



Increasing Energy Efficiency in the Australian National Electricity Market

Client: Department of Climate Change and Energy Efficiency, Commonwealth (federal) Government, Australia

Currently providing advice to a team of consultants who are developing options for increasing energy efficiency in the Australian competitive National Electricity Market. The consultant team is located in the Institute of Sustainable Futures at the University of Technology Sydney. The team has been engaged to identify opportunities for change in the National Energy Market framework to drive or support a step change improvement in energy efficiency. The team's recommendations will be submitted to a Task Group of departmental heads that has been established to report to the Australian Prime Minister by mid-2010 on options to deliver a step change improvement in Australia's energy efficiency by 2020. Project to be completed in 2010.

Trainings on the Implementation of DSM and Energy Efficiency Programs in China

Client: The Regulatory Assistance Project, China office

Currently designing and developing a series of trainings for provincial government officials in China responsible for implementing demand side management and energy efficiency programs to contribute to the Chinese central government's energy efficiency targets. Project to be completed in 2010.

Demand Side Management and Climate Change

Client: Four individual countries under the auspices of the International Energy Agency Demand Side Management Programme

Currently directing a multi-national project that is investigating the potential contribution to mitigating greenhouse gas emissions that can be made by demand side management (DSM) technologies and measures. The project is also examining the extent to which emissions mitigation measures can provide benefits to electricity systems and identifying opportunities for funding DSM programs with revenue from trading emission reductions. Project commenced in 2008 and to be completed in 2010. [Project website](#).

Overview of APEC Energy Working Group Projects (Stage 3)

Client: APEC Secretariat, Singapore

Reviewed the outcomes of a selection of the projects carried out under the auspices of the Energy Working Group (EWG) of the Asia Pacific Economic Cooperation forum (APEC). This project summarised the outcomes of EWG projects covering: new and renewable energy, including alternate transportation fuels; and clean fossil energy. Project completed in 2009. [Download report](#).

Peer Review of the Cost Effectiveness Methodology for the Climate Change Review

Client: Independent Pricing and Regulatory Tribunal, Government of New South Wales, Australia

Carried out a peer review of the draft methodology to be applied by the Independent Pricing and Regulatory Tribunal in assessing the cost effectiveness of those climate change mitigation programs implemented in the State of New South Wales that could be quantified. Project completed in 2009.



Peer Review of Energy Efficiency Policies in Chile

Client: APEC Energy Working Group through the Department of Resources, Energy and Tourism, Commonwealth (federal) Government, Australia

Chaired a team that carried out a review of energy efficiency policies in Chile under the APEC Peer Review of Energy Efficiency (PREE) process. The purpose of the peer review process is to assist all APEC economies to understand the challenges and benefits in advancing energy efficiency. Chile volunteered to undergo a peer review and this was the second review of an APEC economy undertaken under the PREE. The review team was impressed with the broadly-based support for energy efficiency that existed in Chile. The review team felt that it was important that the ongoing development of energy efficiency policy and regulations by the Ministry of Energy in Chile be informed and shaped by 'real world' experiences and contacts with stakeholders. That way program implementation experience would keep broader energy policy (and related national policies) closely linked to developments in the marketplace. Project completed in 2009. [Download report.](#)

Peer Review of Energy Efficiency Policies in New Zealand

Client: APEC Energy Working Group through the Department of Resources, Energy and Tourism, Commonwealth (federal) Government, Australia

Participated in a team that carried out a review of energy efficiency policies in New Zealand under the APEC Peer Review of Energy Efficiency (PREE) process. The purpose of the peer review process is to assist all APEC economies to understand the challenges and benefits in advancing energy efficiency. New Zealand volunteered to undergo a peer review and this was the first review of an APEC economy undertaken under the PREE. The review team was impressed with the level of attention and resources allocated to energy efficiency policy and programmes by the New Zealand Government. The recommendations made by the review team were intended to apply slight corrections to a regime of energy efficiency policy and programmes which essentially was in good shape. Project completed in 2009. [Download report.](#)

Independent Assessment of the APEC Energy Working Group

Client: APEC Secretariat, Singapore

Carried out an independent assessment of the Energy Working Group (EWG) of the Asia Pacific Economic Cooperation forum (APEC). The assessment: reviewed the effectiveness and impact of EWG activities; analysed collaboration and interaction between the EWG and other bodies; and identified strategic priorities and future direction for the EWG. Project completed in 2009. [Download report.](#)

Demand Side Management for Electricity Networks

Client: Seven individual countries under the auspices of the International Energy Agency Demand Side Management Programme

Directed a multi-national project developing methods for utilising demand side management as an alternative to building 'poles and wires' and augmenting electricity networks. The project identified and developed a wide range of DSM measures which could be used to relieve network constraints, including: energy efficiency, fuel switching, demand response, direct load control, interruptibility, load shifting, distributed generation, power factor correction and pricing initiatives. Project commenced in 2004 and completed in 2008. [Project website.](#)



Greenhouse Impact of the Shoalhaven Transfers Project

Client: Department of Commerce and Sydney Catchment Authority, Government of New South Wales, Australia

Evaluated the greenhouse impact (as measured by carbon outputs) of various options under consideration for the project to increase the water transfer capacity from the Shoalhaven River to the Sydney water supply system. Project completed in 2008.

Demand Side Management in the Energy Sector in Australia

Client: Department of Environment, Water, Heritage and the Arts, Commonwealth (federal) Government, Australia

In conjunction with Energy Strategies Pty Ltd, reviewed the possible role of demand side management measures implemented by energy businesses in cost effectively reducing the carbon impact of the Australian economy. The study included: an overview of the main drivers of change in the Australian energy market over the past 20 years; a history of the implementation of DSM programs by Australian energy businesses; a description of the lessons learnt for Australia from international examples of energy efficiency programs implemented by energy businesses; and recommendations and future scenarios for the implementation of DSM measures by energy businesses in Australia. Project completed in 2008.

Overview of APEC Energy Working Group Projects (Stage 2)

Client: APEC Energy Working Group through the Department of Resources, Energy and Tourism, Commonwealth (federal) Government, Australia

Reviewed the outcomes of a selection of the projects carried out under the auspices of the Energy Working Group (EWG) of the Asia Pacific Economic Cooperation forum (APEC). This project summarised the outcomes of EWG projects covering: energy efficiency and conservation; energy data and analysis; and energy trade and investment. Project completed in 2008. [Download report.](#)

Energy Efficiency Advice for an International Public-Private Partnership

Client: International Secretariat, Renewable Energy and Energy Efficiency Partnership, based in Vienna, Austria

Engaged to provide advice on energy efficiency to an international public-private partnership. REEEP was established at the World Summit on Sustainable Development in 2002 with the objective to expand the global market for renewable energy and energy efficiency, particularly in developing countries. Responsibilities included: representing REEEP at regional and international meetings; identifying opportunities for action by REEEP; developing REEEP position papers; assessing applications for REEEP funding; and developing and expanding the REEEP contact network. Engagement commenced in 2005 and completed in 2007. [REEEP website.](#)

Advanced Metering for Energy Supply in Australia

Client: Total Environment Centre funded by the National Electricity Consumer Advocacy Panel, Australia

Carried out a review of advanced metering, including: current progress on implementing advanced metering, regulatory incentives and tariff structures for advanced metering, platforms for enhanced load management, and greenhouse impacts of advanced meters. The report also recommended elements to be included in a metrology framework for the Australian National Electricity Market. Project completed in 2007. [Download report.](#)



Review of the Renewable Energy Support Fund

Client: Sustainability Victoria, Government of Victoria, Australia

Carried out a review of the Victorian Government's Renewable Energy Support Fund (RESF), including: reviewing the design and development of RESF; summarising the status, current and expected outcomes of the RESF; evaluating the effectiveness of RESF in meeting its objectives; identifying and reporting on the value of RESF; and recommending improvements for a revised sustainable energy support program. Project completed in 2007. [Download presentation about RESF.](#)

Overview of APEC Energy Working Group Projects (Stage 1)

Client: APEC Energy Working Group through the Department of Industry, Tourism and Resources, Commonwealth (federal) Government, Australia

Reviewed all 250 projects carried out under the auspices of the Energy Working Group (EWG) of the Asia Pacific Economic Cooperation forum (APEC) since its inception in 1990. The purpose of this review was to document the current and historical project activities of the EWG with the aim of demonstrating to APEC Ministers and delegates how the project activities of the EWG contribute to achieving energy security with a lower environmental impact. The final report from the review was tabled at the 8th Meeting of APEC Energy Ministers in Darwin in May 2007. Project completed in 2007. [Download report.](#)

Market for Climate Change Response Services

Client: Confidential private sector company

Provided analysis of the drivers influencing climate change response, the key opportunities for the client to provide climate change response services, the types of services that the client could consider providing, where competition is already established, and what issues there are in entering the market for climate change response services. Project completed in 2006.

Strategy for the Development of a Load Control Business

Client: Confidential private sector company

Provided assistance with the development of a strategy for the company's load management business that takes advantage of new opportunities and successfully deals with challenges arising from the advent of competitive wholesale electricity markets in Australia and New Zealand, together with the rapid development of new types of load control technologies. Project completed in 2006.

Market Failures in Energy Efficiency

Client: Department of Industry, Tourism and Resources, Commonwealth (federal) Government, Australia

Australian representative for an international project on market failures in energy efficiency. The project carried out an in-depth analysis of specific barriers and market failures that create the inefficient use of energy by end users. The project was coordinated by the International Energy Agency and participating countries were: Australia, Japan, the Netherlands, Norway, Portugal and the USA. Project completed in 2006. [Download report.](#)



Sustainability Policy Objectives for the Introduction of Advanced Metering Infrastructure in Victoria

Client: Sustainability Victoria, Government of Victoria, Australia

Prepared a report on sustainability policy objectives for the Victorian Government initiative to deliver advanced metering infrastructure (AMI) to all Victorian electricity consumers. Reviewed the draft specifications for the AMI system and recommended variations to improve sustainability outcomes. Project completed in 2006. [Metering rollout website.](#)

International and Australian Experience in Network Demand Management

Client: Queensland Joint Working Initiative on Network Demand Management established by the electricity network businesses Ergon Energy, Energex and Powerlink

Reviewed selected network demand management programs undertaken in other parts of Australia and overseas and summarised insights from these programs that are relevant to the current situation of the Queensland electricity network. This study formed part of a larger project carried out by CRA International to assist the Joint Working Initiative to develop and implement effective network demand management initiatives aimed at delivering sustainable reductions in demand, particularly at peak times on the Queensland electricity network. Project completed in 2006.

Demand Side Response Policy Options

Client: Demand Side Response Working Group of the Ministerial Council on Energy, Australia

Managed a consultant team carrying out a suite of studies to identify policy options for demand side response in the Australian National Electricity Market. Carried out a study that identified low cost load control technologies and recommended options for increasing the market uptake of these technologies to assist consumers in managing their energy demand. Project completed in 2006. [Download presentation.](#)

Independent Peer Review of a Solar Cities Bid

Client: Sydney Olympic Park Authority (SOPA), Government of New South Wales, Australia

Through the Solar Cities programme, the Australian Government is providing \$75 million to support a significant penetration of solar technologies, electricity load management processes, innovative pricing arrangements, smart metering equipment and energy efficiency into existing and new residential buildings and commercial/industrial sites. The Brighter Future Solar City Consortium was selected to submit a Detailed Business Case for a project in the Solar Cities programme. Engaged by SOPA, as the lead proponent in the consortium, to carry out an independent peer review of the Brighter Future Solar City bid. Project completed in 2006.

ESD Compliance Assessment of the Shoalhaven Transfer Project

Client: Department of Commerce and Sydney Catchment Authority, Government of New South Wales, Australia

Engaged to assess compliance against the principles of ecologically sustainable development of a proposal to increase the water transfer capacity from the Shoalhaven River to the Sydney water supply system. Project completed in 2006.



Accreditation of Technology Under the New South Wales Greenhouse Gas Reduction Scheme

Client: Confidential private sector company

Carried out an initial analysis of the financial benefits and costs of accrediting the technology under the New South Wales Greenhouse Gas Reduction Scheme. The purpose of this initial analysis was to provide the client with a rough order of magnitude estimate of benefits and costs to enable a decision to be made on whether to proceed further with accreditation. Project completed in 2005.

Solar Cities Programme

Client: Department of Energy, Utilities and Sustainability, Government of New South Wales, Australia

Engaged as New South Wales Program Manager for the Solar Cities programme with responsibility for developing a New South Wales Government support package for the programme. Assisted 21 potential consortia in New South Wales to determine whether they should submit Expressions of Interest for a Solar Cities project and provided detailed advice to the seven consortia that eventually prepared detailed EOIs. Established a database of potential suppliers of goods and service to New South Wales Solar Cities projects. Engagement completed in 2005. [Solar Cities website](#).

Case Study of Thailand's Energy Efficiency Revolving Fund

Client: Department of Industry, Tourism and Resources, Commonwealth (federal) Government, Australia

Developed a Case Study of Thailand's Energy Efficiency Revolving Fund that: outlined the design of the Fund; described how the Fund was implemented; provided insights into the impact of the Fund; and considered whether there were any best practices and lessons learned that could be shared with the other member economies of the Asia Pacific Economic Cooperation forum (APEC). The Case Study was developed for the APEC Energy Working Group and provided an important contribution to informing policy and program formulation within APEC member economies. Project completed in 2005. [Download report](#).

Regulatory Incentives for Demand Side Management in Vietnam

Client: Electricity of Vietnam funded by the World Bank

In association with Danish Energy Management, developed proposals for regulatory incentives which could be introduced in Vietnam to encourage the implementation of demand side management measures by electricity customers. Project completed in 2004.

Demand Management Opportunities in the Inner Sydney Region

Clients: EnergyAustralia, TransGrid and New South Wales Department of Infrastructure, Planning and Natural Resources, Australia

Developed the scopes of works for four studies as part of the Demand Management and Planning Project (DMPP) which will investigate opportunities for demand management measures to achieve peak load reduction in the inner Sydney region. Also contributed to the development of a methodology for assessing peak electricity demand and identifying opportunities for peak load reduction at customer sites in the inner Sydney region with demand greater than 5MVA. Projects completed in 2004. [DMPP website](#).



Review of Funding Options for Sustainable Energy Projects

Client: Department of Energy, Utilities and Sustainability, Government of New South Wales, Australia

Carried out a review of funding options for sustainable energy projects and recommended mechanisms whereby DEUS could provide funding. Project completed in 2004.

Connection of Small Solar Power Systems to the New South Wales Electricity Network

Client: Department of Energy, Utilities and Sustainability, Government of New South Wales, Australia

In association with Global Sustainable Energy Solutions, developed proposals to improve the arrangements for connecting small photovoltaic (PV) systems to the New South Wales electricity network. Investigated the current arrangements for the connection of small PV systems. Worked with representatives of the solar and electricity industries in New South Wales to identify the major issues causing problems with the current arrangements and proposed improved arrangements for overcoming these problems. Project completed in 2004.

Roadmap for the Australian Solar Photovoltaic Industry

Client: Australian Business Council for Sustainable Energy, funded by AusIndustry, Commonwealth (federal) Government, Australia

In association with IT Power Australia, contributed to the development of a market and technology roadmap for the Australian solar photovoltaic industry. This included developing and managing an industry consultation process to determine the content of the roadmap document. The roadmap provides a guide to the development of the Australian solar PV industry in relation to both domestic and export markets, ensuring appropriate Australian ownership of the technology and promoting a sound commercial strategy. Project completed in 2004. [Download Roadmap](#).

Review of Network Demand-side Management Activities

Clients: EnergyAustralia, TransGrid and New South Wales Department of Infrastructure, Planning and Natural Resources, Australia

Reviewed local and international activities in electricity demand-side management which may relieve constraints on electricity distribution and transmission networks and therefore provide alternative options to network augmentation. The results of the review will contribute to the Demand Management and Planning Project which is investigating the potential for reducing the demand for electricity in the inner metropolitan Sydney region in order to defer or avoid the need for expansion of the electricity network infrastructure. Project completed in 2004. [Download report](#).

Review of SEDA's Investment Function and Outcomes

Client: Sustainable Energy Development Authority, Government of New South Wales, Australia

Reviewed all investments in the development and commercialisation of sustainable energy technology undertaken by SEDA since its establishment in 1996. Recommended actions to increase the effectiveness of SEDA's investments in achieving their objectives. Project completed in 2003. [Download SEDA's final Annual Report](#).



Demand-side Abatement of Greenhouse Gas Emissions

Client: Independent Pricing and Regulatory Tribunal, Government of New South Wales, Australia

Provided advice on the implementation of the New South Wales Government's Greenhouse Gas Reduction Scheme, focussing on the demand side abatement component of the Scheme. Tradeable New South Wales Greenhouse Abatement Certificates can be created through demand side abatement activities including: increasing the efficiency of electricity consumption; reducing greenhouse gas emissions through fuel substitution to and from electricity; and reducing emissions from on-site electricity generation. Developed processes for the accreditation of Abatement Certificate Providers for demand side abatement, assessed initial applications for accreditation, and prepared accreditation case studies. Also responsible for facilitating a stakeholder workshop and developing information material. Project completed in 2003. [GGAS website](#).

Waste to Energy Guide for Local Authorities

Client: Australian Business Council for Sustainable Energy, funded by the Australian Greenhouse Office, Commonwealth (federal) Government, Australia

Contributed to the development of a Guide which is intended to increase the awareness and understanding of opportunities for waste to energy applications amongst key decision makers. The primary target audience for the Guide is local authorities throughout Australia, including local councils and water, sewerage and waste authorities. Project completed in 2003. [Download Guide](#).

Photovoltaics in the Urban Environment

Client: Photovoltaic Power Systems Programme of the International Energy Agency supported by funding from AusIndustry, Commonwealth (federal) Government, Australia

Led an international working group which developed a work plan for a multi-national study on the opportunities for large-scale application of grid-connected photovoltaics in the urban environment. The study is sponsored by 11 individual countries who are members of the IEA PVPS Programme. Work plan completed in 2003. [Project website](#).

Energy Efficiency Pilot Program in the Commercial Sector in Vietnam

Client: Ministry of Industry, Government of Vietnam, funded by the World Bank

Contributed to a project carried out by a consortium led by ERM Energy. The project developed the framework and procedures for a proposed pilot commercial energy efficiency program in Vietnam, including designing the overall program, strategies and approaches, business plan and business models, institutional and financial arrangements, technical parameters, flow of funds, application procedures, conditions for grant use and training requirements. Project completed in 2002.

Identification of New Business Opportunities

Client: Confidential private sector company

Identified possible new business opportunities for the client in relation to the development and utilisation of a renewable energy resource. Project completed in 2002.



Review of SEDA's Planning Methodologies and Performance Measurement

Client: Sustainable Energy Development Authority, Government of New South Wales, Australia

Reviewed the methodologies used by SEDA to plan its activities to reduce greenhouse gas emissions through promoting energy efficiency and increased use of renewable energy. Carried out a survey of SEDA program managers to identify the indicators used to measure the performance of SEDA programs. Recommended improvements to SEDA's performance measurement processes and indicators. Project completed in 2002.

Approvals and Incentives for Renewable Energy Projects

Client: Western Power, Australia

Contributed to a study carried out by ERM Energy Australia. The study identified processes for obtaining relevant approvals and licences to construct, connect and operate renewable energy projects; Government incentives, programs and policies for renewable energy that may improve project feasibility; and ways of addressing impediments to renewable energy projects. Project completed in 2002.

Review of the Sustainable Energy Research and Development Fund

Client: Ministry of Energy and Utilities, Government of New South Wales, Australia

Reviewed the performance and outcomes of the Sustainable Energy Research and Development Fund and assessed the extent to which the Fund was achieving its objectives. Recommended the most effective location for the administration of the Fund. Project completed in 2002.

Snowy Corporatisation

Client: The Treasury, Government of New South Wales, Australia

Managed the corporatisation of the Snowy Mountains Hydro-electric Authority for the New South Wales Government. This was a highly complex project management task comprising numerous sub-projects covering a broad range of disparate issues, including: resources management, electricity industry reform, water industry reform, land use planning, environmental remediation, industrial relations, financial analysis, company structure and governance, and inter-governmental relations. Led the New South Wales Government team which successfully completed complex negotiations with Victorian, Commonwealth and South Australian officers across all these issues. Represented the New South Wales Government in successfully negotiating a major ground-breaking inter-governmental agreement to provide increased water flows to improve the environmental condition of the Snowy River. Project commenced in 1996 and completed in 2002. [Snowy Hydro website](#).

Feasibility Study of the Value of Carbon Sinks

Client: Department of Defence, Commonwealth (federal) Government, Australia

Contributed to a study carried out by ERM Energy Australia. The study identified the sites which may present opportunities for carbon sinks, conducted a desktop study into the scope for both existing and new sinks, identified the opportunities to obtain value from carbon sinks and assessed the feasibility of establishing new sinks. Project completed in 2002.



Statutory Review of the Sustainable Energy Development Act

Client: Minister for Energy, Government of New South Wales, Australia

Reviewed the Act of the New South Wales Parliament which established the Sustainable Energy Development Authority and which governed its activities. The purpose of the review was to advise the Minister whether the policy objectives of the Act remained valid five years after it was passed by Parliament and whether the terms of the Act remained appropriate for securing those objectives. Project completed in 2002. [Download report.](#)

Mechanisms for Promoting Societal Demand Management

Client: Independent Pricing and Regulatory Tribunal, Government of New South Wales, Australia

Surveyed current activities in Australia and overseas to promote demand-side management, energy efficiency and renewable energy, including the development of trading schemes for greenhouse gas emission reductions and carbon sequestration. The study formed part of the Inquiry into Demand Management which IPART carried out for the New South Wales Government. Project completed in 2002. [Download report.](#)

Education and Training in Photovoltaics in the Pacific

Client: Tokyo Electric Power Company, Japan

Identified existing activities in education and training about solar photovoltaic technologies at the household level in Pacific Island countries. Project completed in 2001.

Assessment of Grant Applications for the Household Greenhouse Action Program

Client: Australian Greenhouse Office, Commonwealth (federal) Government, Australia

Member of the Assessment Panel which carried out the assessment of Round 1 applications for support under the Household Greenhouse Action Program. Project completed in 2000.

Mechanisms for Promoting Demand-Side Management and Energy Efficiency

Client: Thirteen individual countries and the European Commission under the auspices of the International Energy Agency Demand Side Management Programme

Directed a multi-national project which developed policy, regulatory and commercial mechanisms for promoting demand-side management and energy efficiency in restructured electricity industries. The project included identifying case studies of mechanisms currently in use in the participating countries and collecting and analysing data about these mechanisms. Developed the work program for the project and managed the work of seven contractors in various locations in Europe, North America and Australia. Project commenced in 1997 and completed in 2000. [Project website.](#)

Annual Reports on Greenhouse Gas Emissions

Client: Powercor, Australia

Prepared two annual reports on the greenhouse gas emissions resulting from electricity sold in New South Wales by the electricity retailer Powercor, and strategies for reducing these emissions. These reports were required under the environmental conditions of Powercor's New South Wales electricity retailer licence. Reports prepared for 1999 and 2000.



Demand Management Code of Practice

Client: Department of Energy, Government of New South Wales, Australia

Contributed to the development of the first edition of a *Demand Management Code of Practice* which requires all electricity distributors in New South Wales to consider demand management options as alternatives to network augmentation when planning the development of the distribution network. Represented the Department on an electricity industry working group which oversighted the development of the Code. Responsible for managing the writing of successive drafts of the Code. Project completed in 1999.

[Download Code](#).

Greenhouse Gas Mitigation Strategy

Client: Ergon Energy, Australia

Developed a verification strategy to provide an independent assessment of the emissions reductions actually achieved through the implementation of Ergon Energy's Greenhouse Gas Mitigation Strategy. This study formed part of a larger project carried out by SRC International to develop a Greenhouse Gas Mitigation Strategy for the energy retailer Ergon Energy, as required under New South Wales legislation. Project completed in 1997.

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