

REPORT TO PARLIAMENT

Visit by Liz Penfold MP, Member for Flinders to Kerala and Tamil Nadu, India 4- 16 January 2003

Background

Ausker Energies Pty. Ltd. proposes building a wind farm near Elliston on Eyre Peninsula to generate 50-200 MW of clean power.

Jacob Cherian, Director of the Ausker Group of companies, would also like to construct a desalination plant to complement this facility. Jacob has been seeking the support of the State Government for these projects.

While windpower and desalination were the principal purposes of the trip, I also wished to assess whether there were any other areas where South Australia and India could gain mutual benefits through trade.

Businesses on Eyre Peninsula and in South Australia generally focus on Japan, China and the 'Far East'. India, the world's second most populated country, receives little consideration.

In the last 10 years, India has opened its economy and moved away from the tight central planning that constrained it. Australia - and particularly South Australia - should, I believe, build much closer ties with India, a country with English as a major language, high literacy levels, a rapidly developing IT industry and large numbers of very able and talented people. The city of Bangalore is second only to Silicon Valley in the United State for it's IT industry. More than 200,000 people from India are now working in Silicon Valley.

Kerala State is a similar size to the electorate of Flinders on Eyre Peninsula, however instead of thirty two thousand people it is home to more than thirty million people.

Tamil Nadu State is more than three times the size of Kerala and has over twice as many people at around sixty million.



SUMMARY OF ACTIVITIES, BRIEFINGS, AND ACTION TO BE UNDERTAKEN

Sat. 4th Jan. Kerala

Arrived in the capital of the State of Kerala, Trivandrum.

Sun. 5th Jan. Tamil Nadu State



Visited the flat Muppanthal Valley on the tip of Southern India in Tamil Nadu State and travelled through many kilometres of wind turbines. These generators are small by modern standards but are currently being assessed to upgrade their capacity. There is a total wind generation of 1200MW in the valley alone.

The following information was obtained from Mr. J.R.D Rajakumar, General Manager, ABAN Energies Ltd (www.ABANindia.com) at a briefing on Saturday 11th January and Mr. Jacob Cherian.

1. Installed capacity of wind power in India is 4000 MW with 60% in the South and 40% in the North.
2. Tamil Nadu State has 1500 MW.
3. ABAN has installed 82MW of this for its own operation and under contract to others at various locations in India.
4. In the Muppanthal Valley ABAN owns 162 towers each of 410 KV and 9 towers of 225KV, giving a total installed capacity of 68-70MW. This is the largest private operation in India (8 years old) and size upgrades are being researched at present.
5. All power is sold to the State grid at A11/cents, with the actual cost being A5/cents.
6. All infrastructure support (interconnectors and substations) are supplied by the Government.
7. Comparisons – India & South Australia

| | TAMIL NADU | ELLISTON |
|--------------------|---------------------------------------|---|
| Current Outlay | Over \$A100 million by The ABAN Group | \$A1.2 million to date by Ausker Energies alone, with an expectation of over \$A200 million |
| Wind Speed | 4m/sec | |
| Maximum Wind Speed | 25m/sec | |
| Optimum | 14m/sec | |
| Average | 7.5m/sec | 8.5m/sec |
| Plant load factor | 25% | 42% |
| Price – Australian | 11-12 cents | 7-8cents |
| Area needed | | 5 ha per tower |
| Area available | | 16,000 ha |

8. Power loss 132kv interconnector is about 2% but 270kv is less.
9. Micon turbines used for the Tamil Nadu generators are around 900kw but those to be used on Eyre Peninsula would be 1.5-1.8MW.
10. Phase and Frequency problems are not anticipated as the structures required would be similar to their overseas operations.



On location Geoff Penfold, Jacob Cherian of Ausker Energies and Liz Penfold at the ABAN wind generation site in Tamil Nadu, Southern India.

FOLLOW UP TO BE UNDERTAKEN:

- Send copy of power distribution details to Aban Energies Ltd.
- Raise the issues with the State Government
- See if help can be provided to have the ACCC criteria changed to allow for a regulated line to connect the proposed 1000MW (20% of South Australia's power requirements) of wind power on Eyre Peninsula instead of SNI.
Both have a similar cost to the South Australian consumer however the line for EP will enable 1000Mw of green energy and one billion Australian dollars of private enterprise venture capital to be invested in a new industry for South Australia and open up development on Eyre Peninsula.
The SNI line is in competition with the private non subsidised Murraylink line and will bring in dirty coal power from NSW only if available and no new industry or jobs.
- Lobby for a 275kv interconnector to be constructed along the west coast and able to be eventually triangulated at the Port Lincoln sub station.
- Approach NEMCO or Electranet to try to avoid having to prove connection problems don't exist, as the same generators are used in the Netherlands without problems.

Mon. 6th Jan. Trivandrum

Breakfast was hosted by Dr Gopala Pillai (Managing Director) and senior staff of the Kerala State Development Corporation (www.kinfra.com). We discussed the potential for joint ventures and value adding for jade, graphite, malt, biotech, marine products and tourism. Areas with potential are mainly jade, malt, biotech and tourism into Kerala. Their 'back water' -is a large inland fresh water lagoon and there is the potential to export our Murray River houseboats into this superb area.



A suggestion was made that Kerala State be paired with South Australia, as many of the product areas are similar but relate to tropical rather than temperate climates and large not small populations.

A suggestion was made that a trained elephant be provided to Adelaide's Zoo, to replace the one which recently died and in return supply some Australian native animals for Kerala's Zoo.

It was mentioned that an Austrade delegation was to visit very soon.

FOLLOW UP TO BE UNDERTAKEN:

- Apparently dried fruit is not readily available in South India. Investigate the potential opportunity for South Australia.
- Correspondingly, in discussions with Mr Ganesan (Commissioner for Agriculture, Marketing and Agri Business in Tamil Nadu), drying and importing their plentiful mangos was discussed, investigate possibilities although he said preferably, they should be imported fresh.
- Investigate the replacement of the recently deceased elephant at the Adelaide Zoo with a domesticated elephant (or two).
- Analyse the value of a visit to Kerala by relevant South Australians and by them to SA. Kerala (and India) could be a very large market for South Australia.
- Investigate the potential of houseboats on the backwater.
- Biotech joint venture

Tues. 7th Jan. Kochi

Met with Pamela Mathew, Managing Director, O/E/N India Ltd. (www.oenindia.com), manufacturer of high-tech, high-labour component parts for electrical equipment. The standards attained for reliability are based on the highest international standards. South Australia could utilise this company to produce items for motor vehicles, electronic equipment particularly in the defence industry, where high labour content is needed.

Pamela is also Chairperson of the Confederation of Indian Industry for Kerala State. This organisation is similar to our Chamber of Commerce organisations.

The **NeST Corporation** (www.nestinfotech.com) undertakes development and production of software and provides call centres for overseas enterprises. They undertake this development work for a wide range of international and Fortune 500 companies. All work is of the highest international standard. Due to the lower costs incurred in India they can contract at very competitive prices not only for highly technical work requiring many man hours but also where a high labour content is needed for low value items. SA could become more competitive by utilising their skills where appropriate.

Visited the main centre of NeST Corporation and met Mr Javad Hassan, the company's International Chairman based in the USA. We visited a computer card assembly operation and R&D facilities. NeST operates to the highest international standards for reliability. They are particularly involved in optic fibre connection. They have just completed the design of the Black Box reader for aircraft which they hope will become an international standard.



Pictured seated from left is Geoff Penfold, N Jehangir Managing Director of NeST Group, Jacob Cherian and Liz. Standing behind (left to right) are Mr. Shankaran Vice President Finance, NeST Group and Mr. Shafi, Vice President, Operations, NeST Group.

NeST have also just completed development of a firewall program designed to block hackers and enable easy tracing of their location.

Visited the Marine Product Export Development Corporation. Mr J. Bojan (Director) and senior staff provided information on the fishing industry in India. India is ranked fifth in the world for fish production with an emphasis on aquaculture of shrimp (prawns). These are produced and sold world-wide. Very high standards for processing allow sales to the USA and EU.



FOLLOW UP TO BE UNDERTAKEN:

The NeST group of companies are keen to open an IT office in Adelaide and this should be facilitated with contact being made in the first instance with the NeST Innovative Solution's office in Melbourne.

There is potential to use fibre optic innovations seen at NeST for the proposed SKA telescope if we are fortunate enough to have it located in Australia.

OEN defence and motor vehicle opportunities to be followed up when Pamela Mathew visits South Australia in June 2003.

Facilitate a meeting between Pamela Mathew and Patricia Crook, Chairperson Business SA.

Wed. 8th Jan. Calicut

Visited the factory of Uniroyal Marine Exports Ltd. and were hosted by Mr K.C. Babu the Managing Director and Managing Partner of the Baby Marine Group. They are the largest fish processing group in India. Shrimp were being processed at their factory by IQF (Individually Quick Frozen) for export, and swimmer crabs were being manually processed. There may be a market for SA to farm blue swimmer crabs and sell to this factory as it requires a high labour content to process the meat.



FOLLOW UP TO BE UNDERTAKEN:

An office in Australia, preferably Adelaide, could facilitate the development of opportunities for:

1. Technology transfer to enable Kerala to undertake in-sea aquaculture of their own most suitable fish (seer fish?).
2. Farming of Blue Swimmer Crabs in SA for processing in Kerala.



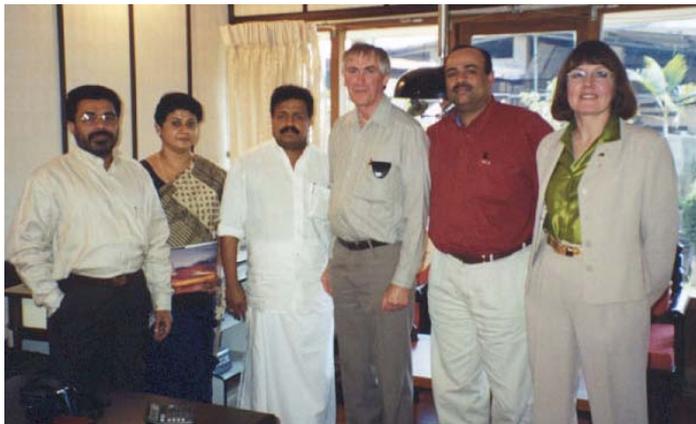
Thurs. 9th. Jan. Calicut

Visited the 11 story 450 bed, Baby Memorial Hospital, which is privately owned and has 110 doctors and specialists. It caters to local people for between \$US 4 per day and \$US 25 for single bed ensuite accommodation. The Hospital serves 250-300 patients per day and is equipped with full medical facilities. It is now providing services for Middle East patients.

The hospital displayed very high standards of services and organisational efficiency. Excellent maintenance was obvious. Particularly noticeable were no queues and no hospital smells.

The hospital has its own nursing college in a separate complex. It may be possible to recruit experienced nurses for work in Australian Hospitals. These nurses are available after five years when their contracts are completed and are already going to the Middle East and America.

The hospital's departments include: General Medicine, Cardiology, Nephrology, Gastroenterology, Neurology, Paediatrics, Neonatology, Dermatology, Chest & Allergy, Ophthalmology, General & Vascular Surgery. Neurosurgery, Paediatric Surgery, Urology, Obstetrics & Gynaecology, Dept. of Infertility & Laparoscopic Surgery, Orthopaedics, ENT, Plastic Surgery, Cardiothoracic Surgery, Physiotherapy, Radio Diagnosis & Imaging, Dental & Maxillofacial, Anaesthesiology, Pathology, Special Educator for Learning Disabilities, Audiology and a casualty section.



Pictured above left to right are Chairman and Chief Physician Dr KG Alexander, Mrs Nancy Babu, Managing Director, Baby Marines & Uniroyal Group Mr. K.C. Babu, Geoff Penfold, Jacob Cherian and Liz.

FOLLOW UP TO BE UNDERTAKEN:

Discuss with relevant parties in SA Government possible recruitment of nurses by agreement with Dr. Alexander.

Fri. 10th Chennai (Madras)

Visit to the Reverse Osmosis desalination plant designed by Dorr-Oliver for the government owned Chennai (Madras) Petroleum Corporation oil refinery. It purifies partly processed sewage and converts it into potable water for the refiners. Production is 12ML per day. (EP needs 5ML per day at present.) This plant (using sewage) was the second in the world when installed. It works fully to specification. The water is drinkable but not used for this purpose.



Also visited the World Bank funded storm water purification plant, also designed by Dorr-Oliver. This purifies 300ML of potable water daily for the city of Chennai (Madras).

Pictured left is Asia's first plant for recovery of water from 2.5m.g.d secondary treated sewage, for industrial application, using HDO's advanced technology including RO de-salting system.

Sat. 11th Chennai (Madras)

Attended a presentation by Dorr-Oliver representatives S.K. Mukherjee (General Manager), N.K. Doshi (Vice President – International Operations) and Suresh Nayak (General Manager – International Business).

The projects they have been involved in were presented and the situation and the needs of Eyre Peninsula were discussed and clarified. Some additional information that was needed to assess the potential for a desalination plant for both the Tod Reservoir and sea water was defined. Once available they will develop basic specifications for these alternative operations. They anticipated the cost to be less than \$2 per litre, even for seawater.

Using low salt content water from the Tod was not seen as a difficult or expensive process. The new membranes available for Reverse Osmosis mean that they have a long life and can be readily cleaned when needed without releasing contaminants into the water, and cost a fraction of what they did originally.

Build, Own and Operate, (BOO), Build, Own, Operate and Transfer (BOOT) contracts were discussed as alternatives.

Some points worth noting:

1. Saudi Arabia has 30% of its water provided by desalination of sea water.
 2. Dorr-Oliver has the expertise to undertake the design. They advise new membranes work better than those used in Chennai (Madras). They have a life of 3-5 years and are cleaned by back flushing unless severely blocked by algae. The design of the system should limit its risk. However they can be cleaned by removal and dipping in a tank of chemical without any environmental impact.
- Low salt content of the Tod would mean high recovery.
 - High recovery would mean a small amount of additional water may be used to dilute the salt concentration for release into the sea.
 - Prefer to use UV irradiation to kill bacteria with low or no chlorine.
 - Can use activated carbon or multi media filters.

FOLLOW UP TO BE UNDERTAKEN:

- Need to send to Dorr-Oliver details regarding water analysis for Tod, Uley and sea water. Data also required includes amount of silica in the water and bacterial concentration in the Tod. Also include available power and other infrastructure.
- Test quality and quantity of water behind Elliston sand hills and ability to extract it in sufficient volume. E.g. 15 + KL per day.



THE ABAN GROUP OF COMPANIES Reji Abraham, Director



The potential of using ABAN oil and gas rigs in Australia was discussed. The ABAN Loyd Chiles Offshore Ltd., has jack up rigs capable of drilling up to 6000 meters in water of 20 feet to 300 feet depth and floating production and storage facilities. Another associated company is Saipem ABAN Drilling Company Ltd.

Pictured left is Reji Abraham, Director, ABAN Group of Companies and below is the offshore drilling rig ABAN I & II.



PRESENTATIONS BY VARIOUS ABAN EXECUTIVES:

ABAN HOTELS AND RESORTS – Suraksha Giri (Consultant)

1. Tourists to Australia

- Need to target “incentive” tourists e.g. sales staff, investors, anyone who is sponsored by their company as a reward.
- ABAN expects Australia to become a major destination by 2005.
- Need to get the package down to R50,000 or \$A2,000 approx.
- Shopping and food are of particular interest.
- Need to get an airline such as QANTAS to compete on the Australia to Chennai (Madras)/Kerala route as Singapore airlines will not discount fares.
- Young “back office” people (call centres, insurance, banks, non contact staff) may be interested in outdoor and eco tours.

2. Selling products in Chennai (Madras)

- Use a wine and cheese tasting using hotel facilities, TAJ or Sheraton.
- Need a period of about 10 days each.
- Problems in importing wine and other alcoholic drinks, and high taxes.

3. Tourism into India

- Kerala road systems are dreadful. Roads are often virtually single lane handling 4 lanes of traffic. It is very disconcerting to have a bus loaded with people or a 9 tonne truck coming at you flat out on the wrong side of the road with nowhere for you to get off without hitting someone or for them to fit into the line of traffic they are passing.



There is also too little to do at Kerala resort for young people.

- A 'Clean Up Kerala Day' litter program similar to 'Clean Up Australia Day' program with the possibility of getting big business sponsoring large wheelie bins to keep their areas clean all year, would have immediate impact. Possibly the Government would have to make littering illegal as it is in Australia.
- With investment in these areas, Kerala (and Tamil Nadu) with its beauty and frequent festivals, could become a major tourism location.

FOLLOW UP TO BE UNDERTAKEN:

Contact Tourism South Australia and discuss possibilities.

ABAN INFORMATICS PTY. LTD. – Jayauthi Ravi, Principal. – www.classontheweb

1. This education program is a brilliant learning tool for years 6-12. The two hundred thousand man hours of work in programming is reflected in the high quality of the work.
2. It has the advantage of being in English, easily accessed by drilling down into the program and at a reasonable cost of R500 per 100 hours or R5 (Aus. 20c) per hour. The first stage of the program is free.
3. Could be a major advantage for all schools, students and teachers. In particular, isolated children would benefit.

FOLLOW UP TO BE UNDERTAKEN:

- Bring to the attention of Education Minister. A modified version could be developed readily. As South Australia has limited resources, modification could be done for all States to fit Australian curricula. The main changes appear in the free system and the order of the curriculum. The curriculum may need some additions to be more relevant to Australian education, e.g. history
- Could be very helpful in education for aboriginal students in remote areas.

ABAN ENERGIES PTY LTD. Mr JRD Rajakumar, General Manager.

Follow up discussions from Sunday 5th with Mr. J.R.D Rajakumar, General Manager, ABAN Energies Ltd (www.ABANindia.com)

Dinner hosted by Mr. Reji Abraham

Met with Mr. A.C. Jose from the state of Kerala who is a Federal Member of the Upper House. He is very keen to help with the development of opportunities between South India and South Australia.

FOLLOW UP TO BE UNDERTAKEN:

Develop the relationship with the Federal Member of the Indian Parliament, Mr. A.C. Jose.

Sun. 12th & Mon. 13th Pondicherry

Pondicherry was a former French Colony. Visited granite works where we saw quality workmanship on various shades of granite. The associated village was clustered around a temple that had been carved from granite more than one thousand years ago.



Wed. 15th Chennai (Madras)

Reji Abraham, Director, ABAN Group of Companies took us to a private Tamil home for lunch.

Present were Mr. K. Ganesan I.A.S. and his family and friends. Mr. Ganesan is the Commissioner for Agriculture Marketing & Agri Business for the Government of Tamil Nadu. Indian apples evidently now come almost entirely from Tasmania.

Thurs. 16th. Chennai (Madras)

Meeting with Reji Abraham and Mr T.V. Stephen (Sole Marketing Associate for Shell Bitumen and AMVE PetroChemicals). He also has interests in wood crafts and is interested in the possibility of Indians immigrating to fill jobs in South Australia.

FOLLOW UP TO BE UNDERTAKEN:

Send details of jobs available/required on EP and in SA, and of the requirements for immigration.

PERSONAL CONCLUSION

There is a possibility of both ABAN and NeST Group offices being opened in Adelaide. These should be pursued with vigour.

As a result of my visit, Jacob Cherian has organised for MR JRD Rajakumar, General Manager, ABAN Energies Pty Ltd who is an expert in wind power generation, and a representative from Dorr Oliver regarding desalination requirements, to visit South Australia in the second week of February and Pamela Mathew in June 2003. These visits must be facilitated.