IN THE MATTER of the Resource Management Act 1991

AND

IN THE MATTER of the submissions by **GENESIS POWER LIMITED** on the Horizons Regional One Plan

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STATEMENT OF EVIDENCE OF RICHARD JOHN MATTHEWS

19 October 2009

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1. INTRODUCTION

1.1 I hold a Master of Science (Hons) degree, and have been working as a resource management adviser for more than thirty years, initially in the local government sector and since 1999 in private practice with the environmental consulting practice, Mitchell Partnerships. I am a partner in this practice.

1.2 My specialist area of expertise is in the application of the Resource Management Act 1991, and other relevant environmental management legislation, the development of Regional and District Plans and the acquisition and assessment of resource consent applications. I have been providing advice on these matters for more than twenty-seven years.

1.3 In relation to statutory planning, I have been involved in the preparation and audit of plans and policy statements since the passing of the Resource Management Act in 1991 ("**RMA**"). This has involved detailed analyses of plan provisions, assisting Councils to prepare planning documentation, preparation of submissions, presentation of evidence at hearings, and provision of advice regarding the lodging and resolution of Environment Court references. I have participated in several Council hearings relating to policy and plan development, and have attended a number of court-assisted and council initiated mediation sessions.

1.4 I have been asked to present evidence to this hearing in relation to the Genesis Power Limited (trading as "**Genesis Energy**") submissions and further submissions in respect of the Horizons Regional One Plan ("**One Plan**").

Scope of Evidence

1.5 In my evidence I will:

- Summarise the context of the Genesis Energy submissions on the water related sections of the One Plan.

- Discuss the overall RMA framework within which the Genesis Energy submissions should be considered, with particular reference to the recognition and provision for renewable energy, and the need to manage the Tongariro Power Scheme ("**TPS**") as an important physical resource.

- Address the submissions made by Genesis Energy on the water related Chapters of the One Plan and the Officers Reports, and outline those matters within the One Plan which in my opinion require revision, such that it provides for hydroelectricity generation and in particular the TPS in an appropriate manner.

- Conclude my evidence.

1.6 Within my evidence I make several suggestions where provisions should be changed. Where a specific provision is quoted, I note my proposed changes are red, while those recommended by the Council Officers are shown in green.

2. BACKGROUND TO SUBMISSION

2.1 Genesis Energy has made a number of submissions and further submissions on the provisions of the water related aspects of the One Plan from the perspective of assessing the policy implications for its existing operations, notably the TPS as well as future water related renewable energy proposals.

2.2 These submissions seek that the provisions of the One Plan promote the purpose of the RMA and provide an appropriate framework for the management of natural and physical resources. Particularly the One Plan should provide an appropriate framework for the significant role that the Regions freshwater resource, and the substantial physical hydroelectricity generation infrastructure located within the bounds of the Regions lakes and rivers, plays in generating renewable electricity,

and in turn, its contribution to enabling people and communities to provide for their social and economic well being.

3. RMA PART II FRAMEWORK

3.1 I outlined in an earlier statement of evidence[1] during the One Plan hearings, the purpose and principles of the RMA as set out in Part II (sections 5, 6, 7 and 8) and their need to be given practical expression through all decision making under the Act, including the drafting of planning documents.

3.2 As I also outlined at that time, the approach for applying Part II is not one where specific focus is placed only on the protection of the environment (aquatic ecology, water quality etc). Rather that those matters should be considered alongside the use of resources and the need to provide for social and economic wellbeing and the health and safety of people, as well as how any adverse effects on the environment can be avoided, remedied or mitigated.

3.3 I will not repeat my full analysis of Part II here, other than to emphasise it is important that the One Plan provide for electricity generation activities as it is important that it provide for a range of matters specifically identified in sections 6, 7 and 8 of the RMA, and that the provisions of the One Plan should provide for the sustainable management of the TPS as a physical resource in the context of section 5. The scheme contributes approximately 1,800 GWh per annum[2] (including Waikato River generation) to New Zealand's electricity supply – about 4% of the country's total electricity generation, or enough electricity to power approximately 225,000 households[3].

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1 Presented 1 July 2008

2 Based on typical Genesis Energy TPS generation and estimated Mighty River Power generation.

3 Ministry for the Environment, *Factsheet 19: Energy and the emissions trading scheme, September 2008.*

4. SUBMISSIONS MADE BY GENESIS ENERGY ON THE WATER RELATED CHAPTERS OF THE ONE PLAN AND OFFICERS' REPORTS

Introduction

4.1 The objectives, policies, methods and rules of Chapters 6, 13, 15 and 16 of the One Plan generally provide an overall framework that is in my opinion capable of managing the freshwater related resources of the Horizons Region in a manner which promotes the sustainable management of natural and physical resources. However, I consider that several amendments to the Plan provisions as notified should be made, including many of those recommended by the Council Officers to provide for existing hydroelectricity generation infrastructure, particularly the TPS. These include amendments to both the water related provisions of the Regional Policy Statement ("**RPS**") section of the One Plan (Chapter 6 of Part 1), and those of the Regional Plan section of the One Plan (Chapters 13, 15 and 16 of Part 2). I address each Chapter in turn below.

PART I – The Regional Policy Statement – Our Regions Significant Issues

Chapter 6 – Water

4.2 Chapter 6 contains the water related provisions of the RPS section of the One Plan. Its objectives and policies set out the framework for how the water related resources in the Horizons Region will be managed.

4.3 As I noted earlier I consider the general structure contained within the proposed provisions to be appropriate, however, I consider some amendments are required to appropriately provide for the existing hydroelectric infrastructure in the region.

4.4 By way of an overview, the key matters of Chapter 6 which I consider need amendment are:

- Policy 6-1 and Table 6.2 set out the water management values for which the regions waterbodies will be managed, and the accompanying Schedule Ba which apply these water management values to particular Water Management Zones in the region. These should be amended such that existing hydroelectricity generation infrastructure is identified as a value in its own right for which affected water bodies are managed, rather than the assumption being it is contained within the *Existing Infrastructure* category.

- Policy 6-2 should be deleted as it adds little to the overall policy framework.

- Policy 6-3, 6-4, 6-5 and 6-8 insofar as they relate to water quality standards set out in Schedule D should not apply to discharges associated with the continued operation, maintenance or repair of existing hydroelectricity generation infrastructure.

- Policies 6-15, 6-16, 6-17 and 6-19 which address surface water allocation and minimum flows should be amended to provide more specific direction for the management of water takes by hydroelectricity generation existing at the time the Plan becomes operative, and for new hydroelectric generation activities.

4.5 I now discuss these in turn.

Water Management Framework

Policy 6-1

4.6 Policy 6-1 sets out the overall framework for the management of the regions water resources. At present I understand hydroelectricity generation to be encompassed within the *Existing Infrastructure* "Value Group" accompanied by the "Management Objective" *The integrity of existing infrastructure is not compromised.*

4.7 The efficient and successful operation of the significant hydroelectricity generation infrastructure within the Horizons Region is reliant on the natural freshwater resource of the Region, more so in my opinion than any other type of infrastructure. It is important that any management decisions relating to those water bodies which contribute to hydroelectricity generation should specifically consider and incorporate the requirements of that hydroelectricity generation. For clarity, and the avoidance of doubt in such decision making, I consider it appropriate that where hydroelectricity generation infrastructure exists within the Regions watercourses, it should be identified specifically as such within the Plan, rather than being identified generically as "Existing Infrastructure". An appropriate manner in which this could be achieved would be to add an additional row to Table 6.2.

4.8 Suggested wording is as follows:

Value Group	Individual Values		Management Objective
Social/Economic	HY	Contributes to existing Hydroelectricity Generation.	The integrity of existing hydroelectricity generation is not compromised

4.9 Related amendments to Schedule Ba are also required. Specifically, a new "hydro" column should be added to Table Ba10. That column should also be populated such that each reach which contributes to existing hydroelectricity generation is identified.

Surface Water Quality

Policy 6-2

4.10 With respect to Policy 6-2 I agree with the Officer that as drafted it adds little to the overall policy framework and should be deleted.

Policy 6-3, 6-4, 6-5 and 6-8

4.11 Policies 6-3, 6-4, 6-5 and 6-8 set out a range of provisions for maintaining and managing water quality, with the appropriate

management of activities within a catchment being dependent on the degree of compliance of the water body with water quality standards set out in Schedule D.

4.12 The water quality policies imply that non-compliance with the water quality standards could require changes to the operation of TPS and future hydroelectric schemes, and therefore affect their ability to generate electricity. By their nature, hydroelectric schemes do not generally add foreign "contaminants" into the discharges associated with the scheme. There can be some changes in characteristics as water passes through a scheme (e.g. ponding of water may change its temperature or clarity) but such changes can readily be addressed through consent conditions rather than imposed as plan standards.

4.13 As such, it is my opinion that discharges from hydroelectric generation schemes insofar as they relate to water quality standards set out in Schedule D should not apply to discharges associated with the continued operation, maintenance or repair of existing hydroelectricity generation infrastructure. Any water quality effects from these activities can (and are presently) appropriately addressed through resource consent conditions.

4.14 I consider it appropriate that a new clause be added to each of these policies (Policies 6-3, 6-4, 6-5 and 6-8) as follows:

> (c) this policy does not apply to the effects on water quality of water discharges from the operation and maintenance of hydroelectricity generation infrastructure.

Water Quantity and Allocation

4.15 Policies 6-15, 6-16, 6-17 and 6-19 address surface water allocation and minimum flows. In my opinion there is ambiguity within these provisions as to how existing takes for hydroelectricity such as the TPS fit within the proposed framework.

4.16 As I have noted previously, the hydroelectricity generation in the Region relies on continued access to its allocated water. I consider the Plan

needs to provide clear direction as to how this water allocated to hydroelectricity generation fits within the policy framework established in the Plan. At present direction is only provided to "core allocation", "supplementary allocation" and water allocated to the river for in-stream use as a minimum flow, with existing hydroelectric generation dealt with largely by implication only.

4.17 Within the "Policies for Surface Water" contained within Chapter 6 the only location that takes for existing hydroelectricity generation are mentioned would be within Policy 6-16 where the changes recommended in the Officers Report state:

> **Policy 6-16: Core *water*^ allocation and minimum flows**
>
> (a) The taking of surface *water*^ shall be managed in accordance with the minimum flows and core allocations set out for each *Water Management Sub-zone** in Schedule B.
>
> **(b) The minimum flows and core allocations set out in Schedule B shall be assessed after any takes lawfully established at the time the Plan becomes *operative*^ for hydroelectricity generation have been taken.** [emphasis added]

4.18 In itself Policy 6-16(b) does not provide any specific direction as to the management of takes for hydroelectricity generation, although I accept that it could be inferred from the direction for how minimum flows and core allocations should be set, that it is intended existing hydroelectricity generation takes for all intents and purposes form part of the existing environment with respect to water allocation in the Horizons Region.

4.19 This inference is supported by the Officers Report of Dr Roygard where the following is stated:

> Many of the existing hydroelectricity consents that are abstractive are located in the upper catchments, and flow recorders downstream of these provide flows records after abstraction by the hydroelectricity consents. Therefore, calculating any remaining allocation after the

> abstraction for hydroelectricity reflects a pragmatic approach to setting minimum flows and allocation limits from the residual recorded flows.

4.20 However the intended management regime for existing hydroelectricity generation takes is further clouded by the statement within the Council Officers *Planning Evidence and Recommendations Report* when discussing restrictions on water takes during low flows that:

> As outlined earlier I consider that hydro electricity generation is an industry and would and should be subject to the same restrictions as other takes.

4.21 I understand that the intention is that existing hydroelectric generation schemes would not fall under the proposed water allocation regime, and would be subject to separate consideration as a discretionary activity under Rule 15-8. Notwithstanding this, I note that Policy 15.1 would require that the Council when making a decision on a discretionary activity consent under Rule 15-8 to "recognise and provide for the provisions of Chapter 6, in particular the policies in Section 6.4.3". In effect, this means that water allocation provisions would apply to existing hydro takes.

4.22 Irrespective of how it was intended that existing hydroelectricity generation be provided for within the Plan, as Mr Bowler has outlined, the matter is a complex one, and as drafted, the proposed water allocation provisions would have significant effects on the ongoing operation of the TPS.

4.23 Taking into account all these matters, it is apparent to me that the Plan needs to provide clear direction for how existing takes for hydroelectricity generation fit within the allocation structure for the Region. This direction needs to be carefully considered and designed to take into account and provide for the unique circumstances present in those catchments affected by existing hydroelectricity generation takes, and in particular those of the TPS, where, as Mr Bowler outlined, the flow regime of those catchments is artificially controlled by the TPS infrastructure.

4.24 Based on discussions with both Mr Bowler and Council Officers, I have drafted some amendments to Policies 6-15, 6-16, 6-17, 6-18, 6-19 and 6-20 as recommended by Council Officers, which I consider appropriately incorporate takes for existing hydroelectricity generation into the allocation framework.

Policy 6-15

4.25 Policy 6-15 sets out the overall approach to surface water allocation in the Plan. In my opinion it should contain specific direction for the management of takes for existing hydroelectric generation, specifically, that water currently allocated to those activities is retained.

4.26 Suggested wording is as follows (including changes recommended in the Officers Report):

Policy 6-15: Overall approach for surface *water*^ allocation

(a) The requirements of *Water Conservation Orders*^ shall be given effect under this Plan.

~~(b) The provisions of this plan will not be inconsistent with the intent of local water conservation notices.~~

(b) The allocation of water by resource consent or plan provisions to hydroelectricity generation activities at the time the Plan becomes operative shall be retained and not affected by any allocation provided for under this plan.

(c) Core allocations of surface *water*^ from *rivers*^ shall be determined in accordance with Policies 6-16 and 6-17. Takes that comply with the relevant core allocation, when assessed in combination with all other takes, shall be allowed.

(d) Supplementary allocations of surface *water*^ from *rivers*^ shall be determined in accordance with Policy 6-18.

(e) Takes from *rivers*^ shall be apportioned, restricted or suspended in times of low flows in accordance with the provisions of Policy 6-19.

(f) Takes of *water*^ from *lakes*^ shall comply with Policy 6-20.

Policy 6-16

4.27 Policy 6-16 establishes the framework for the provisions within the Plan covering core water allocation and minimum flows. I generally support its provisions, particularly the stipulation that core allocations shall be assessed after existing hydroelectricity takes have been taken. However, I consider two minor changes to the wording of clause (b) should be made. The first change, replacing reference to "takes" within the second line of Policy 6-16(b) with "water allocated" is to clarify that the water allocated to existing hydroelectricity generation comprises not only the take itself, but also the water the TPS leaves in the river downstream of the take to maintain specified flows at minimum flow sites. The second change is to clarify that it is the take of water for hydroelectricity generation existing at the time the Plan becomes operative that has been excluded from calculation of the core allocation block in that catchment, rather than the specific consent. This recognises that over time consents will be renewed but the activity the policy seeks to protect will stay the same.

4.28 Suggested wording is as follows:

Policy 6-16: Core *water*^ allocation and minimum flows

(a) The taking of surface *water*^ shall be managed in accordance with the minimum flows and core allocations set out for each *Water Management Sub-zone** in Schedule B.

(b) The minimum flows and core allocations set out in Schedule B shall be assessed after any ~~takes~~ water that has been allocated by resource consent or plan provisions for hydroelectricity generation activities existing ~~lawfully established~~ at the time the Plan becomes *operative*^ is excluded ~~for hydroelectricity generation have been taken~~.

4.29 Amendments should also be made to Schedule B "Surface Water Quantity" to reflect Policy 6.16 and clarify that the minimum flows and

core allocation limits specified do not include flows allocated for existing hydroelectric generation activities. This could be done by way of a footnote within the table referring to each of the catchments where this occurs.

Policy 6-17

4.30 In combination with Policy 6-16, Policy 6-17 sets out how minimum flows and core allocations should be set in cases when there is, and is not, good hydrological information available for the specific waterbody. In my opinion there should be an additional clause to Policy 6-17 requiring that established minimum flow regimes associated with existing hydroelectricity generation schemes be 'locked in' in setting minimum flows and core allocations within the Plan.

4.31 The TPS for example influences the flow regime of the catchment below its infrastructure and takes (in a significant way). In that regard, through an extensive consent process (as summarised by Mr Weir and Mr Bowler), a flow regime has been established within the TPS resource consents for those affected catchments. The assessments undertaken prior to granting these consents considered that this would represent sustainable management of those waterbodies considering the presence of the TPS in their upper catchments. Subsequent monitoring of the TPS activities as outlined in the evidence of Mr Bowler to the Overall Plan hearing and Mr Speedy to the Biodiversity Hearing, has shown that the consents are working effectively in terms of providing for efficient resource use while achieving sustainable ecological benefits.

4.32 My proposed wording is as follows:

> **Policy 6-17: Approach to setting minimum flows and core allocations**
>
> (a) Where good hydrological information, such as a specific *water*^ resource study or a long-term flow record, is available it shall be used to set minimum flows and core allocations in Schedule B.

(b) Where minimum flow regimes within a catchment associated with hydroelectricity schemes have been established by resource consent or plan provisions at the time the Plan becomes operative, such regimes shall be maintained in the setting of minimum flows and core allocations in Schedule B.

(c)~~(b)~~ Where information described in (a) and (b) above is not available, the minimum flows and core allocations set out in Schedule B shall generally be a minimum flow equal to the estimated or calculated one-day mean annual low flow, and a core allocation equal to a percentage of the minimum as specified in Schedule B.

Policy 6-18

4.33 Policy 6-18 addresses supplementary allocation of water. As drafted there is no provision affording protection to takes for existing hydroelectricity generation schemes which would have higher priority. It is appropriate that these existing hydroelectricity generation schemes be afforded similar protection to those for core allocation. I propose alternative wording for Policy 6.18 as follows:

Policy 6-18: Supplementary *water*^ allocation

In addition to the core allocations set out in Policy 6-16, a supplementary allocation from *rivers*^ may be provided:

(a) in circumstances where *water*^ is only taken when the *river*^ flow is greater than the median flow, and the total amount of *water*^ taken by way of a supplementary allocation does not exceed 10% of the natural flow in the *river*^ at the time of abstraction, or

(b) in circumstances where it can be shown that the supplementary allocation will not:

(i) increase the frequency or duration of low flows or lead to a significant departure from the natural flow regime, including frequency of flushing flows.

(ii) cause any adverse *effects*^ on the values of the *water body*^ as set out in Schedule Ba

(iii) limit the ability of anyone to take *water*^ under a core allocation.

(iv) compromise in any way the allocation of water by resource consent or plan provisions to hydroelectricity generation activities existing at the time the Plan becomes operative

Policy 6-19

4.34 Policy 6-19 sets out how water takes will be managed during periods of low flow. The notified provisions and those recommended by Council Officers Policy 6-19 do not include existing takes for hydroelectricity. Existing takes for hydroelectricity are not "permitted activities" under Clause (a) while clause (b) and clause (c) address essential and non-essential "core water allocation" takes which do not include existing hydro takes as these are not considered by the Plan to be "core water allocation".

4.35 As discussed earlier in my evidence, in response to Genesis Energy's submission seeking clarification that existing takes for hydroelectricity generation are not subject to the restrictions prescribed by Policy 6-19, the Council Officer stated that hydroelectricity generation is an industry and would and should be subject to the same restrictions as other takes.

4.36 I infer this to mean the Council Officer intends that takes from existing hydroelectricity generation should be subject to the restrictions prescribed by Policy 6-19. For certainty I consider it is appropriate that direction be provided within Policy 6-19 as to how existing takes for hydroelectricity generation should be managed during times of low flow. In my opinion this requires a new clause specifically addressing those takes.

4.37 The minimum flows estimated for the Whakapapa (footbridge) and Whanganui River (Te Maire) that were included in the present Operative Horizons Land and Water Plan and used in setting the TPS resource consent conditions, should be retained in the One Plan. As noted by Mr Bowler, (and I understand accepted by Horizons Regional Council staff),

the catchments above these locations are fully allocated. Restrictions to the TPS takes should only occur as provided for in the TPS consents.

4.38 My proposed alternative wording for Policy 6-19 to achieve this is as follows:

> **Policy 6-19: Apportioning, restricting and suspending takes in times of low flow**
>
> During times of low flow, takes from *rivers*^ shall be managed in the following manner:
>
> (a) **Permitted takes** – Takes that are permitted by this Plan (surface *water*^ and groundwater takes) or are for fire-fighting purposes shall be allowed to continue regardless of *river*^ flow.
>
> (b) **Essential takes** – The following core *water*^ allocation takes shall be deemed essential and shall be managed in the manner described.
>
> (i) takes greater than permitted by this Plan (and therefore subject to *resource consent*^) that are required to meet an individual's reasonable domestic needs or the reasonable needs of an individual's animals for drinking water shall be allowed to continue regardless of *river*^ flow. Reasonable needs shall be calculated as follows:
>
> a. up to 250 litres per person per day for domestic needs
>
> b. up to 70 litres per animal per day for stock drinking *water*
>
> (ii) takes *required to meet the reasonable needs of hospitals, other facilitie*s providing medical treatment, marae, schools or other education facilities, defence facilities or correction facilities shall be allowed to continue regardless of *river*^ flow
>
> (iii) takes which were lawfully established at the time of this Plan becoming *operative*^ which are 28required for the *operation*^ of industries which, if their take were to cease, would significantly compromise a community's ability to provide for its social, economic or cultural well-being or for its health or safety, shall be allowed to continue regardless of

river^ flow, but shall be required to minimise the amount of *water*^ taken to the extent reasonable

(iv) *public water supply** takes shall be restricted to a total public *water*^ consumption calculated as follows:

(A) an allocation of 250 litres per person per day for domestic needs, plus

(B) an allocation for commercial use equal to 20% of the total allocation for domestic needs, plus

(C) an allocation which meets the reasonable needs of those facilities and industries listed under subsections (b)(ii) and (b)(iii) where such facilities and industries are connected to the *public water supply** system, plus

(D) any allocation necessary to cater for the reasonable needs of livestock that are connected to the *public water supply** system, plus

(E) an allocation for leakage equal to 15% of the total of (A) to (D) above.

(c) **Takes for existing hydroelectricity generation activities –** The taking of water for hydroelectricity generation activities existing at the time the plan becomes operative shall not be subject to this policy.

(d)~~(c)~~ **Non-essential takes** – Other core *water*^ allocation takes, including irrigation takes but excluding the essential takes described under (b), shall be managed in the following manner:

(i) *water*^ takes shall be required to cease when the *river*^ drops is at or below its minimum flow, as set out in Policy 6-16

(ii) *water*^ takes shall be allowed to recommence once the *river*^ flow has risen above its minimum flow.

(e)~~(d)~~ **Meaning of 'core *water*^ allocation take'** – For the purposes of this policy, a core *water*^ allocation take means a take that has been granted consent in accordance with a core *water*^ allocation made under Policy 6-16, or in accordance with a previous core *water*^ allocation regime.

PART II – Regional Plan

4.39 Chapters 13, 15 and 16 contain the specific controls on natural and physical resource use that the One Plan intends to manage in relation to the water resources of the Region. Chapter 13 addresses Discharges to Land and Water, Chapter 15 addresses Takes, Uses and Diversions of Water, and Bores, and Chapter 16 addresses Structures and Activities involving the Beds of Rivers, Lakes, and Artificial Watercourses, and Damming.

4.40 The policies of these chapters for the most part concentrate on specifying those matters to be considered when making decisions on applications, and in the broad I agree with those policies. The exception is Policy 15-5 which proposes common review and expiry dates for water takes within catchments. For major infrastructure such as the TPS common expiry dates are inappropriate, and in my opinion an exception should be provided in the provisions of the Plan for such activities.

4.41 With respect to the One Plan rules relating to structures, water takes, and discharges to water, Chapters 13, 15 and 16 attribute the activities associated with the ongoing operation of the TPS a range of activity classifications ranging from permitted through to non-complying status. Because resource consent applications are required to be "bundled" with respect to activity status for the purpose of considering applications for related activities, the hierarchy established within the One Plan is likely to require applications for activities associated with the TPS to be considered as non complying activities in many cases. This is despite the rules generally seeking to establish a more permissive regime for many resource use activities (such as the controlled activity status for core allocation water takes).

4.42 I have outlined earlier in my evidence, and in my evidence to the Overall One Plan Hearing the importance of ensuring that existing renewable electricity generation activities such as the TPS are not unnecessarily restricted. My Weir has also articulated the importance of the TPS and

why it is important to ensure that this significant infrastructure can continue to operate without unnecessary impediment.

4.43 In this regard, I consider that the rule framework in Chapters 13, 15 and 16 should be structured such that all activities associated with the ongoing operation of the TPS (or other similar significant infrastructure) are classified such that the overall controlled activity status is implemented for consideration of related activities.

4.44 I do not consider that there is any realistic possibility that there will be a need, or desire, in the future to remove the TPS infrastructure (including dams, diversions, canals, tunnels and power stations) that exists at present and / or cease its operation. While there may be reasons why the conditions under which the TPS operates could be reviewed or changed (as for example is provided for in the current TPS consents), this could be achieved within a controlled activity regime. In my opinion, this approach is reinforced by:

- the significant push by government to increase the capacity of renewable electricity generation in New Zealand;

- the TPS being a large, existing, renewable electricity generation scheme which contributes approximately 1,800 GWh per annum (including Waikato River generation) to New Zealand's electricity supply – about 4% of the country's total electricity generation, or enough electricity to power approximately 225,000 households (the equivalent of all of the dwellings in the Manawatu-Whanganui and Waikato Regions combined)[4]; and

- the operation of the scheme and its flow regime have been fine tuned such that its environmental effects are appropriately avoided, remedied or mitigated and it is considered representative of sustainable management as contemplated by Part 2 of the Act.

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4 Statement of evidence of RJ Weir dated 19 October 2009, paragraph 6.6.

4.45 I note that the premise of continued operation of the TPS was supported by Justice William Young P in the recent Court of Appeal judgement in relation to the TPS resource consent applications (Ngati Rangi Trust v Genesis Energy Limited [2009] NZCA 222), who made the following comment (emphasis added) in his deliberations on the 10 year term of consent recommended by the Environment Court:

> I cannot see a credible basis for concluding that an appropriate duration for the consent was only ten years. **It is, for instance, inconceivable that the Environment Court considered that the TPD should cease operating at the expiry of its ten-year consent.**

4.46 Whilst I do not consider it conceivable that the decision maker would ever consider it appropriate to decline a consent application required for the ongoing operation of the TPS, obviously when the consent comes up for renewal, I consider it is appropriate Council has the ability to seek further fine tuning and or alteration of the activities that contribute to the operation of the TPS considering the circumstances that exist at that point in time. I also consider it is possible and practical that the environmental effects of the TPS at that point could be effectively managed through standards, terms and conditions on the consent.

4.47 In my opinion these circumstances are the very circumstances that the controlled activity status is intended to provide for.

4.48 As I noted above, takes of water which comply with the core allocations established in the One Plan are a controlled activity within the One Plan under Rule 15-5. This core allocation block is set after existing takes for hydroelectricity generation have been excluded. I consider it appropriate that the same approach should be extended to those hydroelectricity generation takes that are accorded a similar priority in the One Plan policy framework. It would be appropriate for control to be reserved over the same matters set out in Rule 15-5 for water takes complying with core allocations.

4.49 I also note that water takes for new hydroelectricity generation schemes would often be non-complying activities under the Proposed One Plan

because the quantities of water required are likely to exceed the specified core allocation flows, even though much of the water taken may be returned to the catchment further downstream.

4.50 I consider that such a policy approach is inconsistent with the emphasis being placed on renewable energy and the specific provisions included in section 7 of the RMA to have regard to be benefits to be derived from the use and development of renewable energy. In addition, it does not take account of the water that is returned to the river following the generation of electricity.

4.51 The taking of water for new hydroelectricity generation schemes should, in my opinion, be considered as discretionary activities. The effects of the activity on other users, water quality and water flow could be readily considered through an application for discretionary consent and appropriate conditions applied to ensure minimum flows are met where necessary.

4.52 I discuss below the specific rules (and associated policies as appropriate) in each One Plan chapter.

Chapter 13 – Discharges to Land and Water Rules

4.53 Chapter 13 contains several rules governing discharges to land and water. I consider none of the discharges associated with the TPS would be considered under any of the permitted activity rules. Rather those discharges would either be:

- A non-complying activity under Rule 13-23 where they are within Natural State Water Management Sub Zones or Sites of Significance – Aquatic; or
- Otherwise a discretionary activity under Rule 13-27.

4.54 Rule 13-23 addresses the discharge of contaminants into Natural State Water Management Sub Zones, Sites of Significance-Aquatic and lakes

and wetlands. Under Rule 13-23 the discharge of contaminants is a non-complying activity. The definition of contaminants contained within the RMA is sufficiently broad that any discharge to a waterbody associated with the operation, repair, maintenance or minor upgrading of the TPS could be considered a contaminant. The definition of a contaminant under the RMA is:

> Contaminant includes any substance (including gases, [odorous compounds,] liquids, solids, and micro-organisms) or energy (excluding noise) or heat, that either by itself or in combination with the same, similar, or other substances, energy, or heat—
>
> (a) When discharged into water, changes or is likely to change the physical, chemical, or biological condition of water; or
> (b) When discharged onto or into land or into air, changes or is likely to change the physical, chemical, or biological condition of the land or air onto or into which it is discharged:

4.55 Whilst discharges to Lakes Otamangakau, Te Whaiau and Moawhango are explicitly excluded (as these are man made lakes), the numerous other discharges associated with the operation, repair, maintenance or minor upgrading of the TPS to other waterbodies could be caught under Rule 13-23 and considered to be non-complying activities.

4.56 Rule 13-27 is a “catch all” rule for the discharge of contaminants which are not regulated by, or do not comply with, other rules in the Plan. In my opinion, all discharges associated with the TPS which are not caught by Rule 13-23 due to them being outside Natural State Water Management Sub Zones, Sites of Significance-Aquatic and lakes and wetlands, would be a discretionary activity under Rule 13-27.

4.57 As discussed above, rather than TPS activities being non-complying activities under Rule 13-23 or discretionary activities under Rule 13-27, I consider it appropriate that a new controlled activity rule is created for the discharges of water to water from existing hydro electricity scheme infrastructure.

4.58 My suggested wording for the controlled activity rule is as follows:

Rule # – Discharges from existing hydroelectricity schemes.

Rule	**Activity**	**Classification**	**Conditions / Standards / Terms**	**Control/Discretion Non-Notification**
16-# Discharges from Existing Hydroelectricity schemes.	Discharges from hydroelectricity schemes that have been lawfully established by resource consent or plan provisions existing at the time the Plan becomes operative.	**Controlled**		Discretion is reserved over: (a) measures to control flooding and erosion (b) contaminant^ concentrations and loading rates (c) measures required to comply with s107(1) RMA (d) maintenance* requirements (e) contingency requirements (f) monitoring and information requirements (g) duration of consent (h) review of consent conditions (i) measures to avoid, remedy or mitigate effects on tangata whenua values.

4.59 I agree with the Council Officer that it is appropriate for discharges from new hydroelectricity power schemes to be considered as discretionary activities should they not be able to meet permitted activity Rule 13-9. This recognises that new activities may be inappropriate in some cases, and the Council should have the ability to decline such a consent application should the circumstances of the case merit such action.

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

Rules Governing the Taking of Water

4.60 Rule 15-5 provides for water to be taken in accordance with core allocation flows as a controlled activity. I note that there is no locational restriction on where such water can be taken within a subcatchment and that it may be possible for a person to take water in a way that meets the overall core allocation requirements but can adversely affect the

ability of an existing user to take water in accordance with their existing allocation.

4.61 By way of an example, this could occur in relation to the existing TPS water takes where application for a new water take in accordance with the core allocation but upstream of an existing intake must be granted by the Council (as a controlled activity) but would effectively reduce the existing allocation to the TPS. While I understand that where the existing TPS catchments are fully allocated, there would be no "new" allocations, it remains possible for existing allocations to be transferred upstream of the existing takes. I consider that this should be addressed by way of a new Condition / Standard / Term in Rule 15-5 as follows:

> (f) The take shall not reduce the amount of water available to any other lawfully existing user of the resource or adversely affect any lawfully existing water take.

4.62 Under the framework proposed in the One Plan, the taking of water associated with the TPS does not meet any of the specific rules governing the taking of water within Chapter 15, and as such would be a discretionary activity as an "other takes and uses of water" under Rule 15-8. As discussed, in my opinion, these existing takes should be afforded controlled activity status.

4.63 The Officer's Report (page 285) recommends that the Genesis Energy (and Mighty River Power) submission requesting a more favourable activity status for new and existing hydro electricity schemes, be rejected. The Officer states that:

> *I have recommended that the submissions from Mighty River Power and Genesis wanting a more favourable Activity status for new and existing hydro electricity schemes, be rejected. The approach in terms of the core allocation has recognised the water that is allocated to existing hydro electricity schemes. The Science Reports address this matter. I consider that these activities should be subject to the same requirements as other activities that may create similar effects.*

4.64 As noted earlier the take of water allocated to hydroelectricity generation schemes existing at the time the One Plan becomes operational, and which has been taken into account in setting the minimum flows and

core allocation block should be a controlled activity for the reasons I outlined earlier.

4.65 My suggested wording for such a controlled activity rule is as follows:

Rule 15.5A – Takes and use of surface water by existing hydroelectricity schemes.

Rule	Activity	Classification	Conditions / Standards / Terms	Control / Discretion
15. 5A Takes and use of surface water by existing Hydroelectricity schemes.	The taking of water that has been allocated by resource consent or plan provisions for hydroelectricity generation existing at the time the Plan becomes operative.	**Controlled**		Control is reserved over: (a) the volume and rate of water^ taken, and the timing of the take; (b the location of take; (c) intake velocity and screening requirements; (d) measures to avoid, remedy or mitigate any adverse effects^ on the values of the water body^ at the point of abstraction, including restrictions on the volume and rate of abstraction; (e) effects on rare habitats, and threatened habitats and at-risk habitats and Sites of Significance – Aquatic.12; (f) compliance with minimum flow requirements; (g) duration of consent; (h) review of consent conditions; (i) compliance monitoring. (j) measures to avoid, remedy or mitigate any adverse effects^ on tangata whenua values.

4.66 As I also discussed earlier I consider new hydroelectricity generation takes should be a discretionary activity. This could readily be achieved by amending Rule 15-6 as follows:

Rule	Activity	Classification	Condition	Control
15-6 Takes of surface water^ not complying with core allocations	The taking of surface water^ from a river^: (aa) which, when assessed in combination with all other water^ takes, exceeds the relevant core allocation set out in Schedule B or	**Controlled**		

	(ab) at or below minimum flow (unless allowed by Rule 15-5(b)) This rule^ does not include: (a) takes permitted under Rule 15-1 (b) takes in circumstances where water^ is only taken when the river^ flow is greater than the median flow (these are a discretionary activity^ under Rule 15 - 8) (c) ~~lawfully established~~ takes for new hydroelectricity generation activities (these are discretionary activities under Rule 15-8). (d) takes for existing hydroelectricity generation activities (these are controlled activities under Rule 15-5A).			

Diversions

4.67 Rule 15-9 sets out the permitted activity requirements for lawfully established diversions of water (including existing drainage). Condition (a) of Rule 15-9 requires:

> (a) The diversion or discharge^ shall be to the same water^ management sub-zone to which the water^ would naturally flow, except diversions associated with existing land^ drainage.

4.68 The diversion of water between different catchments is a fundamental part of the TPS, and as such, the diversion of water by the TPS would be a discretionary activity. This does not take account of the important role the TPS plays in that it is existing infrastructure supplying renewable electricity to the National Grid and it relies on being able to move water from one catchment to another.

4.69 This matter could be remedied through the addition of explicit recognition that the clause (a) or Rule 15-9 is not applicable to the TPS diversions. My proposed wording is as follows (or similar to like effect):

(a) The diversion or discharge shall be to the same water management sub-zone to which the water would naturally flow, except diversions associated with existing land drainage or existing lawfully established diversions associated with hydroelectricity generation activities that continue to comply with the associated resource consent conditions.

Chapter 16 – Structures and Activities involving the Beds of Rivers, Lakes and Artificial Watercourses, and Damming

4.70 As set out on page 322 of the Officer's Report, Rule 16-4 has been established to restrict structures and disturbances in water bodies valued as natural state, sites of significance (aquatic and cultural) as identified in Schedule D of the notified plan.

4.71 However, it is likely that a number of watercourses or rivers throughout the Region will exhibit one or more of the values listed under Rule 16-4 meaning any new structures would be assessed as discretionary activities. I consider that this is quite an onerous test and could discourage new hydro electricity generation where viable sites may exist. I disagree with the Officer recommendation that this rule be retained and consider it should be deleted.

4.72 Rules 16-6, 16-7, 16-10, 16-11, and 16-12 and 16-12A contain the permitted activity provisions for structures in, on under or over the bed of any lake or river. If an activity is unable to meet one or more of the conditions of these rules the proposed activity defaults to a discretionary activity. I consider it would be more appropriate to establish a controlled activity rule in relation to each of these permitted activity rules where activities do not meet the standard conditions applied to each of these permitted activities.

4.73 The inclusion of a new controlled activity rule would apply when activities governed by Rules 16-6, 16-7, 16-10, 16-11, 16-12 and 16-12A meet all the conditions/standards/terms of the permitted activity rule other than the standard conditions listed in Section 16.2. It is proposed the controlled activity rule would retain discretion only over those matters listed in Section 16.2. Should any of the other

conditions/standards/terms of the relevant permitted activity rule not be met (other than or in addition to Section 16.2), then the activity would default to the relevant rule as per the drafted provisions.

4.74 My proposed wording for the rule is follows (or similar):

Rule	**Activity**	**Classification**	**Conditions / Standards / Terms**	**Control / Discretion**
16-# Activities not able to meet standard conditions listed in Section 16.2	Activities otherwise permitted by Rule 16-6, 16-7, 16-10, 16-11, 16-12 and 16-12A but which cannot meet one or more of the standard conditions in Section 16.2.	**Controlled**		Those matters listed in Section 16.2

4.75 The Officer's opposition to such a rule relates to the fact that a consent must be granted in relation to an application for a controlled activity consent and that in some instances this may not be appropriate.

4.76 However, I consider that the effects on the environment Council may want or need to manage associated with the standard conditions, could be effectively managed through standards, terms and conditions on the consent itself, by identifying the matters over which control has been retained.

5. CONCLUSION

5.1 Mr Weir in his evidence contextualised the fundamentally important role TPS fills in New Zealand's electricity generating network. Similarly, Mr Bowler provided significant detail on the flow regimes that were established under the process to renew resource consents for the ongoing operation of the TPS, and discussed implications for the TPS of the water allocation framework proposed under the One Plan.

5.2 In my evidence I have addressed how the Plan specifically addresses the TPS. In particular whilst it may be the intention of the Council Officers that existing hydroelectricity generation is provided for within the Plan, at present explicit direction for the allocation of water is only provided to “core allocation”, “supplementary allocation” and “water allocated to the river for in-stream use as a minimum flow”. Existing hydroelectric generation dealt with largely by implication only. As I have noted the Plan needs to provide clear direction as to how the water allocated to hydroelectricity generation fits within the policy framework established in the Plan.

5.3 Accordingly I have provided suggestions as to how that could be done, through some relatively minor, but important changes to the wording of some aspects of the water related provisions of Chapter 6.

5.4 I also consider controlled activity status is appropriate for existing hydroelectricity generation, as I do not consider that there is any realistic possibility that there will be a need, or desire, in the future to remove the hydroelectricity generation infrastructure that exists at present and / or cease its operation. Accordingly I have suggested a few minor changes to the water related Rules of Chapters 13, 15 and 16.