

# **Submission to the East Gippsland Shire Economic Growth Strategy Report 10.2.15**

**Peter Gardner**

## **Introduction**

Many measurements suggest Climate Change is close to, or worse than, the Intergovernmental Panel on Climate Change (IPCC) worst case scenario trajectories. Therefore we all should be preparing for the worst case by planning appropriate responses. Unfortunately most levels of government are reticent in their commitment to act decisively about climate change and some – like our current Federal government – reactionary. It is therefore important that local government leads the way. The Strategy as proposed by the East Gippsland Shire is a step in the right direction but not enough. The Strategy needs to concentrate on climate change, its effects upon us and the many responses and actions this requires. Climate Change must be seen as the challenge of overriding importance and direct all shire actions. The Strategy should thus prioritise actions according to both the size and immediacy of threats brought about by climate change and the urgency to act upon them.

The above is the same introduction I recently made to the Shire Sustainability Strategy. (1) It should be recognised that in some parts there is a conflict between the directions outlined in the Sustainability and Economic Growth Strategies. In particular both forestry and mining activities as currently practiced are both unsustainable and are major offenders in terms of carbon emissions. They are the industries likely to suffer most with some form of carbon emissions pricing introduced by a state or federal government. It is therefore wise to direct growth elsewhere where possible.

## **How Climate Change Effects Economic Activities – now & in future**

**Agriculture** – The region already experiences prolonged droughts, extensive floods and regular heatwaves. Farmers should be encouraged to provide stock shade where it does not already exist perhaps with dual purpose carbon offset or bio-energy plantations. Off river storage should be promoted for the horticulture industry to store water from the expected severe floods and provide irrigation in drought periods. Also horticulture should be encouraged in and around towns for fire protection benefits.

**Fishing** – This industry will be confronted with a gradually warming ocean and changing species, as well as an ocean gradually becoming more acidic. There isn't much that can be done about this in the short term other than adopting as many carbon saving measures as

possible, for the Shire to become carbon neutral and encourage others (both within and outside the shire) to do so.

Forestry – This industry is in long term decline and should be phased out as quickly as possible. Forestry is a carbon intensive industry and harvesting as it is currently practised is a major part of the problem. Forests should (where possible) be preserved as carbon sinks, where in terms of carbon sequestration they will do the most good. A major planning effort is required so that employment opportunities in areas where the industry is concentrated are made available to offset job losses in the industry. It is of note that the practice of clear felling coups is incompatible with both climate change and tourism. The same objection applies to logging trucks. There is some evidence that current practices may affect or reduce local rainfall (2) and that they also increase the risk of dangerous or catastrophic bushfires (3). Using logging and milling waste for bio-energy should not be considered a suitable reason for maintaining current practices. It would be the same as current woodchip practices – the tail wagging the dog. Forests are a store of CO<sub>2</sub> and should be protected and jobs provided in the bush to protect them. Plantation timber should be encouraged for this industry and include various efficiencies including bio-energy, agri-char as products and some grazing for fire protection and weed control. Alternative crops should be promoted (hemp? black wattle?) as woodchip and paper substitute. Clearly this industry is in permanent, or near permanent, decline and major changes are required to make it sustainable. The zero carbon logging practices as advocated by Beyond Zero Emissions may be a suitable guide. (4)

Mining – Like forestry this industry is carbon intensive. To be sustainable mining projects should be carbon neutral. Their CO<sub>2</sub> production can be partially offset by using solar energy for stationary motors. The energy used to truck the product to the shipping terminal should be considered when calculating their carbon budget. This, and other CO<sub>2</sub> produced, may be partially offset by reforestation. All mining projects should demonstrate their sustainability by being carbon neutral before receiving any support from the Shire. Other aspects of mining projects such as local employment opportunities are often overstated. The previous experience of Denhurst and Benambra Copper is informative with anecdotal evidence indicating that the shire actually has a negative employment when the mine closes. That is locals employed in the mine seek work elsewhere and that there is then less local employment than before the mine started. Current proposals for Benambra Copper include a new town with Fly-in-Fly-out workers which will be of little advantage to the local economy. As well the operations of these projects are all price sensitive. With the decline in both copper and iron prices recently both the Benambra and Nowa Nowa projects are uneconomic. There are many other problems associated with these mining projects. (5) The tailings dam as proposed by the Independence Group appears to be both environmentally hazardous and of questionable legality.

Tourism – Each of the major weather events being heavily influenced by climate change discourages tourism – especially floods, fires and heatwaves. My personal experience operating a small and tourist dependant business in Ensay and Swifts Creek has been that all disasters or threatened disasters caused a substantial drop in tourist numbers. These include the bushfires of 2003 and 2006/7 and the heatwave of 2009. Whilst the latter was for a

relatively short period of time the tourist numbers declined spectacularly. This will remain a problem for the foreseeable future with the best option being for the whole shire to become carbon neutral as quickly as possible. I have noted above the conflict of tourism with other activities, especially trucking products of forest and mine and despoiling large areas of forest.-

Health – With climate change this must be one of the growth industries. The health of Gippslanders is, and will be, threatened on a number of fronts. A catastrophic heatwave or bushfire may overwhelm our health system with casualties. It is most likely heatwaves have already caused some fatalities in Gippsland. Increasing vector born diseases such as Ross River fever are another threat. Related growth areas must include all emergency services and emergency operations and planning for these disasters from a local level upwards.

Manufacturing – It is hard to calculate the affects of climate change on this sector – possibly it will be effected the same as tourism. Manufacturers should also be encouraged to aim for carbon neutrality by various methods including energy efficiency. Support and encouragement should be offered to the new industries in renewable energy which should see more profits and more jobs remain within the community. Also they would not be subject to the same boom bust conditions of mining and forestry. These include the following:-

- 1.Wind large scale / may be offshore
- 2.Wind projects for Communities and other possible community projects. (6)
- 3.Rooftop Solar adopt rapidly. More or less happening anyway.
- 4.Solar farms / solar covers of water supplies or channels to reduce evaporation
- 5.Push geothermal a bit harder
- 6.Bio-energy use of farm, plantation & shire waste NOT from current forestry operations
- 7.Wave & tidal explore opportunities
- 8.Micro-grids

## **Conclusion**

I have outlined a large number of shire actions that could be taken in my recent submission to the Shire Sustainability Strategy. To these I can add the shire should a) make sure that any funds they have are not invested in harmful industries b) use a ‘sustainability friendly’ bank and c) use a renewable energy friendly electricity retailer like Powershop.

## **Notes**

- 1.See below

2. <http://www.theage.com.au/environment/climate-change/forestcutting-can-have-an-immediate-effect-on-climate-nature-report-finds-20141219-12b803.html>
3. <https://mickresearch.wordpress.com/2014/08/04/effects-of-stand-age-on-fire-severity/>
4. Beyond Zero Emissions ref. for Land and forestry <http://bze.org.au/landuse>
5. [http://geg.org.au/?page\\_id=631](http://geg.org.au/?page_id=631)
6. A good example of a well planned wind farm in co-operation with the local community is Waubra. See <http://www.waubra.org.au/services/waubra-wind-farm-community-fund/> and <http://www.waubra.org.au/our-area/waubra-wind-farm/economic-benefits/>

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**January 2015**

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### **Introduction**

Many measurements suggest Climate Change is close to, or worse than, the Intergovernmental Panel on Climate Change (IPCC) worst case scenario trajectories. Therefore we all should be preparing for the worst case by planning appropriate responses. Unfortunately most levels of government are reticent in their commitment to act decisively about climate change and some - like our current Federal government - reactionary. It is therefore important that local government leads the way. The Strategy as proposed by the East Gippsland Shire is a step in the right direction but not enough. The Strategy needs to concentrate on climate change, its effects upon us and the many responses and actions this requires. Climate Change must be seen as the challenge of overriding importance and direct all shire actions. The Strategy should thus prioritise actions according to both the size and immediacy of threats brought about by climate change and the urgency to act upon them.

### **A Method to Approach the Problem**

I suggest that the best way to approach the problem (or if you like an alternative strategy) is to start with some general aims, followed by specific actions (what must be done) and what that shire can do. These actions can be prioritised according various criteria including their immediacy, ease of action, cost of action etc within the powers of the shire.

## **Some General Aims**

Working to make Shire operations carbon neutral and therefore sustainable

Working to make Shire operations carbon negative and therefore helping to solve the problem.

To do carbon audits firstly of shire operations then of all activities within the shire to determine a) how much CO<sub>2</sub> each shire activity produces and b) which activities/operations require changes c) how to reduce carbon emissions from specific activities or d) suggest better alternatives.

Education of citizens on Climate Change with the Shire leading the way

Climate Change actions should take priority over economic ones

Employment should take priority over “bricks & mortar” projects/developments

Protection of citizens should take priority

## **Some Specific Actions (there are many more)**

**For Mitigation** a) carbon reduction schemes including energy efficiency (shire doing) encourage bike riding (shire doing) adopting solar (shire doing) bio-energy from shire waste (shire investigating) wind power, geothermal energy, micro-grids, community energy projects, improved public transport, (shire doing) increase public transport, urban renewal rather than suburban expansion, smaller housing rather than larger b) carbon sequestration schemes including plantations, phase out logging, investigating soil carbon possibilities c) discourage any developments/projects that are carbon intensive eg. CSG

**For Adaption** (planning around further warming that is in the pipeline) a) making towns cooler (i) by increasing suitable green vegetation in appropriate places and spaces especially in towns which have a “heat island” effect. (ii) increase the use of reflective paint/materials (white or near white) on surfaces such as roads / roofs etc. (b) making dwellings cooler and energy efficient by (i) encouraging the use of eaves, verandas, pelmets on windows, best insulation etc. (ii) examine option of underground housing in fire prone areas.(iii)encourage the adoption of smaller housing (discourage McMansions) (iv) increase population densities centrally – near amenities and along transportation routes

**Protection of People & Property** (against catastrophic fires, heatwaves, floods) a) fire protection of towns, dwellings, communication routes and infrastructure b) co-ordinating, expanding, directing emergency responses with relevant authorities and bodies c) use of micro-grids to counteract widespread electricity grid failure (and cope with the massive expansion of renewable energy)

**Some Shire Actions and Suggested Priorities** (according to immediacy, then cost, then ease of implementation. Suggest H(igh) M(edium) and L(ow) Priorities)

1. Climate Emergency Planning Committee (H) Easy to implement and low cost.
2. Carbon accounting. Appoint a full time Carbon Accounting Officer whose role includes creating carbon budgets for all projects and activities(H) and use as a guide to shire decisions
3. Say no to CSG projects. (H) Easy to implement and no cost. An international carbon budget is necessary to prevent low level runaway global warming. This will mean a substantial proportion of all fossil fuels must be left undisturbed.
4. Forget about Gas – about to be replaced by renewable energy in the next 10 years (M) Easy to implement no cost.
5. Various changes to planning to permit suitable developments & changes to housing (H)
6. Vary fees to a) encourage favorable activities and b) discourage others
7. Apply for Green Corps workers for fire protection towns, roadside works etc (H)
8. Establish local roadside committees for creating carbon sinks, plantations, bio-energy feed sources on shire lands and roadsides. These management committees should be comprised of interested parties including local landholders and maximize fire protection by grazing, burning, pruning, thinning, establishing plantations for bio-energy or carbon offsets. Management guidelines should include tree planting, tree protection, tree pruning, grazing, mowing, ecological burns, property protection burns, weed control etc. where appropriate. (H)
9. Education a) of council b) of wider public (H) on a) basics of climate change and b) what it means to each and every one of us (immediate & continuing threats including practical responses eg. Where to go in heatwaves if the power system fails)
10. Speed up process of establishing bio-energy plant at Bairnsdale.(M) Councillors & Council workers to visit functioning plants
11. Plan for the establishment of micro-grids including co-operating & co-ordinating local communities and electricity suppliers.(M)
12. Community energy projects. Coordinate & promote. (M) Low cost and may help invigorate some local communities. See the example of Waubra.
13. Sea-level Rise (L) make appropriate planning for worst case ie 2m rise by 2100 and makes changes accordingly
14. Plan long term retreat from coast (L)
15. Encourage the development of Geothermal Energy through the relevant companies and state government departments (M)
16. To examine the possibility of large wind farm developments, possibly offshore? (M)
17. To purchase a fully electric vehicle with solar charging as part of fleet (H)
18. To co-ordinate with education bodies various means of improving knowledge of students and citizens awareness of climate change and to implement identified approaches where practical. (H)
19. To expand shire gardening and nursery activities including a substantial increase in planting and maintaining trees and shrubs in towns. (H) (greenery helps reduce the “heat island effect”)
20. Tree removal should only be permitted under strict circumstances eg fire hazard. (H) The removal of each tree should be offset either by the remover planting a specific number of replacements or paying the shire to do so. The removed tree should be used for bio-energy if possible. Root systems of dead trees should be left undisturbed if

possible. Offsetting should only be used against tree plantations or shire plantings – not against established or natural bush.

21. To remove combustible material near towns as a continuing process by physical removal, heavy grazing, summer green crops, burning and other suitable methods. (H)

Note. As this submission was written during my holidays I have been unable to provide specific references but am quite willing to do so. Also I am willing to give specific advice if required and I am able.

#### Addendum

22. Switching to a sustainable energy provider like powershop