

2 October 2015

Ms Nitya Sharma  
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Dear Ms Sharma

### Official Information Act Request

I refer to your request of 30 June 2015, asking for the following information under the Official Information Act 1982 (the Act):

- 1. all information relating to determining the risks to levy ACC registration on various classes of diesel vehicles and also for petrol powered vehicles*
- 2. all and technical qualifications of such persons who have made this decision.*

On 28 July 2015 you received a letter from ACC extending the timeframe for responding to your request by 30 working days under section 15(1)(b) of the Act.

ACC will address your questions in turn.

#### 1. DETERMINING RISKS

ACC has developed a differentiated levy system for Light Passenger Vehicles (LPV) which is aligned to the risk of injury to occupants and other parties. The system has been designed to encourage awareness of safer vehicles and make levies more fairly reflect the risk of injury. The regime was agreed to by Cabinet in August 2014 and, as discussed below, followed extensive industry consultation.

#### FORMULA USED TO PRODUCE RATING SYSTEM

In developing the risk rating methodology, ACC worked with the New Zealand Transport Agency (NZTA), the Ministry of Business, Innovation and Employment and the Motor Vehicle Industry Expert Group (MVIEG) which is made up of the Automobile Association, Motor Trade Association, Motor Industry Association and the Imported Motor Vehicle Industry Association.

While there are a number of approaches that could have been taken to risk rating, it was agreed to use the Total Secondary Safety Index (TSSI) methodology developed by Monash University Accident Research Centre. The TSSI was chosen as it draws on real crash data from 5.4 million police reported road crashes across Australia and New Zealand, extending back as far as 1987. The TSSI is unique in that it also incorporates injuries to other parties involved in a crash, and this better reflects the cost ACC bears in relation to motor vehicle related injuries.

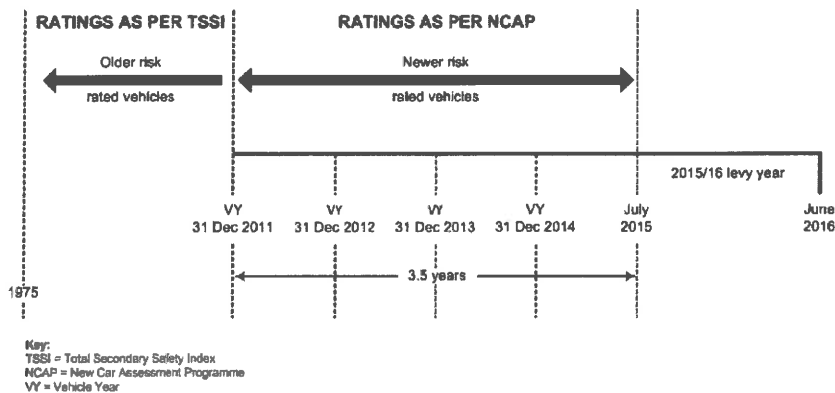
Based on TSSI modelling, ACC proposed four levy bands where vehicles which offer the most protection, for occupants and other road users, are placed in band 4 and those vehicles which offer the least protection are placed in band 1. There was general support from the MVIEG for this approach.

A detailed explanation of the formula used for TSSI is publicly available on the Monash Injury Research Institute website in a report entitled *Vehicle Safety Ratings estimated from Police Reported Crash Data: 2013 Update – Australian and New Zealand crashes during 1987 – 2011*, which can be found on Monash University's website at [www.monash.edu/miri/research/reports/muarc318.pdf](http://www.monash.edu/miri/research/reports/muarc318.pdf)

While the TSSI is the agreed primary approach for risk rating LPVs in the ACC Motor Vehicle Account, there are certain reasons why the levy regime must also rely on other methodologies to provide comprehensive risk rating. Examples of this can be found in relation to newer, low volume and scratch-built or kit/spec cars. The approach taken to each is discussed below.

### Allocating levy rates to newer cars

As noted earlier, the TSSI is based on actual crash data. For that reason, the newest vehicle models cannot be accurately rated on the basis of TSSI as there is little or no crash data available with which to make a credible assessment.<sup>1</sup> Analysis of TSSI data established that there needs to be at least three and a half years of crash data available in respect of a particular LPV in order to provide a credible rating. On that basis, it was agreed that to rate new and recent vehicles a 'credibility threshold' of three and a half years would need to be applied.<sup>2</sup> It was decided that vehicles that met the threshold would be charged a levy based on their TSSI score and vehicles that did not meet the threshold would be banded on the basis of New Car Assessment Programme (NCAP) ratings where available, or default rules (see below). The break-point between using TSSI or NCAP shifts with each new levy year. The following diagram demonstrates how the break-point will be applied to the 2015/16 levy year.



### NCAP

NCAP measures the likelihood and severity of injuries in new cars on the basis of crash tests which have been performed in the laboratory. There are a number of different systems for performing NCAP ratings. While those systems share the common goal of providing a risk rating, there are, however, subtle differences between each. Given that, it was necessary to determine which NCAP would best suit the needs of the levy regime.

Accordingly, ACC and the MVIEG discussed the suitability of the various NCAP including the: Australasian New Car Assessment Programme (ANCAP), Euro New Car Assessment Programme, (Euro NCAP), Japanese New Car Assessment Programme (JNCAP) and United States New Car Assessment Programme (USNCAP). Overall it was acknowledged that because of the subtle differences mentioned above, trade-offs had to be expected when choosing one programme over another.

<sup>1</sup> The generic term 'vehicle year' refers to the year shown in the Motor Vehicle Register ("MVR") that is maintained by the New Zealand Transport Agency. Due to variations in how the MVR captures this information, it could be the 'year of manufacture' (this applies to vehicles from pre 1994 when most were assembled in New Zealand) or be a mixture of model year/year of first registration/year of manufacture.

<sup>2</sup> The industry expressed concern that a period of three and half years may not yield sufficient data, and it was agreed that ACC would review this with a view to consulting the group later on any potential changes that might need to be agreed by the Minister.

The MVIEG suggested that using ANCAP ratings would be the most pragmatic approach in a New Zealand setting. After careful consideration, ACC developed a hierarchy of the programmes with ANCAP as the preferred standard. In doing so it was noted that using ANCAP to provide a risk rating for newer cars would help future-proof the levy rating system. Where ANCAP data is not available, Euro NCAP, then JNCAP are used in order of preference. If no NCAP data exists in relation to a particular vehicle, default rules, which are discussed below, are then applied.

The following table sets out how NCAP ratings are applied to the ACC risk rating levy bands, whereby vehicles which offer the least protection (i.e. most injury risk) are placed in the lowest band:

ANCAP	ACC risk rating levy band	Injury risk
1 and 2 stars	1	Most
3 stars	2	↓
4 stars	3	
5 stars	4	Least

In summary, the agreed treatment for newer cars is:

- Where the credibility threshold is met ACC will use TSSI
- Where the credibility threshold is not met, ACC will use NCAP under the following hierarchy of use:
  1. ANCAP
  2. Euro NCAP
  3. JNCAP
- Where there is no NCAP rating for a particular LVP, ACC will revert to the following default rules.

#### **Default rules**

There are a number of vehicles that are not rated on the basis of either TSSI or NCAP as they either have not been involved in enough road crashes, are rare or unusual, or are a kit/spec or scratch-built car. Default rules apply to these vehicles based on their year of manufacture (YOM) as recorded in the Motor Vehicle Register (MVR) kept by the New Zealand Transport Agency and matched to a risk rating levy band (shown below).

Year of manufacture		ACC risk rating levy band
From	To	
1975	1995	1
1996	2000	2
2001	2008	3
2009	Present	4

The initial consultation undertaken in respect of the default rules considered two YOM ranges. However, following discussion with the Minister for ACC, this was expanded to the four YOM ranges set out above. It was considered that this graduated approach would better reflect the overall safety of the fleet, with the oldest low volume vehicles paying the highest levy and the most recent vehicles paying the lowest.

#### **Scratch-built or kit/spec cars**

The number of scratch-built or kit/spec cars in New Zealand's fleet is relatively small (approximately 2,440). However, concerns were expressed by the MVIEG about defaulting newer vehicles based on YOM, as kit/spec cars are, in general, less safe and it is highly unlikely that they would attain a 5-star ANCAP rating. ACC investigated whether

these cars could all be identified from the MVR and be assigned a higher levy rate, but we cannot be certain that all these vehicles are recorded correctly with the New Zealand Transport Agency.

ACC and MVIEG agreed that while not ideal, scratch-built or kit/spec cars will be considered in the current default rules, but the treatment of them will be revisited for future levy years (that is from 2016/17 on).

## **TREATMENT OF ANOMALIES AND INCONSISTENCIES**

Following careful checking of the bands (in which the MVIEG has been heavily involved), two specific types of anomalies were identified with the risk rating/banding process. However, ACC estimated that only a small number of vehicles are affected by these (approximately 1.5% of the total LPV fleet). The two anomalies are detailed below.

### ***Models where the band decreases for some years of manufacture***

ACC identified 23 models where newer examples of the same model received a lower TSSI rating, and accordingly, a lower ACC risk rating band, than earlier examples of the same model. This deterioration in the rating for newer vehicles is not what is typically expected.

The MVIEG was consulted in relation to this anomaly and was comfortable with the bands assigned but noted that variations in the bands would require careful explanation, particularly where there had been a significant shift. ACC agreed to investigate the large movements and ultimately smoothed the rates for these models to correct this anomaly.

### ***Models where the bands have decreased due to the transition from TSSI to NCAP***

ACC identified 43 models of vehicle which fell into lower bands than they had previously been assigned when the ratings switched from using TSSI to NCAP. This occurs where the NCAP rating of a newer vehicle is lower than the TSSI rating of an earlier version of the same model. The chief concern with this was how to reconcile such inconsistencies with the expectation that newer vehicles are safer than their older versions. Smoothing was considered, however, any smoothing method adopted would compromise either the TSSI or NCAP data. The following options were discussed with the MVIEG:

1. Apply smoothing by rolling back NCAP rating
2. Apply smoothing by rolling forward TSSI rating
3. Maintain the status-quo, do not apply smoothing.

The MVIEG supported the first option. ACC (and the Ministry for Business, Innovation and Employment) supported the third option as this approach maintained the principle of using TSSI for rating older vehicles where this system is considered credible and only used NCAP to rate newer vehicles when TSSI is not credible. It was acknowledged that this would lead to apparent anomalies. The Minister agreed with ACC's rationale in adopting the third option.

This treatment is currently being discussed by the MVIEG and any recommendation it makes may lead to a change in the way such LVPs are treated.

## **ONGOING WORK TO REFINE / ENHANCE VEHICLE RISK RATING**

ACC continues to work with the MVIEG to refine and enhance the vehicle risk rating process. Present discussions include:

- The possibility of introducing a model series dimension to vehicle risk rating so that all vehicles of the same model generation pay the same levy (although that information is not recorded in the MVR)
- The introduction of a parent-child link between model groups so that vehicles which are essentially identical other than their make and model name (rebadging) are charged the same rate

- Proposals for options for the 2015 consultation period (to set the 2016/17 levy rates) to be provided to the Minister for ACC. Consultation is expected to start in October 2015 and any rates or changed rules will be effective from 1 July 2016
- Where they are identified, addressing any other anomalies where the ACC rating seems to disagree with other information available or general expectations – this may result in refinements to the ratings process

ACC and the MVIEG are committed to improving the robustness of the LPV ratings.

### **PETROL AND DIESEL**

The Motor Vehicle Account is funded by the ACC component of the annual vehicle relicensing fee and the ACC levy of 6.9c per litre on petrol sold at the pump.

There is no distinction between a petrol powered vehicle and non-petrol powered vehicle in relation to risk. That is, once a particular make and model of vehicle is assigned to a band, both petrol powered and non-petrol powered vehicles are in that band.

However, for non-petrol powered vehicles, the entire ACC levy is paid as part of the annual motor vehicle relicensing fee. This is because diesel fuel is also used for industrial and off road uses, e.g. generators, boats, farm machinery and does not attract an ACC levy component because of these other uses.

ACC motor vehicle levy rates are set to ensure that the average levy collected for diesel vehicles equates to the combined average of the petrol levy and licence fees for petrol vehicles. Owners of diesel vehicles, on average, pay a similar amount in levies to equivalent petrol vehicles.

## **2. QUALIFICATIONS**

As indicated earlier in this response, many people were involved in the development of VRR. Ultimately, the ACC Board made recommendations to the Minister of ACC for final decisions to be made, some of which were made at Cabinet level. The qualifications of the ACC Board members, the Minister for ACC and Cabinet are publicly available and this part of your request is declined pursuant to section 18(d) of the Act.

If you have any questions about the information provided, ACC will be happy to work with you to answer these. You can contact us at [GovernmentServices@acc.co.nz](mailto:GovernmentServices@acc.co.nz) or in writing to Government Services, PO Box 242, Wellington 6140.

You have the right to complain to the Office of the Ombudsman about our decision to withhold some of the information. You can call them on 0800 802 602 between 9am and 5pm on weekdays, or write to The Office of the Ombudsman, PO Box 10152, Wellington 6143.

Yours sincerely



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