STATE SUSTAINABILITY STRATEGY

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Sustainability is paramount to the survival of our future generations. The question of whether it is a worthwhile pursuit, as far as we are concerned, is a mute point.

Western Australia has vast opportunities to adopt sustainability principles and incorporate them into industry, education and lifestyle. From an Australian perspective, WA has an opportunity to lead the way in sustainable ventures and set an example to the rest of the country.

As our expertise (the writers of this submission) lies predominantly in the area of energy and greenhouse, and environmental education, our recommendations are based primarily in those areas and do not necessarily cover all of the threats that we perceive exist (see box 1 below).

BOX 1

Major Threats To Sustainability In Western Australia

- Over consuming lifestyles – issues of waste
- Insular lifestyles i.e. lack of acceptance and need of cultural diversity
- Water shortages and water waste
- Salinity
- Threats to biodiversity
- Air pollution including excessive greenhouse emissions
- Lack of 'appropriate transport'
- Lack of public understanding and awareness on environmental issues
- Decreasing volume of local industries and enterprises – minimised local opportunities

With community, Local and State Government support, opportunities for sustainability include:

1. **ENERGY & GREENHOUSE**

   Renewables:

   - Development of a leading edge, world-class renewable energy industry. This would need to be supported by a revised mandated renewables target.
   - There would need to be increased funding support for research and development into renewables particularly for small or independent innovators rather than only large corporations to encourage innovation at the local level.
   - Develop a renewable energy market pool, by allowing independent renewable generators to sell into a market pool at prescribed prices. All fossil fuel generators will be required to purchase their portion of the renewable pool based on their net megawatt hours generated.

CASE STUDY 1

A Sustainable Energy Industry for Western Australia – A World Show Case

Our Vision – The Road Less Travelled

2015- 25% of the states energy is produced by CO2 free renewable energy (wind solar hydro, tidal and wave) and 15% by biomass (straw, plantation, oil seed). Generation efficiencies improve to 75% through decentralised and embedded generation involving cogeneration and waste heat recovery from processing plants, large office buildings and shopping centres. The last coal fired power station taken offline. Electrical energy consumption falls to 60% of current figure per capita due to extensive energy efficiency programs and mandatory legislation. The diurnal load factor nears 90% through new measures involving both computer control demand side management and thermal storage techniques. A levy is introduced to minimise the proliferation of peak demand air conditioners. Government backed incentives introduced to make solar water heating and solar space heating mandatory. Transport energy consumption falls to 50% of today's levels through efficient engine designs and standards, mandatory regenerative breaking on all non long haul commercial vehicles (buses taxis couriers, rubbish trucks) and more sustainable transport practices (walking, cycling and light rail). Incentives are provided for all domestic vehicles to have regenerative breaking and high fuel efficiency. Over 90% of the renewable energy technology is supplied locally with multi million dollar exports.

The Mechanism

The Old South Fremantle Power Station continues its historical association with the states power industry by embracing the new world technologies within its old facade. The fully refurbished Power Station is now host to some of the worlds leading edge renewable energy manufacturing and development companies. Further more all these companies are all Perth based. Occupants of the power station include the well known Aussie Gen PTY LTD who are the Southern Hemispheres largest wind turbine manufacturing company, Solar Dish PTY LTD who manufacture solar energy concentrator dishes, Elect Tech PTY LTD that design and manufacture electronic power storage and generation components, Mag Motor PTY LTD that produced permanent Magnet motors and Generators, and Jet Gen PTY LTD who design and manufacture micro gas and steam turbine generators. In addition to the major companies that reside at the power station there are also a number of industry related specialist companies and consultants. The South Fremantle Power House is located right on the beach. All the company's offices overlook the Indian Ocean with pristine views out to Rottnest Island. Proudly surrounding the Power Station are 5 multi mega watt wind turbines that give precedence to the Power Stations new function. The turbines generate enough energy to satisfy the entire buildings energy requirements, as well as 10,000 homes.

The Way Forward

As a result of the reforms implemented by the grid access steering committee and through strong public and political pressure the entity of Western Power will not exist in its present form. The corporate body will be disseminated into its three main components, power generation, transmission, and distribution. Although we are not great proponents of privatisation, it is essential that the states revenue be utilised to its greatest potential. The government however has the responsibility to its electorate and its people to maintain a controlling hand in this important essential service.

Western Australia has a unique position in that the majority of the states power infrastructure is held by the corporate entity Western Power, a wholly state government owned entity. The market is currently stable as there has not been a great deal of private dilution. This will provide a sound base line for developing an energy blue print for the future that is relatively free of existing contractual encumbrances. Western Powers future lies in providing and maintaining the key infrastructure essential for a reliable and regulated energy industry. We must learn from other people's mistakes. We should never contemplate selling off assets and infrastructure that are essentially monopolistic entities. To this we refer specifically to the transmission network. The states industry and its people must not have this ransom placed on their heads.

Energy Efficiency (Consumer Focus):

- All companies that turnover $1,000,000 per annum should be required to undertake biannual energy audits by an approved auditor.
- All local councils should facilitate the implementation of voluntary home energy audit checks within their local communities via schools and community organizations.
- The Greenhouse Challenge and The Cities for Climate Protection programme are two examples of best practice in greenhouse mitigating programmes and should be utilised throughout state and national government as well as made compulsory in businesses that turnover in excess of $1,000,000 per annum. This would encourage each of these groups to understand their baseline energy use and implement targets to reduce overall greenhouse emissions.
- There should be consideration of increased electricity costs for industries and householders parallel with the rise of greenhouse emissions in the state
- Implementation of a tax or increased costs placed on high greenhouse emitting vehicles like 4WDs and large volume engines i.e. V8s.
- Increased costs for industries and consumers that use packaged goods and refunds/reimbursements for industries and consumers who purchase green products. This could involve placing a cost on household waste (eg SA recycling deposit scheme on bottles etc).
- Best practice recycling facilities should be implemented in all councils.
- Federal, State and Local Governments adopt minimum energy efficient design codes/guides for all new houses and renovations, and commercial buildings.

Energy Efficiency (Generation Focus):

- Minimum fuel conversion efficiency legislation introduced for new plants and a transitional period provided to existing plants to meet the new legislative requirements.
- Improved utilisation of embedded generation by way of planning guidelines.
- Improve generation load profiles through demand side management to reduce the exposure to expensive and inefficient peaking generators.

2. LEGISLATIVE CHANGES

- Revision of codes of practices within industries such as mining and resources, large-scale agriculture, and timber industries so that sustainability principles and practices are a minimum legislative requirement in their operations.
- Encourage the practice of employing Sustainable Development Officers in these types of industries that work with Management in the development of long term strategic plans eg Western Mining.
- Governance should occur with long-term considerations rather than the short-term vision (currently in place and representative of our 3 year party terms). Decisions made at all levels, local, state and federal should have to take into account the effect that their decision will have on 3 generations ahead, as well as the 3 generations that have been before us.

3. EDUCATION & RESEARCH

- Establishment of compulsory sustainable development training/awareness-raising for Government staff at all levels such as the draft Sustainability training package developed for newly elected members of the WA Local Government Association.
- Consideration should also be given to developing sustainability programs for use within local industries, community and schools. Suggestions for awareness-raising programs in the community would be:

a. Why do we need to live sustainably?
b. Our over-consuming lifestyles – what we can do better!
c. Transport and your role as the commuter
d. Energy and how to save money at home, at school, at work…

CASE STUDY 2

World Leading Sustainable Research

Sustainability is currently being progressed in Western Australia on a very adhoc and inconsistent basis with some groups contributing a great deal, and others very little, if nothing. The difficulty for researchers in this area is bringing all the information together in an analysis of who is actually achieving what. Within industry for example, there are resource and mining groups, who whilst working in unsustainable industries are employing energy experts to ensure that their energy use is as low as possible and their greenhouse emissions minimised. One particularly large group within this industry already employ officers whose primary roles are to ensure that sustainability considerations are given weight in terms of business operations.

First requirement in terms of research required is to understand where the different sectors that make up our State stand in advancing sustainability principles and actions. This would include broad review of State Govt, Local Government, Industry, Agriculture, Community, Education, and Householders. Publicly recognising and congratulating those groups that are advancing their operations in a sustainable manner should follow this. Public recognition events should occur regularly and should be wholly supported by State and Local Governments.

A think tank organization similar to the Australia Institute should be set up in Western Australia, for local research on sustainability issues. This group should be provided with the necessary funding to employ several experts and consultants in the area. A State of Sustainability (SOS) report should be a necessary first outcome for this group. Each sector within the Western Australian community should have a researcher assigned to help them assess, develop and assist in implementing sustainability principles/objectives in a long term move towards minimising each generational impact on the earth.

4. INNOVATION FUNDING

Establishment of a sustainability innovators investment fund for individuals who have ideas with merit needing funding to get sustainability projects off the ground. This would encourage innovation in areas drastically needing local improvement – like sustainable transport, renewable energy, agriculture, education etc.

5. FINANCIAL SUPPORT

- Financial support for companies and business enterprises that provide a business case for switching their operations to more sustainable methods, particularly within agriculture and resource intensive operations.
- Similarly, financial support for companies and business enterprises needing start-up capital that are wanting to establish fully sustainable operations.

6. WATER

- Appropriate costing of water should be implemented immediately so that the general public understands the true value of water as a scarce commodity i.e. nomination and recognition of the real cost of this natural service.

- Grey water reuse should be instigated along with a suitable public education campaign on both reusing water and general water awareness issues.

7. APPROPRIATE TRANSPORT

- Better bicycle network and facilities made available to commuters
- Public education on sustainable transport
- Tax deduction incentives for receipted public transport or corporate governing employer charge cards.

8. ECO-TOURISM

Development of a wholly sustainable eco-tourism industry, with minimum training and operational requirements for operators throughout the industry. Funding and support would need to be obtained from Local through to State Government for the transition to 'eco' and the ongoing training requirements needed to ensure that operations continue sustainably.