

## ASEC: A New Sustainable Energy Centre in Western Australia

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### Abstract

*The Commonwealth Government announced on 9<sup>th</sup> April 2003 a grant of \$5.5 million over four years from the Australian Greenhouse Office through its Renewable Remote Power Generation Program (RRPGP) to assist the establishment of an Industry Support Centre (ISC) for renewable energy at Murdoch University in Perth. The ISC will support the development of the Australian sustainable energy industry. A key element of this project will be to establish a Renewable Energy Systems and Standards Laboratory (RESLab) that will assist the development of standards and accreditation for renewable energy systems and provide a world class testing facility. The ISC and RESLab will form part of the Australian Sustainable Energy Centre (ASEC) which is to be established as a joint venture of universities, industry and governments to provide services and research capacity to assist the development of the sustainable energy industry in Australia. ASEC will take over some of the activities of the former Australian Co-operative Research Centre for Renewable Energy (ACRE) which will close on 31 December 2003. Some of the ACRE participants and some new members will form the initial consortium for ASEC.*

*ASEC will assist the development of the Australian sustainable energy industry through research and development, standards and testing, demonstration, education, training and policy development. While ASEC will be located in Western Australia, it will maintain and develop strong links to related organisations in Australia, New Zealand and overseas. ASEC will participate in joint projects and provide important services to the whole sustainable energy industry in Australia. ASEC will become a major support base for the Australian sustainable energy industry to assist it to develop new products that meet national and international needs for clean energy supply and efficient energy use.*

*This paper outlines the objectives, key strategies and proposed portfolio of activities of ASEC.*

## INTRODUCTION

ASEC is an unincorporated joint venture of universities, industry and governments to provide services and research capacity to assist the development of the sustainable energy industry in Australia and overseas. ASEC is located on the Murdoch University campus in Perth and incorporates the laboratory facilities of ACRE (known as ACRELab) and ACRE offices and the Murdoch University Energy Research Institute (MUERI) field station. The initial consortium includes Murdoch University, Curtin University, Advanced Energy Systems Ltd, Western Power Corporation, Westwind Turbines, ZBB Energy Corporation and EcoCarbon Ltd. ASEC will maintain and further develop strong links to related organisations within Australia and overseas.

## OBJECTIVES

The prime objectives of ASEC are as outlined below;

- To provide support services to the Australian sustainable energy industry via standards, testing, monitoring and optimal design
- To promote quality in sustainable energy systems through accreditation, training, testing and monitoring of demonstration projects.
- To assist the sustainable energy industry to develop new components for sustainable power generation including inverters, batteries, fuel cells and wind turbines.

- To assist the remote area power supply (RAPS) industry to improve the quality of their products and to develop new products via research, development, demonstration and training.
- To assist the development of the sustainable energy industry through initial and continuing professional training of engineers, scientists and policy analysts with expertise in sustainable energy systems.
- To assist industry and Government with policy analysis and strategic planning for sustainable energy systems and greenhouse gas abatement.

## KEY STRATEGIES

ASEC will work upon the following issues as a key service provider for the Australian sustainable energy industry;

- Carry forward some of the most valuable ACRE activities that are relevant to sustainable energy industry development. These include ACRELab, RAPS development, support to Bushlight (a \$24 million AGO project designed to install RAPS systems in more than 200 small outback Aboriginal communities) and professional development training.
- Initiate new projects related to these activities, that support sustainable energy industry development.
- Support some of the key initiatives of the Renewable Energy Industry Action Agenda (e.g. the Renewable Energy Technology and Information Network for Australia, RETINA)
- Maintain a close relationship with industry in order to provide the type of services it needs.
- Maintain a full range of research, development, demonstration, education and policy analysis activities in order to enhance the core capacities of ASEC.
- Seek additional cash funding for collaborative research, development and education. This entails a separation within ASEC of cash support gained for industry development from the AGO, and the research and development and education projects that do not qualify for AGO support.
- Maintain and enhance existing interstate and international links, to develop an industry support network.

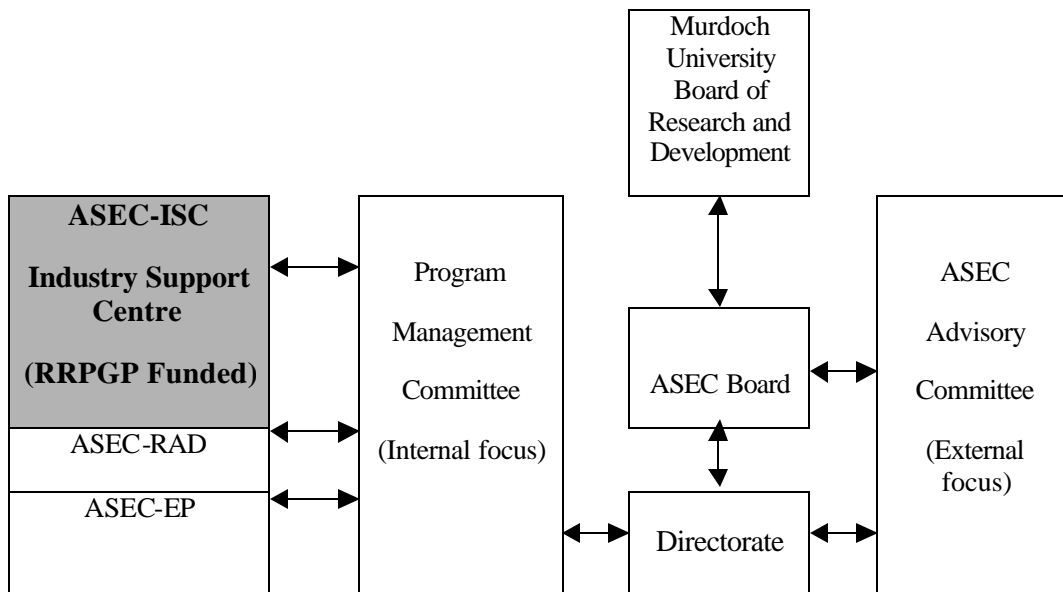
## ASEC PORTFOLIO OF ACTIVITIES

ASEC will initially focus on three major programs of work, each of which will contain several projects. These are:

- **Industry Support Centre (ISC):** This program will be funded by the RRP GP grant and customer fees. It will be responsible for the work on standards, accreditation and testing and support for Bushlight and other demonstration projects. It will carry out appropriate training in standards and professional development and industry road-mapping.
- **Research and Development (RAD):** This program will receive support from external grants and in-kind contributions from the participants. It will include RAPS design, energy efficiency, system optimisation, fuel cells, energy storage including hydrogen storage, energy management, power conditioning for distributed generation including small wind systems, power quality and waste to energy systems.
- **Education and Policy (EP):** This program will cover education and training at all levels including short courses and award courses, information dissemination, policy analysis, RETINA, market research and publicity. Funding will be supplied by course fees, institutional support, external grants and contracts.

## ASEC MANAGEMENT STRUCTURE

The proposed management structure for the ASEC is shown below.



The Program Management Committee will be an internal ASEC Committee responsible for the day-to-day operations of the three units as described above. This Program Management Committee will report to the Chief Executive Officer who will have responsibility for the efficient operation of ASEC and will report to the ASEC Board on matters of policy and direction, and to the Murdoch University Board of Research and Development with respect to the effective and efficient operation of the Centre as part of the University. The ASEC Advisory Committee will provide an interface between ASEC and industry. It will contain representatives from industry and government and will meet regularly to review ASEC's priorities and performance and provide strategic advice to the ASEC Directorate.

The project leaders will be appointed by the ASEC Board from amongst the key researchers. Each project will have a project agreement amongst the parties involved. It will specify the work plan, funding, personnel and intellectual property arrangements. The ASEC Board and the Advisory Committee will play key roles in developing the strategic direction for ASEC and will be responsive to industry support needs.

## KEY PERFORMANCE INDICATORS FOR ASEC

The key performance indicators of ASEC will be developed as the work program becomes fully established. Some performance indicators are already apparent and include:

- RESLab will be expected to meet its budget projections for income from customers.
- RESLab will become NATA accredited.
- ASEC will become a Registered Training Organisation and will offer BCSE accredited training courses for industry.
- ASEC will offer at least six industry workshops and short courses each year.
- The 20kW and 30kW wind turbines will be demonstrated and move into commercial production within 4 years.
- Significant linkages will be developed with other related industry and research organisations, both nationally as well as internationally.

## **SUMMARY**

It is expected that the ASEC will soon become a valuable support base for the Australian sustainable energy industry to assist it to develop new products that meet national and international standards for clean energy supply and efficient energy use. Also, ASEC will be capable of assisting the development of the Australian sustainable energy industry through research and development, standards and testing, demonstration, education, training and policy development.

## **ACKNOWLEDGMENTS**

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