



Chairman's Address 2014 Annual General Meeting

Friday, 28 November 2014: Sitting down to write this message I reflected on the sheer volume of activity undertaken throughout the year by the team, which was guided by three overarching strategic themes and three key focus areas.

Those themes were:

1. Continuous operational improvement;
2. Methodical and accountable execution; and
3. Frugal innovation.

And the focus areas, which I highlighted at our last AGM, were:

1. Firstly, to pursue demonstration opportunities in Victoria;
2. Next, to execute on our India strategy including:
 - a. Establishing demonstration project opportunities
 - b. Establishing plant manufacturing partners
3. And thirdly, to initiate the next development phase of Matmor toward pilot scale.

Let's take a moment to review how we've gone, starting with the themes.

Over the year, the board decided that given the highly dynamic and innovative nature of our business, that spending valuable time and money structuring a largely static, strategic business plan to guide operations would not be effective use of time or money.

Our immediate goals are simple:

- Commercialise Coldry via building our first CDP
- Prepare Matmor for following the same commercialisation path close behind Coldry
- Develop markets for additional plants for both Coldry and Matmor.

To this end, we felt it more frugal to develop a supportive business culture, guided by strong themes, to place us in a better position to attain these goals. These themes are intended to guide everyday decision-making by the executive and operations whilst also allowing the board to measure performance and implement management reporting.

Managing Director, Ashley Moore will talk to the first two points, being continuous operation improvement and execution, in his presentation shortly, so I'd like to expand on the third theme, frugal innovation, then provide a few thoughts on our path forward to global deployment, via the Indian market.

One of the keys to our progress during the year was the reduction in the estimated capital cost of the Coldry demonstration plant via a concept we've come to know as frugal innovation.

Frugal Innovation

India has a fast growing reputation for frugal innovation. In our recent experience, it's well deserved.

The Economist Magazine profiled the concept of India's drive for frugal innovation in an April 2010 article highlighting that there is more to this approach than simply cutting costs to the bone. It involves rethinking entire production processes and business models.

Frugal innovation can vary between industries, but for us it means skilled, cost-effective delivery of activities along our commercialisation pathway.

Lets take Coldry as an example. The completion of the detailed design in August 2013 enabled an appropriate level of costing to be performed in India by Thermax, resulting in a capital estimate for deployment of Coldry in India for less than A\$20 million. This represents a capex reduction of some \$A40 million compared to a similar deployment scenario in Australia and sits within the desired investment range established during our ongoing discussions with NLC.

In short, India offers the opportunity to deliver on our primary objective – Coldry demonstration – at significantly less cost than pursuing the same objective here in Australia. Clearly, this approach achieves greater value for shareholders.

But it's not enough to simply do things cost-effectively. The demand side needs to stack up as well and this is where three interconnected market factors converge to provide Coldry and Matmor with significant opportunity. And nowhere do they converge in a more compelling way, than in India, making it an ideal commercial launch pad.

The Indian Market Perspective

In short, India is the place to be. It is suffering acutely from challenges around energy and resource security, which in turn hampers economic security that leads to constrained outcomes for environmental security.

These three factors determine the prosperity, growth and sustainability of a nation. Appropriately balanced and managed, they translate into higher living standards across a population.

These three factors, or E³ as we've come to call them, set the scene for the India market and the markets in which we aim to participate globally. Let's briefly touch on each in the context of our India strategy.

Energy and Resource Security: accessible, available, affordable energy, especially electricity, is arguably the single largest determinant in economic security and the standard of living in any nation.

Resources such as iron ore and coking coal underpin a nations infrastructure growth, using the energy mentioned above to turn these raw materials into things we need and want.

Limited availability or high cost of energy or resources, threatens economic security.

In the context of Coldry, the applications are clear. Electricity generation. Conversion of dried lignite to other energy forms such as liquids and gas. Upgrading to fertiliser and other high-value products.

Economic Security: underpinned by energy and resource security, economic security drives growth and improvement in the standard of living for nations as I've mentioned. One of the ways in which economic security is enhanced is through the application of technology to achieve diversification of suppliers and markets. This reduces a nations vulnerability to changes in supply, price and foreign manipulation.

The Coldry and Matmor processes act as economic levers, upgrading lignite to enable higher value applications that can broaden supply options across thermal coal, gas, oil and fertiliser markets, mitigating reliance on imports.

Coldry increases the efficiency at which the lignite resource is used, extending its useful life or squeezing more value out of the resource while it lasts.

Matmor's potential lies in its ability to take 'waste' iron ore, combine it with low-cost lignite and turn it into a high value product. It opens the door to alternative iron ore sources, diversifying supply and mitigating imports, resulting in improved balance of payments, increases in GDP and contributes to affordable iron and steel supply in support of infrastructure growth.

Environmental Security: Energy security underpins economic security, which in turn supports the cost of environmentally cleaner pathways.

In general, richer is eventually greener. As incomes go up, people often focus first on cleaning up their drinking water, and progressively on air pollutants such as sulphur dioxide.

As wealth grows, people consume more energy, and move to more efficient and cleaner sources — from wood to coal and oil, and then to natural gas and nuclear power and renewables, progressively emitting less CO₂ per unit of energy.

The premise being that greater wealth supports the infrastructure and regulatory framework needed to create, monitor and enforce environmental protection systems, and the ability to allocate human and financial capital to fixing, maintaining or improving our environment.

In this context, and given the forecast increase coal use to satisfy expected electricity demand that will drive economic growth, Coldry can play two important roles:

- 1) Wealth creation – by upgrading lower value lignite, Coldry contributes to economic outcomes, helping deliver income growth and greater gross domestic product
- 2) Mitigation – increased coal use generally means increased lignite use. Lignite, when not upgraded, is less efficient than black coal, emitting more CO₂ per unit of electricity. Upgrading lignite and bringing it in line with black coal mitigate emissions by as much as 30%.

With regard to Matmor, the environmental benefits are clear. Iron ore mining creates mountains of 'waste' tailings. These tailings are 'out of spec' iron ore that can't be used by traditional blast furnaces. It may be that the iron content is too low or the particle size is too fine. Whatever the reason, these tailings often don't have commercial value and simply continue to pile up. Matmor is an ideal waste remediation solution, taking an environmental liability and turning it into nation building materials. In addition to being able to deal with the waste problem, Matmor is less CO₂ intensive than traditional blast furnace iron making - which includes coke production - reducing the environmental impact of iron production.

As I mentioned, India is the place to be. It's combination of frugal innovation and market conditions make it the ideal commercial launch pad for both the Coldry and Matmor technologies.

Following demonstration in India, the commercial opportunities globally become more attainable.

This brings me to the key focus areas highlighted as last years AGM:

1. Firstly, to pursue demonstration opportunities in Victoria;
2. Next, to execute on our India strategy including:
 - a. Establishing demonstration project opportunities
 - b. Establishing plant manufacturing partners
3. And thirdly, to initiate the next development phase of Matmor toward pilot scale.

We pursued the opportunity to demonstrate Coldry in Victoria, via the ALDP. We didn't attract funding under the program. This was frustrating at the time, given we believe we met the criteria and some of the successful applicants did not.

But upon reflection, the outcome may also be seen as an efficient Government at work, where those projects that are sufficiently advanced and can be financed by the private sector are rejected for taxpayer subsidy with the Government supporting those projects that require supplementary financing due to the heightened technology risks.

While on the topic of Victorian-focused activity, let me address a question raised by several shareholders in the lead up to this AGM; "What are we now doing in Victoria? What opportunities are we currently pursuing locally?"

In answer to that question, the Company is working on a number of prospective project opportunities, covered by non-disclosure obligations.

Suffice to say, we cannot provide details other than that they involve the utilisation of ECT's technology suite to process raw materials ahead of other processes which can gain benefit from the processing and upgrading involved.

While there is work underway, we don't expect to be able to discuss these projects any time in the near future, though should those projects develop, we will of course keep the market updated as required.

In addition to that line of enquiry, we will be recasting our feasibility assessments over projects at Bacchus Marsh and in the Latrobe Valley, based on further developments with our fabrication partners in India, Thermax, which leads me to our second focus area, execution of our India strategy.

As mentioned, we set out to establish a manufacturing base and develop opportunities to demonstrate Coldry in India.

We've achieved the first, partnering with world-class engineering firm Thermax and we're significantly advanced in our discussions with Neyveli Lignite Corporation, in relation to our proposed Coldry demonstration project.

Our efforts with Thermax have taken our detailed Coldry design, costed at around \$60 million here in Victoria, and delivered a sub \$20 million price tag for a deployment in India.

I'm sure you can appreciate that this \$40 million saving is more than the \$30 million we sought under the ALDP.

Given the choice of demonstration in Australia at a subsidised cost of \$30 million or demonstrating in India at a cost of \$20 million, I think the frugal innovation approach wins over most minds.

Which brings me to the third focus area; Matmor development.

We've made some solid steps recently. There are a few moving parts, so let me take a moment to provide a bit of background and context.

Matmor sits behind Coldry in terms of logical development sequence. It requires Coldry at its front end to combine the raw materials and dry the lignite to produce the composite pellets.

Matmor is a more complex process and will require greater investment at each scale step, compared to Coldry.

It makes sense from a development point of view, to get Coldry to an appropriate level of development to mitigate risk in that part of the Matmor process.

As we know, ECT does not own the Matmor technology outright. Well, today marks another significant development in the history of ECT. Today we have placed the company in trading halt for the purpose of finalising the documentation for the outright ownership of Matmor. ECT has been in negotiation with the Calleja Group for the last few months developing a plan for the acquisition of Matmor to ensure we can better control our own destiny and help make the task of commercialisation less complex as we engage parties interested in working with us.

The Calleja Group has shown a high level of goodwill towards ECT in agreeing to the commercial terms of this acquisition and have reinforced themselves as valuable partners to our company.

Special thanks must be made to Ben Calleja who has acted as the main facilitator in these negotiations. His polite tolerance of our tight timelines and often urgent requests combined with his resolve to best represent the interests of the Calleja Group make him a true asset to the Calleja family and their 60 continuous years of business. Ashley Moore will address the commercial terms of this acquisition in his speech.

In India, we've been working with the National Mineral Development Corporation (NMDC) to identify opportunities in their resource portfolio for the application of Matmor. We've been methodically testing several candidate ores in collaboration with their R&D department. That testing program is part of a stepwise engagement that, if successful, will see us advance a Matmor pilot program with NMDC.

Adding to this is the increasing interest by Neyveli Lignite in Matmor. As such we're in the process of discussing a three-party collaboration arrangement.

Clearly, this is a positive development.

As a result we're recasting the Coldry Feasibility to cater for a three-party approach incorporating Matmor.

This extra layer of activity has seen revisions to our indicative timelines, which Ashley will cover shortly in his presentation.

In short, the convergence of interests by NLC and NMDC, the overlap in application of Coldry and Matmor and the macro economic drivers in the Indian economy are working in our favour.

Finally I'd like to thank you, our shareholders (and option holders) for your ongoing support.

Your company is in the best position in its short history, and our ambitions are bold.

The work ahead is challenging, yet achievable. With your continued support, and the dedication of the ECT team toward delivering our objectives, I believe we can realise the considerable potential of both the Coldry and Matmor technologies.

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About ECT

ECT is in the business of commercialising leading-edge coal and iron making technologies, which are capable of delivering financial and environmental benefits.

We are focused on advancing a portfolio of technologies, which have significant market potential globally.

ECT's business plan is to pragmatically commercialise these technologies and secure sustainable, profitable income streams through licencing and other commercial mechanisms.

About Coldry

When applied to lignite and some sub-bituminous coals, the relatively simple Coldry beneficiation process produces a black coal equivalent (BCE) in the form of pellets. Coldry pellets have equal or superior energy value to many black coals and produce lower CO2 emissions than raw lignite.

About MATMOR

The MATMOR process has the potential to revolutionise primary iron making.

MATMOR is a simple, low cost, low emission, production technology, utilising the patented MATMOR retort, which enables the use of cheaper feedstocks to produce primary iron.
