



CAPABILITY STATEMENT: GRANT APPLICATIONS

Writing a good grant application is both an art and a science. It is not technically difficult, in the same way that packing your own parachute is not technically difficult, but in both cases it can help to have someone close at hand who has done it successfully before! That's us...

ABOUT HAC

HAC Consulting was established in 2007 to help government and industry prepare for a carbon constrained future. HAC's combination of policy and research experience, engineering expertise and commercial acumen gives us insight into the requirements of both government and corporate clients.

With experience covering all sectors of the economy, HAC assists with strategic planning, risk analysis, technology assessment and energy and emissions auditing and reporting. We have a proven track record of project development and management, and have worked in partnership with government and commercial clients to secure state, national and international funding for a variety of sustainability initiatives.

We are active corporate members of Greenhouse Challenge Plus, the Western Australian Sustainable Energy Association (WASEA), the Sustainable Transport Coalition (STC), and the Australian Institute of Energy (AIE). Jamie Ally sits on the Chamber of Commerce and Industry of Western Australia (CCI WA) Innovation Committee and Glen Head sits on the board of the WA Sustainable Energy Association and the CCI WA Climate Change Committee.



OUR GENERAL SERVICES

HAC helps clients meet their compliance obligations under legislated and voluntary programs including:

- National Greenhouse and Energy Reporting (NGER) Act
- Greenhouse Challenge Plus
- Energy Efficiency Opportunities (EEO)
- National Pollutant Inventory (NPI)
- Carbon Pollution Reduction Scheme (CPRS)

Compliance – if handled well – will generate a wealth of data and corporate governance systems that can reduce risks and highlight business opportunities. HAC helps clients go ‘beyond compliance’ through timely assessment and management of both the physical risk posed by a changing climate and the corporate and financial risks arising from carbon pricing and how emissions are managed.

The governance systems and risk management processes we help our clients deploy often lead to the identification of new business opportunities in this rapidly changing environment.

We also offer:

- risk management services and tools;
- energy and carbon audits;
- greenhouse gas abatement policy support tools, such as Wedge Analyses and marginal abatement cost curves;
- transport and energy sector abatement policy analysis;
- technology trials and assessment (from feasibility study to business case and implementation);
- corporate sustainability and corporate social responsibility strategies;
- general research and technical report writing services; and
- workshop design and delivery.



GRANT-RELATED SKILLS

General Writing Skills:

HAC is able to communicate complex technical information to an expert panel or a lay-audience in a logical, clear and accessible manner. Further, HAC understands the power of language and is comfortable employing language that is persuasive and engenders a sense of trust in readers.

Several of HAC's core team members edit – and contribute to – international technical journals.

Barriers to Implementation:

HAC understands the multitude of technical, financial, cultural and regulatory elements that influence decisions, especially in relation to the evaluation and deployment of new technologies.

These skills have been employed by the NSW Department of State and Regional Development in relation to Low Carbon Innovations and by the WA Department for Planning and Infrastructure in relation to commercialisation of hydrogen bus construction and associated infrastructure.

Technology Deployment Planning & Road-mapping:

We understand market drivers in the conventional and renewable energy sectors. HAC was engaged in 2008 to *Prepare a Clean Energy Scenario for the South West Interconnected System (SWIS) to 2017/18*. This required a sound understanding of technologies, markets, sunk-costs, levelised energy costs, future capacity factor requirements and demand management options.

We know our way around a Cost Benefit Analysis, especially when used to assess renewable energy technologies. HAC personnel have published life cycle assessments of natural gas, diesel, and electricity energy chains, and economic models of alternative energy initiatives.

Through invited participation in conferences, workshops, and Commonwealth-funded technology road-mapping exercises, we keep in touch with the latest industry and regulation developments, and regularly expand our network of experts, opinion-leaders and politicians.

Our team includes Professor Tony Owen, author of the *Owen Report on Electricity Supply in NSW* – commissioned by the Iemma government – and Professor David Harries, Director of the Research Institute for Sustainable Energy (RISE) based at Murdoch University. HAC also has strong links and a history of close collaboration with Dr Mark Diesendorf, author of *Paths to a Low-Carbon Future: Reducing Australia's greenhouse gas emissions by 30 per cent by 2020* and other influential reports.



We know how to find out anything we might not already know! We have accumulated a vast knowledgebase of information on energy markets in Australia and abroad, conventional and renewable energy technologies, technology roadmaps, independent analyses and government reports. And if we can't access the information we need, chances are that someone in our extensive networks will be able to help or to point us in the right direction.

Workshop Facilitation:

Sometimes the best (or only!) way to get the information you require is by bringing the right people together in a structured workshop environment. Workshops will succeed or fail on the level of pre-planning and the skill of the facilitator. HAC boasts experienced facilitators with complementary technical skills who can ensure the right information is acquired, every time.

Carbon and Energy Pricing:

HAC understands the factors that will influence future energy prices, including changing global demand for finite oil and the introduction of the Australian Government's Carbon Pollution Reduction Scheme (CPRS). In fact HAC has been engaged by the WA Office of Climate Change to prepare issues papers on carbon pricing.

External Communication:

Sometimes a well-researched and well-presented grant application is just not enough. Each grant program has limited funds, and may reject a good application simply because the political winds are not blowing in the right direction.

We know how to get in touch with opinion-leaders in government and industry. We use these networks to provide context in the planning stages of a grant application, and to develop a communication strategy that will improve the likelihood of success.



DEMONSTRATED EXPERIENCE

Members of the HAC team have been developing grant proposals and winning government financial support for many years. Below is a short précis of some relevant projects.

Centre for Research into Energy for Sustainable Transport (CREST)

The CREST proposal brought together multiple university, government and corporate stakeholders with a commitment to the demonstration and commercialisation of renewable technologies. Glen was an integral part of the management team that negotiated the complex commercial arrangements between partners, completed the business case and application and successfully secured several million dollars of government funding under the *Western Australian Centres of Excellence in Science and Innovation* program in 2008.

Hydrogen Fuel Cell Bus Program

Glen Head and Colin Cockroft developed the business and research cases for the continuation of Perth's Hydrogen Fuel Cell Bus Project. These underpinned the *successful* application for WA State Government and Commonwealth Government funding. As program director, Glen was responsible for negotiating the Deed of Agreement with the Commonwealth and reporting against milestones to secure progress payments.

US Department of Energy, Joint Genome Institute Sequencing Grant

The US Department of Energy's Joint Genome Institute (JGI) awarded Murdoch researchers a grant worth around AU \$1 million to sequence the genome of the clover microsymbiont *Rhizobium leguminosarum* bv. *Trifolii* in 2007/2008. This research is of vital importance since symbiotic legumes such as clovers and their nitrogen-fixing rhizobia are the only substitute for fossil fuel-based fertilizer nitrogen, which is becoming more expensive as energy prices increase. This market is worth in excess of US\$13 billion globally. Margaret Gollagher edited the proposal and wrote the sections on sustainability.

Cortical Dynamics Pty Ltd, Commercial Ready Grant

Michael Starling coordinated and edited Cortical Dynamics' application for a \$1.4M Commercial Ready grant to develop its next generation depth of anaesthesia monitoring system. The application included a detailed Business Plan which analysed national and global markets and mapped commercialisation and Intellectual Property (IP) strategies to optimise



market development. The application also comprised a detailed Cost Plan and detailed the national benefits to Australia.

Australian Centre for International Agricultural Research (ACIAR) Grant

In 2006, Margaret Gollagher developed and wrote the social sciences components of the Eastern Cape Communal Arable Lands (ECCAL) international project *Pasture Development for Community Livestock Production in South Africa*. The researchers were awarded funding of \$400,000. Collaborators include Murdoch University, the Western Australian Department of Agriculture, the Republic of South Africa's Agricultural Research Council, the Eastern Cape Department of Agriculture and the Republic of South Africa's National Woolgrowers Association.

Wind Test Centre, RPPGP Grant

David Harries recently secured \$1m in Commonwealth grant funding to establish a wind turbine testing centre in Western Australia. The Small Wind Turbine Test Centre will be funded under the Australian Government's Renewable Remote Power Generation Program.

Strategic Waste Initiative Scheme (SWIS) Grant

Margaret Gollagher obtained a \$250,000 grant for the Vale Smart Builders Program from the Western Australian Strategic Waste Initiative Scheme in 2006/2007. Margaret researched and wrote the grant proposal, gaining support from a network of collaborators including Multiplex Pty Ltd, EarthCare Consulting, Murdoch University, the Western Australian Department of Environment and Conservation, Midland Brick, C&D Recycling, and Western Australian home building companies. The program was designed to facilitate improvements in recycling and reuse of builder's waste on residential developments.

Solco Ltd, Renewable Energy Development Initiative (REDI) grant

As General Manager – Water, Michael Starling was involved in the management and implementation of a REDI grant to develop Solco's proprietary polymer based solar hot water system. This gave him an insight into the process involved and a working knowledge of stakeholder priorities.



OUR PEOPLE

Jamie Ally

Jamie holds a BAsC degree in Mechanical Engineering (Mechatronics) from one of Canada's most prestigious engineering universities and is pursuing a PhD part-time at Murdoch University.

Jamie has built a strong reputation in the alternative fuels and vehicle technologies industries by coupling technical research and development skills with a comprehensive understanding of overarching life cycle and product development impacts.

Having been responsible for systems design (incorporating mechanical, electrical and control theory) and hydrogen drivetrain development and optimisation at Ballard Power Systems in Vancouver, Jamie is one of the few engineers in Australia able to claim hands-on involvement with all stages of development and commercialisation of novel low-carbon transport technologies. Jamie has delivered many lectures and seminars on fuels and energy technologies, presenting on the 'state of the art' and the technical and economic barriers to alternative energy commercialisation.

As a Director of HAC Consulting, Jamie works with government and corporate clients in the fields of energy, climate change, and sustainability. His previous projects include abatement cost calculations, offset strategies, energy efficiency engineering, and process control.

Jamie is a registered professional engineer in Canada, and is a member of the Association of Professional Engineers and Geoscientists of British Columbia (APEG BC). He has published articles in the Journal of Power Sources, the Renewable and Sustainable Energy Reviews, and he is a reviewer for the International Journal of Hydrogen Energy.

Margaret Gollagher

Margaret completed her PhD on corporations and sustainability at Murdoch University's Institute of Sustainability and Technology Policy (ISTP), Australia's premier sustainability research institute. Margaret currently lectures in sustainability at the ISTP, and is a key member of local and international sustainability research programs. She has been instrumental in obtaining research grants from state, national and international funding bodies.

As Principal Policy Adviser for Sustainability to the Western Australian Minister for Planning and Infrastructure, Margaret provided state and national level advice. Her primary duties included overseeing the development of two significant policy documents - the Climate Change, Environment and Energy component of the Australian Transport



Commission's National Transport Policy Framework and the Western Australian Transport Emissions Reduction Strategy. Margaret was also an advisor to the Western Australian Water and Climate Change Cabinet Subcommittee and member of the Senior Officers Group.

As a senior sustainability consultant with HAC, Margaret has focused on issues such as climate change, transport, organisational sustainability, business and sustainability, urban sustainability, waste reuse and recycling, behaviour change and community engagement. She is currently liaising with CSIRO in order to establish a hub of the Energy Mark program in Western Australia.

Margaret edits and contributes to publications such as the international journals Business Strategy and the Environment and Management Review News, as well as forthcoming books on sustainability for international publishers. She is a member of the Greening of Industry Network and the Western Australian Sustainability Practitioners Association.

Michael Starling

Michael holds a Bachelor of Engineering degree in Civil Engineering and obtained Chartered Engineer status in UK. He also completed a Master of Business Administration (MBA) [finance] and Master of Finance [Distinction] at Curtin University Graduate School of Business, Western Australia. Michael has held senior management positions in renewable energy, water and wastewater, and technology commercialisation sectors in Australia and overseas over the past 17 years. He is a valuable Associate of HAC Consulting through his consulting firm Planet Carbon.

Michael held several senior management roles at Solco Ltd, a mid-sized listed Australian renewable energy company (SOO), from 2005 to 2007, including General Manager - Water. Latterly, he helped establish a business consulting division and successfully delivered financial and strategic planning solutions to several technology based companies which increased revenue for Solco and identified potential opportunities for Solco's core business.

As Director of Planet Carbon Pty Ltd, a small consulting business, Michael has helped clients in Finance, Insurance, Tertiary Education, IT, and Biotechnology sectors with business planning and technology commercialisation activities including strategy advisory and fund raising. Planet Carbon is a corporate member of the Western Australian Sustainable Energy Association (WASEA) and Michael sits on the WASEA Committee.

Michael recently attended renewable energy conferences in San Francisco and Glasgow where he gained a detailed insight into global markets and current best practice.



Glen Head

Glen holds a Bachelor of Science degree in Sustainable Development, specialising in Renewable Energy and Public Policy, from Murdoch University. Glen has extensive hands-on experience with strategic management, policy development, risk analysis and climate change related services. Glen has held senior public service positions and consulted to industry for more than 15 years.

Glen recently held the position of Director of Sustainable Transport for the Government of Western Australia and acted as a Senior Policy Adviser to the Western Australian Minister for Planning and Infrastructure. He was responsible for all aspects of sustainable transport policy development.

As a Director and Senior Consultant at HAC Consulting, Glen leads HACs Government Policy practice, providing high level advice on greenhouse gas emissions, carbon trading and energy efficiency to government and corporate clients.

Colin Cockroft

Colin holds a Bachelor of Electronics and Communications Engineering (Honours) degree from Curtin University of Technology, a Masters of Engineering Science in Systems and Control from the University of New South Wales, and has Postgraduate qualifications in Renewable Energy, Energy Economics and Energy Policy from Murdoch University. He is in the final stages of completing a PhD related to the economics of sustainable transport at Murdoch University.

Colin has strong engineering skills and proven experience in the management of complex, high value projects, through various stages of development. In particular, Colin has been responsible for project costing, financing, risk management and strategy development.

Colin has overseen transport technology trials (hydrogen and CNG vehicles and infrastructure), has developed cost-benefit and health-effects models for government and corporate clients and has provided high-level strategic advice on climate change science and abatement opportunities

Dr Ray Wills

Ray has had a wide-ranging career at different times as researcher, planner, adviser, manager and academic. He is CEO of the Western Australian Sustainable Energy Association (WASEA), an Adjunct Senior Research Fellow with the School of Earth and Geographical Sciences at the University of Western Australia, and a valuable Associate of HAC Consulting through his consulting firm, Future Smart Strategies.

Ray is a member of a number of senior policy groups including the Western Australian Government's High Level Stakeholder Group on Greenhouse, the



Western Australian Land Information System's (WALIS) Advisory Committee, and the Conservation Council's Western Australian Collaboration Technical Reference Group. Further, he is a Fellow of the Australian Institute of Energy and member of the Western Australian Branch Committee, and a member of several policy committees of the Chamber of Commerce and Industry of Western Australia including Deputy Chair of CCI's Climate Change Committee.

In a previous position, Ray was the Manager of Sustainability Services with SMEC - the Snowy Mountains Engineering Corporation – a global company with almost 3000 employees in 14 countries. Based in Perth but national in outlook, Ray led and managed the three Sustainability Services teams within SMEC's Environment and Planning group and provided strategic direction for business development.

Ray's knowledge of Government policy, market-based instruments, fuel switching and West Australian business strategies on the reduction of GHG emissions will ensure that the project findings are congruent with the realistic capabilities of both the public and private sectors. Through his work with WASEA and CCI WA, he contributes an enormous insight into the business community including the interests of Alinta, BP, BHP Billiton, Horizon Power, Gull, Rio Tinto, Synergy, Verve Energy, Western Power, and many other large businesses and SMEs.

Prof. David Harries

Professor Harries, the Director of Murdoch University's Research Institute for Sustainable Energy (RISE), has a strong background in all areas of energy policy and regulation and has worked closely with the electricity and gas supply industries. He has represented state governments on renewable energy legislation working groups, third party access to natural gas pipelines, and gas and electricity market development. He has been involved with the electricity network reliability and planning processes, decision making relating to gas and electricity infrastructure investment and in the development of legislation relating to both gas and electricity.

David has undertaken energy related research and consultancies with the University of Tasmania and with the Tasmanian Government working on a range of energy policy issues including developing the legislative and regulatory framework for the introduction of natural gas to Tasmania. He has also worked on national renewable energy initiatives and greenhouse policy. David moved to WA in September 2003 to take up the position of Executive Director of the Sustainable Energy Development Office (SEDO) and was recruited by Murdoch University as Director of RISE in January 2004. Professor Harries has a degree in physics and postgraduate degrees in energy policy.



Tony Owen

Professor Tony Owen led the recent NSW Owen Inquiry into Electricity Supply. As well as providing services to government and industry through HAC Consulting, Tony is currently Professor of Energy Economics at Curtin University, the first position of its kind in Australia.

Professor Owen has held visiting appointments at the Universities of British Columbia, Colorado, Leeds and Exeter, the Organisation for Economic Cooperation and Development (Paris), the UK Department of Energy (Harwell), and the International Energy Agency (Paris). He is a Fellow of the Royal Statistical Society and serves on the International Editorial Boards of Energy Policy and Energy Sources.

Professor Owen is a past President of the International Association for Energy Economics and current President of its Australian affiliate. He has a significant body of published work in energy economics and is eminently qualified to undertake the work described above for the Western Australian Government.

CONTACT US

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