mr McKay said it was like the incident Mr Price had talked about in that the safety switch broke the power supply. Ben said, he again stressed to all staff not to hit a cable.

Adrian Turner, an employee of QHI, said that he commenced working on either 18 September or 25 September 2009. He was teamed to work with Christopher McKay who advised him of the do's and don'ts of installing insulation. He was told to check where they were tacking the foil to ensure they didn't tack any live wires. He said that Chris, Ben and Christopher McKay repeated this information on a number of occasions. On one occasion he recalled receiving a text message from Ben McKay telling them to make sure they double checked where the wires were located in the house and to be careful. Other workers recall being warned about hitting a cable on a number of occasions. Mr Turner was under the impression that Christopher McKay was responsible for training new employees.

Matthew and Monique were booked in to do the Master Builder's course on 16 October 2009. However, they withdrew due to another commitment. Prior to

Matthew’s death, it was not a compulsory requirement of the HIP for installers to undertake this training.

After Matthew’s death, QHI instructed its staff to turn the power off prior to installing the insulation. Staff were also provided with a volt stick to test the circuits after the power was turned back on and were required to complete a risk assessment prior to commencing work.

QHI provided the WH&S investigators with a QHI ‘Safety Management Manual’. The manual is dated 25 September 2009 and Chris McKay told WH&S investigators it was in place at the time of the incident. He said it may have been updated after the incident but it was a generic version adapted from his electrical business that they had made some alterations to. Under the heading ‘Working Live’, it says, “*no installation work is to be commenced where the power supply has not been turned off to the premises*”. Chris McKay explained that this was not correct and it was meant to mean when you were actually working on the wires themselves. However, the manual also referred to the use of risk assessment cards to identify any risks.

No other staff referred to a ‘Safety Management Manual’ prior to the incident. In oral evidence Chris McKay said the manual was not in place prior to Matthew’s death. It had been used in a previous company he worked for and he amended it for QHI’s purposes following Matthew’s death.

There is also a QHI ‘Work Method for the Installation of Silver Cell Insulation’ dated 25 September 2009. It referred to a risk assessment job card. It stated, “*Staple in place but be sure to avoid any electrical cables*”. The ‘Risk Assessment Job Card’ is dated 16 October 2009. Again no employee referred to being aware of a Work Method Statement prior to the incident. Chris McKay said this was created after Matthew’s death.

There are a number of QHI minutes of meetings, which purport to record meetings convened on 22 September 2009, 29 September 2009 and 1 October 2009. They record that staff were informed of the electrical dangers and how to avoid them. A QHI training diary has been provided which lists the ‘demonstrations’ provided to staff. The only demonstration by Mr Phil Price was on 2 October 2009, otherwise the demonstrations were primarily provided by Christopher McKay. Chris McKay denied the minutes of the meetings were created after Matthew’s death.

QHI maintained that Ben McKay, a licensed electrician, “supervised” Matthew and Monique. The supervision consisted of Ben McKay meeting with the teams in the morning to allocate work and being available on the phone. He would also visit the teams on the job if they required something. Ben McKay was not on site at the time the incident occurred and had not been in the ceiling prior to the incident.

Mark Daly, a QHI employee, said that Ben McKay and another QHI representative, John, would complete random checks on some of the houses they completed. He was told on numerous occasions that if they saw anything that did not look safe, to contact either Chris or Ben McKay straight away and not to do the job. Mark recalled receiving a text message on a daily basis from Ben McKay checking to see how they were doing and to be careful whilst in the roof.

Inspector Innes of WH&S said that he was advised that QHI did not have a Hazard Register, a training plan, or a supervision plan. He was advised that pre-work or post-work inspections were not completed by QHI but were undertaken by Countrywide (a business operated under Vision). Vision said that its compliance team conducted post-installation inspections and corrected any faults, and that there were no findings of non-compliance throughout the auditing process of each batch of insulation. Vision advised that, upon the conclusion of each installation, its quality control team inspected the subject premises to ensure compliance and if there were any faults with an installation, the installer was required to fix the fault prior to re-inspection, sign-off and payment being authorised.

Greg Kerr, a QHI employee, said that “Mark” (surname unknown) from Countrywide (Vision) would complete inspections of some of the houses they installed insulation in. Mark told Ben McKay they were pretty good. Ben McKay said that as well as quoting the work, Vision also conducted an assessment of the house.

Mr Innes concluded that the supervision of Matthew and Monique was not adequate for the nature of the work they were doing and the situation they found themselves in.

The Day of Matthew’s Death

Matthew was working with Monique on the day of his death. They had been deployed to install insulation at a property located at 21 Buttercup Court, Meadowbank. The Buttercup Court property was a low set brick domestic residence in suburbia.

The day prior to the incident the homeowner of the Buttercup Court property, Mr Michael Bykiw was waiting for the QHI installers to turn up to install the insulation. They didn’t arrive. His mother, Maria Bykiw complained and demanded her son, Michael be reimbursed for his lost wages. This was agreed to and QHI confirmed they would arrive the following morning at 10am. Representatives from QHI arrived and paid $150.00 in cash. Shortly afterwards, Matthew and Monique arrived to install the insulation. They had been deployed to the property by Ben McKay and were to install a reflective foil laminate.

Ben McKay said he spoke to Matthew on three occasions on the day of the incident and on the last occasion Matthew advised he was just about finished. Ben said Matthew told him he was being pushed by the owner to do some outside areas of the house and Ben advised him it was not required.

At approximately 2.00pm they were in the ceiling cavity finishing off the installation, when Monique heard Matthew say, “*oh fuck*” really loudly but didn’t finish what he was saying. She ran over to Matthew and saw him lying on his stomach shaking. She thought he was having a fit and yelled out to call 000. She approached Matthew and attempted to shake him. Nothing happened so she grabbed him a second time. She was thrown back and awoke a short while after from an unconscious state.

Mrs Bykiw heard a thump and then Monique scream. She called out to her husband Michael Bykiw who told her to ring 000. Mr Bykiw went to the electrical box and pressed the 'Scanalec' button, which to his knowledge turned off the power to the house. He then climbed up the ladder but couldn't see anything. He grabbed a torch and again climbed the ladder. Mr Bykiw saw Matthew laying face down and Monique wrapped in the foil.

Monique's legs became entangled in the foil and she received significant electrical burns to her lower left leg. Monique said she had trouble maintaining consciousness.

Michael Bykiw turned the electrical safety switch off at the switchboard. This did not isolate the power from the circuit involved.

Emergency services including an ambulance arrived. The QAS officers were able to coax Monique down from the manhole. QAS officers isolated the power via the house switchboard before entering the roof. They found Matthew on his back in the corner of the roof. He was extricated from the roof with no pulse or breath sounds. As they were so close to the Logan Hospital the QAS decided to transport him immediately.

At some stage an Energex crew arrived to the scene and turned the power off by disconnecting the mains power to the house, at the street.

Matthew continued to be resuscitated at the Logan Hospital. Unfortunately despite exhaustive attempts Matthew did not respond. He was declared deceased at 1.41pm.

Monique was also transferred to the Logan Hospital. Subsequently she was transferred to the Royal Brisbane and Women's Hospital burns unit. Monique sustained a full thickness burn to her left lower leg. She discharged herself against medical advice on 15 December 2009 after a number of surgical procedures. Monique continued to have treatment as an outpatient, which included dressing changes, occupational therapy and physiotherapy. She has been left with a significant scar on her leg.

Prior Incidents – possibly a missed opportunity

As referred to above, some weeks before Matthew's death, another installer, Jayden Lindsell, hit a cable and the safety switch tripped. Ben McKay said this prompted him he remind all the other installers to be careful not to hit cables.

There was a further alleged previous incident of a wire being stapled prior to Matthew's death on 9 October 2009. There is inconsistency in evidence between Mr and Mrs Harch, the owners of 12 Walnut Close, Yamanto on the one hand, and Ben McKay on the other. This incident is relevant to both supervision and training.

Matthew stapled a cable which tripped the safety switch in the house. Monique said that the power was on and she saw sparks. According to Ben and Chris McKay, this incident was never reported to QHI.

When the power tripped, a worker mentioned to Mrs Harch's brother that he might have nicked a wire. Mrs Harch's brother subsequently realised from photos in the media that the worker was Matthew Fuller. Mrs Harch recalled that the insulation crew consisting of three males and a female. After Matthew's death, Mrs Harch also recognised Matthew from the media reports as being one of the installers who worked on her property.

Monique said that either Matthew or Gus (a co-worker) hit a cord with the staple gun and it sparked. She said that they told a man to turn the power off or the safety switch, and then turned the power back on.

The day after the installation, Mr Harch said that Ben McKay arrived to complete the rebate paperwork. Mr Harch recalled raising concerns over incomplete work and went into the roof cavity with Ben McKay. After attempting to contact the crew, Ben decided to rectify the work while he was there. The incident of nicking the cable was raised and Mr Harch said that, Ben (an electrician), dismissed it and said it was more likely a worker had knelt on a cable and that it had tripped the switch. Mr Harch accepted the explanation.

Mrs Harch recalled that a couple of weeks later, Ben McKay telephoned and arranged to return to the premises on 25 October 2009. Ben advised that a worker had told him that he may have stapled a cable and he wanted to check and fix it. This is in contrast to the evidence of Inspector Innes, who said he spoke with Ben McKay on 20 October 2009 about the previous incident on 9 October 2009 and asked if he knew about it. Ben denied he did. Inspector Innes told him he needed to attend the property to ensure the problem was addressed. Ben McKay advised Inspector Innes he would send someone out the next day.

Ben McKay denied that he was advised of the incident prior to speaking with Inspector Innes. He said that he let a worker go for not reporting the incident. Ben McKay emphatically denied that Mr and Mrs Harch advised him that a cable had been nicked or cut. However, in providing oral evidence, he was not able to say with certainty that he wasn't aware a cable had been nicked, as he didn't recall what he was told.

After reports of Matthew's death in the media, Mr and Mrs Harch organised for an electrician to inspect the roof cavity on 11 November 2009 to double check that everything was okay. Tony Greenwell of Craig Honehenhaus Electrical Pty Ltd inspected the property and found abnormalities in the circuits. Electrical Safety Office Queensland was notified of the fault. The electrical crew identified a staple in one of the power cables. This was removed and while it improved the circuit there was still a fault with the hot plate circuit. This was subsequently repaired. Mr Greenwell was critical of the adequacy of any previous inspection by an electrician after the insulation was installed.

I am satisfied that the incident as described by Mr and Mrs Harch occurred and that Mr Ben McKay's evidence in relation to it is unreliable.

Autopsy

Dr Olumbe and Professor Ansford have provided an Autopsy report concerning Matthew's death. They found thermal burns on the vertex (top most point of the scalp) of Matthew's head and on the front of his left knee which were confirmed microscopically to be consistent with electrocution. The pathologist found minor abrasions on Matthew's face and his right shin, which could be a consequence of a fall.

The report concluded that the cause of Matthew's death was electrocution.

The investigation

Inspector Tony Sheean of WH&S Queensland attended the scene at about 2.40pm on the day of Matthew's death. Matthew and his girlfriend Monique Pridmore had been transferred to the Logan Hospital prior to his arrival. Inspector Sheean investigated the site with Queensland Police Service ('QPS') Officers and representatives from the ESO. Amongst other enquiries, Inspector Sheean entered the ceiling cavity and spoke with the home occupants and the electrical contractor on scene.

A local electrician, Nathan Hurst, of Hurst Electrical Pty Ltd, had been asked to attend the scene by Energex. He checked the power had been disconnected and then assisted the QPS with their investigation prior to the arrival of the ESO inspectors. He entered the roof cavity and was shown a staple through the foil insulation. Mr Hurst advised that when the QPS officers lifted the sheet of foil the staple came out with it. He saw the pinholes in the cable where the metal staple had been. He traced the cable and found it went to the hot water system.

On 23 October 2009, a follow-up visit to the premises was organised by WH&S and ESO officers. They confirmed their initial findings as to the cause of the electric shock and conducted testing of the house to ensure the safety of the occupants. Had all the switches, including the switch for the hot water on the switchboard been turned off, Matthew would not have been electrocuted.

Inspector Innes made enquires concerning the requirements under the HIP, including the definition of supervision.

As a result of its investigation, WH&S issued notices to QHI in relation to issues identified. This included a prohibition notice on 28 October 2009 stopping the installation of foil insulation near live electrical equipment in a way that is not electrically safe. ESO took over the remedial actions in relation to QHI including the issuing of notices to protect workers installing insulation, protect homeowners after insulation was completed, and to check the 100 odd homes that had been worked on up until the incident.

WH&S concluded its report by identifying what is likely to have prevented the incident from occurring. This included:

- Use of non-conductive nylon staples instead of metal staples;

- Use of non-conductive insulation (i.e. cellulose fibre batts) instead of electrically conductive foil insulation;
- Turning the power off to a house, before installing insulation;
- Ensuring that workers underwent comprehensive risk specific training prior to undertaking unsupervised work; and
- Providing effective and direct on-site supervision, having regard to the low order administrative controls being relied upon, the inherent electrical risks associated with the installation task, and also to the youth and inexperience of workers.

The aftermath

QHI was fined $100,000 plus costs pursuant to section 27 of the *Electrical Safety Act 2002* (failure to discharge electrical safety obligation). In relation to the charges pursuant to s199 of the *Electrical Safety Act 2002* against Chris McKay, Industrial Magistrate Herlihy ordered no conviction to be recorded and a bond to be entered of $2,000 to be of good behaviour for two years.

On 30 October 2009, following Matthew's death, Countrywide (Vision) was served with a show cause notice as to why it should not be de-registered from the HIP. Countrywide disputed the show cause, notice denying it breached the Terms and Conditions of Registration, laying the blame directly on QHI.

As at 14 January 2010, Countrywide (Vision) had conducted 1521 installations and had claimed $1,989,590.14.

On 11 February 2010, Vision was served with an immediate suspension notice pending a final decision as to whether it should be de-registered. The reasons were the use of metal staples after they had been banned and partial insulation. Vision provided an explanation, which was accepted by the HIP, and the suspension was lifted.

QHI ceased operating in February 2010.

On 10 January 2011, the Department of Climate Change and Energy Efficiency wrote to Vision concerning issues of non-compliance with the terms and conditions of registration and program guidelines. The letter referred to 666 houses, which were found to have defects. The Commonwealth advised it would be seeking a refund of the monies paid under the HIP. There were 30 different types of defects identified, including a number of roofs found to be live. On 11 February 2011, Vision responded denying it had breached any of the terms and conditions of the HIP. On 10 August 2011, Vision advised the Department of Climate Change and Energy Efficiency that it had gone into liquidation.

On 16 August 2011, the Department of Climate Change and Energy Efficiency wrote to Vision disputing its argument of compliance. The Department advised that of the 666 houses, 281 were deemed to involve substantial non-compliance with the program requirements (179 reports identified metal staples were used on or after 2 November 2009). On 16 August 2011, the Department of Climate Change and Energy Efficiency wrote to Vision's liquidator, advising of the non-compliance issues and that if the reports were substantiated, the Commonwealth would be seeking reimbursement of the monies paid for those houses under the HIP.

On 17 November 2011, the Department of Climate Change and Energy Efficiency agreed to commence debt recovery proceedings against Vision for 464 claims, which were considered non-compliant and recoverable. The claims were broken into two groups and the Commonwealth was seeking $225,860.00 and $356,914.00 respectively. On 2 November 2011, a letter of demand was sent to Vision's liquidator.

On 24 November 2011, the Department of Climate Change and Energy Efficiency served a Proof of Debt for $581,575.0 on Vision's liquidator and requested the Commonwealth be listed as a creditor. The outcome of the debt recovery proceedings is unknown.

The Death of Rueben

Rueben's Employer

Arrow was registered with ASIC on 27 April 2006. The directors of Arrow were Christopher and Richard Jackson. Christopher was a plumber by trade and Richard a carpenter. Arrow was registered in approximately June 2009 as an installer under the HIP. It was a general property maintenance company and attended to most repairs.

Arrow's office manager, Denise Watson, registered the company for the HIP online and over the phone (at this time no documentary evidence of the competency requirements had to be provided to the HIP). Ms Watson recalled doing this with Christopher Jackson. On 26 June 2009, Denise Watson sent a faxed copy of a Certificate of Insurance to the HIP. As a result, Arrow received a letter confirming it was registered for the program. Christopher and Richard maintained that they were required to have a competent tradesman supervisor on all insulation jobs and that Arrow complied with that direction. Christopher Jackson said that once they sent off the paperwork he rang the HIP number and spoke with a male person. He said he was advised he was ready to go. Mr Jackson said that he asked about protocols and was advised words to the effect, "*how hard is it to put insulation in a roof, mate? Make hay while the sun shines*".

Christopher Jackson mainly ran the insulation side of the business. He had installed insulation prior to the commencement of the HIP.

Richard Jackson helped out occasionally with the HIP jobs and as a carpenter he had experience of installing insulation in "hundreds" of houses. In completing those insulation jobs he said he did not check the work area for safety in terms of electricity. Further, he is of the opinion prior to the HIP there was no general practice to check for electrical safety. Richard Jackson recalled asking his brother if there were any requirements they had to meet under the HIP and Christopher telling him they had sent away what they needed to and that he was told by someone in Canberra, "*well, go and make money while the sun shines*". Richard Jackson could not recall reading anything concerning the HIP.

Richard Jackson could not recall if he had ever completed an occupational safety course but said he had been inducted onto various sites and had attended safety meetings when working for QBuild.

Arrow denied ever being provided with an Insulation Installers Pocket Book when it registered as an installer under the HIP (it was not available to installers when Arrow was registered). Therefore, it says it was not aware of the seven warnings regarding electrical work found on page 35 of the Pocket Book. Ms Watson did not recall seeing a hardcopy of the Pocket Book and is confident it never came through the offices of Arrow. Arrow said it was not aware of the *Electrical Safety (Installation of Ceiling Insulation) Notice 2009* which commenced on 1 November 2009. Conversely, Christopher Jackson advised he received the Pocket Book and the 'bylaws' in the post three weeks after Rueben's death.

However, Ms Watson said that she recalled printing out the Pocket Book with one of the Installer Advices. She thought that this would have been the 26 October 2009 advice.

Christopher Jackson said any fact sheets or changes to the program would be printed off by Ms Watson and put on his board. He asserted there were no changes because he didn't get any material. He denied receiving any HIP Installer Advices. Christopher Jackson said Ms Watson did not bring anything to his attention. He confirmed he had never visited the HIP website.

Similarly, Arrow said it was not aware of Clause 4.5.2.3 of the Wiring Rules ASNZ 3000/2007 regarding recessed luminescent lights but had consulted Ideal Electrical and Haymans Electrical about down lights and was told to use cardboard to cover down lights when installing the insulation.

The directors of Arrow both said they were computer illiterate. Ms Watson confirmed Richard Jackson was completely computer illiterate and she never saw him use the computer. She said Christopher Jackson would ring her sometimes to obtain instructions to access information on the computer after hours. She said she sometimes found it difficult to explain instructions to Christopher and therefore kept a hardcopy of everything in the filing cabinet so she could direct him to that if need be.

As part of Ms Watson's duties she would read all incoming emails and print out hard copies. She put the printouts on the relevant director's spike. Ms Watson said that neither director was very good at reading the items placed on the spikes. Richard was apparently better at reading the correspondence than Christopher. Anything related to insulation was placed on Christopher's spike. This included the insulation Installer Advices, which came via email. In addition to putting them on the spike a copy was filed in the hard copy insulation file in the filing cabinet. Ms Watson recalled Christopher reading some of these emails. She said sometimes he would take them away with him, at other times he would sit and read them in front of her.

Ms Watson recalled receiving the HIP Installer Advices and said that while she cannot be sure, letters from the Department of Justice and Attorney General

(ESO) appeared familiar to her. Despite her reference in her statement to not recalling seeing the ESO email of 15 October 2009 concerning the death of Matthew Fuller, in evidence she said she remembered discussing the alert about foil with Christopher Jackson, as she knew they didn't use foil.

On 22 June 2009, Arrow quoted on the residence where Rueben was electrocuted. The quotation was to supply and fit 110 m2 of insulation. Two prices were given, one for fiberglass insulation at a cost of $1,210.00, and the other for polyester insulation at a cost of $1,540.00.

Training and supervision

Rueben Barnes was employed by Arrow on 28 October 2009. At the time, the requirement for installers was to have as a minimum the OH&S safety course qualification.

Prior to commencing with Arrow, Rueben had completed a year of a carpentry apprenticeship with Rockhampton Home Maintenance. He had completed 10 units of training through the Central Queensland Institute of TAFE. One of the subjects included 'Follow OH&S policies and procedures'. His father said that Rueben did not do any training or induction when he started at Arrow because that is something Rueben would have talked to him about.

Arrow said that as Rueben had completed his first year apprenticeship as a carpenter he had completed all necessary safety training in the apprenticeship. Arrow admit they never saw Rueben's blue card in general construction as they believed he had the basic safety qualifications required of a first year apprentice. They said that this was verified through questioning Rueben when he was interviewed for the job. Ms Swift, the WH&S investigator said she understood the apprentice training was not equivalent to the OH&S white card qualification.

Arrow admitted no formal first aid training was provided to any of its staff. Initially, Arrow estimated that Rueben would have installed insulation in between 80 to 100 houses prior to his death. Mr Chris Jackson conceded this was incorrect and it was more likely Arrow as a whole had completed 70-80 installations in that time with Rueben working on a far fewer number.

Richard Jackson recalled interviewing Rueben and that he had told them that he was an apprentice carpenter and that was how they assessed his qualifications and experience in his ability to follow basic safety requirements. Richard said Rueben had a Blue or White Card; otherwise he would have had him do the course like the other fellow they paid to get one. He thought Rueben told them he had one, and did not recall seeing Rueben's CV. Ms Watson looked after the personnel files and denied ever seeing Rueben's CV. She never recalled seeing a Blue or White Card for Rueben.

Rueben's father did not consider Arrow understood the electrical safety issues involved in laying insulation. He said that he spoke to one of the directors on the day of Rueben's death, saying words to the effect, "*I don't understand how this could have happened because I looked inside the meter box when I got there and there was an earth leakage circuit breaker installed* (Safety Switch)". Mr

Barnes holds a restricted electrician licence and said that Safety Switches do not protect against that sort of thing and it was not designed for that.

Brian Callaghan, Rueben's co-worker, said that he had started working with Arrow on the Thursday prior to Rueben's death (Rueben died on the following Wednesday). He started work at 7.00am and was paired with Rueben to go to Yeppoon to start a job. Brian had not previously done any insulation work and was to learn on the job with Rueben and Gaven, another co-worker. Brian said that nobody spoke to him about electrical issues while doing installation of insulation and he never thought about electricity. He said he was told by Nick Jackson not to stand on gyprock and to keep on the wood batons. Brian recalled that Rueben instructed him to use a wood broom handle and an extendable metal pole to poke the batts into place. Brian said Gaven was the foreman and provided direction to him and Rueben.

Arrow maintained that Brian had undergone safety training and induction at his previous employment as a labourer at Alma Ports. Arrow said that while they provided all the equipment necessary to complete the insulation, they did not supply Rueben with a metal pole for use in insulation work. Arrow said that it was not aware that a metal extendable pole was being used at any insulation job sites. Arrow acknowledged there was a metal extendable painters' pole used for painting jobs on Arrow's vehicle along with other tools and equipment for a variety of jobs.

Gaven Feeney had worked for Arrow for about five years and 10 months prior to Rueben's death. He is a carpenter by trade, having been qualified for about seven years. He said that as a carpenter he had worked at heights and was familiar with roof cavities. He did not recall doing any form of induction when he first started working for Arrow. Gaven completed a Blue Card during his apprenticeship and after Rueben's death upgraded to the White Card.

Mr Feeney admitted he only received minimal information on electrical hazards during his carpentry training, which he completed in 2004. He was not aware that safety switches did not cover all circuits in a house. He was not aware there was a ceiling insulation course and had never been offered the chance to attend such a course.

Arrow, through its directors Christopher and Richard Jackson, maintained it took steps to minimise any risk of injury or death from electrocution to its employees while installing insulation. They claimed they had a protocol which involved the foreman checking the power box for an earth leakage switch prior to commencing work. The foreman was then instructed to check the roof wasn't live and to perform a visual check of the roof cavity prior to any other employees entering that area. Arrow believed that, with those safety precautions, the risk of electrocution was minimised. Gaven Feeney denied there was a formal protocol in place but did recall being told on one occasion he was to check the electrical box to ensure a safety switch was installed. Mr Feeney said that if there wasn't a safety switch, he would turn the mains power off.

Richard Jackson said that he and his brother relied on the foreman, Gaven Feeney, to determine whether a site was safe.

Christopher and Richard Jackson acknowledged that Rueben was not required to undertake any formal induction but that he worked with a competent tradesman who would induct him to each specific site and provide the necessary training on the job.

Arrow maintained that Gaven Feeney, or the competent foreman in charge of a particular job, was responsible for doing a visual inspection and verbal and visual induction at every site to assess any potential risks and to minimise them. Arrow said that the risk assessment performed by the foreman on site involved a visual inspection and the completion/update of the Work Method Statement to assess the risks. Arrow says it took into account the factors outlined in the Work Method Statement as well as the risk of electrocution from carrying out work in the roof cavity and the need to minimise all of those risks.

Gaven Feeney said he did not recall receiving any instruction about looking for electrical hazards. He relied on his own experience. This was to have a quick look for rat bitten wires when entering a ceiling space. He said if they identified frayed wires they would just avoid the area but still lay the ceiling insulation.

Christopher and Richard Jackson asserted that Rueben was aware that a Work Method Statement was completed and it was available in the vehicle for employees to read prior to starting work on the job.

The Day of Rueben’s Death

Rueben was working with Brian Callaghan and Gaven Feeney on the day of his death. They had been deployed to install insulation at a property located at Cocks Road, Stanwell. The Cocks Road property is a highset weatherboard domestic resident on rural acreage. It is serviced by two electrical poles; one, which serviced the house, and one which serviced the entire property including the house and sheds.

On arriving at the property, Gaven, the foreman told Rueben and Brian what to do. Gaven said he checked the circuit breaker on the house power box. It was switched on and everything appeared okay. Gaven said he assumed that the circuit breakers would flick off if there was “*any drama*.” Gaven said it was not his usual practice and he never been told to turn the power off before working in a roof. Gaven used the ladder to access the roof and remove three or four roofing sheets to allow access to the roof cavity. Rueben and Brian then went up onto the roof and Gaven stayed on the ground passing the insulation up to them.

In his statement Gaven said Rueben and Brian used an extendable metal pole and a wooden stick to poke the batts into the corners. However, in oral evidence he said he couldn’t see what the boys were using to put the batts in place. He denied seeing them use a metal pole on the day of Rueben’s death or on any other day. Gaven acknowledged even if he did see them use the metal pole he probably would not have thought “*oh big danger*”.

Gaven recalled that they had just about finished the job. He was on the roof near the part they had opened and Ruben and Brian where still inside the cavity finishing off the laying of the batts, when he heard Rueben say; "*What the fuck was that?*" Gaven thought Rueben had been bitten by something. He asked if he was okay and he then saw Rueben go stiff and initially thought Rueben may have been having a seizure. Gaven was adamant Rueben was not holding the metal pole when he was electrocuted because he was handing him batts at the time, and Rueben was using both hands to receive the batts.

Brian said that at around 9.10am he heard Gaven say, *"Quick! Jump out of the roof!"* He saw Rueben's head poking out of the roof space and he was *"as stiff as a board"*. He grabbed Rueben by the shoulder and received a shock, sustaining burns to his hands and wrists. Brian said he and Gaven went to the power box to flick everything off. The circuit breaker was definitely still on and Gaven commented that it should have gone off. The owner of the home went out to turn the power off at the main pole and Brian went to double check it was all off. Gaven recalled the owner's son turning the power off at the main pole and he said he double-checked it.

Mrs McKenzie McHarg, the co-owner of the Cocks Road property, recalled a longhaired man who she thinks was Gaven, coming down the ladder, yelling out to shut the power off and to call an ambulance. She said she called the ambulance and then checked both electrical boxes and everything was off in both boxes.

Steven McKenzie McHarg, Mrs McKenzie McHarg's thirteen-year-old son had been home from school as he had a cough. He recalled a man running into the lounge room saying call an ambulance, turn the power off. While his mother was ringing the ambulance Steven ran outside to turn the power off and asked Gaven to check to see if he was happy with it. Gaven said; *"Thank you. One of the boys has been electrocuted".*

Brian and Gaven then returned to the roof where they pulled Rueben out on to the roof and commenced two person CPR. They continued until the QAS arrived. On arrival to the scene, the QAS paramedics went up on to the roof and deemed the CPR to be effective. They instructed Brian and Gaven to continue whilst they were organising their equipment. The QAS paramedics continued CPR for a further 25 minutes with no return of spontaneous output. Rueben was subsequently declared deceased at 10.10am.

Following the resuscitation attempt, the paramedics transported Brian to the Rockhampton Base Hospital for review. He was released from hospital later that day.

Christopher Jackson said that on the day of Rueben's death he attended the site personally and undertook the site inspection. He said he took the installers out to the property, took them onto the roof and told them what to watch, where to stand, and told them where the load bearing walls were. Christopher Jackson said he tested whether the roof was live by placing the back of his hand on the roof. He said he then left them with his foreman, Gaven Feeney.

At the time the incident occurred, Ms Watson was in the office with the bookkeeper. She was unsure where Christopher or Richard Jackson were and was not able to raise them by telephone. She therefore made the decision to attend the scene. She telephoned the Jackson's as she drove out to the site.

Mr Feeney and Mr Callaghan denied that Mr Jackson went to the site on the morning of Rueben's death.

Brian Callaghan and Gaven Feeney both denied completing the Work Method Statement dated 18 November 2009 which Christopher Jackson claimed he completed and placed in the work truck the crew were using. Under the *'Hazard or Risk'* heading, it cites: "*In through roof earth leakage in power* box". Four control measures are ticked. These included:

- *Rotate workers on roof to reduce exposure;*
- *Use temporary sheeting to make platform on top of trusses and joists;*
- *Ladder to be placed on level surface at ratio of 4 m rise to 1 metre off vertical; and*
- *Place ladder at least 3 m away form overhead electrical cables.*

The '*Acknowledgement of Workplace Method Compliance by Person in Charge'* has the competent person recorded as *Gav Feeny*, dated 18 November 2009 at 7.30am. There is a section for all persons working on the site to record their names and sign to confirm the statement concerning compliance with the Work Method Statement. This section records, *Gav Feeney; R Barnes;* and *B Callaghan*, in rough printing, not by way of a personal signature.

Christopher Jackson said that he completed the Work Method Statement for the Cocks Road property prior to the staff attending the site to install the insulation and it was put in the workers' car for them to consider and amend if necessary prior to beginning work. The foreman was responsible for completing the Work Method Statement prior to the commencement of every job and was responsible for giving it to the office to store at the end of a job. Ms Watson recalled seeing the Work Method Statement on the day of Rueben's death, after the incident, and thought the writing on the Work Method Statement was Gaven Feeney's handwriting.

Gaven Feeney says Work Method Statements were only used for larger jobs and insulation was not a large job. He had not previously completed one for an insulation job. Gaven said he was not given any paperwork for the job, just the address. Gaven said the writing was not his.

Due to a number of inconsistencies, the sworn evidence of Christopher Jackson is unreliable. This issue is canvassed below in the section dealing with s48 referrals.

Autopsy

Dr Buxton provided an Autopsy report concerning Rueben's death. He found the scenario outlined in the police Form 1 and the presence of a small electrical burn on Rueben's right ear was consistent with death by electrocution. Dr Buxton found active cannabis present in Rueben's blood as well as evidence of a metabolised, inactive form of the drug.

The report concluded that the cause of Rueben's death was electrocution.

The Investigation

Senior Sergeant ('SS') Hamrey of the Queensland Police Service attended the scene and adopted the role of Incident Commander. He was advised by a QAS paramedic that Rueben had died and was on the roof of the house. SS Hamrey requested WH&S attend the scene. Further, he asked the Queensland Fire and Rescue Service ('QFRS') officers on scene to organise a "cherry picker" for the purpose of removing Rueben from the roof cavity. The cherry picker was used by the emergency services and WH&S in relation to their attendance and investigation at the scene.

At approximately 12.20pm Workplace Health and Safety Principal Inspector (Investigations) and ESO Inspector, Gavin Thompson attended the Cocks Road property. An Ergon Energy officer advised Inspector Thompson that they had arrived at approximately 10.40am and isolated the power at Ergon's pole.

Inspector Thompson entered the ceiling cavity and located a rat-chewed TPS cable with an exposed copper conductor, which was removed and seized. Initially this was thought to be the cause of the electrocution but it was discounted following further investigation.

On the day after the incident, Inspector Thompson returned to the site and found that a metal screw used to fix the plasterboard ceiling to the metal ceiling batten had pierced a 6mm2 twin TPS (thermoplastic sheathed) cable that ran in the trough of the metal ceiling batten. A separate earth wire ran alongside the cable. It was the third metal ceiling batten from the centre toward the front of the dwelling. Inspector Thompson was unable to say why the original electrician would have laid the cable in the channel of ceiling batten it should have been run across the top of the batten. The cable came from the stove circuit. Inspector Thompson thought the screw was most likely applied during the building process.

The electrical testing confirmed the metal ceiling batten was continuous and ran from one end of the house to the other. That is, it was live from where the screw originated, right through to where the incident occurred. Somehow a circuit was created between Rueben and the live batten. It could have been that Rueben was holding the metal pole found at the scene which the workers had been using to place the bats, or alternatively Rueben could have had his feet on the batten and his hand on the roof.

Inspector Thompson confirmed if all the switches on the switchboard of the house had been turned off, this would have included a switch for the stove circuit. While there was a Residual Current Device, it did not include the stove circuit. Inspector Thompson agreed his policy is to never go into a roof without with out turning the power off. While a visual check will identify some issues, it will not identify all, particularly hidden issues, as occurred in this case.

Inspector Swift (now Francis) completed the WH&S investigation report into the incident. She had approximately 16 years experience in investigations at the time, but had not investigated any incident involving a roof cavity.

Inspector Swift interviewed and liaised with a number of persons as part of her investigation. The directors of Arrow elected to provide written responses to a list of questions rather than attend to be interviewed in person. The responses were given through their lawyers, Rees R and Sydney Jones. Richard Jackson claimed not to recall being involved in the providing information to his lawyers for the response to WH&S and put this down to his poor memory from a car accident prior to Rueben's death. He said his memory was "shot".

On 1 December 2009, Inspector Swift contacted Matthew Kinch of the Department of Environment who advised her of the HIP registration process, training, qualifications and what information was sent to businesses on registration. Inspector Swift was provided a generic statement about the HIP. She then sought a statement from a person able to give evidence. No such statement was provided.

On 19 November 2009, Arrow was issued with an Improvement Notice for contravention of the *Workplace Health and Safety Regulation 2009*. On 4 December 2009, Arrow was issued two Improvement Notices in relation to the *Electrical Safety Act 2002*.

The WH&S investigation was not able to establish the root cause of the defect in the Cocks Road property which had been present for a number of years, nor did it identify who did it due to the various works that had been completed since the house was constructed.

The Workplace Health and Safety investigation found:

- A pre-existing defect was present in the ceiling cavity. A screw had penetrated a cable and caused parts of the house, including a ceiling batten, to become "live". This defect was present for at least 10 years.
- Arrow allowed work to proceed without the house, or any parts, being isolated or de-energised.
- Only minimal induction or training was given to workers.
- There was no specific or documented procedures in place for installation of insulation.
- The deceased worker was permitted to use a conductive, aluminium pole to position or place insulation batts.
- No training was provided to workers in relation to first aid for electric shock.
- In addition to electrical issues facing the workers, they were positioned on the roof some 4.8 metres above the ground, without any consideration as to fall protection.

The aftermath

Arrow was fined $135,000 in the Rockhampton Industrial Court on 17 September 2010. This consisted of $110,000 for the electrical safety breach pursuant to s27 of the Electrical Safety Act 2002, which is the highest imposed on any company for such a breach; and $25,000 for a workplace health and safety breach pursuant to s24 of the *Workplace Health and Safety Act 1995*.

Arrow ceased installing insulation immediately after Rueben's death. On 19 November 2009 Arrow was served with a show cause notice as to why it should not be de-registered from the HIP.

As at 5 November 2009, Arrow had claimed for 78 installations, and had received $110,353.60.

On 1 December 2009, Arrow responded to the show cause notice alleging that at the time of registration the directors were not aware of the requirement for all installers to undergo Occupational Health and Safety Training.

On or around 8 December 2009, DEWHA determined that the response by Arrow did not show sufficient cause as to why the company should not be de-registered. As a result, Arrow was removed from the register on 8 December 2009.

Arrow subsequently tried to appeal the decision or requested to re-register for the program due to the financial impact of de-registration. Despite a number of phone calls and letters, DEWHA did not respond. On 26 February 2010, Richard Jackson advised that Arrow did not want to be re-registered but wanted Arrow's name taken off the public de-registration register. This request was denied.

The Death of Mitchell

Mitchell's contractor

Titan Insulations Pty Ltd was registered with ASIC on 16 September 2009. The directors are Nicholas William Lindsay and Frederick Ramon Palomar. Prior to commencing Titan, Mr Lindsay was a qualified carpenter and Mr Palomar had a diploma in engineering. Mr Palomar predominantly looked after the paperwork and Mr Lindsay was more hands-on, although he did not lay any insulation himself. Neither had any experience with insulation prior to registering for the HIP.

On 18 September 2009, Titan lodged an online application for registration under the HIP. Mr Palomar said that he just followed the prompts online. On 26 September 2009, Titan was asked to meet a number of checks. On 2 October 2009, Titan was advised they did not meet the insurance requirements however the insulation specific competencies were met. On 14 October 2009, Titan emailed a copy of their Certificate of Currency to Medicare. Despite not complying with the insurance requirements, Titan began lodging claims for payment under the HIP on 9 October 2009.

There is evidence the insulation installation work was also being completed by Mitchell for NCL Group Pty Ltd ('NCL'). The sole director of NCL is Nicholas William Lindsay. It was registered with ASIC on 5 March 2009. It had a different principal place of business to Titan. NCL was a registered installer under the HIP. Mr Lindsay explained that NCL was only doing insulation for a short period and that there was a short overlap of a couple of weeks while Titan was being established.

The arrangements appeared to be that an installer was recruited and trained and then contracted to Titan. That contractor would then employ their own subcontractor to assist them with the work.

Mr Lindsay initially met Mitchell on a building site which was next to a job they had been working on. At the time Mitchell was laying insulation. Mr Lindsay asked if he would be interested in working for Titan. Two weeks, later Mitchell approached Titan. Mr Lindsay required Mitchell to complete the ceiling insulation course before working for Titan. He advised that because he hadn't done the course himself he required all of the installers to complete the course.

Mitchell contracted to Titan and then retained Chase Martin as his subcontractor. Mitchell took out public liability insurance on 25 September 2009. The business description on the policy schedule stated, 'Tradesman'. He had previously registered for an ABN on 24 January 2009. Mitchell employed Chase Martin on or around November 2009 directly to assist him with installations. Mitchell originally paid Chase for any work he completed but later Chase was paid directly by Titan. Mr Lindsay advised it was up to the contractor working for Titan to work out how many contractors they wanted.

Titan and its installers worked on the Gold Coast, Hervey Bay and Cairns. When working in Cairns the installers stayed in a motel and hired a minibus to attend the installation jobs.

On 2 February 2010, Titan quoted on the residence outside of Cairns where Mitchell was later electrocuted. The quotation was to supply and fit 100 m2 of insulation for $1,200.00.

Training and Supervision

Mitchell commenced working for Titan on or around 29 September 2009. At the time, the requirement for installers to have as a minimum was the OH&S basic qualification.

Mitchell completed the Australian Construction Training Services 'Ceiling Insulation Installers Course' on 2 October 2009. Ms Wright, the Workplace Health and Safety Investigator, was unable to confirm whether Mitchell had the necessary white/blue card (OH&S training). Mr Palomar said that he did not confirm whether Mitchell had the OH&S training, he just relied on the ceiling insulation course qualification. He assumed the ceiling insulation course covered the required OH&S training.

Mr Lindsay said Mitchell had been working in the insulation industry before completing the ceiling insulation training and relied on this in explaining why an invoice was received from Mitchell on 29 September 2009 which was prior to the ceiling insulation course.

Mr Phillip Smith of Australian Construction Training Services said that it answered an expression of interest to run the course. He said that not a lot of changes were made to the materials provided by CPSISC. The course provided to Mitchell included a theoretical and practical assessment for the relevant units of competency. In relation to the practical assessment, trainees were required to replicate the installation of two types of insulation products into a ceiling cavity. The hard-wired electrical equipment and wiring in the ceiling was not energised with electrical current for the purpose of that assessment. Mr Smith said that participants were not told to turn the power off as part of the training. Roll out foil was not used as part of the demonstration. He said that he would have told participants that staples were high risk around electrical cables, foil would not have been his preference, and to stay clear of foil insulation.

Chase Martin had been working with Mitchell prior to his death. He is a qualified mechanic by trade and had completed some carpentry work prior to immigrating to Australia in 2001. Since being in Australia he had completed general construction work and had been doing insulation work for Thermal Logic for about four years prior to working for Titan.

When he first started working with Thermal Logic, Chase Martin was not provided any training; he just learned what to do by following someone. When he started working for Mitchell, Mr Martin did not receive any further training because he had previous experience in installing insulation. He had to sit a course before starting with Titan but he didn't finish the course. The course was the "Ceiling Installers Course", run by Australian Construction Training Services.

Mr Martin invoiced Titan for any sales work he did but worked for Mitchell in regards to installation and would invoice him accordingly. Chase Martin said that Mitchell originally started paying him in cash but changed to cheques. Subsequently, when they started working in Cairns, Mr Martin began to invoice Titan for sales work and for the installation of insulation. That is, he no longer directly invoiced Mitchell.

Mr Martin said that he and Mitchell worked as a team and liked to try and complete four houses per day, with each taking between half an hour and an hour to complete.

Shane Horne was a friend of Mitchell's. He was a crane operator by trade and had received his qualification through a number of training institutions. Mitchell introduced Mr Horne to Mr Palomar in an attempt to secure work for him. Mr Martin said his meeting with Mr Palomar included:

- him telling Mr Palomar that he held a trade qualification as a crane operator;
- him advising Mr Palomar that he had no previous experience in insulation installation;
- Mr Palomar telling him he did not need to complete the Ceiling Installers Course, so long as one person of the installation team had completed the course; and
- that an insulation team consisted of two people.

Mr Martin started working for Titan the day after he met with Mr Palomar. He was required to meet Andres Palomar (Ramon's brother) at a residential property at Mudgeeraba. Shane did not receive any training or induction when he commenced working.

Shane recalled asking Ramon about the product they were installing, as he was concerned after hearing in the media of the accidents involving insulation installers. Ramon told him that the product was an Australian product that did not conduct electricity as it was not a foil, but was an Aluminium laminate. He said that he was instructed by Ramon to sell the products as Aluminium Laminate as the clients did not want foil installed in their homes. Mr Palomar did not recall this alleged conversation with Shane, however, he recalled being told by a supplier that the foil was non-conductive.

Mr Martin said that the only checks that were completed prior to starting a job, were to look into the manhole to check for adequate clearance or whether the roof contained fibreglass. He confirmed that no paperwork was completed at the start of a job. Shane was not aware of the *Electrical Safety (Installation of Ceiling Insulation) Notice 2009* at the time of Mitchell's death.

Mr Andres Palomar was a third year shopfitter and had been laying insulation for at least six months prior to Mitchell's death. He had worked with another insulation company, which he thinks was called Platinum, for about a month before commencing with Titan. He said that when he started with Platinum he did not receive any training, he just learnt on the job. When he commenced with Titan he had to do a daylong safety course, the 'Ceiling Insulation Installers Course' run by Australian Construction Training Services.

Joshua Rothwell, another Titan contractor, recalled doing the 'Ceiling Insulation Installers Course' with Mitchell and another man whose name he did not recall. He had to do the course before Titan would let him contract to them. He recalled being instructed in relation to working around electrical wires but said there was no mention of plastic staples. He recalled that he commenced working for Titan about two months before Christmas. Mr Rothwell initially worked with Andres Palomar while learning the job and, once qualified, he subcontracted to Jackson Lurmon to form his own insulation team.

Mr Rothwell said that after the installer accident in Brisbane, he and Mitchell were called into the factory by the directors of Titan and informed of the electrocution. Joshua said that he and Mitchell were then both taken to a power box on site where it was demonstrated how to inspect for a safety switch. They were told that not all electrical circuits are attached to a safety switch. They were shown which circuits to shut off at the power box before commencing an installation. He said that they were told to perform these checks before starting and if in any doubt, to call an electrician.

Mr Lindsay said he and Ramon found out about the death of Matthew Fuller through Ramon's neighbour and this is what sparked the impetus for this training session. Ramon said his neighbour worked for the installer company involved in Matthew's death. His neighbour talked to him about the seriousness of turning the power off and the danger of electricity in general. Mr Lindsay confirmed he and Ramon both received emails and updates on the HIP and would action them as required.

Mr Rothwell recalled that about a week after being shown the fuse box demonstration he was again asked to attend the Titan factory. Mitchell was also in attendance and that they went over the safety box demonstration and were told to read over a new safety checklist and an information sheet. Joshua said that Nick then asked them some question to make sure they understood. Joshua recalled he and Mitchell being provided with a pile of ‘Safety Inspection’ forms and were instructed to complete one prior to each installation job.

Mr Rothwell recalled that at the same time they were both provided with plastic staple guns and staples. When he was given the plastic staple gun and staples he had to return the metal stapler and staples as Titan had provided them when he first started to subcontract. However, Mitchell kept his metal stapler because he owned it. Mr Lindsay said that he had no reason to believe Mitchell would continue to use it.

Joshua Rothwell recalled being told that the Government Regulations now required the use of plastic staples in insulation installation. Titan purchased six new guns and 10 boxes of staples on 24 November 2011 from Sustain 21. It appears Sustain 21 only stocked nylon staples.

Mr Rothwell would fill out a Safety Inspection form prior to each installation and would keep the form with the job sheets. However, on returning the job sheets to Titan, he kept the forms in his own folder.

Mr Rothwell said that while they were in Cairns, he recalled Mr Ramon Palomar reminding the contractors about the safety switches, inspections and the use of plastic staples. He said they were all reminded and replied that they were using plastic staples.

Andres Palomar agreed they had been told to stop using metal staples by Titan prior to Christmas but that he and Mitchell chose to keep using them. He said he thought that it was a verbal directive to use plastic staples but they found it was faster to use metal staples. He and Mitchell bought their metal staple guns and metal staples with them from the Gold Coast when they went up to Cairns. Andres confirmed that Titan issued plastic staples but that he and Mitchell would buy their own metal staples. He said they tried to put the least number of staples in as possible.

Andres explained that when they started working on a roof, they would use their head lights to make sure there was enough room and that the timber was safe. They would also check the wires to make sure nothing looked live.

Nicholas Lindsay and Ramon Palomar operated on the premise that Mitchell was an independent contractor. Mr Lindsay confirmed he did not go out on site to supervise Titan’s contracted installers. They relied on the honesty of the installers to undertake the activities they had been informed of, for example the risk assessment and using plastic staples instead of metal staples. Apart from verbal enquiries, Titan took no steps itself to ensure that its contractors were complying with the requirements.

Mr Lindsay didn't believe Titan had any responsibility to supervise the contractors. He said he hadn't done the ceiling insulation course, so how could he supervise those who had? Similarly, Mr Lindsay did not believe Titan was required to check the risk assessments were being completed as he thought it was a record for the installers, should there be an accident. Mr Palomar's view was that Titan was to give the installers the information and it was the installer's personal responsibility to follow through with that information. Mr Palomar recalled the installers being given an e-Alert detailing the death of Matthew Fuller and the Risk Assessment template.

Chase Martin said that he considered Mitchell was his supervisor because he had the "ticket". He said he would work out the best course to do things and Mitchell would sign off on it. They always used the metal staples and staple guns to do the insulation.

Shane Martin said Andres Palomar was his. Andres took him into a roof cavity and showed him what he needed to do. Shane was told to roll out the foil insulation, stretching it out over the roof trusses and then securing it with a metal staple. He recalled being handed a staple gun when he started work with the company.

Shane worked with Andres for a couple of months on houses on the Gold Coast, Brisbane and Hervey Bay. He said he was invoicing Andres directly for the work using his sole trader ABN. He was paid $1.00 per metre of insulation laid and Andres would invoice Titan for $2.00 per metre. Following the Christmas break he went to Cairns with Ramon and another installer, Chase Martin. Shane was responsible for securing the work and when there was enough, the rest of the installation teams went up to Cairns. Around this time he started invoicing Titan directly; one invoice for sales, and the other for installation.

Shane Martin said that when he was in Cairns he was given a different staple gun by Ramon. It used plastic staples. Shane recalled Ramon telling him that there was a new law that required the use of plastic staples. Shane said the plastic staples would not work in hardwood so he developed his own method of securing the insulation by stretching it across the roof trusses and tucking the end around the last bearer. He did not return to using metal staples. Shane confirmed that Titan supplied all of the fasteners.

Ramon Palomar denied any knowledge of his brother, Andres, or any of the other installers continuing to use metal staples after Lindsay had advised they were no longer to be used. Mr Palomar accepted Titan was not undertaking surveillance of the installers concerning switching the power off; only using plastic staples; and undertaking risk assessments prior to commencing each job.

The Day of Mitchell's Death

On 4 February 2010, at about 7.45am, Mitchell Sweeney, Chase Martin and Andres Ramon arrived to a residential property at 13 Wattle Street, Milla Milla to install insulation in the roof of the property. They had already completed two other houses in the street that morning. The Wattle Street Property is a low set brick house in suburbia.

They were working as a team of three that day and planned to split the money between them. This was because Andres's partner, Shane had already returned to the Gold Coast.

It was a small job and took only 20 to 25 minutes to complete. No risk assessment had been conducted in respect of the job. They were moving toward the manhole to leave when Chase said he heard a thud. He thought Mitchell had slipped and cracked something in the roof but then saw Mitchell's leg stretch out to brace himself. Mitchell did not respond when he was asked if he was okay. Then Andres got a zap and as he moved closer to Mitchell and when he touched the tin roof with his back he got a zap. Chase and Andres both yelled to the homeowner to turn the power off and Andres jumped down. Chase is positive Mitchell was not using a staple gun prior to collapsing.

Andres said he was halfway out of the manhole when he heard a thud. When he tried to reach out to speak to Mitchell he received a shock and realised what had happened. He jumped down and found the power box to turn the power off. He then found the homeowners out in a back room and asked them to call an ambulance. Andres returned to the roof and assisted Chase in lifting Mitchell out through the manhole. They then commended CPR.

Mr Aarons, the homeowner, said he was advised the work would only take about 25 minutes. About 15 minutes after the installers started work, one of the men came out and asked for the power to be turned off and then when he went back into the roof and yelled for an ambulance to be called.

Chase Martin said he and Andres Palomar lifted Mitchell out of the roof through the manhole and then started CPR. A police officer arrived before the paramedics and took over doing the chest compressions. Then a lady and her husband attended and assisted with CPR until the ambulance arrived.

Chase Martin and Shane Horne made WorkCover claims for psychological injuries. Shane Horne commenced working again at the end of April 2010. As at 4 August 2010, Chase Martin had not returned to work. It is not clear what his current situation is.

Autopsy

Dr Paull Botterill provided an Autopsy report concerning Mitchell's death. He found that Mitchell had marks over the left and right sides of his trunk, and some discolouration over the base of his right palm, which may represent sites of peri-mortem electrical contact. Testing for drugs and poisons showed the presence of phentermine (a type of stimulant often used for weight loss) at a blood level below the reported toxic range.

The report concluded that the cause of Mitchell's death was electrocution.

The Investigation

WH&SQ Inspector, Rebecca Wright was requested to attend the scene. She arrived to the scene with Anthony Crathern, Workplace Health and Safety Queensland Electrical Inspector, and Paul Hutchinson, Electrical Safety Office Inspector. Inspector Wright liaised with the QPS officers on site and the homeowner. Further, she spoke with Titan's solicitor by telephone. Ms Wright was not aware of the previous fatalities at the time of Mitchell's death.

ESO Inspector Paul Hutchinson and WHS Electrical Inspector Anthony Crathern conducted electrical tests. Inspector Crathern said they completed some testing of the circuits in the house. He found that the lighting circuit active conductor was in contact with the foil insulation somewhere (which would make the insulation "live" at 240 volts). Their initial investigations found there was a fault with the lighting cable and the roof of the premises was "live" with 240 volts.

Inspector Hutchinson said that when he was testing all of the circuits, he found the lighting circuit had a lower resistance reading than any of the other circuits, although the reading was still acceptable according to the Wiring Rules. Further tests, which revealed the outgoing side of the lighting cable active conductor, had a "dead short" to the foil insulation in the roof.

An inspection of the roof cavity by Inspectors Hutchinson and Crathern found that workers had been using metal staples to secure the foil insulation. On removing a portion of lighting cable from the ceiling it was noted to have puncture marks indicating a metal staple had pierced the cable. Inspector Crathern requested Inspector Hutchinson to cut out the piece of cable where the fault occurred so it could be kept as evidence. After the cable was repaired and re-tested, there was no longer a fault in the lighting circuit.

The WH&S investigation concluded that it is likely that part of Mitchell's body, most probably his head or back, came into contact with the metal roofing material as he was preparing to leave the ceiling. They concluded that this would have completed the electrical circuit and caused 240 volts of electricity to pass through his body. Ms Wright advised that the investigation did not reveal as to which worker had inserted the staple that pierced the electrical cable as the workers had finished the job and were exiting the roof cavity when the electrocution occurred.

The Aftermath

Titan was issued with Improvement Notices and Electrical Safety Protection Notices. On 30 August 2011, Titan was fined $100,00.00 for breaching the *Electrical Safety Act 2002*. Initially a plea of not guilty was entered but after one day of evidence, and an amendment to the charge, the company pleaded guilty.

Titan was included on the Deregistered Insulation Installers list effective immediately from 4 February 2010. A show cause notice was sent to Titan. It seems initially that an administrative error occurred and the de-registered date was 20 January 2010 when this should have been 4 February 2010.

Titan wrote to the Department seeking 14 days to respond to the show cause notice instead of 24 hours.

On 7 February 2010, DEWHA wrote to Titan requesting it repay the Department for three installations from November where metal fasteners were used after the program guidelines banned the use of metal staples.

On 8 February 2010, Titan was deleted from the de-registered installer list after advice from DEWHA legal. On 9 February 2010, it was re-listed on the de-registered installer list after consultation with DEWHA Executive.

Prior to deregistration, Titan lodged 506 claims, totalling $663,600.00 for installations carried out between 9 October 2009 and 4 February 2010.

On 2 March 2011, the Department of Climate Change and Energy Efficiency wrote to Titan advising it was withholding $12,000.00 in payments and seeking $213,400.00 in refunds due to issues with the compliance of 164 installations.

On 6 April 2011, Titan wrote to the Department disputing the legal basis for re-payment as the contract for the works was between Titan and the homeowner.

On 24 February 2012, the Department wrote to Titan confirming it had a legal right to seek repayment as the Program Terms and Conditions were a contract between Titan and the Commonwealth. In addition to the 164 non-compliant installations, Titan were notified that a further 41 installations had been identified as non-compliant. The Department sought a response as to why Titan believed the installations were compliant. There were 33 separate types of non-compliance issues identified.

On 13 March 2012, Titan replied to the Department again disputing the legal basis of the Commonwealth's claim for re-imbursement and argued that if there was a contract (which it denied), the award should be for damages, not reimbursement.

It is unclear whether the Department pursued Titan any further for re-payment of the non-compliant installations.

The use of metal staples

A number of witnesses provided insight and comment into the use of roll out foil-based insulation throughout the inquest. Their comments are summarised below.

Christopher Jackson of Arrow said that he had the opportunity to take on a franchise for the installation of foil under the HIP but declined due to the dangers of installing the foil. He said that most plumbers and tradesman wouldn't use it. It was the "new start up in the industry" that was using foil.

Mr Lindsay of Titan confirmed that the reason they used foil was because the supply for the batts became problematic due to the rapid expansion of the HIP. Further, they were of the view that foil was easier to transport. He said that they didn't turn their minds to the potential hazard involved in using metal staples. Mr Lindsay also believed foil was easier to install in "Queenslanders" as you could roll it out and staple it to the beams.

Mr Lindsay didn't know that the foil was electrically conductive. He said that he spoke to a supplier and she reassured him it wasn't. He did not think it could conduct the kind of voltage to harm anyone. He said he also spoke with an electrician who told him it couldn't carry the volts needed to kill someone.

Mr Smith of the Australian Construction Training Services Pty Ltd was of the view foil was not fit for purpose and that it was never intended to be used for retrofitting insulation. He believed it was impractical to cut and fit it around all of the intersection points. He said foil was ineffective as an insulation product and the risks of using it were too great.

Mr Ross of CPSISC was of the view there were concerns at the outset of the program about the use of foil insulation and metal staples. He recalled those concerns coming from the CFMEU and other stakeholders. However, he understood it was allowed to be used in the program because it met the Australian Standards. Mr Ross said that the concerns were the impetus for the warning on page 35 of the Pocket Book regarding the stapling of Reflective Foil Laminate.

However, the relevant Australian Standard AS4200.*2* 1994 referred to the use of foil under sheet roofing, tile roofing or in walls. It did not refer to the use of rollout foil insulation stapled on to roof beams in a retrofit ceiling situation. Mr Ross said he was not aware of any standard, guide, or reference in any regulation referring to the use of roll out foil insulation across the ceiling beams and then anchoring it to those beams with metal staples. He agreed it was an inherently dangerous practice.

Mr D'Arcy of ICANZ said that in his lengthy experience in the industry he rarely came across anybody trying to install sheet foil above ceilings. This was because it didn't have any insulation value itself but relied on creating a reflective air space. To get that reflective air space you still needed air underneath, the foil needed to be dust free and needed to maintain the still air space. He was of the view that achieving this in a ceiling was a difficult task. The companies he represented never promoted foil for that use as they could not guarantee the performance, particularly when as in many cases it would be necessary to cut holes for down lights. There was also the issue of not knowing where timbers were for later work, and the issue of putting foil across electrical cables and not knowing where they were with the possibility of future electric shock. He said that in his and ICANZ's experience foil was not recommended for use across ceilings (ICANZ had two large corporate members and D'Arcy was the only employee).

Mr Tinslay of NECA was aware of foil insulation being used prior to the HIP. He said it was used in cold climates and that he understood from the experts it did not cause the condensation, which can occur with other products. He also said it would be effective in very humid climates such as north Queensland. Mr Tinslay was not aware foil was being used in the HIP but wasn't surprised, as he was aware it was used on ceilings. However, Mr Tinslay later conceded his knowledge of the use of foil was in relation to new constructions.

Mr Tinslay said he recalled discussions about the use of plastic staples and it was agreed that in the long term, if a plastic staple had pierced a cable it could also make the foil partially live. This was because with the accumulation of dirt the power could track across to the foil. He also was of the view that foil should not have been rolled out in a ceiling if there were any cables lying over roof joists, as it was in breach of the wiring rules. In such a scenario, an electrician was required to move the cables so they complied with the standard.

Mr Tinslay described the insulation industry as immature and recalled that in various stakeholder consultations prior to the HIP commenced, there arguments back and forth about the merits and limitations of bulk insulation, foam insulation and cardboard based products. He observed that they did not have one industry body so tended to argue amongst themselves. He said that while there was no criticism of foil there were a lot of snide remarks about the quality of one product over another. He recalled the foil representative being present at the meeting, as he received a phone call after one of the meetings with threats to sue him for something he had said.

Mr Malcolm Richards of the Master Electricians Australia and the Electrical and Communications Association was not aware of anyone warning the Federal Government about the dangers of foil and stapling because nobody that he knew had seen the practice engaged in before. This view was consistent with the ESO Inspectors who in August 2009 had never seen foil used as retrofitted insulation previously. Mr Richards was of the view that foil in the context it was being used required a tight air seal which was impractical in a ceiling with a lot of vertical truss members. He said that in the sites they examined it was rarely carried out properly. He said, "*it was a relatively useless product in terms of insulation installed in that manner*".

In evidence Mr Richards said:

…it wasn't until we actually got some reports from our members in Queensland in September of staples being found and this foil product being used down at ceiling level. We were horrified to see that practice in the first place, and had never seen it before, and can't believe people thought they could use staples in that position.

Mr Richards said that the focus of any warnings was in relation to bulk insulation being installed around lights. It was a long-term existing problem in the industry, which caused house fires.

Mr Richards was of the view that the warning on page 35 of version 1 of the Pocket Book was inadequate. He stated:

What I would want to see if staples were to be used would be a much higher level than anything in a pocket book. Electricians go through four years of training to work on or *near electrical cables and stapling things in their vicinity, and I'd be I would suggest trying to give anyone a pocket book which tried to manage that level of risk would be a process fraught with danger.*

Mr Richards recalled speaking with a representative from the Foil Industry Association before and after meetings he attended following Matthew's death. The industry representative advised that foil had been readily used in the same situation as the HIP in large parts of the world and asked him to work with him to find a safe way of having it done. Mr Richards said he was not convinced, but with the additional safeguards put in place, he became comfortable with the position of the continued use of foil going forward.

Mr Birchley, the trainer from Master Builders Australia, said he had very rarely come across foil insulation in the retrofitting context but had seen it in new constructions. He said that usual practice was to use batts or loose bulk insulation. He said during the HIP, as the traditional products became unavailable, foil became more readily available.

Why was it not mandatory to turn the power off?

In addition to insulation installers, there are builders, tilers, painters, and pest controllers who enter ceiling cavities and there is no law or regulation requiring the power to be turned off before entering the ceiling cavity. Prior to the deaths of the deceased it was not common practice for those not in the electrical industry to turn the power off when working in a ceiling cavity. This is in contrast to people with electrical qualifications who recognise that the inside of a ceiling cavity, is typically, a dangerous electrical space.

A number of witnesses provided insight into what was occurring in the industry prior to the HIP, the product recommendations, and the difficulty in isolating the power.

In older houses with telegraph poles, the power lines usually come from the poles into the eves of the house, down to the switchboard of the house, often passing through the roof cavity. Therefore, if all the circuits are turned off at the metre box or switchboard, there will still be a live path from the entry of the mains down to the switchbox.

QHI were using a product supplied by Vision which was packaged as a SilverCell product (either from Silver Cell Pty Ltd or Silver Cell Queensland Pty Ltd) but the Workplace Health and Safety investigators found it probably was not a SilverCell product. This issue was not investigated further. Mr Kirk confirmed the material was from SilverCell and at different times different gauges were provided due to supply issues. The website for the SilverCell products included instructions to installers, "*Power to be turned off before installing the insulation*" and advising the use of polymer staples. SilverCell provided the WH&S investigators with the "material safety guides sheet". The sheet said to turn the power off at the switchboard and to use a voltage metre to test all cables. QHI denied receiving a "material safety guide sheet" with the materials provided to them by Vision. Chris McKay said they had been provided with three different products by Vision at various times.

Chris McKay from QHI has said that that Phil Price from Silver Cell Queensland Pty Ltd (apparently he was working for Imagination Insulation) provided his staff with training and that the training was done on live roofs. Chris McKay expressed the view that turning the power off created other issues and observed, *"where do you draw the line"*. Not all circuits were able to be turned off, and regardless of turning the power off at the switchboard, some circuits in old houses would remain live.

Ben McKay recalled speaking with Phil about how he was going with leaving the power on. Phil told him that his off-sider had stapled a cable and the safety switch tripped and that the worker got a "zap" from it. Ben McKay remembered saying *"I don't think you should be working live"* but Mr Price said they worked live because if they stapled a cable and then left the premises after switching the power back on, they might inadvertently leave the roof and/or roof space "live".

Ben McKay said the way of managing the risk of having the power on was not to staple a cable. He said it was easy to lift the sheet, check for a cable and then staple the foil. He never thought someone would die, he had never seen a serious injury on a job site, so just didn't think it could happen.

Ben McKay agreed the only way to make it 100% safe was for him as an electrician to go in and check every house and isolate the power prior to the installers commencing and then when the job was finished to go back in after the job was done to check the power. However, he said this was financially impractical when they were only being paid about $275 per house.

Richard Jackson of Arrow said that prior to the HIP it was not general industry practice to turn the power off before going into a roof cavity. He was of the view that if 100 builders were surveyed, only five would turn the power off. Christopher Jackson said he, along with every other plumber, would never turn the power off.

Chris Jackson said that up until Rueben's death he thought all the power went through the "clicker box". He acknowledged that Rueben was never told to turn the power off. Chris Jackson said he would check the power supply by placing the back of his hand on the roof and if he did not get a "kick back" it was safe to go into the roof of the house.

Similarly, Gaven Feeney, a qualified carpenter was not aware an residual current device (RCD) generally only covered lighting and power circuits. He thought all power cables were captured by the RCD. Mr Feeney said if a house did not have an RCD it would be his practice to turn the power off but admitted he had never been confronted by such a situation.

Mr Phillip Smith of Australian Construction Training Pty Ltd was of the view it was not automatic to turn the power off in all circumstances when working in a roof space. If the house had been wired before the AS3000 wiring rules, he said he would have likely turned the power off. He said he would have considered turning the power off if using foil and metal staples.

Mr Tinslay of NECA outlined a number or risk management strategies for working safely above ceilings. He advised that an employer should have a work method practice for its employees to go into a roof cavity and should ensure that the process is repeated to staff at toolbox talks to ensure they know the process. He said the first step was a visual assessment and that it was quite difficult to assess whether the frame is live if you are not an electrician. He said that while a test lamp can be used to establish if the area was live, it would be a relatively rare practice to use one.

Mr Tinslay explained that there could be scenarios where an RCD was covering every circuit and the roof could still be live. Similarly if all of the power had been turned off at the switchboard, it was possible the roof would remain live. Therefore it was good practice to isolate the power supply from the house as far as possible, and then test the area as to whether it is live prior to commencing work.

Mr Tinslay was of the view that the safest approach was to have the area checked by an electrician prior to commencing work because despite visual inspections and turning the power off there is always a risk of a hidden defect that cannot be spotted in a visual inspection.

Mr Richards of the MEA was of the view the power should always be turned off prior to working in a ceiling cavity but acknowledged this was not always practical.

Mr Gibson of the ESO was also of the view power should be turned off when entering a roof cavity.

The regulatory scheme in Queensland at the time of the HIP included s27A(2) of the *Workplace Health and Safety Act 1995* (repealed). It required persons to consider the appropriate control measure in order to properly manage exposure to risks. It required elimination of the hazard or preventing the risk; and if eliminating the hazard or preventing this risk is not possible, minimising the risk by measure that must be considered in a prescribed order.

In addition, pursuant to s.30(2) of the *Electrical Safety Act 2002*, employers had an obligation to ensure their businesses or undertakings were conducted in a way which was electrically safe.

It seems therefore there was no statutory or regulatory obligation to turn off the power at the switch board of residential premises before working in a roof space and a significant proportion of experienced and qualified trades people did not habitually do so.

Therefore, had the HIP mandated this be done by businesses registered under the scheme, it would have imposed on them a requirement that did not apply to others working in the same space. It could be argued this could have been justified on the basis that the HIP was intended to and did bring into the work force inexperienced workers who might have been seen to be at greater risk than those already working in other industries. Conversely, had this been done, a further risk of premises being left "live" would have had to have been negated, probably by mandating an electrical inspection of all premises post insulation installation with the added cost impact of that requirement.

It was not until the eleventh HIP Installer Advice on 19 October 2009 that there was a recommendation for the power to be turned off, and as has been seen, it was not always followed.

Response to the deaths by the State and Commonwealth

After Matthew's death, the ESO and WH&S Queensland issued eAlerts and newsletters to warn of the electrical safety issues, met with representatives from DEWHA and were involved in trying to address the electrical safety issues to installers. Similarly, the Commonwealth engaged in a number of meetings with relevant stakeholders, including for the first time representatives from the electrical industry, raised the awareness of safety issues with installers through its Installer Advices, and made changes to the HIP. All of these initiatives are detailed in the attached chronology. Some pertinent events are repeated below.

Despite Matthew's death occurring on 14 October 2009 and Rueben's death occurring on 18 November 2009, it took until 25 November 2009 for Queensland to utilise the HIP database. Up until that time the registered installers involved in the deaths did not receive the e-Alerts and newsletters sent from the ESO and WH&S Queensland.

On 1 November 2009, the Queensland Government released a Queensland Ministerial Notice on Ceiling Insulation. The Queensland Ministerial Notice was the *Electrical Safety (Installation of Ceiling Insulation) Notice 2009*. Non-compliance with the Notice constituted a breach of electrical safety obligations. In accordance with s4 of the Notice, Metal or other conductive fasteners were not to be used to install ceiling insulation. In accordance with s6 of the Notice, all persons employed or engaged by the relevant person who installed ceiling insulation in a building had to be trained in carrying out an assessment of the electrical risk from the installation of ceiling insulation.

On 1 November 2009, Minister Garrett announced a number of new safety measures. These included:

- A ban on metal fasteners for foil insulation, such as metal staples or nails;
- Mandatory installation of covers over down lights and other ceiling appliances, which were commonly used (but not compulsory under the Australian Standards); and
- A targeted electrical safety inspection program of Queensland homes with foil insulation installed under the HIP.

On 12 November 2009, the Commonwealth convened a further meeting with training organisations, industry and regulators to review the HIP. It was agreed that DEWHA would mail a hardcopy of the Pocket Book to all registered installers by the end of November 2009 (had been available via the link in the Installer Advice of 26 October 2009). Further, it was agreed CPSISC would implement improvements to the HIP training materials. Participants agreed new entrants to the industry were at the greatest risk of injury and unsafe work practices and that these people and companies needed to be targeted for training and audit.

In addition, minimum competency standards under the program were discussed at the meeting. It was agreed that the supervisor needed to be physically present and that they were to sign the work order form to certify:-

- safety risks and hazards were to be identified and controlled appropriately;
- all workers were to be operating in a safe manner; and
- the work had been completed in accordance with the program requirements and all relevant Australian Standards.

However, it seems this issue was to be taken offline for further discussion and clarification. There is no evidence as to the position that was reached on the issue of how supervision would be stipulated under the HIP.

After Rueben's death, on 27 November 2009, the seventeenth HIP Installer Advice was issued. The topics included: 'Changes to the Terms and Conditions of registration'; 'Program changes from 1 December 2009'; and 'Risk Assessment Requirements from 1 December 2009'. Under the program changes a number of other issues were canvassed. These included supervisor clarification (the person signing the Work Order Form is signing on behalf of the registered installer); definition of dwelling; the use of metal or conductive implements (must not be used); Workplace Health and Safety (must comply with the relevant laws and mitigate risk of eclectic shock by using the appropriate control measures); and Two Quotes. The notice required that all workers under the program were to read the 'Construction Industry Pocket Book – Resources for Installers of Ceiling Insulation'. A link to the Pocket Book was once again provided.

From 1 December 2009, the Commonwealth required installers to carry out a mandatory formal risk assessment for every installation before they commenced work. A template for the risk assessment was provided. The Commonwealth document titled, '*Energy Efficient Homes Package, Home Insulation Program, Program Guidelines*', Version 5 was released on 1 December 2009. It included a section on Workplace Health and Safety which was not included in Version 3.

Despite the banning of metal staples on 1 November 2009, there continued to be a number of incidents being reported to ESO. Between 3 November 2009 and 7 December 2009 there had been eight reported instances of electric shock caused by metal staples piercing electrical cables in roof cavities during the course of insulation installation. Mr Leverton recalls there was some discussion concerning the banning of foil but thinks that had occurred at an earlier time. He said the approach of the ESO was on enforcement of the regulation.

On 9 February 2010, five days after the death of Matthew Sweeney, the Commonwealth suspended the use of foil insulation.

Investigations into the HIP by the State and Commonwealth

In December 2010, the Electrical Safety Office Queensland published the '*Electrical Fatality Review Committee Report*'. The Committee was convened to assess the adequacy of electrical safety services following the investigation into the deaths of Matthew, Rueben and Mitchell, and where appropriate make recommendations to the Electrical Safety Office. The Committee:

a) Found the use of foil insulation in continuous roll out form being fixed in roof spaces with metal fasteners proliferated as a result of subsidies offered under the HIP and as such was a relatively new occurrence in the building industry involving many new entrants to the insulation installation sector.
b) Stipulated the measures taken by the Federal Government from 27 October 2009, including the various changes made to the HIP.
c) Found that since 2005, but prior to the implementation of the HIP, four Queensland insulation installers had been prosecuted for failure to ensure that their business or undertaking was conducted in a way that was electrically safe, resulting in fines ranging from $10,000 to $18,000 (the prosecutions related to insulation over down lights – none were related to foil insulation).
d) Noted that in September 2008, the Electrical Safety Office wrote to all known Queensland-based installers of insulation products to warn them of the dangers of insulation installation including about down lights, and to remind them of their legal obligations under the Act.
e) Found that Australian Standard AS *3999-1992 –Thermal insulation of dwellings – Bulk insulation – installation requirements* was more than 20 years out of date with current electrical work practices and safety requirements in relation to location of thermal insulation in close proximity to electrical cables and electrical equipment (i.e. it was not consistent with clause 4.5.2.3 of the 2007 AS 3000 Wiring Rules).
f) Noted that the Electrical Safety Office had targeted proactive electrical safety audit programs utilising an evidence based approach. On 23 November 2009, WHSQ and ESO Inspectors commenced audits of ceiling insulation installers as part of an ongoing activity to ensure compliance with the requirements of both occupational health and safety and electrical safety legislation (of 801 audits, 122 electrical safety protection notices, 81 improvement notices, 6 prohibition notices and 2 verbal directions, were issued).
g) Noted that the audit of installers had been scaled back due to the reduction in installations, but resources had now been directed to audit those workers working under the Federal Government's FISP.
h) Noted that a Regulatory Assessment Statement (RAS) proposing three options for the compulsory fitting of safety switches on all electrical circuits was proposed for Cabinet consideration.

At the conclusion of the Report, the Committee made the following recommendations:

a) The ESO continue to advocate for the adoption of regulatory requirements for safety switches on all circuits capable of being protected in residential properties;
b) The ESO continue to contribute to the development of, and amendments to, the various electrical standards published by Standards Australia;
c) The ESO continue to lobby BD-58 requesting that relevant sections of AS 3999 be aligned with the provisions of the Wiring Rules as they relate to ceiling insulation placement near electrical cables and equipment;

d) The ESO continue to promote the requirements in the Regulation pertaining to the installation of ceiling insulation, highlighting requirements for safe systems of work, training of workers, the banning of the use of metal staples and specific requirements for electrically conductive ceiling insulation to be included as reference material in AS 3999;
e) The ESO continue to develop brochures and internet information to assist workers who may need to enter ceilings in the conduct of their work to ensure safe systems of work were assessed and adopted;
f) The ESO work with the Federal Government in promoting the use of the training units of competence as part of worker requirements in the industry;
g) The ESO continue to lobby the Queensland Building Services Authority and other authorities to include the training in the Building Code of Australia or other appropriate building regulatory regime;
h) The ESO reinforce to the community the importance of using only licensed electricians to test and inspect installations where thermal installation has been installed and to reinforce the role safety switches play in preventing electrical incidents; and
i) The ESO continue with their involvement in the FISP auditing program as well as their ongoing program of Queensland's electrical contractors.

On 6 April 2010, Allan Hawke published his '*Review of the Administration of the Home Insulation Program*' ('the *Hawke Report'*). The review was commissioned by the Federal Government. The 63 page Hawke Report examined the effectiveness of the HIP's:

a) Program design;
b) Administration; and
c) Delivery arrangements.

A brief summary of the findings include:

a) The program was high profile, involved a substantial investment of Commonwealth funds and was seeking to address two of the highest priorities of the Government at the time – economic stimulus and action on climate change.
b) DEWHA program management infrastructure and expertise were not sufficient to support the (at times unanticipated) demands placed on them.
c) A higher level of full time senior management oversight, including a dedicated Deputy Secretary, should have been assigned full time to the energy efficiency programs for the duration of their roll out or until such time as their delivery became routine.
d) The program demanded much more and continuous attention from the Office of the Coordinator-General than it received, particularly in the post-July 2009 roll out period.
e) Implementation of the program was rapid, as was necessary to provide an immediate stimulus response to the potential impact of the global financial crisis on the Australian economy.
f) The model adopted for the HIP contained risks many of which could never be fully mitigated and remained high throughout the delivery of the program.

g) The 1 July 2009 commencement date had an impact on the planning framework and what was possible for the design of the final business model.
h) While the model was implemented, the audit and compliance framework lagged behind.
i) Take up of the HIP was extraordinary and unexpected (estimated 90,000 installations per month, but by November 2009 claims peaked at nearly 180,000).
j) Due to imported materials being required to meet demand, some substandard products may have entered the market.
k) As the number of claims and registered installers rose to unanticipated levels, and the compliance and audit program rolled out, the number of complaints and safety concerns mounted – the effective use of the 'one strike and you're out' policy came too late.
l) 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 the proceedings.
m) Resources were tied up in crisis management.
n) The imperative of responding to the global financial crisis subordinated the energy efficiency requirement of the program such that the usual processes associated with putting a scheme such as the HIP in place were constrained.
o) The stimulus component of the HIP had the desired effect.
p) The program highlighted considerable gaps in the regulatory framework for the insulation industry.
q) It is unreasonable to conclude that all of the issues that emerged from the program could have been anticipated, or that they were easily remediable.
r) The existing frameworks, particularly for state and territory OH&S, were not sufficiently geared up for the 1 July 2009 start date of the HIP proper.

Two relevant recommendations made in the Hawke report have been identified:
a) The development of an administrative tool kit on compliance/audit for new programs, possibly based on the tax model; and
b) Ensuring any future policy and programs are developed in close consultation with industry, state and territory regulators and service delivery agencies so that practical implementation risks are identified and mitigated early in the planning stage.

In July 2010, Environment, Communications and the Arts References Senate Committee released its Report into its inquiry into the '*Energy Efficient Homes Package (ceiling insulation)*'. The Senate Inquiry attracts parliamentary privilege and was not considered at this inquest.

On 15 October 2010, the Auditor General, Ian McPhee published his 209 page Audit Report into the HIP. The Auditor General's report attracts parliamentary privilege and was not considered at this inquest.

Safety switches

A Safety Switch, also known as a Residual Current Device ('RCD') monitors the flow of electricity though a circuit. They automatically shut off the electricity supply when current is detected leaking from faulty switches, wiring or appliances, preventing the risk of current flowing to earth through a person and electrocuting them. The power is cut within as little as 30 milliseconds, therefore significantly reducing the risk of death or serious injury from electrocution. Currently, the Queensland *Electrical Safety Regulation 2002* requires safety switches on power and light circuits in all new residences and all new residential electrical installations. Retrospective fitting of a safety switch on power circuits to post 1992 domestic residences is required on their sale or rental where a residential tenancy agreement applies.

It is fairly common not to have lights, hot water or stove circuits protected by Safety Switches. However, it is possible to leave power circuits (that is power points) on while turning the power off to light circuits and stoves. This is done by pulling out the fuses or turning everything off except for the power points. The main power would need to be turned off and then insert a rewirable fuse so nobody can touch an exposed part because when you take a fuse holder cartridge out, there is a live terminal that can be easily touched. Not a practical solution.

In December 2011, the Queensland Government released for public comment the Regulatory Assessment Statement ('RAS'), 'Extension of mandatory requirements for fitting of safety switches in residential accommodation'. The RAS consultation process ended on 31 March 2012. There are five options proposed. They include:

> Option 1 – mandate the fitting of safety switches on power and lighting circuits in all residential premises with a timeframe of two years for temporary accommodating and leased residences, and five years for domestic dwellings including government and employer supplies. The cost is estimated to be $292.5 million.
>
> Option 2 – mandate the retrofitting of safety switches to power and lighting circuits in all premises targeted under Option 1, and provide additional opportunity for the fitting of safety switches when significant electrical work on the electrical installation at the premises is undertaken. Estimated compliance would be two years for temporary accommodation and leased residences and 13.2 years for residential premises. The cost is estimated to be $270 million.
>
> Option 3 – extend the requirements of Option 1 by requiring the fitting of safety switches to all safety switch capable final sub-circuits. Under this option compliance for temporary accommodation and leased properties will be two years and five years for all other domestic residential properties.
>
> Option 4 – is identical to Option 3 however allows an extended compliance period for domestic residential properties including government and employer-provided residences based on the mandatory fitting of the safety switches at the time of the completion of most types of electrical work on the electrical installation at the premises. It is estimated that practical

compliance will be reached in around 13.2 years after introduction. The cost is estimated to be $38.1 per year (totalling $502.4 million after 13.2 years)

Option 5 – is to maintain the status quo.

The ESO nominated **option 4** as its preferred option, saying it will provide a sound foundation for building on the Government's climate change and renewable initiatives as well as fostering caring and safe communities.

Mr Tinslay of NECA indicated that NECA's position is to mandate RCDs on all existing houses and a system of 10 year inspections of houses to ensure compliance and to test for any faults. NECA has spoken to every State regulator and is of the view NECA's proposal is not politically acceptable because no government wants to force the cost on to a consumer. He is of the view it is not practical to have an RCD on every circuit, for example there is too much leakage from a stove circuit for it to be effective.

Mr Richards of MEA is of the view that RCDs should be mandatory to all capable sub circuits in all Queensland homes. He considered that the quality of RCDs have improved and can be fitted to all circuits. Further, he believes they are now very economical with the retail price for a single safety switch being $50 and a full upgrade to an average home costs from $500 to $800. He believed if devices like an old stove are leaking electricity the owner is wasting power, money and the device is a little unsafe and they should be replaced.

On 25 March 2013, the Office of Fair and Safe Work Queensland issued a further Regulatory Assessment Statement, 'Review of Electrical Safety Regulation 2002'. The purpose of the RAS was to receive feedback on the proposed amendments to the 2002 Regulation, which expires and must be reviewed by 1 September 2013. In relation to Safety Switches, the RAS indicated no change to safety switches in domestic residences. It states:

> *This division provides mandatory requirements for safety switches in domestic residences, including rental properties. It also provides restrictions on electrical work that may be performed on domestic residences where safety switches are not installed. It is widely accepted that increased coverage of households by safety switches has increased electrical safety in homes and that this regulatory practice should continue for the safety of all Queensland residents. A proposal to extend the coverage of safety switches in Queensland homes has been the subject of a previous RAS which is pending further consideration by Government.*

None of the ESO officers who provided evidence at the inquest was able to provide a position as to where the ESO sat in relation to the original RAS. Although, Mr Lamont has indicated he thought the delay was due to the change in government and allowing them to settle in. He was not sure why it had taken so long to action. He said there are a lot of other priorities within the policy area but that it really just needs to go to the Minister for his consideration.

After giving evidence at the inquest, Mr Richards of the MEA wrote to His Honour on 15 April 2013 and 2 May 2013 urging a recommendation in relation to the installation of safety switches for all capable circuits.

Status of relevant Australian Standards

As an outcome of the Electrical Fatality Review Committee Report, Electrical Safety Queensland liaised with Standards Australia. This included:

a) Writing to Standards Australia requesting that consideration be given to amending AS 3999 to follow current work practices and clause 4.5.2 of the Wiring Rules;
b) Making submissions at a meeting of BD-58 (the Australian Standards committee responsible for administering AS3999) in September 2010 requesting that AS3999 be aligned to AS3000, and providing BD-58 with a copy of the Queensland Ministerial Notices to be included as reference material in AS3999.
c) Writing to Standards Australia seeking their consideration of including the requirement for safety switches on all ceiling circuits in building wired under AS/NZA 3000 (the Wiring Rules).

The Department of Climate Change and Energy Efficiency ('DCCEE') also engaged with Standards Australia to pursue the objective of improving industry standards applicable to the insulation industry. The input was in relation to:

a) A new standard for Recessed Luminaire Barriers (AS/NZS 5110:2011);
b) The review of AS 3999;
c) The review of AS/NZS 4200.2 1994;
d) The review of AS/NZ 3000:2007.

Standards Australia has provided an overview of the process of developing standards. An update on all of the relevant standards has been provided as follows:

a) AS 3999-1992 *Thermal insulation of dwellings – Bulk insulation – Installation requirements* has been amended by way of Amendment No. 1 and further work on the revision of AS 3999 is ongoing. The amendments are included in the current version of the standard and noted by a marginal bar and amendment bar of the document. The changes include:
    i. The insertion of new wording in clause 2.6 (electrical cables and electrical equipment);
    ii. The revision of wording in clause 2.7 (built-in appliances);
    iii. The revision of wording in clause 3.2 (general requirements for insulation installation);
    iv. The insertion of new worked in Section 4A (safety requirements for insulation installation); and
    v. The insertion of a new Appendix A (recessed luminaries).
b) AS/NZS 3000:2007 *Electrical installations (known as the Wiring rules)* was amended in July 2009 (Amendment No. 1) and in December 2012 (Amendment No. 2). The amendments are included in the current version and are noted by a marginal bar and amendment bar in the document. The relevant amendment for these purposes is Amendment No. 2. The changes included the revision of wording in clause 4.5.2.3 (recessed luminaries).

c) AS/NZS 4200.1 *Pliable building membranes and underlays Part 1: materials* and AS/NZS 4200.1 *Pliable building membranes and underlays Part 2: Installation requirements* are currently in the process of being reviewed. The project proposal related to 4200.2 (which includes reflective foil laminate) is intended to be complementary to the requirements of AS3999.
d) AS/NZS 5110:2011 *Recessed luminaire barriers* was first published on 4 November 2011 and was reissued incorporating Amendment No. 1 in February 2013.

Mr Blair, the Chief Executive Officer of Standards Australia, provided two addendum statements throughout the course of the inquest to keep the parties abreast of the developments of the relevant standards.

On 11 and 12 March 2013, BD-058 *Thermal Performance and Insulation of Dwellings* (the Standards Australia Technical Committee responsible for the above standards) met in relation to revision of AS 3999; Revision of AS/NZS 4200.1; and Revision of AS/NZS 4200.2.

It was agreed the revision of AS 3999 was a matter of priority. The draft revision is to be sent to the Project Manager on 27 May 2013 for a review period. It is anticipated the draft will be released for public comment in June 2013.

In relation to AS/NZS 4200.1 it was agreed to put the standard on hold for the time being.

In relation to AS/NZS 4200.2 it was agreed the revision needed to occur as a matter of priority and will be developed second to the AS 3999. It is hopeful the draft document will be released for public comment in June 2013.

Administrative Toolkit

As outlined above a number of internal, independent and external audits have taken place in relation to the HIP. DCCEE has advised it had a process in which all-internal, independent and external audit findings and recommendations were documented and reviewed by the DCCEE Audit Committee. In addition, the Audit Committee reviewed management’s response to any of the findings and recommendations.

DCCEE says it has actioned all recommendations of audits and other reviews of the HIP.

Progress of the Foil Insulation Scheme

The third phase of the HIP was the implementation of the safety remediation programs by the Federal Government. The safety plan included the Home Insulation Safety Program (HISP) and the Foil Insulation Safety Plan (‘FISP’).

Ms Kylie Anne Burnett, an Executive Officer to the Secretary of the Commonwealth Department of Climate Change and Energy Efficiency (‘DCCEE’) provided a statement addressing the status of the Home Insulation Safety Plan.

Ms Burnett has advised that the safety plan was announced on 1 April 2010 by way of a media release by the Hon. Greg Combet.

Ms Burnett stated the four key objectives of the plan were:

a) The FISP offered all households with foil insulation installed under the HIP a safety inspection plus the option of having the foil removed or, on the advice of a licensed electrician, safety switches installed.
b) The HISP involved the inspection of a minimum of 150,000 households with non-foil insulation installed under the HIP. In addition to these government-initiated safety inspections, any household with insulation installed under the HIP was able to request a safety inspection.
c) Industry assistance was provided for reputable businesses and workers impacted by the closure of the HIP in the form of employment opportunities as inspectors under the HISP and financial and training assistance.
d) Strong fraud and compliance measures were instigated, including independent audits of the HIP, debt recovery activities and referral of cases to police and relevant authorities where appropriate.

A Program Board, the Home Insulation Program Review Office ('HIPRO') was established to conclude the HIP and to govern the implementation of the safety plan.

Under the HISP the Federal Government retained PwC and Transfield Services (Australia) Pty Ltd to undertake the safety inspections and rectifications. ME Projects was contracted to complete urgent complex rectification work. Non-urgent work was deferred to a later stage.

Ms Burnett has advised 1,119,808 households had non-foil insulation installed. As part of the HISP, 398,181 of those households were offered an inspection and 200,914 accepted.

The HISP closed on 30 June 2012 following completion of the minimum 150,000 non-foil inspections.

Under the FISP, householders were entitled to a safety inspection by a licensed electrician and the option of either having the foil removed or a safety switch installed at no cost to the homeowner. PwC partnered with UGL and subcontracted licensed electricians to undertake the inspection and rectification work.

Ms Burnett advised as at 30 June 2011, of the 58,281 households identified as having had foil insulation installed under the HIP:

a) Inspections completed: 31,835;
b) Householders indicated that their insulation had been inspected independently and no further inspection desired: 7,368:
c) Householders indicated no foil insulation or no insulation: 2,528;
d) Householders requiring specialist inspection and transferred to the HISP: 2,891;
e) Householders refused inspection: 2,878;

f) Unable to contact householder due to out of date contact details, with two letters sent to the household: 5,376; and
g) No success after 4 telephone call attempts, with two letters sent to the household: 5,405.

The Federal Government then made exhaustive attempts to contact those householders who had refused or who could not previously be contacted. Of those 13,500 households a further 1,800 inspections were conducted.

Of the 50,767 households inspected:
a) 16,607 has a safety inspection only;
b) 15,269 had foil removed;
c) 16,375 had safety switches installed;
d) 2,515 ceased the inspections.

The installation of a safety switch or removal of foil was not indicative of the installation being unsafe as it was the householder's choice as to whether to have the foil removed or a safety switch installed, even if the installation was found to be safe. DCCEE provided each relevant state and territory regulatory body a list of households which had foil insulation installed under the HIP. The FSIP closed on 30 June 2012.

Conclusions

Employers and employees responsibilities

Workers are responsible for the safety of themselves and their co-workers but employers share that primary responsibility. The younger the worker, the less training and experience he or she has and the greater the intrinsic danger of the work or the work place the more responsibility shifts to the employer to ensure employees are properly trained, equipped and supervised.

An employer's responsibility to provide a safe work place is not negated by simply labelling workers as "contractors". That the employers of the three people whose deaths were investigated by this inquest failed to adequately discharge their responsibilities is evidenced by their conviction of offences under electrical and work-place safety legislation.

In each case the employer should have recognised that roof spaces are inherently dangerous places to work and they should have had in place reliable systems to effectively manage that risk. Three people died because that didn't happen with any of the three registered installers. However, the circumstances in which each of the deaths occurred were significantly different.

Matthew Fuller had a basic occupational health and safety certificate but no experience or training in installing insulation or in similar industries. His employer gave him no training. He was not supervised in any meaningful sense. He was warned not to staple through electrical cords but was not told of the possible deadly consequences of doing so, nor was he told how to avoid it. It is not appropriate to lay foil over power cords but that was what most of the installers were told to do.

In my view, Mr Fuller's training and supervision were inadequate as was the employer's safety management system. These inadequacies directly contributed to Matthew's death.

Ruben Barnes had no occupational health and safety qualifications or certificates, although it seems likely he had some OH&S training or induction as part of his first year carpentry apprenticeship. He received no training in relation to the installation of insulation or the risks to be managed when engaged in the work. He was supervised on site by an experienced tradesman who might have been expected to be more alert to the risks associated with working in roof cavities. The fact that Ruben and another worker used a metal pole to push insulation batts into place indicates their supervision was lax.

The employer had a very basic safety management system but it was not utilised on the job on which Ruben died.

It is unlikely these inadequacies directly contributed to Ruben's death. He was killed by a hidden trap created by another tradesman at some undetermined period before the job in which Ruben was engaged. His death could have been avoided if the electricity had been isolated from the work site. However, I accept the evidence that was not mandated by any regulation then in force and was not common or accepted practice within the building or insulation industry.

Mitchell Sweeney had some experience in installing roof insulation and had completed an accredited insulation installation course. His employer provided no supervision or work safety system on the basis that Mitchell was an independent contractor. However, as a result of Matthew Fuller's death his employer was alert to the dangers of using metal staples with foil insulation and took active steps to ensure its installers did not engage in that dangerous practice and that they were aware of the danger of stapling through electrical cables. However little or nothing was done to assist the installers ensure that the risk of stapling through live power cables was avoided. They were simply warned of the danger. Despite being directed not to use metal staples Mitchell chose to do so and died as a direct result. Despite that, it is by no means certain that had he been using nylon staples he would have survived, although it is more likely.

Regulatory framework

Because experience over centuries has shown some workers will either recklessly or unintentionally take unnecessary risks and some employers will not adequately discharge their obligation to provide safe work places and safe work systems, governments have intervened to regulate potentially hazardous activities to improve worker and community safety.

Under our constitutional arrangements, workplace health and safety is primarily within the domain of State Governments.

State government instrumentalities

At the time these deaths occurred the home insulation industry was largely unregulated in Queensland in that no license or registration was necessary to offer such services to the public for reward.

There were however general safety obligations applicable to any such work contained in the *Workplace Health and Safety Act 1995* (now repealed) and the *Electrical Safety Act 2002*. Those Act required anyone undertaking a business to eliminate hazards or minimize risks in their undertakings and to ensure they were undertaken in way that was electrically safe.

Obviously, with tens of thousands of commercial undertakings operating around the state, inspectors from WH&SQ and the Electrical Safety Office (ESO) can not monitor all of them. Rather, both offices seek to identify and respond to higher risk activities with targeted audits.

Some years before the HIP was instituted, the risk of fires as a result of improperly installed insulation was identified as a matter which should be monitored by the ESO and its audit program was adjusted to accommodate that. The experienced electrical professionals staffing the office had not come across foil being used as retrofitted insulation in residential premises and so no policy was developed to deal with any risks it generated.

Surprisingly, the announcement of the HIP did not prompt either safety agency to undertake any significant re-assessment of the risks likely to be generated in the massive expansion of the home insulation industry

It seems that in April 2009, concerns were expressed by the Queensland Building Services Authority to the Department of Prime Minister and Cabinet but they did not elicit a response from that Department and the BSA did not follow it up.

In July and August 2009, attempts by DEWHA to engage WH&SQ to work with the DEWHA and WorkSafe Australia to take a nationally co-ordinated approach to worker safety was not taken up by WH&SQ.

There were two electrical safety incidents in Queensland in early August 2009, which came to the attention of the ESO. Both incidents involved the penetration of an electrical cable with a metal staple during the affixing of foil insulation. The ESO again amended the audit process for ceiling insulation installation and investigated each incident. Because the incidents appeared to have been rare occurrences, formal communication of concerns to DEWHA did not eventuate.

I am of the view the two Queensland safety agencies did not react with sufficient urgency or decisiveness to information and activity that should have alerted them to the real likelihood that the risk of death or injury in home insulation activity would significantly increase with the commencement and implementation of the HIP.

Commonwealth agencies

Process failings

The regulation of work place safety is primarily a State Government responsibility. However, it is reasonable to expect that when the Commonwealth Government injects $2.7 billion into the economy via a program designed to create employment for unskilled and/or unemployed workers, it will have regard to the possible safety implications.

That occurred when the HIP was launched but the scoping of the risks likely to be generated and the safeguards that would contain them were miscalculated and inadequate.

Undoubtedly, a major contributor to the failure to put in place adequate safeguards was the speed with which the program was conceived, designed and implemented. It was announced on 3 February 2009 and its commencement on 1 July meant the detailed analysis and planning that would usually be involved in such a venture was curtailed. One witness with experience in such matters estimated that such a project would usually take two years to role out. Because a major focus of this program was the stimulation of the economy to counter the effects of the global financial crisis it needed to proceed far more quickly than that, but not at the cost of human life.

A novel feature of the HIP that also resulted from the rush to set up the HIP and that weakened the safeguards was its dependence upon administrative arrangements rather than legislation. The scheme was based on participants self selecting and qualifying and then certifying compliance to receive payment. The only leverage the project mangers had was to refuse to pay if they became of aware of non compliance with the HIP guidelines. The risk of physical danger, damage to property and fraud should have been obvious – all eventuated

DEWHA sought to control a massive program anticipated to operate around the country for a number of years by simply stipulating minimum training or experience criteria for those seeking to become registered installers and requiring that they supervise the people actually doing the work who would only have to have the minimal entry level OH&S induction. No comprehensive program of audit was instituted as an initial part of the package on the basis that all operators were required to comply with state and territory workplace health and safety requirements. The program's only real control mechanism was a refusal to pay unless certain criteria were met but it had minimal mechanisms in place to monitor these.

Inadequate safeguards to protect installers from the risk of electrocution were mandated because the risk management process which informed the design of the program did not identify the magnitude of that risk accurately.

At the outset of the program on 1 July 2009, installers were able to become registered without producing proof of competency. This continued until 1 September 2009, and thereafter proof of competency was required with the registration process being overseen by Medicare. Despite this there is evidence not all installers met the minimum competency requirements.

The HIP relied on the honesty, integrity and competence of the registered installers to:-

- provide accurate and correct information during the registration process;
- comply with their local state based industrial safety laws;
- ensure their supervisors had appropriate industry experience or undertook insulation installation training;
- make sure their actual installers had basic OH&S certification;
- diligently consider and implement directions contained in regular emailed advices; and
- ensure the actual installers were properly supervised by the appropriately trained or experienced supervisors.

At the commencement of the program there were inadequate safeguards in place to ensure any of these things happened. In a piecemeal fashion as problems became apparent – often only when an installer died – these inadequacies were remedied.

How things went wrong

Risk identification

The safety focus in planning and initial implementation of the HIP concerned fire in roof cavities. The risk of workers being electrocuted was not given sufficient attention by those designing the program despite it being raised by some industry representatives in various stakeholder consultations. Sadly, it took Matthew Fuller's death to highlight the significance of the risk to the relevant authorities.

There was an opportunity for the magnitude and variety of the risks related to interference with electrical supply in the homes insulated to be better appreciated on and after 3 April 2009 when a risk assessment of the installation process was recommended by the Technical Working Group. That was never pursued. The risk assessment of the program conducted by Minter Ellison did not identify electrocution of installers on the basis that risks to workers were not categorised as being a risk to the Commonwealth. Despite that process being labelled a risk assessment, in fact it simply responded to risks others identified, rather than being an independent in-depth scan of the actual potential risks.

Unfortunately, electrical trades organisations such as NECA and the Master Electricians Association were not consulted earlier about the use of foil and metal staples in the program. If there had been such consultation, the safety issues in relation to the use of these products might have emerged at an earlier time. The industry representatives who did participate in planning meetings seemed to have been preoccupied with "getting a slice of the pie" for their members rather than contributing to any objective consideration of how to maximise safety.

The use of insulation foil was not a wide spread practice in the insulation industry, prior to the HIP. Foil seems to have come into use partly due to a shortage of supply of other material, such as batts, and partly perhaps because of the commercial interests of the foil suppliers wanting to be involved in the program. The risk associated with it being highly conductive of electricity was not indentified.

Risk management strategies

Communication

DEWHA made a reasonable attempt to maintain a stream of information to registered installers in the form of Installer Advices, but the issue of electrical safety in the installation process did not assume appropriate significance and some registered installers failed to have sufficient regard to the content provided in any event.

Much attention was given to the Pocket Book as a training aid, however, it was generally not available to installers until on and after 26 October 2009, when it was a download option from one of the Install Advices. Although, it seems it was available to RTO's and some installers sometime after 27 August 2009.

As a consequence of representations made by EE-Oz to CPSISC, in August 2009, a process was begun for the further development of the contents of the Pocket Book. The deaths in October and November gave more impetus to the development of the amendments, but they did not become generally available in Version 2 of the Pocket Book until January 2010. Version 2 significantly expanded upon the electrical safety warnings as a result of the two deaths that had occurred by the time it was produced.

Training

The only competency required to be held by installers who were being "supervised" was the basic OH&S competency. Aside from South Australia, prior to the HIP, there was no competency requirement for installers. During the planning stage for phase two of the HIP industry thought more competency was required. A compromise position was reached due to the need for a speedy rollout, namely, that the OH&S competency would be sufficient.

The training provided in relation to foil laminate in the HIP was less than adequate. Despite recommendations from industry that it be mandatory this did not occur. All workers installing insulation should have been provided with training which included an element on electrical safety hazards in roof cavities. This was a risk industry was aware of prior to the commencement of the HIP.

The HIP engaged an external provider to develop a competency course, which was then fed down to the Registered Training Organisations ('RTO's'), to deliver to registered installers.

While there was wide consultation for the development of the training program, there was no input from the electrical trades. EE-Oz raised a number of concerns after the training material was released.

The induction and training provided to Matthew Fuller and Rueben Barnes was clearly deficient. The induction and training provided to Mitchell Sweeney was adequate in relation to the program requirements. However, the content of the training material was lacking in respect of electrical safety in the context of laying aluminium laminate.

Supervision

It was wrongly assumed that actual installers would be appropriately supervised. Yet the design of the HIP facilitated installers subcontracting work to other entities or individuals. This model allowed the installer to avoid obligations for supervision of workers. In the case of Titan it believed it did not need to provide any direct or indirect supervision to its subcontractors as they had undertaken the necessary training. Similarly, Vision believed it did not need to provide any direct or indirect supervision as it had subcontracted to an experienced electrical contractor.

Supervision was an important element of the HIP due to the compromises in the training requirements of participants. That is, those persons being “supervised” did not require mandatory competency in insulation installation.

DEWHA operated under the false assumption the employers/head contractors were providing appropriate supervision for the installers.

Unfortunately, due to the variables in the quality of training and limited focus on electrical safety, even those “supervisors” who had completed the required insulation installation training may not have been adequately equipped with the knowledge and skill to appropriately address electrical risk.

Reaction to the deaths

There was a swift reaction by the HIP managers to the death of Matthew Fuller on and after 14 October 2009, including widespread consultation and liaison with representatives from the New Zealand about the 2007 incidents. Installer Advices also became more explicit in the warnings about electrical safety for installers.

The Queensland authorities also reacted swiftly to Matthew’s death, however their safety communications were transmitted to their own database of insulation installers, developed in 2008. That database did not contain the details of all of the registered HIP installers.

After the death of Rueben Barnes on 18 November 2009, the State and Commonwealth Governments continued to make adjustments to the program. Installer Advices continued to flow to the approved installers, which highlighted these changes to the program in order to enhance electrical safety.

Despite a flow of warnings to installers, and an apparently appropriate response by Titan, the entity that contracted with Mitchell Sweeney, Mitchell unilaterally continued to use metal staples and tragically met his death by electrocution on 4 February 2010.

After the banning of the use of metal staples, the ESO was on notice that the practice was continuing, but took little action. Prior to Mitchell Sweeney’s death, the ESO did not advise the Commonwealth, or advocate for stronger intervention, including the banning of the use of the laminate foil.

The immediate response of the Queensland Government to each of the deaths was to launch a comprehensive WH&S/ESO investigation.

ESO Queensland conducted an Electrical Fatality Review into the three deaths and published it in the Electrical Fatality Review Committee Report.

The response of the Federal Government was to analyse and audit the HIP through a number of mechanisms, including by an external consultant, a Senate Inquiry and an Auditor-General's Report.

At the outset of the HIP, there were issues with the relevant Australian Standards not providing necessary safety guidance for the installation of insulation. Standards Australia has responded to the concerns of industry and is in the process of updating the relevant standards. There is a highly experienced technical committee charged with the review.

There have been numerous investigations into the HIP. The Commonwealth has acknowledged a number of failings and lessons learnt.

After Mitchell Sweeney's death and once the extent of the problem became apparent, reasonable safety measures where put in place to protect homeowners and workers from potential electrocution. For the reasons detailed throughout this report, it is reasonable to conclude the dangers should have been foreseen and mitigated before three people died in Queensland and another in New South Wales.

Findings required by s. 45

I am required to find, as far as is possible, who the deceased persons were, how, where, and when they died and the medical cause of each death. As a result of considering all of the material contained in the exhibits and the oral evidence, I am able to make the following findings:

Identity of the deceased –	The deceased person was **Matthew James Fuller.**
How he died -	Mr Fuller died as a result of the insulation foil he was installing in a roof space as part of the Home Insulation Program becoming conductive of electricity when a live electrical cable was punctured by a metal staple he was using to secure the foil.
Place of death –	He died at Logan in Queensland.
Date of death –	He died on 14 October 2009.
Cause of death –	Mr Fuller died as a result of electrocution.

Identity of the deceased –	The deceased person was **Rueben Kelly Barnes.**
How he died -	Rueben died while installing batts as part of the Home Insulation Program when he came into contact with a metal ceiling batten which was conducting electricity as a result a screw used to fix plasterboard some years before penetrating an electrical cable.
Place of death –	He died at Stanwell in Queensland.
Date of death –	He died on 18 November 2009.
Cause of death –	Rueben died as a result of electrocution.

Identity of the deceased –	The deceased person was **Mitchell Scott Sweeney.**
How he died -	Mr Sweeney died as a result of the insulation foil he was installing in a roof space as part of the Home Insulation Program becoming conductive of electricity when a live electrical cable was punctured by a metal staple he was using to secure the foil.
Place of death –	He died at Milla Milla in Queensland.
Date of death –	He died on 4 February 2010.
Cause of death –	Mr Sweeney died as a result of electrocution.

Comments and recommendations –s46

Section 46 provides that a coroner may comment on anything connected with a death that relates to public health or safety, the administration of justice or ways to prevent deaths from happening in similar circumstances in the future. Three issues warrant consideration from that perspective in this case:-

- The response of state-based work place safety agencies;
- Public and industry awareness of the dangers of working in roof spaces; and
- The mandating of safety switches

Review of state based safety regulators response

During the course of considering these matters, numerous incidents of administrative and regulatory failing were identified. The evidence also indicated there has been a multiplicity of reviews and audits of the HIP and what went wrong. Those are set out in the statement of Ms Burnett of the Department of Climate Change and Energy Efficiency. She also stated that "*All recommendations of audits and other reviews of the HIP were considered and actioned*" by that department. In those circumstances further comments by me would be unnecessary and duplicative.

There was no evidence put before the court that the State Government agencies which might have been expected to proactively respond to the heightened risks engendered by the HIP have undertaken similar reviews to ensure they react more effectively if a similar Commonwealth project is announced in future.

Workplace safety is primarily a State Government responsibility. Despite the HIP being publicly announced, advertised and rolled out, and at least two attempts being made by Commonwealth agencies to initiate a joint approach to managing the safety issues thrown up by the program, little action was taken by WH&SQ or the ESO to anticipate and respond to the increased risk of harm. It does not seem there has been any review of why this did not occur.

Recommendation 1 – Review of response by safety agencies

While the evidence indicates it was primarily failings in the planning and implementation of the HIP by Commonwealth agencies that led to an increased risk of harm, state-based workplace safety agencies failed to proactively respond to that increased risk and no review of why that occurred or how it will be avoided in future has been undertaken. Accordingly, I recommend the Office of Fair and Safe Work Queensland undertakes such a review.

Electrical hazards in a roof space

These three deaths confirmed what experienced electricians told the inquest: workers in a roof space are exposed to many hazards including electrocution. Surprisingly, a number of witnesses with extensive experience in other trades did not seem to be aware of the magnitude of this risk.

There was also divergence of opinion as to whether the roof space should be isolated from the electrical supply whenever work is being carried out there. The difficulty of affecting that when power from the mains passes through the roof space before connecting to the switchboard was also highlighted.

If experienced tradesmen are unsure of the electrical dangers that may be encountered in a roof space, the ordinary householder is probably even more unaware and therefore at risk. The extent of the risk and the measures needed to make it acceptable will depend upon the nature of the activity being undertaken in the roof and the experience and training of the individuals involved.

Recommendation 2 – Public awareness campaign

In view of the apparent lack of awareness of the risk of electrical shock inherent in entering a residential roof space and the various measures available to manage that risk, I recommend the Office of Fair and Safe Work Queensland *undertake a public awareness campaign giving guidance as to how home occupiers and relevant tradespeople can minimise their exposure to that risk*

Electrical safety switches

Current regulations require a Residual Current Device (RCD) to be fitted to power and light circuits in newly constructed residential premises and to be retrofitted to premises built after 1992 when those premises are sold or rented.

In December 2011 the State Government released a regulatory assessment statement titled "*Extension of Mandatory Requirements for Fitting of Safety Switches in Residential Accommodation".* It sought public and industry comment on options to extend the requirements for the fitting of RCDs. It contained five options with details of the pros and cons of each. The Electrical Safety Office recommended the adoption of option 4 which required the fitting of RCDs to all circuits within various time frames for different categories of premises. The consultation period ended in March 2012. The State Government is yet to take action in relation to the issue.

Recommendation 3 – Extension of requirement for RCDs

The various options for the extension of the requirement for the mandatory fitting of RCDs involve the balancing of the costs involved against the resulting improvements to electrical safety. The State Government is best placed to assess the competing policy considerations with expert advice from the Electrical Safety Office. I recommend the matter be actioned as a matter of urgency.

Referral – s48

Section 48 provides that if as a result of the information gathered during an investigation a coroner reasonably suspects a person may have committed an indictable offence the coroner must refer the information to the Director of Public Prosecutions. For any other offences the information is to be referred to the chief executive of the department administering the legislation which creates the offence.

In this case that provision requires I consider whether the evidence given by Mr Christopher Jackson raises a suspicion he committed perjury and whether the principals of some of the registered installers committed offences against the Workplace Health and Safety Act or the Electrical Safety Act.

Perjury

The *Criminal Code (Qld)*, S. 123, provides relevantly as follows:

> *"**Perjury***
> *Any person who in any judicial proceeding, … knowingly gives false testimony touching any matter which is material to any question then depending in that proceeding, or intended to be raised in that proceeding, is guilty of a crime, which is called perjury."*

Section 119 *Criminal Code* defines *"Judicial Proceeding"* as follows:

> *"…any proceeding had or taken in or before any court, tribunal or person, in which evidence may be taken on oath."*

Mr Jackson gave evidence in relation to two matters which were material to questions *"then depending in* (the) *proceeding"* which may have been knowingly false, namely:

- That he filled out a Work Method Statement ('WMS') for the job at Stanwell early on the morning of 18 November 2009 and left it with Gaven Feeney. The WMS included issues relating to assessment of risk. Mr Jackson purports to have written the words *"In through roof; earth leakage in powerbox"* as part of a risk assessment that he personally conducted prior to the job being commenced.
- That Mr Jackson accompanied the three workers – the deceased, the foreman Gaven Feeney, and worker Brian Callaghan – to the site at Stanwell and there did a further risk assessment prior to the job being handed over to the foreman and work commencing.

These are matters material to the question I must determine during the inquest, namely, how Rueben Barnes died. The other workers who were present on the morning of the incident deny that Mr Jackson attended the incident site or undertook the risk assessment as he claimed.

Submissions made on his behalf seem to acknowledge that his evidence was erroneous but suggest that was a result of stress rather than being "*knowingly false"*. In my view that is an issue for the DPP to consider when determining whether charges should be laid. Accordingly, I consider I am obliged to refer the information for the DPP's consideration.

Workplace health and safety offences

As detailed earlier prosecutions under the Electrical Safety Act 2002 ('ES Act') and the Workplace Health and Safety Act 1995 ('WH&S Act') have occurred in relation to the three deaths.

The question arises whether further charges under the *Workplace Health and Safety Act 1995* ("WH&S Act") ought to be considered, given the evidence that has been heard in relation to the actions of those supposed to be supervising Matthew Fuller and Ruben Barnes.

Section 15B of the WH&S Act defines the meaning of a person in control of relevant workplace area.

Section 22 WH&S Act provides that workplace health and safety is ensured when persons are free from death caused by any workplace, relevant workplace area and work activities.

Pursuant to s23 of the WH&S Act, a number of persons have obligations to ensure workplace health and safety. They include but are not limited to persons in control of workplaces.

In accordance with s24 of the WH&S Act, a person on whom a workplace health and safety obligation is imposed must discharge the obligation. If the breach causes death or grievous bodily harm the penalty is – 1000 penalty units or 2 years imprisonment.

Section 28 of the WH&S Act imposes an obligation upon a person who conducts a business or undertaking to ensure the workplace health and safety of the person's workers.

Pursuant to s.29 WH&S Act, the person's obligations include, without being exhaustive, doing all of the following:

(a) Providing and maintaining a safe and healthy work environment;
(b) …
(c) …
(d) Ensuring safe systems of work;
(e) Providing information, instruction, training and supervision to ensure health and safety.

Section 30 of the WH&S Act imposes obligations of persons in control of workplaces. The person is to:

(a) Ensure the risk of injury or illness from a workplace is minimised for persons coming onto the workplace to work;
(b) Ensure the risk of injury or illness from any plant or substance provided by the person for the performance of work by someone other than the person's worker is minimised when used properly;
(c) Ensure there is appropriate, safe access to and from the workplace for persons other than the person's workers.

As a result of Mr Fuller's death QHI Installation Pty Ltd was prosecuted and fined as was Mr Chris McKay for their failures to discharge electrical safety obligations.

It could be argued Mr Ben McKay also had such an obligation as a result of his role as supervisor and his being in control of the workplace. There is evidence which, if accepted, could lead to a conclusion that he failed to adequately discharge those obligations in circumstances where he, a trained electrician, knew Mr Fuller was untrained and there had been other instances of "near misses" which should have alerted Mr McKay of the need to take steps to reduce the risk of harm to Mr Fuller.

Accordingly I consider I am obliged to refer the information concerning the actions of Mr Ben McKay to the chief executive officer of the Department of Justice and the Attorney-General for consideration of whether a prosecution should occur alleging breaches of the now repealed Workplace Health and Safety Act.

The employer of Ruben Barnes, Arrow Property Maintenance Pty Ltd, was prosecuted and convicted of breaches of s27 of the Electrical Safety Act.

The siblings of Ruben submitted the two directors of the company should also be prosecuted for failing to comply with s199 of the Electrical Safety Act which provides that the executive officers of a corporation must ensure the corporation complies with the Act. As the company pleaded guilty to a breach of the Act a prima facie case against the directors exists, albeit the hidden danger which led to Ruben's death may well be a circumstance that militates against a prosecution.

I consider I am obliged to refer the information concerning the actions of Mr Christopher Jackson and Mr Richard Jackson to the chief executive officer of the Department of Justice and the Attorney-General for consideration of whether a prosecution should occur alleging a breach of the Electrical Safety Act.

I close the Inquest.

Michael Barnes
State Coroner
Brisbane
4 July 2013

Annexure A - Chronology of key events in the HIP

In or around September 2007, a Coroner in New Zealand was critical of the New Zealand government for doing little to warn of the dangers of do-it yourself insulation concerning the death of a man who was electrocuted while stapling aluminium foil to floor joist under his home.[2]

In or around 2007/2008 the Queensland Electrical Safety Office ('ESO') commenced an audit project in response to the potential fire hazard caused by bulk thermal insulation materials being in close proximity to electrical safety equipment such as down lights. It included correspondence being sent on 11 September 2008 to all listed insulation installers in Queensland advising them of their responsibilities in relation to electrical safety and the provisions of the wiring rules.[3]

Prior to the HIP some 200,000 homes were insulated annually (50,000 – 75,000 existing dwellings and up to 150,000 new builds).[4]

Volumes of payments under Phase 1 of the HIP were around 20,000 per month in May and June 2009, with a total of about 70,000 claims eventually received.[5]

The second phase of the HIP expected to dramatically increase this to around 90,000 installations every month.[6] Following the full program launch, there was an average of approximately 146,000 installations per month from July, peaking at 178,000 in November 2009.[7] There were 136,000 installations in December 2009 and 140,000 installations in January 2010.[8]

The extent to which the HIP expanded incredibly and dragged in a range of businesses was unanticipated at the time of the design and roll out of the HIP.

On 3 February 2009, the Prime Minister announced the Energy Efficient Homes Package. [9]

On 9 February 2009, Mr Tikey, the President of the Aluminium Foil Insulation Association wrote to the Prime Minster seeking the inclusion of foil products in the HIP and for consultation with that sector of the industry.[10] There were no risk factors raised by Mr Tikey concerning the use of aluminium foil in the HIP.

On 18 February 2009, the first Energy Efficient Homes Package Industry Consultation Meeting occurred. Meeting participants included representatives from the Insulation Council of Australasia and New Zealand ('ICANZ'); the Australian Cellulose Insulation Manufacturers' Association ('ACIMA'); AFIA,

[2] Exhibit Z17.4 and Exhibit Z17.5
[3] Exhibit Z14.3
[4] Exhibit Z5, p25
[5] Exhibit Z5, p47
[6] Exhibit Z5, p25, p44
[7] Exhibit Z5, p26
[8] Exhibit Z5, p28
[9] Exhibit BD2, p1
[10] Exhibit Z24.1

Polyisocyanurate Insulation Manufacturers Association (PIMA); Small Business, the Housing Industry of Australia ('HIA'); Master Builders Australia ('MBA'); and Australian Building Codes Board ('ABCB'). In addition, there were representatives from insulation companies. There were no representatives from the electrical industry.[11]

Mr Keeffe, the Assistant Secretary of the Home Energy Branch of DEWHA said that this meeting was the first opportunity they had to get all of the industry stakeholders together in one place.[12] Mr Carter, the First Assistant Secretary of the Renewables and Energy Efficiency Division of DEWHA, said that the department didn't have a deep knowledge of the practicalities of the industry and installation of insulation. It therefore needed to seek industry feedback and industry involvement in the program.[13]

At the meeting, Mr Peter Ruz of Fletcher Insulation advised of electrocutions. The record states,

> Peter Ruz provided an example in NZ, where a similar program had to be suspended because three people electrocuted themselves. The majority strongly recommended mandatory training for insulation installers. It was agreed that a common training regime should be given to new entrants to ensure safety and quality.[14]

Mr Keefe said that he did not recall the discussion about New Zealand in detail but he did remember that it was discussed in general terms[15] (DEWHA made further investigations and this is canvassed under coronial issue 2 below).

The majority of attendees at the meeting of 18 February 2009 seemed to agree that specialist skills were required and that builders wouldn't necessarily know the technical details related to insulation. It was agreed a common training regime should be given to new entrants to ensure safety and quality. DEWHA liaised with DEEWR to explore the necessary training requirements for the HIP, including whether the training would be mandatory or voluntary.[16] The majority of attendees at the meeting strongly recommended mandatory training for insulation installers.[17]

Further, it was agreed as a minimum requirement, that installers would need to undertake the one day Occupational Health and Safety training,[18] commonly referred to as a 'White' or 'Blue' Card.

On 26 February 2009, Mr Tony Leverton, the Director, Electrical Safety Policy, of the ESO, sent an email to Mr Ian Jennings of the Queensland Building Services Authority ('BSA') raising his concerns, particularly in relation to fire safety. He stated:

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[11] Exhibit Z18.12, p7
[12] T9-48
[13] T10-23
[14] Exhibit Z18.12, p5
[15] T9-49
[16] Exhibit Z18.12, p5
[17] Exhibit Z18.6, p5
[18] Exhibit Z18.12, p4

> Given the likely flood of insulation activity from 1 July 2009, I'd appreciate the BSA's views on what additional advices/action (if any) might need to be taken to ensure that licensed installation installers (with large backlogs of work) undertake a competent and safe job.[19]

Mr Leverton did not receive a response from the BSA.

On 27 February 2009, ElectroComms and Energy Utilities Industry Training Council ('EE-Oz') wrote to DEEWR recommending the minimum standards for insulation installers to carry out retrofits.[20] They included, *'Document occupational hazards and risks in electrical work'* and *'Identify building techniques, methods and materials used in electrotechnology work activities'*.[21] EE-Oz had been seeking its own contract to develop materials for the program. This did not occur. DEEWR advised it was for CPSISC to consult with EE-Oz. [22]

On 9 March 2009, Mr Tinslay of the National Electrical and Communications Association ('NECA') wrote to Minister Garrett.[23] In the opening paragraph he stated, "…*NECA wishes to raise pitfalls that exist if appropriate safeguards are not deployed in conjunction with this initiative*". He advised that NECA was responsible for the majority of electrical installation works in residential, commercial and industrial situations. Mr Tinslay said that, whilst not the only safety risk, the most dangerous was the risk associated with installing insulation over or in close proximity to recessed luminaries. He also suggested possible training courses. In closing, NECA offered its services with ensuring its sector of the building industry was aware of the program. Mr Tinsaly said the impetus for the letter was because the announcement of the program was a red flag issue for him. He said that at the time he wrote the letter, he was not aware foil was going to be used in the program.[24]

In or around early March 2009, DEWHA advertised for an external consultant to undertake a Risk Assessment of the HIP. A number of service requirements were listed in the advertisement. They included:

> Analysis of existing project material, including but not limited to Project Plan, Project Schedule, Procurement Plan, Delivery Methodology, Governance Framework, Communications Strategy and learnings from planning meetings, workshops and stakeholder communications;
> Elicitation of risks from the insulation teams that may not yet be fully articulated or written down and documented;
> Consolidation of issues, threats, risks, severity, exposure, likelihood and potential damage…[25]

The response to the Risk Assessment advertisement was due on 11 March 2009. Minter Ellison Consultants (Canberra) Pty Ltd ('Minter Ellison') provided its response to the advertisement on 10 March 2009. It was awarded the contract to

[19] Exhibit Z29.1 (provided after the close of oral evidence)
[20] Exhibit Z17.3
[21] Exhibit Z17.3
[22] Exhibit Z17.3
[23] Exhibit Z12.2
[24] T6-11
[25] Exhibit Z15.1, p16

complete the Risk Assessment on 13 March 2009. The Risk Assessment was due on 30 April 2009. The fee for completing the Risk Assessment was $29,985.00. Ms Coaldrake said that the short turn around for the contract was not unusual in the sense that she could respond to an advert, be awarded the job and commence work the following day.[26] Ms Coaldrake was aware at the outset of her retainer that the program was targeting people who were new to the insulation industry.[27]

On 20 March 2009, a further Insulation Industry Consultation Meeting was convened.[28] It was agreed industry would nominate representatives for three working groups. These included the training; technical compliance; and regional delivery working groups. It was agreed a possible model for training was a one day installer refresher course, two day trade transition course, five day new entrance course and that competency would be based within the Australian Training Quality Framework.[29]

On 23 March 2009, Minter Ellison conducted a project initiation meeting.[30] The purpose of the workshop was to provide an overview of the risk assessment process; and collect and analyse all relevant material from the Project Manager in soft or hard copy. This included learnings from planning meetings, workshops and stakeholder consultations.[31] Ms Coaldrake said they basically gave her what they had and she would gather the rest of the material by questioning participants in the workshop.[32]

Further, on 23 March 2009 a risk identification workshop was held. The purpose of the meeting was to provide a detailed briefing on project issues and risks; review outcomes of preliminary analysis; discuss risks already identified by the project team; identify, analyse and assess other risks; and agree the next steps.[33] Each identified risk was then analysed and the risk register populated.[34]

On 1 April 2009, Mr Chris Boyle, the Executive Manager, Policy, Legislation, Research and Support Services of the Queensland Building Services Authority ('BSA') wrote to Ms Julie Yeend of the Department of the Prime Minister and Cabinet about concerns regarding ceiling insulation being included in the Federal Government economic stimulus package. The email included the concerns by ESO regarding the installation of insulation around down-lights/luminaries. Mr Boyle stated:

> Given the likely flood of insulation activity from 1 July 2009, I'd appreciated your views on what additional advice/action (if any) might be taken to ensure that licensed installation installers (with large backlogs of work) undertake a competent and safe job.

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[26] T10-4
[27] T10-5
[28] Exhibit Z18.3
[29] Exhibit Z18.3, p2
[30] T10-7
[31] Exhibit Z15.1, p23
[32] T10-7
[33] Exhibit Z15.1, p24; T10-7
[34] Exhibit Z15.1, p24

Mr Boyle did not receive a response from the Department of Prime Minister and Cabinet.[35]

On 3 April 2009, an Energy Efficient Homes Package Technical Workshop was held.[36] The Meeting Summary stated:

> The work involved in installation could result in a high level of exposure for the Government due to hazards of existing buildings, hazardous materials and occupational health and safety. The program poses a high likelihood of catastrophic consequences (death or serious injury). Workshop participants noted that a risk assessment of the installation process is required to determine a tolerable level of risk both for the community and the cost to the Government.[37]

The outcomes of the meeting included:

> Undertake a Risk Assessment of the installation process to include safety including working safely at heights and OHS, dangers in existing (and old) buildings, hazardous materials, fire, electrical issues, the speed of insulation across both the program, roof types and insulation in use;
>
> ABCB (Australian Building Codes Board) to provide details of specialist technical consultants to undertake risk assessment;
>
> Provide details on previous issues around safety and installation to feed into risk assessment.[38]

Mr Keeffe of DEWHA said it would have been the ongoing work of the teams to explore this issue and feed it up at a summary level to the risk assessment.[39] There is no evidence of a further Technical Workshop occurring. However, Mr Keeffe thought that they would have been consulted when the overall risk assessment by Minter Ellison was completed.[40] Mr Carter did not recall these concerns being raised with him. He said he was provided information at the Project Control Group and did not recall this being raised.[41]

Ms Coaldrake did not recall ever seeing the minutes of the Technical Workshops, or that concerns from that meeting, were raised with her.[42] Further, she was not aware whether a risk assessment of the installation process was ever undertaken.[43] Ms Coaldrake was of the view that installer safety was not a 'Commonwealth risk' and that for some reason they were trying to manage further than they were strictly expected to.[44] She explained that she relied on the Commonwealth to identify the risks to her and the issue of installer safety was never raised as a risk for consideration. Ms Coaldrake accepted that the risk assessment contemplated the risks to the Commonwealth financially or reputationally, but not to the installers in terms of death or injury.[45] However, she

[35] Exhibit Z26.1, p119
[36] Exhibit Z18.14
[37] Exhibit Z18.14, p1
[38] Exhibit Z18.14, p4
[39] T9-56
[40] T9-56
[41] T10-38
[42] T10-12
[43] T10-13
[44] T10-13
[45] T10-19

accepted in evidence that the death of an installer would be a risk to the Commonwealth.[46]

Mr Keeffe accepted that the observations at the meeting about a high likelihood of catastrophic consequence were consistent with the attitude of the Department at that time.[47] However, the cause of such consequences by industry was that of death due to fire, not electrocution.[48] Mr Keeffe said that the Department commissioned Minter Ellison to conduct a global or complete risk assessment.[49]

On 3 April 2009, a Training Workshop was convened.[50] Whilst industry associations recognised that a mandatory **enterprise unit** would be ideal, it would not be possible by 1 June 2009. Therefore, it was agreed that the entry level would be set in line with the industry level at that time. However, it was agreed the supervisors were required to have an approved trade, industry experience, or have undertaken industry training. [51] The industry recommended amendments to the Minimum entry requirements for the Installer Provider Register which were referred back to the Project Control Group.[52]

In relation to training, attendees agreed on three to five days' training, including the one day OHS induction training, including both classroom and on-the-job training.[53]

From 7-9 April 2009, feedback was received on the HIP Risk Register being developed by Minter Ellison.[54]

On 9 April 2009, the Risk Register was finalised. It included 19 headings. None specifically addressed safety. Point 4 'Installation quality and compliance' referred to Safety – house fire/damage and Point 11 'Regulation' referred to consulting with regulators (ACCC) and aligning the program specific regulation with State/Territory etc. Regulation.[55]

On 20 April 2009, Mr Keeffe replied to Mr Tinslay's letter of 9 March 2009.[56] In relation to the issue of training, Mr Keefe stated:

> …To ensure installers are appropriately trained, the Government is currently developing a training program for new entrants to the insulation industry based on existing units in the current nationally endorsed training package. As a part of this, tradespeople with no insulation experience who are making a shift to insulation installation will require a two day supplementary course. The Government does, however, appreciate NECA's offer of its services and as a result, NECA has been added to the stakeholder register for the Energy Efficient Homes Package.

[46] T10-15
[47] T9-82
[48] T9-82
[49] T9-83
[50] Exhibit Z10.7
[51] Exhibit Z10.7, p2
[52] Exhibit Z10.7
[53] Exhibit Z10.7, p2
[54] Exhibit Z15.1, p24;
[55] Exhibit Z8.1
[56] Exhibit Z12.3

> Organisations on this register are approached by the Government on an as-needs basis for advice, consultation and information dissemination on various aspects of the Energy Efficient Homes Package.

Mr Tinslay said that on receipt of the letter he assumed it was okay and that the government was across the issue. Sometime after receipt of the letter and prior to Matthew's death, Mr Tinslay informally met with the Government and continued to offer NECA's assistance. He said he provided information to the Government in response to adhoc requests.[57] He conceded that at that time, his major concern was about potential fires.[58]

On 23 April 2009, a document was prepared which was titled 'Minute for PCG of 23 April 2009 - Critical Timing Issue: Certified installers ready to register on 1 July for Home Insulation Program'. The document appears to have been created by Mr Keeffe as his name appears at the bottom of the document. Mr Keeffe stipulated, on advice from DEEWR, CPSISC and industry that installers needed a minimum level of competence and competence could be gained through training, work experience and transfer of skills from allied fields such as building trades. The four major categories of prospective installers were current builders' licenses; other building trade licences; practical experience but no relevant qualifications; and no prior experience, but wanting to enter the industry. Mr Keeffe recommended:

a) There be a 'wide portal' of access to registration before 1 July, to make it available to those in the first three categories with the <u>proviso</u> that those registering achieve formal competence (as assessed by RTOs) by 1 September;
b) Registration requirements accept existing state/territory courses;
c) DEEWR be engaged at a high level to facilitate the roll out to and delivery by RTOs; and
d) DEEWR further assist with the roll out to those in the fourth category, through programs such as the 'Green jobs program'.[59]

On 23 April 2009, Ms Margaret Coaldrake, acting through Minter Ellison, entered an agreement with DEWHA to become the HIP Strategic Risk Advisor.[60] According to the Deed of Agreement, the Additional Services included:

> On an hourly basis, provide support and assist the nominated Risk Manager appointed by the Department…to support the development and implementation of any necessary ongoing adjustments to the existing Risk Register and Risk Management Plan.[61]

The hourly rate was $269.50 and included Ms Coaldrake attending and reporting to the Project Control Group meeting as needed and responding to the Risk Manager's enquiries relating to the Risk Management Plan. Ms Coaldrake

[57] T6-22
[58] T6-29
[59] Exhibit Z24.5 (provided after the close of oral evidence)
[60] T10-9
[61] Exhibit Z15.2, p1

explained she did not attend any industry consultation meetings and was reliant on the information that went to the Project Control Group.[62]

Further, in April 2009 fair-trading and consumer affairs representatives from the states and territories met with representatives from the Commonwealth to discuss the development of a compliance framework for the HIP.[63] The minutes of the meetings were not provided to the inquest. Representatives from ESO Queensland deny being consulted or formally advised of the HIP by any State or Commonwealth agencies.[64]

On 6 May 2009, CPSISC was retained by DEEWR to develop the training materials for recognised training providers to deliver training to installers throughout their respective States[65] (prior to the contract CPSISC had been invited to attend the industry training meetings and attended its first meeting on 30 April 2009[66]).

On 7 May 2009, the Risk Register was updated. A consequence is noted of unsafe or incorrectly installed product leading to fire/damage. The corrective action was to ensure state programs had robust compliance arrangements.[67]

On 8 May 2009, the Project Control Group met. It was agreed to amend the 'Competency Requirements' and 'Terms and Conditions' from "*person installing ceiling insulation must also have one or more of the following competencies*…" to having the requirements only related to the person engaged to supervise the installation of ceiling insulation.[68] Ms Coaldrake was a participant at the meeting. The term *'supervise'* was not defined.

On 22 May 2009, the ESO was notified of an incident concerning an insulation installer who received a shock/burn in a roof space[69] the incident was not reported to DEWHA.

On 1 June 2009, the Commonwealth released Version 2 of the *Energy Efficient Homes Package, Home Insulation Program, Program Guidelines*'. It provided an overview of the program; information for homeowners; installers and installation eligibility requirements; types and reasonable cost of insulation; and compliance.[70]

The Installer Provider Register was opened on 9 June 2009 and launched on 29 June 2009.[71]

[62] T10-12
[63] Exhibit Z5, p2
[64] T10-50; T10-65
[65] T5-59
[66] T5-61
[67] Exhibit Z8.2 (provided after the close of oral evidence)
[68] Exhibit Z24.2, p2
[69] Exhibit Z21.1
[70] Exhibit SE11.7
[71] Exhibit BD2, p3

On 9 June 2009, Arrow was registered as an installer with the HIP (Rueben was employed on 28 October 2009).[72]

On 16 June 2009, Minter Ellison proposed that a project management health check be undertaken.[73] Ms Coaldrake conducted this. [74]

On 24 June 2009, the Risk Register was updated. It included reference to 'unsafe incorrectly installed product leads to fire/damage'. The risk treatment included liaising closely with DEEWR on the management of Installer skills, checking training competency in administration audits, and DEWHA communication tools.

On 25 June 2009, ESO was notified of an incident involving a worker receiving a shock from a ceiling fan whilst installing insulation[75]. The incident was not reported to DEWHA.

On 29 June 2009, an Insulation Industry Consultation Meeting was held. There was a view that there may be suppliers on the installer register who did not have the appropriate training.[76] It was agreed that the policy was clear and that Occupational Health & Safety training was essential and a supervisor must have the relevant qualifications to sign the work order form.[77] Mr Batt, the General Manager of AUTEX, expressed his opinion that training was still not compulsory, so why would installers do it? He said there was nothing to compel people to undertake the training. Further, Mr Batt advised that 80% of people hadn't purchased the relevant Standards and that there needed to be some sort of guide explaining the Standards.[78] Mr Keefe explained that it was necessary to educate, not regulate, and that the OHS requirements were in addition to what was in place before the HIP. It was stated that it was necessary to keep the entry level low.[79]

Mr Keefe said that regulation would have slowed down job growth and therefore would have been counter-productive to the policy settings. Instead they took the approach to educate all householders and installers of their rights, responsibilities and obligations.[80]

On 29 June 2009, the first HIP Installer Advice was issued. The topics included: 'Check and update your registration details online'; 'Provision of program guidelines to householders'; and 'Tax invoices to be provided to householders'.[81]

On 1 July 2009, in parallel with phase 2 of the HIP, New Zealand commenced its 'Warm Up' program which had job creation and health and energy efficiency

[72] Exhibit BD3, p5
[73] Exhibit Z15.3, p6
[74] Exhibit Z15.3, p6
[75] Exhibit Z21.1
[76] Exhibit Z18.5, p2
[77] Exhibit Z18.5, p2
[78] Exhibit Z18.15, p10
[79] Exhibit Z18
[80] T9-63
[81] Exhibit Z18.19

objectives. That program had a ‘List of Accepted products’, which excluded foil and blow-in insulation. Foil was not included due to technical concerns over is performance, and safety issues. The safety issues stemmed from the three deaths, which had occurred in New Zealand in 2007 from the ‘do-it-yourself’ under-floor installation of foil insulation.

On 2 July 2009, Mr Kimber, the Acting Director for Program Design and Delivery Team of the HIP, was put in touch with the newly appointed Quality Assurance Manager for the New Zealand insulation program. An exchange ensued by email about compliance and supply issues.[82] There was no discussion of the use of foil insulation.

On 10 July 2009, Ms Coaldrake through Langdale Consulting (Ms Coaldrake’s company), extended the contract as the Strategic Risk Advisor for the HIP (this contract continued until 28 February 2010).[83]

On 15 July 2009, the second HIP Installer Advice was issued. The topics included: ‘Information displayed on the Installer Provider Register’; ‘Nominating your services area on the Register’; and ‘Insurance – Certificates of Currency’.[84]

On 16 July 2009, Dr Tony Delbridge from the HIP Insulation Technology and Evaluation group sent an email to Mr Tim Campbell of the Queensland Government. At the time, Mr Campbell was holding the position of Acting Manager, Construction Strategy Group, Workplace Health and Safety Queensland.[85] Dr Delbridge identified an issue of concern, being a consistent failure by insulation installers to comply with safe working practises, the primary ones being safe working at heights and safe materials handling. Dr Delbridge extended an invitation for Workplace Health and Safety Queensland to work with DEWHA and Work Safe Australia in taking a nationally co-ordinated approach to the issue.[86]

On 22 July 2009, the third HIP Installer Advice was issued. The topics included: ‘Claims for payment’; and ‘Training availability’. It referred installers to the ‘SkillsInfo’ website to locate Registered Training Organisations who were on scope to offer the insulation training course.[87]

On 31 July 2009, the Risk Register was updated. It included a reference to ‘unsafe or incorrectly installed product leads to fire/damage, injury or death’. The actions were similar to those previously indicated.[88]

By August 2009, the apparent take up of the program was a lot higher than anticipated. Mr Carter conceded the HIP was being deluged by untrained and

[82] Exhibit Z27 (provided after the close of oral evidence)
[83] Exhibit Z15, p1
[84] Exhibit Z18.19
[85] Exhibit Z22, p1
[86] Exhibit 18.18
[87] Exhibit Z18.19
[88] Exhibit Z8.4 (provided after the close of oral evidence)

unskilled people and that DEWHA was aware that complaints were being raised about the quality of the insulation and the installation of the insulation.[89]

On 4 August 2009, CPSISC provided DEWHA with a copy of the final training products and the 'Ceiling Insulation – Construction Industry Pocket Book' ('the Pocket Book').[90]

On 5 August 2009, ESO were notified of an incident at Victoria Point concerning an insulation installer receiving a shock when an electric cable was hit with a metal staple[91]. The incident was not reported to DEWHA.

On 6 August 2009, ESO were notified of an incident at Deception Bay concerning an insulation installer receiving a shock when a metal staple penetrated an electric cable[92]. The incident was not reported to DEWHA.

On 6 August 2009, the fourth HIP Installer Advice was issued. The topics included: 'Reminder of the Terms and Conditions of Registration' (non-compliance risks non-payment or removal from the register); 'Compliance with Material Standards'; 'Requirement for Program Guidelines to be read by households'; 'Soliciting deposits for installations'; and 'Reporting areas insulated'.[93]

On 7 August 2009, an Insulation Manufacturer's Meeting occurred. It was reported that there was a dramatic increase seen in demand for a number of products. However, capacity was not an issue for foil.[94]

On 10 August 2009, roof inspection commenced with the compliance database operational on 27 August 2009.[95]

On 10 August 2010, CPSISC was asked by DEWHA to add the training products to its website as PDF documents.[96] CPSISC attended to this the following day.[97]

Further on 10 August 2009, Ms Samantha Kortt of the HIP Policy Team wrote to Mr Campbell in Queensland. Her email stated:

> Given the unprecedented size of the insulation programs, OH&S issues when installing ceiling insulation have been raised as a potential area of concern. Therefore, we are keen to open up a dialog with your agency regarding OH&S issues in the insulation industry and in particular, we would like to discuss the opportunity to establish an information sharing MOU with your agency, where we could ask questions about specific

[89] T10-40
[90] Exhibit Z10.15
[91] Exhibit Z221.1
[92] Exhibit Z21.1
[93] Exhibit Z18.19
[94] Exhibit Z18.6, p1
[95] Exhibit Z5, p5, 948
[96] Exhibit Z10.16
[97] Exhibit Z10.16

installer's and companies that have been the subject of investigations and prosecutions for breaching relevant safe work and OH&S legislation.[98]

Mr Campbell recalled meeting with Tony Leverton of ESO about the requests from DEWHA.[99] Mr Leverton did not recall seeing the emails or having a meeting with Mr Campbell about the requests from DEWHA.[100] He said if he had been aware of the requests from DEWHA he would have welcomed the engagement.[101] There is no evidence of any further follow-up by DEWHA.

Whilst Mr Keeffe did not recall the specific emails to Mr Campbell he did recall the context in which they were sent. He said it has been agreed to provide the States with a general overview of the program and to ensure consistency where possible. It was to make the States and Territories aware of the program and the issues that would arise from it.[102]

Mr Carter acknowledged that one of the fundamental elements of the program was the reliance on existing State and Territory occupational health and safety laws. He was not able to explain why the safety regulators had not been consulted.[103]

On 12 August 2009 the Pocket Book was only available for download from the Internet but there was an intention to print copies for distribution.[104] The warning concerning electrical safety had a reference to foil insulation. It stated, in bold red writing, "*Warning: the practice of RFLs to ceiling joists poses a high risk of electrocution*".[105]

In mid August 2009, at an ESO Senior Management meeting, mention was made by the Director of Compliance of an incident with foil insulation. It was agreed to extend the ESO compliance audit process and to undertake an electrical safety information program for insulation installers in Queensland. None of the ESO inspectors had come across foil insulation for ceiling insulation and it was viewed as a rare occurrence.[106] Mr Gibson, the Director of Electrical Safety Compliance with the Office of Fair and Safe Work Queensland said that he spoke with a lot of inspectors with lots of years of experience at around that time and none had seen foil used in the capacity it was being used in the HIP. Up until the first incident they were not aware that foil was a product available under the HIP.[107] An investigation into the incidents and use of foil ensued over a period of time.[108] This included speaking with representatives from the Foil Insulation Association.[109]

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[98] Exhibit Z18.18
[99] Exhibit Z22, p1
[100] Exhibit Z
[101] T10-64
[102] T9-64
[103] T10-333
[104] Exhibit Z10.17
[105] Exhibit SB46
[106] Exhibit Z26, p2
[107] T8-98
[108] T8-106
[109] T8-108

Following on from the ESO meeting in mid August 2009, ESO amended its insulation audit tool to include a question in relation to foil insulation. The new question stated: "*Procedures in place to ensure electrical equipment is not damaged when installing metal foil*".[110] Mr Gibson said that as soon as ESO became aware that foil was being used, they quickly made the change to the audit to highlight to the inspectors the additional safety aspect that they had become aware of.[111]

Mr Keeffe said that as far as he was aware, there was a process by which the States and Territories would feed information into their compliance section. If for example there was a major incident with harm or risk to safety, they were told about it. He did not recall being advised an installer had been hospitalised as a result of an incident prior to Matthew Fuller's death.[112]

Mr Carter acknowledged that in August 2009 there was a significant concern about the quality of installation that may have been occurring. There were also concerns about price gouging.[113]

On 24 August 2009, the fifth HIP Installer Advice was issued. The topics included: 'Partial installation of ceiling insulation'; 'Availability of some insulation materials'; and 'Program take up'.[114]

On 27 August 2009, it was agreed DEWHA would print and arrange the distribution of 20,000 Pocket Books.[115] In an internal minute from DEWHA dated 24 August 2009, it stated: "[*T]he Pocket Books are intended to be distributed to interested RTOs and insulation companies*".[116] The Pocket Books do not appear to have been delivered to every Installer registered with the HIP. The books were dated July 2009 but not distributed until after 27 August 2009.

On 27 August 2009, the sixth HIP Installer Advice was issued. The topics included: 'SPECIAL EDITION – PROGRAM CHANGES EFFECTIVE FROM 1 SEPTEMBER 2009'. Advising the Low Emission Assistance Plan for Renters would cease to exist and the HIP would now cover tenants and landlords. An Information sheet for installers was attached. [117]

In addition, on 27 August 2009, the Risk Register was updated (this version of the risk register was not located).

On 1 September 2009, Version 3 of the '*Energy Efficient Homes Package, Home Insulation Program, Program Guidelines*' was released.[118] Version 2 of the Installer competency requirements was also released. As a result of the new program requirements, based on examples provided by DEWHA, Medicare

[110] Exhibit Z14.4
[111] T8-95
[112] T9-66
[113] T10-40
[114] Exhibit Z18.19
[115] Exhibit Z10.18
[116] Exhibit Z24.3
[117] Exhibit Z18.19
[118] Exhibit FE60

Australia staff checked competencies. If Medicare were unsure if a competency satisfied the eligibility requirements, the case was escalated to a more senior officer who sought advice from DEWHA[119]. Up until that time installers registered with the HIP online by completing a self assessment with qualifications being verified through random and targeted desktop audits or onsite visits.[120] There was no evidence provided at the inquest that this requirement was retrospective.

On 2 September 2009, the seventh HIP Installer Advice was issued. The topics included: 'Low Emission Assistance Plan for Renters – ceased on 31 August 2009'; 'Home Insulation Program to replace previous HIP and LEAPR schemes'; 'Program funding capped'; 'Physical site inspection and written quote'; 'Training qualifications and Insurance of Certificates of Currency to be presented' (evidence of qualifications and/or competencies required at the time of registration and for those already registered qualifications and/or competencies would be required as part of compliance strategies); 'Increase compliance and audit checks'; 'Transition arrangements'' 'Work Order Forms being revised'; 'Claiming and receiving the increased rebate for rental properties'; 'Charges for Installations from 1 September 2009 in rental properties'; 'and 'Terms and Conditions of Registration' (remained essentially the same and existing installers deemed to accept the Terms and Conditions unless DEWHA was advised in writing).[121]

Mr Keeffe said that up until that point of time, installers had to agree and commit in writing that they had the required competencies. However, as part of the compliance regime in moving forward it was agreed the registered installers should provide evidence of their qualifications. Mr Keeffe explained that there was some concern about introducing evidence of qualifications as an earlier requirement because it would have added to the paper burden and slowed down the process of registration.[122]

On or around 10 September 2009, ESO conducted an Insulation Installer talk to 18 participants[123] (this stemmed from the mid-August ESO meeting). The talk included a PowerPoint presentation, which included slides showing photographs of a staple through electrical cable with foil.[124] The participants were canvassed from ESO's Queensland Installer database, which had been created in, or around 2008 from the yellow pages[125]. At that time, ESO assumed that those installers registered in the HIP would be the same as on ESO's database.

On 11 September 2009, the eighth HIP Installer Advice was issued. The topics included: 'Pricing Table in the new Program Guidelines'; 'Physical Site Inspection'; 'Insulation system – scheduled outage'; 'How to lodge a complaint about the HIP' and 'Website update'. A link was provided for installers.[126]

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119 Exhibit BD3, p1
120 Exhibit BD3,p1
121 Exhibit Z18.19
122 T9-73
123 Exhibit Z26.1, p1
124 Exhibit Z29.2 (provided after the close of oral evidence)
125 T8-102
126 Exhibit Z18.19

On 29 September 2009, the ninth HIP Installer Advice was issued. The topics included: 'Website Outage'; 'Safety Issue – Down light clearances'; 'Accessories allowable under the HIP'; 'Insurance'; 'Supervision' (outlining requirements of a supervisor in addition to the one day Occupational Health and Safety Induction Course – a link to further information was provided); 'Work Order Form completion'; and 'Advertising'.[127]Mr Keefe explained that the Department portrayed a very strong message from a policy sense that the Department expected compliance and that they were checking.[128]

On 29 September PwC commenced an audit and compliance service. It commenced a roof inspection regime conducted through a subcontract with UGL services. It took some time to scale up to a peak level of 1000 roof inspections per week[129]. By that time 172 roof inspections had been conducted by DEWHA's internal auditor.[130]

On 1 October 2009, Vision trading as Countrywide had its registration with HIP confirmed[131] (QHI was subcontracted to Countrywide and QHI employed Matthew Fuller).

On 1 October 2009, the Risk Register was updated. The continued reference to 'unsafe or incorrectly installed product leads to fire/damage' was included. Some of the actions are illegible but generally accord with previous action requirements.[132]

On 9 October 2009, the tenth HIP Installer Advice was issued. The topics included: 'Website Outage'; 'Audit program roll-out' (site inspections of houses are now being undertaken); 'Pricing Table'; 'Work Order Form – when to sign'; 'Public Housing is not covered by the Program'; 'Compliance with laws' (must comply with all relevant Commonwealth, State, Territory and local government laws and regulations); and 'Audit of insurance requirements'.[133]

On 10 October 2009, the then Queensland Attorney-General and Minister for Industrial Relations ('the Queensland Attorney-General') issued a media release titled; 'installing roof insulation correctly will reduce down light fire risks'.[134]

On 12 October 2009, an Industry Consultation meeting was held. Minister Garrett asked to hear from the participants regarding any issues they had. These included,

Program running much faster than anticipated;

Supply issue – manufacturing improved efficiency, increased plant capacity and increased investment;

[127] Exhibit Z18.19
[128] T9-73
[129] Exhibit Z5, p48
[130] Exhibit SE11.1
[131] Exhibit FE1.12
[132] Exhibit Z8.5
[133] Exhibit Z18.19
[134] Exhibit Z14, p3

> Increased demand has resulted in need to increase imports which raises the issue of product quality and compliance. Compliance needs top priority as many imports have failed compliance tests and found to be defective;
> Product quality is becoming a media issue which is getting daily attention;
> Training issue – upgrading installer skills to standards required;
> Fire issue – disproportionate to number of installations but is a big issue.

On 14 October 2009, Matthew Fuller was electrocuted.

On or around 14 October 2009, Titan had met all the registration requirements with the HIP. It had lodged its application on 18 September 2009 (Mitchell commenced working for Titan on or around 29 September 2009).

On 15 October 2009, ESO Queensland issued an 'e-Alert' 'Fatality of ceiling insulation installer'.[135] The 'e-Alert' highlighted the risks associated with the use of metal staples to fix foil insulation. The alert was distributed to ESO subscribers.[136] The registered installers relevant to these deaths were not on the ESO subscriber list.[137]

On 16 October 2009, Malcolm Richards, Chief Executive Officer of Master Electricians, wrote to Minister Garrett urging the Federal Government to immediately withdraw its rebate for metal insulation products following the death of Matthew Fuller. He advised that his members across Australia had become more and more concerned over the last six months, with reports of potentially hazardous incidents relating to the installation of insulation increasing steadily. Mr Richards described the majority of incidents to be categorised as: staples used to hold down aluminium insulation coming into contact with electrical wiring; and insulation being installed directly over high temperature light fittings which is leading to house fires [138]. He estimated that in excess of 20 members reported issues prior to the death of Matthew[139] (a response was received on 19 November 2009, see below).

Mr Richards explained that he had drafted a letter to Minister Garrett prior to Matthew's death, but it was in his out tray and had not been sent by the time Matthew's death occurred.[140] Mr Richards said he amended the letter and sent it immediately following Matthew's death.[141]

On 16 October 2009, ESO Queensland convened a meeting with representatives from the Queensland Building Services Authority, the Office of Fair Trading and the Queensland Fire and Rescue Service to consider appropriate measures to improve safety of insulation installers and homeowners.[142]

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[135] Exhibit Z1
[136] Exhibit Z14, p3
[137] Exhibit Z14.37
[138] Exhibit Z16.1
[139] T6-46
[140] T6-47
[141] T6-47
[142] Exhibit Z4, p13

The outcome of the meeting was that all of the Queensland agencies agreed to the immediate distribution of an email alert dealing with the electrical safety risks associated with the installation of foil ceiling insulation via their respective stakeholder databases. It was further agreed that the agencies would exchange relevant data to enable the urgent development of a comprehensive fact sheet detailing the breadth of workplace health and safety and electrical safety risks involved in undertaking work in ceiling spaces.

ESO sent a letter to all known 489 Queensland-based insulation installers and five insulation industry associations.[143] The installers were identified from the yellow pages, white pages and an Internet listing search. [144] The letter included information about Matthew's death, installer obligations, the recent e-Alert and information about down light clearance distances from the AS/NZ 3000 (Wiring Rules).[145] Further, to assist insulation installers to comply with clause 4.5.2.3 of the Wiring Rules, the Queensland Electrical Safety Office published the clause on the ESO website under a licensing agreement with SAI Global.[146] A letter was sent to Countrywide Insulations (Vision) but the letter was returned 'left address/unknown'. The other Installers were not on the ESO mailing list.[147]

On 19 October 2009, the eleventh HIP Installer Advice was issued. The topics included: 'IMPORTANT SAFETY NOTICE'. It outlined the importance of complying with all Occupational Health and Safety requirements. It stated:

> Installers should ensure that only trained and competent installers are allowed to enter the roof space. The following procedures will keep your work place safe:
>
> - Turn off the domestic power supply to the work area and when the installation is complete, turn it back on. Check that light switches and power point circuits are operational before you leave;
> - Check that residual current devices (circuit breakers) are fitted;
> - Locate power cables and fittings before you start installing the insulation and ensure they will not be in the way of any staples or fixings that you will be using;
> - Use heat resistance protective down light covers or leave the required clearance, generally at least 50mm or 200mm around halogen down lights;
> - Do not leave debris, including off-cuts, rubbish, loose staples etc. in the roof space.
>
> It is a safety issue to ensure that electricity is turned off BEFORE undertaking any work in confined roof spaces. Where required, the appropriate safety equipment should be used, this includes gloves, masks and safety glasses.

At the end of the Installer Advice, contact details for the OHS and Workers Compensation bodies were listed. The only listing for Queensland was WorkCover (Queensland). Mr Keeffe explained that prior to that time, the Advice

[143] Exhibit Z14, p3
[144] Exhibit Z14, p3
[145] Exhibit Z4, p13
[146] Exhibit Z4, p13
[147] Exhibit Z14.37

was to comply with existing State and Territory laws, none of which were consistent. After the death of Matthew, it was considered that a lot more explicit information in relation to that advice was required.[148]

On 20 October 2009, Mr Richards from Master Electricians met with Minister Garrett.[149] Mr Richards said that they discussed the content of his letter of 16 October 2009 and he provided first hand advice. He thought he said words to the effect, "*if you don't remove this rebate from foil base products there would be more deaths in the program*". [150] Mr Richards said that he pushed the Minister to take action and he agreed to put an industry group together to discuss the issues.[151]

On 20 October 2009, Mr Leverton of ESO wrote to DEWHA seeking a copy of the register of approved insulation installers.[152]

In or around 20 October 2009, a member of the HIP Policy Team engaged with the Team Manager, Technical, for the New Zealand Program, the Energy Efficiency and Conservation Authority ('EECA'). A meeting was arranged to share experiences regarding the respective retro-fit programs. During the course of email exchanges, the New Zealand representative stated:

> …it is a real shame that another installer had to die fitting foil under the floor. We stopped using foil on EECA-funded projects as of 1 July 2009 and we never regretted that. I have to admit it was not that easy – EECA had a strong pushback from some stakeholders as alternative products were and still are more expensive. However, what is the value of a human's life?[153]

This resulted in an urgent response from DEWHA seeking further information on the banning of foil.

On 22 October 2009, the EECA representative advised that the foil was originally banned due to poor performance (condensation issues). However, they subsequently learnt of the safety challenges with foil and had recently been alerted to a number of instances of electrocution that occurred during routine maintenance a few years after the reflective membrane was fitted under the house. They then became aware of further performance issues. EECA advised they had 15 bulk insulation products for underfloor application approved for the program. The issue of metal versus plastic staples was canvassed by DEWHA. The EECA representative advised that the plastic staples were an expensive alternative and therefore they did not go down that route as they did not believe plastic staples would completely eliminate safety risks.[154] A number of links to resources on reflective membranes was provided.

[148] T9-74
[149] Exhibit Z16.2
[150] T6-47
[151] T6-47
[152] Exhibit Z18 to Z20; T9-67
[153] Exhibit Z28 (provided after the close of oral evidence)
[154] Exhibit Z28 (provided after the close of oral evidence)

On 26 October 2009, the twelfth HIP Installer Advice was issued. The topics included: 'SPECIAL ISSUE ON SAFETY'. The Advice reminded installers that all installers must have the relevant OHS training and if an installer did not have the additional competencies (that is, trade specific experience, completed the insulation training course, or industry experience) they must be supervised by someone who did have them. The Advice stated:

> Employers and supervisors are responsible for ensuring, as far as possible, that an employee is safe from injury and risk to health. There are specific OHS Acts, regulations, codes of practice, Australian Standards which govern health and safety in the workplace.

The Installer Advice also set out employee responsibilities. It also referred to the Construction Industry Pocket Book and provided a link to the Pocket Book. The information supplied by Master Electricians Australia was included. It stated:

> The process of stapling conductive foils in ceiling spaces where cables are present is highly dangerous. Metal staples may connect a live wire to the entire ceiling of foil without operating protection equipment. This will place the worker and other people entering the ceiling at a very high risk of electrocution. Non conductive securing practices are highly recommended such as taping or nylon staples.
>
> Turning off Main switches and safety switches are good practices but do not eliminate the risk. Many cables in the ceiling are not controlled by these devices. All cables are to be treated alive until proven deenergised by a licensed electrician.
>
> Master Electricians Australia highly recommend engaging an electrical contractor to perform a final test of the installation to ensure it is left safe…

Installers were referred to their OHS authorities. The contact for Queensland was the Department of Employment & Industrial Relations Workplace Health & Safety.

On 27 and 28 October 2009, the Commonwealth convened meetings with training organisations, industry and regulators to review the HIP.[155] This was the first industry meeting of the HIP in which representatives from the electrical industry were invited to attend.[156] Mr Keeffe accepted that the reason for this was that it wasn't until that stage of the program that the risk of electrical safety had been identified as a significant risk.[157]

Representatives from ESO attended the meetings on 27 and 28 October 2009 with Minister Garrett, and advised that a Queensland Ministerial Notice was being drafted for release, and recommended that the provisions be introduced across Australia [158]. This was the first occasion that Queensland ESO or Workplace Health and Safety officials had met with representatives from DEWHA. No minutes of the meetings of 28 October 2008 have been located.

[155] Exhibit Z18.21
[156] T9-69
[157] T9-69
[158] Exhibit Z14, p4

At the meeting of 27 October 2009, it was noted that mechanical fasteners had the potential to pierce electrical cables and cause an electrical hazard. However, the meeting was advised that plastic staples were likely to reduce the electrical risk. It was acknowledged that the training program and materials could be improved to address electrical safety.[159] Mr Richards recalled some criticism of the use of foil products, and some manufacturers defending the products. Further, he recalled that after the meeting a middle ground was reached, and he accepted the use of plastic staples.[160] Mr Leverton recalls

On 29 October 2009, the Risk Register was reviewed and the same reference to 'unsafe or incorrectly installed product leads to fire/damage' was found. There was no reference to electrocution, foil products or installer safety. There was reference to miscommunication and complaints.[161]

On 1 November 2009, Minister Garrett announced a number of new safety measures. These included:

a) A ban on metal fasteners for foil insulation, such as metal staples or nails;
b) Mandatory installation of covers over down lights and other ceiling appliances, which were commonly used (not compulsory under the Australian Standards); and
c) A targeted electrical safety inspection program of Queensland homes with foil insulation installed under the HIP.[162]

The announcement by Minister Garrett coincided with the release of the Queensland Ministerial Notice on Ceiling Insulation, which was also announced on 1 November 2009.[163] The Queensland Ministerial Notice was the *Electrical Safety (Installation of Ceiling Insulation) Notice 2009*. Non-compliance with the Notice constituted a breach of electrical safety obligations. In accordance with s4 of the Notice, Metal or other conductive fasteners were not to be used to install ceiling insulation. In accordance with s6 of the Notice, all persons employed or engaged by the relevant person who installed ceiling insulation in a building had to be trained in carrying out an assessment of the electrical risk from the installation of ceiling insulation.[164]

On 1 November 2009, the thirteenth Installer Advice was issued. The topics included: 'Important announcements about Home Insulation Program changes from 2 November 2009' (provided overview); 'Terms and Conditions of Registration'; and 'Transitional arrangements'. The changes to the program included:

- New guidelines being released;
- Subsidy reduced from $1,600 to $1,200;
- Program funding capped;
- Appropriate cover for down lights;
- No use of metal staples;

[159] Exhibit Z18.21
[160] T6-49
[161] Exhibit Z8.6 (provided after the close of oral evidence)
[162] Exhibit BD2, p6
[163] Exhibit BB2, p6
[164] Exhibit Z2

- Two quotations required;
- From 1 December 2009 risk assessment to be completed;
- Reminder local government housing excluded from the program.

On or around 2 November 2009, Workplace Health and Safety Queensland released a four page information sheet 'Insulation – installing ceiling insulation and your health and safety' outlining the requirements under the Notice.[165] ESO developed an audit tool in relation to the Ministerial Notice, 'Insulation Installers audit – Ministerial Notice'.[166]

On 2 November 2009, the Commonwealth released Version 4 of its 'Energy Efficient Home Package Home Insulation Program – program guidelines'.[167]

On 3 November 2009, ESO issued an 'e-Alert' titled 'Installing ceiling insulation – health and safety information'.[168] Mr Gibson, the Acting Director, Electrical Safety Compliance, of the Electrical Safety Office confirmed that the relevant Installers to this inquest were not on the mailing list for the dissemination of this information.[169]

Between 2 and 5 November 2009, modifications were made to the ESO Internet site to introduce a new electrical safety and ceiling insulation webpage, which provided various insulation safety information including the Ministerial Notice and the fact sheet and Questions and Answers.[170]

On 5 November 2009, the fourteenth HIP Installer Advice was issued. The Advice provided additional information on the program changes.[171]

On 12 November 2009, the Commonwealth convened a further meeting with training organisations, industry and regulators to review the HIP.[172] It was agreed that DEWHA would mail a hardcopy of the Pocket Book to all registered installers by the end of November 2009 (had been available via the link in the Installer Advice of 26 October 2009). Further, it was agreed CPSISC would implement improvements to the HIP training materials. Participants agreed new entrants to the industry were at the greatest risk of injury and unsafe work practices and that these people and companies needed to be targeted for training and audit.[173]

In addition, minimum competency standards under the program were discussed at the meeting. It was agreed that the supervisor needed to be physically present and that they were to sign the work order form to certify i) safety risks and hazards were to be identified and controlled appropriately; ii) all workers were to be operating in a safe manner; and iii) the work had been completed in accordance with the program requirements and all relevant Australian

[165] Exhibit BD17
[166] Exhibit BD16
[167] Exhibit BD19
[168] Exhibit Z1
[169] Exhibit Z14.37
[170] Exhibit Z14, p4
[171] Exhibit Z18.19
[172] Exhibit Z18.24
[173] Exhibit Z18.23

Standards.[174] However, it seems this issue was to be taken offline for further discussion and clarification. There is no evidence as to the position that was reached on the issue of how supervision would be stipulated under the HIP.

On 13 November 2009, the fifteenth HIP Installer Advice was issued. The topics included, 'Home Insulation Program – Transitional Arrangements'; 'Program Take up'; 'The "Do Not Call" Register'; 'Caravan Park Eligibility'; 'Recycling Plastic Waste'; and 'Discarded Insulation Materials'.[175]

On 18 November 2009 Rueben Barnes was electrocuted.

On 18 November 2009, the sixteenth Installer Advice was issued. The topics included: 'Changes to Terms and Conditions of Registration for Installers under the Home Insulation Program'; 'Password changes'; 'New confirmation page when lodging claims'; 'Claim Issues'; and 'Low Emission Assistance Plan for Renters (LEAPR) Adjustment'.[176]

On 19 November 2009, Minister Garrett replied to Mr Richards' letter of 16 October 2009 (Mr Richards had been urgently seeking withdrawal of the rebate for metal based insulation).[177] Minister Garrett outlined the safety protections that had been, and were, to be added to the HIP.[178]

On 19 November 2009, a summary of all of the modifications to the encompass risk assessment and/or knowledge of electrical hazards to the training materials and Pocket Book was created by CPSISC. It include approximately 60 amendments.[179]

On 20 November 2009, the Queensland Attorney General wrote to Minister Garrett seeking urgent changes to the training and pre-qualification requirements for installers under the HIP.[180]

On 23 November 2009, ESO and WH&S Inspectors commenced an audit program on insulation installers to ensure compliance with both electrical and workplace health and safety legislation, including the Ministerial Notice.[181]

On 25 November 2009, ESO sent out an 'e-Alert' titled, 'Fatality of ceiling insulation installer – 18 November 2009'.[182] It stated:

> Tragedies such as this could be avoided if basic safety precautions are followed. The information contained in the fact-sheet – *Insulation – installing ceiling insulation and your health and safety,* published on the Department's website following the electrocution death of an insulation installer on 14 October 2009, should be followed in all cases.

[174] Exhibit Z18.23, p3
[175] Exhibit Z18.19
[176] Exhibit Z18.19
[177] Exhibit Z16.2
[178] Exhibit Z16.2
[179] Exhibit Z10.3
[180] Exhibit Z14, p5
[181] Exhibit Z14, p5
[182] Exhibit SB43

The e-Alert referred to WH&S and ESO Inspectors undertaking audits of insulation installers as part of an ongoing operation to ensure compliance with the requirements of both OH&S and electrical safety legislation. It also made reference to risk assessments and provided a link to download the risk assessment template. [183] It was sent to the list of accredited installers, which was provided by DEWHA.[184] Vision and Countrywide Insulation, Arrow and Titan were all on the DEWHA supplied list and would have received the e-Alert. QHI did not appear on the list and would not have been sent an e-Alert. [185]

On 27 November 2009, the Risk Register was updated. A copy was unable to be located.

On 27 November 2009, the seventeenth HIP Installer Advice was issued. The topics included: 'Changes to the Terms and Conditions of registration'; 'Program changes from 1 December 2009'; and 'Risk Assessment Requirements from 1 December 2009'. Under the program changes a number of other issues were canvassed. These included supervisor clarification (the person signing the Work Order Form is signing on behalf of the registered installer); definition of dwelling; the use of metal or conductive implements (must not be used); Workplace Health and Safety (must comply with the relevant laws and mitigate risk of eclectic shock by using the appropriate control measures); and Two Quotes.[186]

> The notice required that all workers under the program were to read the 'Construction Industry Pocket Book – Resources for Installers of Ceiling Insulation'. A link to the Pocket Book was once again provided.[187]

From 1 December 2009, the Commonwealth required installers to carry out a mandatory formal risk assessment for every installation before they commenced work.[188] A template for the risk assessment was provided.[189] The Commonwealth document titled, '*Energy Efficient Homes Package, Home Insulation Program, Program Guidelines*', Version 5 was released on 1 December 2009. It included a section on Workplace Health and Safety which was not included in Version 3.

On 11 December 2009, the eighteenth HIP Installer Advice was issued. The format was in a letter to the installers. It advised that to remain on the register installers must agree to the new rules about the deregistered installer list and complete a risk assessment on the approved template before starting each job.

On 15 December 2009, the Spring 2009 edition of Electrical Safety Outlook contained an article 'Electrical Danger for Insulation Installers'. It was emailed to 11,715 ESO subscribers.[190] There continued to be a number of incidents being

[183] Exhibit SB43
[184] Exhibit Z14.37
[185] Exhibit Z14.37
[186] Exhibit Z18.19
[187] Exhibit Z18.19
[188] Exhibit BD2, p6
[189] Exhibit SB49
[190] Exhibit Z14, p5

report to ESO involving metal staples and foil after the use of metal staples were banned on 1 November 2009.[191] Mr Leverton recalls there was some discussion concerning the banning of foil but thinks that had occurred at an earlier time. He said the approach of the ESO was on enforcement of the regulation.[192]

On 17 December 2009, the nineteenth HIP Installer Advice was issued. The topics included: 'Training/skill requirements' (training compulsory if no relevant trade qualification or previous industry experience); and 'Providing evidence' (evidence to provide minimum standards have been met).[193]

On 23 December 2009, the twentieth HIP Installer Advice was issued. The topics included: 'Approved List of Insulation Products'; 'Heat Stress'; and 'Payment arrangements over the Christmas New Year period'.[194]

In or around January 2010, the second version of the Pocket Book was available for distribution.[195]

On 12 January 2010, the twenty-first HIP Installer Advice was issued. The topics included: 'New Training Requirements'; 'Landlord's permission for tenanted properties'; and 'Flat and unusual roofs'.

On 20 January 2010, the Queensland Attorney General issued a media release 'Insulation installers targeted in State-wide safety blitz'.[196]

On 4 February 2010, Mitchell Sweeney was electrocuted.

Further, on 4 February 2010, the twenty-second HIP Installer Advice was issued. It was a reminder to installers that they must by 12 February 2009 provide evidence that all installers met the necessary competency requirements.

On 5 February 2010, ESO Queensland issued an 'e-Alert' titled, 'Fatality of ceiling insulation installer'. Vision (through Countrywide) and Titan received the e-Alert.[197] Arrow had been removed from the DEWHA list by this time. [198]

On 9 February 2010, the Commonwealth Government suspended the use of foil insulation.[199]

On 9 February 2010, the twenty-third HIP Installer Advice was issued. It enclosed the media release issued by the Minister concerning the suspension of foil insulation from the HIP.[200]

[191] Exhibit Z26.1, p104-105; T10-75
[192] T10-76
[193] Exhibit Z18.19
[194] Exhibit Z18.10
[195] T5-68
[196] Exhibit Z14, p5
[197] Exhibit Z14.37
[198] Exhibit Z14.37
[199] Exhibit Z14, p5
[200] Exhibit Z18.19

On 10 February 2010, the Commonwealth Government announced electrical safety inspections for all homes with foil insulation installed under the HIP. Queensland supported this announcement by providing technical questions and answers and assisted in the creation of an Electrical Contactor Checklist.[201]

On 15-16 February 2010, ESO representatives met with DEWHA officials and a range of stakeholders to discuss remediation options.[202]

As at 16 February 2010, the Queensland audit program had completed 579 audits. Inspectors issued Electrical Safety Notices to 80 businesses and Improvement Notices to 70 businesses. The majority related to failure to carry out risk assessments or train staff in risk assessments. Only three related to the use of metal fasteners.[203]

On 18 February 2010, the Queensland Attorney General wrote to the Minister for DEWHA supporting the decision to suspend foil insulation from the HIP and requested the Minister consider the options the ESO representatives posed at the meeting of 15-16 February 2010.[204]

On 24 February 2010, ESO representatives attended a meeting of industry stakeholders called by the Minster for DEWHA. The meeting was to discuss ongoing issues with the foil insulation installations. ESO was in favour of the foil being removed.[205]

On 25 February 2010, Electrical Safety Office Queensland issued an Electrical Safety Outlook e-Alerts – 'Managing foil ceiling insulation risks – householders and trade' and 'Ceiling foil insulation risks to licensed electrical workers'.[206]

The e-Alert directed to householders and trades warned against entering a ceiling space where foil ceiling insulation was installed. If access must occur it recommended ensuring all sources of electricity supply to the premises were isolated before entry. It warned that simply turning off main switches at the switchboards may not isolate all sources of electricity supply to the premises. The e-Alert said the Electrical Safety Office considered that the safe removal of foil from the ceiling space provided the greatest level of electrical safety. Alternatively, it recommended the installation of safety switches for all final sub-circuits and sub-mains located in the ceiling space, by a licensed electrical contractor.[207]

The e-Alert, directed to electrical workers, identified a number of factors which should be included in a risk assessment in a ceiling where foil insulation had been laid. They included:

[201] Exhibit Z14, p5
[202] Exhibit Z14, p5
[203] Exhibit Z14, p6
[204] Exhibit Z14, p6
[205] Exhibit Z14, p6
[206] Exhibit SB81
[207] Exhibit SB81

a) Electrical cables which may have been damaged during the installation of ceiling insulation e.g. cutting, piercing, nailing or stapling into electrical cables;
b) Defective electrical cables e.g. perished or rodent-damaged cable insulation;
c) Exposed terminals or conductors of electrical equipment in the ceiling space e.g. behind light fittings, fans etc;
d) Longer-term electrical safety risks associated with foil insulation due to disturbance of the foil, and home maintenance activities which may result in the electrification of the foil insulation.[208]

On or around 26 February 2010, the Minister for DEWHA wrote to the Queensland Attorney General in response to the safety risks associated with foil insulation.[209]

On 5 March 2010, the Queensland Attorney General wrote to the Minister Assisting the Minister for Climate Change and Energy Efficiency. The letter was in relation to the foil legacy issues.[210]

On 6 March 2010, the Commonwealth Government announced the commencement of the Foil Insulation Safety Program ('FISP').

On 8 March 2010, the Electrical Regulatory Authorities Council ('ERAC') of which the ESO Executive Director, Mr Peter Lamont was a co-ordinator chair wrote to DEWHA. ERAC sought to be involved in the design of any new insulation scheme and in managing any legacy safety issues arising from the HIP.[211]

On 9 March 2010, mandatory safety measures to minimise the risks associated with electrically conductive foil ceiling insulation were introduced through another Queensland Ministerial Notice, 'Electrical Safety (Installation of Ceiling Insulation) Notice 2010.[212] In addition to the precautions included in the 2009 Ministerial Notice, the 2010 Notice required testing of electrical installations by a licenced electrical contractor before the installation of electrically conductive ceiling insulation. If the installation was deemed safe, the relevant person was required to ensure an electrical safety switch was installed on each final subcircuit and submain in the ceiling structure and provide direction for any consumers mains or cables not protected by an electrical safety switch in the ceiling structure.[213]

On 11 March 2010, an E-Alert about the new Ministerial Notice was emailed to the ESO subscribers and the insulation installers.[214] Vision (through Countrywide) and Titan would have received this E-Alert.[215]

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[208] Exhibit SB1
[209] Exhibit Z14, p6
[210] Exhibit Z14, p6
[211] Exhibit Z14, p7
[212] Exhibit Z2
[213] Exhibit Z3 (see sections 8 and 9)
[214] Exhibit Z14, p7
[215] Exhibit Z14.37

On 12 March 2010, a web page titled ‘Electrical safety and ceiling insulation’ was published on the Department of Justice and Attorney-General website (page created on 15 February 2010).[216] The web page provided information about safety and insulation. It had links to ‘Information for consumers’; ‘Legislation and information for installers’; ‘Safety alerts’; ‘Frequently Asked Questions’; and ‘the Australian Government rebate program’.

The ESO continued to liaise with the Commonwealth Government, publish e-Alerts about the FISP, and carry out audits.[217]

On 1 October 2010, both the 2009 and 2010 Ministerial Notices were incorporated into the *Electrical Safety Regulation* by the *Electrical Safety and Other Regulation Amendment and Repeal Regulation (No. 1) 2010*. This Regulation also repealed the two Ministerial Notices on the same day.[218]

[216] Exhibit Z1
[217] Exhibit Z14, p8
[218] Exhibit Z4, p11 (see also *Electrical Safety Regulation 2002*, s81A to 81K)