

## SUBMISSIONS ON PROPOSED PLAN CHANGE 13 (Air Quality) to Bay of Plenty Regional Natural Resources Plan Clause 6 of First Schedule, Resource Management Act 1991

To: Bay of Plenty Regional Council  
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### Submitter Details

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### Submissions

This is a submission on Proposed Plan Change 13 to the Bay of Plenty Regional Natural Resources Plan.

This submission is prepared in general accordance with Form 5 in Schedule 1 of the Resource Management (Forms, Fees and Procedure) Regulations 2003. Section 1 to this submission provides context for the specific submission points set out in section 2 of this submission.

Mercury could **not** gain an advantage in trade competition through this submission.

**Mercury wishes to be heard in support of its submission.**

If others make a similar submission, Mercury will **not** consider presenting a joint case with them at the hearing.



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Miles Rowe  
for Planning and Policy Manager  
Mercury NZ Limited

Date: 17<sup>th</sup> April 2018

# **1 Mercury NZ Limited**

## **1.1 Overview**

Mercury is a publicly listed company and the third largest electricity generator in New Zealand, typically generating about 17% of New Zealand's electricity. In addition, the Company is the third largest retailer in New Zealand, selling electricity through various retail businesses.

Mercury has a diverse and expanding portfolio of generation assets throughout the North Island, which over the last 5 years has generated an average of over 6,700 gigawatt hours of electricity per year. 100% of the Company's generation comes from renewable resources, which includes geothermal power stations in the Bay of Plenty and Waikato regions, and the Waikato Hydro Scheme on the Waikato River.

## **1.2 Assets, Operations and Interest in Bay of Plenty Region**

Mercury owns and operates the 100 MW Kawerau Geothermal Power Station which commenced operations in 2008. The Kawerau Power Station is a significant contributor to the electricity generated in the Bay of Plenty Region and generates enough electricity to supply approximately 100,000 households or about one third of residential and industrial demand for electricity in the Bay of Plenty Region.

The Kawerau Geothermal System is capable of sustaining further development. In addition, there are a number of geothermal systems within the Bay of Plenty Region, such as Taheke, Tikitere, and Rotoma, having potential temperature and energy resources to support future use and development. These Geothermal Systems have limited or no development currently.

Mercury holds resource consents from the Bay of Plenty Regional Council for its existing geothermal operations and geothermal drilling activities. The development, operation, maintenance and upgrading of new and existing renewable electricity generation activities is a matter of national significance under the National Policy Statement for Renewable Electricity Generation 2011. Of relevance to Proposed Plan Change 13, is geothermal air discharges associated with geothermal operations and geothermal drilling.



## 2 Specific submissions

This section sets out the submissions by Mercury in relation to on Proposed Plan Change 13 (Air Quality) to the Regional Natural Resources Plan.

Specific Provision	Support / Oppose	The Submission is:	Relief Sought (additions <u>underlined</u> , deletions <u>struck-through</u> ):
All of Proposed Plan Change	Support with modification	Mercury generally supports the intention of the objectives, policies, rules and definitions set out in the Proposed Plan Change but considers that increased recognition of the national and regional significance of geothermal assets in Bay of Plenty (BOP) region, both because of the benefits to be derived from the use and development of renewable energy resources and the contribution geothermal electricity generation makes to the regional and national economy should be reflected. Mercury's assets and operations make a significant contribution to the regional and national economy. The BOP Regional Policy Statement (RPS) also acknowledges that the ongoing development, operation, maintenance and upgrading of new and existing electricity generation facilities is an issue of regional and national importance and these matters are recognised and provided for by the RPS objectives and policies.	To retain the objectives, policies, rules and definitions of the Proposed Plan Change, except where otherwise requested by this submission.  Any further and consequential amendments to achieve the intent of this submission.
Objective AQ O1	Support with modification	Mercury supports the intent of the objective but considers that it should be amended to remove reference to "mauri". Mauri is a poorly understood concept in western science and not easily defined. If air quality is protected and enhanced then it follows that mauri will also be protected and enhanced.  Mercury also considers that the Objective should refer to significant adverse effects. The current objective would seek to protect human health from all adverse effects which could only be achieved by having no discharges which is inconsistent with the purpose of the RMA.	Amend Objective AQ O1 to read:  <b><i>Protect air from adverse effects — Te tiaki i te hau mai i ngā pānga kino</i></b> <i>Protect the mauri-of-air-and human health from significant adverse effects of anthropogenic contaminant discharges to air, and enhance air quality where degraded.</i>
Objective AQ O2	Oppose	Mercury supports ambient air quality that meets the National Environmental Standards for Air Quality (2004) (NESAQ) and the Ambient Air Quality Guidelines (2002) (AAQG), which are both essential to assessing consent applications for air discharges. However, the NESAQ provides a mandatory baseline for air quality protection across New Zealand and has the force of regulations. The RMA requires that the NESAQ prevails over any less stringent requirements in other documents, including regional plans and AAQG, but councils can make more stringent provisions in regional plans or apply more stringent criteria to resource consent applications where this is demonstrated necessary in the region.  There is no direct reason for the Objective referencing the NESAQ given the mandatory nature of the Standard unless the Council is adopting more stringent provisions. Therefore the Objective only needs to reference any other guideline values being	Amend Objective AQ O2 to read:  <b><i>Ambient air quality — Te pai o te hau</i></b> <i>The region's ambient air quality meets the National Environmental Standards for Air Quality (2004) and the Ambient Air Quality Guidelines (2002), except that the National Environmental Standards for Air Quality (2004) shall prevail over any inconsistent values, limits or metrics in the Ambient Air Quality Guidelines (2002).</i>



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		adopted for the region, such as the AAQG, and noting how any inconsistencies with the NESAQ will be dealt with.	
Objective AQ O3	Support	Mercury supports the Objective to manage discharges to air according to their adverse effects.	Retain Objective AQ O3 in the same or similar form.
Policy AQ P1	Support	Mercury supports the intent of the policy relating to the classification of activities but considers the current rule framework of the Plan Change does not align with the policy because all industrial or trade activities are assigned a discretionary status irrespective of the likely nature and scale of their resultant adverse effects. This requires an amendment to Rule AQ R1 to address the circumstances when discharges are permitted, including for industrial or trade activities, when adverse effects of discharges are suitably avoided, remedied or mitigated.	Retain Policy AQ P1 in the same or similar form, subject to achieving the requested changes to Rule AQ R1.
Policy AQ P2	Oppose	Mercury seeks the deletion of Policy AQ P2 relating to the discharges of hazardous substances. It appears the Council has confused "hazardous substances" with "hazardous air pollutants" and "contaminants". Hazardous substances are defined under the Hazardous Substances and New Organisms Act and include a range of hazards of specific chemicals and mixtures. The RMA is focused on managing the discharge of contaminants into air which may or may not meet the definition of a hazardous substance under HSNO.  The policy as currently drafted also sets a bottom line of avoiding all discharges of hazardous substances and case law (Davidson) has made it clear that bottom lines must be achieved. Mercury suggests that the qualification which commences with "and where avoidance is not possible..." would be subject to legal challenge in terms of the bottom line that precedes it. "Avoid" means to "not allow" a discharge of any amount, irrespective of scale, and effects. The inclusion of "seek to avoid" at the commencement of the policy may help to clarify that avoidance is preferable but not of itself a bottom line. However, overall the policy is considered unnecessary alongside the other Air Quality policies, particularly Policy AQ P3, which appropriately address the adverse effects of air discharges on human health, cultural values, amenity values, or the environment.	Delete Policy AQ P2 in its entirety.
Policy AQ P3	Oppose	Mercury supports the intent of the policy on the way in which air discharges are managed but considers that it should be amended to ensure that it reflects the appropriate RMA statutory tests.  In terms of (a), the current drafting requires adverse effects on human health to be avoided. Reference to "avoid" is a strong directive to "not allow" adverse effects and is	Amend Policy AQ P3 to read:  <b>Management of discharges — Te whakahaere i ngā tukunga</b>



Specific Provision	Support / Oppose	The Submission is:	Relief Sought (additions <u>underlined</u> , deletions <u>struck-through</u> ):
Policy AQ P4	Oppose	<p>somewhat at odds with (e) which seeks only to "minimise" the discharge on human health and other values beyond the boundary of the property. This outcome is not consistent with the RPS, other provisions in the Proposed Plan Change or resource management practice in general. Air Quality Objective 1 in the RPS seeks "The adverse effects of odours, chemical emissions and particulates are avoided, remedied or mitigated so as to protect people and the environment." This is support by RPS Policies AQ 2A and AQ 3A to manage the adverse effects of air discharges. A policy that focuses on the avoidance of significant adverse effects on human health and the management of other adverse effects is a better fit for the RPS provisions and with the hierarchy of sustainable management measures set out within the RMA.</p> <p>In Mercury's view, the elements in (e) can be appropriately dealt with by the proposed amendment to (a), such that (e) can be deleted accordingly.</p> <p>Mercury considers the text "contribute to" in (b) is inappropriate. All discharge of contaminants will have a contribution to ambient air quality but the discharge in itself could be insignificant with a minor or negligible effect on compliance with the standards and guidelines. In addition, ambient air quality standards in the NESAQ and guideline values in the AAQG apply across the region or part of the region with respect to management of the airshed rather than being treated as compliance threshold for individual discharges. This region-wide approach to the management of the airshed should be reflected in (b).</p> <p>Mercury supports (d) but considers the inclusion of "significant" into (d) is necessary.</p>	<p>Activities that discharge <u>contaminants</u> to air must be managed, including by use of the best practicable option, to:</p> <p>(a) safeguard the life supporting capacity of the air, avoid <u>significant</u> adverse effects on human health, and manage all other adverse effects on human health cultural values, amenity values, and the environment, including into areas beyond the boundary of the subject property.</p> <p>(b) avoid the discharge of <u>contaminants</u> at a rate or volume that may, when assessed across the <u>airshed</u>, contribute to, or cause an exceedance or breach of the <u>ambient air quality standards of the NESAQ</u> or exceed the health-based values of the AAQGs</p> <p>(c) avoid reduction in visibility where it may cause adverse effects on vehicle, aircraft, or ship safety</p> <p>(d) avoid the discharge of <u>contaminants</u> that may cause <u>significant</u> adverse effects on regionally significant <u>infrastructure</u></p> <p>(e) <del>minimise the discharge of contaminants into areas beyond the boundary of the subject property where it may cause adverse effects on human health, cultural values, amenity values, or the environment.</del></p>
Policy AQ P4	Oppose	<p>Mercury generally supports the policy on matters to be considered for discharge of contaminants to air, as well as the policy tests, which refer to "considering" and "have particular regard" to but it should be noted that these are matters for "decision makers" to take into account.</p> <p>No changes sought to clause (a), subject to achieving sought changes to the definition of sensitive activities, which is currently considered too broad. Mercury supports clauses (c) (d) and (e) without change.</p> <p>Mercury supports ambient air quality that meets the National Environmental Standards for Air Quality (2004) (NESAQ) and the Ambient Air Quality Guidelines (2002) (AAQG), which are both essential to assessing consent applications for air discharges. However, both documents apply across the region or part of the region with respect to management of the airshed. That is, it requires a region-wide approach to the</p>	<p>Amend Policy AQ P4 to read:</p> <p><b>Matters to consider — Ngā take hei whiriwhiri</b></p> <p>When considering the acceptability of any discharge of <u>contaminants</u> to air, <u>regional-plan users</u> decision makers must have particular regard to the following matters:</p> <p>(a) The proximity of <u>sensitive activities</u> to the discharge.</p> <p>(b) <del>The location of any</del> <u>Gazetted airsheds, or areas where the discharge may cause an</u> <u>Whether any</u> exceedance or breach of the <u>ambient air quality</u></p>



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AQ R1	Oppose	<p>management of the airshed. Clause (b) also needs to be framed a matter to be considered rather than being treated as compliance threshold for individual discharges. Assessment policy needs to be mindful that areas around geothermal resources are likely to have naturally high levels of H<sub>2</sub>S. Air quality policy needs to ensure there is an appropriate consideration of this matter for the use and development of renewable energy resources. It is suggested that clause (f) is amended to consider significant cumulative effects. This is to ensure a prohibitive approach isn't taken to consent discharges, which have naturally high ambient levels of contaminants, such as H<sub>2</sub>S. Alternatively, this could be addressed by adding a specific policy relevant to discharges in geothermal areas and Mercury is willing to engage parties on this matter.</p> <p>Mercury supports the intent of (g), but considers the clause is an unnecessary duplication of (a). Mercury suggests replacing (g) that addresses the considerations in section 17 of the RMA (duty to avoid, remedy or remedy adverse effects) about whether the discharge is noxious, dangerous, offensive, or objectionable beyond the boundary of the subject property. The policy approach is consistent with the language in a number of the Proposed Plan Change rules.</p>	<p>standards of the NESAQ or <del>exceed the</del> health-based values of the AAQGs <u>is likely to result for any airshed where the discharge occurs.</u></p> <p>(c) <u>Adverse effects on air quality values identified in the relevant iwi and hapū resource management plans.</u></p> <p>(d) <u>The effect of the prevailing weather conditions, including rainfall, wind speed and wind direction.</u></p> <p>(e) <u>The effect of the discharge on human health, cultural values, amenity values, the environment, and regionally significant infrastructure.</u></p> <p>(f) <u>Significant cumulative effects.</u></p> <p>(g) <u>The effect of new activities discharging contaminants into air near established sensitive activities. Whether the discharge is noxious or dangerous, offensive or objectionable beyond the boundary of the subject property.</u></p>
AQ R1	Oppose	<p>Mercury supports a permissive "catch all" rule for air discharges, where effects are minor. However, Mercury opposes the inclusion of (c). The way the Rule is currently drafted, it makes all industrial or trade premises a discretionary activity irrespective of size, scale and effects. Mercury interprets that geothermal electricity generation is industrial activity as defined by the RMA and therefore is caught by this Rule. Mercury does not oppose a discretionary activity rule for air discharges from geothermal generation in general, but seeks the plan allows for minor ancillary activities that are otherwise able to comply with clauses (a) and (b) of the Rule.</p> <p>In the alternative, if clause (c) be retained, Mercury seeks an explicit new permitted rule to provide for minor air discharges from regionally significant infrastructure sites.</p>	<p>Amend Rule AQ R1 to read:</p> <p><b>General activities – Permitted — Ngā mahinga noa – E whakaaehia ana</b></p> <p>Any discharge of contaminants into air which is not subject to any other rule in this regional plan and excluding the discharge of dust to air associated with a plantation forestry activity, is a permitted activity provided the following conditions are complied with:</p> <p>(a) <u>The discharge must not be noxious or dangerous, offensive or objectionable beyond the boundary of the subject property or into any water body.</u></p> <p>(b) <u>The discharge of smoke or water vapour must not adversely affect the safety of any vehicle, aircraft, or ship.</u></p> <p><del>(c) The discharge is not from industrial or trade premises</del></p>



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AQ R2	Support	Mercury supports the general discretionary activity Rule AQ R2 for any discharge of contaminants to air that are not otherwise provided for by any other rule of the Air Quality chapter.	Alternatively, add a new permitted activity rule to provide for minor air discharges from Regionally Significant infrastructure sites.
AQ R4	Support	Mercury considers it would be unreasonable to have to obtain discharge permits for vehicle movements on unsealed roads and the rule is supported.	Retain Rule AQ R2 in the same or similar form.
AQ R5	Support with modification	Mercury operates the Kawerau geothermal power station, which also requires continuous steamfield management, including geothermal drilling activities. Mercury holds existing consents for air discharges from these activities. Mercury supports the concept of a permitted threshold for the use of geothermal energy, where effects are less than minor and the volumes of geothermal fluid are small. Some of the permitted criteria proposed in Rule AQ R5 are not considered relevant to an effects-based approach to discharges and their effects. The specific discharge parameters required to manage the discharges including the discharge height and location are dependent on the specific location and distance to any neighbours or sensitive activities. Condition (c) is sufficient to manage the potential adverse effects from the discharges.	<p>Retain Rule AQ R4 in the same or similar form.</p> <p>Amend Rule AQ R5 to read:</p> <p><b><i>Venting of geothermal gas and steam – Permitted</i></b>  <b><i>— Te tuku kapuni ngāwha me te koromamao – E whakaaehia ana</i></b></p> <p><i>The discharge of geothermal gases and steam into air from any well, bore or soakage hole associated with the anthropogenic use of geothermal water and geothermal energy is a permitted activity, provided the following conditions are compiled with:</i></p> <p><b>a</b> <del>The gas or steam must be an unimpeded vertical discharge from a vent.</del></p> <p><b>b</b> <del>All vents must have sufficient height to ensure that the plume is unaffected by downdraft and must rise a minimum of 6 metres above ground level including 3 metres above the highest ridge line of any reef within 30 metres.</del></p> <p><b>c</b> <i>The discharge must not be noxious or dangerous, offensive or objectionable beyond the boundary of the subject property.</i></p> <p><b>d</b> <i>The take or discharge of geothermal water must be less than 1,000 tonnes per day.</i></p> <p><i>Note: this rule manages the discharge to air from geothermal water and/or geothermal energy use. The</i></p>



Specific Provision	Support / Oppose	The Submission is:	Relief Sought (additions <u>underlined</u> , deletions <u>struck-through</u> ):
AQ R16	Support with modification	<p>Infrequently, Mercury undertakes spray painting of geothermal infrastructure components to protect them from corrosion. Due to the location of the geothermal infrastructure and topographic conditions surrounding its infrastructure, it may be impracticable for Mercury to erect spray booths and stacks as required by (a) and (b). Given the locations of Mercury's operations and activities it considers that (c) is the only permitted activity condition required to ensure the discharge from spray painting results in acceptable adverse effects beyond the subject property boundary.</p> <p>Mercury considers that the alternative approach set out in Rule AQ R17 (a)(ii) for a "best practice method" and Rule AQ R17 (d) for mobile operations would also be acceptable for spray painting operations. Mercury notes that blasting and painting are almost always undertaken together (i.e. it would be unusual to blast and then not paint it almost immediately). Therefore, it is unusual for the rules of the Proposed Plan Change to allow blasting to occur under a BPO method without a booth but not apply the same philosophy to the painting operation.</p> <p>Mercury therefore proposes two possible amendment scenarios to the current drafting of the rule.</p>	<p>use of geothermal water and geothermal energy must comply with the rules in the GR Geothermal Resources module and the Rotorua Geothermal Regional Plan.</p>
			<p>Amend Rule AQ R16 to read:</p> <p><b>Spraypainting – Permitted — Peita tōrehu – E whakaaehia ana</b></p> <p>The discharge of contaminants to air from the spray application of surface coatings containing di-isocyanates, organic plasticisers, or spray on anti-fouling paint (excluding the application of protective coatings to transmission line support structures) is a permitted activity provided the following conditions are complied with:</p> <p>(a) The spraying is carried out in a spray booth, room, or enclosure fitted with an air extraction system that discharges all contaminants and exhaust air to an emission stack.</p> <p>(b) The discharge must be an unimpeded vertical discharge from the emission stack at least 3 metres above the ridge height of the building and 3 metres above the highest ridge line of any roof within 30 metres.</p> <p>(c) The discharge must not be noxious or dangerous, offensive or objectionable beyond the boundary of the subject property.</p> <p><u>Except that conditions (a) and (b) above shall not apply to spray painting of infrastructure and the painting activity is located more than 50 m from a boundary of property not under the ownership, lease or control of the HEPS operator.</u></p> <p>Or in the alternative, amend Rule AQ R16 by inserting the following after clause (b):</p>





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			<p><u>OR</u></p> <p><u>where (a) and (b) cannot be met due to the mobile nature on an operation then the discharge must be controlled using a current, best practice method such as screening and paint technologies.</u></p>
AQ R17	Support	As discussed above for Rule AQ R16, Mercury undertakes abrasive blasting of infrastructure components to treat corrosion and prepare them for painting. Due to the location of the infrastructure and topographic conditions surrounding its geothermal infrastructure, it will invariably be impracticable for Mercury to erect a sealed blasting booth as required under condition (a)(i) of Rule AQ R17. Therefore the retention of condition (a)(ii) is supported by Mercury.	Retain AQ R17 in the same or similar form.
Definitions – noxious or dangerous	Oppose	Mercury considers the definition should be deleted. 'Noxious or dangerous' is used within the RMA and case law has considered this based on a normal English language definition. The inclusion of the definition could result in a conflict between further court interpretation under the Act and the definition in the Plan. Further guidance on what is considered noxious or dangerous is also included in the MfE Good Practice guides for odour, dust and industry. No similar definition is provided for offensive or objectionable which are used together with noxious or dangerous within the RMA and the Plan.	Delete the proposed definition for "noxious or dangerous".
Definitions – public amenity area	Support with modification	Mercury considers the current definition for "public amenity area" includes a number of specific areas which are not areas where people congregate for extended periods of time. People are only present at a specific location on cycleways, parks and reserves (where playgrounds, sports fields and seating are not provided) and walkways for a short period of time.	Amend definition for "public amenity area" to read" <b>Public amenity area means a public area where members of the public are likely to congregate for extended periods of time, including (but not limited to): backcountry huts, barbeques, changing facilities, cycleways; outdoor sports facilities, parks and reserves; playgrounds and playground equipment, public toilets, seating and picnic tables, shelters, squares, and walkways.</b>
Definitions – sensitive activity	Support with modification	Mercury supports the proposed definition for "sensitive activity" subject to modifications. A number of the activities listed may not be sensitive to all contaminants and in all circumstances. For example, public water supply catchments, and wetlands will not be sensitive to discharges of odour or particulates. Further food manufacturing facilities are typically located within commercial or industrial areas where other discharges to air will	<i>Sensitive activity means an activity that may be adversely affected by contaminants and includes:</i> (a) residential buildings and areas (including marae); (b) childcare centres, schools, educational facilities



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		<p>be present and can be sources of discharges to air themselves (e.g. odour from roasting).</p>	<p>(c) <u>hospitals, nursing homes, aged care facilities</u>  (d) <u>offices, consulting rooms, gymnasiums, community centres</u>  (e) <u>hotels, motels, caravan parks, camping areas, tourist accommodation</u>  (f) <u>correctional facilities</u>  (g) <u>public amenity areas</u>  (h) <u>manufacturing or storage of food or beverages</u>  (i) <u>manufacturing or storage of electronics</u>  (j) <u>public water supply catchments and intakes.</u>  (k) <u>water bodies, watercourses (as listed in Schedule 3) and associated riparian vegetation</u>  (l) <u>incompatible crops or farming systems (e.g. organic farms, greenhouses)</u>  (m) <u>wetlands, indigenous vegetation habitat areas and reserves.</u>  (n) <u>household water supplies (including roofs from which a water supply is obtained).</u></p>

