

Energy labelling of alcoholic beverages

Evidence Assessment

2021

Executive summary

In August 2019 the Communique from the meeting of the Australia and New Zealand Ministerial Forum on Food Regulation (now the Food Ministers' Meeting) noted that:

Currently, consumers' ability to understand the energy contribution that alcohol makes to their diet is severely limited, as alcoholic beverages are exempt from providing nutrition information on the label. The Food Regulation Standing Committee (FRSC) has undertaken preliminary analysis on potential regulatory and non-regulatory policy options to address this issue and support consumers to make informed purchasing choices and consumption decisions.

The Ministers agreed to refer work on energy labelling of alcoholic beverages to Food Standards Australia New Zealand (FSANZ) as part of the work relating to alcohol labelling already underway.

As a first step, FSANZ has undertaken an evidence assessment to investigate the issue, as noted by the Ministers, to clearly identify and define the problem (if any), and determine whether labelling is appropriate for addressing the identified problem.

To investigate the issue FSANZ has considered:

- the consumption of, and the energy intake from, alcoholic beverages in Australia and New Zealand
- the available evidence regarding consumer value, understanding and behaviour in relation to energy content information about alcoholic beverages by undertaking a rapid systematic review and meta-analysis
- the availability of energy content information for alcoholic beverages for sale in Australia and New Zealand
- regulatory and non-regulatory approaches used overseas for the provision of energy content information to consumers including the labelling of alcoholic beverages
- technical issues associated with the determination of the energy content of alcoholic beverages.

Two rounds of targeted consultation were undertaken with key representatives from the food industry, public health and consumer groups, jurisdictions and government public health agencies.

The following is a summary of the key assessment findings:

- around 80% of Australian (over 18 years) and New Zealand adults (over 15 years) consume alcoholic beverages
- alcoholic beverages contribute a mean of 16.7% and 16.0% of total daily energy intake for Australian and New Zealand adults respectively on the day they consume alcoholic beverages
- alcohol is energy dense providing 29.3 kilojoules/gram. For adults in the Australian and New Zealand nutrition surveys, 81% and 74% respectively of the energy intakes from alcoholic beverages is contributed by the alcohol itself
- in Australia and New Zealand most alcoholic beverages are purchased to consume away from the place of purchase
- most packaged alcoholic beverages for retail sale in Australia and New Zealand do not currently provide energy content information on the label, however some consumer information about the energy content of alcoholic beverages is available online
- the evidence shows consumers do not understand that alcohol is the main source of energy in most alcoholic beverages

- consumers generally value energy labelling on alcoholic beverages, however they do not understand it, at least when presented in numerical (calorie/kilojoule) format
- energy content information (in calorie/kilojoule numerical format) has no effect on consumers' likelihood of drinking an alcoholic beverage. However it remains unclear whether energy content information affects other behaviours, such as choice among different types of alcoholic beverages or the number of drinks consumed over time. It also remains unclear whether providing energy content information in other (non-numerical) formats affects consumer behaviour
- energy content labelling of alcoholic beverages is not specifically regulated anywhere in the world, however, some countries are in the process of developing mandatory requirements for energy content labelling, and
- while there are some technical issues specific to alcoholic beverages, the energy content of alcoholic beverages can be determined to enable the provision of energy content information.

Based on these key findings, and in the context of:

- the Australian and New Zealand Dietary Guidelines recommendations to limit alcohol intake to achieve an appropriate energy intake, and
- policy guidance which states that Ministers expect food labels to provide adequate information to enable consumers to make informed choices to support healthy dietary patterns recommended in the Dietary Guidelines.

FSANZ has identified the problem as

Unlike most other packaged food and beverages, labels on most packaged alcoholic beverages do not provide information about energy content to enable consumers to make informed choices in line with dietary guidelines.

As labelling appears a potential approach to address the problem, FSANZ considers further consideration is warranted. Therefore FSANZ intends to undertake further work to explore regulatory and/or non-regulatory options for energy labelling of alcoholic beverages, and identify a preferred approach.

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1 Introduction

In August 2019 the Communiqué¹ from the meeting of the Australia and New Zealand Ministerial Forum on Food Regulation (now the Food Ministers' Meeting)² noted that:

Currently, consumers' ability to understand the energy contribution that alcohol makes to their diet is severely limited, as alcoholic beverages are exempt from providing nutrition information on the label. The Food Regulation Standing Committee (FRSC) has undertaken preliminary analysis on potential regulatory and non-regulatory policy options to address this issue and support consumers to make informed purchasing choices and consumption decisions.

The Ministers agreed to refer work on energy labelling of alcoholic beverages to Food Standards Australia New Zealand (FSANZ) as part of the work relating to alcohol labelling already underway³.

As a first step, FSANZ has undertaken an evidence assessment to investigate the issue, as noted by the Ministers, to clearly identify and define the problem (if any), and determine whether labelling is appropriate for addressing the identified problem.

2 Background

2.1 Labelling Review

In 2009, a comprehensive independent review of food labelling law and policy was undertaken by an expert panel, chaired by Dr Neal Blewett, AC. The panel's final report, *Labelling Logic: Review of Food Labelling Law and Policy* (2011) (Labelling Logic) (Blewett et al., 2011), was publicly released on 28 January 2011.

Recommendation 26 from Labelling Logic states: *That energy content be displayed on the labels of all alcoholic beverages, consistent with the requirements for other food products.*

The context of this recommendation was that the provision of energy information would assist people wanting to manage their energy intake given the energy density of alcohol as a nutrient. The panel rejected the view that alcohol products like all other foods should carry a Nutrition Information Panel (NIP) given alcoholic beverages contain few nutrients of concern, other than alcohol, but noted the provision of energy content deserves consideration.

Food Ministers provided 'in principle' support of the recommendation⁴ and noted the labelling review panel's advice that providing the energy content information on alcoholic beverages:

- *would help consumers make informed choices between alcoholic beverages, non-alcoholic beverages and other foods, based on energy content*
- *may assist with product choices based on personal preference in relation to health and/or weight management, and*
- *would more closely align this class of food with other food commodities already required to declare energy content in the nutrition information panel.*

¹ [Australia and New Zealand Ministerial Forum on Food Regulation Communiqué 16 August 2019](#)

² The Australia and New Zealand Ministerial Forum on Food Regulation name change took effect on 21 February 2021 following a decision by Ministers.

³ On FSANZ's work program at the time were Proposals [P1049 - Carbohydrate and sugars claims on alcoholic beverages](#) and [P1050 – Pregnancy warning labelling on alcoholic beverages](#).

⁴ [Response to the Recommendations of Labelling Logic: Review of Food Labelling Law and Policy \(2011\)](#)

Food Ministers also noted:

- consumption of alcohol *may contribute to a significant proportion of an individual's total daily energy intake and may therefore be a contributing factor to overweight and obesity*
- *that the implementation of this recommendation may bring associated costs for industry and have potential international trade implications; these would need to be fully assessed, and*
- *that concerns have been raised about the labelling of energy content on alcoholic beverages having an adverse effect on young people's (particularly women's) eating and drinking behaviour, that is, skipping meals to reduce energy intake to allow for alcohol intake.*

Before considering the issue further, Food Ministers asked FSANZ to undertake research, including discussions with industry, and complete a cost benefit analysis (CBA) to assess the impact of implementing the recommendation. FSANZ contracted the New Zealand Institute of Economic Research (NZIER) to complete the CBA and the report was published in 2015 (NZIER, 2015).

2.2 Preliminary policy work

In May 2015, the Food Regulation Standing Committee (FRSC) noted the CBA, and following the Australian Government Department of Health preparing a paper, '*Broader Policy Issues regarding energy labelling on alcoholic beverages*' for discussion in September 2015, FRSC agreed that the issues be progressed through the new policy framework.

In September 2016, the Forum agreed that FRSC could progress to the next phase of the policy development process. FRSC commenced preliminary work to investigate potential regulatory and non-regulatory policy options to address the issue and support consumers make informed decisions, and in June 2017 conducted targeted stakeholder consultation⁵.

2.3 Nutrition labelling of alcoholic beverages in Australia and New Zealand

Standard 1.2.8 – Nutrition Information requirements in the Australia New Zealand Food Standards Code (the Code) requires most packaged foods to be labelled with an NIP, containing average energy content⁶ information. However, section 1.2.8—5 exempts certain foods including standardised alcoholic beverages⁷ and beverages containing no less than 0.5% alcohol by volume (ABV) that are not standardised alcoholic beverages, from this requirement. This exemption occurred when mandatory nutrition labelling was introduced during the development of the joint Code in 2000⁸. The basis for the exemption was because most alcoholic beverages are of minor nutritional significance, except for their energy and alcohol content, and it was considered the presence of an NIP could mislead consumers about the nutritional value of alcoholic beverages. It was noted that the relationship between energy and alcohol may need to be addressed through education.

Section 1.2.7—4 of Standard 1.2.7 - Nutrition, health and related claims permits nutrition content claims about energy or carbohydrate content to be made on alcoholic beverages. When a permitted nutrition content claim is made, section 1.2.8—5 states an NIP must be provided. The Code also permits alcoholic beverages to voluntarily provide an NIP (See Standard 1.1.2—9(4)).

⁵ <https://foodregulation.gov.au/internet/fr/publishing.nsf/Content/activities-energy-labelling>

⁶ **average energy content** means the average energy content calculated in accordance with section S11—2.

⁷ **standardised alcoholic beverage** is defined in the Code as beer, brandy, cider, fruit wine, fruit wine product, liqueur, mead, perry, spirit, vegetable wine, vegetable wine product, wine or wine product.

⁸ [https://www.foodstandards.gov.au/publications/Pages/Review-of-Nutrition-Labeling-Full-Assessment-Report-Proposal-P167-\(1999\).aspx](https://www.foodstandards.gov.au/publications/Pages/Review-of-Nutrition-Labeling-Full-Assessment-Report-Proposal-P167-(1999).aspx)

When an NIP is provided, the particulars prescribed in section 1.2.8—6 must be included in the NIP and it must be set out in a prescribed format. This means that an NIP on the label of an alcoholic beverage must include the average energy content per serving (mL) and per 100mL.

2.4 Dietary Guidelines

Both the Australian and New Zealand Dietary Guidelines recommend limiting alcohol intake.

The Australian Dietary Guidelines⁹ consider alcohol to be a discretionary food (i.e. energy dense, nutrient poor) and that *limiting alcohol intake is an important strategy for achieving appropriate energy intake*. It is recommended that alcohol intake contribute less than 5% of dietary energy.

The Eating and Activity Guidelines for New Zealand Adults¹⁰ note that *drinking alcohol can add more energy to the diet than people are aware of* and recommend that *if you drink alcohol, keep your intake low*.

2.5 Ministerial policy guidance

The *Policy Guideline on Food Labelling to Support Consumers to Make Informed Healthy Choices*¹¹ (policy guideline) was endorsed by Food Ministers in August 2020. The scope of the policy guideline applies to foods, beverages and alcoholic beverages.

The overall aim of the policy guideline is that Food Ministers expect *food*¹² labels to provide *adequate information to enable consumers to make informed food choices to support healthy dietary patterns recommended in the Dietary Guidelines*.

3 Objectives and approach

The objective of this evidence assessment was to investigate the issue, as noted by the Ministers, and to clearly identify and define the problem (if any), and determine whether labelling is appropriate for addressing the identified problem.

To investigate the issue FSANZ has considered:

- the consumption of, and the energy intake from, alcoholic beverages in Australia and New Zealand
- the available evidence regarding consumer value, understanding and behaviour in relation to energy content information about alcoholic beverages by undertaking a rapid systematic review and meta-analysis
- the availability of energy content information for alcoholic beverages for sale in Australia and New Zealand
- regulatory and non-regulatory approaches used overseas for the provision of energy content information to consumers including the labelling of alcoholic beverages, and
- technical issues associated with the determination of the energy content of alcoholic beverages.

⁹ The Australian Dietary Guidelines are available at <https://www.eatforhealth.gov.au/guidelines>

¹⁰ The NZ Eating and Activity Guidelines are available at <https://www.health.govt.nz/publication/eating-and-activity-guidelines-new-zealand-adults>

¹¹ The policy guideline is available at <https://foodregulation.gov.au/internet/fr/publishing.nsf/Content/food-policies>.

¹² The policy guidance footnotes that 'food' here refers to foods and beverages, including alcoholic beverages.

3.1 Stakeholder consultation

In October 2020 FSANZ undertook targeted consultations with industry, public health and consumer stakeholders, and subsequently with jurisdictions in November 2020.

Further targeted consultation with key industry stakeholders was undertaken in March 2021 to obtain information on the availability of energy content information for alcoholic beverages, and any technical issues associated with the determination of the energy content in these products. The information and data provided by stakeholders informed the investigations detailed in sections 4.3 and 4.5.

A second round of targeted consultation was undertaken in late April and early May 2021 to inform stakeholders of the key assessment findings, and seek their views on the identified problem (see section 5).

4 Investigations and evidence

4.1 Alcoholic beverage intake in Australia and New Zealand

4.1.1 Consumption of alcoholic beverages

Alcoholic beverages are consumed by most Australian and New Zealand adults. In recent national health surveys, 78.8% of Australian adults (aged 18 years and older) (Australian Bureau of Statistics [ABS], 2018) and 80.3% of New Zealand adults (aged 15 years and older) (New Zealand Ministry of Health, 2019) reported consuming alcohol on any occasion over the previous year, with 55.0% of Australian adults consuming alcohol during the previous week (ABS, 2018). In a 2020 poll, 5% of Australian adults who drink alcohol reported consuming alcohol daily over the previous 12 months (Foundation for Alcohol Research and Education [FARE], 2020).

Based on day one of the consumption data from the Australian and New Zealand national nutrition surveys (ABS, 2014; New Zealand Ministry of Health, 2011a, b), 31.8% of Australian and 32.3% of New Zealand adults (aged 18 years and over) reported consuming an alcoholic beverage, with the mean and median intake of alcohol from alcoholic beverages being equivalent to the consumption of 4.5 and 3 standard drinks respectively on the day both Australian and New Zealand adults reported consuming an alcoholic beverage. From the same nutrition survey data, 86.4% of New Zealand adults (aged 18 years and over) consumed an alcoholic beverage over the previous year, a similar proportion to that found in the New Zealand health survey noted above.

In both Australia and New Zealand, most alcoholic beverages are purchased to consume away from the place of purchase. In 2019, for Australian adults who consumed an alcoholic beverage in the past year, 64.6% of their usual supply of alcohol was purchased to take away and drink elsewhere, whereas 23.1% was purchased to drink at the venue¹³ (Australian Institute of Health and Welfare [AIHW], 2020). In New Zealand in 2014, off-licences (premises that sell alcoholic beverages for consumption away from their premises) accounted for an estimated 84% of alcoholic beverage sales by volume, whereas on-licences (premises that sell alcohol for consumption on their premises) accounted for 14% of estimated alcoholic beverage sales by volume (M.E Consulting, 2018).

¹³ Additional sources of usual supply of alcohol are also presented in the data from AIHW (2020) which are not noted here.

4.1.2 Energy intake from alcoholic beverages

The energy intake from alcoholic beverages for adults (aged 18 years and over) on day one of the Australian and New Zealand national nutrition surveys (ABS, 2014; New Zealand Ministry of Health, 2011a, b) is considerable. A mean of 5.3% and 5.2% of total daily energy intake for all Australian and New Zealand adults respectively is contributed by alcoholic beverages. These figures include adults who did not consume an alcoholic beverage. For New Zealand adults who reported consuming an alcoholic beverage over the past year, a mean of 6.0% of total energy is contributed by alcoholic beverages on that one day. For those who reported consuming an alcoholic beverage on day one of the national nutrition surveys, a mean of 16.7% of total energy intake for Australian adults and 16.0% of total energy intake for New Zealand adults is contributed by alcoholic beverages. These results are corroborated by the literature where it has been shown that on day one of the national nutrition survey, alcoholic beverages contributed the greatest proportion of energy from all beverage categories consumed by Australian adults (Riley et al., 2019).

Alcohol is high in energy, contributing 29.3 kilojoules/gram to the diet (National Health and Medical Research Council [NHMRC], Australian Government Department of Health and Ageing, & New Zealand Ministry of Health, 2006). For adults (aged 18 years and over) in the Australian and New Zealand national nutrition surveys (ABS, 2014; New Zealand Ministry of Health, 2011a, b), 81% and 74% respectively of the energy intakes from alcoholic beverages consumed on day one of the surveys is contributed by the alcohol itself.

For adults (aged 18 years and over) in the Australian and New Zealand national nutrition surveys (ABS, 2014; New Zealand Ministry of Health, 2011a, b), wine and beer accounts for most of the energy intake from alcoholic beverages consumed on day one. For Australian adults, a mean of 46% of the energy intake from alcoholic beverages is from wine and 37% from beer. The remainder is from other alcoholic beverages (9%), spirits (6%) and cider and perry (2%). For New Zealand adults, a mean of 43% of energy from alcoholic beverages is from wine and 37% from beer. The remainder is from spirits (11%), other alcoholic beverages (8%) and liqueurs and cocktails (2%).

Further detail on alcoholic beverage intake in Australia and New Zealand is provided in Appendix 1.

4.2 Consumer evidence

FSANZ undertook a rapid systematic review and meta-analysis to examine the available evidence regarding consumer value, understanding and behaviour in relation to energy content information about alcoholic beverages (see Supporting Document). The review is based on a total of 38 studies, and the quality of each study was evaluated using a standardised quality assessment tool. Findings across studies were narratively synthesised and, where the outcome measures across studies could be combined, meta-analysis was used to estimate summary effects. This section summarises the findings of the review.

4.2.1 Consumer value of energy labelling on alcoholic beverages

Results from 18 studies showed that consumers generally value energy labelling on alcoholic beverages (pooled proportion of consumers supporting energy labelling = 69% [95% CI: 56-79%]). However, certain groups (such as heavy drinkers, people who are not health-/weight-conscious, males, people with lower-level education) are likely to value the information less than others. Additionally, although consumers generally value energy content information, other information may be valued on the label to a greater extent (e.g., alcohol content, ingredients, warnings about particular health risks that are associated with alcohol consumption) and this likely varies across different groups in the population.

4.2.2 Consumer understanding of the energy content of alcoholic beverages

Results from 22 studies showed that, based on their general knowledge, consumers generally have a poor understanding of the energy content of alcoholic beverages.

Firstly, only a minority of consumers are able to correctly estimate the energy content (i.e. number of kilojoules or calories) in alcoholic beverages using their general knowledge (pooled proportion of correct estimates across studies = 18% [95% CI: 14-24%]). Additionally, consumers generally report that they do not know the energy content of alcoholic beverages and that they are not confident in their estimates.

Secondly, consumers are generally unable to correctly rank the energy content of different alcoholic beverages using their general knowledge. Rather, consumers tend to underestimate the relative energy content of wine and spirits. That is, wine and spirits are mistakenly perceived as being lower in energy compared to other alcoholic beverages. Conversely, consumers tend to overestimate the relative energy content of beer. That is, beer is mistakenly perceived as being higher in energy compared to other alcoholic beverages.

Thirdly, consumers are generally unaware that alcohol is the main source of energy in wine, beer, and spirits. Rather, one available New Zealand-based study found that consumers tended to believe that sugar was the main source of energy in these beverages (Walker et al., 2019a). One Australian-based study also indicated that low-carbohydrate beer consumers may mistakenly perceive carbohydrates as the main source of energy in beer. In this study consumers chose to drink low-carbohydrate beer over other types of beers (including light alcohol strength beer) because they mistakenly believed it to have less kilojoules and to be less fattening (Victoria Health Promotion Foundation, 2010).

The overall finding that consumers are generally unable to correctly estimate the energy content (i.e. number of kilojoules or calories) in alcoholic beverages using their general knowledge is likely similar to that of food and non-alcoholic beverages (e.g., Brindal et al., 2012; Pettigrew et al., 2013). However, where the two may differ is that consumers generally understand that some foods are high in energy (Brindal et al., 2012). In contrast, consumers may not understand that alcohol is high in energy, as the evidence shows that consumers do not understand that alcohol is the main source of energy in most alcoholic beverages.

Whether providing energy content information enhances consumer understanding of the energy content of alcoholic beverages is further reviewed below.

4.2.3 The effect of energy content information regarding alcoholic beverages on consumer understanding and behaviour

Results from 16 studies showed that energy labelling (in kilojoule/calorie numerical format) has no effect on consumers' likelihood of drinking an alcoholic beverage. However this finding may be explained by the possibility that consumers do not understand energy content information when presented in calorie/kilojoule numerical formats. Consistent with this possibility, two available studies (including one based on a New Zealand sample) found that participants generally found calorie/kilojoule and percent daily intake information difficult to understand (Pabst et al., 2019; Walker et al., 2019a). Similar findings have been reported regarding consumer understanding of energy labelling on food and non-alcoholic beverages (Cowburn & Stockley, 2005; Watson et al., 2013). Additionally, given that most studies examined the effect of energy labelling on participants' likelihood of consuming a single alcoholic beverage, it remains unclear whether energy labelling has an effect on other relevant behaviours (such as consumer choice among different types of alcoholic beverages, or the number of drinks consumed over time). It is also unclear whether providing participants with energy labelling for a range of different alcoholic beverages and/or using other (non-numerical) formats would provide

a sufficient context for consumers to be able to interpret the information, and whether this in turn would affect consumer behaviour.

Finally, there is limited evidence available to answer the question of whether providing energy labelling on alcoholic beverages is likely to encourage some 'at risk' groups of consumers to offset the energy from alcoholic beverages by reducing their food intake.

In summary, the effect of energy labelling of alcoholic beverages on consumer behaviour remains unclear, given that the way in which the available studies measured consumer behaviour, and the types of behaviours measured, was severely limited.

4.2.4 Conclusion

Consumers generally have a poor understanding of the energy content of alcoholic beverages. Consumers generally value energy labelling on alcoholic beverages, however, providing consumers with energy labelling (at least in kilojoule/calorie numerical format) may not enhance consumer understanding, as consumers report that they find the information difficult to interpret.

Most studies found that energy labelling has no effect on consumers' likelihood of drinking an alcoholic beverage. However, it remains unclear whether providing energy labelling using other formats and/or for a range of different alcoholic beverages enhances consumer understanding and therefore affects consumer behaviour. It also remains unclear whether energy labelling on alcoholic beverages affects a range of other relevant behaviours, such as choice among different types of alcoholic beverages, the number of drinks consumed over time, or the amount of food consumed. Thus, it is not possible to make a definitive conclusion regarding the effect of energy labelling of alcoholic beverages on consumer behaviour, given the limitations of the current available evidence.

4.3 Availability of energy content information

FSANZ undertook a limited survey at major liquor retail outlets and supermarkets in Australia (two stores in Canberra) and New Zealand (three stores in Wellington) to investigate the availability of energy content information on the label of alcoholic beverages, as well as other point of sale nutrition information. A search of the internet was also undertaken and information sought through targeted consultation to investigate the availability of energy content information on alcoholic beverages both on and off label.

4.3.1 Label information

Packaged alcoholic beverages are not required to provide an NIP, containing average energy content information, unless a permitted nutrition content claim is being made. While voluntary labelling of alcoholic beverages with an NIP is permitted by the Code, very few products available for retail sale in Australia and New Zealand appear to provide an NIP in the absence of making a claim. Beers and ready-to-drink beverages (RTD's) are more likely to make nutrition content claims and are therefore labelled with an NIP. However FSANZ's survey found most packaged alcoholic beverages for retail sale in Australia and New Zealand do not currently provide energy content information on the label.

4.3.2 Online information

Consumer information about the energy content of alcoholic beverages is available online. An online search for energy content, or kilojoules/calories in alcoholic beverages generates a large number of search results with varying degrees of information about the energy content of different alcoholic beverages. Common examples are detailed below.

Industry websites

A number of Australia and New Zealand alcohol producers are providing nutrition information, including energy content, on their websites, and some producers are including QR codes on label, linking to their websites. This information is generally specific to the branded product and is more commonly observed for beers and RTD's, than other categories of alcoholic beverages like wine and spirits.

Energy content information on industry websites is provided in different ways including NIPs, truncated NIPs (e.g. only energy information provided) and claims about energy content (e.g. 75 calories/serve, low in calories).

Some international alcoholic beverage brands include energy content information on their websites, but this information may not be for products available in Australia and New Zealand.

Online shopping

A small number of Australian and New Zealand retailers provide energy content information of some alcoholic beverages on their websites for online shoppers. For example Woolworths New Zealand Limited provide nutrition information, including energy content, in a full NIP format sourced from GS1 New Zealand for some alcoholic beverages.

Government websites

In New Zealand, the Health Promotion Agency runs a website (alcohol.org.nz) which provides information, research, advice and resources to help prevent and reduce alcohol-related harm. An information sheet on the energy content of alcoholic drinks¹⁴ is available. Graphics show the energy content of a specified volume of the main types of alcoholic beverages alongside the energy content of other drinks and some snacks.

The Mental Health Commission in Western Australia operates the *Alcohol. Think Again* website which has generic information about the energy content of a limited number of alcoholic beverages¹⁵. LiveLighter is a public health education program run by the Cancer Council and Heart Foundation in both Western Australia and Victoria and funded by both state governments. On the LiveLighter website there is information about the energy content of alcohol¹⁶. Estimates of the energy content of general types of drinks are provided with some food comparisons. Reference is made to the high amount of energy in alcohol and that *low carb* drinks may not be much lower in energy given most of the energy comes from alcohol.

Industry initiatives

DrinkWise Australia, an independent not-for-profit industry funded organisation, promotes a safe and healthy drinking culture. On their website, they have a standard drinks calculator¹⁷ which provides the number of calories in certain volumes of specified beverages (small beer, large beer, beer can, beer bottle, red wine, white wine, champagne, straight spirit, spirit premixed).

Similar overseas organisations e.g. UK's DrinkAware also provide information about the number of calories in common alcoholic beverages.

¹⁴ [Health Promotion Agency. Energy content of alcoholic beverages](#)

¹⁵ [Mental Health Commission Western Australia. Alcohol and Nutrition](#)

¹⁶ [LiveLighter. The surprising amount of kilojoules in alcohol](#)

¹⁷ [DrinkWise. | Standard drinks calculator](#)

Food composition databases

Searchable food composition databases, containing nutrition information on alcoholic beverages are available online. These may be freely available or at a cost to the user. Common examples include:

- The Australian Food Composition Database (AFCD) developed by FSANZ which contains average nutrient content of commonly consumed Australian foods
- The NZ Food Composition Database developed by Plant & Food Research and the Ministry of Health which contains nutrient data for New Zealand foods
- Commercial databases (e.g. CalorieKing). Commercial databases may contain some brand/product data in addition to generic alcoholic beverages.

Other sources of online information

Generic energy content information is also freely available from many other online sources such as Wikipedia; calorie counters; health, fitness and lifestyle websites/blogs; and magazine and newspaper articles.

Energy content information available across the various web references is not provided in a consistent manner and usually not product specific. Although some information appears to be from credible sources, some information is provided without reference to the data source. Additionally, a lot of information is based on international data and may not be relevant in the Australian and New Zealand context.

4.3.3 Mobile phone applications (apps)

Over the last 5 years there has been a rise in the number of nutrition and weight loss apps that contain nutrition information, including energy content. However researchers have found variability in the quality of these apps and noted they may not provide exact, reliable information about specific foods (Holmann et al., 2017). Furthermore a number of apps do not disclose information sources or references for food nutrient data (Chen et al., 2015) so may not be credible sources of information.

4.4 Overseas approaches

Energy content labelling of alcoholic beverages is not specifically regulated anywhere in the world. However, a few countries require broader nutrition labelling on specific products (International Alliance for Responsible Drinking [IARD], 2019) and when certain claims are made e.g. in the USA a 'light' malt beverage must have the amount of calories per serving on the label. Ireland, the United Kingdom and the European Union are in the process of developing requirements for energy content labelling The UK Department of Health & Social Care expects to undertake public consultation on energy content labelling of alcoholic beverages in 2021 (UK Department of Health & Social Care, 2020)

Similar to Australia and New Zealand (see section 4.3.2), the alcoholic beverage industry voluntarily provides energy content information on some alcoholic beverage labels and on websites using various presentation formats. In the European Union, peak industry bodies developed a self-regulatory proposal for providing nutrition information to consumers in 2018 (European alcoholic beverage sectors, 2018). This was further developed and supported by the European wine sector (European wine sector, 2018), Spirits Europe (Spirits Europe, 2019) and the Brewers of Europe (Brewers of Europe, 2019) for on-label and/or online information. Recently the European Commission has announced it intends to develop a proposal for the provision of nutrition labelling on alcoholic beverages by the end of 2022 (European Commission, 2021).

In addition to peak industry bodies, a number of alcoholic beverage producers around the world have policies for providing energy content information on-label and/or on websites, however

there appears to be more emphasis on providing the information on websites than on-label. International brand policies on the provision of energy content information may impact the amount and type of information available to Australia and New Zealand consumers whether it be provided on-label or on websites.

Further detail is provided in Appendix 2.

4.5 Determination of energy content of alcoholic beverages

4.5.1 Methodology

Average energy content is defined in section 1.1.2—2 Definitions—general of the Code as the average energy content calculated in accordance with section S11—2 of Schedule 11 Calculation of values for nutrition information panels¹⁸. S11—2 sets out the equation and the energy factors for determining the average energy content of foods for inclusion in the NIP.

Methods that can be used to determine the average energy content of a food for making declarations in an NIP include:

- indirect laboratory analysis and calculation
- calculation from ingoing ingredients (recipe method)
 - using the FSANZ Nutrition Panel Calculator (NPC)
 - other commercial software.

The suitability of these methods for determining the energy content of alcoholic beverages is discussed below.

4.5.1.1 *Indirect laboratory analysis and calculation*

The average energy content of foods and beverages can be determined by a combination of laboratory analysis and calculation. The average amount, in grams, of each component in the food (e.g. carbohydrate, fat, alcohol etc.) and energy factors for these components are required for this method. The equation and energy factors are set out in S11—2 of the Code. Laboratory analysis either in-house or commercially sourced is required to determine the amount of each component in the food.

FSANZ consulted with the Australian Government's national authority on measurement, the National Measurement Institute (NMI)¹⁹ who advised that alcoholic beverages can be analysed for nutrition information similar to other food matrices. As most alcoholic beverages have negligible amounts of protein, fat and fibre and the majority of the energy comes from the alcohol itself, the analysis of alcoholic beverages is generally quite straight forward and when engaging a commercial laboratory to undertake the analysis, can be done at a lower cost than other foods.

4.5.1.2 *Calculation from ingoing ingredients*

The average energy content of some foods can be calculated from recipe. The ingredients and amounts used in the recipe and the final weight or weight change are required for this method.

FSANZ has developed the NPC, a free, online tool to assist food manufacturers calculate the average nutrient content of foods from ingoing ingredients. It is supported by a dataset

¹⁸ <https://www.legislation.gov.au/Details/F2018C00953>

¹⁹ <https://www.industry.gov.au/policies-and-initiatives/national-measurement-institute>

containing average nutrient data for 2520 common foods, including over 50 alcoholic beverages, which can be used as ingredients.

A number of commercial tools are also available, at a cost, as an alternative to the NPC to assist food manufacturers calculate nutrient content of foods for labelling purposes.

While calculation of energy content information from ingoing ingredients may not be as accurate as the other methods it is a cheaper alternative for manufacturers.

4.5.2 Technical issues specific to alcoholic beverages

As discussed previously, some alcohol producers do provide energy content information on and/or off label for their alcoholic beverage products (see section 4.3). Submissions from industry stakeholders indicate that a mix of analysis and calculation is common practice for the determination of nutrition and alcohol content information in the industry. However stakeholders did raise some issues in the determination and provision of accurate energy content information, specific to alcoholic beverages.

4.5.2.1 Alcoholic beverages produced by fermentation

Many alcoholic beverages including beer, wine and some spirits are produced by fermentation. Alcoholic fermentation is the process by which yeast, or bacteria converts sugars into alcohol and carbon dioxide. Consequently, fermentation and the extent of fermentation has an effect on the final sugar (carbohydrate) and alcohol content, and therefore energy content of the final product. The energy content of fermented alcoholic beverages can be determined by calculation if the sugar and alcohol content of the final product has been determined analytically, but cannot be determined solely from ingoing ingredients. Consequently some degree of laboratory analysis is necessary, and the NPC and other similar tools (i.e. calculation from ingoing ingredients) are inappropriate for the determination of the energy content of fermented alcoholic beverages.

4.5.2.2 Accuracy and tolerances

Some alcoholic beverages e.g. wine, craft beer etc. are not made to recipe and therefore the nutritional profile may vary between batches. Industry stakeholders have raised concern about the determination of energy content on a batch by batch basis as being burdensome and financially unfeasible for small batch producers. They have requested consideration of standardised values, rather than product-specific energy content information for alcoholic beverages.

Section 2.7.1—3 sets out the accuracy required in the statement of alcohol content for different alcoholic beverages. Given the large contribution that alcohol makes to a product's energy content, industry stakeholders have suggested these tolerances require consideration with respect to the accuracy required for energy labelling of alcoholic beverages.

4.5.3 Conclusion

We have not identified any technical impediments to determining the energy content of alcoholic beverages to enable the provision of energy content information, and some products are already labelled with energy content information demonstrating it is possible. However, there are issues specific to alcoholic beverages that require further consideration.

5 Conclusion and next steps

The objective of this assessment was to consider the evidence and investigate issues associated with energy labelling of alcoholic beverages, to clearly identify and define the problem (if any), and determine whether labelling is appropriate for addressing the identified problem.

The following is a summary of the key assessment findings:

- around 80% of Australian (over 18 years) and New Zealand adults (over 15 years) consume alcoholic beverages;
- alcoholic beverages contribute a mean of 16.7% and 16.0% of total daily energy intake for Australian and New Zealand adults respectively on the day they consume alcoholic beverages;
- alcohol is energy dense providing 29.3 kilojoules/gram. For adults in the Australian and New Zealand nutrition surveys, 81% and 74% respectively of the energy intakes from alcoholic beverages is contributed by the alcohol itself;
- in Australia and New Zealand most alcoholic beverages are purchased to consume away from the place of purchase;
- most packaged alcoholic beverages for retail sale in Australia and New Zealand do not currently provide energy content information on the label, however some consumer information about the energy content of alcoholic beverages is available online;
- the evidence shows consumers do not understand that alcohol is the main source of energy in most alcoholic beverages;
- consumers generally value energy labelling on alcoholic beverages, however they do not understand it, at least when presented in numerical (calorie/kilojoule) format;
- energy content information (in calorie/kilojoule numerical format) has no effect on consumers' likelihood of drinking an alcoholic beverage. However it remains unclear whether energy content information affects other behaviours, such as choice among different types of alcoholic beverages or the number of drinks consumed over time. It also remains unclear whether providing energy content information in other (non-numerical) formats affects consumer behaviour;
- energy content labelling of alcoholic beverages is not specifically regulated anywhere in the world, however, some countries are in the process of developing mandatory requirements for energy content labelling; and
- while there are some technical issues specific to alcoholic beverages, the energy content of alcoholic beverages can be determined to enable the provision of energy content information.

Based on these key findings, and in the context of:

- the Australian and New Zealand Dietary Guidelines recommendations to limit alcohol intake to achieve an appropriate energy intake; and
- policy guidance which states that Ministers expect food labels to provide adequate information to enable consumers to make informed choices to support healthy dietary patterns recommended in the Dietary Guidelines

FSANZ has identified the problem as

Unlike most other packaged food and beverages, labels on most packaged alcoholic beverages do not provide information about energy content to enable consumers to make informed choices in line with dietary guidelines.

As labelling appears a potential approach to address the problem, FSANZ considers further consideration is warranted. Therefore FSANZ intends to undertake further work to explore

regulatory and/or non-regulatory options for energy labelling of alcoholic beverages, and identify a preferred approach.

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Appendices

Appendix 1: Dietary Intake Assessment

1 Objectives

The objectives of this dietary intake assessment are to:

- estimate the consumption of alcoholic beverages for Australian and New Zealand adults, and
- estimate the alcohol and energy intakes from alcoholic beverages for Australian and New Zealand adults.

2 Methodology and approach for the dietary intake assessment

Dietary intake assessments require consumption data for the foods that have been collected through a national nutrition survey. The dietary intake assessment was undertaken using FSANZ's dietary modelling computer program Harvest²⁰. The analysis was restricted to adults at least 18 years of age, which is the legal alcohol drinking age in both Australia and New Zealand.

A summary of the general FSANZ approach to conducting dietary intake assessments is on the [FSANZ website](#). A detailed discussion of the FSANZ methodology and approach to conducting dietary intake assessments is set out in [Principles and Practices of Dietary Exposure Assessment for Food Regulatory Purposes](#) (FSANZ, 2009).

2.1 Food consumption data used

The labelling regulations contained in the *Australia New Zealand Food Standards Code* (the Code) apply to alcoholic beverages sold in both Australia and New Zealand, therefore dietary intake assessments were undertaken for both countries.

Alcoholic beverage consumption and alcohol and energy intakes derived by FSANZ for Australia and New Zealand were based on 24-hour diet recall nutrition survey data. The food consumption data used for the dietary intake assessment were:

- 2008-09 New Zealand Adult Nutrition Survey (2008 NZ ANS) (New Zealand Ministry of Health, 2011a, b) and
- 2011-12 Australian National Nutrition and Physical Activity Survey (2011-12 NNPAS) (ABS, 2014b).

The design of these nutrition surveys vary and the key attributes of each, including survey limitations are on the [FSANZ website](#).

All alcoholic beverages (including commercial and home prepared mixed beverages) were included in the assessment (refer to Table 1). De-alcoholised and non-alcoholic wine (including sparkling varieties) in the 2011-12 NNPAS food category of 'wines' and alcohol consumed as part of other foods reported being consumed in both the Australian and New Zealand nutrition surveys (e.g. wine in sauces) were excluded. In addition to the proportion of total energy intake,

²⁰ Harvest is FSANZ's custom-built dietary modelling software program that replaced the previous program, DIAMOND, which does the same calculations just using a different software program.

this assessment also estimated energy intake from alcoholic beverages as a proportion of energy intake from discretionary foods for Australian adults. The list of foods identified as discretionary is available in the Australian Health Survey Users Guide, 2011-13 (ABS, 2014a).

Table 1: Nutrition survey food groups for alcoholic beverages included in the dietary intake assessment

2011-12 NNPAS		2008 NZ ANS	
Food group code	Food group name	Food group code	Food group name
291	Beers	4101	Beer
292	Wines	4102	Wine
293	Spirits	4103	Spirits
294	Cider and perry	4104	Liqueurs and cocktails
295	Other alcoholic beverages*	4105	Other alcohol [^]

* 2011-12 Australian National Nutrition and Physical Activity Survey. Other alcoholic beverages includes liqueurs, cocktails, pre-mixed commercially manufactured drinks and other alcoholic beverages.

[^]2008-09 New Zealand Adult Nutrition Survey. Other alcohol includes alcoholic soda, bitters, cider, hot toddy drink, port, punch and sherry.

In the 2008 NZ ANS, energy values did not include the energy from dietary fibre (New Zealand Ministry of Health 2011a). The nutrient composition database AUSNUT 2011-13 (Food Standards Australia New Zealand, 2014) that was used for the 2011-12 NNPAS includes two estimates for energy, one with and one without energy from dietary fibre. For consistency in this assessment, energy intakes from alcoholic beverages consumed in the 2011-12 NNPAS were calculated using the values for energy without dietary fibre.

Dietary consumption of alcoholic beverages, and alcohol and energy intake from alcoholic beverages, were calculated for day one for all *respondents* as well as the following two sub-groups of consumers:

1. Respondents who reported consuming an alcoholic beverage on day one were classified as *day one consumers*. This group does not represent all those in the population who consume alcoholic beverages (i.e. drinkers) because not all drinkers drink daily. For example, some may drink but once a month, and the survey only captures a single day of each participant's diet.
2. Respondents in the 2008 NZ ANS who answered yes to the question 'Have you had a drink containing alcohol in the last 12 months?' were classified as *12 month consumers* even if they did not report consuming an alcoholic beverage on day one of the survey. Respondents who answered 'no', or who did not provide a response to the question in the 2008 NZ ANS were not classified as *12 month consumers* for this dietary intake assessment, as were those who reported never having consumed an alcoholic beverage. Unlike the 2008 NZ ANS the 2011-12 NNPAS did not include a question that could be used to identify those who usually drink alcohol.

2.2 Assumptions and limitations of the dietary intake assessment

The purpose of the dietary intake assessment was to make the best estimate of alcoholic beverage consumption, and intake of alcohol and energy from alcoholic beverages. Where significant uncertainties in the data exist, FSANZ uses conservative assumptions to ensure that the estimated dietary intake is not an underestimate. One assumption made in this dietary intake assessment is that alcoholic beverage consumption data includes both packaged (i.e. labelled) and non-packaged beverages.

Dietary intake assessments based on food consumption data from nutrition surveys provide the best estimation of actual consumption of a food and the resulting estimated dietary intake assessment for the Australian and New Zealand populations. However, national nutrition survey data have some limitations. A discussion of these limitations is included in Section 6 of the [Principles and Practices of Dietary Exposure Assessment for Food Regulatory Purposes](#) (FSANZ, 2009).

3 Dietary intake assessment results

3.1 Alcoholic beverage consumption

The estimated consumption of alcoholic beverages were calculated for *day one consumers* (Australia and New Zealand) and *12 month consumers* (New Zealand only) of alcoholic beverages. Data are reported as the weighted²¹ proportion of consumers to respondents.

On day one of the nutrition surveys, 31.8% of Australian and 32.3% of New Zealand adults report consuming an alcoholic beverage (refer to Table 2).

Table 2: Consumption of alcoholic beverages

Country	Consumers	No. of respondents (18+ years)	Proportion of consumers
Australia	Day one consumers*	9621	31.8
New Zealand	Day one consumers^	4455	32.3

* 2011-12 Australian National Nutrition and Physical Activity Survey. Based on consumption data from Day 1 respondents aged 18 years and over. These data were weighted during the calculations undertaken in Harvest.

^ 2008-09 New Zealand Adult Nutrition Survey. Based on consumption data from Day 1 respondents aged 18 years and over. These data were weighted during the calculations undertaken in Harvest.

In the New Zealand nutrition survey, when asked the question 'Have you had a drink containing alcohol in the last 12 months', 86.4% of adults report consuming an alcoholic beverage over the past year.

3.2 Alcohol intake from alcoholic beverages

The estimated dietary intakes of alcohol (g/day) from alcoholic beverages were calculated for all *respondents* (Australia and New Zealand), *day one consumers* (Australia and New Zealand)

²¹ Survey sample weighting factors are used to adjust the results of surveys to better reflect the results that would have been obtained if a truly representative sample had been able to be obtained, and to make population based estimations of results.

and *12 month consumers* (New Zealand only) and are reported for mean, 50th percentile (median) and 90th percentile intakes, and as the number of standard drinks²².

Data are reported for adults aged 18 years and over as per the legal alcohol drinking age in both Australia and New Zealand in Table 3. For *respondents* and *12 month consumers* the median alcohol intakes from alcoholic beverages are zero because alcoholic beverages were not consumed by all respondents (less than half) to the surveys.

The estimated mean alcohol intake from alcoholic beverages on day one for *respondents* in the Australian and New Zealand surveys is 14.2 g/day and 14.6 g/day respectively. This is equivalent to the consumption of approximately 1.4 to 1.5 standard drinks per day for all adult respondents to the surveys.

The estimated mean alcohol intake from alcoholic beverages on day one for *12 month consumers* in the New Zealand survey is 16.9 g/day. This is equivalent to the consumption of approximately 1.7 standard drinks per day for adults who are alcoholic beverage consumers at some time over a 12 month period, but who may or may not have consumed an alcoholic beverage on the day of the survey.

The estimated mean and median alcohol intake from alcoholic beverages on day one for *day one consumers* in the Australian and New Zealand surveys is 44.5 g/day and 32.2 g/day, and 45.3 g/day and 29.6 g/day respectively. These are equivalent to the consumption of approximately 4.5 (mean) and 3 (median) standard drinks per day, on the day Australian and New Zealand adults reported consuming an alcoholic beverage.

3.3 Energy intake from alcoholic beverages

The estimated dietary intakes of energy from alcoholic beverages were calculated for all *respondents* (Australia and New Zealand), *day one consumers* (Australia and New Zealand), and *12 month consumers* (New Zealand only). Data on energy intakes from alcoholic beverages are reported for mean, 50th percentile (median) and 90th percentile intakes in three ways:

- in kilojoules per day, derived from each individual's daily intake
- as a proportion (%) of total energy intake, derived from each individual's daily intake
- as a proportion (%) of the energy intake from discretionary foods (Australia only), derived from each individual's daily intake.

Data are reported for adults aged 18 years and over as per the legal alcohol drinking age in both Australia and New Zealand in Table 3. For *respondents* and *12 month consumers* the median energy intakes from alcoholic beverages are zero because alcoholic beverages were not consumed by all respondents (less than half) to the surveys.

The estimated mean energy intake from alcoholic beverages on day one for *respondents* in the Australian and New Zealand nutrition surveys is 511 kJ/day and 575 kJ/day respectively. As a proportion of total energy, these intakes represent a mean of 5.3% and 5.2% of total energy intake for Australian and New Zealand adults, and a mean of 13.8% of the energy intake from discretionary foods for Australian adults.

The estimated mean energy intake from alcoholic beverages on day one for *12 month consumers* in the 2008 NZ ANS is 664 kJ/day. This represents an estimated mean proportion of 6.0% of total energy intake for New Zealand adults who are alcoholic beverage consumers at

²² A standard drink is defined in Standard 2.7.1-2 of the Code as the amount (for a beverage containing alcohol) that contains 10 grams of ethanol when measured at 20°C.

some stage over a 12 month period, but who may or may not have consumed an alcoholic beverage on the day of the survey.

The estimated mean energy intake from alcoholic beverages for *day one consumers* in the Australian and New Zealand nutrition surveys is 1608 kJ/day and 1781 kJ/day respectively. As a proportion of total energy, these intakes represent a mean of 16.7% and 16.0% of total energy intake for Australian and New Zealand adults, and a mean of 43.4% of energy intake from discretionary foods for Australian adults, on the day adults report consuming an alcoholic beverage.

For Australia and New Zealand *day one consumers*, the estimated median energy intakes from alcoholic beverages are less than the estimated means. This indicates the data distribution is skewed to the right, reflecting some higher intakes of energy from alcoholic beverages, both as kJ per day and as proportions of energy intake.

3.4 Contribution of energy intake from alcohol to the estimated energy intake from alcoholic beverages

The contribution of energy intake from alcohol to the estimated energy intake from alcoholic beverages was calculated for *day one consumers* (Australia and New Zealand). Of the total energy intake from alcoholic beverages consumed by Australian and New Zealand adults on day one of the nutrition surveys, 81% and 74% respectively is contributed by the alcohol intake itself.

3.5 Mean energy intakes from different alcoholic beverages as a proportion of the total estimated energy intake from alcoholic beverages

The mean energy intakes from different alcoholic beverage groups as a proportion of the total energy intake from alcoholic beverages was calculated for *day one consumers* (Australia and New Zealand). For Australian adults, a mean of 46% of the energy intake from alcoholic beverages is from wines and 37% from beers. The remainder is from other alcoholic beverages (9%), spirits (6%) and cider and perry (2%). For New Zealand adults, a mean of 43% of the energy intake from alcoholic beverages is from wine and 37% from beer. The remainder is from spirits (11%), other alcoholic beverages (8%) and liqueurs and cocktails (2%) (refer to Table 4).

For both Australian and New Zealand *day one consumers*, beer contributes a greater mean proportion of energy intake from alcoholic beverages for males, whereas wine contributes a greater mean proportion of energy intake from alcoholic beverages for females (refer to Table 4).

Table 3: Estimated mean, 50th percentile (P50) and 90th percentile (P90) energy intake from alcoholic beverages

Country	Respondents/ consumers	Alcohol intake from alcoholic beverages (g/day)			Energy intake from alcoholic beverages (kJ/day)			Proportion of total energy intake (%)			Proportion of energy intake from discretionary foods (%)		
		Mean	P50	P90	Mean	P50	P90	Mean	P50	P90	Mean	P50	P90
Australia	Respondents*	14.2	0	50.3	511	0	1791	5.3	0	19.4	13.8	0	55.2
	Day one consumers*	44.5	32.2	90.9	1608	1123	3293	16.7	13.2	33.8	43.4	38.4	83.5
New Zealand	Respondents^	14.6	0	45.0	575	0	1620	5.2	0	18.8	n/a	n/a	n/a
	12 month consumers [‡]	16.9	0	50.4	664	0	1917	6.0	0	20.1	n/a	n/a	n/a
	Day one consumers^	45.3	29.6	100.1	1781	1054	4075	16.0	11.8	32.5	n/a	n/a	n/a

* 2011-12 Australian National Nutrition and Physical Activity Survey. Based on consumption data from Day 1 respondents aged 18 years and over. These data were weighted during the calculations undertaken in Harvest.

^2008-09 New Zealand Adult Nutrition Survey. Based on consumption data from Day 1 respondents aged 18 years and over. These data were weighted during the calculations undertaken in Harvest.

‡2008-09 New Zealand Adult Nutrition Survey. Based on responses to the question 'Have you had a drink containing alcohol in the last 12 months?'. These data were weighted during the calculations undertaken in Harvest.

Table 4: Mean energy intakes from different alcoholic beverages as a proportion of the total energy intake from alcoholic beverages

Country	Alcoholic beverage group	Mean energy intakes from different alcoholic beverage groups as a proportion of the total energy intake from alcoholic beverages (%)		
		Males	Females	Total
Australia*	Beer	54	12	37
	Wine	30	69	46
	Other alcoholic beverages	8	11	9
	Spirits	6	6	6
	Cider and perry	2	2	2
New Zealand^	Beer	56	12	37
	Wine	24	68	43
	Other alcoholic beverages	6	9	8
	Spirits	12	8	11
	Liqueurs and cocktails	1	3	2

* 2011-12 Australian National Nutrition and Physical Activity Survey. Based on consumption data from Day 1 respondents aged 18 years and over. Other alcoholic beverages includes liqueurs, cocktails, pre-mixed drinks and other alcoholic beverages.

^2008-09 New Zealand Adult Nutrition Survey. Based on consumption data from Day 1 respondents aged 18 years and over. Other alcohol includes alcoholic soda, bitters, cider, hot toddy drink, port, punch and sherry.

Table 5: Proportion of energy intake from food groups consumed in the 2011-12 NNPAS and the 2008 NZ ANS

2011 NNPAS*		2008 NZ ANS^	
Food Group	Proportion of energy intake (%)	Food Group	Proportion of energy intake (%)
Non-alcoholic beverages	6.1	Non-alcoholic beverages	5.0
Cereals and cereal products	17.7	Bread	11.0
		Grains and pasta	6.8
		Breakfast cereals	3.5
Cereal-based products and dishes	18.4	Bread based dishes	5.0
		Cakes and muffins	3.7
		Biscuits	2.7
		Pies and pastries	2.5
		Puddings and desserts	1.0
Fats and oils	1.7	Butter and margarine	3.0
		Fats and oils	0.3
Fish and seafood products and dishes	2.6	Fish and seafood	2.8
Fruit products and dishes	4.3	Fruit	5.4
Egg products and dishes	1.2	Eggs and egg dishes	1.5
Meat, poultry and game products and dishes	14.1	Poultry	3.8
		Beef and veal	3.3
		Sausages and processed meats	2.3
		Pork	1.7
		Lamb and mutton	1.1
		Other meat	0.2
Milk products and dishes	9.7	Milk	5.0
		Dairy products	2.5
		Cheese	1.9
Dairy & meat substitutes	0.4	Milk alternatives included with Milk above	
Soup	1.2	Soups and stocks	0.8
Seed and nut products and dishes	1.8	Nuts and seeds	1.2
Sauces, dips and condiments	1.6	Savoury sauces and condiments	1.4
Vegetable products and dishes	6.7	Vegetables	3.8
		Potatoes, kumara and taro	6.4
Legume and pulse products and dishes	0.4	Legumes included with Vegetables above	
Snack foods	1.2	Snack foods	0.6
Sugar products and dishes	1.8	Sugar and sweets	4.2
Confectionery and cereal/nut/fruit/seed bars	2.5	Snack bars	0.7
Alcoholic beverages	6.0	Alcoholic beverages	4.9
Special dietary foods	0.5	Supplements providing energy	0.2
Miscellaneous	0.1	N/A	

* 2011-12 Australian National Nutrition and Physical Activity Survey. Based on consumption data from Day 1 respondents aged 19 years and over (ABS, 2014c). Non-alcoholic beverages include tea, coffee and coffee substitutes, fruit and vegetable juices and drinks, cordials, soft drinks and flavoured mineral waters, electrolyte, energy and fortified drinks, waters, municipal and bottled unflavoured, other beverage flavourings and prepared beverages.

^2008-09 New Zealand Adult Nutrition Survey. Based on consumption data from Day 1 respondents aged 15 years and over. (New Zealand Ministry of Health, 2011b). Non-alcoholic beverages include all teas, coffee and substitutes, hot chocolate drinks, juices, cordial, soft drinks, water, powdered drinks, sports and energy drinks.

4 Discussion

Alcoholic beverages are consumed by most Australian and New Zealand adults, with some consuming alcoholic beverages daily. In recent national health surveys, 78.8% of Australian adults (aged 18 years and older) (ABS, 2018) and 80.3% of New Zealand adults (aged 15 years and older) (New Zealand Ministry of Health, 2019) reported consuming alcohol on any occasion over the previous year, with 55.0% of Australian adults consuming alcohol during the previous week (ABS, 2018). In a 2020 poll, 5% of Australian adults who drink alcohol reported consuming alcohol daily over the previous 12 months (FARE, 2020).

This analysis found that based on day one of consumption data from the Australian and New Zealand nutrition surveys, 31.8% of Australian and 32.3% of New Zealand adults reported consuming an alcoholic beverage. From the same nutrition survey data, 86.4% of New Zealand adults reported consuming an alcoholic beverage over the previous year, a similar proportion to that found in the health survey noted above.

In both Australia and New Zealand, most alcoholic beverages are purchased to consume away from the place of purchase. In 2019, for Australian adults who consumed an alcoholic beverage in the past year, 64.6% of their usual supply of alcohol was purchased to take away and drink elsewhere, whereas 23.1% was purchased to drink at the venue (AIHW, 2020). In New Zealand in 2014, off-licences (premises that sell alcoholic beverages for consumption away from their premises) accounted for an estimated 84% of alcoholic beverage sales by volume, whereas on-licences (premises that sell alcohol for consumption on their premises) accounted for 14% of estimated alcoholic beverage sales by volume (M.E Consulting, 2018).

On day one of the Australian and New Zealand nutrition surveys, the mean alcohol intake from alcoholic beverages is equivalent to the consumption of 1.4-1.5 standard drinks for all respondents (inclusive of those who did and did not report consuming an alcoholic beverage). In Australia, the mean usual intake of alcohol from foods and beverages (i.e. not just alcoholic beverages) for respondents to the 2011-12 NNPAS was between 13 g/day and 24 g/day for males (19 years and over) and between 7 g/day and 13 g/day for females (19 years and over) (ABS & FSANZ, 2015). These mean usual intakes are equivalent to between 1.3 to 2.4 standard drinks for males and between 0.7 and 1.3 standard drinks for females. Usual intakes are estimated using sophisticated mathematical models (in this case the National Cancer Institute (NCI) Method) that calculate an estimate of intake over a longer period of time using the two days of dietary survey data. Usual intake distributions could not be calculated for New Zealand alcohol intake data from the 2008 NZ ANS (New Zealand Ministry of Health, 2011b).

For both Australia and New Zealand, the mean alcohol intake from alcoholic beverages for adults who reported consuming an alcoholic beverage on day one of the survey is equivalent to the consumption of 4.5 standard drinks, with the median alcohol intake being equivalent to the consumption of 3 standard drinks. In a 2020 poll of Australian adults, 28% of those who drink alcohol reported consuming more than 4 standard drinks on a typical occasion (FARE, 2020). In New Zealand, 15.0% of adults 15 years and over who consumed alcohol in the past year, reported drinking 6 or more alcoholic drinks on one occasion at least weekly, and 26.9% reported drinking 6 or more alcoholic drinks on one occasion at least monthly (New Zealand Ministry of Health, 2019).

The energy intake from alcoholic beverages for adults on day one of the Australian and New Zealand nutrition surveys is considerable. A mean of 5.3% and 5.2% of total energy intake for Australian and New Zealand respondents respectively is contributed by alcoholic beverages (these figures include adults who did not consume an alcoholic beverage). This is slightly above the recommendation in the Australian Dietary Guidelines (NHMRC, 2013) of

less than 5% of dietary energy. These contributions of energy from alcoholic beverages to total energy intakes are similar to those of non-alcoholic beverages (including but not limited to fruit juices and drinks, soft drinks, cordials, electrolyte drinks etc.) (6.1%) for adults (19 years and over) in the 2011-12 NNPAS (ABS, 2014c), and to those of fruit (5.4%), non-alcoholic beverages (5.0%), milk (5.0%), and bread-based dishes (5.0%) for respondents (15 years and over) in the 2008 NZ ANS (New Zealand Ministry of Health, 2011b). See Table 5 for further details.

In Australia, the mean usual proportion of energy intake from alcohol from foods and beverages in the 2011-12 NNPAS was between 3% and 7% for males (19 years and above) and between 2% and 5% for females (19 years and above) (ABS & FSANZ, 2015). For New Zealand adults who reported consuming an alcoholic beverage over the past year, a mean of 6.0% of total energy is contributed by alcoholic beverages which is similar to the proportion of energy intake for all adult New Zealand survey respondents.

For those who reported consuming an alcoholic beverage on day one of the nutrition surveys, a mean of 16.7% of total energy for Australian adults and 16.0% of total energy for New Zealand adults is contributed by alcoholic beverages. These results are corroborated by the literature where it has been shown that on day one of the 2011-12 NNPAS, alcoholic beverages contributed the greatest proportion of energy from all beverage categories consumed by Australian adults (Riley et al., 2019).

Alcoholic beverages are classed as discretionary choices in the Australian Dietary Guidelines (NHMRC, 2013). For Australian adults who reported consuming an alcoholic beverage on day one of the national nutrition survey, a mean of 43.4% of the energy intake from discretionary foods is contributed by alcoholic beverages. At the 90th percentile, 83.5% of the energy intake from discretionary foods is contributed by alcoholic beverages. These data are supported by a separate analysis of discretionary food and beverage consumption data from day one of the 2011-12 NNPAS, which showed that wines and beers were two of the top four contributing food groups to energy intake from discretionary choices of Australian adults (19 years and over) (Fayet-Moore et al., 2019). Additionally, wine was the highest contributing food group to total energy from discretionary foods consumed at dinner, and beers and wines were the top two contributing food groups to energy intake at a beverage/drink eating occasion (Fayet-Moore et al., 2019).

Alcohol is high in energy, contributing 29.3 kJ/g to the diet (NHMRC, Australian Government Department of Health and Ageing, & New Zealand Ministry of Health, 2006). For adults in the Australian and New Zealand nutrition surveys, 81% and 74% respectively of the energy intakes from alcoholic beverages consumed on day one of the surveys is contributed by the alcohol itself.

For adults in the Australian and New Zealand nutrition surveys, beer and wine accounts for most of the energy intake from alcoholic beverages consumed on day one. This is supported by apparent consumption data which shows that beer (39.0%) and wine (38.6%) contributed the greatest total volume of pure alcohol available for consumption in Australia in 2017-18 (ABS, 2019). In New Zealand, beer accounted for 59% and wine accounted for 23% of the total volume of alcoholic beverages available for consumption in 2020 (Statistics New Zealand, 2021).

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Appendix 2: Energy content information available overseas

1 Codex guidelines

Codex Alimentarius has no standard or guideline specific to the labelling of alcoholic beverages. However, at the 44th meeting of the Codex Committee on Food Labelling (CCFL) in October 2017, a paper on alcoholic beverage labelling prepared by the World Health Organization (WHO) was discussed (Codex Alimentarius, 2017). The WHO proposed CCFL do new work to develop guidance on labelling of alcoholic beverages, covering a definition of alcoholic beverages, product information, health warnings, restrictions on information and packaging presenting risks to health, and restrictions on nutrition labelling and health claims. It was agreed a discussion paper on alcoholic beverage labelling would be prepared for the May 2019 CCFL meeting for the purpose of deciding whether new work on alcoholic beverage labelling would proceed. At that meeting delegates expressed a wide range of views, with some supporting and others not supporting future work (Codex Alimentarius, 2019). It was agreed comments on the paper would be sought via a Circular Letter and a further discussion paper be prepared for a session in October 2020. However due to Covid-19 delays, the paper will now be discussed at CCFL46 in September 2021.

2 Regulations around the world

2.1 Ireland

The Government of Ireland enacted the Public Health (Alcohol) Act 2018 in October 2018 (Government of Ireland, 2018). The Act covers price, availability, marketing, advertising, and labelling of alcohol. Mandatory labelling of energy content (in both kilojoules and kilocalories) is included. The Act confers powers to the Minister of Health to make regulations to specify details of the labelling to be used. To date, such regulations have not been prepared. A public consultation seeking expert research on the effectiveness of alcohol labelling information, including energy content, was undertaken in 2019 (Food Safety Authority of Ireland, 2019). Work on the regulations has been delayed due to Covid-19. Draft regulations (including energy labelling) will need to be approved by the European Union (EU) before they can be implemented in Ireland.

2.2 European Union

Regulation (EU) No. 1169/2011 on the provision of food information to consumers, exempts alcoholic beverages containing more than 1.2% alcohol by volume from having a list of ingredients and nutrition declarations. This exemption was dependent on the European Commission (EC) subsequently reviewing whether alcoholic beverages should include a list of ingredients and nutrition declarations. In a report published in 2017 (European Commission, 2017) the EC concluded that voluntary industry labelling initiatives already underway should be allowed to develop further and asked the industry to prepare a self-regulatory proposal (see section 3.1 below).

In February 2021, the EC announced it intends to propose at the end of 2022 that the existing ingredient and nutrition labelling requirements in Regulation (EU) No. 1169/2011 are applied to alcoholic drinks (European Commission, 2021). The EC commented that the Memorandum of Understanding (MoU) from Spirits Europe (Spirits Europe, 2019) did not meet their expectations (see section 3.1). While the 2019 MoU from the Brewers of Europe pledging to put ingredient lists and energy values on all beer bottles by the 2022 (see section 3.1), was well received by the EC, the EC seems to prefer to take a consistent mandatory approach across the alcoholic sector. It is unclear whether this proposal will be affected by

the review of Regulation (EU) No.1169/2011 which includes options for a front-of-pack label.²³

2.3 United Kingdom

In July 2020, the UK government released a policy paper *Tackling obesity: empowering adults and children to live healthier lives* (UK Department of Health & Social Care, 2020). One of the actions in the paper was to consult, before the end of 2020, on the governments' plan to introduce mandatory energy content labelling of all pre-packaged alcoholic beverages and those beverages purchased on draught or by the glass. The UK Department of Health and Social Care anticipates the consultation will occur in 2021²⁴.

2.4 USA

There are no requirements for energy content labelling of alcoholic beverages in the USA. However, the Alcohol and Tobacco Tax and Trade Bureau (TTB) allows voluntary labelling of energy content information on certain alcoholic beverages²⁵ only if the label contains a 'statement of average analysis' as provided in TTB Ruling 2004-1²⁶ or a serving facts statement as provided in TTB Ruling 2013-2²⁷. Both of these statements require the listing of energy (using calories), carbohydrate, protein, and fat content per serving or per container when the container size is equal to or less than the regulated serving size. Abbreviated references to energy content can be made on the label (e.g. 96 calories per 12 fl. oz. serving) provided a statement of average analysis or a serving facts statement is also provided.

2.5 Canada

Similar to the USA, there are no requirements for energy content labelling of alcoholic beverages in Canada. Canada exempts beverages with an alcohol content of more than 0.5% from nutrition facts labelling but allows a nutrition facts table, including calories, on a voluntary basis. A nutrition facts table becomes mandatory on an alcoholic beverage containing more than 0.5% ABV if a nutrition claim is made or if a reference is made to energy or certain nutrients. A nutrition facts table is also required if certain artificial sweeteners are added to unstandardised alcoholic beverages.²⁸

²³ See information on [front-of-pack labelling in the EU](#) and the [consultation on the revision of rules on information provided to consumers](#).

²⁴ Personal communication: UK Department of Health & Social Care, April 2021

²⁵ Wine, distilled spirits and malt beverages excluding wines containing less than 7 % alcohol by volume and beer that is not made with both malted barley and hops.

²⁶ TTB Ruling 2004-1 is available at <https://www.ttb.gov/images/pdfs/rulings/2004-1.pdf> Serving size is specified: malt beverages (12 fl.oz.); wine (5 fl.oz.); distilled spirits (1.5 fl.oz.) [approximately 355 ml, 148 ml, 44 ml respectively].

²⁷ TTB Ruling 2013-2 is available at <https://www.ttb.gov/images/pdfs/rulings/2013-2.pdf> A serving facts statement may include the serving size, the number of servings per container, and the number of calories and the number of grams of carbohydrates, protein, and fat per serving size. Serving sizes are specified by the percentage alcohol by volume for wine, spirits and beer. Serving facts statements may include information about the alcohol content of the product on an optional basis. Alcohol content may be presented as a percentage of alcohol by volume. In addition, if alcohol content is expressed as a percentage of alcohol by volume, the serving facts statement may also include a statement of the fluid ounces of pure ethyl alcohol per serving. Examples of how serving facts statements can be presented are given in TTB Ruling 2013-2.

²⁸ [Canadian alcohol labelling requirements](#)

3 Voluntary industry labelling initiatives

3.1 European Union

In 2018, the alcoholic beverage sector published a self-regulatory proposal which sets out a commitment to provide a list of ingredients and nutrition information to consumers on-label and/or off-label (European alcoholic beverage sectors, 2018). The proposal indicated nutrition information could be limited to energy content only and that energy content should be provided per 100 ml and possibly also per serving/per serving equivalent of an alcohol unit based on drinking guidelines. Use of a non-tabular format for the energy content, such as using 'E' for energy was also noted. It was stated there would be an evaluation of the voluntary labelling initiative in March 2021. Annexes to the self-regulatory proposal were also prepared by each of the wine (European wine sector, 2018) and spirits (Spirits Europe, 2018) sectors to further support the initiative and provide detailed guidance on the display of ingredient and nutrition information, including energy content.

An MoU by Spirits Europe was published in 2019 which expanded on the 2018 self-regulatory proposal for the spirits sector (Spirits Europe, 2019). Spirits Europe committed to provide the energy value (kilojoule and kilocalorie) on-label per 100 ml and also per serving size along with ingredient lists online. Examples of formats for energy content were provided. Small bottles of 35 ml or less and gift boxes and/or outer-packaging were exempt from including energy content and a list of ingredients on the label. The targets set were that the total EU market share (by volume) of products placed on the EU market providing energy content information on-label and a list of ingredients online would be at least 25% by end of 2020, 50% by end of 2021 and 66% by end of 2022. The spirits sector also committed to make consumer information available via smartphone barcode scans and have commenced developing this approach with GS1 (Global supply-chain standardisation body). While this is being developed, there is a web-portal²⁹ that provides energy content information, ingredient lists and other information about each of the EU's 47 spirit drink categories. No interpretative information about energy content is provided on the portal.

In 2019, the Brewers of Europe and its members signed an MoU to declare ingredients and energy content information on all beer bottles and cans in the EU by 2022 (Brewers of Europe, 2019). The MoU states energy content information should be displayed per 100 ml (kilojoule and kilocalorie) and various design formats are provided. Brewers of Europe reported that 60% of all beers sold in Europe in 2019 displayed energy content information on-label.

3.2 United Kingdom

The Portman Group was established by leading alcoholic beverage companies in 1989 to promote responsible drinking in the UK. The Group developed the Drinkaware website and in 2007 an independent charity, the Drinkaware Trust, was established to focus on consumer education. Drinkaware has an energy content calculator³⁰ on its website which calculates the calories and standard units³¹ in a specified volume of the main types of alcoholic beverages e.g. pint of beer (4% ABV), 175mL wine (13% ABV).

The Portman Group has developed a marketing toolkit which refers to including energy content information per 100 ml on a label (Portman Group, 2017). It also notes it is optional to provide energy content information per serving.

²⁹ [Spirits Europe: What's in a spirit drink?](#)

³⁰ [Drinkaware energy content calculator](#)

³¹ One unit is 10 ml of pure alcohol

In 2019, the Alcohol Health Alliance surveyed labelling information on a random sample of 424 alcohol containers in the UK. They reported 37% of labels listed energy content information without any further information, and 7% displayed full nutritional information including energy content (Alcohol Health Alliance, 2020).

3.3 Alcoholic beverage producer labelling initiatives

Some alcoholic beverage producers provide energy content information (kilojoule and kilocalorie or only in kilocalorie, per serving and/or per 100 ml) on their websites. For example see William Grant³² and Bacardi³³. Formats for online presentation of the information vary but often use an NIP-type approach. Several companies owning a number of brands have policies about nutrition information. Examples of these are provided below.

3.3.1 Diageo

Diageo has over 200 brands (mainly spirits and a small number of beers and ready-to-drink beverages) sold all over world. In 2016 Diageo launched the Diageo Consumer Information Standards (DCIS) which set out minimum standards for information that must be included on alcoholic beverage labels and packaging of their brands (Diageo, 2016). Two label designs for presenting nutritional information including energy content are given in the DCIS. They recommend the 'detailed nutritional system' (NIP-type content) should be used when space allows. Note the energy content per serving is provided only. Energy content per 100 ml is to be used only in countries where it is mandated. In its 2020 annual report, Diageo claims to be the first alcohol company to put nutritional information on its labels (Diageo, 2020, p. 25).

Diageo operates a website called DRINKiQ. As stated on the website *DRINKiQ is a global resource to help people make responsible choices about drinking – or not drinking. The programme is delivered through training and providing information and practical advice online.*

The website³⁴ does not appear to have information about energy content.

3.3.2 Heineken

Heineken has over 300 brands of beer and cider available in more than 190 countries. Some brands are available internationally (e.g. Heineken, Amstel) while others are local and regional brands (e.g. Kingfisher).

As part of its responsible consumption policy, in 2020 Heineken committed to provide:

- ingredient and nutrition information per 100 ml on label **and** online for all beer and cider brands produced and sold in the EU
- ingredient and nutrition information per 100 ml on label **or** online for all beer and cider brands produced and sold outside the EU.

On their website³⁵, Heineken reports that at the end of 2020, about 89% of their beer and cider brands had nutrition information available on pack or online. They also estimated that 100% of their beer and cider brands had nutrition information available on pack in Europe in 2020.

³² [William Grant & Sons Nutrition Information](#)

³³ [Nutrition information for the Bacardi range](#)

³⁴ [DrinkiQ website](#)

³⁵ [Heineken](#)

3.3.3 *Pernod Ricard*

Pernod Ricard includes a broad range of spirit and wine brands within its portfolio. In 2017, Pernod Ricard announced all its international strategic spirits brands and most of its wine, champagne and local brands had published nutrition information on their respective websites.³⁶ The presentation of nutrition information on websites, including energy content, is in a consistent NIP-type format and gives energy content per 10 g alcohol and per serving. Their policy does not appear to extend to providing nutrition information on product labels.

3.3.4 *Brown Forman*

Brown-Forman has more than 25 brands in its portfolio of wines and spirits. Nutrition information about brands available in various regions around the world, including Australia, is available on the Brown Forman website³⁷. Energy content information is provided per serving for specified alcohol contents.

³⁶ [Pernod Ricard nutrition information](#)

³⁷ [Brown Forman nutrition information](#)

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