

ACT FIRES
JANUARY 2003
SUBMISSIONS OF
ACTEWAGL

INQUESTS INTO THE DEATH OF
DOROTHY McGRATH,
ALISON MARY TENER,
PETER BRABAZON BROOKE AND
DOUGLAS JOHN FRASER

AND

INQUIRY INTO THE FIRES OF JANUARY 2003

MR ROBERT STITT QC

30 June 2006

A Introduction

- 1 These submissions are made on behalf of the ActewAGL partnerships and associated entities (collectively referred to in these submissions as “ActewAGL”) in relation to the evidence given and the issues at the Inquiry which concern it.
- 2 No submissions are made as the manner and cause of death of the deceased the subject of the preliminary findings of the Coroner in 2004.
- 3 Your Honour granted limited leave to Mr Stitt QC to appear on behalf of ActewAGL **(T0013 - 16 June 2003)**.
- 4 The Submissions of Counsel Assisting dated 2 April 2006 do not make any comments which are in any way expressly or impliedly critical of ActewAGL. Having regard to ActewAGL’s limited role in the Inquiry, ActewAGL does not seek to make any submissions in relation to matters that have been raised by Counsel Assisting which may be adverse to or which relate to other parties before the Inquiry.
- 5 Similarly in respect of the Submissions of Counsel Assisting on Recommendations dated 4 May 2006, none of the comments or recommendations contained in those Submissions relate directly to ActewAGL. Accordingly ActewAGL again does not seek to make any comments in relation to those submissions.
- 6 ActewAGL’s submissions address how the bushfires of January 2003 impacted upon ActewAGL (and the steps taken to restore gas, water, sewerage and electricity services following the fires).
- 7 The bushfires of January 2003 impacted upon the infrastructure for each of gas, water, sewerage and electricity in different ways.

Water and Sewerage

Water Supply flow and pressure

- 8 The residents of the ACT have available to them a water storage, supply and distribution system which provides high quality potable water to over 130,000 properties.
- 9 That water supply system is not designed primarily for, or intended to be used primarily in, the fighting of bushfires. Its primary purpose is to supply water for the domestic use of residents of the ACT. The capacity to provide water for fire fighting purposes, whilst available to the ACT Fire Brigade and the Rural Fire Service, nevertheless is an ancillary purpose. This distinction should be borne in mind.
- 10 Whilst there is sufficient capacity for the provision of water for the primary purpose, circumstances or a combination of circumstances may arise under extreme bushfire conditions when fire fighting equipment and citizens using all of their domestic hoses or damage to the water infrastructure may cause a drop in, or loss of, water pressure.
- 11 This contingency is well recognised by fire fighters, bushfire experts, the emergency services authorities and other relevant stakeholders.
12. It is for this reason that, as part of its educational program to ACT residents, the ESB and the Government published and distributed to ACT residents the “Will You Survive” brochure. That brochure warned residents that, in extreme conditions during a bushfire emergency, water pressure may be reduced. This is the inevitable result of an unusually high demand on the water system by residents and fire fighters. The brochure warns residents that it may be appropriate to have auxiliary water pumps, or booster pumps, if they intended to stay and fight fires (**T1649.14-31**).

- 13 The evidence at the Inquiry established that, at the time of the fires, there was an adequate water supply in all of the storage facilities in and around Canberra. Two days or so prior to the fires reaching Canberra, all of the reservoirs in the Canberra area had been filled by ActewAGL. Therefore, any drop in, or loss of, water pressure during the bushfire emergency was simply a function of the number of people using the system at the time of the fire event or damage to water infrastructure caused by the fires themselves and not because there were inadequate supplies of water.
- 14 On the 16th and 17th of January, all of the hydrants in the suburbs on the “entire western urban/rural interface” were checked by ActewAGL staff at the request of the ACT Fire Brigade (see: Collins **T5404.25-5404.47**). The hydrants were checked and tested and found all to be ready for use.
- 15 Some reduction in or loss of pressure was experienced by some householders in Canberra during the fires at some locations. Several witnesses to the Inquiry gave evidence of this. However during the fires there were no reported water mains failures in the fire affected areas. At all relevant times there was an adequate supply of water in the reservoirs and the levels did not fall at any time during the bushfires to cause a complete loss of water¹.
- 16 Mr Justin Leonard, who leads the research team in the CSIRO Division of Manufacturing and Infrastructure Technology,² gave the following evidence in answer to a question from Your Honour (**T6778.11-25**):

...Although the lack of water, the loss of water is a common theme among virtually all bushfires. And that's due to the high demand that is imposed on the water network during the event through appliances hooking up to water mains and also through the damage of the structural fires leaving most of the water infrastructure open, and

¹ See ActewAGL report to the Coroner dated 20 September 2004 in response to submissions by Phillip Mazey and Janice Mazey formerly of 50 Darwinia Terrace, Chapman ACT dated 20 July 2004, para 8.1.

water will just freely flow from house wreckages. And only in a few isolated examples in Duffy, we found that some people had the foresight to turn water supplies off to destroyed structures and actually experienced some return of water pressure in that area.

- 17 Some of the resident witnesses who gave evidence at the Inquiry indicated that, whilst they did suffer a drop in, or loss of, water pressure, nevertheless it was not unexpected: (see for example the evidence of Mr Boyle (**T5578.42-5579.20**) who now believes that when he suffered a loss of water pressure it was because all residents in the neighbouring street had already turned on their hoses to fight the fires.
- 18 Importantly, there is no evidence that any drop in, or loss of, water pressure caused, or contributed to, the destruction of any houses during the fire. That is to say, because of the maelstrom conditions and the resulting fires to surrounding structures, bushes, fences or other houses, it was inevitable that all of the houses at which the residents stayed to attempt to fight the fires and which were destroyed would have been destroyed even absent any drop in, or loss of, water pressure. Graphic evidence was given by one resident, Mr Boyle of 19 Kathner Crescent, who was attempting to fight the fires in and around his house but at the time of a drop in water pressure, that he entered his house and found that the house was going to burn in any event as the fire was already in the roof space (**T5564.41-5567.26**).
- 19 Further graphic evidence was given by Mr Perry Smith (**T5632.9-5635.37**) who indicated that, at the time of the fall in water pressure in his area, his family had already evacuated, the fires had enveloped all of his property and there was a fire under his car (which was his only means of escape). At this time he decided to leave the property for his own safety and not simply because of the loss of water pressure.

² See Submissions of Counsel Assisting dated 2 April 2006, paragraph 956.

- 20 Not all suburbs suffered a loss of water pressure. The evidence of Leonard Norris was that during the whole of the time he was fighting the fires, the water pressure was good and, in his words "... we had that at all times". (T5700.25-31).
- 21 There was no evidence from any fire fighters that hydrants failed to deliver suitable pressure to them during the emergency. Nor is there any evidence from any authorities criticizing the water distribution system or ActewAGL's management of it.
- 22 As to the future, the community should continue to be made aware that in a similar circumstance a drop in, or loss of, water pressure may happen and that this is simply a function of the demand on the system by so many people using their hoses (often two or three hoses at each property) as well as fire brigade usage at the same time. This possibility strengthens the need for a recommendation for further community education and awareness in relation to appropriate water use and issues of water pressure during a bushfire emergency which may impact on preparations to fight any fire.
- 23 There should accordingly be a finding that there is no causal nexus between the destruction of, or damage to, any house or building and the drop in, or loss of, water pressure during the bushfires of January 2003. The destruction of, or damage to, the houses would have occurred in any event because of the intensity of the fire, the extreme temperatures involved and the severity of the ember attacks caused by and associated with the fires.

ActewAGL water infrastructure

- 24 The continued provision of uncontaminated water services to the residents of the ACT under emergency conditions, or following such conditions, or in a natural catastrophe such as a bushfire, is of critical importance.
- 25 On 18 January it was necessary for the water treatment plant at Mt Stromlo to be closed down and for chlorine stored at that plant to be protected prior to the onset of the fast approaching fire front (see Bennett T1992.2-14). This was done efficiently by ActewAGL staff.
- 26 The events of the days between 15 and 18 January 2003 demonstrate that ActewAGL was prepared, and has the capacity, to respond to timely and appropriate requests and directions from the ESB or other emergency services and authorities, to protect its infrastructure. By doing so, it was able to ensure the supply of uncontaminated water and adequate sewerage services to ACT residents.
- 27 However, in order for the infrastructure not to be put at risk, particularly by fires, it is necessary for ActewAGL to be given early and timely warnings of impending dangers to that infrastructure and clear and unambiguous instructions and directions in sufficient time to permit them to be carried out.
- 28 ActewAGL submits that the events of January 2003 reinforce the desirability for there to be put in place between the emergency services and it a clear protocol that , in the future, will govern their relationship in the event of an emergency such as that of the bushfires of 2003. A suggested protocol is attached to these Submissions. It is submitted that Your Honour should make a recommendation that it be adopted.
- 29 It is acknowledged that many of the actions referred to in the protocol (for example, clause 3.1) were carried out prior to and during the bushfires. The purpose of the protocol

is to clarify for the future an appropriate line of communication between the respective entities and to ensure that instructions are given and received in an efficient, coherent and timely manner.

B Sewerage

30 Whilst there has been no criticism, and very little mention, of the sewerage system at the Inquiry, the following points should be made.

31 On the 18th January, 2003 the AFP advised of a serious threat to the lower Molonglo Water Quality Control Centre, which was subsequently damaged by fire. Action was promptly taken by ActewAGL at that Centre. It was necessary to ensure that the Centre, which was isolated by fires and resultant Police road blocks, was able to be utilised notwithstanding that it suffered quite significant fire damage, in particular, burnt out electric cables which were essential to the operation of the Centre.

32 It was necessary to ensure that, if sewage could not be routinely treated at the Centre, it was stored in the holding dam. It was critical to ensure that this did not pose a risk to public health by pollution of the Molonglo and Murrumbidgee Rivers.

33 Additionally it was necessary to hold untreated and partially treated sewage in the holding dam so as to prevent it flowing into the river system, until treatment operations could be resumed.

34 Radio messages were issued requesting the public to refrain from excessive discharge of water into the sewerage system from sinks, showers, toilets etc. in order to minimise the amount of sewerage flowing into the treatment plant. The public reaction to this request was excellent and supportive.

35 Following the fire emergencies, parts of the sewerage system were unserviceable for

approximately two days until the Centre was able to be brought back into line. During the period of shutdown no untreated sewage escaped from the holding dam and no pollution of the environment or risk to public health occurred. This was achieved in a comparatively short period and the request for limitation on use of the sewerage system was able to be lifted the following day. This was a very rapid response and again showed that ActewAGL can respond appropriately to an emergency of this kind. Indeed, in this situation, it did so and avoided the potential major health risk from overflowing sewerage.

Electricity

- 36 The electricity supply and distribution system in the ACT provides electrical services to more than 150,000 customers (over 320,000 people) in the ACT area. That system complies with and conforms to industry best practice.
- 37 The Transgrid Station at Holt is vital to the city's electricity supply. Whilst this apparatus is not owned by ActewAGL, continued electricity supply to and from the Transgrid plant was essential for the emergency communications and other services in the fire response.
- 38 ActewAGL staff, with assistance from others, arranged for the station to be protected by the provision of fire breaks and no fire eventually threatened or damaged the station and electricity continued to be available to the Canberra network.
- 39 The electricity distribution network in the ACT includes high voltage wires and poles and fire damage to them carries an inherent risk to persons or livestock if the power supply is not shut off in a timely fashion.
- 40 The electricity system operates in such a manner that, if power poles are burnt and high voltage wires fall to the ground, the supply of power to them is immediately cut off. The network then tries to restart supply but it is designed so that, if circuits are damaged,

electricity supply should then be automatically and permanently cut off.

41 Whilst the risk of danger from fallen wires to fire fighters and other emergency personnel is generally low from high voltage wires in these circumstances, nevertheless there is some residual risk. Paradoxically, low voltage wires may create a greater risk. If poles supporting low voltage wires are brought down by fire without high voltage wires also having been brought down, the lower energy in the lower voltage wire means that the automated shut-off in response to wires touching the ground, generally do not occur. Consequently they could pose a risk of electrocution.

42 Restoration of supply, however, is often urgently required in order to support emergency services.

43 It is for this reason that the shutting down and reopening of parts of the distribution system may become imperative under emergency conditions.

44 Following the fires on the 18th January, ActewAGL demonstrated that it can respond to restore services to the effected parts of the distribution system in a timely manner after such an emergency.

45 This is illustrated by the fact that, immediately after the fire on Saturday, 18th January, 37,500 customers were without electricity supply and the Woden to Wanniasa 132kv sub-transmission line was unserviceable.

46 However, by midnight on Saturday, 18th January, electricity was restored to 7,500 of those customers and by midnight on Sunday, 19th January, only 6,500 customers remained without electricity supply.

47 This number was progressively diminished until Friday, 24th January when the Woden to Wanniasa 132kv transmission line was restored to service. By 28th January, electricity

was restored to all customers in Canberra who had been affected.

- 48 The need for protocols which, in the future, govern the relationship in the event of an emergency has been established. A suggested protocol is attached to these submissions. It is submitted that Your Honour should make a recommendation that it be adopted.

Gas

Introduction

- 49 The residents of the ACT are serviced by a gas distribution system which conforms to industry best practice. There are approximately 3,520km of gas mains in the ACT that supply approximately 90,000 customer connections. The distribution system and infrastructure of which it is comprised are governed by, and comply with, in excess of 150 standards issued under the Australian Standards Regime.
- 50 The gas is natural gas which is lighter than air. If it escapes from the gas distribution system into the atmosphere it rises quickly and will readily dissipate. However if it collects in a confined space the risk of detonation increases dramatically, especially if there is a potential for it to be exposed to a source of ignition such as fire.
- 51 Natural gas is only flammable when mixed with air in a proportion of between 5% (the lower explosive limit (LEL)) and 15% (the upper explosive limit (UEL)) and there is a source of ignition. Above or below those mixture levels natural gas will not ignite.
- 52 The gas distribution system therefore has, as a fundamental requirement, the need to keep the natural gas confined within the network and to allow its delivery to customers in conditions that are as safe as possible for such a highly flammable substance.
- 53 Gas within the network, because it is under pressure, will not burn or explode unless air is allowed to enter the system. Accordingly the distribution network carries with it inherent

dangers if the integrity of the system is lost or damaged or the pipes are ruptured or air is allowed to enter the system whilst gas remains in it.

54 It is thus crucial to overall safety that, to the greatest extent possible, the natural gas must be contained within the distribution network and only released from it and allowed to mix with air under strictly controlled methods.

55 Whilst ever the gas pressure is maintained within the distribution network and there is no chance of air entering the system and thus forming an explosive mixture the system and network are safe.

56 Conversely whenever the gas remains in the system where it may mix with the atmosphere, a potential exists for an explosive mix to be created and subsequent detonation to occur if it is exposed to a source of ignition.

57 If the distribution pipes are open or uncontrolled breaks occur in the network so that there is a chance that air can flow back into the pipes if the gas supply is shut off then the risk of potential detonation is greatly increased.

58 Where there are breaks in the network, the risk of potential detonation increases where the shut off occurs further back in the system. A condition known as “flame travelling” can occur which is the ability of a gas flame to follow the air/gas mixture down the pipelines to its source.³

Network Shutdown

59 Accordingly shutting down the gas supply distribution system is never without risk, particularly where there is known, or suspected, damage to the distribution network.

³ Statement of Peter Bowden dated 28 August 2003 (DPP.DPP.0001 0315).

60 The controlled combustion of natural gas is relatively safe. That is, where gas is already burning there is no chance of further combustion or explosion even though there may be damage to other property in the immediate vicinity. This means that, if gas is burning freely at a point of escape from a damaged network, it is safer to allow that to continue until it can be contained in a strictly controlled manner.

61 In order to prevent the uncontrolled escape from the distribution system, isolating a part of that system can be achieved but the process can be complex and needs to be understood:

- First, once a part of the network is isolated there is still unused gas accumulated in the pipes. The greater the area of the system which is shut down the greater the volume of gas potentially available to mix with air and thus create a combustible mixture.
- Second, to ensure safe and effective isolation and to minimise the risk of flame travel and explosion, the point of shut down should be as close as possible to the part of the network damaged.
- Third, ActewAGL employs a technique known as the “squeeze off” which achieves the maximum efficiency in the shutting off process.

62 In the ACT, isolation of parts of the gas distribution network can be undertaken in the following ways:

- (a) at the residence, by switching off the Meter Control Valve (MCV);
- (b) at any point along the medium pressure network on the customer’s service by “squeezing-off” of the piping; and
- (c) suburb shut-off at the Secondary District Regulators (SDRs).

- 63 Shut down at the SDRs may be undertaken by accessing and turning off valves located underground at the regulator. However, given the extensive and interconnected nature of the medium pressure network in the ACT, isolation of a suburb may require shut down at a multiple number of SDRs.
- 64 It is not simply a question of “turning the gas off”. Rather, the system has to be purged of gas and, depending upon the size of that part of the distribution network sought to be shut down, this may take some time. It is for this reason that the attached protocol is submitted to the Court. It is submitted that Your Honour should make a recommendation that it be adopted.
- 65 Whilst there is some evidence that some meter sets at houses which were burnt or damaged, were burnt during the fires causing escaping gas to burn, nevertheless it is unrealistic and unattainable to expect that all component parts of the gas distribution network will, at all times, be capable of withstanding extreme temperatures (up to 1200° C) and ambient conditions such as those generated by the bushfires of 2003.
- 66 All the components of the gas distribution network and system infrastructure as installed and maintained by ActewAGL complied with all relevant and applicable Australian Standards.
- 67 These standards are directed to ensure that the component parts of the distribution network are capable of withstanding the operating conditions and circumstances absent extreme temperatures. It has not been suggested by any witness, and it would be unreasonable so to expect, that the distribution system or any of its component parts ought to have been capable of withstanding without suffering any damage the extreme temperatures and ambient conditions created by those fires.
- 68 In conformity with the evidence given by Mr Justin Leonard, it is not possible for Your

Honour to make any determination in a causative sense of any individual matter or thing relating to gas that brought about the damage or destruction to property⁴.

69 We note that paragraph 964 of the submissions of Counsel Assisting dated 2 April 2006 refers to Mr Leonard's recommendation that Your Honour recommend the implementation of AS3959. ActewAGL has no submission to make to contradict Mr Leonard's views and opinions other than to submit that the implementation of the standard should take the usual form.

Date: 30 June 2006
Robert Stitt QC
Counsel for ActewAGL

⁴ See the submissions of Counsel Assisting dated 2 April 2006, paragraph 961.

Emergency Communication with Water and Sewerage Utilities Protocol

1 Purpose

- 1.1 The purpose of the protocol is to provide a procedure under which each of the water and sewerage networks (as defined in the *Utilities Act 2000*) or part thereof may be manipulated, controlled, shut off or disconnected under emergency conditions by the utility licensee ACTEW Corporation Ltd or its network operator ActewAGL or any of their related entities (“the Water and Sewerage Utilities”) in a safe and timely manner.
- 1.2 It is intended that the protocol will be activated by ACT Emergency Services Authority (“ACT ESA”), the Territory Controller or the Chief Officers as defined in the *Emergencies Act 2004* or their delegates as set out in Schedule 1) (“**the Activating Party**”) whenever the Activating Party decides that the interests of public safety or protection of property or the environment warrant that such action be undertaken.
- 1.3 Unless otherwise required by law, the Water and Sewerage Utilities are not required to respond to directions or instructions to control, shut off or disconnect the relevant networks or parts thereof under emergency conditions which are not issued in accordance with this protocol.

2 Communications

- 2.1 All communications under the protocol are to be made between the Activating Party and the officer of ActewAGL (“**Officer**”) as set out in Schedule 2 hereto (updated as appropriate).
- 2.2 The Activating Party is to have the legal authority to activate the protocol and to implement it as required hereunder.
- 2.3 Information and instructions provided by the Activating Party to the Officer of ActewAGL will initially be by direct contact or by telephone and confirmed as soon as practicable thereafter by facsimile and/or email.

3 Information required

- 3.1 The actions which the Activating Party may require the Water and Sewerage Utilities to take, include but are not limited to:
 - (a) unscheduled testing of fire hydrants;
 - (b) ensuring that suburban reservoirs are maintained at or above the emergency supply levels as determined by the Water and Sewerage Utilities;
 - (c) removal or isolation of chemical stocks used for water treatment from ACTEW water treatment plants;

- (d) provision of expert advice in relation to catchment protection; and
 - (e) provision of hydrant risers or standpipes.
- 3.2 The Activating Party will provide the Water and Sewerage Utilities with the following instructions and information based on its threat assessment:
- (a) that it requires part of the water and/or sewerage network to be controlled, shut off or disconnected;
 - (b) precise details of that part of the relevant networks which it requires to be so managed;
 - (c) the present status of the threat (including what areas are under threat, the nature of the threat and how soon the threat will materialise);
 - (d) any obstacle which may affect the Water and Sewerage Utilities' access to the area concerned and how that obstacle may be overcome, including safety advice;
 - (e) contact details of the person who is the Activating Party;
 - (f) precise details of the Activating Party's site controller (if any) including contact details.
- 3.3 The Activating Party will liaise with the Water and Sewerage Utilities and discuss the issues outlined above. Discussions will include issues which relate to or may impact upon the Water and Sewerage Utility's licence, public health and/or the environment, and the safety of staff and safety or integrity of the relevant network. This discussion will occur before instructions are given under the protocol.
- 3.4 The Activating Party will give all due weight to the advice of the Water and Sewerage Utilities as to whether and how such instructions can be complied with safely or in a timely manner.

4 Notice required

- 4.1 The Water and Sewerage Utilities require sufficient notice so as safely to manipulate, control, shut off or disconnect the relevant networks or parts thereof.
- 4.2 The Activating Party will provide the Water and Sewerage Utilities with the maximum period of notice of which it is capable.
- 4.3 The parts of the relevant networks that may be involved in such instructions or directions include:
 - the Corin, Bendora, Cotter and Googong catchment areas and dams and pipelines;
 - the Googong and Mount Stromlo water treatment plants;
 - the Lower Molonglo Water Quality Control Centre;

- the Cotter pump station;
- urban reservoirs;
- urban water pump and sewage pump stations;
- communications infrastructure at Bulls Head and Mugga Ridge; and
- the water distribution infrastructure including but not limited to, the pipe network in the relevant area.

4.4 In issuing the instruction, the Activating Party must have regard to the nature of the asset and the nature of the instruction or direction given in respect of such asset or part of the network including:

- the ability to operate on emergency standby power; and
- capacity for remote operation and the like.

Generally the Water and Sewerage Utilities would require not less than 8 hours to comply with directions and instructions, however in some circumstances this may be in excess of 24 hours depending on the directions and instructions.

It is not possible to be precise as to the period of notice required in each such situation.

4.5 In issuing instructions the Activating Party must have regard to the fact that it is inherent in the water network that water pressure and water flow are likely to be reduced and restricted at times of peak demands for access to the water supply.

4.6 The Officer on behalf of the Water and Sewerage Utilities will notify the Activating Party when the instructions have been complied with.

5 Restoration of water and sewerage

5.1 The Activating Party will advise the Water and Sewerage Utilities when it is safe to lift any controls or to restore and reconnect water and sewerage services to relevant areas of the network.

5.2 The Water and Sewerage Utilities will restore supply as soon as reasonably practicable after being so advised.

6 Review of protocol

6.1 The Activating Party and the Water and Sewerage Utilities may review the protocol from time to time as appropriate and may make changes where agreed.

SCHEDULE 1

Name of Activating Party delegates under clause 1.2	Phone/Contact	Fax/Email/Address

DATED:

SCHEDULE 2

Name of Position	Phone/Contact	Fax/Email/Address
Network Controller on duty at the relevant time		

DATED:

Emergency communication with the Electricity Utility Protocol

1 Purpose

- 1.1 The purpose of the protocol is to provide a procedure under which the electricity network (as defined in the *Utilities Act 2000*) or part thereof may be controlled, isolated, shut off or disconnected under emergency conditions by ActewAGL or any of its related entities (“the Electricity Utility”) in a safe and timely manner.
- 1.2 It is intended that the protocol will be activated by ACT Emergency Services Authority (“ACT ESA”), the Territory Controller or the Chief Officers as defined in the *Emergencies Act 2004* or their delegates as set out in Schedule 1 (“**the Activating Party**”) whenever the Activating Party decides that the interests of public safety or protection of property or the environment warrant that such action should be undertaken.
- 1.3 Unless otherwise required by law, the Electricity Utility is not required to respond to directions or instructions to control, shut off or disconnect the relevant network or parts thereof under emergency conditions which are not issued in accordance with this protocol.

2 Communications

- 2.1 All communications under the protocol are to be made between the Activating party and the Network Controller of the Electricity Utility as set out in Schedule 2 hereto (updated as appropriate).
- 2.2 The Activating Party is to have the legal authority to activate the protocol and to implement it as required hereunder.
- 2.3 Information and instructions provided by the Activating Party to the Network Controller of the Electricity Utility will initially be by direct contact or by telephone and confirmed as soon as practicable thereafter by facsimile and/or email.

3 Information required

- 3.1 The Actions which the Activating Party may require the Electricity Utility to take include, but are not limited to, the control, isolation, shut off or disconnection of parts of the electricity network that have been damaged or are liable to be damaged by the emergency event.
- 3.2 The Activating Party will provide the Electricity Utility with the following instructions and information based on its threat assessment:
 - (a) that it requires part of the electricity network to be controlled, isolated, shut off or disconnected;
 - (b) precise details of that part of the electricity network which it requires to be so dealt with (for example a specified single house, a number of specified houses in a street, a specified

street, a number of specified streets, a specified suburb or part thereof or a larger specified area);

- (c) the present status of the threat (including what areas are under threat, the nature of the threat, and how soon the threat will materialise);
- (d) any obstacle which may affect the Electricity Utility's access to the area to be isolated (eg road blocks) and how that obstacle may be overcome including safety advice;
- (e) contact details of the nominated officer of the person who is the Activating Party;
- (f) precise details of the Activating Party's Site Controller (if any), including contact details.

3.3 The Activating Party will liaise with the Electricity Utility and discuss the issues outlined above. Discussions will include issues which relate to or may impact upon the Electricity Utility's licence, public health and/or the environment and the safety of staff and the safety or integrity of the relevant network. This discussion will occur before instructions are given under the protocol.

3.4 The Activating Party will give all due weight to the advice of the Electricity Utility as to whether and how the instructions to deal with the electricity network can be complied with safely and in a timely manner, the extent of the effect and the potential consequences of such actions.

4 Notice Required

- 4.1 The Electricity Utility requires sufficient notice so as to safely isolate and de-energise electricity from parts of the electricity network.
- 4.2 The Activating Party will provide the Electricity Utility with the maximum period of notice of which it is capable.
- 4.3 The Electricity Utility can, by means of remote control, isolate large areas of the high voltage electricity network within minutes. However, the low voltage network is not remotely controlled and requires manual switching by the Electricity Utility's field staff. Nevertheless, safe access cannot be assured until attendance and inspection on site by the Electricity Utility's field staff. Generally in order to isolate and make safe the following areas, with isolation limited to the areas indicated, the Electricity Utility requires not less than the following periods of notice:

Area to be isolated	Notice required
House	45 to 60 minutes
Few houses in a street	45 to 60 minutes

Street	60 to 90 minutes
Few streets	1 to 2 hours
Suburb or substantial part thereof	2 to 4 hours
Larger area	It is not possible to estimate the notice required as this will depend on the area involved.

- 4.4 In issuing the instruction, Activating Party must have regard to the period of notice required by the Electricity Utility and must take into account the reasonably anticipated time necessary to obtain access and to isolate, de-energise and make safe the relevant portion of the network. It is not possible to be precise as to the period of notice in each such situation.
- 4.5 The Network Controller of the Electricity Utility will notify the Activating Party when the instructions have been complied with.

5 Restoration of Electricity Supply

- 5.1 The Activating Party will advise the Electricity Utility when it is safe to access a particular area in order to check the network and perform any necessary work required prior to restoration of supply to the isolated area of the network.
- 5.2 The Electricity Utility will restore electricity supply to the isolated areas as soon as reasonably practicable after being so advised.

6 Review of protocol

- 6.1 The Activating Party and ActewAGL may review the protocol from time to time as appropriate and may make changes where agreed.

SCHEDULE 1

Name of Activating Party delegates under clause 1.2	Phone/Contact	Fax/Email/Address

DATED:

SCHEDULE 2

Name of Position	Phone/Contact	Fax/Email/Address

DATED:

Emergency Communication with the Gas Utility Protocol

1 Purpose

- 1.1 The purpose of the protocol is to provide a procedure under which the relevant gas distribution network (as defined in *Utilities Act 2000*) or parts thereof may be controlled, isolated, shut off or disconnected under emergency conditions by ActewAGL/Agility or any of its related entities (“the Gas Utility”) in a safe and timely manner.
- 1.2 It is intended that the protocol will be activated by ACT Emergency Services Authority (“ACT ESA”), the Territory Controller or the Chief Officers as defined in the *Emergencies Act 2004* or their delegates (as set out in Schedule 1) (“**the Activating Party**”) whenever the Activating Party decides that the interests of public safety or protection of property or the environment warrant the control, isolation, shut down or disconnection by the Gas Utility of the gas distribution network or parts thereof.
- 1.3 Unless otherwise required by law, the Gas Utility is not required to respond to directions or instructions concerning the gas distribution network which are not issued in accordance with this protocol.

2 Communications

- 2.1 All communications under the protocol are to be made between the Activating Party and the Agility planner at the Agility Response Centre of the Gas Utility whose contact details are set out at Schedule 2 hereto (updated as appropriate).
- 2.2 The Activating Party is to have the legal authority to activate the protocol and to implement it as required hereunder.
- 2.3 Information and instructions provided by the Activating Party to the Agility planner at the Agility Response Centres of the Gas Utility will initially be by direct contact or by telephone and confirmed as soon as practicable thereafter by facsimile and/or email.

3 Information required

- 3.1 The actions which the Activating Party may require the Gas Utility to take include, but are not limited to, the control, isolation, shut off or disconnection of parts of the gas network that have been damaged or are liable to be damaged by the emergency event.
- 3.2 The Activating Party will provide the Gas Utility with the following instructions and information based on its threat assessment:
 - (a) that it requires part of the gas distribution network to be controlled, isolated, shut off or disconnected;
 - (b) precise details of that part of the gas distribution network which it requires to be so dealt with (for example a specified

single house, a number of specified houses in a street, a specified street, a number of specified streets, a specified suburb or a larger specified area);

- (c) the present status of the threat (including what areas are under threat, the nature of the threat and how soon the threat will materialise);
- (d) any obstacles which may affect the Gas Utility's access to the area to be isolated (e.g. roadblocks) and how that obstacle may be overcome including safety advice;
- (e) contact details of the person who is the Activating Party;
- (f) precise details of the Activating Party's site controller (if any), including contact details.

- 3.3 The Activating Party will liaise and discuss with the Gas Utility the issues outlined above and including issues which relate to or may impact upon the Gas Utility's licence, public health and / or the environment and the safety and integrity of the relevant network before providing instructions under the protocol.
- 3.4 The Activating Party will give all due weight to the advice of the Gas Utility as to whether and how the instruction to deal with the gas distribution network can be complied with safely and in a timely manner.

4 Notice required

- 4.1 The Gas Utility requires sufficient notice so as to safely isolate relevant parts of the gas distribution network and purge gas from those parts.
- 4.2 The Activating Party will provide the Gas Utility with the maximum possible amount of notice of which it is capable.
- 4.3 Generally in order to isolate and make safe the following areas the Gas Utility requires not less than the following periods of notice:

Area to be isolated	Notice Required
House	80 minutes
Few houses in a street	80 minutes
Street	2 hours
Few streets	3 hours
Suburb	5 hours
Larger area	It is not possible to estimate the notice required as this will depend on the area involved.

- 4.4 In issuing the instruction the Activating Party must have regard to the period of notice required by the Gas Utility and must take into account

the area to be isolated, the particular circumstances on the day and the reasonably anticipated time to obtain access, to undertake isolation and to purge gas from that area of the gas distribution network. It is not possible to be precise as to the period of notice required in each situation and the Activating Party will provide the maximum possible period of notice of which it is capable.

5 Restoration of gas supply

- 5.1 The Activating Party will advise the Gas Utility when it is safe to begin the task of restoring and reconnecting gas supply to the isolated areas of the network.
- 5.2 The Gas Utility will restore the gas supply to the isolated areas as soon as reasonably practicable after being so advised.

6 Review of protocol

- 6.1 The Activating Party and ActewAGL in consultation with Agility may review this protocol from time to time when appropriate and may make changes where agreed from time to time.

SCHEDULE 1

Name of Activating Party delegates under clause 1.2	Phone/Contact	Fax/Email/Address

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DATED:

SCHEDULE 2

Name of Position	Phone/Contact	Fax/Email/Address
Agility Planner		

DATED: