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3rd June 2020

I wish to submit an objection against Mod 1 SSD 6693 and future construction by TILT Renewables of Rye Park wind farm for the following reason:

I would like to ask that the Rye Park Wind Farm Mod 1 SSD 6693 not be approved by the DPIE especially with the respect to habitat disruption for amount of clearing as predicted necessary to construct this highly subsidised industrial estate, due to absolute destruction of the environment of a species not addressed by **NGH Environmental's *Biodiversity Assessment Addendum*** *Rye Park Wind Farm* March 2016. The Diamond Firetail Finch *(Stagonopleura guttata)*

This species is listed as near threatened. Reference IUCN and has been recorded by well-known Boorowa local an astute observer of nature Mr Pat Thompson as having a breeding population within the area designated for the removal of habitat. Mr Thompson states that this species builds its atypical globularly Australian Grass Finch nest with its side entrance in eucalypt saplings within the area bounded by the "greater" Rye Park Wind Farm, Pat Thompson also states that he has observed this finch constructing its nest out of the much maligned Sifton Bush Cassina arcuata, the Diamond Firetail Finch is also known to construct its nest in the closer knit branches of Mistletoe associated with and being born by older trees in habitat such as will be found in the area tobe cleared for the proposed Rye Park Wind Farm and along potential access roads such as Grassy Creek Road and along both overhead and underground power line easements, therefore as this species unmentioned by NGH and only given scant attention by TILT Renewables become another candidate for possible extinction even if it's local is it worth the risk of future generations pointing the finger at the reader as a representative of the NSW DPIE if this was to occur, when they reader has been a party to the forever loss of yet another never tobe replaced Australian species?
I have immense respect for Pat Thompson's avian knowledge acquired from a lifetime of avian observation in the Boorowa District.
By allowing the interference with the remaining although disturbed ecosystem in the Rye Park area will spell the local death knell for another species, if this installation was to go ahead this small finch will be severely affected by land and habitat disturbances aswell affecting lost and disturbed feeding/breeding habitat, this species will also be affected by Barotrauma as will many species attempting to exist in and around the towers.
Barotrauma definition attached.

barotrauma
ˈbarə(ʊ)ˌtrɔːmə,-ˌtraʊmə/
noun
Medicine

noun: **barotrauma**

1. injury caused by a change in air pressure, affecting typically the ear or the lung.

Translate barotrauma to Choose language
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Barotrauma - Wikipedia, the free encyclopedia
*https://en.wikipedia.org/wiki/**Barotrauma***

1. Cached
2. Similar

Barotrauma is physical damage to body tissues caused by a difference in pressure between a gas space inside, or in contact with the body, and the surrounding fluid.
Types of injury · Diving barotrauma · Blast induced barotrauma

Once again I draw the reader and members of the NSW OEH that I am assure did similar Desk Top Assessments, as advised to me during one of three phone conversation with OEH Representative Virginia Thomas on 2nd June 2015 and as its repeatedly printed in NGH's report that they have done Desktop Assessments aswell, I suggest that their Desktop Assessments are incomplete I once again refer the reader to below.

Extract;
Native vegetation of Boorowa Shire NSW NPWS 2002

The IUCN has classified the species as being of near threatened. The bird's habitat has been threatened by alteration of vegetation structure caused by over-grazing, weed invasion, salinisation and other flow-on processes. This loss of main food plants and habitat results in competition with invasive species, and increased predation.

4.5.12 Diamond Firetail (Stagonopleura guttata)
The Diamond Firetail is a small finch that inhabits drier grassy woodlands in South Australia, Victoria, New South Wales, the ACT and Queensland. The species feeds predominantly on grass seeds and nests in shrubs and small trees either in single pairs or communally.
Conservation Status
The species still occupies much of its broad range but within this range it has become extinct in small remnants of vegetation.
This species was recorded infrequently in Boorowa Shire during the project but has, nevertheless, been recorded from numerous sites. It appears to be restricted largely to ungrazed or lightly grassland/woodland remnants.
Issues in Boorowa Shire
As this species feeds largely on grass seeds it is likely that heavily grazed areas provide less suitable habitat than roadsides and public lands subjected to infrequent grazing. Mowing of roadside vegetation as part of maintenance activities may affect this species. All planning assessments for road maintenance within the shire should include an eight-part test for this species, except perhaps for some roadsides classed in this report as Low Conservation Value. Revegetation works can provide suitable habitat for this species. A recent survey of revegetation sites for Greening Australia

found this bird in a variety of revegetation plots from short windrows to large 15ha blocks, it was only found in sites at least 9 years old. It has been recorded as breeding in revegetated areas (Greening Australia 2001).

Not only does roadside verge mowing affect the ability of the Diamond Firetail to source seed but repeated and multiple passes by large construction machinery and ancillary fleet vehicles will have a devastatingly disruptive impact on feeding by this small finch.

So once more I ask, is it acceptable that in the name of so-called Green Energy that we destroy part of what may be the last vestige of another struggling native Australian species, by you the representative of the NSW DPIE approving this Mod 1 SSD 6693 Rye Park wind farm?

Regards

John McGrath

NSW Department of Planning Industries and Environment Compliance Team

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3rd June 2020

I wish to submit an objection against Mod 1 SSD 6693 Rye Park wind farm and future construction by TILT Renewables of Rye Park wind farm for the following reason:

The NSW Department of Planning Industries and Environment Compliance Team reliability as compliance officers is very dubious?

Here I cite the instance here when Goldwind proponent for Coppabella wind farm carried out vegetation clearance along the verges of Whitefield's Road that intersects the Hume Highway west of Bookham, during the week 19th to 23rd August 2019.

The representatives of the NSW Department of Planning Industries and Environment Compliance Team arrived after the road verge vegetation reduction was completed by Goldwind's contractors.

Nowhere near acceptable?

Here I am asking why doesn't the NSW Department of Planning Industries and Environment Compliance Team, always have a representative on the site of such projects?

I spoke with Tatisana Banduruk from NSW Department of Planning Industries and Environment about my concerns regarding the reliability of the NSW Department of Planning Industries and Environment Compliance Team on the 2th May 2020.

"Rubber Stamping" wind farm construction "illegalities" by the NSW Department of Planning Industries and Environment Compliance Team, has been observed by the community before and here I will cite 1 major instance the uncontrolled "micro siting" of wind towers by Goldwind at Gullen Range near Crookwell. The proponent was allowed to erect towers in some cases up to 800 meters from the allocated position.

Thus, generally the community has no confidence in representatives of the NSW Department of Planning Industries and Environment Compliance Team, being competent to overseer work that is likely to evolve from Mod 1 SSD 6693 Rye Park wind farm.

Regards

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3rd June 2020

I wish to submit an objection against Mod 1 SSD 6693 and future construction of Rye Park wind farm for the following reason.

I would ask that the Mod 1 SSD 6693 Rye Park Wind Farm not go ahead because of the existence of the **Swift Parrot *Discolor Lathamus***.
From TILT Renewables Wind Farm project update December 2019, I see that:
Swift Parrots *will also be considered in the assessment. The Swift Parrot is a winter migrant in that they occur on the mainland though the winter months. While in the warmer months they are south in Tasmania.*
Basically, TILT Renewables have **verbatimed** that information to 1 of many questions I forwarded to them in writing re Rye Park wind farm, see below:

30. Do you know the timeframe for the feeding Swift Parrots to come through?

The Swift Parrot is a winter migrant in that they occur on the mainland through winter months. While in the warmer months they are south in Tasmania.
Swift Parrots have also been considered in the bird and bat assessment.

Whilst this is true an assessment of the Swift Parrot in the footprint of the Rye park wind farm needs to take in many things pertinent to this species.
Including preferred feeding habitat, flight paths, and heights
Lathamus discolor
I have attached much information on this parrot species and other species that will be affected by approval of Mod 1 SSD 6693 including the necessity of retaining roadside vegetation.
Submission for Rye Park Wind Farm-Swift Parrot ***Lathamus discolor***
Since the commencement of and acceptance of the NGH **Environmental's *Biodiversity Assessment Addendum*** *Rye Park Wind Farm* March 2016, as an accepted guide by the NSW OEH the status of the Swift Parrot has been raised to Critically Endangered,
REFERENCE.

Listing and Conservation Advices	**Listed as Critically Endangered** **Listed marine** *Approved Conservation Advice for* Lathamus discolor *(swift parrot)* (Threatened Species Scientific Committee, 2016cg) [Conservation Advice].

The Swift Parrot hardly rates a mention on the **NGH Environmental's *Biodiversity Assessment Addendum*** *Rye Park Wind Farm* March 2016. Except scantly on page 50,

"The project area is not considered to support foraging habitat for the Swift Parrot; this species was not observed during targeted surveys."

Even when I raised the issue of the Swift Parrot with Trustpower's Mr Michael Head when I visited the Trustpower "Information Centre" in Yass on the afternoon of the 25th May 2016, he directed my attention to 3 pink dots on their wall mounted maps, 2 of those dots where overlayed on each other, indicating that yes the Swift Parrot did occur within the then footprint of Rye Park wind farm..

Information to the contrary of NGH's information highlighted in green above supplied by well-known and respected Rye Park local Mr Verdi Barberis who when on repeated camping trips spanning a decade with his family, during the months of August September each year from 2006 to 2015 inclusive observed this species in proliferation feeding on the nectar of the flowering Eucalypts in particular the nectar of the flowers of the Red Flowering Iron Bark AKA as the Mugga Iron Bark ***Eucalyptus sideroxylon***

Verdi Barberis was even able to name the areas where he saw the Swift Parrot feeding and cross referenced these positions by suppling me with grid references as we spoke and looked over a map.

I suggest rather than a species the Swift Parrot that is not considered being at significant risk from habitat destruction that the reverse is the case, considering its latest status downgrade.

I would also strongly suggest that the increased RSA if Mod 1 SSD 6693 is approved by the DPIE will have a devastating effect on this species, and obviously if this species flew below the 30 metre ABGL mark as suggested they do by NGH Environmental I would suggest that then most of the birds would drown as they crossed Bass Straight in their annual flight to and from the mainland and Tasmania each year as they would "collide" with the tops of the higher Bass Straight waves.

Therefore rather than just do Desk Top Assessments as is suggested right throughout NGH Environmental's document 2016, I suggest both NGH and NSW OEH, and TILT Renewables should move outside their respective offices and actually visit the proposed site at the relevant time of year to see the affected species and I also suggest that there should be a proper follow up on the "ground' study documented on the Swift Parrot and its habits in the area planned for Rye Park Wind Farm.

I suggest that a true **independent body** do this study and that any construction commencement or approval of Mod 1 SSD 6693 be held over until that study is documented.

The revised height of 200M tip height applied for by Mod 1 SSD 6693 RSA will severely impact the Swift Parrot in the Rye Park Range area.

With reference to "Australian Parrots" Joseph M. Forshaw Third [Revised edition] 2002

Page 504 the author has printed under heading Habits. IN part "They are arboreal, spending much of their time feeding among the top-most branches of flowering eucalypts,"

Forshaw also backs up Verdi Barberis's observation that on page 506 of his publication "the parrots feed mainly in winter-flowering plants, especially red ironbark *Eucalyptus sideroxylon"*

Referring to the later 2 documented observations I would suggest puts the Swift Parrot within the "new" prescribed RSA for Rye Park Wind Farm ie lower sweep 30 meters AGL and its upper tip of 157 meters AGL, therefore putting this now **critically endangered** species into an even more perilous position should the Rye Park Wind Farm go ahead.

Given the height that this species feeds on flowering eucalypts, it will be in immense peril from blade strike transiting from one feeding tree to another well above the 30 meter height therefore in the direct path of the revised RSA, for the Rye Park Wind Farm's Wind Towers.

Once again I suggest that OEH refer to their own documentation in Vegetation of the Boorowa Shire 2002, if they wish to continue using Desk Top Assessments utilise the knowledge collected by their own staff rather than the desktop assessments (references to desktop assessments throughout their own documentation **NGH Environmental's *Biodiversity Assessment Addendum*** *Rye Park Wind Farm* March 2016)

http://www.environment.gov.au/cgi-bin/sprat/public/publicspecies.pl?taxon_id=744#movement_patterns

4.5.3 Swift Parrot (Lathamus discolor)

The Swift Parrot is a medium-sized, predominantly green parrot that breeds in Tasmania in the summer months. During autumn much of the population migrates to mainland Australia. Autumn and winter flowering *Eucalyptus* species such as White Box and Red Ironbark form an important component of the diet of the species during this period.

Conservation Status

The Swift Parrot is threatened by clearing of breeding habitat in Tasmania and foraging habitat on mainland Australia. It was recorded in Gunnary TSR during the project and is likely to regularly occur within Boorowa Shire, although it may be absent in some years depending on the magnitude of the flowering of *Eucalyptus* species.

Issues in Boorowa Shire

Two of the Swift Parrot's main feed trees on mainland Australia, White Box and Red Ironbark, occur throughout Boorowa Shire. A Tree Preservation Order and education program would assist in the conservation of this species. All planning assessments for road maintenance within the shire should include an eight-part test for this species, except perhaps for some roadsides classed in this report as Low Conservation Value.

The perilous state of the Shire's vegetation means that its retention, regeneration and rehabilitation on private land is crucial to its survival. This report provides information of use to those engaged in such activities. It can be used as a guide to the selection of suitable species for planting, provides further justification for the allocation of Landcare and Natural Heritage Trust funding to the Shire and contains specific conservation advice.

Roadsides and Travelling Stock Reserves are generally the areas which retain the greatest plant diversity within the Shire. Council has the key responsibility for protecting remaining roadside vegetation, while rural Lands Protection Boards are responsible for the stock reserves. Conservation advice for these areas includes protection of the most significant areas and implementation of compatible management.

This report also suggests that the survival of native vegetation and threatened species habitat would be enhanced by the inclusion of a tree preservation order and a clause that protects roadside vegetation in the Shire's Local Environment Plan.

_ **landscape integrity** - Landscape integrity refers to whether an ecosystem falls into a heavily modified landscape, which would be ranked as a 5, on a scale of 1 to 5. If an ecosystem falls within a natural matrix of ecosystems with little overall modification, it would be ranked as a 1 in a scale of 1 to 5;

_ **extent of habitat fragmentation** - The comparative size of the current patch relative to historical conditions. A highly fragmented ecosystem with predominantly small patch sizes would be ranked as a 5, on a scale of 1 to 5. If an ecosystem occurs in large, intact and naturally shaped patches or relatively intact linear patches, it would be ranked as a 1, on a scale of 1 to 5;

_ **proportion of native species present** - If an ecosystem has a high proportion of

native species present in most of its patches, it would be ranked as a 1, on a scale of 1 to 5. If an ecosystem had mostly exotic species present in most of its patches, it would be ranked as a 5, on a scale of 1 to 5.

_ **current habitat complexity -** This criterion refers to the microhabitat of an ecosystem, relative to historical conditions. Some ecosystems are inherently more variable and have more layers and places for plants or animals to find resources or shelter. An ecosystem with a high habitat complexity would be ranked as 1, on a scale of 1-5. An ecosystem with few layers and few microhabitats for species would be ranked as a 5, on a scale of 1 to 5.

_ **presence or absence of key functional groups -** If most of the functional groups are present within an ecosystem, it would be ranked as a 1, on scale of 1 to 5. If an ecosystem has lost some key functional groups, which affects ecological processes within an ecosystem, it would be ranked as a 5, on a scale of 1 to 5.

Table 2 shows how the five criteria above are assessed and combined to create four categories of ecosystem functionality. Of necessity, subjective judgements are involved.

Conservation Value and Management of Roadside Vegetation

2.1 Introduction

In many parts of Boorowa Shire, roadside vegetation is the only original native vegetation that remains. These remnants contain plant communities that are poorly preserved on the surrounding private land.

In regions that are highly modified, such as the Boorowa Shire, roadside vegetation is a valuable tool in determining the composition of the pre-European environment. Roadsides are especially important for the conservation of understorey plant species which are sensitive to grazing pressure. These species often survive only within the narrow fenced roadside area. Grazing land adjacent to roadsides typically contains a mixture of exotic pasture species, weeds and native species which are able to tolerate sustained grazing pressure, such as Red Grass (*Bothriochloa macra*) and Speargrasses (*Austrostipa* spp.). Where cropping or horticultural landuse is practised the vegetation has been completely altered from its pre-European state and typically retains no endemic vegetation.

Road reserves were established to provide access from one place to another and have evolved to perform a number of functions including the provision of services including communication, electricity, drainage, sewage and gas. They are also used for stock grazing, beekeeping and recreational activities. Ideally roadsides are not the most suitable places for wildlife and native plants, however they are often all that remains in certain landscapes. There are many natural, economic, social and cultural reasons why roadside vegetation should be valued and retained.

Roadside reserves containing native vegetation are important because they:

_ may be the only remaining examples of the original native flora prior to non-Aboriginal occupation

_ provide a source of seeds for farm tree planting of locally adapted indigenous trees and shrubs

_ provide habitat for birds and other fauna which may help to control agricultural pests

_ may contain rare or *threatened* species and communities

_ help to retain the biodiversity of the region

_ conserve the genetic variation of flora species for their potential economic and scientific value and the long-term survival of the species

_ may act as corridors connecting other areas of remnant vegetation thereby allowing the movement of wildlife
_ are an important resource for stock during drought
_ may contain historical sites (Aboriginal and early European)

_ Keep vegetation disturbance in all areas to a minimum to reduce potential soil erosion and the spread of weeds. The cost of earthworks and revegetation to mitigate soil erosion can be very expensive.
_ Where excavation of the soil profile is to take place topsoil should be removed to a depth of 100-200mm and stockpiled in designated sites. Topsoil should be respread as soon as possible to allow regeneration from the soil seed bank to occur.
_ Silt fences or hay bales should be used during construction to prevent sediment from moving from freshly graded table drains or other disturbed areas.
_ Upon completion of works disturbed areas should be revegetated as soon as possible with species appropriate for the site. Ideally table drains should be seeded with local native grasses. An alternative is a sterile cover crop (varieties bred to set non-viable seed), which will be replaced by native seed over time. This is particularly important in areas of high conservation value roadside where introduced grasses may invade the adjoining vegetation. Local Greening Australia and Landcare offices will be able to provide advice about appropriate seed sources

Management issues that need to be considered for Travelling Stock Reserves include:
_ Collection of firewood. Firewood collection often results in the removal of much of the dead woody debris that forms an integral component of the habitat of several threatened species including the Bush Stone-curlew, Hooded Robin, Brown Treecreeper and Speckled Warbler as well as a host of regionally significant fauna species. Dead Timber is uncommon in virtually all the areas TSRs. No further permits for firewood collection should be issued and illegal collection should be prosecuted. Signs prohibiting firewood collection would be helpful.
_ Use of reserves for long-term grazing. The conservation value of native vegetation

4 Threatened Species and Endangered Ecological Communities

4.1 Introduction

This section of the report provides a summary of the endangered and threatened flora and fauna species and endangered ecological communities recorded from within Boorowa Shire. A brief summary of the ecology of each species, its conservation status throughout its range and in the Boorowa Shire and the implications in relation to proposed activities within the shire is provided. Map 4 shows records of threatened fauna within Boorowa Shire. These records include those from the NSW NPWS Atlas of NSW Wildlife and from observations made during the vegetation mapping project.

4.2 Legislative Framework

4.2.1 Threatened Species Conservation Act 1995

The NSW *Threatened Species Conservation Act 1995* (*TSC Act 1995*) provides the legislative basis for the protection of threatened species in NSW. The Act provides for the establishment and maintenance of schedules of endangered and threatened fauna and flora species and endangered ecological communities. It places responsibilities on government agencies, consent authorities and applicants with respect to development

control, planning and species recovery planning.
There is no requirement under the Act to apply for a licence to "harm or pick" a threatened species in order to undertake routine agricultural activities. As the majority of activities affecting threatened species on private lands in Boorowa Shire fall within this category, the Act will not necessarily have a direct influence on landholders under most circumstances. Routine agricultural activities include:
_ Grazing of lands that have been regularly stocked in the past.
_ Maintenance of existing tracks on properties.
_ Maintenance of existing fence lines.
_ Occasional tree felling.
_ Collection of firewood for personal use.
Activities that do not constitute routine agricultural activities include:
_ Firewood collection for commercial gain.
_ Clearing greater than 2 hectares of native vegetation a year.

4.3 Endangered Ecological Communities

White Box-Yellow Box Woodland is listed as an endangered ecological community on Schedule 1, Part 3 of the *TSC Act 1995*. This community is defined as woodlands in which the dominant tree species include White Box (*Eucalyptus albens*), Yellow Box (*Eucalyptus melliodora*) and Blakely's Red Gum (*Eucalyptus blakelyi*). The following plant communities identified in this project represent forms of this ecological community:

_ White Box Woodlands
_ *Themeda australis-Bothriochloa* Grassland/Open Woodland
_ Blakelys Red Gum-Yellow Box- Grassy Woodlands

The native vegetation model accompanying this report indicates that the woodlands representing this community once covered about 44% of Boorowa Shire. They were particularly widespread across the western half of the shire. Today these woodlands occur over less than 3% of the Shire, mostly as small patches of poor condition (ie many weeds present, high level of other disturbances, low native species diversity). The listing of this community on the *TSC Act 1995* reinforces the value of the identification of these communities in this report and the need to implement strategies to protect these remnants. The definition of the community within the *TSC Act 1995* includes degraded remnants that would respond to assisted natural regeneration. This could include single paddock trees or clumps of trees within paddocks, which as detailed previously, form a large proportion of the remaining remnants of this plant community in Boorowa Shire.

4.4 Threatened Flora

4.4.1 Tarengo Leek Orchid (Prasophyllum petilum)

This orchid species is known from only three, widely dispersed sites on the South Western Slopes and Southern Tablelands of NSW. Two of the known sites are within cemeteries in the ACT region. The third site is on the Tarengo TSR located approximately five kilometres south-west of Boorowa. At this site, the species occurs within *Themeda australis-Bothriochloa macra* grassland. The Tarengo TSR supports the largest known population of the species. It is possible that the orchid may occur on private properties in the Boorowa region, particularly those supporting native grasslands and grassy woodlands that have not been subjected to long term grazing pressure. The orchid is currently the focus of a recovery planning program coordinated by the NSW NPWS.

4.4.2 Yass Daisy (Ammobium craspedioides)
The Yass Daisy is distributed roughly between Bigga and Wagga Wagga. This species was recorded in four sites in the south-eastern corner of the shire. This included one site on private property, two on TSRs and one on a crown leasehold property. Surveys for this species are best conducted in spring and summer so it is possible that the species is more widespread in the Boorowa Shire but was not detected at some locations during the project which was conducted during the autumn months.
The Yass Daisy occurs in relatively undisturbed grassy woodlands and secondary grasslands (grassy woodlands in which much of the native tree cover has been removed). All sites in which the species was recorded during the survey were characterised by the presence of an understorey dominated largely by native species and a light grazing regime.

Using a company such as NGH environment which will not be an independent environmental assessor. .

Therefore, as I ask that the representatives of DPIE think hard about approving Mod 1 SSD 6693 any thought of commencement of constructing the proposed Rye Park Wind Farm under a modified form be held over until a proper and **independent** assessment of the **Critically Endangered** Swift Parrot be carried out in the proposed construction area.

Regards
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3rd June 2020

I wish to submit an objection against Mod 1 SSD 6693 and future construction by TILT Renewables of Rye Park wind farm for the following reason:

The potential impact on the endangered **Southern Pygmy Perch** ***Nannoperca australis*** a species recently reintroduced by local action groups to tributaries of the Boorowa River, Pudman Creek for instance its former known habitat.

NGH Environmental state in their ***Biodiversity Assessment Addendum*** *Rye Park Wind Farm* March 2016, Section 5.7.1 that the Endangered Southern Pygmy Perch is known to occur in Blakney Creek and they also "rightly observe" that as above this species was introduced into the Pudman Creek.
NGH Environmental cites pressure on the Southern Pygmy Perch by introduced Red Fin Perch; obviously any introduced exotic carnivorous fish will have an impact on any existing native more docile fish populations.
According to NGH **Environmental's** ***Biodiversity Assessment Addendum*** *Rye Park Wind Farm* March 2016, documentation Figure 5-1/Aerial/Satellite imagining and overlay of highlighting both the portion of the Blakney Creek that runs through the area adjacent to the relevant showing the sites of some Rye Park Wind Towers.
Why is it correct for 1 arm of NSW Government departments the Department of Fisheries to restock into local streams a fish species teetering on the brink of local extinction in its natural habitat and with the "swipe" of a pen another branch of that same NSW Government its State Planning Department to allow a Wind Farm development, by a New Zealand base company and for the record New Zealand doesn't have a good record as far as extinctions go, so on that information why allow this Mod 1 SSD 6693 to be approved?
I and others believe that going on past Wind Farm construction, environmental results that Rye Park Wind Farm if constructed will allow heavy siltation of Blakney, Flakeney and Pudman Creeks, from both 30 metre wide access roads and site preparations for the Wind Towers themselves.
This imminent heavy siltation will be detrimental to any chance of the survival of an aquatic species such as the Southern Pygmy Perch.
Recent well know event that happened during construction of access road of the adjacent Bango wind farm by CWP. when heavy rains came in March much of their unsealed sections of roads washed away ultimately ending up as siltation in local creeks?
Thus, should the DPIE approve Mod 1 6693 the reintroduced population of Pygmy Perch will be heavily impacted by siltation, to the point of re-extermination of the **Southern Pygmy Perch**

Nannoperca australis in local creeks with the Rye Park wind farm footprint covering much steeper terrain than does Bango wind farm?
Therefore, I ask that Mod 1 6693 of this project the Rye Park Wind Farm not be approved by the DPIE until independent detailed observations are done of this species.
Regards
John McGrath

Tx magnostriction

Circuit Breaker operation cooling fans if used, transfer oil pumps if used

Why do transformers hum?

Transformer noise is caused by a phenomenon which causes a piece of magnetic sheet steel to extend itself when magnetized. When the magnetization is taken away, it goes back to its original condition. This phenomenon is scientifically referred to as magnetostriction. A transformer is magnetically excited by an alternating voltage and current so that it becomes extended and contracted twice during a full cycle of magnetization.

The magnetization of any given point on the sheet varies, so the extension and contraction is not uniform. A transformer core is made from many sheets of special steel to reduce losses and moderate the ensuing heating effect. The extensions and contractions are taking place erratically all over a sheet and each sheet is behaving erratically with respect to its neighbor, so you can see what a moving, writhing construction it is when excited. These extensions are miniscule proportionally and therefore not normally visible to the naked eye. However, they are sufficient to cause a vibration, and consequently noise. Applying voltage to a transformer produces a magnetic flux, or magnetic lines of force in the core. The degree of flux determines the amount of magnetostriction and hence, the noise level.

Why not reduce the noise in the core by reducing the amount of flux? Transformer voltages are fixed by system requirements. The ratio of these voltages to the number of turns in the winding determines the amount of magnetization. This ratio of voltage to turns is determined

mainly for economical soundness. Therefore the amount of flux at the normal voltage is fixed. This also fixes the level of noise and vibration. Also, increasing (or decreasing) magnetization does not affect the magnetostriction equivalently. In technical terms the relationship is not linear.