Submission 21: Attachment A

Pioneer Corporation Pty Ltd ACN 081 541 273

Government Brief

Converting Prickly Acacia from Pest to sustainable fuel

Pioneer Corporations Objectives

- Create a financially viable business by harvesting, and pelletising prickly acacia (Declared Weed of National Significance) for export and remote power generation.
- Using the harvested acacia, to develop associated hardwood industries, including bio-mass to energy, the establishment of hardwood forestry plantations using proven science and technology whilst maintaining best environmental practices.
- In subsequent phases develop a sustainable cluster of industries based on the use of the prickly acacia in energy conversion and plantation replacement.
- Pioneer Corporation aims to ensure security, along with a sharing of ownership providing a opportunities for investment to all stakeholders, including landholders.

Our focus is on doing real things, that will make real impacts.

Pioneer Corporation

- In 1997 Pioneer Corporation identified that there existed an opportunity to develop hardwood plantations West of the Great Divide, specifically, in the north western regions of Queensland.
- During the developmental stage of our forestry Project we were made aware of Acacia (*nilotica*) commonly known as Prickly Acacia.
- It was at that point Pioneer Corporation decided to examine Acacia (*nilotica*) the origin and its purpose in our landscape.
- Pioneer Corporations has since dedicated significant time to thoroughly investigating the full potential that Acacia (*nilotica*) can provide, the results are contained in this brief.

Pioneer Corporation Partners and People

- 'Corky' s Sustainable Energy', who will guide the by-products conversion and utilization process has worked on other projects with companies like Anglo-American, Smorgans Steel, Xstrata Coal and Nepean Mining.
- Rob Gourlay of Orbtek Pty Ltd, an environmental scientist with more than 20 years experience has developed the Biological Systems for our forestry program.
- E Z Energy has been delivering turnkey energy solutions to various industry sectors, including the NSW Department of Corrective Service, both in the supply of temporary & permanent generation installations.
- Terry Dohnt Terry designed the harvesting system will be managing the harvesting operation, and in due course, establishing the sawmill.
- All About Pumps & Pipes, a Queensland based business will partner with Pioneer to deliver the irrigation systems.

The Resource

- A 'Declared Weed of National Significance' namely Acacia (nilotica), commonly referred to as prickly acacia.
- Estimated volume exceeds 100 M ton of available biomass covering an area of some 7.5 M hectares of rich grazing land. 7.5 M ha = the total landmass of Tasmania.
- Secured by way of Government approval / Permit to harvest along with a legal binding agreement with landholders.
- On 11th December 2001, Pioneer Corporation secured clearing approval from the Queensland Government covering 5 Shires representing area of 7.5 M ha.
- Without perceived fair distribution of wealth, the resource will remain underutilized.



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The Business and Associated Industry Opportunities

- Pioneer Corporation will establish and run several wealth generating industries from the harvested acacia weed, these include:
 - Fuel wood, torrified & wood pellets. (Biomass to energy)
 - Hardwood Forest Estates.
 - Renewable Energy.
 - Timber recovery & processing, fine furniture grade timber
 - Planned Vertical Integration & Total Processing of Acacia.



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Without perceived fair distribution of wealth, the resource will remain underutilised.

- It is intended to include the landowners as J V partners on our Forest Estates program. In doing so, they will receive a percentage of the wealth created from forestry / Carbon Credits.
- Legislation states that it is illegal to remove & sell acacia. Therefore landowners don't receive a financial benefit from this side of the operation.
- The forestry program will provide a form of compensation to landowners affected by infestations of acacia.
- The landowners provide a degree of security over our access to their property for removal of acacia.



Cluster

of

Associated

Industries



Region for Development shown

within

triangle

Investing in Queensland

Project Support - In Perpetuity

- In June 2000 Pioneer Corporation entered into working arrangement with Sinclair Knight Merz to obtain all Governmental approvals required when dealing with a 'Declared Weed of National Significance'.
- Given the significance of the project in the removal of a weed of national significance and its prevalence in Western Queensland, Pioneer Corporation is seeking support from Government by way of an **extended tenement or in** perpetuity:
- This approach provides certainty for both Government and Pioneer Corporation
- Enables the establishment of a long term strategy to eradicate the prickly acacia weed from Western Queensland
- Provides Pioneer Corporation with certainty of a resource that gives certainty to potential investors and community

Job Creation in Western Queensland

•	Industries	•	Employment for Construction period	•	Full time Employment
•	Pellet plant	•	25	•	15
•	Power Generation	•	20	•	12
•	Sawmill	•	15	•	10
•	Forestry	•	10	•	45
•	Total	•	70	•	82

Growth potential over 3 - 5 years.

Industries	Construction	 Full time Employees
 Pellet plant 	X 2	• 25
 Power generation 	X 5	• 30
Sawmill	X 2	• 25
Forestry	X 3	• 135
Total		215

Related Industry Opportunity Fuel wood / Wood pellets.

- The key industry to be developed in the phase 1 is from the harvesting of Acacia as bio-mass to energy in the form of wood pellets.
- Pellets are virtually smokeless, generate heat that is, both efficient and co-operative in our endeavors to reduce emissions.
- This project will establish a national market for use in small commercial boilers & domestic heating, along with export.
- The gross dry calorific value of Acacia is 19.03 MJ/Kg (coal equivalent) ensuring the production of a range of high quality products.
- Wood pellets as a fuel are rated Carbon neutral.

World wide demand is currently at 16 Million Metric ton & growing.



Wood pellet press



Bulk pellets

Torrified pellets



Pellet heater

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Related Industry Opportunity Forest Estates

Our 'Integrated Forest Estates System' comprises of,

- Biological farming with Microbes = zero use of chemical fertilizers.
- Environmental landscaping, which comprises of strategic plantings that will provide benefits such as, reduction of wind & evaporation, improve soil condition and shade for livestock.
- Average planting rate will be in the order of 400-600 trees / ha, eliminating the need for thinning. A retention of 20% of trees planted.
- Harvesting cycle will be, fuel wood from 6 8 years other selected species being 12 - 15+ years for sawlogs & wood-fibre.

The integration of forestry with grazing contributes to long term sustainability.

Today & the Future.

Replacing prickly acacia with Eucalypt plantation integrated with grazing





'Cullenden Station' North of Muttaburra.

Eucalypt plantation on grazing land (Photo: DPI+F 2005.



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Related Industry Opportunity in Syn-Gas Power Station

- Small scale Rankine cycle power stations using energy-dense torrified pellets in remote locations.
- Waste gas & heat, which are by-products from the production of torrifying pellets, will be used to generate power at the centralize plants
- Where there is adequate fresh wood waste the power plant will be Integrated Dryer Gasification Combined Cycle (IDGCC).



30 MW Multiple units



2 MW IDGCC wood fueled power plant

Related Opportunities Sawmill and Processing Plant

- From the 100 + million tons of Acacia expected to be harvested, a percentage of selected logs would be suitable for processing into furniture grade timber.
- Part of the plan is to establish a Sawmill & Processing plant to convert Acacia logs into high grade cabinet timbers.
- There are at least 6 Acacia species within the prescribed area that can be processed into high value cabinet timbers.
- The sawmill will be located on the same site as the Energy & Pellet plant, waste sawdust from the Mill can be processed into pellets.

Timber recovery & Processing.





Acacia quality flooring

Social benefits of success for Queensland

•Currently claims 20% of valuable grazing land due to infestation of prickly acacia.

•Rehabilitation of valuable grazing land.

- •Replacement of prickly acacia with selected hardwood species embracing an integrated forestry system.
- •Removal of a 'Declared Weed of National Significance" that potential for establishing hardwood plantations / Carbon sinks, generating new industry with extended revenue.
- •Sustainable development providing regional economic growth.





Where to from here?

The next step before a business plan / feasibility study:

•Biomass mapping of the resource using satellite imagery will provide available biomass in tons.

•Producing a quantity of wood pellets from acacia for analysis.

•A proximate analysis of wood pellets and torrified pellets for moisture, ash, volatile matter, net calorific value and BTU.

•Landowner / Right of Entry agreements and legal framework.

•Feasibility study on all four business elements, Energy, Wood / Torrified pellets, Sawmill, Forest estates.

•The harvesting system requires completion, to finalize selection of equipment and methodology.

Conclusion

Sustainability is an issue of pressing urgency, yet it is also a buzzword with little substance.

The Project outlined herein has the ability to provide that much sought substance.

Further contact and investment inquiries

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