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## **THE GRAND PLAN.**

The "Grand Plan" is predicated on the following precepts:

1. To produce all of Australia's base-load electricity from non-polluting generation.
2. To supply adequate water to feed the Murray Darling Basin's environmental and extraction needs.
3. To eliminate the trauma besetting migrants and refugees who have yet to be accepted into Australian society.
4. To supply potable water to the various settlements.

The basis of the Plan is to extract water from Lake Argyle and other water storages yet to be built in the northern parts of Australia and to pipe this water through multiple hydro-electric power generators to finally enter the Murray Darling system via the Darling River.

### **HISTORICAL:**

The technique of transferring water from where it is located to where it is needed is as old as time itself. The Roman Empire built its aqueducts, gold miners dug races around hillsides, the Victorian Government built a North South Pipeline to ensure Melbourne's water supply.

There is no mystery in the transfer of water and the current assessments appear to predict that the bulk of Australia's rainfall will, in future, be concentrated in its north.

By the same assessments, the cropping of temperate-climate plants will remain in the southern areas and that this is where the irrigation water will continue to be a necessity.

### **HYDRO ELECTRICITY:**

By tapping into a large flow of water enclosed in concrete pipes, multiple generating sites may be built with minimal reduction in the amount of water being extracted from the storages.

Rather than one enormous pipe, the flow from (initially) Lake Argyle should be piped through (say) 6 x 1 metre diameter pipes stacked in a pyramid formation and laid into purpose-built trenches in order to prevent unwanted lateral movement. At the appropriate sites, the flow is directed into 12 x 50 cm pipes and then into 24 x 25 cm pipes, thus creating a series of water flows which are running at high speed and great pressure. These jets of high-pressure water are then directed at the turbines of 24

hydro-electric generators, before the water is progressively returned to its stack of 1 metre diameter pipes and allowed to travel at a more sedate speed to the next generation point.

The generation points could well be sited at no more than 50 kilometres apart, depending on the topography through which the pipes are run, and so it is that this one sequence of water transfer running from Lake Argyle to the headwaters of the Darling would be sufficient, on its own, to generate Australia's base-load electricity. As the transference of this water would take place on a continuous basis, there would be no longer any requirement to continue with coal or gas fired electricity generation.

I dare say it is unnecessary to mention that the techniques used in the Snowy Mountains Scheme, the Waikato River System and the Tennessee Valley Authority's system, many decades ago, may be directly transferred to the proposed Argyle Darling Pipeline.

#### MURRAY DARLING BASIN:

Rather than the obvious knee-jerk reaction to a shortage of water, the emphasis on reducing the extraction should be placed second behind the endeavour to increase the flow and therefore supply adequate flows to satisfy both the environmental needs of the river ecology as well as the economic needs of the irrigation areas.

By extracting water from Argyle and an unspecified series of storages built on the north-flowing rivers located in Australia's Top End and directing it into the upper reaches of the Darling River system, the flows from the Murrumbidgee and the Murray would no longer be required to feed the river system below the river junction at Wentworth. Instantly, there is more than adequate water, under "normal" conditions, to satisfy both environmental flows of both rivers as well as enhanced irrigation extraction.

The Darling and Lower Murray requirements would be met from the Top End transfers.

This Plan would take decades to implement, but that is no excuse for not beginning the planning, the acquisition of land and the manufacture of the infrastructure in order that when started, the plan would proceed with some speed.

In the meantime, there are at least two dams on the Ovens River system which were designed to be enlarged. The amplified Lake Buffalo storage would have been overfilled with the rainstorms and snowmelt in 2010. This storage alone is planned to hold 1000 gigalitres of water which equates to a third of the reduction in extractions forecast in the Murray Darling Authority's Guide to a plan. Lake William Hovell on the King River could be expanded to reduce the forecasted reductions still further. Whether other lakes, such as Burrinjuck could be expanded or new storages built in the upper Kiewa and upper Ovens regions in order to tap into the forecasted increase in severe storms which we

are informed will become more frequent as the climate changes, are still matters to be even noticed by our political planners.

There is little sense in forcing current and future farmers to reduce their crop production. If there was a surplus of food in the world, restrictions may be justified, but the world and Australia's poor are not overly supplied with food. Our country could be and should be a food bowl feeding the multitudes in Asia and those Australians whom we know need help. Price subsidisation is for our Governments to discuss and the marketing of produce is not the tenor of this writing - solely the production of foodstuffs.

#### UNAUTHORISED MIGRANTS:

The problems with cramming people into camps and detention centres are well known and well publicised.

In order to construct the Argyle Darling Pipeline, there would need to be accommodation provided for the workforce used in its construction. A series of villages or small towns - up to (say) 6000 persons, could be constructed as permanent villages to be used as accommodation for displaced persons, potential migrants and unauthorised personnel, once they have been vacated by the pipeline workforce..

These villages would be constructed, ideally in a circular format, with the central area taken up with shops, offices (including a permanent Immigration Department presence) schools and community facilities. There should be a wide boulevard circling the central hub sufficient to satisfy community space and activities, whilst outside this again would be housing. Beyond the designated housing precinct would be farmland- irrigated arable land, where the townfolk would be gainfully occupied or employed while they await the pronouncement on their future status. Each village would be thus largely self-supporting and with the potential of becoming permanent townships exporting their produce to Australia and South East Asia.

There is, of course, the option of placing unauthorised migrants directly into the workforce as members of the pipeline construction teams.

The current unintentional intake of potential migrants is about 6000 annually and to place them in villages, with people who speak their own language, worship their own Gods and eat the same food would have to be better than any Christmas Island overcrowded camp or any of the ex-army barracks at present in use. At the very least, giving the "boat people" and the unauthorised migrants space to live in, land to work, shops to run and schools for their children has to be a little bit Christian and somewhat less likely to cause riots over the time it takes to process their claims. And, of course, the earlier intakes would be helpful to the later intakes in showing them the ropes and guiding them in acquiescing to the rules of their new land.

#### POTABLE WATER:

Each new village and many of the existing townships on the route of the pipeline, needs to have a potable water supply. There would no doubt be a need to treat the raw water by some method to eliminate any hazardous materials and there would be a need to establish the type of treatment necessary.

The possibility of extracting water from the pipeline to supplement the current water supply to other towns and cities within a limited distance should not be overlooked.

#### SUMMARY:

1. The transfer of water through an Argyle Darling Pipeline will require the Federal Government to think nationally and the State Governments to act co-operatively.
2. The benefits to Australia's landscape, its humanity and to its environment appear to outweigh the immense size of the project.
3. The planning should begin immediately as should the provision of the expanded water storages in the Victorian Alps.

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