Mr John Brewster  
Chair: TasWind Consultative Committee  
Email: jhbrewster@bigpond.com

9 April 2013

Dear Mr Brewster

Ref: Scope Economic Study – King Island: “What is the Economic Forecast for King Island with and without Wind Towers?”

CH2M HILL Australia Pty Ltd (CH2M HILL) is pleased to respond to the TasWind Consultative Committee’s Project Scope regarding “What is the Economic Forecast for King Island with and without Wind Towers?”.

We have the capability and experience necessary to undertake this socio-economic study of King Island development options with and without wind towers. We will work closely with the TasWind Consultative Committee to ensure that we understand and meet your requirements. We are especially interested in exploring with you what is the most appropriate economic development model for King Island in the future.

Our proposal includes our summary understanding of the project, a methodology for completing the socio-economic study, our experience and expertise, key personnel, a breakdown of the proposed fee, and details of our quality management system. Importantly, we are available to commence the project immediately and meet your timelines.

We trust that this proposal is to the TasWind Consultative Committee’s satisfaction. Please contact Phil Hughes on Ph 03 8682 3952 (or email: phil.hughes@ch2m.com) should you have any questions regarding this proposal, or any other issues you wish to discuss.

Yours sincerely

David Middleton  
Regional Business Group Manager, Water, ANZ
Proposal for Provision of Services: Economic Study – King Island: “What is the Economic Forecast for King Island with and without Wind Towers?”

Project appreciation
King Island is situated at the western entrance to Bass Strait and is midway between Victoria and Tasmania. King Island is approximately 64 kilometres north to south and 27 kilometres east to west. The Island has a population of approximately 1,565 people (2011 ABS Census) of which around 800 reside in the township of Currie situated on the west coast. There are two other villages – Naracoopa on the east coast and Grassy (a former mining town) to the south east. Important local industries are beef, dairy, fishing, kelp and tourism.¹

King Island has to make a decision on its future economic direction given an ongoing loss of population and a decline in traditional rural industries. Current options include a large wind farm development (TasWind) with around 200 wind towers by Hydro Tasmania, and one to two international golf course developments with supporting tourism investment.² There may also be other development options that would be appropriate for King Island given the local community, economy and natural environment.

The TasWind Consultative Committee has been funded by Hydro Tasmania to commission an independent strategic socio-economic study to assess the economic forecast for King Island with and without wind towers.³

CH2M HILL has the capability and experience necessary to undertake the independent socio-economic study of King Island and assess the economic forecast and development options with and without wind towers. CH2M HILL employs a multi-disciplinary team of economists, scientists, planners, engineers and project managers enabling it to undertake strategic and innovative projects by combining its economic, financial, environmental, technical and project skills.

Collectively, the proposed CH2M HILL project team:

- Has demonstrated experience with socio-economic assessments and related economic, environmental and sustainability studies.
- Has completed a range of innovative socio-economic and sustainability studies involving research, assessment, engagement and presentation of results.

² TasWind Consultative Committee, 2013, Scope Economic Study – King Island.
³ TasWind Consultative Committee, 2013, Scope Economic Study – King Island.
Has proven project and time management skills, and high quality risk management skills.

Is well placed to work with the TasWind Consultative Committee to deliver the socio-economic study of King Island and assess the economic forecast and development options with and without wind towers.

Given the timeframes required for the delivery of the project, effective time management will be a critical component of the successful delivery of this project. CH2M HILL is well placed to meet this challenge as demonstrated by our extensive project experience and work with a wide range of Council’s, departments, agencies and regulators. We well understand the importance of timeliness when completing work of this nature. Our clients will attest to our ability to deliver on time and on budget.

Proposed Methodology
CH2M HILL has provided a description of our proposed methodology, outputs, and work program to deliver the project requirements outlined in the Project Scope.

We have assessed the activities required to complete the “Economic Forecast for King Island with and without Wind Towers” (the Study) and grouped them into four phases which logically describe the approach we will adopt to successfully complete the Study. Our proposed methodology has been divided into the following phases in accordance with the Project Scope:

- **Phase 1**: Project initiation and setup; and review of Hydro Tasmania’s list of economic benefits and costs for King Island.
- **Phase 2**: Development of a socio-economic profile of King Island under model 1 (with wind towers) and model 2 (without wind towers).
- **Phase 3**: Economic comparison of both models, assessment of how the respective models place King Island from an economic perspective, and discussion of how can King Island best prosper long-term. This phase includes preparation of a 10-15 page report plus appendices.
- **Phase 4**: Presentation of findings to the King Island community.

Each phase is outlined in more detail below.

**Phase 1: Project initiation and setup, and Review of Hydro Tasmania list of Economic Benefits and Costs for King Island**

This phase provides for project establishment and an initial project meeting with the TWCC with regards to the Study methodology, approach, activities and deliverables. The Study will be delivered according to CH2M HILL’s accredited quality, health, safety and
environment management systems. Through the project, the CH2M HILL project team will provide weekly project reports and regularly liaise with TCWW regarding progress of the project and potential issues to ensure “no surprises”.

In Phase 1, CH2M HILL will undertake a peer review of Hydro Tasmania’s socio-economic report and associated economic benefits and costs to King Island of the TasWind Project. The peer review will assess Hydro Tasmania’s study based on the appropriateness and reasonableness of:

- The study’s terms of reference and how the study has sought to address the terms of reference.
- The methodology used to assess costs and benefits and key assumptions, data and information sourced.
- Key findings and results.

Specific tasks to be undertaken as part of Phase 1 include:

- Facilitation of a Project Inception (“kick-off”) Meeting for the Study via teleconference with key TCWW representatives to ensure alignment on project objectives, approach and timing.
- Preparation of a Project Plan (Project Quality Plan), in accordance with CH2M HILL’s Project Delivery System.
- Peer review of Hydro Tasmania’s socio-economic report and associated economic benefits and costs to King Island of the TasWind Project.

**Project resources:** Phil Hughes and David Somek will attend the Project Inception Meeting (via teleconference) and review Hydro Tasmania’s socio-economic report.

**Deliverables:** The deliverables for Phase 1 include a brief agenda and summary meeting minutes (email format) for the Project Inception Meeting, and a technical memo documenting the peer review of Hydro Tasmania’s socio-economic report.

**Phase 2: Socio-economic profiles of King Island with and without the TasWind Project**

This phase involves developing a snap shot of the economic forecast for King Island over 5, 10 and a proposed 20 year period with and without wind towers. CH2M HILL will develop a baseline socio-economic profile of the current economic, environmental and social situation in King Island. The baseline profile of King Island will be based on 2011 Census and other socio-economic data published by the Australian Bureau of Statistics (ABS). The baseline profile will subsequently used to develop two models for King Island’s forecast socio-economic profile: Model 1 with the wind towers, and Model 2 without the wind towers.
Specific tasks to be undertaken as part of Phase 1 include the following:

- Develop a strategic framework, in consultation with the TWCC, that captures key economic, environmental and social parameters appropriate to King Island. The strategic framework will guide the development of the baseline profile and socio-economic forecast models. An indicative strategic framework is outlined in Table 1 for discussion.

- Develop a baseline socio-economic profile of the current situation in King Island based on 2011 Census and other ABS socio-economic data, and supported by additional information and data as required (e.g. Tasmanian Government, King Island Council). Potential sources of information may include:
  - ABS 2011 Census.
  - ABS demographic and economic statistics.
  - ABS state accounts.
  - Tasmanian Departmental demographic and economic forecasts and information.
  - King Island Council information and data.
  - Tasmanian and King Island industry data.
  - TasWind Project information and data (http://www.taswind.com.au/).
  - King Island Major project information and data, for example Cape Wickham Golf Course Development.

- Develop socio-economic forecasts for King Island under two models: with the TasWind Project (Model 1), and without the TasWind Project (Model 2). Each model will measure key economic, environmental and social parameters at key milestones (assumed to be 5, 10 and 20 years after the commencement of construction of the TasWind Project – third period to be discussed).

An indicative strategic framework is outlined in Table 1. The framework will be used to illustrate the forecast results for each of the three time periods drawing on quantitative and qualitative data and findings. We will also identify the trend from the base year.
Table 1 – Indicative strategic framework (for discussion only)

<table>
<thead>
<tr>
<th>King Island, after 5 years (with wind towers)</th>
<th>Economic</th>
<th>Environmental</th>
<th>Social</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employment</td>
<td>#</td>
<td>Development footprint</td>
<td>#</td>
</tr>
<tr>
<td>Regional economic output (Gross Regional Production)</td>
<td>#</td>
<td>Visual and noise amenity</td>
<td>#</td>
</tr>
<tr>
<td>Household income</td>
<td>#</td>
<td>Cost of living</td>
<td>#</td>
</tr>
<tr>
<td>Land value</td>
<td>#</td>
<td>#</td>
<td></td>
</tr>
</tbody>
</table>

In accordance with the Project Scope, the following economic assumptions will be made within both of the models:

1. Beef and dairy farming, kelp industries, fishing, dairy production (cheese manufacturing) and mining industries will operate as if ‘business as usual’. That is production levels remain relatively similar to present day levels. CPI will be included in economic analyses. The exception to this assumption is where economic impacts are identifiable as a result of activity within the model. For example, if agricultural practices were negatively affected as a result of wind turbine exclusion zones.

2. Tourism projections should be included in both models, including any associated changes in correlation with the proposed golf course developments.

3. Positive and negative impacts as identified in the Project Scope, such as a potential 500 fly in and out workers.

Other assumptions regarding the development of the respective models include:

- CH2M HILL will develop the models in Microsoft Excel to better enable the modelling of socio-economic impacts.

- To enhance the quantitative modelling of agreed economic, environmental and social impacts, CH2M HILL will undertake supporting qualitative analysis on relevant issues where appropriate (e.g. social issues associated with fly-in-fly-out workers).

Project resources: Phil Hughes and David Somek will develop the strategic framework, baseline socio-economic profile, and socio-economic models of King Island with and without the TasWind Project.

Deliverables: The deliverables for Phase 2 will be the strategic framework, a baseline socio-economic profile of King Island, and the two respective socio-economic models of King Island.
Phase 3: Economic comparison of King Island under both models

Drawing on the outcomes of Phase 1 and Phase 2, CH2M HILL will prepare and submit a draft report that undertakes a suitably detailed economic comparison of King Island’s socio-economic profile under Models 1 and 2.

In undertaking the comparative assessment of the models, CH2M HILL will assess how each respective model impacts key economic, environmental and social parameters, including tourism, population, employment opportunities, and port and road infrastructure. Of particular importance, CH2M HILL will discuss where does this place King Island from an economic perspective, and how King Island’s long-term prosperity can be best achieved.

Contained in the 10-15 page report will be:

- Brief introduction, background and project objectives.
- Details of approach and methodology, including strategic framework.
- Description and outline of King Island’s baseline snapshot.
- Description and outline of Model 1 and Model 2, including explanation of relevant assumptions and additional qualitative analysis of key issues.
- Comparison of Model 1 and Model 2.
- Discussion and comparison of each model for King Island, and how King Island’s long-term prosperity can be best achieved.

CH2M HILL will ensure the report is presented in “layman terms” to enhance its accessibility to all readers. To ensure all key issues are appropriately identified and addressed, CH2M HILL recommends a draft report review workshop be held via teleconference with key TWCC representatives to receive feedback on the draft report.

Following receipt and discussion of TWCC’s comments on the draft report, a final report will be prepared and submitted. A draft report review period of 5 working days has been allowed for within the project given the tight timeline.

**Project resources:** Phil Hughes and David Somek will prepare the draft and final reports.

**Deliverables:** The deliverables for Phase 3 will be the draft and final reports with the results of the study assessing the “Economic Forecast for King Island with and without Wind Towers”.
Phase 4: Presentation of findings to the King Island community

Following the submission of the final report to the TWCC, CH2M HILL will present the findings of the Study at a community meeting (or meetings) in King Island and field questions from the community.

Project resources: Phil Hughes will present the findings of the Study at a community meeting (or meetings).

Deliverables: The deliverables for Phase 4 will be the presentation of the Study findings to a community meeting(s) in King Island.

Project work program

The proposed work program for the delivery of the Study is outlined in Table 2 below.

Table 2 – Work program

<table>
<thead>
<tr>
<th>Phase</th>
<th>Task/deliverable</th>
<th>Scheduled completion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase 1</td>
<td>Project inception and kick-off</td>
<td>Week ending 12 April 2013</td>
</tr>
<tr>
<td></td>
<td>Peer review of Hydro Tasmania’s socio-economic study</td>
<td>Friday 19 April 2013</td>
</tr>
<tr>
<td>Phase 2</td>
<td>Strategic framework</td>
<td>Friday 19 April 2013</td>
</tr>
<tr>
<td></td>
<td>Baseline snapshot of King Island</td>
<td>Friday  26 April 2013</td>
</tr>
<tr>
<td></td>
<td>Completion of Model 1 and Model 2</td>
<td>Friday 26 April 2013</td>
</tr>
<tr>
<td>Phase 3</td>
<td>Draft Report</td>
<td>Friday 3 May 2013</td>
</tr>
<tr>
<td></td>
<td>Final Report</td>
<td>Friday 10 May 2013</td>
</tr>
<tr>
<td>Phase 4</td>
<td>Community presentation</td>
<td>Week commencing 13 May 2013</td>
</tr>
</tbody>
</table>

Proposed Fee

CH2M HILL propose to undertake this assignment for a fixed lump sum fee of $19,680 (ex GST). CH2M HILL propose to submit monthly invoices on work completed in the previous month.

The cost of travelling to King Island for the community presentation(s) will be the subject of a variation. The indicative daily rate for Phil Hughes, Principal Consultant, is $1,800 per day, and estimated taxi and airfare expenses of $550.

Table 3 – Proposed fee

<table>
<thead>
<tr>
<th>Scope of Works</th>
<th>Description</th>
<th>Lump Sum Cost (Excl. GST)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase 1</td>
<td>Project initiation and peer review</td>
<td>$2,880</td>
</tr>
<tr>
<td>Phase 2</td>
<td>Socio-economic profile (Model 1 and Model 2)</td>
<td>$8,880</td>
</tr>
</tbody>
</table>
**Scope of Works** | **Description** | **Lump Sum Cost (Excl. GST)**
--- | --- | ---
Phase 3 | Economic comparison, draft and final report | $7,920
Phase 4 | Community presentation[s]$^1$ | -
**Total** | **$19,680** |

$^1$ Phase 4 will be subject to a variation of $2,350 (ex GST).

The following assumptions have been made:

- Information will be provided by the TasWind Consultative Committee or sourced from other providers, such as the Australian Bureau of Statistics, at no cost.
- One set of consolidated comments on the draft report will be provided by the TasWind Consultative Committee in a timely manner to maintain the project timeline. We have allowed a period of five days for comments on the draft report in our proposed timeframe.
- The proposed CH2M HILL fee is valid for one month after submission.

**Terms of Engagement**

CH2M HILL proposes that this assignment is completed under its standard terms and conditions (Attachment A). We also propose that the following disclaimer is to be included in the project report:

>This King Island Socio-Economic Assessment (the Report) has been prepared by CH2M HILL Australia Pty Ltd (CH2M HILL) for the TasWind Consultative Committee in accordance with an agreement between CH2M HILL and the TasWind Consultative Committee. The Report may only be used and relied on by the TasWind Consultative Committee to understand potential socio-economic impacts associated with and without wind development (the Purpose) and may not be used by, or relied on by any person other than the TasWind Consultative Committee. The services undertaken by CH2M HILL in connection with preparing the Report were limited to those specifically detailed in the Report. The Report is based on conditions encountered and information reviewed, including assumptions made by CH2M HILL at the time of preparing the Report. To the maximum extent permitted by law, CH2M HILL expressly disclaims responsibility for or liability arising from any error in, or omission in connection with assumptions, or reliance on the Report by a third party, or use of this Report other than for the Purpose.

**Insurance**

CH2M HILL holds appropriate insurance cover in respect to professional indemnity and public liability.
**Experience and Expertise**

We have a broad range of experience and expertise in socio-economic and sustainability assessments, research studies and community engagement. Selected examples of our major projects are outlined in the table below.

<table>
<thead>
<tr>
<th>Project and Client</th>
<th>Project Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Redland Sustainability Study, 2011, Redland City Council, Queensland</td>
<td>We completed a strategic sustainability assessment and modelled the key economic, environmental and social impacts of future population growth and housing development in Redland. This project featured development and application of an innovative sustainability assessment model and presentation of the results to a meeting of the Redland City Council.</td>
</tr>
<tr>
<td>Economic Impact Appraisal – Coal Seam Gas Development, 2012-13, Queensland Gas Corporation/ERM</td>
<td>We prepared an Economic Impact Assessment for QGC/ERM to support the development of an Environmental Impact Statement for an extension of a major coal seam gas project in Eastern Queensland. This included developing a socio-economic baseline profile and economic impact assessment of the CSG development.</td>
</tr>
<tr>
<td>Integrated Life Cycle Assessment of Water Management Options, 2012-13, Santos</td>
<td>We undertook an integrated life-cycle assessment of water and brine management options for coal seam gas water management involving an economic, environmental and social assessment of each option. The assessment covered the commissioning, operations and decommissioning stages of each option.</td>
</tr>
<tr>
<td>Post Implementation Review of the Lower Murray Reclaimed Irrigation Areas (LMRIA) Program, 2009, (former) South Australian Department of Water, Land and Biodiversity Conservation</td>
<td>We conducted a major program review to assess the effectiveness and efficiency, and determine the success of, the $25 million LMRIA program and capture the lessons learned for future reference. We assessed the LMRIA program against its goals and objectives with supporting socio-economic analysis, review of water markets and trading, and stakeholder engagement. Our review was positively received and we were subsequently invited to present the findings to the South Australian Minister for Water.</td>
</tr>
<tr>
<td>Economic Appraisal of Stormwater Harvesting and Reuse Schemes, 2009, Brisbane City Council</td>
<td>We completed an economic cost benefit analysis (CBA) of draft engineering design concepts of storm water harvesting and reuse (SWHR) schemes in order for Council to obtain Commonwealth funding. We undertook a rapid net present value (NPV) economic analysis of the benefit of avoiding additional potable water use.</td>
</tr>
<tr>
<td>Flood Risk Reduction: Assessment of Costs and Benefits, 2009, Victorian Department of Sustainability and Environment (DSE)</td>
<td>We undertook a economic assessment of the costs and benefits of delivering various non-structural flood risk reduction measures across Victoria on a state-wide basis. Our analysis significantly contributed to an improved understanding of the value of proposed flood risk measures. “This is a seminal analysis that should set a benchmark for future flood policy work” DSE, 2009.</td>
</tr>
</tbody>
</table>
Project and Client | Project Description
---|---
Augmenting Melbourne’s Water Supply, 2010, Melbourne Water | We conducted a literature review of how changes in urban form and building design may deliver water savings; and developed a strategic model to quantify the potential reduction in demand for potable water in 2030 and 2060 due to water efficiency measures and alternative water sources.

Solar Photovoltaic’s Feasibility Study, 2008, Victorian Department of Transport | We completed a high level feasibility study on the application of solar PV on railway stations for the Victorian Department of Transport.

Economic analysis of sustainable land management, 2005-06, Victorian Department of Sustainability and Environment | This study involved an economic analysis of key risks to the Victorian rural economy from a decline in landscape condition. We prepared an economic profile of major sectors, assessed historic growth rates and future trends, and considered costs to the economy and risks from a decline in landscape condition. [Undertaken by Phil Hughes]

**Personnel Experience and Expertise**

To undertake the proposed socio-economic study, we propose an experienced team of economists. The team will be lead by Phil Hughes with support from David Somek. One page curriculum vitae are provided in Appendix A.

<table>
<thead>
<tr>
<th>Phil Hughes</th>
</tr>
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<tbody>
<tr>
<td>Principal Consultant, Sustainability &amp; Water Management</td>
</tr>
<tr>
<td><strong>Project Role: Technical lead, socio-economic analysis</strong></td>
</tr>
</tbody>
</table>

*Qualifications:* Masters in Environmental Policy/Planning; BA Economics; BSc Geography

*Experience:* Phil has 20 years experience in economic analysis, policy and planning, program evaluation, natural resource management (NRM) and stakeholder engagement. He has advanced understanding of economic and regulatory research and analysis, socio-economic assessment, policy and program design, program evaluation and sustainability assessment. Phil has led a range of socio-economic studies including economic impact studies, cost benefit analysis, and economic and sustainability assessments for local councils, departments, private companies and water utilities. Phil has also managed major national-level policy reviews and program evaluations in Australia and New Zealand – often featuring significant stakeholder engagement with the community, government, industry and NGOs. For example, Phil project managed and led the evaluation of the $25 million Queensland Wetlands Programme, and the review and audit of the $23 million Lower Murray Reclaimed Irrigation Areas restructuring and rehabilitation program. Both of these projects involved significant assessment and extensive engagement with government agencies, industry groups, landowners and the community. Prior to joining CH2M HILL, Phil worked as an environmental economist and research manager for the Department of Sustainability and Environment and the Australian Productivity Commission.
David Somek  
Senior Economist  

**Qualifications:** B. Commerce/B. Economics; Hons in Economics  

**Experience:** David has eight years experience and is a specialist in economic and financial analysis, policy analysis, and regulatory pricing reviews and audits. David has worked in both the private and public sectors on strategic economic policy, financial and budget analysis. David has significant experience in economic assessment, budgetary and costing reviews, review of capital and operating expenditure, audits of operational performance, due diligence reviews, regulatory cost impact reviews, process and metric benchmarking, including for Brisbane and Redland City Councils. David's experience in economic and policy research and review relates to issues stretching across infrastructure, environment, agriculture, mining, energy, drought and bio-security. David has undertaken various socio-economic studies including economic impact studies, cost benefit analysis (e.g. of stormwater management and flood mitigation options). David has also undertaken a range of sustainability and strategic life cycle assessments in the oil and gas sectors.

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**CH2M HILL’s Quality Management System**

The Quality System used in Australia is based on the universal CH2M HILL Project Delivery System (PDS). The quality system has been certified by SAI Global to ISO9001:2008. The certification covers all of the CH2M HILL Australian offices (Sydney, Melbourne and Brisbane).

The CH2M HILL quality system accesses a wide range of documents including:

- A standard set of key processes, forms and management plans, to provide a consistent and standardised approach to common project requirements.
- An ability to select system components from a range of available documents and assemble project documentation based on project specific requirements and risks.
- An integrated system approach where project management plans cover specific requirements (contractual, HSE etc.) and also interface and inter-relate with each other.
- CH2M HILL Corporate documentation from a global centre of excellence and the engineering design group. This includes a centralised BD/PD Portal containing guidelines, tools and templates for all aspects of business development and project delivery.

CH2M HILL defines quality assurance (QA) as a system of activities for planning and executing work effectively. QA involves actions such as project planning and chartering, effective and efficient work processes and procedures, documentation, review, learning, and training. QA represents the activities necessary to provide adequate confidence that the client's requirements will be met. Quality will be assured through this project with appropriate internal review of all deliverables by the technical lead prior to submission.
Short Curriculum Vitae – Economic assessment

- Phil Hughes, Principal Consultant/Economist
- David Somek, Senior Economist

Attachment A: Proposed CH2M HILL Terms
Phil Hughes
Principal Consultant: Sustainability and Water Management
Water and Environment

Education
• BSc (Geography) and BA (Economics); University of Otago, New Zealand.
• MRRP (Environmental Planning) (Dist.); University of Otago, New Zealand.
• Member of Environment Institute of Australia and New Zealand; New Zealand Planning Institute; and Australian Water Association.
• Australasian Reporting Awards Director and Adjudicator.

Distinguishing Qualifications
• Strategy design, development and review
• Policy analysis and review
• Economic analysis and research
• Sustainability assessment
• Natural resource management/planning
• Water resource management
• Program design and evaluation
• Indicator design and review
• Sustainability and integrated reporting
• Annual reporting and benchmarking
• State of the Environment reporting frameworks, and
• Stakeholder engagement and workshop facilitation

Related Experience
Phil Hughes is a Principal Consultant with 20 years experience in environmental management, environmental economics and sustainable development. He is an accomplished sustainability advisor, environmental economist, policy analyst and workshop facilitator. Phil has extensive experience across many sectors including sustainable water management, sustainability assessment, integrated and sustainability reporting, urban sustainability, sustainable land management and biodiversity conservation.

Representative Projects
Integrated Water Management Workshops (2012): Strategic advice and facilitation of project workshops for Office of Living Victoria on integrated water management and liveability.
Integrated life-cycle assessment of CSG water and brine management options (2012): An integrated life-cycle assessment of CSG water and brine management options, involving an economic, environmental and social assessment of each option. The assessment also covers the commissioning, operations and decommissioning stages of each option.
QGC Economic Impact Assessment (2012): Project management and preparation of an Economic Impact Assessment for QGC to support an extension of a major coal seam gas (CSG) project in Eastern Queensland.
Santos CSG Water Management Options Multi-Criteria Analysis (MCA) (2012): Preparation of a MCA to identify the most preferred CSG water management option for the Fairview CSG field. Potential options were assessed against a range of technical, social, environmental and cost criteria, and ranked from least preferred to most preferred option.
Integrated Water Management Workshops (2011): Strategic advice and facilitation of project workshops for Melbourne Water on a future IWM strategy for the West of Melbourne.
Operating Licence Audit – Catchment Management (2011): Audit of performance of the Sydney Catchment Authority against the Operating Licence for the Independent Pricing and Regulatory Tribunal (IPART) of NSW.


Augmenting Melbourne’s Water Supply (2010): Preliminary study and literature review of how changes in urban form and building design may deliver water savings. Development of a model to quantify the potential reduction in demand for potable water in 2030 and 2060 due to water efficiency measures and alternative water sources.


Post Implementation Review of the Lower Murray Reclaimed Irrigation Areas Program (2009): Major program review to determine the success of the $25 million LMRIA program and capture the lessons learned for future reference with significant analysis and stakeholder engagement.


Rural and Urban Water Management (2005-06): Analysis of use of triple bottom line assessment approaches to inform sustainable water strategies; and input into economic valuation of healthy rivers (while at the Department of Sustainability and Environment).

Sustainable Land Management (2005-06): Economic analysis of how to improve public land management in Victoria; and analysis of key risks to the rural economy from a decline in landscape condition (while at the Department of Sustainability and Environment).

Environmental Regulation and Aquaculture (2004): Economic research and analysis of regulatory frameworks affecting aquaculture management across Australia (while at Productivity Commission).
David Somek
Senior Economist
Water and Environment

Education
- Bachelor of Commerce, 2003, Monash University
- Bachelor of Economics (Honours), 2004, Monash University
- Member of Economic Society of Australia (Victorian Branch)
- Member of Australian Agriculture & Resource Economics Society

Distinguishing Qualifications
- Economic analysis and research
- Policy analysis, research and review
- Cost benefit analysis
- Integrated options assessment
- Natural resource management
- Water resource management
- Program evaluation
- Sustainability assessment and reporting
- Scenario analysis and modelling
- Data collection and analysis
- Stakeholder engagement
- Project management

Related Experience
David Somek is Senior Economist with eight years experience specialising in economic policy analysis and review, program evaluation, benefit-cost analysis, integrated options assessment, financial analysis, sustainability assessment and reporting, stakeholder engagement, and scenario modelling and analysis. David has significant experience providing the above services for both government and private sectors, particularly across the water, environment, and natural resources sectors.

Representative Projects
Integrated life-cycle assessment of water and brine management options (2012-13): An integrated life-cycle assessment of water and brine management options, involving an economic, environmental and social assessment of each option. The assessment also covers the commissioning, operations and decommissioning stages of each option.

Economic Impact Assessment, major project extension (2011-12): Preparation of an Economic Impact Assessment to support an extension of an Environmental Impact Statement for a major infrastructure project.

Water Management Options Multi-Criteria Analysis (2012): Preparation of an integrated MCA to identify the most preferred water management option for a project field. Potential options were assessed and scored against a range of technical, social, environmental and cost criteria, and ranked from least preferred to most preferred option.

Strategic Review of Draft NSW Aquifer Interference Policy and Draft New England North West Strategic Regional Land Use Plan (2012): Strategic reviews to identify potential implications and issues relating to the CSG industry in NSW. In particular, the reviews considered implications for: approval processes; water licence arrangements and requirements; groundwater assessments, monitoring and management; reporting requirements; soil and aquifer impacts; and assessment processes.

Economic review of Victorian biodiversity and NRM policy and legislation (2011): Review of Victorian biodiversity and NRM policy issues using first principles to outline current arrangements, targets, objectives and principles underpinning current policy approaches, and identify key policy concerns and opportunities.

Cost Benefit Analysis of Stormwater Harvesting and Reuse projects (2009-10): Strategic economic evaluation of stormwater harvesting and reuse projects, involving a rapid appraisal NPV stage and full
economic cost benefit analysis considering both avoided costs of potable water supply and wider environmental and social values on a site specific basis.

**Flood Risk Reduction – Assessment of Costs and Benefits (2009):** Major strategic study to determine and analyse the costs and benefits of delivering various non-structural flood risk mitigation measures across Victoria on a State-wide basis. Project involved the development of an economic model to assess the costs and benefits of each of the mitigation measures across Victoria on a state-wide basis.

**ERA Inquiry into State Underground Power Program Cost Benefit Study (2010):** Technical review and assessment of the State Underground Power Program to assist the ERA’s Cost-Benefit Study. The assessment included an examination of costs, a review of the impact the selection process has on project costs, and comparison of maintenance costs for overhead powerlines and underground cables.

**Gladstone Area Water Board - 2010 Pricing Investigation (2010):** Major strategic review of historical and proposed operating expenditure. Project involved a detailed assessment of each category of proposed expenditure and an indicative benchmarking assessment of operating costs against comparator organisations.

**Enlarged Cotter Dam Water Security Project Investigation (2010):** Review of prudence and efficiency of project cost estimates in meeting water security requirements. Involved assessment of contractual and alliance arrangements for project delivery, potential for cost variations and savings, and review of key drivers for expenditure including net economic benefit analysis.

**Redlands Sustainability Study (2011):** Development of an integrated environmental, economic and social scenario model to assess key sustainability impacts of future population growth and development in Redland City Council, Queensland. GIS generated maps were produced to show the location and extent of sustainability impacts.

**Preparation of National Performance Report 2010-11 Rural Water Service Providers (2011):** Preparation and development of the 2010-11 rural water service providers report, including a stand-alone ‘highlights’ sections on key issues relating to service provider characteristics, customer service, environmental and water management, and financial performance.

**Preliminary study into augmenting Melbourne’s water supply by changing the urban form (2010):** Preliminary study involving development of a water augmentation model to quantify the potential reduction in demand for potable water in 2030 and 2060 due to efficiency measures and alternative water sources.

**Lower Murray Reclaimed Irrigation Areas (LMRIA) Post Implementation Review (2009):** Major program review to determine the success of the LMRIA program and capture the lessons learned for future reference with extensive analysis and stakeholder engagement for the former South Australian Department of Water, Land and Biodiversity Conservation.

**Queensland Wetlands Programme Evaluation (2008):** Major strategic programme and project evaluation with extensive stakeholder engagement, analysis and review of program logic for Queensland Department of Natural Resources and Water.