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BP New Zealand feedback on Working paper – Assessing profitability

1. Introduction and summary

1.1 BP New Zealand (**BPNZ**) appreciates the opportunity to respond to the Commission's Working paper on assessing profitability (**Profitability Working Paper**) of 18 April 2019.

1.2 In the first section of this submission, BPNZ offers some observations on terminology that it hopes will assist the Commission in grounding its analysis of profitability and be reflected in the Commission's draft report. In particular, BPNZ recommends that the concept of 'profitability' be reserved for references to long term measures of the profitability of investments, rather than short term measures of returns such as annual gross margins or annual return on capital employed (**ROCE**).

1.3 BPNZ also notes the suggestion in the Profitability Working Paper that findings of 'persistent' high or above normal returns may indicate excess profitability and ineffective competition. For this to be valid terminology, the term 'persistent' should be reserved for findings of high or above normal returns that have persisted for long enough that excess profitability in the long term sense can be assumed. When business cycles and investment lives are long, annual returns above normal levels that continue for five or even ten years may not be 'persistent' in the sense of implying excess profitability or ineffective competition.

1.4 In Section 2, BPNZ provides some comments on the use of gross margins when assessing profitability. In particular, BPNZ observes that in addition to the weaknesses of gross margin measures that are recognised in the Profitability Working Paper, there is no good benchmark against which to assess the magnitude of gross margins for the purpose of determining whether fuel retailers in New Zealand have been generating persistent, above-normal returns.

1.5 In Section 3, BPNZ submits that if the Commission proceeds to assess ROCE as a measure of financial performance, it should ensure that its baseline approach uses replacement cost estimates for each year studied. The Profitability Working Paper gives the impression that, although the Commission appreciates the problems with ROCE estimates based on historic costs, it intends its baseline estimates of ROCE to be based on historic costs, with adjustments for replacement costs as an extension "where "available" and "possible". BPNZ submits that the Commission should instead adopt an ambition of estimating replacement cost ROCE as its baseline ROCE measure.

1.6 In Section 4, BPNZ comments on the Commission's proposal to use forward looking measures of profitability, where available. In particular, BPNZ cautions against undue reliance being placed on inherently uncertain forward-looking estimates of retailer returns.

1.7 Finally, in Section 5, BPNZ comments on a number of the measurement challenges that confront any attempt to estimate profitability in this industry and the Commission's responses to BPNZ's previous submission on these measurement challenges.

2. Observations on terminology

The distinction between 'profitability' and 'returns'

2.1 In various places within the Profitability Working Paper the Commission uses the term 'profitability' when referring to short-term measures of returns.[1] BPNZ recommends that the Commission clarify in its draft report the meaning of the term 'profitability' in the context of this market study, and cautions against the use of that term to describe short-term measures of returns such as annual gross margins or annual ROCE. This would reduce the scope for misinterpretation of the Commission's analysis.

2.2 From an economic perspective, investment required for a particular business activity will only be considered profitable when the value of the cash flows generated, in net present value (**NPV**) terms, result in an economic return over the life of that investment that exceeds the cost of capital. As a result, in the context of long-term investments, profitability cannot be assessed on an annual or other short-term basis: it can only be assessed over the life of the investment. As a matter of terminology, therefore, BP submits that for the purposes of this market study the term 'profitability' should be reserved for references to long term measures of the profitability of investments, rather than measures of short term returns.

2.3 The danger of a loose use of the term 'profitability' when referring to short term measures of returns is that readers may mistake high returns for a short period as indicating excess profitability or ineffective competition, when in fact those short term returns may merely reflect one point in a much longer business cycle and in the life of investments that may not ultimately be excessively profitable.

2.4 The terminology that BPNZ recommends the Commission adopt in its draft report is used by the Commission in paragraphs 97-99 of the Profitability Working Paper, where it considers "when are *excess returns* persistent?" (emphasis added).[2]

The meaning of 'persistent'

2.5 BPNZ welcomes the Profitability Working Paper's emphasis on long term analysis of profitability and its recognition of the cyclical nature of the industry. In particular, BPNZ welcomes the Profitability Working Paper's emphasis on identifying persistent, rather than temporary excess returns, and its recognition that profitability needs to be assessed over a timeframe that reflects business cycles and the lives of investments.[3]

2.6 BPNZ also agrees with the Profitability Working Paper's characterisation of the history of retail fuel supply in NZ since 1998 as a cycle, with high margins in the late 1990s leading to entry by Challenge and Gull, which was followed by a long period in the 2000s of margins that were insufficient to attract investment and that led to divestment by some retailers, which in turn has been followed by rising margins, which has once again incentivised investment, entry and expansion.[4] This can be expected to lead in the future to a downturn in margins as the cycle repeats.

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[1] For example, in paragraph X4, the Commission states that "[p]*rofitability* tends to vary over time" and that "[h]igh levels of *profitability* over short periods of time do not necessarily indicate a problem with competition" (emphasis added). There are many other examples throughout the Profitability Working Paper.

[2] If this terminology were adopted in paras X4 and X5, the passages referred to in the previous footnote would change to "high levels of *returns* over short periods of time do not necessarily indicate a problem with competition".

[3] Profitability Working Paper, 37 – 38, 53 and 97 – 99.

[4] Profitability Working Paper, 38.3.

2.7 It is important to recognise the 20 year period over which this cycle has played out and the low margins that were experienced in the 2000s, which any retail fuel business must factor into its investment decisions. In light of this, BPNZ submits that any assessment of the profitability of retail fuel businesses in NZ would be incomplete and unsuitable as a basis for conclusions regarding the effectiveness of competition in the industry if it failed to take into account the full cycle including the period of low returns. In short, to do so would be to overstate the profitability of NZ fuel retailers.

2.8 BPNZ also notes the suggestion in the Profitability Working Paper that findings of 'persistent' high or above normal returns may indicate excess profitability and ineffective competition.[5] For this to be valid terminology the term 'persistent' should be reserved for findings of high or above normal returns that have persisted for long enough that excess profitability in the long term sense can be assumed. If business cycles and investment lives are long, then annual returns above normal levels that continue for five or even ten years may not be 'persistent' in the sense of implying excess profitability or ineffective competition.

2.9 BPNZ recognises that data limitations may preclude analysis of returns prior to 2010 and that the Commission may elect to proceed with the available data and estimate returns from 2010 onwards. In that event, BPNZ submits that the interpretation of those returns should not include any conclusions regarding excess profitability or 'persistent' high or above normal returns, precisely because this period captures just one part of the cycle and investment lives are much longer. The Commission should always bear in mind the length and depth of below-normal returns that retailers sustained in the 2000's.

3. Comments on use of gross margins in profitability assessment

3.1 BPNZ appreciates the Commission's desire to examine a variety of measures of profitability given that each measure presents challenges of either measurement or interpretation, or both. However, BPNZ questions what the Commission can achieve with gross margin data when it comes to assessing profitability. According to the Profitability Working Paper, the Commission considers that gross margins "are likely to be appropriate" for the market study, but it does not provide any basis for this view, let alone for the emphasis given in the Profitability Working Paper to gross margins.

3.2 The Profitability Working Paper does observes that gross margins are one of the most commonly used measure of *financial performance* in the fuel sector. Although BPNZ appreciates the attractiveness of measures that are readily available from company accounts, as explained above, financial performance, which is an accounting concept, is not to be equated with profitability in an economic sense: gross margins are not an economic measure of profitability.

3.3 What is more, the Profitability Working Paper acknowledges that gross margins are an incomplete measure of performance.[6] In particular, the Profitability Working Paper highlights that gross margins do not reflect all operating costs, the amount of capital required or the risk involved in the operation of a fuel retail business.

3.4 Given all of this, it is not clear how the Commission intends to use analysis of gross margins to inform its assessment of whether fuel retailers have been excessively profitable or whether the market is or is not effectively competitive.

3.5 BPNZ submits that it would be helpful for stakeholders if the Commission were to clarify and articulate, in advance of the draft report:

(a) the benchmark, if any, that the Commission intends to compare gross margins to, in order to assess whether the gross margins of fuel retailers are 'high' or 'low'; and

[5] Profitability Working Paper, 27.
[6] Profitability Working Paper, 68.

(b) the relevance of whatever the Commission may find in relation to gross margins for conclusions it might draw in respect of the profitability of fuel retailers, given the limitations of gross margins identified above.

3.6 Regarding benchmarks, in BPNZ's view, there is no good benchmark against which to assess the magnitude of gross margins for the purpose of determining whether fuel retailers in New Zealand have been generating persistent, above-normal returns. A comparison of the gross margins of New Zealand fuel retailers with those of fuel retailers in other countries is unlikely to be instructive, given differences in operating environments[7] and timings of business cycles in each country.

4. Any ROCE measure should be based on replacement cost

4.1 As BPNZ has previously submitted, the economically meaningful measure of capital employed for the purpose of a profitability assessment is a replacement cost measure that reflects the costs that an entrant would face. The use of historic asset values to determine the value of capital employed in a ROCE analysis is conceptually flawed and may significantly overstate ROCE where replacement cost is rising over time.

4.2 Although the Commission recognises this in its Profitability Working Paper,[8] it appears to contemplate only limited adjustments to its ROCE analysis to reflect the flaws of historic cost measures of capital employed. In particular, the Profitability Working Paper gives the impression that the Commission's ROCE analysis will be based primarily on historic cost and that it will "seek to incorporate" replacement cost into its analysis "where it is available and where possible"[9] and only as an extension to that primary analysis.[10] BPNZ submits that this is under-ambitious. BPNZ considers that sufficient information should be available for the Commission to estimate replacement costs for every year that it wishes to analyse, and that if the Commission is to estimate ROCE for retail fuel businesses in NZ it should aim to do so primarily on the basis of replacement cost measures of capital employed for each year that is studied.

4.3 Table 1 below demonstrates the importance of using replacement cost rather than historic cost measures of capital employed. As can be seen there, when replacement cost increases over time, as it can be expected to, estimates of ROCE using historic cost will overstate ROCE using replacement cost, and the overstatement could be significant. Given this, BPNZ submits that there is no merit in the Commission basing a ROCE analysis on historic cost measures of capital employed with adjustments for replacement cost only as an extension: the base measures of ROCE that would be generated would be of little information value given the potential variance of those measures from ROCE measures based on replacement cost. If the Commission is to pursue a ROCE analysis it should do so with an ambition of basing it comprehensively on replacement cost.

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[7] For example, New Zealand is what is known as a relatively "over-pumped" market, meaning that it has a high ratio of pumps to population. Another way of saying this is that New Zealand has a low ratio of volume to pumps. Given that the retailing of fuel involves not insubstantial fixed costs, it is natural to expect higher gross margins of retailers in an under-pumped country than in countries with fewer pumps per person and more volume per pump.

[8] Profitability Working Paper, paras 85-90.

[9] Profitability Working Paper, para 90.

[10] Profitability Working Paper, para 93.3.

Table 1: Stylised comparison of ROCE using historic vs replacement cost measures of capital employed

	Year										
	1	2	3	4	5	6	7	8	9	10	Av
Cash Flows ($000's)	$2	$4	$6	$8	$10	$13	$15	$20	$25	$25	
Historic Cost ($000's)	$100	$100	$100	$100	$100	$100	$100	$100	$100	$100	
ROCE (HC)	2%	4%	6%	8%	10%	13%	15%	20%	25%	25%	**12.8%**
Replacement Cost ($000's)	$110	$120	$130	$140	$150	$160	$170	$180	$190	$200	
ROCE (RC)	2%	3%	5%	6%	7%	8%	9%	11%	13%	13%	**7.6%**

5. Comments on forward-looking estimates of returns

5.1 In recognition of the limitations of using gross margins and ROCE to assess competition in the retail fuel industry, the Commission intends to consider other indicators of profitability, namely:[11]

(a) the returns being achieved or that retailers expect to achieve in respect of recent or proposed new investments in retail fuel markets; and

(b) the price paid in respect of recent market transactions involving retail fuel assets.

5.2 BPNZ cautions against undue reliance on what are inherently uncertain forward-looking estimates of retailer returns.

5.3 In particular, BPNZ cautions that business forecasts of future investments may be overly optimistic due to behavioural biases in decision making. For example, behavioural economists have observed that individuals exhibit optimism bias in planning and tend to underestimate the time required to complete a project as well as the costs and risks of future action, resulting in time and cost overruns as well as a shortfall of benefits. This is generally known in the literature as the planning fallacy.[12] Such optimism in forecasting can be expected to result in a bias in business cases towards the prediction of IRRs that overstate the out-turn profitability of new investments. BPNZ recommends that the Commission consider the implications of such bias before drawing any conclusions from business cases for new or recent investments or other analysis that is based largely on forecasts.

5.4 BPNZ also cautions against the use of recent transaction prices in respect of retail fuel assets to infer the prospect and/or magnitude of future monopoly rents. Offer prices that exceed the market value of a target's tangible assets may reflect expected returns on long-term investments in brand, goodwill or other intangible assets, or an expectation of merger-specific synergies. Behavioural biases can also affect purchase decisions with acquirers often paying more for targets than their intrinsic worth.[13] Indeed, some studies have found

[11] Profitability Working Paper, 91 – 93.
[12] See, for example, the following papers that won Daniel Kahneman the Nobel Prize in economics in 2002: Kahneman, D. and Tversky, A. (1979), "Prospect theory: An analysis of decisions under risk," *Econometrica*, 47, pp. 313–327; Kahneman, D. and Tversky, A. (1979), "Intuitive prediction: Biases and corrective procedures," in: S. Makridakis and S. C. Wheelwright (Eds), Studies in the Management Sciences: Forecasting, p. 12 (Amsterdam: NorthHolland); and Kahneman, D and Lovallo, D. (1993), 'Timid Choices and Bold Forecasts: A Cognitive Perspective on Risk Taking', *Management Science*, Vol. 39, No. 1, pp. 22 and 24 – 29. See also Lovallo, D. and Kahneman, D. (2003). "Delusions of Success: How Optimism Undermines Executives' Decisions", *Harvard Business Review*, pp. 56–63.
[13] This phenomenon is known as the winner's curse, whereby the winner of an auction is that which has the largest overestimation of an item's value. Empirical evidence suggests that while stockholders of target firms make significant profits when their firms are purchased, there is often little or no gain to the buyer. See Thaler, 'Anomalies: The Winner's Curse', Journal of Economic Perspectives, Vol 2, No. 1, Winter 1988, p. 198.

that buyers often incur significant losses.[14] Given this, BPNZ recommends that the Commission treat transaction price information with great caution.

6. **Measurement issues**

6.1 In its Submission on the Preliminary Issues Paper, dated 21 February 2019, BPNZ raised a number of concerns in relation to the measurement of ROCE in respect of retail fuel operations. BP reiterates these concerns and disagrees with the Commission's consideration of them in a number of respects, as outlined below.

Valuation of intangible assets

6.2 In its submission BPNZ noted that, in the context of retail fuel, brand value is a significant intangible asset that may be difficult to value reliably.[15] In response, the Commission argues that "The level of intangibles in NZ fuel companies does not appear to be large as evidenced by post-acquisition accounting for the fair value of assets acquired".[16] This statement appears to be at odds with the post-acquisition accounting of Z Energy's acquisition of Chevron and Caltex's acquisition of Gull, both referenced by the Commission in support of its argument. In particular:

(a) Z Energy recorded $693 million in intangible assets as at 31 March 2017 (including goodwill[17] and brands valued at $185 million), which represented 28% of its total assets and 40% of its non-current assets at the time.[18] The bulk of these intangible assets were recorded upon the acquisition of Chevron.

(b) Caltex purchased Gull NZ for A$329 million in December 2016, of which $222 million (67%) was recorded as goodwill, with the value of property plant and equipment coming to just $63 million. Around that time Caltex also purchased the Milemaker business in Australia for A$95 million, of which almost $60 million (63%) was recorded as goodwill, with the value of property plant and equipment coming to just over $10 million.

6.3 Post-acquisition accounting for the above-mentioned transactions therefore suggests to BPNZ that significant intangible assets are involved in fuel retailing in New Zealand.

6.4 Although intangible assets including goodwill may be recorded on a company's balance sheet at the time it acquires a new asset, intangibles that are generated organically are often not. As a result, the level of intangibles identified on the balance sheets of fuel retailers may be understated, resulting in understatements of the capital base for ROCE estimates.

6.5 Further, the fact that the balance sheets of different retailers will recognise to a greater or lesser extent the value of intangible assets (e.g. those that have recently made acquisitions are likely to recognise more intangible assets) is likely to complicate any meaningful comparison of ROCE for different retailers.

6.6 The Profitability Working Paper also suggests that, because there are a number of loyalty schemes, these are easy for customers to join, many consumers are members of multiple schemes, not all schemes have purchase commitments, and consumers can switch easily between these schemes, "brand values and goodwill are not particularly valuable intangible

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[14] For example, in a study of 96 acquisitions completed between 1974 and 1983, the winning bid premium did, on average, overstate the market's estimate of the expected takeover gain. Further, the cumulative average excess return to the winning bidder, measured over the period from 20 days before to 100 days after the acquisition announcement, was significantly negative. See Varayia, N. and Ferris, K.R, 'Overpaying in Corporate Takeovers: The Winner's Curse', Financial Analyst's Journal, 43(3), 64-70.

[15] BPNZ's Submission on Preliminary Issues Paper, dated 21 February 2019, p. 4.

[16] Profitability Working Paper, 84.1.

[17] Goodwill is the excess of a purchase price over the value of the net identifiable assets acquired in the purchase.

[18] See Z Energy Annual Report 2017, pp. 62 and 75.

assets in this market".[19] In BPNZ's view, the nature of loyalty schemes and participation in them is not a strong basis for a conclusion of limited brand value and goodwill more generally for fuel retailers. For example, the fact that an individual may be a member of more than one loyalty scheme does not imply that he or she would not prefer and be willing to pay more for fuel from a strong brand offering additional services that add value to the individual.

Allocation of shared costs

6.7 In its submission BPNZ noted that the Commission's estimates of ROCE would be directed at a specific business activity that is a subset of the full set of activities of the firms in question and that consequently there are likely to be challenges around the appropriate allocations of shared costs.[20] The Profitability Working Paper states that the Commission will not seek to allocate shared and common costs where the firms have not previously done so and proposes to rely on each retailer's existing treatment of such costs for the purpose of its ROCE analysis.[21]

6.8 In BPNZ's view, high level ROCE estimates for those retailers that are engaged in a range of business activities in addition to the retailing of fuel (e.g., fuel refining, fuel wholesaling, the sale of fuel to commercial customers or the retail of jet fuel, fuel oil or bitumen) are likely to provide limited insight into the profitability of their retail fuel operations.

6.9 It follows that to attempt any sensible ROCE based analysis of retail fuel profitability, one must attempt to derive ROCE estimates specifically for the retail fuel activities of integrated firms. This requires allocation of shared costs in ways that differ from the ways those costs have been allocated in existing accounts. The way in which shared costs are allocated in existing accounts (i.e. the "existing treatment" of costs) will be accounting treatments that will not necessarily reflect economic principles.[22] BPNZ therefore cautions the Commission against unquestioning reliance on existing treatments of shared costs.

Distortions in accounting treatments

6.10 In its submission BPNZ noted that information in business accounts on revenues, costs and capital employed may be distorted by accounting conventions or one-off items so as to produce a misleading picture of ROCE.[23] In response, the Profitability Working Paper argues that distortions in accounting treatments "should be offset, in part, by using a range of different techniques and approaches" and by focusing on a range of players.[24] However, using a range of techniques and analysing a range of players cannot solve for distortions that are common across the techniques and players. Moreover, even when using ranges of findings based on different techniques and players there remains a real risk that the ranges are unreliable.

Estimating the WACC

6.11 The Commission notes that it intends to estimate the WACC using its cost of capital input methodologies, with relevant inputs determined by reference to the specific features of the fuel sector.[25] While the Profitability Working Paper provides a broad overview of the way in which the Commission may set some components of the WACC in the context of this market study, BPNZ recommends that prior to issuing its draft report, the Commission publish a more detailed working paper setting out how it intends to implement its input methodology

[19] Profitability Working Paper, 84.1.
[20] BP Submission on Preliminary Issues Paper, dated 21 February 2019, p. 5.
[21] Profitability Working Paper, 84.2.
[22] For example, from an economic perspective, if one is interested in understanding the profitability of fuel retailing on a stand-alone basis, distinct from the overall profitability of integrated fuel businesses, one should allocate all shared costs to the retail operations of vertically integrated businesses.
[23] BP Submission on Preliminary Issues Paper, dated 21 February 2019, p. 5.
[24] Profitability Working Paper, 84.3.
[25] Profitability Working Paper, 56 - 59.

in the context of retail fuel, outside of a regulatory context. More specifically, the Commission should set out its preliminary position and seek submissions in respect of each element of the WACC that it proposes to adopt in its draft report.

6.12 BPNZ agrees with the Commission that, in the context of a market study, it is appropriate to identify a reasonable range for the WACC rather than a single point estimate (as is required in the context of the Commission's regulatory activities).[26] However, it cautions against the use of the mid-point of this range for the purpose of determining whether a business has generated excess returns in any year (where excess returns are calculated as ROCE – WACC).[27] Any conclusion as to the existence or likely quantum of excess returns must be made by reference to the range of plausible values for the WACC, calculated for each year of the period over which the Commission intends to conduct its analysis.

[26] Profitability Working Paper, 59.

[27] At paragraph 60 of the Profitability Working Paper the Commission notes that it does not intend to make additional adjustments to its WACC estimate (ie, it does not intend to use an estimate for WACC above the mid-point of its range of estimates) to reflect any potential risks of estimation error.