

Robert Lemon's final submission to Senator Heffernan, Chairman of Senate Select Committee, Agricultural and Related Industries, following attendance at the Brisbane 4.03.09 hearing.

16.03.09.

Senator Heffernan, Chairman
Senate Select Committee on
Agricultural and Related Industries
GPO Box 6100, CANBERRA ACT 2600.

Dear Senator Heffernan

Further to my submissions, may I offer additional evidence, for climate change reversal by five essentials and provision for new low cost water in Oz? (See Appendix A re 5 essentials)

"The warnings of BA Santamaria, the NCC (& writer) over 25 years have proved dead right. Corporate, globalised capitalism has failed. It has led to an enormous concentration of economic power that have in turn manipulated governments into fatally flawed economic policies. These policies have led to the creation of huge national savings pools that have been leveraged to create massively inflated financial markets, which are now imploding."

"The NCC's solutions are based on the principle of subsidiarity, of savings rather than debt based economies, of restoring balances into world trade through rebuilding domestic industries using specialist banking and trade policies."

"Communism fell overnight, now economic globalisation is crumbling. This is the time for a new economic architecture, one rooted in the tradition of Christian social principles imbedded in the idea of Christian Democracy." (Solving the economic crisis: what will replace the ideology of globalism? Patrick J Byrne, NCC National Vice-President.)

You raised the issue of costs, in regard to my submission, but did not give estimates or numbers of "real" farmers and graziers, who have little or no water, for continuity of production in the eastern states. (Qld, NSW, Vic, Sth Aust.) Indeed, lack of water, and average requirements for the Murray Darling Basin (MDB) and the lakes, is subject to debate, as is the *average* water "run off" in Australia. I indicated I find it hard to do the mental conversion calculations, from Ac ft to Ml, etc; estimates to "right", wrong flawed statistics, if no one knows the requirements is impossible. See "High & Dry", Guy Pearse.

For example, to know how many Australian farmers and graziers are required to make a meaningful contribution to a future world's food and health needs, for 9.5 Billion people? Professor Lance Endersbee in "A VOYAGE OF DISCOVERY" gives clues to "understand".

Humphrey Kempe's "The Astonished Earth", gives a practical guide on how to achieve it.

4 m. ac.ft of water (4,934 Gl) may supply 32,000 farms with 500 acres for a 3in irrigation; but for continuity of production, if 23% is supplied by rain, 77% is required by irrigation, so carrying capacity (productivity) may be 7,500 sheep or 1,250 head of cattle pa. on 500 ac. If 1 ac.ft of water irrigates 4 acres a week for 40 weeks, (77% of the year) 10 ac.ft. of water per acre per year is used. If 16 m. acres are irrigated (32,000 x 500 ac.) 160 m. ac.ft. pa, or 10.67% of 1,500 m. ac.ft (1.85 m. Gl.) is needed. If 55% of desalinated and diverted water is

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allocated to 160,000 farms, we have just 45% left for the MDB, the lakes, the permanent bushfire protection, seepage and evaporation with integrated aquaculture opportunities for aboriginal enterprise to value add 60,000 years of environmental management experience.

A revised Bradfield scheme may give *average* reliable water of 2,000 Gl; other east / west water redirection through the Great Dividing Range, a further *average* of 2,027 Gl. pa. (See *Possibilities for inland Diversions of NSW Coastal Streams*, NSW Water Resources Commission, 1981. Then the most favourable five, high-yielding dams produced an average of 2,027 Giga-litres annually, adding 16% more water to the MDB's average flow.)

1. Voters want strategies for less pollution to implement fast climate change reversal. Five essentials; 1. Stop wasting water; 2. Solar, Hybrid, safe 4th Generation Nuclear, Vacuum Desalination, Hydro Power, Electricity Plants 3. Reafforestation; 4. Top up our lakes so evaporation brings extra rain; 5. Geothermal Electricity generation with no pollution; **this will ensure a low, but adequate carbon tax (ACT) of 1%. Reducing ACT from 5% to 1% to save 4% of business costs, to keep strong Australian business employment and production for World leadership.**
2. The Farming /Grazing community expect governments to supply **adequate water**, for continuity of production to provide a reasonable standard of living.
3. Australia is the driest inhabited continent on Earth with **the most variable climate**, and is more adversely affected by climate change, than any other Nation. However, if we supply adequate permanent water, we win. No -40° blizzards, etc.
4. "Should the drought continue, the system will dry out with a **huge loss of wild life**. Prior to human intervention in the MDB system, this regular feast and famine occurred naturally on a far more regular basis than today. These rivers are not like European river systems, which have high constant flows from regular reliable rainfall. Rather, the MDB rivers form an extensive desert river system with large variations in annual flows."

"For example, where the Rhine River in Switzerland has a maximum flow that is only twice the minimum flow, the Murray River has a maximum flow 15.5 times its minimum flow and the Darling River 4,700 times its minimum flow". (Comment, National Civic Council, December 2009.)
5. CSIRO's 1,000 year climate report, shows many droughts, one of 30 years.
6. **In drought constant desalination flows can make our Nation viable.**
7. **Permanent water will make a difference for "people of the Inland"**.
8. **Australia's potential is almost unlimited if we can get government cooperation to do what must be done. With adequate water, we can earn \$637.827B.pa, plus 4% saved by ACT, and \$100B.pa in tourism by 2020:**

- (a) **\$627.2 million pa from lease of 20,000 tons of U³⁰⁸ @\$31,360 per ton pa, (enough for 100 plants) or \$156.8 million pa plus 15,000 Construction Workers (CW's) at \$31,360 pa for \$470.4 million to total \$627.2 million pa.**

- (b) **\$200 m. by reprocessing 20,000 tons of U³⁰⁸ @ \$20,000 a ton, now worth \$30,000 ton and suitable for another five year life span in a similar plant. The \$10,000 a ton extra funds go to fund the “coalition of the willing”, (COW) run by the Australian Nuclear Authority, (ANA) incorporating the Nuclear Repository Authority plants, (NRA) estimated @ \$200 m. on a reprocessing volume of 20,000 tons pa.**
- (c) **\$637 b. pa from sale of 63.88 million tons of seven day shelf life food to 10% of our northern neighbours, at half a Kg per day @ \$10 Kg for 350 million people, pa.**
- (d) **4% saved out of the Nations productivity, by ACT.**
- (e) **\$100B.pa extra in tourism linked education, health services.**

8. Australia's cost/benefit from new earnings, are estimated as follows:

- (a) Mine uranium, using the private sector, such as Rio Tinto Ltd.

Grant miners generous tax benefits for U³⁰⁸ supplied in the National interest. A ton of five year life U³⁰⁸ fuel, now costed at \$31,360 when new, with higher values for reconstituted fast breeder reactor, ten year life fuel. Plants using 200 ton of U³⁰⁸ now cost \$6.272 M. for five year fuel, \$1.2544 M. pa. 100 cost \$125.440 M. pa for 20,000 tons of five year U³⁰⁸ fuel. We need 25 plants with **start up costs (SUC,s) @ \$1 M pa per plant, or less if we own our mines.**

- (b) Create new U³⁰⁸ mines; start with a \$500 m. investment for hot prospects.
- (c) Build fast 240 to 400 K/h trains in Australia. 60 may cost one billion dollars.
- (d) Fast trains from Echuca, etc. to northern ports, would cost much less than the Alice Springs to Darwin line if built by a United Nations team paid for by U³⁰⁸ barter, and would have very heavy gauge rail line for high speed freight and passenger trains, of 240 to 400 Kilometres per hour
- (e) 32,000 x 50 ton Aluminium Refrigerated Containers (ARC's) may cost \$25,000 each, or \$800 million.
- (f) 100 Fast Tri-marine Ferries est. by Austal Ships @ \$263M. each for \$26.3 B.
- (g) Provide surplus funds for food and water security.
- (h) Provide surplus funds for an AusBank. (See German KfW bank details)
- (i) Provide surplus funds for rights of children.
- (j) Provide surplus funds for Internet Filtering.

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- (k) Provide surplus funds for Carbon Trading at 1% tax; ACT.
- (l) Provide funds to defend freedom of religion, family stability, to limit abortion and crimes against humanity. Our Lord said: "I came that you may have life, and have it more abundantly". If we use our brains and take advantage of our opportunities and lifestyles, we can build a happy more contented Nation.
- (m) Provide funds for a large Cooperative for farmers survival, so purchasing and marketing can be conducted on a fair basis. Ethanol production must be mandated, to give sugar farmers and the nation opportunities to prosper. New sugar cane juice marketing given assistance. (See "Landline", 15.03.09)

\$30B. SUC,s creates 2M jobs and \$1T earnings, to lead the oil rich sheikdoms.

Thank you for your extra work on Australia's Agricultural and Related Industries enquiry.

Kindest regards

Rob Lemon

List of abbreviations

NCC	National Civic Council
ACT	Adequate Carbon Tax
MDB	Murray Darling Basin
PLE	Professor Lance Endersbee AO; book, "A VOYAGE OF DISCOVERY"
CW's	Construction Workers
CSIRO	Commonwealth Scientific and Industrial Research Organisation
SUC's	Start up costs
ARC's	Aluminium Refrigerated Containers
COW	Coalition of the willing
ANA	Australian Nuclear Authority
NRA	Nuclear Repository Authority
FCF's	Fast Cat Ferries
H & D	High & Dry, by Guy Pearse

“During my voyage I discovered some outstanding scholars of the past. ----- But on certain critical issues they did not inspire their own colleagues, because their theories were ahead of their time. Some of their most important ideas were criticized, even ridiculed, and subsequently ignored.

In all science, the pressures to conform can be overwhelming to the dissident, while remaining quite unnoticed by all those in the mainstream of science and professional practice. I believe the scholars I discuss in this book were intellectual giants. They followed their scientific enquiries wherever they led, and resisted intellectual intimidation.” Pro. Endersbee.

APPENDIX A.

16.03.09

Five essentials Australia must put into practice to turn around the World’s Greenhouse Gas Emissions Climate Change Effect.

“A shift in societal values, is needed to maintain a habitable planet and extreme weather events highlight the risks of inaction.” Ian Dunlop CSIRO.

1. STOP WASTING THE WATER.

- (A) Divert, store water by pipe, canals and rivers; 100 m. ac ft (1233.48 Gl) of water pa, 70% of a possible *average recovery* flow of Queensland’s northern, peninsular and gulf rivers, to S.A. **PRODUCING HYDRO-ELECTRICITY.**

Mt Glenroy at the Burdekin Dam has a height of 573 Metres (1,804 ft.) above sea level. (ASL) If the water level of Lake Dalrymple were raised by a high 1,000 ft dam, water can be gravity fed up the Burdekin Valley, past Blair Athol and Lake Theresa, past Emerald to Lake Maraboga and past Springsure, up Cona Creek, through the Carnarvon Range, past Carnarvon into Dooloogarah Creek to the Warrego River and into the Maranoa River near Consueo Peak to take water to Lake Kajarabie, and past St George to Sth Aust. A 1,000 ft dam provides hydro power, over 340 Kilometres. (See page 17, “A VOYAGE OF DISCOVERY”, Professor Lance Endersbee AO, FTSE; (PLE) “Libya, the man made river; 7.5 m. long, 4 M diameter, pre-stressed concrete pipes, with rubber ring joints, transport water 4,000 kilometres, using deep wells to tap fossil groundwater, which has no effective recharge as the resource is exploited.)

For Oz, recharges may come from cyclone and depression rain, but supplemented by very low cost, huge solar, hybrid, safe nuclear vacuum desalination, power stills; (S/H/S/N/V/D/P/G/S’s) guaranteeing continuity of production, (COP) independent from food imports, able to export COP food to the world, for an expected 9.5 billion people in the future. Employing our people in modern agriculture and industry, by permanent stream flows like the Rhine River in Europe, to make it a reality.

Lake Dalrymple’s S/H/S/N/V/D/P/G/S’s resupply, sited between Abbot Point & Ayr.

- (B) A transmountain diversion from the Clarence/Richmond Basins (CRB; the upper Clarence, Nimboida, Macleay Rivers) to the Murray-Darling Basin. (MDB) Annual water flow available compares to the Snowy Mountains (from 3,000 Gl in 1930 to over 11,000 Gl now; see “Impacts of water Regulation and Storage”, MDB. <http://www.mdbc.gov.au/nrm/water>)

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To guarantee **COP**, S/H/S/N/V/D/P/G/S’s and fish farming plants, must be sited between Ballina and Yamba to quiet the negative talk by local folk, and for adequate water for the Granite Belt, Darling Downs, Goondiwindi, and down stream sites etc. (See “National Infrastructure and National Development”, PLE.)

2. **GUARANTEE OF WATER IS ESSENTIAL FOR FARMING SUCCESS.**

COP, by S/H/S/N/V/D/P/G/S’s, to create 1,500 Million ac.ft. (1.85 M.GL) of low cost (1 cent/100 M³, \$1/Gl.) **DESALINATED WATER for the eastern States, the MDB and the Lakes** to maintain basic production in droughts.

Based on the lease of 200,000 tons of U³⁰⁸, enough for 1,000 plants for China, India, Russia and the World, would provide 200,000 construction workers (CW’s) @ \$31,360 pa, or \$6.32 B. in four years on five year leases.

One million tons of Australian/Canadian U³⁰⁸ on five year leases earns \$156.8 B. in four years, to employ 1 million CW’s, to build new World infrastructure, to create a habitable planet and turn around climate change to reduce atmospheric pollution.

One million tons of U³⁰⁸ in 5 years provides 45 Gw hours of electricity, 50,000 Gl of water pa saving 45.5 GT of CO² pollution, relative to coal on current technology. (CT)

Countries providing CW’s for our infrastructure development would have priority to our U³⁰⁸, which would be returned to us for re-constituting in our “Fast Breeder Reactors” (FBR’s) at the end of its useful life. Only small quantities of waste remain at the end of this process, which Australia is best placed to deal with.

100, S/H/S/N/V/D/P/G/S’s in China, would reduce their pollution by 50% and provide them with adequate, new quality **WATER**, to give their people good health.

“This technology claims a dramatically higher level of safety and efficiency. Instead of water, it uses pyrolytic graphite as the neutron moderator, and an inert gas such as helium, as the coolant at very high temperature, to drive a turbine directly.

This eliminates complex steam management systems from the design, increasing transfer efficiency (ratio of electrical output) to about 50%. The gases do not dissolve contaminants or absorb neutrons as water does, so the core has less radioactive fluids and is more economical and safer than light water reactors.”

The helium gas goes through pipes in the solar stills to keep the desalination process going 24/7. After being used by the turbine to produce electricity, the helium gas maintains the Solar Hybrid Nuclear vacuum stills at a temperature of 60-80° to give maximum distillate at low cost (1 cent per 100 M³) for quality pristine fresh water.

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The S/H/S/N/V/D/P/G/Ss need to be located where adequate pristine sea water is available; where high tides enable sea water to be “gravity loaded” for still supply.

“The performance of the system (efficiency) depends on meteorological parameters, namely wind velocity, solar radiation, sky temperatures, ambient temperature. Besides the meteorological parameters, it also depends on water parameters, such as salt concentration, algae formation on water, and mineral layers on basin water.”

“The highest useful intensity wavelength is 0.47 microns, the range of visible beams. Intensity of solar radiation reaching the earth’s surface ranges from 0 to about 1,050 W/m² at the equator. Most of this radiation comes directly from the sun, but about 10% comes as scattered light, even on cloudy days.”

“Efficiency rates for solar plants range from 25/40% in winter and from 30/60% during months of high radiation intensity; real rate depends on design, construction and operation of the plant and on ambient conditions. For example, a distillate flow rate of around 5 kg/m² is possible with an assumed water temperature of 80° C and mean radiation intensity of 24.5 mega joules per square metre (MJ/m²), conditions typical in the Northern Hemisphere in July; in such circumstances, the Still has a mean efficiency of 50 per cent. Combined with solar energy heating / evaporating water inside solar stills – heat transfer/storage from nuclear, geo-thermal or coal, radically improves productivity/reliability.” (*Desalination in the 21st Century.*)

“About 90 per cent of France’s electrical power comes from hydro-electricity and nuclear power, which helps explain why France is able to reduce its dependence on imported petroleum, meet its greenhouse gas reduction targets, and export electricity to its neighbours with over 50 years of reliable U³⁰⁸ trading with Australia.”

“The contrast with Australia could not be more stark”.

“Australia is heavily dependent on coal-fired power stations which, according to the Australian Coal Association, produce about 85% of Australia’s electric power which is used not only for domestic purposes, but also sustains some of Australia’s largest industries, including the manufacture of aluminium, most of which is exported.”

“Combustion of coal produces carbon dioxide, and so the electricity generators, which have an outstanding record of producing low-cost energy on which Australia’s prosperity is based, are now to be the victims of the new carbon-trading scheme unveiled by Canberra academic, Professor Ross Garnaut.”

“Mr Rudd is hell-bent on introducing an emissions-trading scheme which will be an effective tax on energy, forcing even more of Australia’s beleaguered manufacturing industries to shut down or move off-shore.”

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“- with the impact of drought/rising fuel prices, it will also signal the death-knell for much of Australia’s agriculture, on which “our” prosperity has traditionally rested. The impact of Mr Rudd’s utterly futile policies will be felt by all Australians.” Peter Westmore, national president, National Civic Council; NW, p.24, 2.8.2008.

3. WE NEED QUALITY TREES TO IMPROVE RAIN AND AIR PURITY.

A full range of trees is vital to restore reforestation but without water, young trees die; mature trees are lost by “bushfires”, unless protected by fire breaks with sprinkler systems. We need a sound carbon credit system for positive planning. (See “Making sense of carbon-trading”, Peter Westmore, NW, p.24, 23/6/07, “If Australia was serious, it would forget about emissions trading; invest in biofuel technology instead”; and, “Picking winners is a losing proposition” Brian Toohey, TWAFR, p.63, 24-25.5.08; “Climate change policy is wrongly tilted towards carbon capture and storage (CCS).

“Plants are the key to removing carbon from the air” Landline, 15.02.09. See, Carbon Accreditation Scheme”, Dr Christine Jones, Chicago Futures Exchange. These 5 essentials provide low carbon tax of 1%, so Oz industry is very competitive.

“If a cost-effective way can be found to use coal with few emissions, fine. But the government and Garnaut are fixated on one type of technology, carbon capture / storage that they wrongly regard as synonymous with a different technology called clean coal. It is now highly unlikely that **CCS** will prove commercially viable for cutting emissions from coal-fired electricity generation”.

“Geothermal and wave sources will prove cheaper than clean coal, with solar thermal and wind power playing a role. CSIRO technologist Louis Wibberley argues it would be much better to put a sizeable slice of available R&D dollars into finding ways to turn waste CO₂ into something of commercial value or greatly improving efficiency of coal use by developing carbon fuel cells.(See TWAFR, 15-16.12.2007)”

“And then I noted that the same errors of understanding seemed to apply to the matter of climate change.” Page viii, line 25, “A VOYAGE OF DISCOVERY”, PLE.

4. WE MUST TOP UP OUR LAKES SO EVAPORATION BRINGS RAIN.

Creating 100,000 sq miles of Permanent Fresh Water Lakes (PFWL) for Australia, needs 384 million acre ft (473,657 Gl.) of water p.a. if seepage and evaporation *average* six feet p.a. If its 10 feet p.a., we need 640 M. ac. ft. pa. (789,411 Gl) Salt-water lakes, can be re-supplied by gravity-fed seawater, creating Japanese type tuna, whale farming and traditional aquaculture. (North America’s Great Lakes have 95,000 sq miles of PFWL.)

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5. **GEOTHERMAL.** Beneath our feet, is a massive source of efficient, emission-free 24/7 **THERMAL POWER TO PRODUCE ELECTRICITY**, if wind / rivers stop, to **SHUT DOWN THE DIRTY COAL FIRED POWER STATIONS BY 2020.** We can convert dirty coal by Underground Coal Gasification (UCG) Gas-to-Liquid (GTL) Coal-to-liquid (CTL) or by the Toffler process, to produce ultra clean, low cost diesel/petrol, Bio-fuels, *Hydrogen*.

(See “The future looks green and very hot”, Stephen Wisenthai, p.52, AFR,17.1.08, and “UH-OH; WE PICKED THE WRONG CURE FOR COAL”, B.Toohy, WAFR, 15-16.12. 07; Louis Wibberley’s paper, CSIRO energy technologist, on direct carbon fuel cells, using electrochemical process to generate electricity directly from carbon.)

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The NCC’s solutions are based on the principle of subsidiarity, of savings rather than debt based economies, of restoring balances into world trade through rebuilding domestic industries using specialist banking and trade policies.

Communism fell overnight, now economic globalism is crumbling. This is the time for a new economic architecture, one rooted in the tradition of Christian Democracy. Now is the time for the NCC.” Patrick J Byrne, National Vice-President NCC.

Thank you for taking the time to read my investigative enquiry.

Best regards,

Rob. Lemon.

