

# **Environment Industries Sunshine Coast Submission to the Queensland Parliamentary Inquiry into World's Best Practice by Governments to Effectively Stimulate Employment Opportunities in Queensland**

## **Industry Context for this Submission**

In line with the role of the Economic Development Committee of the Queensland Parliament to monitor and report on issues in the policy areas of employment and industry development, this submission is made by the Environmental Industries Sunshine Coast Group which concentrates on employment and industry development opportunities within the Environmental Industries, particularly in the Sunshine Coast region of the state.

While this submission is based on the experience of industry in the Sunshine Coast region, the points made in this submission may be extrapolated to other regions in Queensland, particularly those regions that have a comparative advantage or economic base or interest in developing Environmental Industries within their region

Environmental Industries is considered a new and emerging industry for Queensland and is a priority within the 15 key priority industries **for** Queensland, as indicated in the Smart State Strategy 2005-2015.

In the Queensland Government, Environment Industries Profile and Trends Report 2006, the Sunshine Coast was noted as having the third highest concentration of Environmental businesses in the state, only marginally behind the Gold Coast and Brisbane. Since 2005, there has been a substantial expansion of this industry in the region.

## **Industry definition**

The definition of the environmental industry used in this submission is the definition used in the [Department of State Development Queensland Environment Industry: Profile and Trends Report 2006](#) (now DEEDI) as it applies to the Sunshine Coast region. The definition is:

*Sunshine Coast Businesses that promote and provide products and services to:*

- *prevent, mitigate or reverse impacts on the natural environment*
- *reduce ecological or human health risks*
- *And improve business efficiency through sustainability measures*

## **Vision and Goals for the Environmental Industries Sunshine Coast**

### **Vision**

Environmental Industries Sunshine Coast - Recognised as an industry representative group that promotes and provides environmentally focused, sustainable products and services, regionally, nationally and internationally.

### **Goals**

- 1.** To build the capacity and capability of the environmental industry in the Sunshine Coast region
- 2.** To promote the Sunshine Coast as a region that produces environmentally focused products and services
- 3.** To raise awareness of how to achieve environmental sustainability for business, industry and consumers.

## **Environmental Industries Sunshine Coast (EISC) Background and Structure**

Environmental industries Sunshine Coast (EISC), is a group of professional and business leaders from industry, with support from government and educational institutions, with a focus on developing environmentally sustainable industries and activities.

The Group represents over 120 Sunshine Coast based businesses, engaged in providing environmentally focused, sustainable products and services and includes “adopters” and “advocates”.

The group was initially convened by the Department of Tourism, Regional Development and Industry in 2008.

The EISC structure comprises one overarching reference group, with three main working groups that focus on the water, building and design, and energy sub-sectors of environmental industries. These working groups provide networking, information sharing, and action planning roles that work with and inform the reference group.

### **Group Scope**

The Sunshine Coast Environmental Industry has a diverse range of businesses for the end user (residential, commercial, industrial) including businesses focussing on:

- **Water management**
  - integrated water cycle management (water harvesting, treatment and re-use),
  - environmental consulting and
  - water sensitive systems design (for the end user to reduce water consumption and impact on water resources)
- **Environmentally sustainable/friendly building construction/design and building supplies:**

Businesses recognising, promoting, supporting and using:

  - the principles of passive solar design and natural ventilation, principals including natural heating and cooling, efficient water use and responsiveness to place and/or

Businesses making:

  - building materials that reduce the carbon footprint over the lifecycle of the building
- **Renewable energies (emerging)**

Businesses focussing on energy efficiency through:

  - renewable energy generation and

Businesses committed to:

  - educating households and businesses how to reduce their power demand and use renewables to supply their needs.

## **Industry Recognition and Job Descriptors**

Other than recognition from businesses involved in this industry, there is poor public recognition and understanding of the scope, size and value of this industry sector to the region and the state.

Green jobs are usually associated in the public mind with jobs relating to environment protection and rehabilitation. The Environmental Industry encompasses a much more diverse range of jobs than that associated with the term green jobs. Refer to the Group scope section above.

Some of the terms used to describe these jobs are clean tech, green jobs, environmentally friendly/sustainable jobs.

This submission will hopefully assist in addressing some of the ways the Queensland Government can assist in raising the recognition of the industry, its capability and capacity by addressing some of the questions raised for consideration by the Inquiry.

### **Submission- Issues for Comment**

#### **1. How does Queensland ensure that opportunities for employment creation are maximised in existing industries?**

Opportunities for maximising employment creation in the environment industries include:

- a. Recognising that Environment Industries is a legitimate industry sector rather than a collection of businesses that just happen to fit the definition above.
- b. Encouraging the relevant body(ies) to include Environment Industries as an ANZSIC code so that the scope and value of this industry sector can be directly measured and recognised as an emerging industry sector with:- significant growth potential; a myriad of opportunities associated with climate change; and that is responsive to:- the need to reduce the state's green house gases; and to provide significant economic and jobs growth for Queensland. Currently, a substantial part of the environmental industry is hidden in other industry sectors as measured by ANZSIC codes, for example in manufacturing and construction sectors.
- c. While government incentives that increase the uptake of environmental industries products and services is welcomed by the industry, working in close consultation with industry in the development of economic policies that relate to the industry, for example climate change and green house gas policies, would result in policies that benefit the industry in both the short and the long term. It is recognised that short term policies have in some respects been detrimental to the long term interests of micro and small businesses for example in the water and renewable energies sub-sectors of the environment industries including water tank rebates and solar hot water system rebates.

Implementation of and changes to government incentive schemes with short lead times is difficult for the industry and affects it's capacity and it's ability as an employment generator because:

- i) it is difficult to find sufficient quality trained staff in the short term e.g. solar installers and plastic rotor moulders for water tanks
- ii) it is difficult to down size businesses at short notice if Government incentive schemes cease for example businesses have often geared up in response to water tank rebates to cope with the rapid increase in demand.
- iii) Industry reputation and standards can be affected by inferior product used by new market entrants that have entered the market only to take advantage of Government incentives. New entrants may undercut existing business by using inferior product. Longer term industry players are often left to repair the damage done by for example the installation of poor quality water tanks or inferior quality solar power systems after the incentive schemes have ceased. Not only does this affect the reputation of the industry as a whole, it then makes it difficult for them to recruit quality staff in the longer term due to a poor industry image.
- iv) Introduction of government incentives with very short lead times, for example solar hot water services, affects customer perception of the industry. With the increase in order volume, there is often a backlog of paperwork for the businesses involved resulting in long lead times before customers take delivery of their product. This creates customer wariness about the use of these products into the future, resulting in a negative industry perception.
- v) There needs to be accreditation of products that make energy efficient claims for example water heat pumps. Products that do not live up to claims made, adversely affects industry reputation into the future
- vi) Micro and small businesses like those in the Environmental Industry in the Sunshine Coast region do not have the capacity to tender under the arrangements previously in place for incentive schemes for example solar hot water systems. As a result, potential work goes outside of the region as consumers access systems provided by the large scale operators with the capacity to tender for the schemes. Businesses in the region would welcome the opportunity to be part of the tender process to maintain and grow their businesses and establish an on-going relationship with their customers.

Working in close consultation with the industry, prior to the introduction of Government incentive schemes, will hopefully result in assisting micro and small business in emerging industry sectors like the environmental industries to grow and strengthen their businesses for the longer term, enabling business to create more certain employment opportunities.

## **2. How can Queensland make best use of its natural resources in creating jobs for Queenslanders?**

Queensland has a major competitive advantage in its abundance of natural resources including energy (particularly solar with some of the longest hours of sunshine in the world) and water (with some of the highest average rainfall in the world).

By working with these competitive advantages and the environment industry in the following ways, there is the possibility of generating substantial employment opportunities:

- a. By supporting the take up of products and services in the Environment Industry through raising public and Government department awareness of the economic and environmental benefits of business/commercial and household uptake of:
  - i) integrated water cycle management via decentralised water infrastructure, including water harvesting, treatment and re-use
  - ii) Renewable energy use , particularly solar grid connect and off grid solar power ;
  - iii) Sustainable building design and construction methods and materials
- b. By having government policies that actively promote the uptake of these environmental industries products and services.

By working in close consultation with industry in the development of economic policies that benefit the industry in both the short and the long term, as outlined in no. 1 above.

- 3. Is Queensland's science, research and technology infrastructure effectively utilised? Can it be used more effectively to enable greater employment in these fields?**
- 4. How can Queensland promote innovation in Queensland industry to create employment opportunities? How do we create jobs from public and private investment in research and development?**

- a. As highlighted on page 29 of the Queensland Environment Industry: Profile and Trends Report 2006, 87% of businesses in the environmental industries sector are micro or small businesses, with 66% of them being privately owned.
- b. Also highlighted in the same report on page 30 was the fact that over 80% of these businesses by necessity do their own research and development (R&D) and product development, with 40% of them funding their known R&D. This is because the industry is highly innovative and often at the cutting edge of it's field.
- c. Queensland Government funding programs such as Smart State Proof of Concept funds that are designed to assist businesses with R&D and product development are oriented to large, already existing businesses and/or to large universities as the research partner.
- d. Enhancement of the Government funding process to address the following points would assist in a greater uptake of R&D within the environment industries and hence in employment generation opportunities in this industry sector.

Some of the difficulties faced by small businesses in the environmental industry in the Sunshine Coast region related to government funded R&D, including Smart State Funds Proof of Concept and similar funds, include:

- i) **Needing to have the assistance of a Queensland Department public servant to assist in addressing the criteria** as the funding application requires the using of correct

terminology and addressing the criteria in a way expected by those assessing the application. Many of these potential applicants have little or no experience in writing funding applications; knowing specific government priorities relevant to the application; and how to address these. Unless the business has the assistance of a public servant or has experience in writing similar applications, they are less likely to be successful.

- ii) The length of time needed between completing an application and knowing the application outcome hampers R&D implementation for businesses in this fast moving and innovative industry. With more recent streamlined application processes, businesses have been advised that they would be aware of the outcome of their application within three months of submission. However, in reality for example, the Smart State Funds Proof of Concept funds, particularly in the early rounds, this time-frame was drawn out to 5-6 months. In these rounds there were no set closing dates for applications and assessment as assessment occurred when there was sufficient critical mass of applications to be assessed. Hence, business is deterred from putting in applications when there is limited certainty around timeframes and the need for them to allocate funds for R&D projects within their own budgetary constraints.
- iii) Businesses that apply and are unsuccessful in their applications need to have meaningful feedback to assist them being able to improve on their applications for subsequent rounds. Feedback available is often very general in nature and does not address specific points that prospective applicants need to be aware of due to the Government's risk management policies.
- iv) As funds like Proof of Concept funding requires that the business applying has to already have or be able to locate their own research partner (often a university), this often proves difficult for a small business with limited contact or knowledge of relevant research entities. Encouragement to link with other businesses that may have research capabilities needs to be further developed.
- v) While, research partnerships with regional universities has recently been encouraged, there is often limited relevant expertise available in these institutions, so funding tends to favour larger metropolitan research institutions. This does not assist in developing business relationships around R&D with research institutions outside metropolitan areas.
- vi) The above issue partly relates to the federal government funding model for universities. Funding is tied to research that generates publications rather than research that assists new product development for businesses. Until there is a change to the federal government research funding model to universities there is less likelihood that the research done by universities will be able to match the more practically based research needed by the Environment Industry for practical R&D for product development and innovation.
- vii) Small and micro businesses often find the amount of paperwork and the time involved in filling out funding applications very daunting. Reducing the amount of paperwork

and hence time involved would make it more likely that small and micro businesses would favour applying for government grants as they do not have dedicated resources to use for this purpose and the time spent on an application is time taken away from making a living in many cases.

Having a pre-application process would greatly assist industry, i.e. having applicants complete a draft short form application outlining the scope of the project proposed and being given “frank and fearless” feedback on the likely success or not of the application would encourage businesses to apply for government grants/assistance schemes. Businesses, particularly micro and small business do not have the time or resources, as mentioned above to spend on applications that have a low chance of success.

**5. How should Queensland identify new and emerging industries and support the creation of employment in new industries?**

Environment Industries has already been identified by the Queensland Government as a priority industry sector. Employment creation in this fast growing and emerging industry sector can be supported and encouraged by:

- a. Government mandating the use of integrated water cycle management for all new industrial/ commercial and residential developments and schemes to financially assist the retrofitting of all existing industrial/ commercial and residential properties.

Research done by Dr Peter Coombes, Director, Bonacci Water and Associate Professor, University of Newcastle, a keynote speaker at the Integrated Water Cycle Management Forum organised by the Environmental Industries Sunshine Coast Water Working Group at the University of the Sunshine Coast in December, 2008 suggests that urban areas like Brisbane generates 35 times more water than they use. Hence, by Government mandating the use of integrated water cycle management as suggested above, while not only reducing the cost to both state and local governments of supplying and maintaining centralised water infrastructure and reducing greenhouse gases by reducing the energy required to transport water, such mandating would also boost employment opportunities in the water sub-sector of Environment industries through the use of water harvesting, treatment and re-use.

- b. While, the Queensland Government has taken some substantial steps to assist in promoting energy efficiencies in building and design, for example adopting the Green Building Council of Australia’s 5-star Green Star excellence rating as the standard for newly constructed or refurbished government offices, further encouragement needs to be given to new and existing property owners to use environmentally friendly building design principles and building materials by :

- i) mandating the use of environmental design principles and material for new commercial/ industrial and residential construction and retrofitting of same to encourage up take of these products and services
- ii) providing financial incentives to commercial/ industrial and residential construction by way of discounted or rebated stamp duty on new and existing properties

- iii) providing public education campaigns regarding the financial savings to be made in operating costs over the life cycle of the building by using environmentally friendly products and services

Government initiation of these suggestions would greatly boost demand for these environmentally friendly design and building products and services and hence boost employment opportunities in the environmentally friendly (or sustainable) building and design sub-sector of the Environment Industries.

- c. Using points i) to iii) outlined in b. above, in conjunction with government awareness raising and financial incentives to incorporate renewable energy sources, particularly solar power.

Government initiation of these suggestions would greatly boost demand for these solar products and services and hence boost employment opportunities in the renewable energies, particularly the solar sub-sector of the Environment Industries.

**6. How does Queensland ensure that Queensland industry is competitive in an increasingly global market?**

Diversification of the Queensland economy away from the traditional export earners of mining, primary production and tourism, is the key to ensuring Queensland is competitive in a global market.

- a. As an industry with a high level of innovation and therefore a high knowledge base, the environmental industries can assist in diversifying the Queensland economy and boosting export revenue for Queensland.
- b. As services are a key part of Queensland's exports, this can be further boosted by the export of services from the environmental industries. The 2006 Environment Industries Profile and Trends Report showed that approximately 30% of business in environmental industries are consultants which is considered consistent with that of the Sunshine Coast region.
- c. Potential for earning export dollars from the products produced by the environmental industry including:
  - i) those in particular demand by developing economies, for example integrated water cycle treatment equipment for water harvesting, treatment and re-use systems, environmentally friendly building supplies, and
  - ii) also the services produced by the environmental industry including:
  - iii) consultancy services, for example environmentally friendly building design, solar power systems design and installation, integrated water cycle treatment system design, soil and water testing, environmental impact statements to name a few.

Therefore assistance to the environmental industry will not only assist in diversifying the Queensland economy but also stimulate employment opportunities in this industry.

- d. Some specific ways to assist the industry sector to become and remain more internationally



competitive include:

- i) assistance with R&D as outlined in questions 3 & 4
- ii) more opportunities and resources for trade missions to developing economies e.g. China, India, Fiji and follow up work to leverage from these missions

**7. What are Queensland's comparative advantages and how should Queensland make best use of these advantages?**

Refer to answer for Q. 2 above

**8. How can Queensland's industry promotion strategies best support Queensland industry to be competitive in a global market place?**

Anything that has been mentioned in previous answers that promotes environmental industries capability and that leads to increased employment opportunities in the industry.

- a. Raising public awareness nationally and internationally of the types of products and services that the environmental industries offers and the diverse range of jobs available in this industry. There is a very low recognition factor outside this industry of the size, scope and value of this industry sector to Queensland. Government tends to concentrate on promoting a narrow band of "green jobs", for example solar and insulation installation industries. The public and other industry sectors think that environmental jobs are those the government is promoting for revegetation programs and environmental rehabilitation. While these jobs are important to the community, the jobs in the environmental industry as described here include a range of professional and trade positions that add economic value, have the capacity for high growth under favourable economic conditions and the right Government incentives and have significant export growth potential.
- b. Promotion of environmental industry capability, particularly in developing economies for example China, India, SE Asian, Pacific countries, UAE to name a few. There is growing recognition in these economies of the benefit of using environmentally friendly products, services and processes, particularly for products and services that suit decentralised infrastructure.
- c. Also refer to answers for no. 6 above

**9. Should industry promotion strategies be narrowly focused on a small range of particular industries or be more broadly based**

- a. Industry promotion strategies should be strategically focused on a targeted number of industries that have the highest potential to assist in the diversification of the Queensland economy and also the greatest capability and capacity to generate clean, green jobs such as the environmental industry.
- b. By strategically targeting the environmental industries, this will not only assist in generating jobs within the state but also assist in the prevention and mitigation of climate change and reduction of greenhouse gas emissions, state-wide, nationally and internationally.

- c. Including the environmental industries in this strategically narrow focus means that greater leverage can be obtained for this industry even in an economic downturn as there is growing awareness of the importance and demand for environmental industries products and services /
- d. Using a narrowly focused target means that greater resources can be used to more quickly generate jobs potential and export earning capacity.

**10. What can the Queensland Government do to improve employment opportunities for youth, mature age, indigenous and disadvantaged workers?**

The environmental industry provides employment opportunities for younger and mature age workers within the Sunshine Coast Region.

- a. Young people and career advisors are generally unaware of the diverse range of employment opportunities available in the environmental industries in the region from professional positions like civil, waste water and electronics engineers, environmental scientists, environmental planners, soil systems analysts, town planners, architects, business managers, human resources, IT, to trade positions like electricians, plumbers, building designers, boiler makers, fitter and turners, and plastic rotor moulders.
- b. Many employers in the environment industries prefer employees with the following personal characteristics – loyalty, strong work ethic, and reliability, making mature age workers ideal employees in this industry sector. As the Sunshine Coast region is a favoured chosen place of residence for mature age people, those looking for employment, perhaps only part time, could ideally be absorbed by growing the capacity of the environmental industry in the region.
- c. In addition to sound theoretical and technical knowledge and skills, employers in the environment industries are also looking for employees with the general skills needed to be successful in environmental employment. Some general skills identified are listed below.
  - i) effective communication skills (written and oral)
  - ii) an ability to use common software packages (word processing, spreadsheets, email, Internet, etc)
  - iii) an ability to undertake team work
  - iv) critical thinking and judgement
  - v) lateral thinking and ability to think creatively
  - vi) an ability to plan and organise work and projects
  - vii) leadership skills
  - viii) facilitation skills
  - ix) a good work ethic

- d. The environmental industry also provides employment opportunities for indigenous people, particularly in more remote locations where there are few employment opportunities.
- i) Both younger and older indigenous workers could be trained in the erection of environmentally friendly modular homes made by a number of Sunshine Coast Environmental Industry businesses.
  - ii) As previously mentioned as many of these businesses are micro or small business, training opportunities that assist young and mature age workers to gain the skill sets needed by this industry sector could be preferable to workers completing a full apprenticeship or traineeships. As many employers in the environmental industries have a strong employment ethic, in some cases they are reluctant to take on apprentices and trainees because of the length of time that it takes to complete an apprenticeship or traineeship and the amount of off the job training needed and the time that it takes on the job to supervise staff during their training period. More flexible approaches to training worked out in conjunction with the employer would be useful.
  - iii) Mature age workers would more likely be attracted to this industry if they wanted a career change or to come back to work after a period of not working if they could develop a relevant skill set and not have to complete a qualification that requires full time study.

**11. Should full time employment be a priority in creating employment opportunity? How should Queensland respond to underemployment?**

To assist with addressing underemployment, refer to no. 10 c and d above.

**12. Should the Government target policies at certain regions in Queensland? What criteria should be used to select these regions?**

Not addressed by this submission

**13. Do the current employment programs help develop individuals with the skills that employers need?**

The Green Army jobs initiative assists in developing skills for protecting, conserving and restoring the natural environment i.e. green spaces and recreational areas. Green Arms jobs are not within the scope of Environmental Industries..

Programs that raise the awareness of the type and range of jobs available in the environmental industries and assist young and mature age people, both current and future workforce entrants to undertake relevant technical and tertiary study to develop the skill sets needed by employers in the environmental industries as outlined in no. 10 above would be welcomed.

**14. What role do employers have in developing and enhancing the skills of their employees?**

Environmental industries Sunshine Coast employers are actively involved in developing and enhancing the skills of their employees in various ways depending on the size of the business and its capacity for in-house or off-site training.

Some of the training done in-house includes:

- a. Certificate IV in Advanced manufacturing using an external training provider (larger business)
- b. In-house front line management and supervisory training (larger business)
- c. On the job skills training

Some of the training/professional development done externally includes:

- a. Industry specific knowledge and skill training by professional associations
- b. Industry update forums/workshops e.g. Integrated Water Cycle Management Forum organised by the Environment Industries Sunshine Coast Water Working group at the University of the Sunshine Coast in December, 2008
- c. Relevant TAFE courses for apprentices

**15. Are these Government programs working? If not, how can government improve these programs or better achieve these outcomes?**

Government can improve these programs or better achieve these outcomes by:

- a. Expanding well thought out incentive schemes or having grant funding available on a 50/50 basis for business/industry and consumers that encourage the uptake of environmental industries products , for example for water harvesting and recycling, subsidising the cost of building design using energy efficient design principles, and installation of solar power systems which would directly assist to grow job opportunities in the environmental industry, rather than have training programs like the Green Army programs, where generic skills learned do not necessarily directly ensure long term employment.
- b. Expansion of government schemes like the EcoBiz program, administered by the Department of Resource Management, that assist business to audit their energy, water and waste to assist their bottom line and benefit the environment by reducing their carbon footprint. While being an excellent introduction program for business to identify where savings can be made, businesses in the Sunshine Coast region that have been keen to make these savings often fall short of either completing the audit process or implementing the product, service and/or process steps to gain the energy, water and waste savings. This is due to either:
  - i) a lack of knowledge about how to source these products and services and/or
  - ii) a lack of time or resources within the business to devote to this process.

Businesses in the Sunshine Coast region that have been assisted by the person funded by Sunshine Coast Regional Council to complete the auditing and implementation stages have evidenced huge savings to their bottom line and great reductions to their carbon footprint.

**Questions 16 is** not addressed by this submission

**17. What other best practice approaches can an Australian state government use to stimulate employment?**

Governments at all levels have a great opportunity to assist business and industry through their procurement policies because of the strength of their buying power. While Governments at all levels are introducing environmental considerations into their compliance polices, , through greater

unitisation of the use of products and services produced by the environmental industry to boost employment and training opportunities.

State Government procurement practices may also encourage local government and supply chain partners to follow its lead in the use of products and services from the environmental industry.

**Questions 18 – 20** are not addressed by this submission

**21. What impact does regulation have on the creation of employment opportunities in Queensland?**

Government regulation as it applies to the environmental industries can have both a positive and negative effect on employment opportunities in this industry.

In a positive sense, if regulations for example to reduce the pollution load in storm water are effectively policed to ensure compliance, this has a beneficial effect on employment opportunities in the environmental industries as it encourages business, industry and/or householders to install pollution control devices and hence boost demand for these products.

Government regulation however does have a negative impact on employment opportunities in other sections of the environmental industry. For example, government's preference for expensive centralised water infrastructure reduces the opportunity for the introduction of decentralised/more localised water infrastructure for water harvesting, treatment and reuse, therefore reducing the potential for the uptake of these systems and the growth of employment opportunities in this sub-sector of the industry. Refer to question no. 5 above.

**Questions 22– 23** are not addressed by this submission

Submitted by:

Bruce Napier, Chair, Environmental Industries Sunshine Coast

(with the agreement and on behalf of Environmental Industries Sunshine Coast Group)

**Contact details:**

Bruce Napier, Bruce Napier & Associates

10 Tamper St, Nambour, Qld 4560

(07) 5441-5263 or 0412-760-485 or bnapier@napierenv.net