

f-factor Incentive Scheme:

**Statement of Reasons
for Decision to Make Order in Council**

14 December 2016

Purpose

This document has been prepared by the Department of Environment, Land, Water and Planning (DELWP) to assist the Minister for Energy, Environment and Climate Change in complying with section 26 of the Subordinate Legislation Act 1994.

Page 39 of the Victorian Guide to Regulation (2014 Edition) states:

“Departments/agencies must provide reasons for the direction taken in final regulations or legislative instruments that broadly address any general issues raised in submissions. This statement of reasons must be published on the same government website used to consult on the RIS and on the VCEC’s [OCBR’s] website, and be available in hard copy format on request. In this way, the rationale for the ‘final policy position’, including any departures from the preferred option in the RIS, can be explained clearly and is readily accessible to all stakeholders.”

Background

On 10 October 2016, the Minister for Energy, Environment and Climate Change released an exposure draft of the *f-factor Incentive Scheme* Regulatory Impact Statement (RIS) and Order in Council (OIC). The public consultation period closed on 7 November 2016.

Four submissions were received from the following parties:

No.	Organisation
1	CitiPower Pty & Powercor Australia Ltd
2	United Energy Distribution Pty Limited
3	Jemena Electricity Networks (Vic) Ltd
4	AusNet Services Ltd

Three of the of the four submissions support the introduction of a targeted *f-factor* in principle. AusNet Services (AusNet) recommends the current *f-factor* not be amended as proposed.

The submissions identified eight broad issues relating to the proposed OIC or RIS.

The following tables summarise these issues raised and states the Government’s position. Specific statements have been quoted when required for clarity.

Issue 1: Incentivising Safety	
1.1	<i>The proposed f-factor will not drive risk mitigation improvements; other mechanisms already provide effective strategies to reduce network bushfire risk.</i>
Submission Response	AusNet states it does not consider the proposed scheme will promote more efficient risk mitigation as its bushfire mitigation decisions are driven by business safety commitments and legal obligations, not financial incentives. It maintains, bushfire mitigation measures are best optimised through the current safety framework managed by Energy Safe Victoria (ESV). AusNet also maintains that it currently applies the Fire Loss Consequence Model (FLCM) to optimise network operation and

	<p>investment programs for the mitigation of bushfire risk and that the FLCM, not the proposed f-factor, should continue to drive its approach to bushfire risk mitigation.</p> <p>The CitiPower / Powercor, Jemena, United Energy and AusNet submissions state that the distribution businesses are already motivated to conduct effective network bushfire mitigation through other inputs than the f-factor. These inputs include: corporate objectives, community expectations and the risk of litigation, internal bushfire risk mitigation frameworks and practices, Bushfire Mitigation Plans, the adoption of new bushfire mitigation technology, the current legislative and regulatory bushfire safety framework, and safety oversight by ESV.</p> <p>Jemena also states that the incentive value available to it under the current and the proposed f-factor schemes is not material compared with expenditure required for even the smallest of network improvements.</p>
<p>Government Response</p>	<p>The Government acknowledges that the electricity distribution businesses take the fire start danger posed by their networks seriously and undertake bushfire mitigation activities to respond to this risk. The Government also acknowledges the seriousness with which the distribution businesses respond to specific bushfire mitigation obligations and their broader bushfire safety responsibilities and liabilities under law.</p> <p>However, the Government does not accept that the revised f-factor has no role to play in enhancing safety practices.</p> <p>The Government has confidence that an f-factor scheme that is revised on the grounds being proposed will strengthen the suite of legislative and regulatory measures that are in place, that together will yield well targeted and operationally efficient outcomes that serve the interests of bushfire safety.</p>

Issue 2: Risk Classification	
2.1	<p><i>Representation of bushfire risk in the proposed f-factor geographic risk category zones is inferior to, and inconsistent with, the way the FLCM assesses risk.</i></p>
Submission Response	<p>AusNet maintains that the risk assessment framework of the proposed f-factor is inconsistent with the FLCM endorsed by the Powerline Bushfire Safety Taskforce.</p> <p>AusNet also maintains that the new geographic risk zones of the proposed f-factor smear risk across wide areas and that this approach is inferior to the granular risk assessment used by the FLCM.</p>
Government Response	<p>The Government does not agree that the risk assessment framework for the proposed f-factor is inconsistent with the FLCM or misrepresents network bushfire risk. The design of the proposed f-factor scheme is entirely consistent with the FLCM that has been in use since the work of the Taskforce in 2011.</p> <p>Further bushfire risk modelling undertaken since 2011 has allowed the FLCM to be used as a major input underpinning the f-factor design, but not the only input. The FLCM does not include consideration of powerline ignition likelihood, nor does it fully incorporate certain qualitative bushfire risk considerations like locational differences in the ability to suppress fires and to evacuate affected populations (issues of access and egress).</p> <p>The Government's amendments to the <i>Electricity Safety (Bushfire Mitigation) Regulations 2013</i> and the f-factor take account of these other risk considerations.</p> <p>The f-factor redesign builds on the long standing breakdown of geographic bushfire risk priorities (under the <i>Electricity Safety Act 1998</i>) across Victoria into:</p>

	<ul style="list-style-type: none"> • Hazardous Bushfire Risk Areas (HBRA); and • Low Bushfire Risk Areas (LBRA). <p>Victorian Bushfires Royal Commission (VBRC) Recommendations 27 and 32 require enhanced powerline mitigation treatments to target locations deemed to be of the highest risk.</p> <p>The bushfire mitigation regulatory amendments introduced in May 2016 identify two new standards for fault and ignition suppression, both of which have a clear geographic dimension.</p> <p>Consistent with these earlier regulatory amendments, the f-factor redesign has identified two new categories of heightened geographic risk within areas declared HBRA. These are categorised as “extreme” and “severe”.</p> <p>A broad categorisation of geographic risk is consistent with the advice of the FLCM architects, who represent their results following the application of data smoothing techniques (averaging consequence estimates over broader areas) and they advise against interpreting results at too fine a level of granularity.</p>
2.2	<i>Time relative to geographic risk weighting.</i>
Submission Response	The f-factor gives a greater weighting to geographical risk (as opposed to time factors) which will distort investment and operational signals.
Government Response	<p>The f-factor weightings for geography and time work interactively to represent differentials in powerline bushfire risk.</p> <p>The weighting scale for the “time” dimension of the Ignition Risk Unit (IRU) calculation is based on differences in the FDR Index, which is made of a combination of the McArthur Forest Fire Danger and Grassland Fire Danger Index calculations, which has been in operational use for 50 years.</p> <p>The weighting scale for the “geographic” dimension of the IRU calculation uses the FLCM, which is widely used across government and industry.</p> <p>The Government is satisfied with the balance of the underlying risk weightings and the basis of their derivation.</p>

Issue 3: Fire Reporting and Revenue Adjustment Clarifications	
3.1	<i>Certainty that the scheme will use historical ignitions data to determine ignitions performance.</i>
Submission Response	The draft OIC for the f-factor provides unfettered discretion to the Government to determine future benchmark targets; the OIC should provide clear guidance that future IRU benchmark targets should be set on the basis of historic performance.
Government Response	<p>The Government has determined that it is not necessary for the f-factor OIC to state that historical ignitions data will be used to determine IRU benchmarks. Changing the basis of benchmarking the network ignitions performance of the distribution businesses will require a change to the f-factor OIC.</p> <p>If this were to occur, the distribution businesses would be consulted.</p>

3.2	<i>Clarification of regulatory revenue adjustment year for the 2016-17 financial year ignitions performance.</i>
Submission Response	Clarification should be provided on which year the revenue for 2016/17 ignitions performance will be adjusted.
Government Response	<p>The Government confirms that the published draft of the OIC is correct and that 2016-17 financial year ignitions performance data will be used to calculate the revenue adjustment for the 2019 regulatory year.</p> <p>The revenue adjustment for the 2015, 2016 and 2017 regulatory years will be calculated in accordance with the existing Order.</p> <p>The revenue adjustment for the 2018 regulatory year will be calculated in accordance with the transitional methodology provided under clause 13, on the basis of fire starts that occurred between 1 January to 30 June 2016.</p>
3.3	<i>1 January to 30 June 2016 ignitions reporting requirements.</i>
Submission Response	The draft OIC requires reporting for the 1 January 2016 – 30 June 2016 to be provided by September 2016, which has passed. This will preclude inclusion in the 2018 revenue adjustment.
Government Response	<p>Under clause 6(3)(h) a fire start report may include such other information as the AER may from time to time specify.</p> <p>The report required by the AER no later than 30 September 2017 could therefore require the provision of information on fire starts for the 1 January 2016 – 30 June 2016 period.</p> <p>Accordingly there is nothing that would preclude this data from being considered in the 2018 revenue adjustment.</p>

Issue 4: Transition	
4.1	The 1 July 2016 introduction of the proposed f-factor scheme raises a problem of retrospectivity.
Submission Response	The AusNet submission states that <i>“the proposal is to introduce the new f-factor scheme from 1 July 2016, a date which is four months before publication of the RIS. Retrospective regulation should be avoided wherever possible, as it is counter to the Rule of Law principles.”</i>
Government Response	<p>The Government does not accept that the proposal raises a retrospectivity issue.</p> <p>The Order does not create a new liability in the past but rather it provides a new formula by which an existing liability is calculated.</p> <p>Further, there are transitional arrangements in place to preserve the existing formula for the 2015, 2016 and 2017 regulatory years, and to provide for an adjusted formula for the 2018 regulatory year. The new formula for calculating the revenue adjustment only comes into effect in respect of the 2019 regulatory year and subsequent years.</p> <p>Under clause 9(2) of the proposed Order, the revenue adjustments for regulatory years 2015, 2016 and 2017 are to be calculated in accordance with the current Order. In effect this means that there is no change to the calculation of the revenue adjustment in respect of those years.</p> <p>Therefore, notwithstanding that the Order may commence on a date in 2016, no actual change to the calculation of the revenue adjustment will occur until the 2018 revenue</p>

	<p>adjustment is calculated. This is subsequent to the making of the Order.</p> <p>A retrospectivity issue therefore does not arise in respect of the revenue adjustment for the 2016 regulatory year.</p>
Submission Response	<p>The AusNet submission states “<i>the proposed clause 13 would have the effect of imposing the new f-factor scheme retrospectively. The stated intention of the new f-factor scheme is to provide stronger incentives that will drive changed behaviour and better outcomes. Accordingly, it is not logical for the new f-factor to be applied retrospectively.</i></p> <p><i>Retrospective regulation should be avoided wherever possible, as it is counter to the Rule of Law principles, particularly the principles that laws should be capable of being known so subjects can comply with it, as well as the principle that subjects should not be adversely affected by a retrospective change of the law.</i></p> <p><i>The current regulatory year now has less than two months left to run. In these circumstances, we consider that a more appropriate transitional arrangement would be to introduce the new scheme at the end of the current regulatory year, i.e. from 1 January 2017, so that the outcome in the current annual measurement period under the existing scheme is preserved, consistent with good regulatory practice.”</i></p>
Government Response	<p>As noted above, the Department does not accept that the proposal raises a retrospectivity issue.</p> <p>Clause 13 provides for an adjusted formula for the 2018 regulatory year, with the new formula to come into effect for the 2019 regulatory year and subsequent years.</p> <p>The f-factor scheme is simply transitioning:</p> <ul style="list-style-type: none"> • From the current arrangement, which assesses a raw ignition count against an historical benchmark based on raw ignition counts; • To the revised arrangement, which assesses a weighted rating of ignitions against an historical benchmark based on weighted ignitions. <p>Under both arrangements, where average annual ignition performance over time is similar to the benchmark, each arrangement will be cost neutral. The transition period is considered to be one part of a longer time period over which the principle of cost-neutrality is anticipated to apply.</p> <p>The distribution businesses have also been aware of the new information collection requirements for the f-factor. On 27 June 2016, the Department advised in writing to CitiPower / Powercor, AusNet, Jemena and United Energy of the minimum ignition data collection required for the f-factor from 1 July 2016.</p>
4.2	<i>Transitional arrangements for the scheme may impact cost neutrality.</i>
Submission Response	United Energy states that “ <i>cost neutrality has been omitted in transitional arrangements for the period in which this re-designed scheme is first applied.</i> ”
Government Response	The Government does not accept that cost neutrality is compromised by the transition to the new arrangements for the f-factor. The transitional period will measure the fire-start performance of the businesses against a pro-rata of the existing calendar year business benchmarks. The new scheme will measure fire start performance under the IRU benchmarks on a financial year basis, starting 1 July 2016. Both the existing and the revised f-factor schemes have been designed to be cost neutral over time.

Issue 5: Fire Danger Ratings Data Source	
5.1	<i>Common understanding on the source of Fire Danger Ratings (FDR) information should be established and made available to the distribution businesses</i>
Submission Response	<p>CitiPower / Powercor propose that a single source of FDR declaration information should be made available to minimise disputes. Live access to this information is also needed to enable the distribution businesses to respond to the f-factor scheme's incentive.</p> <p>CitiPower / Powercor also recommend that access to historical FDR information, by time and location, should be provided to all distribution businesses via a log distributed by ESV on a weekly and 6 monthly basis.</p> <p>This measure is needed to ensure the scheme is transparent and auditable.</p>
Government Response	<p>The Government agrees that a single official source of published FDR ratings by time, date and location is required to minimise disputes. Currently, a daily source for this information is available on the Bureau of Meteorology (BOM) website at:</p> <p>http://www.bom.gov.au/vic/forecasts/bushfire.shtml</p> <p>Additionally, arrangements are being made and it is expected that a source will also provide historical FDR information.</p> <p>To maintain instant access to this single source of truth, the Government has determined that relevant parties should access this source themselves from BOM.</p>

Issue 6 : Cost Uncertainty	
6.1	<i>The value of an individual IRU imposes too great an impact on distribution businesses under the geographic and time weighted scheme.</i>
Submission Response	The IRU base value should be reduced to contain the maximum potential liability posed to the distribution businesses.
Government Response	The Government has determined that \$15,000 per IRU is an appropriate value, having considered the bushfire risk posed to Victorian communities by network ignitions and the cost implications for both consumers and businesses, under a weighted f-factor scheme.
6.2	<i>A distinction between pole top and ground ignitions should be introduced.</i>
Submission Response	CitiPower / Powercor recommends introducing a reduced IRU value for fire starts that do not result in grass or vegetation ignitions; Jemena also proposes that fires contained to pole-tops and ground fires that result in less than one meter ² of vegetation being burned be excluded under the scheme. These exclusions reflect the reduced risk posed to the community posed by these fires.
Government Response	<p>All ignitions pose a danger to the community. Under certain climatic and environmental conditions, pole top ignitions may become ground fires that pose a significant bushfire danger to the community.</p> <p>In some respects, pole top fires may be considered potential ground fires in waiting. A pole top ignition that does not transition to ground may be attributable to good fortune rather than good management. Contemplated in this context, the rationale for distinguishing between these classes of ignition is not justified.</p>

<p>6.3</p>	<p><i>Cost control mechanisms should be applied to the new f-factor to limit the financial risk to the distribution businesses.</i></p>
<p>Submission Response</p>	<p>Three submissions recommend a cap be introduced into the f-factor to limit the maximum financial liabilities which the distribution businesses may face.</p> <p>Jemena recommends a cap should be introduced which would limit the maximum penalty to the total amount of benefits provided under the f-factor under the preceding five years. Jemena also recommends that the scheme should depart from applying fixed weightings for each of the distribution businesses for time and geography based risk factors.</p> <p>Powercor propose a daily cap of 99 IRUs and an annual cap and collar at plus and minus 50 per cent of its IRU benchmark.</p> <p>AusNet recommend that an annual cap for its business be set at \$9.8 million.</p> <p>AusNet also suggest that the scheme allow the distribution businesses a banking clause, modelled on that provided by the s-factor. This allows the distribution businesses to spread revenue increases or decreases across regulatory years.</p>
<p>Government Response</p>	<p>The Government does not support introducing a cap or a banking arrangement into the proposed f-factor scheme as these mechanisms would undermine the incentive for the businesses to act on days and in places of greatest bushfire risk when action is most needed.</p> <p>If a cap (daily or annualised) were reached, the incentive under the f-factor scheme for any subsequent ignition would be diminished. While the Government does not wish to see undue financial burden placed on a business, it also does not propose to erode the incentive for heightened bushfire mitigation vigilance through the application of a cap.</p> <p>The Government does not support applying different geographic and time based measures for each of the distribution businesses. Firstly, with respect to the “time” variable, Fire Danger Ratings reflect a statewide standard of assessing bushfire risk to the community. A consistent statewide categorisation of “geographic” risk across the distribution businesses provides the clearest and fairest basis for representing locational risk.</p>
<p>6.4</p>	<p><i>The maximum annual potential financial risks imposed by the scheme have been underestimated by the RIS.</i></p>
<p>Submission Response</p>	<p>AusNet maintains its further analysis replicates the methodology used in the RIS, using ignitions data from 2007 – 2010, and that this analysis estimates AusNet may face a maximum annual \$21.5 million loss; AusNet maintains a maximum loss cap of \$9.8 million should be introduced to control this financial risk.</p>
<p>Government Response</p>	<p>The Government does not accept the assertion by AusNet that the Government and CSIRO Data61 modelling “significantly understates the maximum financial exposure” under the f-factor, nor that this supports the need for the introduction of a cap.</p> <p>The Government has concluded that the method applied by AusNet results in a distortion of AusNet’s maximum financial exposure under the revised f-factor.</p> <p>The Government and CSIRO Data61 modelling did not utilise data prior to 2012 as:</p> <ul style="list-style-type: none"> • the distribution businesses did not have such data available; • where available, it was not in a form suitable to this modelling use; and • prior to 2012, there was substantially less safety protection technology in use on the distribution network and so the earlier ignition data is not comparable.

	<p>The results of the analysis presented by AusNet to support the call for a cap cannot be accepted as:</p> <ul style="list-style-type: none"> • modelling on the basis of years 2007 to 2010, treats the extreme weather year of 2009 as a one in four year occurrence (allowing its impact to be overrepresented in the data); • the impact of 2009 was not moderated by combining the 2007-2010 data with data already available for the 2012 to 2015 period. <p>AusNet’s presentation of its maximum financial exposure under the f-factor is seemingly based on an analysis that treats an extreme year as a one in four year occurrence, selecting their maximum financial exposure as the most extreme value of its simulated events (presumably of 30000 simulated years). AusNet’s described simulation is based on fewer years of data than is available. It includes an extreme event in 2009 in a small sample of years. This places an upward bias of AusNet’s financial exposure that is unrealistic and does not provide a plausible estimation of its maximum liabilities under the proposed f-factor.</p> <p>The CSIRO Data61 estimation of AusNet’s financial risk exposure is based on publicly available ignitions data supplied by the distribution businesses to the Department to aid in the design of the f-factor.</p> <p>The Government is therefore satisfied that the revised f-factor framework has appropriately and fairly considered changes in the financial risk exposure to both distribution businesses and the community.</p>
6.5	<i>The financial risk posed by the proposed f-factor to distribution businesses may result in a reduction of service supply reliability.</i>
Submission Response	The AusNet submission notes that “if the scheme exposes distributors to extreme financial risks, it may encourage actions that do not balance safety and reliability considerations – both of which are important to customers. So, while we will not compromise safety – reliability performance may be compromised if excessive financial penalties are introduced through an amended f-factor scheme.”
Government Response	<p>The Government expects that the distribution businesses will respond to the f-factor incentives through improved network bushfire risk mitigation and that these measures will avoid supply interruptions.</p> <p>The Government will continue to monitor the balance between power supply reliability and safety incentives, considering in particular any f-factor related reliability impacts.</p>
6.6	<i>Potential major financial penalties resulting from ignitions started by exogenous variables under the proposed f-factor may result in increased costs to consumers.</i>
Submission Response	The distribution businesses should not face major financial penalties for ignitions started by events beyond their control, such as lightning strikes and motor vehicle accidents, as consumers may be exposed to network price increases.
Government Response	<p>The Government does not accept the need to exclude ignitions caused by external variables from the proposed f-factor.</p> <p>It is recognised that distribution businesses already employ technology to protect their networks from lightning (such as surge arrestors) and inform infrastructure planning by considerations of public safety (such as where to locate a power pole).</p> <p>As all fires pose a risk to the community, the distribution businesses are encouraged to undertake investment and infrastructure planning decisions to limit all powerline ignitions, irrespective of cause. However, the Government expects that this investment targets bushfire risk efficiently.</p>

	<p>The average annual value of the revised f-factor (payments either to the distribution businesses or consumers) is expected to be \$12 million across all distribution businesses. This value is considered sufficient to guide capital investment and operational bushfire mitigation efficiencies.</p> <p>It is therefore expected that the proposed f-factor will encourage efficiency, ingenuity and innovation to mitigate and reduce bushfire risk from network ignitions.</p>
--	--

Issue 7: Data Quality	
7.1	<i>Small selection of ignitions data require correction.</i>
Submission Response	<p>Three of the four respondents maintain that a small selection of the ignition records used to calculate their respective Ignition Risk Unit benchmarks, as stated in the RIS and OIC, require recoding into either different geographical or time categories.</p> <p>Powercor have identified 17 out of their 1609 records of 2012 to 2015 network fire starts which they state require re-weighting, resulting in an increase IRU baseline for Powercor from 468 to 468.83. CitiPower recommends changing one of its 108 ignition records.</p> <p>AusNet has highlighted changes to geographical location for three out of its 656 ignition records, and identified the three records in its attachment to its RIS submission.</p> <p>Jemena state that its calculation of its IRU revises its 9.7 total down to 9.37. The Jemena submission did not provide contested individual ignition records.</p>
Government Response	<p>The Government has elected not to change the published IRU benchmarks as published in the RIS.</p> <p>The Government has reviewed the additional data provided by Powercor and agrees that 14 of the 17 ignitions (and the single CitiPower ignition) should be scored differently. Based on the recalculation, the Powercor IRU benchmark would be 467.2 instead of 468.</p> <p>AusNet, Jemena and CitiPower / Powercor have noted similar small variations in the calculation of their IRU benchmarks.</p> <p>The Government has determined that no adjustment to the IRU published benchmarks is warranted as:</p> <ul style="list-style-type: none"> • the IRU benchmark would only be marginally lower for all distribution businesses; • the difference between the Government’s calculation and that of each business is always less than one IRU; and • not every business provided data to enable the Government to validate the calculation.
7.2	<i>The 2012 – 2015 data set used for the modelling does not reflect future scenarios.</i>
Submission Response	<p>The data set being used to set the f-factor IRU benchmark targets may not reflect future scenarios or be suitable for the decrement as no Code Red days occurred during 2012 - 2015.</p>
Government Response	<p>The Government does not accept that the absence of Code Red days in the 2012 – 2015 ignitions data sets impacts the appropriateness of the proposed IRU benchmarks.</p> <p>During the Government’s f-factor consultations with the distribution businesses in May</p>

	<p>and June of 2016, it was concluded that ignition data prior to 2012 was not captured in a form that was suited to the setting of an IRU based benchmark under the revised f-factor.</p> <p>Accordingly, the 2012 to 2015 historical ignitions data provided to the Australian Energy Regulator by the distribution businesses was used to calculate the IRU benchmarks.</p> <p>Using this data, the Government engaged CSIRO Data61 to undertake Monte Carlo modelling of 30,000 simulated ignition years to estimate how annual IRU scores may vary under different potential weather scenarios. In June 2016, one of the distribution businesses provided their own analysis that included an estimate of their final IRU score for 2009, the year of the Black Saturday bushfires. The CSIRO Data61 modelling provided a distribution of annual IRU scores for the simulated weather years, including estimates for extremes of cool and hot weather years. The distribution includes the value calculated for that distribution business in 2009, providing confidence that the modelling provides a reasonable estimation of extreme weather scenarios and the possible IRU outcomes that may ensue.</p> <p>The Government has confidence that the sensitivity modelling undertaken by CSIRO Data61 provides a reasonable estimate of the impact of weather variability on annual IRU scores.</p>
--	---

Issue 8: Decrement of IRU Benchmarks	
8.1	<i>Decrementing the IRU benchmarks is not necessary.</i>
Submission Response	United Energy “does not agree that a specific design feature is required to reduce the benchmarks already paid for by customers. This feature is already dealt with in the historic data.”
Government Response	<p>The Government expects that the introduction and appropriate utilisation of Rapid Earth Fault Current Limiters (REFCLs) will reduce ignitions. However, the Government does not agree that the benefit of f-factor payments for this REFCL-related reduction should be passed directly to the distribution businesses.</p> <p>The decrement is necessary to ensure consumers do not pay again for the operation of a technology for which they will pay as part of their tariffs.</p>
8.2	<i>Further time and consultation is required to become certain of REFCL operational benefits before Ignition Risk Unit baselines are adjusted.</i>
Submission Response	<p>AusNet and Powercor recommend that the Government not adjust the IRU performance benchmarks to account for an assumed level of future benefits from REFCL technology.</p> <p>AusNet considers the extent and timing of network bushfire safety improvements from REFCLs to be uncertain, given the technology has not been used elsewhere for bushfire mitigation purposes.</p> <p>Powercor also consider the REFCL technology to be in a testing phase and that the Government take into account Powercor’s operational experience of REFCLs.</p> <p>Powercor recommends that its decrement be halved to 6 per cent in recognition of the uncertainties of the impact of REFCLs on ignitions and that operational data be used to inform the decrement in 2020-21.</p> <p>The benchmark decrements should only be applied in light of operational experience.</p>
Government	The Government does not accept the need to delay or reduce the decrement of the distribution businesses’ IRU baselines for the 2019/20 financial year.

<p>Response</p>	<p>While future operational data will provide additional insights into REFCL performance, other forms of knowledge are also valid. There is significant value in what has already been learned about the operational capability of REFCLs. The information gained from experimental use of REFCLs, and engineering/physics understanding of electricity has provided valid and compelling evidence about the risk reduction potential of REFCLs.</p> <p>REFCLs have been a focus of industry and Government exchange since 2011, when the Powerline Bushfire Safety Taskforce provided its report to guide the implementation of VBRC Recommendations 27 and 32.</p> <p>Each distribution business had a representative on the Taskforce, which reported that a REFCL could reduce ignition likelihood by as much as 70 per cent.</p> <p>Since that time, there has been a substantial investment in both REFCL trials and powerline ignition risk modelling, to understand REFCL performance and to accurately estimate the risk benefits of this technology. Through the application of the Government and CSIRO Risk Reduction Model (RRM), a more detailed analysis of future REFCL performance has been calculated, informed by the results of the REFCL trials at the Frankston South and Kilmore South Zone Substations.</p> <p>Using this new analysis, the RRM has been used to estimate that a REFCL will reduce the typical likelihood of ignition on multi-phase powerlines by between 48 and 60 per cent.</p> <p>The Government has confidence in using these figures as the basis for IRU Benchmark adjustments.</p> <p>The level of adjustment for 2019/20 is considered fair as:</p> <ul style="list-style-type: none"> • it reflects the history of 22kV ignitions across Zone Substations reported by businesses; • it applies decrements in accordance with each distribution businesses' own schedule for Zone Substation protection; • it applies an estimated level of ignition reduction that uses the most current independent data and is more conservative than the original estimates of the Taskforce; and • the IRU benchmark has not been adjusted to take account of other safety benefits introduced since 2011, such as powerline replacement activity or the application of new enhanced safety settings to Automatic Circuit Reclosers. <p>In the lead up to 2019/20, the Government will continue to monitor technology improvements of all kinds, facilitate independent appraisals of operational performance and consider consumer funded safety investment in distribution networks.</p> <p>The decrement remains necessary to ensure that consumers do not pay twice for the benefits of this enhanced network protection technology. It is also important that the distribution businesses are incentivised to master and maximise the full protection benefits of REFCLs quickly in order to best protect the Victorian community.</p>
<p>8.3</p>	<p><i>The RIS overestimates the forecast decrement by assuming that some types of fires (such as HV fuse failures) would be eliminated by the installation of REFCLs.</i></p>
<p>Submission Response</p>	<p>The rate of decrement of IRU benchmarks due to REFCL operation should be reduced as the RIS “overestimates the forecast decrement” by incorrectly assuming that a subset of ignitions are treatable by REFCLs.</p>
<p>Government Response</p>	<p>The Government does not accept AusNet’s view that the rate of decrement for the 2019/20 financial year IRU benchmarks requires adjustment on the basis of the subset of ignitions it has identified.</p>

	<p>The assertion that the RIS “overestimates the forecast decrement” is based on a misinterpretation of the methodology used to calculate the decrement.</p> <p>For clarification:</p> <ul style="list-style-type: none"> • The RRM has been used to estimate how much less likely typical future ignitions on 22kV networks will be following the application of enhanced protection, like that offered by a REFCL. • The RRM was not used to estimate how a REFCL, if in operation, would have reduced the likelihood of a specific past ignition on a 22kV powerline. <p>For specific combinations of weather conditions and environmental features, the RRM is able to estimate how less likely an ignition would be to occur on a powerline with different types of powerline safety technology in place.</p> <p>Using the RRM, it is estimated that a REFCL will reduce the likelihood of ignition by between 48 and 60 per cent on average, across all ignition causes on 22kV powerlines. It has a predicted effectiveness of between 0 – 95 per cent for specific ignition causes.</p> <p>The decrementing method applies the average likelihood reduction rate relevant to each location and set of weather conditions, ignoring the <i>specific</i> cause of the historical ignition.</p> <p>AusNet’s recalculation of the decrement is incorrect.</p> <p>While it is true that a REFCL will not prevent ignitions due to particular causes, there is a greater probability that a REFCL will prevent ignitions due to other causes (sometimes as high as 95 per cent). AusNet’s recalculation of the decrement value for 2019/20 only reduces the rate for selected historical ignitions without increasing the rate for other ignition causes. Such an approach lacks balance.</p> <p>The consideration of ignition causes is built into the average rates, and the Government accepts that the application of these averages is the appropriate way to calculate decrements to the IRU benchmark of each distribution business.</p>
<p>8.4</p>	<p><i>A subset of data previously submitted to DELWP by AusNet incorrectly located low voltage network ignitions on the 22 kilovolt high voltage network.</i></p>
<p>Submission Response</p>	<p>The AusNet submission provides updated data that corrects the voltage for a subset of network ignitions records which AusNet had previously reported to the Department.</p>
<p>Government Response</p>	<p>In data provided in support of its submission of 7 November, AusNet identified 112 low voltage ignitions which it previously reported to the Department as 22 kV high voltage ignitions, and one previously 22 kV high voltage ignition was changed to a 66 kV ignition. Sixteen of these changed ignitions impact the AusNet 2019/20 decrement.</p> <p>On 18 November 2016, DELWP formally requested that AusNet explain and substantiate the change.</p> <p>In its 22 November 2016 written response to DELWP, AusNet indicated that it has undertaken a comprehensive analysis of the data it had previously provided to the Department. AusNet indicated in this letter that it considers the data in its 7 November 2016 submission to the f-factor RIS to be accurate. AusNet also stated “<i>the impact of the updated voltage field was insignificant in arriving at a lower decrement than proposed by PBSP. Indeed, it only makes a difference after the year 2023, and then this difference is just 2%.</i>”.</p> <p>To be consistent with the f-factor IRU methodology, the Government has determined to adjust AusNet’s decrement for 2019/20 to account for its corrected voltage data even though the degree of decrement is small.</p> <p>AusNet’s 22 November written response also maintains that its “<i>different IRU estimate</i></p>

	<p><i>is due to a correction to the assessment of fault cause and the anticipated impact of REFCL technology with each ignition incident.”</i></p> <p>The Government will not adjust the decrement to account for the fault types which AusNet states are not affected by REFCLs. On this point, AusNet’s position is based on a misinterpretation of the methodology used to calculate the decrement (as indicated in the Government response to Issue 8.3 above).</p> <p>The AusNet adjusted IRU benchmark for 2019/20 following the application of the revised decrement is 221.1 .</p>
8.5	<i>The CSIRO Data61 Risk Reduction Modelling used for the decrement should be provided before the new f-factor scheme starts.</i>
Submission Response	CitiPower / Powercor recommend that the distribution businesses should review the Risk Reduction Model prior to the targets for the proposed f-factor scheme being finalised.
Government Response	<p>The Government does not accept that the introduction of the proposed f-factor or finalisation of benchmarks or decrements should be delayed while the distribution businesses review the CSIRO Data61 RRM.</p> <p>This delay is not justified as the proposed scheme does not use the RRM to calculate the IRU benchmarks that will apply from the commencement of the 2016/17 financial year.</p> <p>The first decrement will occur at the start of the 2019/2020 financial year, in which time the Government and CSIRO Data61 will familiarise the distribution businesses with the RRM and its data as part of a broader, planned handover of the model for bushfire mitigation purposes.</p> <p>This handover will continue the process established in 2015/16 in which DELWP and CSIRO Data61 introduced the key features of the RRM to the distribution businesses, including how the model has been used to decrement the IRU benchmark for the 2019/20 financial year and the key modelling assumptions that apply.</p> <p>As part of the pre-RIS stakeholder consultation in mid-2016, CSIRO Data61 met with the distribution businesses to present and discuss the data and approach used for risk-reduction modelling. The distribution businesses were informed about how the RRM decrements the 2019/20 IRU benchmarks and were stepped through the key modelling assumptions that apply. CSIRO Data61 has also presented the RRM to the distribution businesses through the DB Reference Group, facilitated by the Powerline Bushfire Safety Program.</p> <p>During this consultation, it was explained that the 2019/20 financial year decrement to the IRU benchmark of each business has been calculated on the basis of the best data available and informed by industry experts and the results of the technology trials conducted at Frankston South and Kilmore South Zone Substations in partnership with the Government and the distribution businesses.</p> <p>The Government is keen to see the dialogue between it, the distribution businesses and CSIRO Data61 on the RRM continue and welcomes RRM data exchanges to support further alignment and understanding of the relativities of powerline bushfire risk mitigation.</p>