

**IN THE DISTRICT COURT  
AT WELLINGTON**

**CRN. 09085500387 & ORS**

**COMMERCE COMMISSION**  
Informant

v

**SHELL NEW ZEALAND LIMITED**  
Defendant

Hearing: 16-19 August 2010

Appearances: J Dixon and J Donkin for the Informant  
L Taylor and A Kerr for the Defendant

Judgment: 3 September 2010

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**DECISION OF JUDGE M J BEHRENS QC**

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[1] The Commerce Commission alleges Shell New Zealand Limited misled the consumer by representing in advertising that its fuel economy formula would enable the motorist to travel appreciably further when in reality it would not do so.

[2] This allegation has been specified in 11 charges laid under s 10 of the Fair Trading Act 1986 that Shell engaged in conduct “liable to mislead the public” and in 11 charges under s13(e) that it made a false or misleading representation.

## Background

[3] In 2001 Shell conducted tests of a new product which was to be called the Fuel Economy Formula. As such it was a petrol additive designed to prevent the build up of car engine deposits and to control friction at the piston ring pack part of a car engine.

[4] The test (not carried out in New Zealand) involved using a selection of cars chosen from top selling cars in Europe, South America and Asia. Three fuels were used in the testing. Fifteen cars were run on a base fuel - that is one within the parameters of the base fuel produced in New Zealand with no additive. Fifteen were run on the same base fuel but with the formula added to it and a further five cars were run on the same base fuel but with a selection of additives added to it.

[5] The Commerce Commission called Michael Foster, a senior tutor at the Department of Statistics at the University of Auckland to explain the test statistically. He is an expert in the field and was not challenged as such. He said in regard to the test that Shell wanted to test the hypothesis that its additive improved fuel efficiency in a fleet of modern vehicles. In fact, as appears from a description of the test in a paper (exhibit 11) entitled "*A Critical Road Test Evaluation of a High-Performance Gasoline Additive in a Fleet of Modern European and Asian Vehicles*", one of the hypotheses tested was that **consistent** use of a high-performance additive package brings **significant** (my emphasis) benefits in terms of fuel economy, exhaust emissions and inlet system cleanliness. There is no doubt that the test and the paper were of a high standard and neither could be, nor were, challenged on content. The paper was written effectively by Shell but subjected to independent evaluation. It was published in the journal of the Society of Automotive Engineers.

[6] Mr Foster was of the view that the test was excellently designed. He was quite impressed with it. Shell had a 1991 test to refer to, used mainly to calculate an appropriate sample size for this 2001 test.

[7] His evidence did not challenge the evaluation paper in its description of the road test. The paper's conclusion was that the fuel containing the additive provided "clear benefits". These were a fuel economy benefit over the base fuel of 1.0% across 14 car models, 96% lower inlet valve deposits than base fuel averaged across 15 car models and 94% lower inlet valve deposits than mixed fuelling averaged across 5 car models. With two of the cars in the test, atypical results were returned but without what he described as the raw data, Mr Foster could make no comment on a possible resulting statistical significance. He found that the test did not compare the effect of Shell's additive with that of other market typical fuels as far as fuel economy went and indeed that was stated in the evaluation paper.

[8] He said that the strongest statement he could make statistically was that there was a 90% confidence level that the true unknown fuel efficiency value of Shell's additive over base fuel was somewhere between .1 and 1.9%. One car in the test showed fuel consumption "benefit" of -7.1% and after investigation it was excluded from the final data analysis. Mr Foster said he could not judge whether that exclusion would affect the true unknown efficiency value because he did not have the raw data for the test. However there was no suggestion in any other evidence that the test results could not be relied upon statistically. He accepted that Shell could have advertised a claim based on a true fuel efficiency of up to 1.9%. He also accepted that the result of the test could be relied upon statistically.

[9] He agreed that if benefits found within each pair of cars, ie the difference between base fuel use and additive use, were averaged out, "*you basically get .98% or 1% overall benefit*".

[10] The test results also showed the benefits mentioned in paragraph 6 relating to the markedly lower amount of inlet valve deposits but there was no formal statistical analysis conducted of valve deposit reductions. Professor Watson, Professor of Engineering at Melbourne University, called by the defendant said that such an analysis was unnecessary in view of the clear results obtained about inlet valve deposits. (Although the professor agreed in cross-examination that some of his evidence was based on a graph incorrectly drawn by him, I find this small error did not affect the validity of his opinion in this regard.)

[11] He explained that the Fuel Economy Formula was essentially a “keep clean” product. It functioned by preventing the build up of gums in inlet ports and valves that can detrimentally affect spray angle and droplet sizes produced by petrol injectors. He contrasted the use of such a product with efforts to improve fuel efficiencies through hardware developments.

[12] So, with the findings from the test, Shell embarked on an advertising campaign and it is really whether the Commerce Commission can prove beyond reasonable doubt that the advertisements or any of them placed in various media were misleading that is the issue in each of the charges.

[13] The advertising began in May 2006 and included radio advertisements, television advertisements, newspaper advertisements, billboards, brochures at point of sale and posters at point of sale.

[14] The radio advertising featured an actor’s voice referring to a car being “*miles from anywhere*” with an orange low fuel warning light on the dashboard. It then goes on to refer to Shell also thinking about fuel economy and then to the formula with a tag line “*designed to take you further*” and that “*you can move further on every tankful*”. It was to be played on 26 stations throughout New Zealand between May and June 2006 and was played on Newstalk ZB on 1 May 2006 and 13 June 2006.

[15] The television advertisement depicted a skier going down a jump and then passing over a village and landing some distance beyond it. The voiceover during the advertisement stated “*Shell Ultra 91 and 95 fuel economy formula are designed to do one thing above all: take you further*”. It was played on national television on numerous occasions between 30 April and 23 June 2006. In particular it played on TV 1 on 23 June, TV2 on 8 May and TV3 on 30 April.

[16] The newspaper advertisement showed a man stretching and getting coffee with use of the words “*designed to take you further*” and “*it’s even more important to give yourself a break from driving*”. That was in the *Sunday Star-Times* on 7 May 2006. The *Dominion Post* published an advertising feature featuring the skier, the

Shell Fuel Challenge and the words "*designed to take you further*". The Shell Fuel Challenge was a fuel economy Guinness world record attempt sponsored by Shell and used to promote the Fuel Economy Formula.

[17] The billboard showed a photograph of the ski jumper used in the television advertisements and used the words "*designed to take you further*". It appeared in Wellington in May and June 2006 and in Auckland in May 2007.

[18] The brochure was available at Shell service stations throughout New Zealand and showed a car travelling towards a distant mountain and used the words "*designed to take you further*".

[19] Posters were also displayed at Shell service stations throughout New Zealand with the same image and phrase as in the brochure, that is "*designed to take you further*" with a car travelling towards a distant mountain.

[20] The Commerce Commission as informant relied almost exclusively on the evidence of Professor Sarah Todd who is a professor of marketing at the University of Otago. She was called as an expert in consumer behaviour and gave evidence that she had taught that subject since 1989 and had taught and developed a third year advanced course in that subject. She said her particular area covered social psychology which looked at how people behave based on information they are given. This necessarily involved the study of perceptions, decision-making, attitudes and their relationship to behaviour.

[21] She saw all the advertisements which were the subject of the charges. She described petrol as a commodity product like milk, a low involvement product in the sense that it was something bought everyday and so the decision to buy it does not take much preparation or thought from the consumer. She was criticised by Mr Taylor as not having the requisite expertise to give an opinion on the subject and it was suggested to her that in fact, in part, her opinion was based on what might be referred to as an old-fashioned approach to advertising. The reason for this suggestion came from a comparison of her evidence with that of an expert called by

Shell, Dr Callister of Brigham Young University in Utah, United States. I will say more about his evidence later.

[22] Professor Todd said that overall the advertising campaign relied on imagery and a broad text based or word based claim which was pretty much what might be expected for a low involvement product.

[23] She said that the ski jumper advertisement was imagery, showing a significant feat, jumping over a village, something that had previously not been considered possible. Her opinion was that *“in the same way that it would be such a significant thing for a ski jumper to go over a village, similarly Shell has achieved this breakthrough if you like, or a huge leap in fuel efficiency”*. In other words, she said this was the message to the consumer and further that this is what the consumer would have taken from that image.

[24] The nub of her opinion (which I find she was undoubtedly qualified to give) is that Shell would not have had any complaints about the ski jumper alone but given *“huge emphasis”* on the texts such as driving further and needing to stop more often, that an image or perception would have been created in consumer’s minds that they would have been able to drive an appreciable distance further with the new fuel than before its use. She said that perception becomes the truth as far as the consumer is concerned: *“a strong focus on taking you further or helping you go further makes me think that in my opinion that consumers would really think they are going to travel an appreciable distance further. For the average consumer I think they’re expecting more than a .98 average improvement”*.

[25] In cross-examination it was suggested to her that she had not referred to any literature as the basis of her opinion about the effect of the advertising. Her answer to that was that she had had around 20 years of teaching consumer behaviour and that she was familiar with the literature. It has to be said that she could not in court cite any literature that was available on the topic and she accepted that she had done no specific research connected to this advertising nor did she cite any research as to how consumers might perceive this kind of advertising. This is not necessarily fatal but is relevant when comparing her evidence with that of Dr Callister. Professor

Todd agreed that she had not read the articles or the research that Professor Callister had referred to in a brief of evidence that she had seen but repeated that her opinion in evidence was based on her knowledge and understanding of how consumers view advertisements.

[26] I think it is fair to say that she and Dr Callister were agreed that the series of advertisements and multi-media executions were designed to be viewed as a campaign and that the ski jump advertisement was a teaser in the advertising terminology, "*designed to gain someone's awareness*". She said that if Shell had used the figure .98% more clearly in the advertising or if it had said something like designed to take you less than 1% further which is also objectively true that would have created quite a different perception.

[27] Perhaps importantly she did say that the only way that anyone would truly understand what consumers got out of that particular ad would be to go out and ask a whole lot of them. In that regard then I am being asked I suppose to accept her opinion of what such people might have said, based on her own experience and expertise. She agreed that she had not carried out any research of any kind to determine whether someone would see an advantage in 6 or 7 kilometres of extra mileage.

[28] Interestingly there was discussion during her cross-examination about her apparently stated view and opinion given to the informant that the "*coffee ad*" might lead consumers to believe they could get up to 160kms extra out of a tankful of the Shell product. She was criticised for holding what would seem to be an unreal view of this and I must say that I found her suggestion to be disquieting in terms of her opinion as an expert. She was on much safer ground to suggest that the imagery meant for the consumer that the additive would take the motorist appreciably further, than suggesting or putting a figure of kilometres on a tankful of the petrol with the additive.

[29] The next witness was David Baker, a Chief Advisor for the Commerce Commission. Shell was "interviewed" in 2007 by him and two other officers of the Commission. A transcript of that interview and a Shell discussion paper was

produced. Shell supplied figures that showed its market share for Mogas was 29.78 in January 2006, 30.24 in April and 30.78 in July. The advertising campaign of course ran for 9 weeks from 1 May. Mr Baker also produced (and there was no objection) a *Fair Go* programme that examined the effect of the additive. He said the programme showed that there was a 7km benefit on a tank of Shell petrol and he confirmed that the Commerce Commission had not received any complaints as a result of that programme. It is also clear from the transcript of the interview and other evidence at trial that Shell accepted that a .98% increase in fuel efficiency would add around 7kms on a tank full of the new formula.

[30] Dr Callister is an associate professor of Communications at Brigham Young University. He teaches graduate courses in Persuasion and Media Effects, undergraduate courses in Consumer Behaviour, Advertising and Research Methods. His task was to consider the charges laid by the informant and in particular whether Shell's advertising was liable to mislead the public or whether it included a false or misleading representation that the fuel had a particular performance characteristic or benefit.

[31] Dr Callister disagreed with Professor Todd's opinion. In his opinion the primary message of Shell's advertising campaign was that it had successfully developed a fuel additive product that was designed to and could take the customers further. He said that the claim was qualified by the use throughout of the word "*further*" rather than "*furtherest*" and it was unquantified in that it made no claim as to how much further it could take motorists. He said that the use of unquantified claims in advertising was very common and that consumers understood such claims. In essence he disagreed with Professor Todd's conclusions that the claims were a significant overstatement of the actual benefits. He did not agree that the average consumer would be left with an impression that it was possible to cover significant extra distance on the same quantity of the advertised fuel. Nor did he agree that the claims made and the lack of clear information provided was likely to mislead consumers as to what could be gained because he said that they were based on too literal a reading of aspects of the advertising and failed to recognise intended hyperbole and/or appeal to emotion in the images used. He said that Professor



Todd's analysis was more consistent with outdated "*copy theory*" than with modern research into consumer perception.

[32] It was his view that the word "*further*" did not imply a comparative claim against competitor products but suggested that the formula was designed to take motorists further than Shell fuel previously took them. He said it was essentially a "*new improved formula*" claim which most consumers would immediately understand and would not regard as comparative to competitor products.

[33] The true essential difference between his opinion and that of Professor Todd's was that to decide how consumers were likely to see the images of the ski jumper, the car travelling towards the mountains and a man stretching and getting coffee in combination with the message "*designed to take you further*" it was necessary to consider consumer perceptions of what he said was visual hyperbole and appeals to emotion in advertising.

[34] He cited the results of a study into consumer perceptions of visual hyperbole in advertising published in 2007. He cited figures which showed that consumers are familiar with such rhetorical figures in advertising – that is visual metaphors and hyperboles and have come to appreciate, recognise, and understand the rhetorical functions of visual imagery and action.

[35] It was his view that a modern appreciation of hyperbole recognised that it provided emphasis-effect clarified and most often was humorous. He said that these goals are accomplished by violating expectations for what typically happens in heightening the improbability of an event or action to the point that consumers abandon literal interpretations and seek for more figurative meanings. Perhaps the most important part of his evidence was his finding through research that while the results of that research suggested that viewing visual hyperboles produced more favourable attitudes towards the advertising because of the humour, the visual hyperbole did not lead to more favourable perceptions of product usefulness and product appeal. He said that his 2007 research into visual hyperbole was in response to a request for research that might study how consumers distinguish between factual claims and fictitious ones. He said that advertisements featuring visual hyperboles

served as *“truth telling fictions and that they contain a blend of fact and fiction”*. Advertisers employing this rhetorical device assume that consumers can separate out the fictional elements and arrive at the intended meaning. He said that in his opinion the criticism directed at Shell’s rendering of the ski jumper reveals a misunderstanding of the rhetorical capabilities of visual images, the role and popularity of visual hyperbole, and the visual literacy of the consumers who view them. Essentially he says that emotional processes are now considered crucial elements that assist in using our cognitive resources, making decisions, and organising our external and internal words.

[36] Boiled down his opinion seems to be, based on research, that the emotional aspect of the advertising in fact assists the consumer to understand the message and far from misleading him or her assists the accurate understanding of the message. In other words, Dr Callister’s view is that the advertising the subject of these informations was neither false nor misleading but was of assistance to the consumer in understanding the nature of what Shell was advertising.

[37] In cross-examination he accepted that this research was confined to university students at a university in which he was teaching and that he had made a recommendation that future research should be based on a representative sample from the general population.

[38] It is for the Commerce Commission to prove beyond reasonable doubt the elements of each of the charges laid as they are. Counsel have been helpful with their submissions on the law and I welcomed their succinct submissions on the facts.

[39] Both advertising experts have given opinion evidence on the ultimate issue in each set of informations and their opinions are not thereby inadmissible. There is no direct evidence of the effect of the advertising in question. That is not fatal to or even necessary for the informant’s case. There is evidence of Shell’s changing share of the market around the time of the advertising campaign but an increase in market share before the campaign is almost the same as an increase after it. That is between January and April 2006 the market share increased by 0.46%. It increased by 0.54% between April and July. The campaign ran for 9 weeks from 1 May. These figures

cannot be said to back up Professor Todd's opinion, as the January – April increase has to be for a reason other than the campaign and whatever that reason is, it may have affected the April – July increase.

[40] The defendant called Shell Global Solutions Fuels Technology Manager, Eric Holthusen. He explained in part, the connection between various companies sharing the name "Shell" and I noted that the defendant was not suggesting that any entity other than the named defendant was potentially responsible for the actions that gave rise to the prosecutions.

[41] His description of the fleet testing and independent reviews confirmed the integrity of the work behind the advertising. He stated that *"the results of the fleet trial are considered a major achievement from Shell's research and development efforts"* and *"as far as we are aware, no other oil company, certainly none in New Zealand, has proven fuel economy benefits from the use of proprietary additives to the extent proven by Shell Global Solutions' fleet testing."*

[42] He explained that the defendant was reluctant to quantify the benefit to be obtained from using the formula because there were a range of factors, such as driving techniques, weather and road conditions and age and type of vehicle that could impact on what an individual motorist might experience. He also accepted that the fleet test evaluation *"showed a fuel economy benefit of between -2.4% and 3.5% with a mean of .98%."* He repeated this view in evidence and said *"Marketing would always like to quantify, in this specific instance, I vetoed it, because...we have 1% which is the average, we have the interval that says somewhere between 90% of the cases we would lie between 0.1 and 1.9% and if you look at individual cars, we have a range of minus 2.4 to plus 3.5 so whichever value of those available you pick, you would be inaccurate."*

[43] He put in context the 2006 Fuel Economy World Record Challenge which was part of the advertising feature published by the Dominion Post. The challenge was mounted by a John and Helen Taylor who approached Shell for assistance. Mr Holthusen said that Shell developed a *"new fuel"* for them, based on *"the same technology as Fuel Economy Formula."* On 4 April 2006, the Taylors broke the

record having used 4.5 litres per 100 kilometres. This advertising feature and its claim is not part of any allegation against the defendant.

### **Decision**

[44] Firstly, I follow *Marcol v Commerce Commission* [1991] 2 NZLR 502 and the line of cases decided after it and approach the issues raised by s10 and s 13(e) without distinguishing between them because “*On an objective approach there is...no practical difference between the concepts of misleading...and liable to mislead*” (at 508).


[45] Secondly I sum up the evidence as a contest between the experts called by each party on the essential question raised as I have described it in the first paragraph of this judgement. The informant must satisfy me beyond reasonable doubt and these are offences of strict liability in that the defendant’s intention is irrelevant to the question.

[46] Shell’s claim is literally true. There is no doubt that the additive was designed to take the motorist further. It was not a comparative claim in the sense of looking at other company’s fuels. There is no helpful evidence outside of the opinions of Professor Todd and Dr Callister. There is no evidence that anyone was actually mislead. There does not need to be but absence of such evidence “*is surely striking*”: *Geddes and Ors v New Zealand Dairy Board and Anor* (CA 180/03, 20/06/03 para 94) Chambers J. There is some evidence of sales around the time of the advertising but to make anything of that against the defendant would be a guess and unfair.

[47] The two expert opinions can be objectively criticised, for example Professor Todd’s view of the “coffee ad” and Dr Callister’s less than adequate consumer sampling but I am not in a position to choose between them. I could reject both of course but if I did I am not prepared to substitute my own, particularly in view of the burden of proof and because there would be little evidence left to go by.

[48] So I am left with evidence that does not make me sure of the defendant's guilt in respect of any charge laid.

[49] Each information is dismissed.

A handwritten signature in cursive script, appearing to read 'M J Behrens', written in black ink.

M J Behrens QC  
District Court Judge

Signed at 4.55 pm on 3 September 2010