ESAA

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Electricity Supply Association of Australia Limited

Electricity Supply Association of Australia Limited (ESAA)
Submission to the inquiry into increasing value-adding to Australian raw Materials

The Electricity Supply Association of Australia Limited (ESAA) represents a wide range of participants in the electricity industry, ranging from electricity generators and distributors/transmission entities through to electricity retailers. Its membership includes State and Territory government business enterprises and privatised enterprises.

ESAA welcomes the opportunity to make a submission to the House of Representatives Standing Committee on Industry, Science and Resources inquiry into increasing value-adding to Australian raw materials.

We thank you for the opportunity to make this submission, and would be pleased to discuss any of these issues in further detail. Accordingly, please contact Simon Troeth, Manager of ESAA's Canberra office on (02) 6248 3694 if we can be of further assistance.

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Submission Paper to House of Representatives Standing Committee on Industry, Science and Resources

On

Inquiry into increasing value-adding to Australian raw materials

Electricity Supply Association of Australia Limited

(ACN Number: 052 416 083)

1. Introduction

The Australian electricity supply industry has made a major contribution to value-adding to Australian raw materials and will continue to make a vital contribution well into the future.

The industry adds value to raw materials in several ways.

Firstly, electricity generation businesses convert raw materials such as coal, water, natural gas, wind, sunlight and biomass into electricity.

This conversion process is the core business of electricity generators and represents the most fundamental value-adding path in the electricity supply sector.

The industry is constantly developing greater efficiencies in the conversion of raw materials into electricity. This includes the development of lower-grade energy resources and new conversion methods.

In this way, generators and others in the industry are constantly striving to add the greatest value to energy resources. In particular, the introduction of energy market competition in the 1990s has imposed a commercial imperative for continuous efficiency gains.

Australian businesses have access to one of the cheapest sources of electric power in the developed world.

With electricity making up on average 20 per cent of business input costs in important industrial sectors, the provision of reliable, low-cost electricity is a major element in driving greater business competitiveness.

This low cost of energy assists businesses, and energy-intensive users in particular, to operate competitively, improving opportunities for job creation and wealth creation.

In this way, the electricity supply industry is crucial to the successful establishment of value-adding enterprises and, in particular, helps the establishment of sunrise industries, including high-technology enterprises.

The Australian electricity supply business in 1999 has more than eight million customers with well over a million in business. It provides power to most towns in country areas and also provides electricity efficiently and cheaply to farms and other businesses in rural areas.

A reliable, low-cost electricity supply is an essential element in any strategy to increase the amount of value-adding being introduced to Australia's agricultural and food-processing sectors.

In fact, these new value-adding enterprises cannot proceed without the provision of a secure supply of power. Electricity distribution companies work closely with customers to ensure their needs are taken into account and understand the importance of dependable infrastructure to customers, particularly in rural and remote areas.

Electricity is the premium and most versatile energy source for increasingly more demanding and complex applications ranging from induction heating, microwave cooling and infrared drying to global computerisation and telecommunications.

All these applications depend on a reliable source of electricity as well as, increasingly, on a quality source of electricity in terms of voltage and current control, harmonics and power factor.

Electricity supply companies have been strong supporters of research and development projects and have contributed to the development of innovative, high-technology value-adding such as fuel cells and photovoltaic cells for distributed power generation.

Australia leads the world in the development of thin, highly efficient photovoltaic cells, with current commercialisation based on the work of Professor Martin Green and Stuart Wenham expected to lead to substantial domestic and export sales.

The recent Federal Government decision to provide $100 million for each of four years to support greenhouse gas abatement also holds potential for further expansion of value-adding in the renewable energy area, which may make renewable energy sources more cost-competitive and therefore encourage their use by business and domestic customers. Cost is currently a major barrier to adoption of renewable energy technologies.

Electricity supply businesses have made a major contribution also to value-adding in two other areas -- human resources and machinery.

The provision of electricity supply infrastructure has created tens of thousands of jobs for graduates and skilled workers. The industry has also invested substantial resources in providing education and training for its large staff, ensuring that value is added regularly to the human resource essential to the successful running of a large and complex industry.

In many cases, this education and training is highly specialised -- including areas such as power engineering courses.

As well, more than $800 million per year of export products and services is provided by the electricity supply industry.

The local manufacturing and skills base is well positioned to expand export services and products, but more focussed government assistance is needed as identified in recent reviews of export opportunities by the Department of Industry, Science and Resources and AustEnergy.

Introduction of overseas technology into the Australian electricity supply industry has involved the conversion of foreign-sourced equipment to Australian conditions -- adding value to enable plant and machinery to operate effectively in the local environment.

Without access to such conversion skills, electricity supply businesses would possibly be limited in their use of equipment -- effectively constraining the scope of development and therefore affecting the cost and reliability of electricity supply.

However, certain policy approaches taken by State and Federal governments work against the effective expansion of value-adding capacity in the electricity supply industry.

The risk and cost burden of regulation in the competitive energy markets has emerged as an important policy issue. This impacts on the electricity supply sector's ability to offer reliable and competitively-costed power to business and domestic customers, not least through imposing added cost.

ESAA argues that there should be a review under the national competition policy agreement of the current state of energy regulation.

The lack of coordination between different levels of government is also hampering the efficient development of additional value-adding capacity. Planning policies and actions should be better coordinated to maximise the development of this capacity to benefit all Australians.

2. Value-adding: the direct contribution

The Australian electricity supply industry has been a major direct contributor to the value-adding process in Australia.

The industry relies for its livelihood on the efficient conversion of raw materials to a value-added product (electric power).

This conversion, and the transmission of electricity to the home or business user, requires the construction and maintenance of a vast amount of infrastructure. Australia's electricity supply business has assets valued at $67 billion and annual turnover of $22 billion, and the electricity supply sector contributes around two percent of Australia's Gross Domestic Product.

This creates jobs across a wide range of areas. In 1998, 33,099 people were employed in electricity generation, transmission and system operation and distribution and retailing. In addition, jobs were created in coal mines, in the transport sector and in various service industries allied to the electricity sector.

While the supply of electricity has created over the past five decades tens of thousands of jobs for graduates and skilled workers, the industry has also invested substantial resources in providing education and training for its large staff.

It has fostered a wide range of skills and experience in tackling the challenge of building electricity supply infrastructure which can operate in a wide range of climatic conditions.

Local communities throughout Australia have also benefitted from the demand for services created by the construction and operation of electricity supply facilities.

Importantly, it is through the provision of electricity that many Australian companies are able to add value to a wide range of products and services. Without access to a supply of competitively-priced, reliable electricity, a number of these firms would simply not be able to participate in the value-added economy. Low electricity prices in Australia enable the establishment and expansion of value-adding capacity.

For example, not only is electricity generation in itself a value-adding process by converting primary fossil fuels into valuable secondary energy, the utilisation of electricity adds enormous value in the conversion of Australia's mineral wealth into value-added metals and products as well as to the utilisation of electronic technologies.

Value-adding examples in the mineral sector include the conversion of alumina to aluminium and current proposals for reducing magnesium ores to magnesium -- a key versatile, lightweight metal which through its use in the motor vehicles sector and elsewhere will reduce weight and energy use and therefore improve efficiency.

The combination of competitively-priced electricity supplies and a richness of natural resources gives Australia a significant international advantage in, for example, the processing of minerals products such as alumina and bauxite.

The value in the mineral sector is significant, but the value adding of technology is profound as society moves into the services age.

A huge number of advanced electronic processes -- from navigational aids, to computers, to elaborate manufacturing and processing, to telecommunications -- depend on a reliable and high-quality supply of electricity, which will become even more important in the future.

3. Value-adding: the indirect contribution

There are a number of indirect contributions which the electricity supply industry makes to value-adding in Australia.

(a) Personnel

The electricity industry plays an important role in adding value to its human resources.

Education and training takes place across a wide range of areas, including power engineering, safety, risk management and electronic commerce. ESAA plays an important role in the education and training process through its extensive range of training courses and seminars designed to improve the knowledge base of people in the electricity supply sector.

For example, the skills developed in the Snowy Mountains project including design, installation and maintenance have been retained by Snowy Mountains Engineering Corporation and are utilised by that firm in its work both here and overseas.

The demand for training and education also flows into a number of other industry-related areas such as consulting engineering, transport, education, communications and residential construction. The unique needs of the electricity supply sector in turn create the need for specialised courses in these areas.

In addition, Australia's thermal coal-fired power stations provide experience in burning coal to produce power -- experience which is utilised by overseas customers.

This disparate range of training and education requirements makes the electricity industry one of Australia's major contributors in adding value to the nation's human resources.

(b) Equipment

The electricity supply industry often requires equipment purchased from overseas to be adapted to suit Australian conditions.

This conversion work adds critical value to the machinery, because without it the machinery may not function at its full potential in the harsh Australian environment. Access to such equipment from overseas is critical as few manufacturers exist in Australia.

This is a key value-adding function which, in turn, allows the electricity supply sector to provide power with more security at less cost.

4. Conclusions and recommendations

ESAA believes the electricity supply sector is an important part of Australia's value-adding industries.

It serves a key role in its own value-adding processes, and also, through the provision of a reliable, low-cost supply of electricity to business, provides a solid base for further expansion of value-adding, particularly in rural and regional areas.

However, there are significant barriers to further expansion of value-adding capacity in the electricity supply sector. These include regulatory barriers and the uncertainty associated with future environmental liabilities.

An ESAA survey of costs of regulation to members last year found that Australia's electricity supply businesses face annual costs of more than $50 million in complying with regulation.

This is clearly burdensome in the context of considering new projects or upgrading existing projects, as well as in establishing new electricity supply ventures to service business customers in remote areas.

ESAA believes that early consideration should be given to a review of the regulatory structure governing the competitive supply of electricity, as recommended by the Industry Commission on page 146 of Volume II of the report Energy Generation and Distribution:

"The Commission recommends a review by an independent body -- in three years time -- of the progress made in implementing (regulatory) reforms. Such a review would provide an opportunity to evaluate options for further improving efficiency in light of achievements in Australia and developments overseas."

Such a review could also examine whether the regulatory structure governing the electricity supply sector could be simplified and made more accountable.

The cost of energy compared to other countries is a major factor in business competitiveness. If Government policies make energy more expensive, many value-adding industries are likely to move to countries where energy is less expensive.

The flexibility of capital in a global economy means that such movement can happen with little warning and scant opportunity to redress problem areas.

This includes a number of policy areas such as taxation (GST and the Ralph Review of business taxation), mandated increases in the proportion of electricity generated by renewable sources, minimum efficiency standards for power generation and environmental policy.

Environmental policy uncertainty is also affecting future investment in the electricity supply sector and therefore the expansion of value-adding capacity. Businesses are unsure about the introduction of an emissions trading scheme, which may enable them to cost the environmental impact of current and future projects.

ESAA recommends:

* A high-level inquiry into regulation of the utility sector in Australia be established, preferably through the Productivity Commission.

* Government policies should be geared towards encouraging the provision of electricity at minimum cost and with maximum system reliability.

* Environmental policies should recognise the competitive advantage of a low cost electricity supply and aim to balance the interests of Australian companies and the economy with the need to protect and improve the environment.

* Large energy-intensive projects should be encouraged to proceed, provided proper environmental safeguards are in place.

* Taxation policies such as accelerated depreciation concessions should be focussed on enabling long-term energy-intensive projects to proceed to benefit the community.

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