BEFORE THE MANAWATU-WANGANUI REGIONAL COUNCIL

In the matter of	the Resource Management Act 1991
and	
In the matter of	Submissions and further submissions made by **TRUSTPOWER LIMITED** to the Manawatu-Wanganui Regional Council on the proposed One Plan – Water Hearings.

STATEMENT OF EVIDENCE OF ROBERT JOHN SCHOFIELD
Environmental Planner

---

19 October 2009

1 Introduction

1.1 My name is Robert John Schofield, and I am a Director of Boffa Miskell Limited, a national firm of consulting planners, ecologists and landscape architects. I hold the qualifications of BA (Hons) and Master of Regional and Resource Planning (Otago). I am a Member of the New Zealand Planning Institute, and a Past President (1998-2000). I have been a planning consultant based in Wellington for over 24 years, providing consultancy services for a wide range of clients around New Zealand, including local authorities, land developers, and the infrastructure and power sectors.

1.2 My experience includes the writing and preparation of Plan Changes for Councils and private clients, as well as work on the preparation of District and Regional Plans, including formulating provisions for infrastructure and energy development and distribution.

1.3 In this matter, I have been commissioned by TrustPower Limited ('TrustPower') to prepare its submissions on the proposed One Plan and to present planning evidence on its points consistent with the purpose and principles of the Resource Management Act 1991 ('RMA' or the 'Act'). I have worked closely with both TrustPower and with other generators as part of my involvement in submissions on the proposed One Plan.

1.4 In preparing my evidence, my approach was to:

- Consider the provisions of the proposed One Plan of consequence to TrustPower, having regard to the purpose and principles of the RMA and other relevant national policies and strategies; and
- Recommend appropriate changes that would give effect to the amendments requested by TrustPower in a way that is consistent with the RMA and my duties as an independent planning expert.

1.5 I have been engaged by TrustPower to provide an analysis of the proposed One Plan in terms of the relevant statutory considerations and obligations, taking into account those issues raised by TrustPower in relation to those chapters relating to Water (Chapter 6), Discharges to Land and Water (Chapter 13), Takes, Uses and Diversions of Water and Bores (Chapter 15), Structures and Activities involving Beds of Rivers and Lakes, and Artificial Water Courses and Damming (Chapter 16) and Schedules B and D.

1.6 For the reasons I discuss later in my evidence, I do not intend to address many of the matters of other submitters' concerns in TrustPower's submission in detail, unless specifically relevant. Rather, the purpose of my evidence is to review the principal matters of concern to TrustPower within those chapters against the purpose and principles of the RMA and good planning practice. My evidence takes into account the section 42A report recommendations on the Water Hearings of the proposed One Plan.

1.7 My evidence is structured according to the following format:

- Statutory considerations, particularly the purpose and principles of the RMA, in relation to the matters that are subject to this hearing; and

- An analysis of the section 42A report's recommendations into the submissions and further submissions on the proposed One Plan as they relate to the concerns of TrustPower.

1.8 I have read the Code of Conduct for Expert Witnesses issued as part of the Environment Court Practice Notes. I agree to comply with the code and am satisfied the matters I address in my evidence are within my expertise. I am not aware of any material facts that I have omitted that might alter or detract from the opinions I express in my evidence.

2 Primary Issues for TrustPower

2.1 TrustPower generally supports the intent of the proposed One Plan, which seeks to ensure an integrated approach to resource management in the Manawatu-Wanganui Region. In a large measure, TrustPower either supports or does not oppose the general direction and approach of the proposed One Plan. However, the proposed One Plan introduces a number of changes to policy that have the potential to adversely affect the ability to maintain and enhance effective and efficient renewable electricity generation within the region.

2.2 For this hearing on those provisions relating to water, TrustPower is concerned that the proposed One Plan does not fully and satisfactorily recognise and take into account the regional and national benefits of renewable energy generation through specific objectives, policies and methods that are consistent with sections 5 and 7 of the RMA or with recent government policy in relation to renewable energy.

2.3 The need for additional renewable energy generation in New Zealand and a discussion of the requirements of Part 2 of the RMA in regard to renewable energy is provided in some detail in the background to my evidence-in-chief on the Infrastructure, Energy and Waste Chapter. I will not repeat this information again. However, to briefly summarise, as RMA policy statements and plans provide one of the key mechanisms by which the government's stated goals on renewable energy are implemented, I consider that it is important and indeed appropriate for the proposed One Plan to recognise and provide for these matters. In general, there is little debate about the role of the proposed One Plan in that regard.

2.4 I support TrustPower's intention to ensure the proposed One Plan provides an adequate framework that explicitly recognises and provides for renewable energy projects. Such a framework would be consistent with New Zealand's goal to use its abundant renewable energy resources to ensure long-term sustainability and energy self sufficiency and to reduce New Zealand's contributions to climate change. This goal is also consistent with the need to have particular regard to promoting the benefits of renewable electricity under section 7(j) of the RMA. While the proposed One Plan has introduced some major policy advances through Chapter 3 and related provisions, in my opinion, it does not sufficiently take into account these stated government direction or provide for renewable energy development in a manner that appropriately recognises the regional and national benefits.

2.5 In terms of my evidence on the proposed One Plan's Water provisions, I would note that if any matter raised in TrustPower's submission is not discussed in my evidence, then it should be inferred that I agree with the relevant recommendations in the section 42A report. In particular, I support retaining all provisions of the proposed One Plan that recognise the importance of energy generation in enabling people to provide for their wellbeing.

2.6 To assist the Commissioners, I have attached as Appendix 1 a summary table of TrustPower's submissions and further submissions, whether the officer's recommendation is to accept or reject these submissions, and my comments on the recommendations in respect of the provisions on water.

3 Importance of Hydroelectric Power Generation

3.1 Historically, New Zealand has experienced steady growth in electricity demand: about 2.5% per year since 1980[1]. This steady growth is expected to continue consistent with the current demands[2]. While increased efficiency in energy use may reduce the rate in growth, the New Zealand Energy Strategy notes that electricity demand is still expected to continue to grow at 1.3% per year (compounding) until 2025 (page 72).

3.2 The Ministry of Economic Development's 'New Zealand Energy Quarterly' states that generation from renewable sources provided around 70% of New Zealand's total electricity generation for the June Quarter,[3] of which the vast majority is from hydro-generation. Renewable generation is on track to be over 70% for the 2009 calendar year, the first time since 2004. Under the NZ Energy Strategy, however, the target is to generate 90% of electricity from renewable sources by 2025. While this may appear a readily achievable target, there are some significant challenges facing the energy sector in reaching this level of electricity production, including the costs and long timeframes for consenting.

3.3 As noted in the evidence of Mr Carlyon for Horizons Regional Council, hydroelectric power generation remains the largest user of water in the region (page 23). There are still, though, opportunities for further hydroelectric power generation within the region.

3.4 Further to its original opening statement presented at the General and Overall Plan Hearing[4], TrustPower is the fourth largest retailer and fifth largest generator of electricity in New Zealand. TrustPower has eighteen hydroelectricity generation schemes throughout New Zealand, the Tararua Wind Farm, and the Myponga Wind Farm in Australia. While TrustPower currently has no hydroelectric power generation assets within the Manawatu-

1 From Genesis Energy's submission on the proposed NZCPS, paragraph 16

2 Section 9.1 (Part 2) of the NZES predicts that electricity is projected to grow by 1.3% per annum while Section 1.1.1 of the document entitled "Proposed National Policy Statement for Renewable Electricity Generation, Evaluation under Section 32 of the Resource Management Act 1991" (prepared by the Ministry for the Environment) states that 3,900 MW of new electricity generation capacity will be needed by 2025.

3 Ministry of Economic Development's 'New Zealand Energy Quarterly – June Quarter 2009', available from www.med.govt.nz/energy/data/electricity

4 Refer TrustPower Limited company evidence of Kerry J Watson, dated 17 June 2008

Wanganui Region, TrustPower continues to maintain an active interest in the potential for a range of future renewable energy-generation opportunities within the Manawatu-Wanganui Region. For this reason, TrustPower has expended considerable effort through the submissions process to ensure the proposed One Plan maintains a fair and consistent approach to water allocation and water efficiency – one that does not unnecessarily inhibit hydroelectricity generation development and enhancement projects. However, as I will explain further in my evidence, there is a risk that the current approach of the One Plan towards managing the region's water resources creates too great a degree of uncertainty for investors in water-related infrastructure.

3.5 In developing the proposed One Plan, surface water quality degradation and increasing water demand have been identified as two of the 'big four' issues facing the Region (refer page 1-3 of the proposed One Plan). However, I would contend that addressing these issues should not be to the detriment of ensuring the plan adequately recognises and provides for the benefits of renewable energy generation to be realised.

3.6 However, unlike the proposed amended provisions of Chapter 3 (in relation to Infrastructure and Energy), I do not consider the provisions relating to water resources do take sufficient regard of these recognised regional and national benefits, either for existing or new infrastructure (which includes electricity generation facilities) in a manner that is consistent with Part 2 of the Act.

3.7 The current approach of the proposed One Plan in regard to the management of the Region's water resources is a prescriptive one, which focuses primarily on protecting the resources from the adverse effects of its development and use, as opposed to enabling the use and development of water resources subject to meeting environmental standards or accordingly, there is a real risk that the current policy framework for water (and related provisions) does not sufficiently provide for renewable energy generation activities. Such a framework is fundamental to both the establishment of new renewable electricity generation activities, as well as the maintenance, operation and upgrading of existing facilities.

3.8 While resource management policy that focuses on the negative effects of the use or management of natural and physical resources may have some benefits to the average plan user, the reality of such an approach for major water users or infrastructure operators is substantially different. Ultimately each provision has an incremental impact on the feasibility of new infrastructure development, an approach that does little to promote sustainable management of natural and physical resources, and the enabling tenet of the RMA.

3.9 In addition to the increasingly difficult and costly process to consent new infrastructure, maintaining or improving existing infrastructure faces the same impediments. In particular, the conditions upon which consent is granted for many existing hydroelectric power generation schemes are almost always more restrictive, irrespective of known and well established operational effects. I have footnoted some examples where the values of

TrustPower's existing assets have been reduced as a consequence of the consent renewal / reconsenting processes[5].

3.10 In response, TrustPower has sought to ensure that the provisions for water resource management in the proposed One Plan[6] provides an appropriate policy framework by, among other things –

(a) Applying nationally consistent frameworks for water allocation and management that are consistent with Part 2 of the Act and established case law;

(b) Reinforcing that renewable energy generation activities should be promoted as a means of enabling sustainable management of our natural and physical resources, including benefits for addressing climate change;

(c) Sufficiently protecting lawfully established activities that are in the national or regional interest; and considered to be physical resources under Part 5 of the Act; and

(d) Managing the effects of renewable energy activities in a manner that is consistent with the regional and national benefits provided by such activities.

3.11 TrustPower's other submissions have sought to have the proposed One Plan provisions suitably take into account the amount of investment required in infrastructure developments, particularly in relation to consent durations, consent review conditions and financial contributions.

3.12 A substantial amount of information has been provided as part of the multiple section 42A reports on the water provisions of the proposed One Plan. Aside from the 420 page section 42A planning report (and its companion 697 page summary of submission points), there has been a large amount of supplementary technical and legal information that had had to be taken into account. Given the major importance for the Region of ensuring an equitable and efficient approach to water allocation and use, and the range of potential environmental issues, the significant resources that this review has utilised is not surprising.

3.13 In the interests of efficiency, my evidence focuses on the key issues for TrustPower, and accordingly a number of TrustPower's primary and further submission points have not been specifically addressed. This approach should be inferred as meaning that those other submission points are not important issues for TrustPower – rather TrustPower has sought to

5 Recent examples include: (1) the imposition of further environmental enhancement measures through the re-consenting process at the Motukawa Hydroelectric Power Scheme, Taranaki, reducing the Scheme's output by some 6-7% percent; (2) the imposition of a flow share regime (presently being trialled) at The Branch Hydroelectric Power Scheme could result in an 8% reduction in output; (3) the re-consenting of the Waihopai Hydroelectric Power Scheme resulted in a 4.2% reduction in output; (4) the Waipori Hydroelectric Power Scheme resulted in a 1.2% reduction in output and a reduced ability to generate during national and regional power shortages; and (5) the Hinemaiaia Hydroelectric Power Scheme where there was a reduced ability to meet peaks in electricity demand.

6 Namely Chapter 6 'Water', Chapter 13 'Discharges to Land and Water', Chapter 15 'Takes, Uses and Diversions of Water and Bores' and Chapter 16 'Structures and Activities Involving Beds of Rivers, Lakes and Artificial Water Courses and Damming'

concentrate on those major issues that are relevant to its interests as a renewable electricity generator – particularly those that are either contrary to best practice water allocation frameworks, or are inconsistent with the intent of Part 2 of the Act and/or the use of renewable energy generally.

4 Recognising Regionally Significant Infrastructure

4.1 Chapter 3 sets out, inter alia, the objectives and policies for regionally significant infrastructure, and the recommended revisions to this chapter are largely supported by TrustPower and other generators. The submissions from TrustPower and other generators sought greater reference within other parts of the One Plan to the provisions of Chapter 3, either through cross-references to specific provisions or through amendments outlining how the water provisions related to the provisions for Infrastructure and Energy.

4.2 However, in the vast majority of instances, such submission points were rejected by the section 42A report, citing "Chapter 3 already covers this matter and would, where applicable, be considered in relation to a particular resource consent application (page 30)" or text to similar effect.

4.3 Given that such relief was a key part of TrustPower's submissions, I will discuss the intent of TrustPower's relief in more detail. Prior to the amendments currently proposed to Chapter 3 and the clarification of the intent of these policies applying across the proposed One Plan framework, I considered the policies on infrastructure of regional/national importance was insufficient, particularly in light of the region's noted hydro-generation resources and recent government policy direction as highlighted above pertaining to renewable energy and climate change. My interpretation of the notified policy framework was that consenting (or re-consenting) of such infrastructure would have been a major task, given the proposed One Plan's focus on *avoiding* negative effects associated with the use or management of natural and physical resources, as opposed to promoting their sustainable management as required by Part 2 of the Act.

4.4 I would submit that the generation of electricity, particularly for larger schemes, is generally of sufficient significance to warrant a 'regional or national importance' categorisation. In drawing this conclusion, I am acknowledging the integral role that a secure and reliable supply of electricity plays in both society and the economy, in terms of its essential role in the maintenance and enhancement of the health and well-being of people and communities.

4.5 For example, the Environment Court has confirmed that an existing hydroelectric power scheme is a significant physical resource that requires sustainable management and protection[7]. The retention and, as appropriate, further development of existing generation plants is environmentally efficient as it maximises the use of existing assets with little or minor adverse effects on the environment.

7 The Waipori Hydroelectric Power Scheme, Otago: refer *Save Mahinerangi Society Incorporated v Otago Regional Council* C1/2004

4.6 Overall, I remain concerned at the almost total absence of reference to renewable energy and regionally important infrastructure throughout the water provisions of the proposed One Plan, and consider that this is inconsistent with Part 2 of the Act. Given the multiple rejections of submissions seeking greater explicit reference to hydroelectric generation activities and additional cross-references to Chapter 3, I still consider that the water provisions remain too focused on protection from any effects on natural values. An example of the increased emphasis on natural values (as well as the inconsistency of this approach with the multiple cross-references to other chapters); the section 42A report has recommended numerous specific references to activities in rare, threatened and at-risk habitats. In the absence of such cross-references to either Chapter 3 or regionally important infrastructure specifically, I consider it is inappropriate to continue cross-referencing other Chapters or effects on natural values.

4.7 Now that I have provided the basis for TrustPower's submissions, I will now discuss TrustPower's submission points in more detail. In many areas, the submission points duplicate an earlier submission point – and in these cases I simply refer to the stated relief.

5 Chapter 6 Water

4.1 Chapter 6 General – Water Quality; 6.1.3 – Water Quantity - Ground and Surface Water Allocation; and Paragraph 6.1.5 River and Lake Beds – River and Lake Beds

5.1 TrustPower, along with a number of other electricity generators, submitted in detail on the introductory section of Chapter 6, seeking a combination of either increased recognition of, or provision for hydroelectric generation within Chapter 6 and/or greater or additional cross references to Chapter 3 Infrastructure, Energy and Waste consistent with the benefits of renewable energy outlined above[8]. More specifically, TrustPower supported the submission of Mighty River Power to add a new section to Part 6 of the proposed One Plan that provides a policy framework (objectives and policies) for the allocation of water to hydro electricity[9].

5.2 TrustPower also supported the submission of Meridian Energy Ltd (Meridian) to add a new section to Chapter 6 that provides a policy framework (objectives and policies) specifically for takes, uses, damming and diversion activities associated with hydro electricity[10].

5.3 TrustPower supported the submission of Mighty River Power to amend Schedule B to exclude takes and uses of water for hydroelectricity activities from the core allocation and minimum flow requirements[11]. TrustPower also submitted in support of Meridian's submission to include new provisions within the proposed One Plan allowing for consideration of an alternative

8 Refer for example submission 359 4, supported by X 511 6 and X 525 105; Submission 363 58, supported by X 511 146 and X 525 90.
9 Refer submission 359 4, supported by X 511 6 and X 525 105.
10 Refer submission 363 58, supported by X 511 146 and X 525 90
11 Refer submission 359 6, supported by X 511 7, X 522 12 and X 525 116.

minimum flow or allocation regime via a resource consent application process where the applicant has provided new or improved scientific knowledge on the waterbody and where the:

(a) Effects on the values that have been identified for the particular river system are able to be avoided, remedied or mitigated;

(b) Effects on existing takes and uses have been evaluated and are minor;

(c) Benefits to the community and the nation offset adverse effects; and

(d) The positive benefits of allowing water takes for renewable energy developments that also limit the potential for greenhouse gas emissions[12].

5.4 However, the section 42A report recommended that in large part the submissions of generators on this matter be rejected for the reason that *"Chapter 3 already covers this matter and would, where applicable, be considered in relation to a particular resource consent application"* (page 30).

5.5 For the multiple reasons outlined above in relation to the benefits of renewable energy generation, TrustPower is concerned that the specifics of a number of the submissions points have been unduly disregarded. The generic rejection of the large number of submission points seeking specific recognition of the importance of hydroelectricity generation activities in the region (and as a matter of regional / national importance) to be specifically recognised by the water provisions (refer, for example, submission 307 17 EECA) is perhaps my biggest concern.

5.6 Similarly, the approach to relying on Chapter 3 provisions with no substantial cross-references to regionally or nationally important infrastructure, in my opinion, does not prescribe sufficient weighting to these activities. I consider that the wholesale rejection of those submissions seeking amendments to refer to the positive attributes associated with infrastructure and energy development particularly hydroelectric power generation and/or include cross references to the objectives and policies within Chapter 3 dealing with infrastructure does not give appropriate consideration to these submissions.

5.7 Despite the numerous recommendations in the section 42A report stating that these matters are sufficiently dealt with by Chapter 3, I consider this approach is inconsistent with other Chapters of the proposed One Plan which are consistently cross-referenced through the water provisions. For example, the multiple cross-references to rare, threatened and at-risk habitats in the recommended amended versions of the water provisions.

5.8 As outlined in the submission of EECA, the single largest user of water in the Region is the energy sector. EECA submitted that the region has potential for both large and small hydropower schemes and with the current requirement to maximise renewable energy resources, more hydro electricity generation may be developed in the region in the future[13]. I support the

12 Refer submission 363 59, supported by X 511 147.

13 Refer submission 307-16.

section 42A report's recommended inclusion of the following wording to the end of paragraph three: "*…although there is the potential for more hydro electricity generation in the Region over the next decade*." (page 43).

5.9 In considering the above, I remain of the opinion that the introduction to Chapter 6 should include some reference to hydroelectric generation and a cross-reference to the policies in Chapter 3.

4.16 Chapter 6 – Objective 6-1 Water Management Values – Water Quality

5.10 TrustPower, like a number of other submitters, opposed the cross-referencing of Schedule D in its current form in the absence of detailed justification of the minimum flows outlined and corresponding cumulative core allocation limits. I will discuss this in more detail in relation to Schedules B and D in sections 9 and 10 of my evidence.

5.11 TrustPower also supported the submissions of Mighty River Power and Meridian to delete the reference to Schedule D and amend the objective to recognise and provide for the values set out in Schedule D, where appropriate[14]. However, the reporting officer considered that the words "where it is appropriate" add less certainty to the Objective and are "inappropriate" (page 57 section 42A report).

5.12 I fully concur with the section 42A report that the policy framework for Schedule D needs to be retained. However, for the reasons outlined in my evidence in regard to Schedules B and D, I consider that this policy framework needs to not only include other values within Schedule D (which are now recommended to be included in Schedule B by the section 42A report), but to also provide for consideration of an alternative minimum flow or allocation regime via a resource consent application process where the applicant has provided new or improved scientific knowledge on the waterbody (as per MEL submission 363 59, supported by X 511 147). Such a framework could remove the uncertainty associated with current flows, and would provide for the adaptive management of the resource, as new information becomes available in the future.

5.13 The adaptive management approach is now well recognised by the Environment Court, particularly when large complex ecological systems are being managed and management decisions cannot wait for final research results[15]. As an example of the Council application of adaptive management, in the Interim Decision of Canterbury Regional Council by Independent Commissioners in the case of applications to take water from the Selwyn Rakaia Ground Water Zone, the Commissioners made the following comments about the use of adaptive management as an appropriate basis on which to grant consents:

> *We also accept, that even if we conclude for a particular aquifer that the grant of further consents is unlikely to result in a long term*

14 Refer to submission 363 63, supported by X 511 164; submission 359 43, supported by X 511 162 and X 522 140

15 *Golden Bay Marine Farmers v Tasman DC* W019/03 is the leading authority on the concept of adaptive management. This Environment Court case at paragraph 406 adopts the definition of adaptive management from the New Zealand Biodiversity Strategy (2000).

> *decline in levels or pressures, we should nevertheless ensure that short term effects on Aquifer 1 levels and therefore adaptive management conditions should be able to manage short term effects.* (paragraph 64)
>
> *…However, in our view it is unlikely that, with appropriate adaptive management conditions, these consents will lead to more than minor additional effects occurring.* (paragraph 180)

4.18 Chapter 6 – Objective 6-3 Water Quantity and Allocation - Ground and Surface Water Allocation

5.14 TrustPower's submission sought that Objective 6-3 be amended to state that the amount of water available for regionally or nationally important energy generation is not unduly compromised[16]. TrustPower also supported the submissions from Genesis Energy (Genesis) and Meridian seeking an amendment to Objective 6-3 to ensure that either during times of water shortage, takes are restricted to those that are essential to the health or safety of people, hydroelectric schemes, communities or stock, and other takes are ceased[17] or a new provision be added that allows flexible allocation and minimum flow regimes[18].

5.15 Similar to most submissions from generators on this Chapter, however, the relief sought was recommended to be rejected. Moreover, the section 42A report questioned why reference is required specifically to electricity generation (page 66). However, in rejecting these submissions, the officer has noted that discussions will continue with submitters. We look forward to discussing the nature of these submissions in more detail with Horizon's officers in the coming months. In the interim, for the reasons outlined above in relation to Schedule B, I support insertion of additional provisions to outline alternative appropriate minimum flow for their consent if these can be properly determined by appropriate experts.

5.16 Ultimately, the water framework established by the proposed One Pan should seek to manage water allocation in a manner that appropriately recognises the rights of existing consent holders. Case law has clarified that decision makers allocating water at the time they promulgate plans or consider resource consent applications cannot make decisions which have the effect of reallocating to new users water that is already allocated to existing users. Accordingly, I consider it fundamental that the proposed One Plan includes a clear Objective that the Council intends to act in a manner consistent with established case law by recognising its requirement to be mindful of its obligations to those to whom it has already decided to grant consent.

4.19 Chapter 6 – Objective 6-4 River and Lake Beds - Rivers and Lake Beds

5.17 TrustPower's submission sought that this Objective specifically recognises the particular benefits of infrastructure and renewable energy[19]. This

16 Refer submission 358 33, supported by X 519 32, X 522 142 and X 525 241; and submission 363 64, supported by X 511 176
17 Refer submission 268 23, supported by X 511 174
18 Refer submission 363 65, supported by X 511 177
19 Refer submission 358 34, supported by X 522 144 and X 525 242.

submission, along with similar submissions from generators, was rejected by the section 42A report which stated it is inappropriate that the Objective specifically focuses on one activity as all values need to be recognised.

5.18 While I concur with the need to recognise all values, I consider that at least one objective of the water chapter should refer to hydroelectricity generation; in light of water use being one of the big issues facing the region and given such hydroelectric generation has been identified as one of the major water users in the region[20]. As currently drafted, the Regional Policy Statement provisions for water in Chapter 6 do not specifically provide for any regionally or nationally significant infrastructure that is dependent on water resources.

5.19 As an aside, I support the recommended deletion of the term 'significant' in this context and consider the revised objective goes some way towards addressing TrustPower's concerns.

4.23 Chapter 6 – Policy 6-1 Water Management Zones and Values – Water Quality

5.20 TrustPower was one of a number of submitters seeking a specific reference to the value of renewable energy / hydroelectricity generation within the Policy and Table 6.2. Although Table 6.2 refers to "existing infrastructure", it remains my opinion that the associated management objective - "*The integrity of existing infrastructure is not compromised*" – does not take into account the numerous recognised benefits of infrastructure.

5.21 In the section 42A report's justification for the recommended amendments and consideration of other submissions, the officer notes "*There is a substantial body of scientific evidence that supports the approach being taken in the One Plan"* (refer page 78). After reviewing the large amounts of information provided as part of the reporting on the water provisions of the proposed One Plan, I can accept this point. However, as outlined earlier in my evidence, there was little information provided in relation to the other benefits of water in terms of renewable electricity generation; specifically, to recognise that that such use is essentially 'non-consumptive' in that water is returned to the system and able to be reallocated for another use. Given the officer seeks to return to this matter after discussing it further with the submitters, I will not get into any further detail at this point.

5.22 Accordingly, while the rewording of Policy 6-1 is supported in part, it remains my opinion that the lack of inclusion of specific hydroelectricity generation activities remains an outstanding issue.

4.26 Chapter 6 – Policy 6-4 Enhancement where Water Quality Standards are not Met – Water Quality

5.23 TrustPower supported the submission of Genesis Energy to insert a new clause to Policy 6-4 to ensure the policy does not apply to the effects on water quality from the operation and maintenance of hydroelectric power generation infrastructure[21]. I disagree with the section 42A report statement

20 Refer to page 23 of the statement of evidence of Greg Carlyon for Horizons
21 Refer submission 268 26

which suggested that there is no sound resource management reason why hydroelectric power generation should be singled out to be any different to any activity where there is the potential for adverse effects on the environment.

5.24 As I have outlined earlier in my evidence on the water provisions – and earlier Chapters of the proposed One Plan to date – the Act contains numerous provisions which relate to renewable energy generation activities are in the regional or national interest: this is recognised by Chapter 3 of the proposed One Plan. Moreover, where there is a significant resource management issue pertaining to a specific activity, then there is justification for a specific policy(ies) to address such activity.

5.25 Accordingly, I consider it would be appropriate – and indeed consistent with the Act – for Policy 6-4 to provide for some instances, particularly in the case of regionally or nationally significant infrastructure, where the water quality standards outlined in Schedule D cannot be met.

4.34 Chapter 6 – Policy 6-12 Reasonable and Justifiable Need for Water - Ground and Surface Water Allocation

5.26 Both TrustPower and Meridian submitted seeking to amend this policy to ensure the specific recognition of water use for hydroelectric power generation and the continued availability of water currently used[22]. These submissions were rejected by the section 42A report, citing that the term 'industrial use' is broad enough to cover hydroelectric power generation (page 113). As outlined earlier in my evidence, TrustPower submitted on this point in the interests of ensuring existing hydroelectric power generation was not continually subjected to ongoing consent reviews and other processes to improve efficiency and thus potentially reduce water takes and the value of hydroelectricity generation assets.

5.27 I would submit that it would not be clear that hydroelectric power generation was an "industrial use" of water. In particular, while hydroelectric power generation does 'use' water, it is not a consumptive use, as would commonly be associated with the industrial use of water.

5.28 Regardless of Chapter 3, I still consider the industrial use section of this policy inadequate to provide sufficient regard to the reasonable and justifiable nature of water for infrastructure of regional / national importance and ultimately to ensure that for hydroelectricity generation purposes, water allocation is calculated to allow the continued availability of water currently used.

4.35 Chapter 6 – Policy 6-13 Efficient use of water - Ground and Surface Water Allocation

5.29 TrustPower submitted on this policy to ensure there were exceptions for existing hydroelectric power generation schemes and renewable energy[23].

22 Refer submission 358 37, supported by X 522 152; and 363 82, supported by X 511 238
23 Refer submission 358 44; and submission 363 83, supported by X 511 244

TrustPower also submitted in relation to the submission of Forest and Bird which sought to make the policy apply to all existing water allocations[24].

5.30 In its current form, I do not consider that the framework does not take into account that the use of water for renewable energy generation is highly efficient, as water is returned to a waterbody for reallocation and use for another purpose: this characteristic needs to be recognised within the Policy. Policies that would not provide for such efficient use do not recognise the associated benefits.

5.31 Further, it is in an electricity generator's interest to ensure that water is used efficiently, as any inefficiencies resulting from water loss associated with hydroelectric generation activities results in lost generation and thus therefore reduced revenue. Accordingly, I consider that any requirements for water budgets to check for leakages and water use efficiency to be inappropriate for hydroelectric power generation activities.

5.32 As outlined above, inclusion of this policy without some specific provision for hydroelectric power generation activities risks further impediments to production and the values of its existing assets as a consequence of the consent renewal / re-consenting processes.

4.36 Chapter 6 – Policy 6-14 Consideration of alternative water sources - Ground and Surface Water Allocation

5.33 TrustPower supports the revised wording as recommended by the section 42A report to include harvesting during periods or high flow when making decisions on consent applications to take water. I consider the revised wording effectively provides for the more efficient use of water (i.e., less waste during high flows), as well as provides for storage and use during low flow periods.

4.37 Chapter 6 – Policy 6-15 Overall approach for surface water allocation - Ground and Surface Water Allocation

5.34 TrustPower generally supports the provisions for ground and surface water allocation as currently recommended by the section 42A report, consistent with a number of its primary submission points and further submissions. I agree with the section 42A report that Policy 6-16 that deals with core allocation makes it clear that existing hydroelectricity takes have been taken into account in setting the core allocation[25].

4.38 Chapter 6 – Policy 6-16 Core water allocation and minimum flows – Ground and Surface Water Allocation

5.35 TrustPower supports the recommendation of the section 42A report that Policy 6-16 should only apply to existing hydroelectric takes as opposed to new takes, and that the framework cannot allocate unknown volumes of water in advance. The matter of activities needing to be "lawfully established" has been canvassed by the legal submission of Ms Burkhardt for TrustPower. However, from a planning perspective, the basis for Policy 6-16

24 Refer submission 460 47, opposed by X 511 248 and X 531 66
25 Refer submission 358 41, supported by X 522 134

remains the cross-reference to Schedule B with which TrustPower has a number of concerns. While Policy 6-16 recognises existing takes, it remains my opinion that the Schedule B approach remains highly restrictive of new water takes for hydroelectric generation or for major infrastructure, a point I discuss in more detail later in my evidence.

4.39 Chapter 6 – Policy 6-17 Approach to setting minimum flows and core allocations - Ground and Surface Water Allocation

5.36 TrustPower supported a number of submissions seeking that Policy 6-17 be amended to allow for minimum flows lower than that specified in Schedule B, and that it would be appropriate to allow for adaptive management resulting from new knowledge or more detailed studies[26]. In my opinion, minimum flows should only be imposed on a case-by-case basis where scientific investigations have proved there is a real need.

5.37 I agree in part with the section 42A report that such information can be dealt with as part of the resource consent process (page 125). However, the current activity status in some cases does not sufficiently provide for such an approach.

4.41 Chapter 6 – Policy 6-19 Apportioning, restricting and suspending takes in times of low flow - Ground and Surface Water Allocation

5.38 In summary, TrustPower generally supported Policy 6-19, but sought that consents for the take and use of water for hydroelectricity shall be allowed to continue to the allowable minimum flow or, alternatively, that there be a clause specifically relating to the importance of energy generation to the national interest[27]. TrustPower also submitted in support of other submitters seeking similar relief and opposed a number of submitters seeking alternative approaches to apportioning and restricting takes. The legal submission of Ms Burkhardt for TrustPower has discussed in more detail the alleged intent of section 14 of the Act.

5.39 I support the proposed amendments in the Policy to essential takes [clause (b)(i)] to clarify reasonable needs for people and animals, and clause (b)(iii) to clarify that takes which are lawfully established shall be allowed to continue regardless of river flow. While I can accept to a point the statement in the section 42A report that '*hydro electricity generation is an industry*' (page 131), in the absence of a definition of 'industry(ies)' within the proposed One Plan, I consider that the exception in clause (b)(iii) should specifically refer to the intended industries. However, in relation to the section 42A report's statement that hydroelectricity generation should be subject to the same restrictions as other takes, I disagree. As I have outlined above, I consider hydroelectricity generation to be an essentially non-consumptive use of water.

5.40 Given clause (c) of Policy 6-19 defaults to the core water allocation flows outlined in Policy 6-16 (and thus Schedule B), I still have a number of

26 Refer submission 359 59, supported by X 487 103, X 511 264 and X 522 158
27 Refer submission 358 42, supported by X 522 160 and X 525 248

concerns at the implications of Schedule B in regard to this Policy as I discuss in more detail later in my evidence.

5.41 With the exception of the lack of specific reference to 'industries' as including hydroelectricity generation activities, I am satisfied that the amendments to clause (b)(iii) in relation to lawfully established takes addresses TrustPower's concerns and is consistent with the intent of section 14 of the Act.

4.51 Chapter 6 – Policy 6-28 Activities in waterbodies with a value of Natural State, Sites of Significance - Cultural, or Sites of Significance – Aquatic - Rivers and Lake Beds

5.42 TrustPower's primary submission in regard to this Policy sought better definition and justification of the use of the terms "Natural State Waterbodies", "Sites of Significance - Cultural," and "Sites of Significance - Aquatic" in the proposed One Plan – or alternatively sought their deletion[28]. TrustPower submitted in support of similar submissions from Meridian and Federated Farmers[29].

5.43 This relief was rejected by the section 42A report, which stated that this Policy is intended to send a strong signal that in relation to these sites i.e. sites of significance for Cultural or Aquatic reasons or Natural State Sites, adverse effects need to be avoided (page 149).

5.44 Given the lack of suitable robust criteria justifying the inclusion of these sites in the Schedules, I still have some concerns at their inclusion – a point I discuss in more detail in relation to Schedules B and D later in my evidence. However, consistent with TrustPower's submissions, I do support the section 42A officer's recommendation to amend clause (a) of the policy to allow for some mitigation of effects on these values (page 149) and consider this to be consistent with the intent of Part 2 of the Act to 'avoid, remedy or mitigate' adverse effects. Consistent with the section 42A report's recommendation to provide for the mitigation of adverse effects on these values, I consider that Policy 6-28 could also be amended to allow for financial contributions to offset or compensate for adverse effects on these values as currently provided for in Policy 6-30.

4.54 Chapter 6 – Policy 6-31 Essential and beneficial activities – Rivers and Lake Beds

5.45 TrustPower submitted in support of Policy 6-31, but sought an amendment to refer specifically to infrastructure facilities associated with renewable energy generation[30]. These submissions were rejected by the section 42A report in the context of changing the intent of the policy to 'existing activities' (page 155).

5.46 Whilst the section 42A report notes that the policy as currently worded has the potential to be misinterpreted, I consider the replacement of the term

28 Refer submission 358 46, supported in part by X 522 164
29 Refer submission 363 95 , supported by X 511 297 and 519 19; submission 426 76, supported by X 511 300
30 Refer to submission 358 47 TPL, supported by X 525 250 and supported in part by X 522 167

'essential' with 'existing' would result in a significant change to the intent of this policy. This change would have the effect of deleting one of the only provisions within the Water provisions that positively provides for essential activities, which I would interpret as including infrastructure of regional or national importance. As outlined in TrustPower's original submission on this (and other policies), the current lack of policies either specifically providing for infrastructure of regional/national importance or alternatively cross-referencing to Chapter 3 is inconsistent with other Chapters of the proposed One Plan – see, for example, Policy 12-3 (as notified) 'Important and essential activities', which specifically recognises some effects *'associated with an activity that is important or essential to the well-being of local communities a, the Region or a wider area of New Zealand'*.

6 Chapter 13 Discharges to Land and Water

4.72 Chapter 13 – General – Water Quality

6.1 As I have outlined earlier, I consider the lack of specific reference to hydroelectricity generation activities as infrastructure of regional/national importance within the water provisions of the proposed One Plan to be inconsistent with the Act and recent government policy aiming to specifically provide for renewable energy generation. Chapter 13 is no exception to this, and despite the numerous and wide-ranging submissions seeking such recognition, the Officers are recommending that this Chapter contains no specific references to such activities (with the exception of 'regionally significant infrastructure identified in Policy 3-1' specified in Policy 13-2).

6.2 As outlined in TrustPower's original submission[31], a lack of such reference is, in my opinion, inconsistent with other Chapters of the proposed One Plan – see, for example, the notified Policy 12-3 'Important and essential activities', which specifically allow some effects '*associated with an activity that is important or essential to the well-being of local communities a, the Region or a wider area of New Zealand'*. For the reasons outlined earlier in my evidence, I consider this approach to be inconsistent with Part 2 of the Act and government direction or provide for renewable energy development in a manner that recognises the regional and national benefits of such development.

4.89 Chapter 13 – Rule 13-9 Discharges of water to water – Water Quality

6.3 TrustPower submitted in support of the submission of Genesis to create a Controlled Activity Rule for discharges of water to water from hydroelectric power schemes not able to comply with the conditions specified in Rule 13-9. As outlined in Genesis's submission, this approach would recognise the importance of future hydro electricity schemes and existing TPS infrastructure while giving the Council some control by way of consent conditions.

31 Refer to submission 358 77, supported by X 519 36 and supported in part by X 522 229 and X 522 314

6.4 I consider that the section 42A report's rejection of this relief does not acknowledge the issues associated with unavoidable temporary discharges of sediments from hydroelectric power schemes. Given the temporary and irregular nature of these discharges, the full potential and actual adverse effects of the activity may not comply with the permitted activity rule conditions prescribed in Rule 13-9, particularly condition (b) which requires the discharge shall not cause ***any*** scouring or erosion of any land or waterbody beyond the point of discharge. Accordingly, I consider requiring discretionary activity status for these minor discharges as suggested by the section 42A report (page 220) is unnecessarily onerous, as well as inconsistent with the intent of the Act.

6.5 In terms of the current condition in Rule 13-9 that the discharge should not cause any scouring or erosion of any land of water body, I consider such controls could be more reasonably managed through a consent condition[32] or more specifically through amendment of the rule to explicitly provide for flushing flows and/or channel maintenance flows from hydro-electricity dams as a controlled activity. This would be consistent with the recommendation for exemption of such activities from water quality standards by the section 42A report of Dr Barry Biggs (page 28).

4.105 Chapter 13 – Rule 13-23 Discharges to Natural State water management zones, Sites of Significance - Aquatic and lakes and wetlands – Water Quality

6.6 TrustPower originally submitted on Rule 13-23, seeking that minor or temporary discharges could be undertaken to these identified waterbodies[33]. This was accepted in part by the section 42A report through the clarification and amendment that this rule was in relation to discharges of contaminants. However, given the potentially wide default RMA definition of 'contaminant', TrustPower is concerned at the potential implications for existing or new hydroelectric generation activities associated with the non-complying activity status of Rule 13-23.

7 Chapter 15 Takes, Uses and Diversions of Water and Bores

4.111 Chapter 15 – General - Ground and Surface Water Allocation; and 4.112 Chapter 15 – Policy 15-1 Consent decision-making for takes and uses of surface water and groundwater - Ground and Surface Water Allocation

7.1 Consistent with its submissions on the other chapters relating to water and discharges, TrustPower originally sought that the provisions in Chapter 15 be amended to make specific provision for infrastructure supply and energy

32 An example of an existing erosion control condition is as follows (from TrustPower's Hinemaiaia Hydro-Electric Power Scheme): The consent holder shall be responsible for any erosion control works in the immediate vicinity of the dams, penstocks, power stations and any other civil structure associated with the hydro electric power scheme that, in the opinion of an appropriately qualified independent registered engineer, become necessary to preserve the integrity and stability of the river channel and/or to control erosion occurring in that vicinity as a result of the exercise of these resource consents.

33 Refer submission 358 78

development, including a requirement to have regard to important and essential activities[34]. In response to these submissions, the section 42A report considered the cross reference to Chapter 3 within the Policy 15-1 provides an adequate link to the matters of concern to submitters (page 259). While my concerns about the lack of reference to regionally important infrastructure still largely remain, I support the recommended cross-referencing to those relevant provisions in Chapter 3 within Policy 15-1, consistent with TrustPower's submissions.

7.2 TrustPower also supported the submission of Meridian which sought to add a new clause (d) to Policy 15-1 to enable non-consumptive uses of water including the use and recycling of water[35]. This relief was rejected by the section 42A report which stated that the issue of non-consumptive takes should be considered in relation to potential effects and be put through the rigour of the rule framework (page 259). The difficulty with this approach is, as I have outlined earlier, that, with the exception of those provisions in Chapter 3, there are no provisions within Chapters 6, 13 or 15 that relate to the specific benefits of regionally important infrastructure, particularly renewable energy generation. As such, there is little in the way of a framework for evaluating these benefits and thus taking them into account in the decision-making process, consistent with government's stated intent in regard to renewable energy and climate change.

7.3 I consider the rejection of Meridian's submission to enable non-consumptive uses of water (including the use and recycling of water) inconsistent with my interpretation of the term. While the evidence of Mr Carlyon for Horizons Regional Council considers that the major schemes in the Manawatu-Wanganui Region are consumptive users (page 23)[36], I do not consider this a reasonable or sound basis by which to consider future hydroelectric generation schemes. Under the current policy framework for water allocation, the proposed One Plan does not contrast between true consumptive uses that remove water on a permanent basis, and partially consumptive uses such as hydroelectric power generation dams, which take water and return it to either the same water course or an alternative water course. It is my understanding that, in the majority of situations, water taken by a hydroelectric power generation scheme is available for downstream users subsequent to use within the scheme. Accordingly, I consider that the proposed One Plan should provide for the development of these types of schemes effectively through plan provisions that allow non-consumptive uses similar to hydroelectric power schemes throughout the rest of New Zealand.

4.116 Chapter 15 – Policy 15-5 Consent review and expiry - Ground and Surface Water Allocation

7.4 TrustPower and Mighty River Power originally sought that Policy 15-5 be amended to ensure consents for hydro electricity takes are not subject to

34 Refer submissions 358 82, supported by X 522 519 and X 525 259; submission 363 166, supported X 511 450

35 Refer submission 363 167, supported by X 511 451

36 At page 23 of his evidence, Mr Carlyon states that for much of the rest of the country, hydroelectric power generation is typically run-of-river, where a dam is used to store and then release water as demand requires, with all of the water eventually passing down the same river.

common catchment expiry dates and to have clause (a) deleted[37]. TrustPower and Mighty River Power also sought that clause (b) be amended to specifically include existing and new resource consents for hydroelectricity generation[38]. These submissions were rejected by the section 42A report, stating that hydroelectricity takes are not listed as an essential take under Policy 6-19 and *"it is unclear why they should be singled out and given special treatment over any other infrastructure or industrial activity"* (page 267).

7.5 As an aside, TrustPower and other submitters did seek in numerous submissions on Policy 6-19 that consents for the take and use of water for hydroelectricity shall be allowed to continue to the allowable minimum flow[39]; however, these submissions were also rejected.

7.6 As outlined in its primary submission, TrustPower opposes the presumption within Policy 15-5 that consents will generally expire rather than be reviewed. TrustPower supports the approach whereby consents for infrastructure projects where large-scale investments are involved should be recognised in the proposed One Plan as situations where consent reviews are more appropriate than the use of common consent expiry dates. This approach would be consistent with the proposed approach of the Waikato Regional Plan (Variation 6) which does not require water uses for or associated with hydroelectricity generation to be subject to common expiry dates[40].

7.7 The matter of common expiry dates was canvassed in the section 42A report of Dr Jonathon Roygard. However, rather than outlining the associated issues, the officer simply noted that he had advocated the use of common expiry dates for a number of years (page 23). As with a number of the other section 42A reports justifying the proposed approach in the proposed One Plan, Mr Roygard's section 42A report did not address the significant infrastructure investment of major water users.

7.8 While common expiry dates have some 'ease-of-management' benefits for Councils administering water allocation frameworks, it is my understanding that common expiry dates for water permits reduces the likelihood that the same take will be renewed, and discourages efficient investment in the use of water permits. Many investments to use water, such as hydroelectricity power schemes, are very long-life assets. Accordingly, the attenuation of rights of water permits potentially has a material impact on investment and the efficient use of water. It is my opinion, therefore, that the current Policy 15-5 is potentially inconsistent with the government's stated desire to increase renewable energy generation, achieve increased security of supply and reduce climate change.

37 Refer submission 358 83, supported by X 522 335
38 Refer submission 358 84 and 358 85
39 Refer submission 358 42, supported by X 522 160 and X 525 248
40 Refer policy 11(c) (previously policy 10(c) as follows: "Those consents provided for in part b) (i and ii) of this policy [(i) for domestic/municipal supply; (ii) for the primary purpose of, or directly associated with electricity generation] shall include review dates which coincide with the common expiry dates for the relevant catchments listed in Table 3-3."

7.9 Overall, therefore, for the reasons outlined earlier in my evidence, I consider that Policy 15-5 should be amended to specifically exclude hydro-electricity generation activities from the common expiry date framework.

7.10 As an aside, TrustPower continues to oppose the assumption in Policy 15-5(a) that it is more efficient to allocate water amongst a wide range of users. TrustPower also opposes the priority order for allocation in (b) of this policy. In some cases, the purpose of the Act may be best served through providing water to a small range of users (consistent with the degree of national, regional or community benefit from the taking or use of water, as distinct from individual benefit)). In reflecting this situation, I consider Policy 15-5 should also take into account the value of investments made by existing consent holders, as well as providing for previously consented takes in accordance with the requirements of section 124B(4) of the Act.

4.120 Chapter 15 – Rule 15-1 Minor takes and uses of surface water - Ground and Surface Water Allocation

7.11 TrustPower supports the recommended amendments to Rule 15-1 and the definition of 'property' provided in the Glossary.

7.12 In light of the rates of take specified in the conditions to Rule 15-1, I consider that there should also be a Council-administered registration of permitted takes within each catchment to allow Council to ensure they do not over-allocate water resources. This approach would also ensure permitted takes do not have an adverse effect on existing environment and consented takes.

4.125 Chapter 15 – Rule 15-6 Takes of surface water not complying with core allocations - Ground and Surface Water Allocation

7.13 TrustPower sought either the deletion of Rule 15-6 from the proposed One Plan or an amendment to the \activity status to make such activities discretionary rather than non-complying[41]. This relief was rejected by the section 42A report, citing "the approach in terms of the core allocation has recognised the water that is allocated to existing hydroelectricity schemes" and that "the Science Reports address this matter" (page 285). Similar to the rejection of many of the TrustPower submissions seeking similar relief, the section 42A report stated that hydroelectric generation activities should be subject to the same requirements as other activities that may create similar effects.

7.14 Again, I would contend that this statement is inconsistent with the intent of Chapter 3 with a number of provisions specifically recognising that the effects of such activities may be tolerated differently to other activities, consistent with their regional / national significance.

7.15 Ultimately, I consider Rule 15-6, through its non-complying activity status, to largely rule out the development of new hydroelectricity generation in the Manawatu-Wanganui Region. This is a highly restrictive approach and again is inconsistent with the Act's enabling purpose – i.e. sustainable

41 Refer to submission 358 87, supported by X 519 37

management – as well as with government policy to increase the development of energy from renewable sources. As I will outline in my discussion on Schedule B, I consider there needs to be an established framework for reassessing any stated minimum flows and core allocations and an associated more enabling statutory framework for future water takes consistent with Chapter 3 and government policy on infrastructure development and renewable energy generation.

8 Chapter 16 Structures and Activities involving Beds of Rivers and Lakes, and Artificial Water Courses and Damming

4.136 Chapter 16 – Policy 16-1 Consent decision making for activities in river and lake beds (including modified watercourses) - River and Lake Beds

8.1 TrustPower, Mighty River Power, Meridian and Powerco all sought that Policy 16-1 be amended through the addition of a clause to have regard to the objectives and policies in Chapter 3 in relation to infrastructure development and energy generation. Again, like the majority of submissions seeking improved cross-referencing to Chapter 3, this relief was rejected by the section 42A report with the reasoning that in considering an application for resource consent all the relevant provisions of Part I will be taken into account (page 302).

8.2 As I have previously outlined, the water provisions of the proposed One Plan currently have little specific regard to infrastructure of regional / national importance and Chapter 16 is no exception, despite providing the policy framework for structures and activities, artificial water courses and damming. Linked to my earlier discussion, I consider Chapter 16 is of considerable importance and in its current form is going to remain a major impediment to both the establishment of new infrastructure and re-consenting of existing lawfully established infrastructure, particularly given the lack of reference to infrastructure of regional or national importance or cross-references to Chapter 3 of the proposed One Plan. For the multiple reasons outlined earlier, such an approach is consistent with current government policy to promote such activities where they are in the regional or national interest.

4.141 Chapter 16 – Rule 16-1 Damming of protected rivers – River and Lake Beds

8.3 Similar to the earlier policy provisions, TrustPower was one of a number of submitters seeking that the rule is either given a less stringent activity classification, and that certain rivers are deleted, or that the rule is removed altogether[42]. TrustPower's primary submission opposed the inclusion of the large list of waterbodies for 'aesthetic' values. Similar to the concerns expressed as part of the landscapes and natural character provisions[43], I have

42 Refer submissions 358 100-104; submission 363 176, supported by X 511 489; and 426 205 , supported by X 511 491

43 Refer paragraphs 4.18 – 4.30 of TrustPower's planning evidence on the General Hearing (including Administration and Finance, Landscapes and Natural Character and Energy and

some concerns associated with a 'prohibited' activity status in the absence of a robust and region-wide assessment of the values of these waterbodies.

8.4 In regard to the prohibited activity status for damming waterbodies that are subject to Water Conservation Orders, for the reasons outlined in the legal submission of Ms Burkhardt, such an approach appears unnecessary given that the WCO will detail the restrictions and prohibitions which override any regional plan in any event. Furthermore, a blanket prohibition could potentially result in a more restrictive approach than that applied in any particular WCO as the Order may not itself provide for the blanket prohibition the plan imposes.

8.5 Applying the same prohibited activity status to other rivers which have 'high values including landscape values' (page 315 of the section 42A report) is, in my opinion, not justified in the absence of robust assessment criteria to identify such values and establishment of the relevant values to be considered when assessing effects of activities on such values.

8.6 Most importantly, the rule does not provide for hydroelectric power schemes or other infrastructure where there may be less than minor effects. For example, during the scoping and design phase of a project, detailed studies and assessments are undertaken to determine the significance of values supported by a waterbody, and a scheme's design is typically modified accordingly to minimise the impact. For example, the original scheme design for the proposed TrustPower Wairau hydroelectric power scheme was substantially reduced in capacity from 125MW to a capacity of 72MW following analysis of the impact of the design on river birds habitat. In this example, the development process undertaken resulted in an appropriate balance between utilising energy potential and minimising environmental effects.

8.7 In responding to TrustPower's submission on Rule 16-1, the section 42A report specifically clarified that lawfully established structures are able to continue as a permitted activity under Rule 16-20. Accordingly, the section 42A report recommends an amendment to the rule guide under Rule 16-9 to clarify this. I support this clarification consistent with TrustPower's primary submission.

4.142 Chapter 16 – Rule 16-2 Other structures and disturbances in protected rivers – River and Lake Beds

8.8 I am pleased to see the section 4A report's support for TrustPower's submission requesting that structures are not restricted by Rule 16.2[44], consistent with the Operative Beds of River and Lakes plan and when appropriate structures are restricted by Rule 16-4 (page 320).

Infrastructure Provisions – dated 17 April 2009) and paragraph 4.10 of TrustPower's supplementary planning evidence (dated 16 July 2009).

44 Refer submission 358 120

4.144 Chapter 16 – Rule 16-4 Structures and disturbances involving waterbodies valued as Natural State, Sites of Significance - Aquatic, and Sites of Significance – Cultural – River and Lake Beds

8.9 While I agree with the section 42A report's statement that restricting discretion to a set number of matters would be difficult given the high number of values these river reaches hold and would not be appropriate (page 323), I consider that creating an exception for infrastructure of regional importance would be relatively straightforward and would remain consistent with Chapter 3 of the proposed One Plan.

8.10 TrustPower supports the section 42A report's recommendation to include the maintenance and upgrading of lawfully established structures to the extent it is allowed for by Rule 16-6 within Rule 16-4.

4.149 Chapter 16 – Rule 16-8 New and existing small dams – River and Lake Beds

8.11 I support the amendments recommended to the rule guide to explicitly clarify how the taking of water is treated (page 333) consistent with TrustPower's original submission[45].

9 Schedule B Surface Water Quantity

4.183 Schedule B Surface Water Quantity – Table - Ground and Surface Water Allocation

9.1 Throughout its primary and further submissions, TrustPower sought the deletion of Schedule B from the proposed One Plan and any references to Schedule B elsewhere in the document, or, alternatively, the deletion of the minimum flows and cumulative core allocations for each of the sub-zones in Schedule B until such time as they are determined in agreement with hydroelectricity generation parties and others through a process of formal consultation[46]. TrustPower also sought that Schedule B be amended to explicitly recognise existing takes for hydroelectricity as part of the core allocation in the relevant water management sub zone[47]. Similar relief was sought by were sought by Horticulture New Zealand and Federated Farmers.

9.2 While TrustPower considers that the setting of minimum and environmental flows is appropriate in situations where a proven environment benefit is provided, the setting of upper allocation limits or levels is not something that is universally accepted by the scientific community; therefore, it is opposed to the setting of allocation limits or levels. In relation to the information in Schedule B, TrustPower considers that the setting of inappropriate environmental flows and limits or levels will potentially have an adverse effect on both new and existing activities, and may result in existing activities losing water in over allocated areas. Accordingly, as I have discussed in paragraphs 5.12 and 5.13, TrustPower would prefer a more

45 Refer submission 358 114, supported by X 519 39
46 Refer submission 358 143, supported by X 522 449
47 Refer submission 358 144, supported by X 525 245 and supported in part by X 522 450

adaptive framework for environmental flows as research is undertaken and technological advances occur, an approach with which I support.

9.3 Given the substantial work that has been undertaken to support, and in some instances revise, the minimum flows following submissions (including the multiple reports prepared to support the section 42A report), I agree that the amended minimum flows outlined in Schedule B form a good basis for management of the region's waterbodies consistent with the *"pragmatic risk-based approach to flow allocation in lieu of biological understanding of how sensitive river ecosystems are to changes in flow frequency over the low-medium range"*[48]. This approach is consistent with the intent of TrustPower's original submission which sought the imposition of minimum flows and core allocations only with robust scientific support.

9.4 I also support the recommended amendments to Part Ba2: Surface Water Management Values to specifically identify *"all natural waterbodies except those classified as NS, those covered by NWCO and those identified as zero allocation zones in Schedule B"* as waterbodies suitable as a water source for industrial abstraction.

9.5 As per TrustPower's submissions, I still consider the large list of surface water management values to be overwhelmingly in favour of biophysical considerations. This approach is succinctly outlined in the section 42A report of Dr John Hayes for Horizons, which states that the minimum flow policy proposed is *"a 'safe' environmental policy and one that will ensure the protection of aquatic resources in most situations, but it may unnecessarily constrain out-of-stream use of water"* (page 18).

9.6 In my opinion, such a protectionist approach is not full consistent with the purpose of sustainable management.

9.7 While I support the recognition of existing hydroelectric generation schemes within the core allocations (Policy 6-16), as well as the specific identification of waterbodies suitable for industrial abstraction outlined above, I consider the proposed One Plan's approach to applying these levels remains overly protectionist of environmental values as it does not make suitable provision for the reassessment of minimum flows – and thus core allocations. As I have set out earlier in my evidence, the proposed One Plan's protectionist approach combined with an almost total lack of references to regionally important infrastructure have created a water allocation and use framework that would unfairly inhibit or preclude justifiable use of the water resource in a manner that is highly restrictive of existing and new infrastructure, irrespective of potential benefits.

9.8 I reiterate to the Committee TrustPower's experiences that a decreased flow regime imposed on a hydroelectric power generation scheme has the single greatest impact on the volume of energy produced by the scheme. Accordingly, any reduction in water available for hydroelectricity impacts on the economics of hydroelectricity development in general. Therefore, I consider that Schedule B should be amended to clarify that the core allocations outlined are environmental bottom-lines in the absence of robust

48 Refer section 42A report of Dr John William Hayes, para 110.

independent hydrological assessment establishing otherwise. Similarly, I consider that the relevant provisions of the proposed One Plan referring to Schedule B prescribe an approach for scientific reassessment of the core allocations outlined in Schedule B.

9.9 Further to the concept of imposing minimum flows only where there is a proven environmental benefit for doing so - as far as I am aware increasing the minimum flow does not necessarily result in higher environmental values for a waterbody. For example, I note to the Committee that the aquatic ecology evidence for TrustPower's Proposed Wairau scheme has demonstrated there is likely to be a greater area of habitat for insects and fish at lower flows.

9.10 It is also my understanding that there is no generally applicable rule of thumb that is scientifically defensible for basing allocation limits on mean annual low flows (MALF). For example, I note that the numerous investigations in Canterbury have determined flow allocations of about one quarter of MALF to more than ten times MALF[49]. In TrustPower's submission on the proposed National Policy Statement for Freshwater Management, TrustPower noted that scientific information gathered by Environment Canterbury on the macroinvertebrate communities of Canterbury streams indicates that there are no strong relationships between the amount of water allocated relative to the MALF and the community health indices[50]. This seems to be contrary to the proposed One Plan approach to setting MALF in the Manawatu-Wanganui Region.

10 Schedule D Surface Water Management Zones and Standards

10.1 TrustPower, like a number of submitters, sought the deletion of Schedule D and all references to Schedule D in the proposed One Plan, until such time as the water values and management objectives and methods are more robustly reviewed[51]. TrustPower supported the submission of Federated Farmers that this review should be based on a full cost benefit analysis taking into account economic considerations for the region and on the basis of clear evidence linking existing water quality and practices, proposed water quality standards and proposed methods/rules to achieve those standards.

10.2 Similarly, TrustPower supported the submissions of Horticulture New Zealand and Meridian seeking that the proposed One Plan contain improved justification of the inclusion of each of these classifications[52]. TrustPower also submitted seeking the deletion of a number of specific waterbodies from the maps and tables within Schedule D.

49 Refer 'Allocation of surface takes as a proportion of MALF' (Canterbury Strategic Water Allocation Study, Lincoln Environmental 2002

50 Refer Meredith, A. S., Cottam, D., Anthony, M., Lavender, R. 2003. *Ecosystem Health of Canterbury Rivers: Development and Implementation of Biotic and Habitat Assessment Methods* 1999/2000. Report No. R03/3. Environment Canterbury, March 2003

51 Refer submissions 358 148 and 358 150, supported by X 520 96; and 358 166

52 Refer submissions 357 151, supported by X 487 169, X 495 409 and X 511 569; and submission 363 209, supported by X 495 408 and X 511 566

10.3 TrustPower supports the section 42A report's recommended acceptance of its submission seeking to clarify the exact limits and extent of all rivers and streams that are included in Schedule D[53]. In relation to its specific submissions seeking the deletion of various maps and tables within Schedule D, TrustPower largely supports the recommendations in the section 42A report. TrustPower would like to express its appreciation to Horizon's officers and experts for the manner in which its submissions on a number of waterbodies outlined in Schedule D were given detailed consideration by the section 42A reports. This evaluation has clarified a number of issues raised by TrustPower's primary submission. Nonetheless, I consider it appropriate that Schedule D be retained subject to an appropriate policy and regulatory framework that allows for minor changes to the values in Schedule D for regionally significant infrastructure.

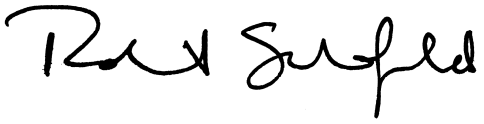
11 Conclusions

11.1 In conclusion, I support the overall intent and approach of the proposed One Plan to provide a strong framework for promoting the integrated management of the Region's natural and physical resources, focusing on key regional assets and issues. In particular, the recognition of the region's significant infrastructural and energy generation assets and resources within the proposed One Plan are supported.

11.2 However, I do not consider that the proposed One Plan sufficiently recognises or provides for the national and regional benefits provided by infrastructure and energy, or adequately takes into account the government's stated commitment to providing for renewable energy generation consistent with its climate change goals, energy security and other related policies. Further, I consider the framework established through the water provisions of the proposed One Plan overly restricts the development of new hydroelectricity generation in a manner that is inconsistent with the enabling purpose and principles of the Act.

11.3 Accordingly, I consider that the water provisions of the proposed One Plan should contain a greater level of recognition of, and provision for, renewable energy generation to recognise the regional and national significance of this resource use, and the region's contribution to their national benefits, consistent with purpose and principles of the RMA.

11.4 Accordingly, I would recommend that the relief sought by TrustPower be accepted, according to the manner outlined in my evidence.



Robert Schofield
Director, Boffa Miskell Limited | Environmental Planner
19 October 2009

53 Refer submission 358 148