



# Impact evaluation of the ESRC's Energy Research Groups



Final Report to ESRC from CAG Consultants

## Impact evaluation of ESRC's Energy Research Groups

A report by CAG Consultants  
July 2012

CAG CONSULTANTS  
Gordon House  
6 Lissenden Gardens  
London NW5 1LX  
Tel/fax 020 7482 8882  
hq@cagconsult.co.uk  
www.cagconsultants.co.uk

For direct enquiries about this report please contact:  
Emma Cranidge  
Senior Consultant  
CAG Consultants  
01706 817347  
[ec@cagconsult.co.uk](mailto:ec@cagconsult.co.uk)

Author	Niall Machin Senior Consultant	
Reviewer 1	Emma Cranidge Director	

### CAG Consultants

CAG Consultants is an independent employee-owned business. Founded in 1983, we are an independent, employee-owned co-operative. We provide support, policy advice and training in a wide range of fields relating to sustainable development and climate change, regeneration and stakeholder & community involvement. We deliver high quality, innovative and thoughtful work for our clients, who include government departments, local authorities, public agencies, the NHS and regeneration and community planning partners across the UK. We pride ourselves on our strong ethical approach and our commitment to social justice and improving and protecting the environment. For more information, see [www.cagconsultants.co.uk](http://www.cagconsultants.co.uk)

## Contents

Contents	3
Executive summary	5
Summary of the evaluation methodology	5
Non academic policy and practice impact	6
Impact of any synergistic activity between the Groups	8
Mechanisms and routes to impact	8
Lessons learned regarding maximising the non-academic impact of research	8
Conclusions and recommendations	8
1. Background to the evaluation and the Energy Research Groups	10
1.1 Background	10
1.2 Terms of reference	10
1.3 Brief description of each group	11
2. Evaluation methodology	13
2.1 Approach adopted	13
2.2 Discussion points	14
2.3 Key informants/respondents/participants in the study	15
2.4 Case studies	15
3. Commentary	16
3.1 On line survey	16
3.2 Impact on policy and practice	16
3.2.1 Instrumental impacts	16
3.2.2 Conceptual	19
3.2.3 Capacity building	23
3.2.4 Future impacts	24
3.3 The impact of any synergistic activity between the Groups	24
3.4 Mechanisms and routes to impact	26
3.4.1 Planned routes	27
3.4.2 Other factors affecting influence	30
3.4.3 Summary	32
3.5 Lessons learned regarding maximising the non-academic impact of research	32
3.5.1 What is expected?	32
3.5.2 Should research make policy?	33
3.5.3 Designing for impact	33
3.5.4 What do policy makers find useful?	34

3.5.5 How to better connect end users and academia?	35
3.6 Methods used to evaluate and identify research impacts	37
<b>4. Conclusions and recommendations</b>	<b>38</b>
4.1 Key conclusions	38
4.2 Lessons learned for impact generation	39
4.3 Notes on evaluation methodology	40
4.4 Recommendations to encourage impact and influence	40
<b>Annex 1 Additional methodology detail</b>	<b>Error! Bookmark not defined.</b>
A1. Interviewee details	<b>Error! Bookmark not defined.</b>
<b>Annex 2 Case studies</b>	<b>43</b>
Case study A. Low Carbon Technology Transfer to Developing Countries: Sussex Energy Group (SEG)	43
Case study B. Electricity Market Reform: Electricity Policy Research Group (EPRG)	48
Case study C. 21stC Living Project - RESOLVE	52
Case study D. Ofgem's Project TransmiT - EPRG	54
Case study E. Nuclear power – SEG	55
Case study F. Ofgem's RPI-X@20 review - EPRG	57

## Executive summary

The Economic and Research Council (ESRC) commissioned CAG Consultants to undertake an in-depth assessment of the impact of its three Energy Research Groups on policy makers and key stakeholders within the power and energy sector.

### Summary of the investments

In 2005, ESRC commissioned three Energy Research Groups as part of its contribution to the RCUK's Energy Research Programme: the **Sussex Energy Group (SEG)**; the **Electricity Policy Research Group** (based at Cambridge); and **RESOLVE** (at the University of Surrey). Total funding was £7,998,891.15 and the grants ran for five years with extensions until November 2011.

The **Sussex Energy Group (SEG)** was awarded £2,821,074.44 (1/4/2005- 31/3/2010) to conduct an interdisciplinary and interactive research programme on the design, analysis and evaluation of public and corporate policies to manage the transition to a low carbon economy. Cambridge's **Electricity Policy Research Group**, (1/10/2005-30/9/2010) was awarded £2,416,978.81 ESRC to research regulation and markets; technology and innovation; governance and policies; and climate change policy. The **Research Group on Lifestyles Values and the Environment (RESOLVE)**<sup>1</sup> (2/5/2006- 30/11/2011) at the University of Surrey was awarded £2,760,837.90 to develop a robust understanding of the links between lifestyle, societal values and the environment.

### Resources

Centre	Researchers*	PhDs**
SEG	19/23	16
EPRG	7/17	14
RESOLVE	12/23	5

\* these figures show number of research staff funded by ESRC, out of the total number within the centre (i.e. the latter includes staff funded from elsewhere). \*\* includes ESRC studentships plus DPhil students supervised by centre academic staff during the period of the core ESRC award.

### Summary of the evaluation methodology

A qualitative tracking forward approach was undertaken, utilising desk review, key internal and external (end user) interviews, case studies and supplemented by some quantitative information from an on-line end user survey.

## Non academic policy and practice impact

The three groups were all clearly influential in their fields and the evaluation has identified a wide range of impacts. We have used the following categorisation of social science impact taken from Nutley et al (2007):

- Instrumental - for example, influencing the development of policy, practice or service provision, shaping legislation, altering behaviour;
- Conceptual - for example, contributing to the understanding of these and related issues, reframing debates;
- Capacity building - for example, through technical/personal skill development.

## Instrumental impact

EPRG was seen as a primary source of advice and knowledge on energy economics and markets, especially by the Department for Energy and Climate Change (DECC) and Ofgem. EPRG has played an influential role as a sounding board for the Electricity Market Reform process and face to face briefings with DECC in Cambridge and London led to a number of policy impacts. EPRG's advice to Ofgem, catalysed by key EPRG staff acting as advisors, was useful in scoping Ofgem's 'Transmit' project and their review of energy network regulation (RPI-X@20 review).

A proportion of RESOLVE's impact can be said to be conceptual and its research led to the formation of the Sustainable Lifestyles Research Group (SLRG), now funded by Defra. Examples of instrumental impact of RESOLVE's work mostly relate to industry or practitioners, rather than policy makers. RESOLVE was brought in by the Eden Project and Homebase to contribute to their [21st Century Living Project](#) looking at green purchasing for 100 families and the findings have impacted upon Homebase and Eden Project in terms of their business planning and marketing. Other instrumental impacts related to its work for the United Nations Environment Programme (UNEP) in their sustainable lifestyles work, evaluating the Ofgem Energy Demand Research project report and its work on embedded emissions.

SEG had a number of instrumental impacts, many of which were discussed in the Pearson evaluation<sup>1</sup>. Their work on low carbon technology transfer is fairly well documented<sup>2</sup>, initially with India, then China and subsequently a range of other countries. SEG became the key academic player providing justification for low carbon technology transfer in the UK's negotiations on climate change, an issue which had previously been a sticking point. Impact has included informing

---

<sup>1</sup> Pearson, P. 'Evaluation of the ESRC Sussex Energy Group' (March 2011).

<sup>2</sup> See <http://www.esrc.ac.uk/impacts-and-findings/features-casestudies/case-studies/2774/low-carbon-technology-to-developing-countries.aspx>

government response to parliamentary questions and supporting UK government lines in negotiations.

### Conceptual impact

EPRG was credited by industry in terms of moving the debate from a rhetorical one to a more quantitative approach, where facts and figures are being brought to bear. They moved the policy debate forward on issues such as carbon capture and storage, distribution networks, energy market reform (including nuclear power), cost of renewable policy, security of supply (e.g. the geo-politics of Russian gas) and how commercial projects such as Liquefied Natural Gas (LNG) should be taken forward and regulated. This greater understanding has had an impact at EU level which then is passed down to industry.

For RESOLVE, conceptual impact has been significant. RESOLVE raised the profile of social science and insights into behaviour change with government departments, alongside informing debate on how this can be measured and researched rigorously – with Whitehall interest spread across a number of departments including Defra, Home Office, Cabinet and DfT. Tim Jackson's book 'Prosperity without Growth?' (PWG) was much discussed amongst end users. Whilst the book arose from a report produced in Tim Jackson's Commissioner role on the Sustainable Development Commission, rather than an exclusively RESOLVE publication, it no doubt drew on RESOLVE's work. End users described themselves typically as consumers of RESOLVE's ideas, commenting that 'the UK has had one of the most vibrant debates on behaviour change and RESOLVE have been a key contributor to that'.

SEG's work on nuclear power was seen as a conceptual impact. Through the work and reputation of Gordon MacKerron and Jim Watson, SEG became more of a trusted broker and participant in the nuclear debate. MacKerron in particular was a close confidante of senior government figures on nuclear build and nuclear waste issues and one of the more prominent academics appearing on BBC and in the broadsheets discussing these issues.

### Capacity building impact

EPRG was effective at placing staff in advisory roles with Michael Pollitt and Michael Grubb acting as Advisors at Ofgem.

Two of the Groups, EPRG and RESOLVE made good use of secondments, both into DECC. Senior SEG staff felt that this was an underused mechanism in terms of their approach. Secondees were aware that their role formed a part of 'bridging the gap' between academia and policy makers. One aspect of this role was bringing together DECC staff who valued academic papers and research, and colleagues who were more sceptical of the theoretical approach.

### Impact of any synergistic activity between the Groups

There was some evidence of the synergistic work between the three groups. They are aware of each other's research, meet on various occasions and invited each other to events and seminars and had joint board members, and tried to keep each other up to date through news briefings and working papers, but joint research or collaboration / comment on research was limited.

### Mechanisms and routes to impact

The groups all had a proactive approach to dissemination, engagement and production of policy relevant research. A range of methods were employed and the evaluation notes a number of factors that have affected influence.

Particularly important factors were seen as: policy maker buy-in and assistance with research design (including commissioning); establishing a critical mass of work on a topic area and a reputation as the primary place to go for advice (either an individual or a group); use of face-to-face briefings and meetings, preferably in Whitehall; the importance of timing/established need for the work; and establishing strong links between group and the policy body, e.g. via advisory posts or secondments.

### Lessons learned regarding maximising the non-academic impact of research

Adopting a positive, proactive attitude towards policy engagement across the research group and involving end users in research design were two key factors. Some researchers were unclear about ESRC's promotion of impact: this would seem to be an issue for group management in communicating ESRC requirements to their research teams. There is a role for intermediary bodies or individuals to interface between academia and policy makers and perform a 'translation' role. Synthesising research into summaries and briefing papers is welcomed. Secondments or advisory roles should be considered by research investments seeking policy impact. Informing or educating end users would be beneficial: policy makers sometimes don't know what questions to ask.

Interviewees from both sides were aware that policy makers can make bad policy and often are constrained by a particular policy approach or starting point. Where groups sought to influence or impact on practice or industry, it is important that academics get better at familiarising themselves with industry's perspective.

### Conclusions and recommendations

ESRC should continue to improve the interface between academic research and policy making by strategic planning. Discussing policy priorities with Chief Scientific Advisors should help clarify opportunities and limitations for academics making contributions to policy. This would help define research topics in relation to the questions, especially to areas where policy makers are struggling to provide options.



Given the apparent lack of clarity amongst some researchers about ESRC's expectations and guidance regarding impact, ESRC should continue to promote this aspect, for example, by use of their Pathways to Impact Toolkit and working with groups to communicate the message down to research teams.

With regard to synergistic impact and working, ESRC need to be clearer about the goals and objectives for this type of work and better promote the benefits and advantages of this work to grant recipients. ESRC could consider: finding a way to prioritise this work within the funding and academic context, which in part appears to work against it; aligning ESRC encouragement with capacity building, particularly in relation to skills development in communication; resourcing such collaborations; finding new methods of discovering and keeping informed where commonalities exist in research that might, at the macro level, not have obvious synergies; and building this activity in to grant recipients plans and work programmes.

To improve academic impact on policy making, *ESRC funded investments* should consider:

Being proactive: adopting a positive, proactive attitude towards policy engagement, with use of action plans (e.g. pathways to impact plans);

Staff awareness. communicating ESRC's expectation on dissemination and impact to researchers by ensuring staff are aware of ESRC advice and guidance on impact;

Involve end users in research design; this is a key route to improving impact;

Use of face-to-face briefings and meetings, preferably in Whitehall;

Establish strong links with target policy bodies e.g. explore placing staff in key advisory posts or secondments;

Language: Use of 'translation intermediaries', e.g. institutions or individuals who can help academics translate their material into policy friendly language and format.

To improve industry impact, there is a general need to improve communication with this sector. An 'industry forum' along the lines of the EPRG Energy Policy Forum is a useful two way route of knowledge exchange between academia and industry. Consultation with industry needs to be persistent and involve trade representatives as well as individual companies/ groups. The promotion of placements within industry can improve communication and also encourages industry to assist with research.

## 1. Background to the evaluation and the Energy Research Groups

### 1.1 Background

In 2005, ESRC commissioned three Energy Research Groups as part of its contribution to the RCUK's Energy Research Programme<sup>3</sup>: the Electricity Policy Research Group (based at Cambridge), RESOLVE (at the University of Surrey) and the Sussex Energy Group (SEG). However it is important to note that each ERG began and completed its work at different times.

- ▶ The Electricity Policy Research Group started in October 2005 and completed in September 2010
- ▶ RESOLVE Started in May 2006 and completed in November 2011
- ▶ Sussex Energy Group started in May 2005 and completed in March 2010

CAG's evaluation for ESRC focuses on the policy and practice impact of each group as well as assessing any synergistic impacts between the groups. We also considered any impacts arising from the Energy Groups' synergistic work with the UK Energy Research Group<sup>4</sup> and previous ESRC energy funded initiatives such as the Beyond Nimbyism<sup>5</sup> project based at the University of Exeter.

### 1.2 Terms of reference

The evaluation is looking at the following issues as agreed with ESRC:

- ways in which the three Energy Research Group's work has contributed to policy debates and been utilised and applied by policy makers and key stakeholders within the power and energy sector
- the mechanisms through which the Groups' work has influenced policy formation and development
- the mechanisms through which the Groups' activities has influenced changes in professional practice
- changes in policy and practice have occurred that can be attributed to the research supported

---

<sup>3</sup> This programme aims to position the UK to meet its energy and environmental targets and policy goals through world-class research and training.

<http://www.rcukenergy.org.uk/home/research-councils-energy-program.html>

<sup>4</sup> <http://www.rcukenergy.org.uk/what-were-funding/uk-energy-research-centre.html>

<sup>5</sup> [http://geography.exeter.ac.uk/beyond\\_nimbyism/index.shtml](http://geography.exeter.ac.uk/beyond_nimbyism/index.shtml)

- ways in which PhDs, research assistants and post-doctoral students have transferred skills and lessons learned while at the Groups to non-academic settings and how this has had impact on policy and practice
- lessons learned regarding maximising the non-academic impact of research
- critical reflections on the methods used to assess and identify research impact

In addition, the ESRC has been/will be undertaking separate evaluations of the three groups using its standard evaluation processes (i.e. undertaking a more general evaluation looking at academic quality, University management and so on). The ESRC evaluation of SEG was completed by Professor Pearson (Cardiff University) in 2011. Professor Catherine Mitchell (Exeter University) has recently been commissioned to lead the EPRG evaluation. The evaluation of RESOLVE is planned for 2012.

### 1.3 Brief description of each group

The Sussex Energy Group (SEG 1/4/2005- 31/3/2010)<sup>6</sup> aimed to conduct an interdisciplinary and interactive programme of research on the design, analysis and evaluation of public and corporate policies to manage the transition to a sustainable, low carbon economy.

SEG's research agenda was organised around three main themes:

- Transitions to sustainable energy systems
- Governance of sustainable energy systems
- Strategic appraisal for sustainable energy systems

At the Cambridge Electricity Policy Research Group<sup>7</sup> (1/10/2005-30/9/2010) the core discipline is economics, within a framework that encourages collaboration between experts from different academic traditions, drawing on insights from business, policy, engineering, political science and law. Research themes included:

- Regulation and Markets, which looks at: Market design and Competition, Network Regulation, Demand.
- Technology and Innovation, which looks at: Research and Development, Strategic Deployment and learning by Doing, Technology and Policy
- Governance and Policies, which looks at: Public Perceptions and Policy Making Process, Energy Security and International Relations

<sup>6</sup> <http://www.sussex.ac.uk/sussexenergygroup/>

<sup>7</sup> <http://www.eprg.group.cam.ac.uk>

- Climate Change Policy, which looks at: Emission Trading and Carbon Pricing, Non Price Instruments, International Engagement.

The Research Group on Lifestyles Values and the Environment (RESOLVE) (2/5/2006- 30/11/2011) <sup>8</sup> at the University of Surrey is developing a robust understanding of the links between lifestyle, societal values and the environment. In particular, RESOLVE is working to provide robust, evidence based advice to policy-makers in the UK and elsewhere who are seeking to understand and to influence the behaviours and practices of 'energy consumers'. RESOLVE has the following thematic research strands:

- Carbon Mapping
- Psychology of Energy Behaviours
- Sociology of Lifestyles
- Carbon Lifestyle Scenarios
- Governance for Sustainable Lives
- Grass Roots Initiatives for Low-Carbon Living

In addition to this evaluation, the ESRC has been/will be undertaking separate evaluations of the three groups using its standard evaluation processes (i.e. undertaking a more general evaluation looking at academic quality, University management and so on). The ESRC evaluation of SEG was completed by Professor Pearson (Cardiff University) in 2011. Professor Catherine Mitchell (Exeter University) has recently been commissioned to lead the EPRG evaluation. The evaluation of RESOLVE is planned for 2012.

---

<sup>8</sup> <http://www3.surrey.ac.uk/resolve/programmetable.htm>

## 2. Evaluation methodology

The methodology adopted was discussed with ESRC and revised slightly as we have proceeded: we always seek to tailor our approach to meet the needs of the evaluation.

### 2.1 Approach adopted

We have based our method on five key stages. A summary of each stage is outlined in Table 1 below, with each element building the evaluation in a planned process. More detailed information on methodology is contained in Annex 1.

Table 1. Summary of evaluation stages and aims

Stage	Methods	Aim
0 Inception briefing		To kick start the process and share any key information needs. Tailor/amend methodology where necessary.
1. Defining the scope and potential impact	Initial Director conversations. Literature review.	In order to test or assess the impact we must first be clear about what the impact might be. Through a literature review we listed the potential impacts of the work of the groups.
2. Collecting and collating internal information	Internal key informant telephone interviews with Directors, researchers and Advisory Board Members.	This work had a threefold aim: to inform the defining of the impacts; to start to draw together the evidence of impact; and to identify end users for stage 3.
3. Collecting and collating external information	External key informant telephone interviews with end users. On-line survey of end users.	In stage 3 we continued to draw together the evidence of impacts focusing on external policy makers and practitioners. End users were invited to complete an on-line survey to produce some quantitative data.
4. Analysis and case studies	Analysis and case studies	A period of analysis and reflection to draw the key lessons and conclusions from the information gathered. Production of six case studies to illustrate impact and routes to impact.
5. Reporting	Draft and final reports.	Reporting process which included a reflection on the evaluation processes

		as well as reporting on the groups' impact.
--	--	---

## 2.2 Discussion points

### Tracking back

We agreed to investigate any potential to use the 'tracking back' approach to assess the groups' contribution to economic impact. 'Tracking back' seeks to use specific policy initiatives as starting points, identify research contributions to these policy initiatives, and to provide quantitative assessments of the impact of those contributions using national policy evaluation data as benchmarks. Following discussions with ESRC we agreed to spend a limited amount of time at stage 1 (defining the scope) to try and identify any tracking back opportunities.

### Not duplicating evaluations

Given the fact that SEG had recently been evaluated, we sought to add value to the recent evaluation and not duplicate work. For the SEG element, the approach was tailored to focus on two key impact areas and develop these into qualitative case studies. The topics selected were;

- International Low Carbon Technology Transfer.
- Nuclear power.

In terms of methodology for focussing on these two qualitative case studies, we proposed a similar approach centred on structured telephone interviews with key researchers and others for these two areas , plus structured external interviews with key end users relating to these two policy areas (from policy, practice and industry sectors). In addition, we sought to include the SEG experience/ perspective in other aspects of the evaluation, including evaluation of the impact of the synergies between the groups and analysis of information around routes to impact and impact mechanisms.

Similarly this report sits within the context of Prof. Catherine Mitchell's evaluation of EPRG and the main RESOLVE evaluation. This RESOLVE evaluation will enable assessment of impact following the end of the Group which can build on the findings in this report.

### Director's workshop

Our original proposal included a workshop for the three Directors at the start of the evaluation to introduce ourselves, get their input on key impacts/ routes to impact and crucially to get their buy-in to the evaluation. Having discussed this with ESRC, we revised this element and replaced it with three introductory phone calls with

Directors. This was felt to be a more rewarding approach for two main reasons: firstly, it would have been logistically difficult to get three very busy people round a table at relatively short notice; and secondly, a more discrete two way phone conversation would allow a more fruitful, candid exchange in terms of information gathering and managing expectations about the evaluation.

#### On-line survey and on-line forum

The on-line survey with end users provided valuable qualitative and quantitative information.

However, the on-line forum was not taken forward. It was decided that the other existing sources of information (desk review, interviews and on-line survey) were sufficient to triangulate evidence and that asking busy, senior people to take contribute to an additional, on-line forum would not have generated any further information.

#### Other elements

As part of the evaluation, we attended the UKERC Local Energy Governance Workshop on 4th October 2011 to assist us in the analysis of impact factors and wider synergies.

#### 2.3 Key informants/respondents/participants in the study

We interviewed 27 internal informants (3 Directors, 13 researchers and 11 advisory board members) and 27 end users (16 policy makers, 9 from industry and 2 other end users). Each was sent an agreed interview proforma in advance and had a chance to comment on the draft interview transcript. Further information is set out in Annex 1.

We also had separate initial telephone conversations with the three Directors.

#### 2.4 Case studies

Six illustrative case studies were developed to illustrate impact routes to impact. These are set out in full in Annex 2. Case studies were initially been suggested by the stakeholders into a long list. Each suggestion was reviewed and analysed in terms of its possibilities for the illustration and communication of key points of learning about research impact. Plus, as in all parts of the evaluation, CAG took note of related evaluations past and future, aiming to ensure balance overall.

### 3. Commentary

#### 3.1 On line survey

We begin this section by reflecting on the on-line survey quantitative results. A total of 16 of the 27 end users contacted completed surveys (59%); broken down as SEG 4, RESOLVE 7 and EPRG 5.

The majority felt that all groups had more conceptual impact (influencing the policy debate), but that there was also reasonable instrumental impact (policy decisions), especially for EPRG. For EPRG and SEG, impact on practice (industry) was weakest: not so RESOLVE, where it was felt that practice impact outweighed policy impact. These results reflect well with other evidence streams.

#### 3.2 Impact on policy and practice

Following discussions with ESRC, we are grouping types of impact, rather than setting out impacts of the three groups separately. We have used the following categorisation of social science impact taken from Nutley et al (2007):

- Instrumental - for example, influencing the development of policy, practice or service provision, shaping legislation, altering behaviour
- Conceptual - for example, contributing to the understanding of these and related issues, reframing debates
- Capacity building - for example, through technical/personal skill development

Policy and service development are not linear processes and decisions are rarely taken simply on the basis of research evidence alone. Research outputs may influence decision-making at a range of different points in time, and such influence may or may not be visible.

In terms of operationalising these concepts, we found a degree of overlap between instrumental and conceptual impacts, particularly when viewed from different sectoral perspectives. For example, impacts seen as instrumental to some policy makers were viewed as conceptual to industry, these different perceptions reflect the differing sectorial needs.

##### 3.2.1 Instrumental impacts

There were some good examples of instrumental impact.

EPRG have played an influential role in the Electricity Market Reform process (see case study B). A number of EPRG research projects and papers have contributed to this process and EPRG were seen by DECC as '*the premier group in electricity markets*' (and David Newbery as a key player). This was reflected in DECC's



proactive approach to obtaining EPRG briefings. A number of suggestions made by EPRG 'are now being proposed for legislation' including:

- reform of balancing markets (originated from CMI working paper 58<sup>9</sup> in 2004 and discussed at teach-in session at DECC, 7th Apr 2011):
- introduction of carbon tax (EPRG Seminar presentation, 14th May 2010)
- de-risking of wind contracts (EPRG Working Paper 1120, July 2011)
- delaying implementation and carefully designing capacity mechanism (EPRG Dinner, 8th Dec 2011).

Whilst the dates of some of these liaisons are outside of the ESRC grant period, it was clear from our discussions with DECC that research undertaken during the grant period was instrumental in provision of this advice.

EPRG research has also been very influential in terms of focussing the scope of Ofgem's 'Transmit' project (see Case Study D) and their review of energy network regulation (RPI-X@20 review – see case study F).

There were a number of other claims by EPRG concerning instrumental impact, listed below:

- Stephen Littlechild's work on constructive engagement (see RPI-X@20 review above). Littlechild's work on influencing the ways regulators look at things [negotiated settlements and customer engagement], suggested another way of regulating, i.e. assisting the parties involved rather than regulators determining the outcome themselves. Littlechild worked with three regulators: CAA, Ofgem and Ofwat. The regulators published papers which referenced his research. Overseas, ACCC (Australia) are also looking at this.
- David Newbery's work with Holmberg and Ralph, started pre-EPRG, modelling market behaviour in wholesale markets, shortly after UK privatisation. This work predicted that at least 5 or more big companies are required to make the market competitive; subsequently in the UK we now have the big 6 energy companies. This study created interest from Australia and the EPRG study is cited in the new Australian approach.
- EPRG's work on the impact of Liberalisation on R&D was, according to Newbery, 'influential at EU level'. The work identified the need to increase collective support for R&D. Newbury considered that this work was 'significant in setting

---

<sup>9</sup> Roques, Newbery and Nuttall (2004) "Generation Adequacy and Investment Incentives in Britain: from the Pool to NETA". CMI Working Paper 58.

up the Low Carbon Network Fund and the extension of the consumer levy to support R&D and is cited clearly in the Cave Review of Water’.

- Economic analysis of the EU Emissions Trading Scheme (ETS): EPRG helped the European Commission with an international workshop in 2007 (attended by policy makers) which resulted in a ‘straw man’ proposal for simple auction design. Karsten Neuhoff’s work on National Allocation Plan CO2 permits was ‘significant’ according to a number of internal interviewees: this work concluded that they should have been auctioned at 2nd stage, and were too generous at 1st stage. One internal researcher saw this as being instrumental in helping the Commission derive/deliver 2nd phase of ETS and 3rd phase and moving to auditing of allowances, with implications for industry (i.e. energy intensive users). The End of Award Report states that *‘the body of work that was jointly developed by TSEC2 and Climate Strategies was extensively quoted in the EU Commission Impact Assessment for Climate Package, and resulted in invitations to several presentations to European Parliament, Member State governments, and European utilities to discuss design and implementation’*.

RESOLVE’s research led to the formation of the Sustainable Lifestyles Research Group (SLRG), now funded by Defra. A Defra end user felt that the SLRG was part of RESOLVE’s legacy, and that RESOLVE’s work had made ‘the shaping of the SLRG work programme much easier, for example work on the Rebound Effect was brought in to the SLRG scope’.

Examples of instrumental impact of RESOLVE’s work mostly related to industry or practitioners, rather than policy makers. One Whitehall end user saw this as reflecting the fact that Defra believe that businesses hold the key to sustainable behaviour change.

RESOLVE were brought in by the Eden Project and Homebase to contribute to their 21st Century Living Project (see case study C). The project looked at green purchasing for 100 families with RESOLVE studying the values and behaviours of the families concerned. The study has had a significant impact on Homebase and Eden Project in terms of their business planning and marketing. One of the key findings was that low income and ‘materialistic’ families can go green: it’s not a middle class preserve and you don’t have to be green to act green.

Futerra’s ‘New Rules of the New Game’ communication resource was influenced by RESOLVE’s work which ‘was certainly on their reading list for this publication’. Each of their ‘New Rules’ was evidenced by five pieces of key resources, and RESOLVE’s research was one of these key resources. In terms of aiding the cause of sustainable behaviour change, Futerra felt that ‘RESOLVE helped by finding tools to change mindsets’.

RESOLVE research was used by the United Nations Environment Programme (UNEP) in their sustainable lifestyles work. RESOLVE led the UK element of the

UNEP's Global Survey on Sustainable Lifestyles (covering 26 countries) and Tim Jackson also promoted the final report to UN General Assembly and wrote some of the final report.

RESOLVE (Birgitta Gatersleben) was part of the consultancy group that evaluated the Ofgem Energy Demand Research project report. She was confident this had an impact on Ofgem policy in relation to smart metering (her work is cited in reports, but we found no additional evidence of impact).

Angela Druckman's work on embedded emissions for RESOLVE included work for the Carbon Trust to assess the importance of carbon emissions embedded in capital goods in order to decide whether or not they should be included in PAS2050, a publicly available specification that provides a method for assessing the life cycle greenhouse gas (GHG) emissions of goods and services. We were unable to corroborate impact, although Druckman's work<sup>10</sup> on the importance of embedded emissions was widely disseminated and quoted.

SEG had a number of instrumental impacts, many of which were discussed in the Pearson evaluation<sup>11</sup>. Their work on low carbon technology transfer is fairly well documented<sup>12</sup>, initially with India, then China and a range of other countries (see case study A). SEG became the key academic player providing justification for low carbon technology transfer in the UK's negotiations on climate change, an issue which had previously been a sticking point. Impact has included informing government response to parliamentary questions and supporting UK government lines in negotiations.

### 3.2.2 Conceptual Impact

There were a number of examples of the three energy groups influencing public debate on certain energy issues and helping to further understanding.

EPRG was credited by industry in terms of moving the debate from a rhetorical one to one where facts and figures are being brought to bear, a more quantitative approach.

EPRG was seen by an industry stakeholder as being 'a very important part of moving forward the policy debate' on issues such as distribution networks, energy market reform (including nuclear power), cost of renewable policy, security of supply (e.g. the geo-politics of Russian gas) and how commercial projects such as Liquefied Natural Gas (LNG) should be taken forward and regulated. This greater

---

<sup>10</sup> E.g. Druckman A and Jackson T. 'The bare necessities: How much household carbon do we really need? RESOLVE Working Paper Series 05-09 (2009).

<sup>11</sup> Pearson, P. 'Evaluation of the ESRC Sussex Energy Group' (March 2011).

<sup>12</sup> See <http://www.esrc.ac.uk/impacts-and-findings/features-casestudies/casestudies/2774/low-carbon-technology-to-developing-countries.aspx>

understanding has had an impact at EU level which then is passed down to industry.

Industry also credited EPRG (David Reiner) in drawing attention to the way the public debate in Carbon Capture and Storage (CCS) has developed: EPRG research highlighted the shortcomings of industry and government in getting the agenda into the public domain and allowing inappropriate messages about CCS to be communicated by the press.

The Energy Policy Forum (EPF) run by EPRG was hailed as a good mechanism for keeping industry informed about and shaping the policy debate.

An industry stakeholder valued EPRG's international perspective, particularly in relation to energy markets. The UK was a pioneer of liberalised markets which, at the time, didn't encourage learning from outside of the UK. But this situation has become less true over time making EPRG's international perspective, referred to as 'an international survey approach', enormously valued especially by industry.

EPRG was very active at an EU level and Newbery described his unit as a 'truly internationally recognised group', citing with connections in Singapore, Australia, New Zealand, California plus their collaboration with Cambridge MIT. The list of Associate Researchers at EPRG supports this view, including researchers from United Nations Industrial Development Organization Vienna, DIW Berlin, Ifo Institute Munich, International University Bremen, CNRS (France), Florence School of Regulation and Director (Loyola de Palacio Energy Policy Programme), Comillas University (Spain), Universite Catholique de Louvain (Belgium) and the Center for Global Trade Analysis Purdue University (US). In this sense, Newbery considered that EPRG was 'part of an international group of scholars – our industry is the same the world over, its just the politics, fuel mix and country size that varies'.

An EU policy maker corroborated EPRG's international relevance, stating that 'we have followed what they are doing, downloaded papers, and been inspired by documents. One direct impact is that the Group has been able to clarify things, increased our understanding of the UK situation'. Electricity Market Reform in the UK is of direct interest to the European Commission as a whole. David Newbery acted as an expert in 2010 for the EC and was one of their key speakers for a workshop about interaction of renewable support, ETS and electricity markets.

For [RESOLVE](#), it would appear one of their chief impacts was conceptual. RESOLVE could be said to have 'co-evolved' with Defra on a joint learning curve with regard to sustainable consumption and behaviour change research. With a key focus on looking at lifestyles, social structures, values and how people behave, RESOLVE's audience is potentially much wider than that of SEG or EPRG. As such it widens out to include all governing departments and far deeper into industry. An internal interviewee set the scene: *'one key impact was supporting the sustainable consumption evidence work and policy development in Defra. Sustainable*

*consumption was ground-breaking in Defra 5 years ago at the time when RESOLVE kicked off. Defra was getting interested in individual household behaviour and thinking about how to design relevant policy. Defra instigated an evidence base on sustainable consumption and RESOLVE came alongside, supported work in Defra and added an independent and impartial view. So RESOLVE was timely, supporting the needs for sustainable consumption to be part of the evidence base'.*

Another internal interviewee commented that RESOLVE's work on alternative or sustainable lifestyles had been influential in terms of helping to frame the debate and understand the issues, but not in terms of policy. RESOLVE raised the profile of social science and insights into behaviour change with government departments, alongside informing debate on how this can be measured and researched rigorously – with Whitehall interest spread across a number of departments including Defra, Home Office, Cabinet and DfT.

However, an industry end user considered that RESOLVE operated in 'a niche topic area' and produced an extraordinary amount of material on behaviour change and sustainable development between 2005 and 2010, but, 'did so in a very tiny bubble'.

This was contrasted with the impact that the new Prime Minister David Cameron had when he came into office and 'got all his minions to read the nudge<sup>13</sup> report and created a new unit in No.10'. The same end user concluded that even in 'the ideas space' the RESOLVE work and influence 'can look bigger than it really was'. In terms of policy, with contributions such as RESOLVE, it was difficult to know when a piece of work had an impact: like grains of sand building up over time, it is impossible to predict when an extra grain will cause a landslide, all you know is that over time there will be some big landslides and lots of small ones. There was the feeling amongst end users that the work of RESOLVE would have progressively built up in the minds of decision makers in this way. Today, to the Coalition's current 'Nudge Unit' or Behavioural Insights Team, these issues may all seem obvious, but without all of the work of RESOLVE (and others), then 'behaviour change' would not have the status it now enjoys. An end user reported that Oliver Letwin (once dubbed the 'principal architect of nudge') knew of RESOLVE's work and monitored their output. One end user commented:

*'It concerns me because there ought to be more of this work going on, it's such an important agenda, but particularly complex. It's difficult when you consider the huge profile that the more simplistic 'nudge' agenda has had in*

---

<sup>13</sup> A 'nudge', a recent academic buzzword owing to Thaler and Sunstein (2008), refers to a non-standard policy instrument aiming at inducing people's 'rational' behaviours, drawing on the recent findings from cognitive psychology and behavioural economics. Cf nudge v. think - in working to motivate pro-social and pro-environmental behaviours, policy-makers often make use of the idea of nudging people to do the right thing.

*Govt. Whereas RESOLVE's impact appears to be minimal even though it is taking a much broader, more rounded view of behavioural change'.*

Tim Jackson's book 'Prosperity without Growth?' (PWG) was much discussed amongst end users. Whilst the book arose from a report produced in Tim Jackson's Commissioner role on the Sustainable Development Commission, rather than an exclusively RESOLVE publication, it no doubt drew on RESOLVE's work. The relationship has been described by Tim Jackson as having "strong links in content between *Prosperity without Growth* and the work of RESOLVE as a whole and the evolution of RESOLVE was intimately linked to the evolution of the report".

Given its dual provenance, we will not discuss the book in great deal in this evaluation; however, it is important to note that the book is perhaps a fascinating example of significant conceptual impact. Many felt that the book had a momentous influence in the realm of policy ideas and narrative – and ideas predate policy. Whatever the other merits of the book, its accessible writing style and contentious subject area ensured that it achieved a much wider value in terms of having such a high profile<sup>14</sup>: such a publication is a fast track to prominence open to other academics. In fact perhaps the what, why, where, when and how of the impact of this publication is worthy of further research.

One end user commented that fellow civil servants 'had little faith in mainstream economics as it was simply not addressing issues like climate change, resource depletion' and would have liked to have seen greater follow through on some of the issues explored in PWG. They went on:

'This is where ESRC needs to start looking – develop a clear view of how economics can address environmental and social challenges. Awful lot of economists who agree on the need for change, but it is an area of work where there is no hope of RESOLVE dealing with it within the timeframe they have been around'.

One end user described themselves as 'a consumer of RESOLVE's ideas'. Another used RESOLVE reports and website routinely in their literature reviews and as a key resource in terms of thought leadership, commenting that 'the UK has had one of the most vibrant debates on behaviour change and RESOLVE have been a key contributor to that'.

Angela Druckman's work on the 'Rebound Effect' (joint with SEG/SLRG) was widely disseminated and quoted and raised awareness across government (e.g. presentation at European Commission workshop 28th February 2011, led to *references in EC DG final report*; provided advice and papers to feed into a BIS review on the Rebound Effect in order to raise awareness across government, and

---

<sup>14</sup> End users claimed that both Nick Clegg and Ed Miliband (as Energy Minister) were photographed taking the book away with them as holiday reading.

to improve the guidance based on analytical results). Internal interviewees described this work as having 'tremendous impact', but we were unable to find evidence of this from end users.

SEG's work on nuclear power is a conceptual impact (see case study E): through the work and reputation of Gordon MacKerron and Jim Watson, SEG became more of a trusted broker and participant in the nuclear debate. MacKerron in particular was a close confidante of senior government figures on nuclear build and nuclear waste issues and one of the more prominent academics appearing on BBC and in the broadsheets discussing these issues.

### 3.2.3 Capacity building

EPRG was effective at placing staff in advisory roles, particularly with Ofgem, with Michael Pollitt and Michael Grubb acting as Advisors at Ofgem.

SEG have developed a number of positive capacity building processes including, for example Gordon MacKerron's role as chair of the govt's Committee on Radioactive Waste Management, Andy Stirling's membership of Defra's Science Advisory Committee, and Jim Watson's role as Specialist Advisor to the House of Commons Environment Food and Rural Affairs Committee.

Two of the Groups, EPRG and RESOLVE made good use of secondments, both into DECC. Senior SEG staff felt that this was an underused mechanism in terms of their approach.

EPRG seconded a PhD student into DECC to work on a technical update paper on Electricity Market Reform. This secondment was able to build on the already close relationship between DECC and EPRG and, in particular, offered an additional pathway to pick the brains of EPRG Director David Newbery. DECC staff had been impressed with previous 'prophetic' EPRG research on electricity market design and existing staff with an academic history sought out an academic secondee.

In RESOLVE's case, ESRC was advertising for 3-month internships with public sector. This included one with DECC to help develop a social science engagement strategy (understood that this was gap identified in a Capability Review in late 2009). It was seen as an opportunity for the policy and governance strand of RESOLVE to gain some insight into policy-making processes within the UK. The secondee ended up doing a variety of things, some related to RESOLVE's areas of interest and others not, but all in line with interests within the Centre for Environmental Strategy where they were based. Outputs included a paper exploring the energy landscape governance of Bangladesh; a paper on Engaging Communities and the Third Sector for the officer responsible for following up on the report of a cross-Ministerial working group (particularly Defra and DECC) that explored how to better engage with the 3rd sector; a paper on theory and evidence about behaviour and social change, initially for the same team, but the Head of Social Science Engagement at DECC had also found this paper 'useful'; and analysis

on energy comparator data in terms of implementing the new government's manifesto. At the end of the internship, the secondee wrote a short piece on their perspective of what engaging with non-economic social sciences might offer for DECC using examples from RESOLVE. In conclusion, the secondee felt that they had brought/shared some new areas of knowledge that were new to DECC, even if with only a few people. They also did a presentation back at RESOLVE on 'what is policy-making and how does it happen'.

A DECC colleague found this secondment 'extremely useful' and saw two key outcomes:

- broad views on behaviour, helped to highlight that the issues go beyond economic and social views and values, and also incorporate psychological views too;
- contributed to a strong case for more social researchers in DECC. They have now gone from a position where there were no social researchers to having 14 in the department. Helped establish a need for social research capacity and showed how it can be deployed.

In both cases, secondees were very much aware that they were part of 'bridging the gap' between academia and policy makers. One aspect of this role was bridging the gap between DECC staff who valued academic papers and research, and colleagues who were more sceptical of the theoretical approach.

#### 3.2.4 Future impacts

Academic impact and influence can be a slow or lengthy process. There are a number of areas where the energy groups' work is likely to have 'future impact'. This may be due to 'slow burning' impact, where relevance is gradually building over time, or perhaps in relation to research that has already had an impact – but impact is likely to continue or to increase over time.

As RESOLVE started later and completed more recently it is likely that its impact has not yet fully 'matured' and will therefore develop over time. For example, in growth challenged times the themes of Tim Jackson's book 'Prosperity Without Growth?', are becoming more prescient. A government end user confirmed that the [SEG](#) work on low carbon technology transfer will still be relevant to future UK climate change negotiations.

### 3.3 Impact of any synergistic activity between the Groups

Although not a central funding requirement, there was some evidence of synergistic work between the three groups. They are aware of each other's research, met on various occasions, invited each other to events and seminars, had joint board members, and tried to keep each other up to date through news briefings and



working papers. However, joint research or collaboration / comment on research was limited.

The areas of joint working were:

- SEG and RESOLVE working together on the joint bid for the Sustainable Lifestyles Research Group, and the subsequent work of the SLRG.
- SEG (Steve Sorrell) and RESOLVE (Angela Druckman) liaising closely over work on the 'rebound effect'

RESOLVE and SEG appeared to have closer ties, due to being 'nearer' to each other in both geographical location and subject matter. EPRG appeared to be more isolated from the other two groups for the same reasons (EPRG had closer links with UEA due to location, and Imperial (due to both being EPSRC funded). However, EPRG are now are working on joint project with Jim Watson (SEG), who has written a chapter in the latest EPRG book.

There were several reasons why further collaboration during the ESRC grant period was not forthcoming:

- Competition for funding, e.g. 'in practical terms we are always out looking for funding. There is no extra money in doing synergistic work – no incentive. If it is worth doing a particular piece of research – we would look to do it ourselves'
- The core activity of each of the three groups being seen as different by participants: EPRG (high end economics and electricity, very market orientated), SEG (medium end economics, public policy and political science), RESOLVE (social psychology).
- The issue of the impossibility of forcing collaboration/engagement between groups/ academics. Interviewees felt the RESOLVE and SEG disciplines were 'closer' to each other, so that was more of an 'organic' link.
- Having time to commit to this work, as well as the research and dissemination / networking activity, especially within an academic context that focuses on and values other priorities, for example being published in peer reviewed journals.
- One or two interviewees also questioned whether all group members would have the skills to work in this way, although they recognised that the majority did.

There was a lack of enthusiasm for 'throwing people at one another'. Rather academics saw themselves developing networks, as an organic process, involving intellectual affinity ('writing about the same stuff'), meeting and liking each other, 'even if you disagree with each other's findings'. One commented that 'the

instrumentalisation of the idea of academic collaboration doesn't include these social processes'. Collaborations emerge (organically), evolve and find their strength. Academics interviewed didn't favour what one described as 'the sandpit process, typified by playground mentality, territorial conflict and misunderstanding – precisely because it hasn't come through an organic process'. They felt that synergistic working was not encouraged by incentives – no institutional incentives, no research time incentives: 'resources to do this organic process were squeezed'. You 'build personal relationships over common interests over time'. They don't necessarily sit under the ESRC umbrella (some do).

In addition, the recent 'cluster work' (e.g. energy security, inclusive energy (poverty)) was thought to bring people together. There was some positive feedback on cluster working but regret that funding was not available. In particular interviewees felt that cluster work had been useful in building links between work in progress, improving communication and building relationships between professionally between individuals and centres alongside developing understanding and synergies between work strands.

We also considered any impacts arising from the Energy Groups' synergistic work with the UK Energy Research Centre<sup>15</sup> (UK ERC) and previous ESRC energy funded initiatives such as the Beyond Nimbyism<sup>16</sup> project based at the University of Exeter.

Newbery felt that EPRG had close contacts with UK ERC, describing UK ERC as 'the hub, with centres/groups as spokes': UK ERC held workshops on electricity market reform events to which EPRG contributed, but he questioned whether such central bodies have a duty to co-ordinate. SEG also had good contacts with UK ERC, for example Adrian Smith and Florian Kern ran a 2 day research practical workshop in Oxford for UKERC on critical issues in low carbon innovation'. Ronan Palmer also led a workshop on energy market reform for SEG. For RESOLVE, Angela Druckman was on UK ERC's Advisory Board for Green Jobs.

We found no evidence of any synergistic work with previous ESRC energy funded initiatives such as the Beyond Nimbyism.

### 3.4 Mechanisms and routes to impact

We have distinguished below between planned or formal pathways to impact, which could sensibly be set out by a group in order to achieve impact (many of which come under the broad brush of dissemination or engagement), and other factors affecting influence.

---

<sup>15</sup> <http://www.rcukenergy.org.uk/what-were-funding/uk-energy-research-centre.html>

<sup>16</sup> [http://geography.exeter.ac.uk/beyond\\_nimbyism/index.shtml](http://geography.exeter.ac.uk/beyond_nimbyism/index.shtml)

### 3.4.1 Planned routes

All three groups showed evidence of having formal strategies or plans for dissemination and engagement, in order to achieve impact and influence. This approach demonstrates the following good practice:

- Involvement by policy makers in research design;
- Allocation of 16% of the budget relates to impact, engagement and communication activities;
- Provision of expert advice to policy team on communications issues;
- Monitoring of impact as project progresses via PIPA (participatory impact pathways analysis)<sup>17</sup>;
- Identification of relevant user groups; and
- Use of a range of engagement mechanisms (expert advice to intergovernmental organisations and national governments, specific formal and informal briefings to civil servants, MPs and Ministers, series of Policy Briefing Notes, use of extensive networks (including high profile Steering Boards composed of public, private, third sector and academic members), web sites, newsletters, international, national, regional and local press coverage on radio, TV, web and in print).

Below we pick out a selection of mechanisms/ routes that were of particular use to the three research groups.

- Fora and participatory groups. EPRG's Energy Policy Forum was based on a US model (MIT) and was originally set up more as a funding source. However, it became much more useful as a *two-way* ideas and information exchange. The Forum is self funded and comprises a mix of industry, government and regulators. Ofgem were one of the early joiners which resulted in two key pieces of work being undertaken by Michael Pollitt (RPI-X@20 Review; and impact of liberalisation on R&D). DECC also sit on EPF, plus around 10 industry companies. EPF organised themed meetings and seminars where EPRG research teams were introduced to policy discussions. EPRG also did 10-12 EPF research conference calls per year, which were shared with Forum members (usually have 15-20 people for 1 hour, usually 15mins presentation followed by 45mins Q&A, usually aligned to research publication times, or linked to important events e.g. Fukushima nuclear issue). These conference calls were 'well received'. EPF companies also received a 'company visit', where 2 or 3 EPRG staff would go out to the company and can have 'more private discussions,

---

<sup>17</sup> Using PIPA helps map out the relationships between research aims, the actors involved, methods used to enact change and the pathways to impact which may be realised

centred on company's circumstances, when the regulator is not in the room'. The Forum also provided members with an opportunity to use EPRG as a 'sparring partner' for consultations such as the Electricity Market Reform. The Forum was a good iterative way of shaping the research process, particularly with industry, and informing early stages of research. All groups had departmental contacts as members of their Advisory Board: having someone they 'knew and trusted' who could use as a conduit to other policy teams, was seen as a key route to impact. SEG's Advisory Board was seen by one member as an 'interface with Whitehall and industry'.

- Seminars, events, conferences. One Board member felt that EPRG's seminars attracted an 'absolutely stunning' network of people: *'EPRG are a high class act, this shines through, people want to be there. The fact that it has 'Cambridge' in the title helps, but its real substance, there's interesting stuff said, always good quality, well presented, up to the minute discussions, very good and very relevant. Felt that a lot of it was down to David Newbery, he's built something pretty stunning, based on a record of very high standard academic work'*.
- Working Papers – these were seen as a 'main academic dissemination tool', produced for industry on a wide range of issues. EPRG and RESOLVE staff considered that 'once you reach a critical mass on publications then people sign up to the website. This includes 'a high % of significant people from industry'. All energy groups invested quite a lot in working papers and website, with EPRG in particular putting up almost everything they do so users can see what they are thinking 'week to week'. Interviewees also reported that this way of working, while new to some academics, also encouraged collaborative research with partners.
- Influence via expert status. Each group had 'renowned experts' who were called in as policy advisors to departments, to parliamentary sub-committees and the EU. As one industry stakeholder wryly commented 'you don't always see what they say but you know they are likely to be having an impact'. EPRG was very responsive to requests from regulators or government to join as advisors, submit evidence or appear before Parliamentary Select Committees (see End of Award Report, page 7 for examples). Tim Jackson (RESOLVE) advised the Environmental Audit Committee (e.g. report on 'Green Fiscal Policy in a Recession, 2008). SEG put considerable effort in getting known as the people to advise Parliamentary Select Committees, with a senior researcher commenting 'politicians worry about making fools of themselves in front of Select Committees, and so do industry people. Being an advisor to Select Committees makes you interesting, you write the Committee reports and even write the questions too'. Direct Whitehall briefings. The groups actively briefed government, usually off site, but there were instances when government came to be briefed. Again this adds 'weight' and visibility to individuals and the work. Examples of the latter included:

- The whole of the DECC team (10 people) working on the Electricity Market Reform came to Cambridge to be briefed at EPRG for a full half day;
  - SEG cultivated Charles Hendry, current Energy Minister, when he was in opposition as a local MP. When he became Minister he came for an informal briefing at SEG. He also spoke at the book launch 'Energy for the Future'.
  - A lot of RESOLVE researchers attended Defra workshops and focus groups which were organised by Defra specifically to inform their policy.
- Using communications advisors. SEG employed a joint researcher/communications expert, Alister Scott as an 'embedded research and dissemination person' who was part time for 2-3 years (built into the Award, 3 days per week). SEG Director Jim Watson 'noticed the difference after Alister left when he found it harder to create space for dissemination and lacked the skills to some extent. Another SEG researcher commented: 'having Alister Scott at SEG was great, got us trained up and thinking about engagement'. RESOLVE had discussions with ESRC about creating a similar post given the strain on Tim Jackson's time but to no avail<sup>18</sup>. One Board Member suspected that this '*came down to the University: Vice Chancellor at Sussex sees this as really important – wanted to support SEG/SPRU as strong brand and had big push with China – very entrepreneurial university*'. SEG interviewers emphasised the key importance of this role, while other pointed to how important it is to prioritise this work and 'make it important and valuable', while ensuring that those carrying out any dissemination activity has the skills to do it. Discussing a policy briefing note with the press team at the University was seen to be helpful in terms of setting up relevant meetings. In order to reach a broader policy audience, Michael Peters (RESOLVE) worked with a communications expert, Tim Blanchard, to get articles published in two sections of the media – New Start and Local Government Chronicle (widely subscribed non academic journals read by practitioners). EPRG tended to use Pierre Noel in his role as Energy Policy Forum Director to advise on communications.
  - Press, TV, social networking. One internal interviewee felt that 'peer reviewed papers could suffer 'deep burial' but if you get hold of a microphone or in front of a TV camera your impact is more successful'. RESOLVE adopted a proactive policy of engaging with non academic or mass media. An Advisory Board member commented that '*from the start, RESOLVE focussed on the interaction with the public – how to get ideas from academia into the public eye – so RESOLVE was aware of the need to advertise [via articles in the press and on*

<sup>18</sup> Tim had conversations with ESRC liaison officer (Jacqui Burgess), identified the need for, and possibility of funding for another post (comms related), Tim produced a couple of proposals, but ESRC wanted to look into achieving this via a different route (inter/cross disciplinary route) and the Sustainable Lifestyles Research Group (SLRG) bid eventually took over (Ian Christie appointed in 2010 on resource management).

*TV] ... they have been quite successful in reaching out to the real audience of projects like this – the general public'. This work appears to have three benefits. Firstly opening up the debate to an even wider audience, up skilling researchers in their ability to communicate in new ways to non academic audiences, and finally find new and quick ways of getting information inform of the target audience of policy makers and industry. This work has included making journalists, commentators and writers part of the network and creating opportunities with this audience. Gordon MacKerron at SEG was 'allowed to direct media issues' and wrote articles (e.g. Observer, Guardian) and appeared on Radio 4, Newsnight, as well as inputting into documentary 'Secret Life of the National Grid'.*

- Mapping your end users. There were examples of all the three groups mapping the policy landscape, see who has influence within it, find the open doors, build relationships with end users, develop partnerships and collaborations; but most significant of all develop a clear strategy and plan of action based on this initial mapping stage.

#### 3.4.2 Other factors affecting influence

- Language and style. Policy makers in particular prefer summaries, key bullet points and briefing notes, written in non academic parlance. Shorter briefing papers were very effective for SEG, including two on nuclear issues that were picked up by civil servants (rather than looking at longer papers) and their Cancun briefing (4 sides A4) on low carbon technology transfer was 'very effective'.
- Location. All three groups are within an hour's train ride of Whitehall, and all had examples of where policy makers and civil servants had come to them, either for advice or to attend seminars/events. However, all three groups also recognised the importance of taking their advice to Whitehall. SEG started to hold events in Central London (Piccadilly) to make it easier for policy makers to attend. Whilst EPRG realised that for important issues they could attract policy makers to Cambridge, they also started to hold Energy Policy Forum dinners in London and there was a feeling that 'if they did more in London, then they might speak to 'a broader range of policy makers'. This was corroborated from the end user interviews. In the main, Government and industry could not justify sending staff to seminars out of London.

RESOLVE also ran international conferences and meetings in London that were both well-attended by policy-makers, and in which senior policy makers (sometimes at Ministerial level) gave invited keynote addresses.

End user comments included:

*'I was sent information on events and seminars but they were in Guildford so I never attended. They were usually lunchtime seminars, so no way someone would attend not for just an hour'.*

- Role of Director. Clearly the role of the Director is pivotal to the success and impact of a group. To a number of end users, the Directors were the most familiar component of the energy groups, and were seen to be disproportionately influential almost to the extent that other researchers didn't really matter. In some cases, this was perhaps a reflection on the seniority of the end user interviewee: they were aware of Directors and met them, but didn't deal with other researchers. Strong leadership and a 'known' Director can be helpful in positioning the group.
- Reputation and trust. Senior SEG interviewees felt that SEG was a trusted place for advice for government, going back many years (John Surrey founder of SPRU energy work in 1969 was an ex civil servant and from the 70s onwards (with John Chesshire) they were regularly called upon by government, including clerks of Select Committees). As an example Gordon Mackerron with David Newbery (EPRG) were appointed as 2 of the 3 specialist advisors on the big inquiry into coalmine closures. It was felt that at SEG Gordon MacKerron 'had a reputation that secured his legitimacy', and SEG papers backed this up. Another board member with government experience commented *'the reputation of any group like SEG is really the reputation of its leading people'*. The importance of cultivating relationships was emphasised by a board member with government experience: *'there is a morass of material out there that civil servants have to synthesise and make sense of'*. Government advisors cannot read as much as they would like, so in the end personal relationships are critical.
- Joining forces with a supportive Think Tank. EPRG's work on Russian gas supply (Pierre Noel) was adopted by George Soros who supported its findings and opened doors for Pierre to speak to a huge array of influential policy makers, including various energy ministers and their advisors. One board member suggested that researchers should *'talk to other, more overtly political think tanks whose job it is to inform, and preferably influence policy – e.g. Adam Smith Institute, IPPR, etc. How do they think they inform policy?'*
- Timing and making the most of opportunities. Many participants indicated that making sure you are up to date with the needs of your network is really important, that researchers need to *'spot opportunities'*, *'be on the lookout for opportunities'*, *'be hungry for information'* and on the *'hunt for new ideas'* – by having this very proactive approach to mining networks researchers are able to translate their research findings into relevant briefing papers, written to provide the audience with what they need for their work and thus giving research results to practical application in real time. Being topical produces more opportunities to write, collaborate and speak at conferences and therefore increases a researcher's dissemination opportunities. A RESOLVE interviewee

summed up this type of work by suggesting it is important to *'keep alive the possibility of a conversation when the time is right'*. Whilst impact can often be serendipitous, equally researchers need to make the most of opportunities when they arise. There was an example of government interest in the Rebound Effect work (Tim Jackson and Ian Christie presented this to the Sustainable Lifestyles Research Group) with Defra wanting to present this work to DECC. Despite the interest of Defra, they complained that 'nothing seems to be happening' from RESOLVE/SEG in response. Defra felt that the groups need to act quickly when an opportunity arises and should 'be hassling for opportunities to take evidence back into Defra'. A different government end user emphasised the point: 'timing is all so important. When an issue is topical, the impact of academic research is likely to be big. At that point you will get a lot of impact'.

### 3.4.3 Summary

Whilst all the above routes and factors clearly come into play in terms of academic groups seeking impact, we have picked out a small number below which were particularly important in achieving impact in the case study examples:

- Policy maker buy-in to the research, helping in research design, commissioning work;
- Critical mass of work on a topic area and an established reputation as the primary place to go for advice (either an individual or a group);
- Use of face-to-face briefings and meetings, preferably in Whitehall;
- Timing needs to be right, with an established need for the work;
- Strong links between group and the policy body, e.g. group staff in key advisory posts or secondments.

## 3.5 Lessons learned regarding maximising the non-academic impact of research

### 3.5.1 What is expected?

Some researchers interviewed were not clear about what was expected of them with regard to engagement and dissemination with a view to achieving impact and influence. Coupled with the fact that some academics are not natural 'engagers', this presents a patchy picture. As one end user stated:

*'There are quite a large number of academics out there who aren't interested in impact. But also a significant number of people who would be really keen for their work to be taken on board'.*



However, there appeared a lack of clarity about what was expected of researchers by ESRC with regard to impact. One researcher said that they *'felt that it would have been useful to have a request to demonstrate impact [from the research council] ...the ESRC were more focussed on research, not dissemination ... and ESRC funding is proper research funding without an applied element'* concluding that *'this almost implies that you don't have to worry about dissemination'*. Another lamented *'given ESRC's investment, it's a pity that they talk much more about the communications aspect'*. One interviewee perceived an ESRC tendency to think that impact was about the odd seminar or policy briefing paper.

Achieving impact through academic research has risen up the agenda in recent years and ESRC's support for this process has increased accordingly. ESRC have developed a number of advisory mechanisms to aid impact, including their Pathways to Impact Toolkit and various additional pots of funding for dissemination (e.g. Festival of Social Science, also previous funding for Knowledge Exchange Opportunities). The desire to see impact, and these additional opportunities and tools are communicated to research groups via Troika Meetings and Investment Director meetings. ESRC ask for Pathways to Impact plans to be submitted with final research proposals. In addition, groups are asked to set out their impact in their Annual Reports.

Therefore, it is clear that ESRC expects impact, where appropriate. Whilst our interviews with Directors and senior researchers demonstrated an understanding of ESRC's expectations, it may be that this was not communicated as well as it should be within the groups themselves to all researchers.

### 3.5.2 Should research make policy?

Both the internal and end user interviews questioned the assumption that academic research *should* influence policy. Many interviewees stated that they would be worried if research had a direct and immediate impact, i.e. if policy makers were taking it straight from research – as this *'would be deeply undemocratic'*. Research should *contribute* to the policy debate. Some research can be deeply critical of government/policy. Typical of a number of comments was:

*'Not sure whether academic research should become more relevant to policy making, or needs to be. ESRC should not replicate Defra or BIS in terms of making policy'*.

### 3.5.3 Designing for impact

Adopting a positive, proactive attitude towards policy engagement across the research group and involving end users in research design were two key factors. Sussex had always aimed to be policy relevant and this approach was adopted by SPRU and then exemplified by SEG: as one interviewee put it *'the way we do research is based upon an engaged approach which pervades everyone at SEG. We look for a two way relationship with stakeholders and take every opportunity to*

*engage'. As another put it, 'its not just putting the end results close to end users, but crucially being informed by them at the design stage and throughout the research'.*

Involving end users in research design and academic groups' forward work programme was a critical point from the end user perspective. This would ensure that research is both relevant and timely. Where groups target government departments as major end users of their research, then they could be more proactive and invest more time in developing the relationship and not just at Director level. For example, they could set up annual visits to discuss a department's issues over the short term (say next 3-5 years).

However, end users appeared favourable to longer sessions (say three or four hours of workshops, looking at 4 or 5 presentations) out of town, or urged groups to find a central London location. A Whitehall end user suggested that *'if you want to engage with senior people from Whitehall, then need to have events in Westminster Central Hall, at lunchtime, 1.5 hours max. Or do tailored presentations – come into and present over lunch hour - would have loads of people coming'*. The Whitehall door appears to be open, if academics are prepared to come into the departments.

#### 3.5.4 What do policy makers find useful?

Whilst some appreciate and have time for academic papers, most do not. Papers or reports that review a *tranche* of research, summarise papers and explain the issues to a non expert audience were especially appreciated<sup>19</sup>. An end user referred to a US newsletter (NBER) as an example of good practice in disseminating academic papers: *'once a month they pay a journalist to read a full paper then write a 400 word article on it – in language that makes people want to read it'*. It was argued that papers selected for this treatment probably have a much higher readership.

An end user with experience in both government and academia considered that *'a lot of academic output was inaccessible to policy makers – shockingly so'*. The Grantham Institute was cited as an example of intermediary body who translate academic research into a product that end users can understand, i.e. they get academics to produce briefing papers, they run events (e.g. recent one for a couple of hundred business people plus the Secretary of State).

Synthesising research into summaries and briefing papers is welcomed. One end user stated *'we need bite size findings – e.g. 3 bullet points in an email. When we commission research, we ask for a 3 page summary because we know policy makers need short documents'*.

---

<sup>19</sup> An example of such an approach is the AVOID programme, set up by DECC and Defra to put the latest scientific knowledge about dangerous climate change into the hands of policymakers and which undertakes meta-analysis of academic research

Where academics reach a consensus on an issue, then this is useful to decision makers. Also numbers and metrics are incredibly useful, e.g. future costs of technologies, value to consumers of certain situations and research that 'has a go' at coming up with such numbers is valued.

Secondments or advisory appointments should be considered by research groups seeking policy impact.

### 3.5.5 How to better connect end users and academia?

An insight into the challenge presented regarding the academic/ policy interface was provided by a government stakeholder who lamented:

*'I am still grappling with the challenge of integrating government and academia. For example, typically, when someone here says "that's very theoretical" they do not mean "that captures, in a deep way, a coherent and insightful view of an apparently difficult and fragmented subject." They mean, "that's unlikely to be applicable to the real world." I don't agree with this assessment, but I don't know how to move the debate on. Ideas welcome.'*

One interviewee with experience of the civil service considered that it was difficult for outsiders to have an influence on government policy and stressed the importance of '*having to have an informed customer in the first place*'. Increasingly it's now the Treasury that makes policy decisions, rather than the departments, which makes it difficult for academics to 'have the right conversations'. There was some perception that maybe some policy makers don't know what questions to ask; and therefore there was a role and need to educate them to ask researchers the right questions.

However, interviewees raised a concern that researchers shouldn't fall into the trap of telling policy makers what they want to hear, which would be the easiest route to impact ('gold plated'). It was seen to be perfectly sensible for researchers to take their questions from politicians and policy makers – but not their answers! The opposite view was emerging from advisory board members who represented policy makers: one commented that academics should '*be prepared to muddy their hands if they want to maximise impact*' feeling that '*the culture in academia remains on the side of theoretical/blue sky thinking, rather than public or policy engagement*'.

It was recognised that when doing research in applied areas, ESRC funding is very helpful: alternative funding from departments or industry, may be seen to compromise independence and lead to bias. A typical comment was: '*if you are working for DECC then you are answering their questions and they say they know what the answer is going to be anyway, although have no evidence. With ESRC funding you can change the question and don't care what the answer is*'.

Changes in administration plus high turnover of staff and civil servant changes make maintaining long term relationships difficult. The need to 'future proof' ones

networks to accommodate these changes, was emphasised by more than one interviewee. This may involve widening points of contact beyond single individuals.

Interviewees from both sides were aware that policy makers can make bad policy and often are constrained by a particular policy approach or starting point. DECC's relationship with EPRG over the Electricity Market Reform was a good example. DECC valued EPRG's market stance, knowledge and understanding – and according to some of its own staff may have been better taking EPRG's 'optimal' advice on all aspects – but were constrained by the government's starting position. Nevertheless, having such a solid and knowledgeable sounding board was incredibly useful for DECC.

Some in industry accepted that not all academic research should be relevant to industrial practitioners, and felt there was certainly a place for 'blue sky thinking'. But where groups sought to influence or impact on practice or industry, then it is important that academics get better at familiarising themselves with industry's perspective. Industry stakeholders argued that academics should understand the challenges faced by business, suggesting for example that policy proposals need to be grounded in terms of the 'realistic charges' that industry pays. Consultation with industry needs to be persistent and involve groups and trade representatives in order to improve feedback and results.

Collaborative practice or seeing research and its dissemination as a two way process, involving a multiplicity of partners, including non academics and end users, seems to be the key to achieving greater success.

EPRG's Energy Policy Forum (EPF) was a good example of two way dialogue. A unique aspect of the EPF was the offer of private audiences for members. EPRG researchers go out to industry premises or headquarters and discuss areas of common interest. As one industry stakeholder commented *'conversations take place and they may factor these issues into their future work - this activity means the work they do is relevant as it's informed by real-life issues. We value them [as being different to consultants] because of their independence and ability to free think and take a rounded look'*.

Only through maintaining independence does research have any value or credibility: *'we shouldn't mind if our work is used by Greenpeace or DECC'* reflects one of the many comments received in interviews about the crucial importance of academic research; being completely independent from both policy makers and industry.

Whilst EPRG were hugely respected and very influential, there was a sense from a number of government policy makers that they assumed a level of expertise that wasn't present in their audience: *'EPRG probably need to recognise that the audience is not as clever as they think and need more effort with explanation, rather than assuming that people follow the argument, more popularised'*

*presentations, more step by step explanation'* suggested one government end user. There was also a view that scientists and engineers in academia were closer to DECC than academics in energy policy/energy economists were.

### 3.6 Methods used to evaluate and identify research impacts

Most people interviewed accepted that the approach taken by CAG, i.e. a qualitative, tracking forward approach, was the most appropriate way to evaluate this type of programme. One interviewee commented *'the way CAG/ESRC are doing it – telling the impact story, speaking to people – is more realistic in terms of understanding how impact occurs'*.

There was no support for a 'tracking back' approach to assess/ quantify economic impact. CAG looked into opportunities to use tracking back at the desk review stage but did not identify any suitable examples. This aspect of the original methodology was not pursued.

There was widespread feeling that measuring researchers by their policy or practice 'impact' was difficult from both a practical and philosophical perspective. Instead, measuring the process of engagement rather than the end result was seen to be more appropriate (i.e. the potential for impact or proxy indicator, rather than the impact itself). This would put the right burden on the researchers, instead of measuring academics on policy impact which was seen by some academics interviewed as being 'a perverse incentive'.

One interviewee suggested looking at metrics – how many people read particular types of media, e.g. a comment in the Daily Mirror will be read by more people, or books sold, visits to website. Measuring the number of messages you get out there. User contacts are important – personal relationships, e.g. '10 people at this certain level attended this event'.

## 4. Conclusions and recommendations

### 4.1 Key conclusions

The three Energy Groups funded by ESRC during the period 2005-2010 (RESOLVE, EPRG and SEG) produced a vast amount of high quality policy relevant research across a number of topical energy policy areas. There was considerable interest in the output of these groups especially from DECC, Defra and Ofgem, but also from industry and practitioners.

Both EPRG and SEG built on many years of similar research by predecessor bodies and researchers (in SEG's case SPRU), whereas RESOLVE differed in tackling the relatively new area of sustainable behaviour change amongst consumers.

#### Energy groups' impacts and influence

The evaluation traced examples of instrumental, conceptual and capacity impacts. EPRG had a number of instrumental impacts, including on the Electricity Market Reform, charging arrangements for gas and electricity transmission networks, the impacts of liberalisation in energy markets and the EU Emissions Trading Scheme. SEG was instrumental in the UK's negotiations on climate change in relation to low carbon technology transfer, an area of work which continues to expand in impact and influence beyond India and China (this evaluation was limited to two areas of SEG work). RESOLVE's examples of instrumental impact were perhaps more limited and directed at industry and practice. Their work on the 21st Century Living Project with Homebase and the Eden Project is a good example.

The main value of RESOLVE to end users was in its conceptual impact in terms of helping to frame the debate on sustainable lifestyles and raise the profile of social science and insights into behaviour change across a range of government departments. EPRG was valued by industry in terms of moving the debate from a rhetorical one to one where facts and figures are being brought to bear, a more quantitative approach. Their Energy Policy Forum is a respected model for two way interchange with industry, government and regulators. They have also moved the debate forward on Carbon Capture and Storage and the geo-politics of Russian gas. SEG's pre-eminence in the nuclear energy world has also led to conceptual impact in senior government circles.

Capacity impact was also demonstrated by PhD secondments into government departments and by senior researchers acting as advisors to Ofgem.

#### Synergies

The evaluation found some evidence of collaborative work between the three groups and a few examples of synergistic benefits or impacts.

### Routes and mechanisms to impact

The groups all had a proactive approach to dissemination, engagement and production of policy relevant research. A range of methods were employed and the evaluation notes a number of factors that have affected influence (success factors and barriers).

Particularly important factors were seen as:

- Policy maker buy-in to the research, helping in research design, commissioning work;
- Critical mass of work on a topic area and an established reputation as the primary place to go for advice (either an individual or a group);
- Use of face-to-face briefings and meetings, preferably in Whitehall;
- Timing needs to be right, with an established need for the work;
- Strong links between group and the policy body, e.g. group staff in key advisory posts or secondments.

### 4.2 Lessons learned for impact generation

The evaluation drew out a number of lessons in relation to impact generation.

Adopting a positive, proactive attitude towards policy engagement across the research group and involving end users in research design were two key factors. This would ensure that research is both relevant and timely. End users also appeared to favour meetings of sufficient length (say three or four hours of workshops, looking at 4 or 5 presentations) in central London locations. The Whitehall door appears to be open, if academics are prepared to come into the departments.

There is a real role for intermediary bodies or individuals to interface between academia and policy makers and perform a 'translation' role. Papers or reports that review a *tranche* of research, summarise papers and explain the issues to a non expert audience were especially appreciated.

Secondments or advisory appointments should be considered by research groups seeking policy impact.

Informing or educating end users would be beneficial: policy makers sometimes don't know what questions to ask.

It was recognised that when doing research in applied areas, ESRC funding is very helpful: alternative funding from departments or industry, may be seen to compromise independence and lead to bias.

Changes in administration plus high turnover of staff and civil servant changes make maintaining long term relationships difficult. The need to 'future proof' ones networks to accommodate these changes, was emphasised by more than one interviewee. This may involve widening points of contact beyond single individuals.

Interviewees from both sides were aware that policy makers can make bad policy and often are constrained by a particular policy approach or starting point. DECC's relationship with EPRG over the Electricity Market Reform was a good example. DECC valued EPRG's market stance, knowledge and understanding – and according to some of its own staff may have been better taking EPRG's 'optimal' advice on all aspects – but were constrained by the government's starting position.

Where groups sought to influence or impact on practice or industry, it is important that academics get better at familiarising themselves with industry's perspective. Consultation with industry needs to be persistent and involve groups and trade representatives in order to improve feedback and results.

#### 4.3 Notes on evaluation methodology

The evaluation adopted a qualitative tracking forward approach: this was welcomed by stakeholders interviewed.

#### 4.4 Recommendations to encourage impact and influence

##### 4.4.1 Strategic Planning

ESRC could better help to improve the interface between academic research and policy making by strategic planning. For example, in relation to UK Government policy, ESRC can discuss priorities with Chief Scientific Advisors (we understand these conversations already take place) to better understand how policy is formulated, what questions need to be asked, and what knowledge and analysis would be useful. This should help clarify the opportunities and limitations for academics making contributions to policy formulation (bearing in mind that the purpose of Research Councils' funding is not to provide a knowledge base and analytical capability for Government but carefully designed research can help support this latter objective). This would help define research topics in relation to the questions, especially to areas where policy makers are struggling to provide options.

##### 4.4.2 Reinforcing the impact message

Given the apparent lack of clarity amongst some researchers about ESRC's expectations and guidance regarding impact, ESRC should continue to promote this



aspect of their funding, for example, by use of their Impact Toolkit. This is also a matter for academic groups (see below).

#### 4.4.3 Synergistic working

With regard to synergistic impact and working, the ESRC needs to be clearer about the goals and objectives for this type of work and better promote the benefits and advantages of this work to grant recipients. In addition, to encourage synergistic working/impact ESRC could consider:

- Finding a way to prioritise this work within the funding and academic context, which in part appears to work against it. One suggested mechanism was cross membership amongst group Advisory Boards e.g. 2-3 shared non executives across the 3 groups with responsibility for promoting synergies;
- Aligning ESRC encouragement with capacity building, particularly in relation to skills development in communication;
- Resourcing the process;
- Finding new methods of discovering and keeping informed where commonalities exist in research that might, at the macro level, not have obvious synergies
- Building this activity in to grant recipients plans and work programmes.

#### 4.4.4 Improving impact potential: policy making

To improve academic impact on policy making, *grant holders* should consider the points below:

- Be proactive: adopt a positive, proactive attitude towards policy engagement, with use of action plans (e.g. pathways to impact plans – see Annex 3);
- Staff awareness. Better communicate ESRC's expectation on dissemination and impact to researchers by ensuring staff are aware of ESRC advice and guidance regarding impact, e.g. the ESRC Impact Toolkit;
- Involve end users in research design; this is a key route to improving impact;
- Use of face-to-face briefings and meetings, preferably in Whitehall;
- Establish strong links with target policy bodies e.g. explore placing staff in key advisory posts or secondments;
- Language: Consider the promulgation of 'translation intermediaries', either institutions (along the lines of LSE's Grantham Institute) or individuals who can help academics translate their material into policy friendly language and format.

#### 4.4.5 Improving impact potential: industry

In terms of improved impact with industry, there is a general need to improve communication with this sector. The use of an 'industry forum' along the lines of the EPRG Energy Policy Forum is a useful two way route of knowledge exchange between academia and industry. Consultation with industry needs to be persistent and involve trade representatives as well as individual companies/ groups. The promotion of placements within industry can improve communication and also encourages industry to assist with research.

## Annex 2 Case studies

### Case study A. Low Carbon Technology Transfer to Developing Countries<sup>20</sup>: Sussex Energy Group (SEG)

Background and research: A SEG team led by David Ockwell undertook two phases on research for the UK government investigating the barriers to low carbon technology (LCT) transfer in India and developed policy recommendations on the basis of empirical evidence collected. The first phase looked at bridging the divide between traditional approaches to viewing technology transfer and new insights from the literature on carbon innovation. The second phase conducted more in-depth analysis on the issues of intellectual property rights, and collaborative research, development, demonstration and deployment and their role in facilitating low carbon technology transfer to developing countries. These original two pieces of research have led to multiple spin-offs, with subsequent smaller pieces of work being conducted on related issues for a range of public sector bodies including DFID (on environmental leapfrogging), UNDP (on cleaner coal technology in China, India and South Africa), OECD (on environmental innovations) and UNCTAD (on energy and rural development). It also led to a framework contract with DFID to evaluate proposals for funding to the World Bank Clean Technology Fund. A follow-on project investigating low carbon technology transfer to China was also initiated.

Impact: This work has made significant contributions to the search for a new deal on climate change, particularly on the role of low carbon innovation in developing countries. The results of the initial two phases of research were presented at a range of conferences and policy meetings including the Delhi Sustainable Development Summit, Parliamentary Commonwealth Association conferences on climate change and several side events at annual Conferences of the Parties (COP) to the UN Framework Convention on Climate Change. At the invitation of Lord Stern, these results were also used to produce a policy proposal which was published to inform the negotiations in Copenhagen in 2009.

SEG felt that they had 'instant access to Whitehall' for this work which included provision of funding. The UK Government wanted to find a constructive way forward on climate change negotiations and considered that the 'carrot' that would bring developing countries to the climate change table was the offer of access to low carbon technology. This had been a major stumbling block in previous international discussions where help with technology had been offered but never delivered upon. Prime Minister Blair had a progressive stance on this issue and saw this SEG research as way of getting things off the ground and delivering on UK promises.

---

<sup>20</sup> SEG's initial work in this area is the subject of an existing ESRC case study – see [http://www.esrc.ac.uk/images/Low\\_carbon\\_technology\\_transfer\\_tcm8-3373.pdf](http://www.esrc.ac.uk/images/Low_carbon_technology_transfer_tcm8-3373.pdf)

DECC described SEG's second phase work as 'influential and very helpful in terms of international negotiations and narrowing the gap between Indian and UK positions'. It highlighted that intellectual property rights was a much smaller barrier to technology transfer than the Indian Government had argued. Governmental positions had been particularly entrenched, but the study, for the first time, looked at the empirical evidence. A major concern had been that developed countries held the intellectual property rights to low carbon technologies and were blocking development in the developing world as a result. The study showed, however, that it was the conditions on the ground in developing countries (e.g. skills, investment, etc) that were bigger barriers. According to a UK technology lead negotiator for international climate change under the UNFCCC:

*'It was very helpful. We needed some evidence to support our position on technology transfer particularly in relation to intellectual property rights (IPR). Some developing countries see IPR as a barrier to technology transfer but we see it as a driver for innovation. The work looked at barriers to technology transfer. Showed that IPR isn't an important barrier, there are more important issues. It is this research that we have used to inform our negotiating positions in international climate discussions. The work has also been used to help us liaise with the IP office in London to develop our lines for negotiation, and also respond to parliamentary questions'.*

*'Helped to make a case for the fact that the IPR is not a barrier to technology transfer. We could show we had done some work on the ground in India and China, which strengthened our position and helped in conveying our message to influence others. The work really hit the mark – very helpful that in negotiations we could point to firm evidence rather than relying on hypothesis and conjecture. It didn't directly influence anyone by itself, but it contributed to the evidence we needed to make the case. Our position would have been weaker without it'.*

The original work has led to a number of spin-offs, and the policy stance has broadened into how transfer of LCT feeds into broader sustainability and development benefits, including transferring skills and knowledge. Spin-offs have included:

- Commonwealth Secretariat commissioned work in relation to 'least developed countries' energy context: trade implications for small states, such as those in the Caribbean, which have very open trade-dependent economies, whose trade in goods and services is embedded within natural resources that are highly vulnerable to climate change impacts e.g. food and fisheries sectors and tourism. The work aimed to get these very open economies to start thinking about options for reducing impacts on key sectors and addressing competitiveness concerns in a carbon constrained world, including through energy policy. The initial work by SEG and David Ockwell has already been very helpful in helping define terms such as 'low carbon' and 'green jobs'. The

Commonwealth Institute is producing a book on Trade and Climate Change with SEG's David Ockwell advising in relation to energy. The target audience is Trade Policy advisers for member states of the commonwealth. A stakeholder involved in this work commented:

*'We had been working on a project with least developed countries, small vulnerable economies and small island developing states. We'd been looking at the trade and development aspects of climate change as they relate to these countries. Our project was interested in what options they have in the sense of alternative development pathways in the context of climate change. One thing we wanted to look at was low carbon development. And within that we were interested in technology issues and in energy issues. We therefore ended up asking SEG to do some work on the energy issues. We'd seen what they had done in the subject area and we were aware that they had a framework that we could benefit from'.*

- China study: PM Gordon Brown visited Beijing where he announced LCT collaboration: SEG researcher David Ockwell was flown out to China to get buy in. DECC commented that the original India study *'was so successful that the Chinese were keen to find out more, so a similar study was then carried out in China with SEG and a Chinese university (Tshinghua)'*;
- Chilean government commissioned a low carbon technology needs assessment. SEG advised Chile further in 2010. The Chilean Government was in the process of reassessing technology needs for climate change adaptation and mitigation, in the context of the international convention on climate change. At the same time SEG was working on technology transfer issues between UK and China. While the context was different, the thinking from this was very useful in providing inputs to the local debate in Chile. David Ockwell was invited to a broad-based stakeholder workshop in Chile and was also involved in many meetings with different authorities in Chile. According to a former Chilean Government advisor, the thinking and learning on technology transfer has now really been internalised within the Chilean government.
- Other spin offs include: work in Peru and Columbia (initiated by the UK Foreign & Commonwealth Office); an OECD Environment Directorate report; SEG being asked to review applications to Climate Technology Fund (for DfID); request from an African development bank, for SEG to run a course, training Senior Executives and Managers.

Policy outputs have included:

- In 2010 the UN Framework Convention on Climate Change Secretariat asked David Ockwell and project collaborators (in India, Holland) to produce a report advising on part of a policy mechanism, post Kyoto deal ('Collaborative R&D between developed and developing countries'), advising Expert Group on

Technology Transfer (a UNCCC advisory group). The report was produced and has been 'officially adopted' by UN group. Link to report on UNFCCC site here <http://unfccc.int/resource/docs/2010/sbsta/eng/inf11.pdf>

- Influencing the wording of an Indian government policy on renewables;
- Global Environment Change published an academic paper;
- OECD Environment Directorate [working paper](#)
- Forthcoming report for Commonwealth Secretariat.
- Also several policy briefs (two below, one forthcoming)
  - [www.sussex.ac.uk/sussexenergygroup/documents/low-carbon-tech-transfer-briefing---nov-101.pdf](http://www.sussex.ac.uk/sussexenergygroup/documents/low-carbon-tech-transfer-briefing---nov-101.pdf)
  - [www.sussex.ac.uk/sussexenergygroup/documents/techo-briefingweb1.pdf](http://www.sussex.ac.uk/sussexenergygroup/documents/techo-briefingweb1.pdf)

Key findings and success factors: A key aspect was the emphasis on 'new case study evidence' and looking at India and China and how innovation happens. Research produced *practical* examples to add to the discussion which had hitherto been more general and unspecific. It also looked at how things vary by technology in those countries. Whilst founded on empirical discipline, research linked the debate back to theoretical angle and innovation capacity. This is now underpinning more innovative approaches involving broader socio-technical transition.

Whilst the original work was very responsive having been commissioned by DECC, SEG then took a step back, and adopted more of strategic academic approach.

The team secured buy in from Indian government by holding meetings with Indian researchers and Ministers. The use of shorter policy briefings (4 sides of A4) was said to be 'very effective' by UK negotiators (e.g. Cancun briefing on LCT).

The work with the Commonwealth Secretariat highlights the importance of involving policy-makers at the beginning of the research process to help shape the questions and ensure the work will be useful for informing policy. The Commonwealth Secretariat agreed a format with SEG in advance to ensure the findings were presented in a way that would be relevant to policy makers, i.e. more usable and understandable. A government stakeholder stated:

*'one of the problems is that policy makers have little time to read these things, or they don't have expertise in the area. And we also know the majority of policy-makers in the countries concerned don't have capacity to deal with the research findings – it's an issue for them to translate the findings into practical policy-making. So we'll need to do some hand-holding*

*with the policy-makers to help them consider the results, and we'll bring the academics to some of the meetings too'.*

SEG partnered with the Indian based The Energy Resources Institute (TERI) and both were very good at presenting the results at interim stages: they adopted a policy of 'no surprises', which really helped in terms of preparing the Indian Government of the messages that were likely to come out. TERI's involvement also enhanced trust around the issue and the study.

## Case study B. Electricity Market Reform: Electricity Policy Research Group (EPRG)

Background and research. Electricity Market Reform in the UK involved designing a wholesale market into which generating companies could offer power. Electricity market design is complex, as supply and demand of electricity must be balanced second by second, and storage is expensive and very limited. In addition price setting variable costs are about half average costs, the industry and its cost structure are highly transparent, the technology common knowledge, and demand highly inelastic in the short run: all conditions conducive to market power and tacit collusion. However, there are uncertainties whether current market arrangements will be able to deliver the scale of long-term investment needed quickly enough to meet the triple challenge of a low carbon electricity system, secure supply and a good deal for consumers. Huge investment is required: up to £110 billion in electricity generation and transmission by 2020, more than double the current rate of investment.

The Government published its White Paper on Electricity Market Reform (EMR), *'Planning our electric future: a White Paper for secure, affordable and low-carbon electricity (CM 8099)'*, in July 2011. This sets out the Government's commitment to transform the UK's electricity system to ensure that our future electricity supply is secure, low-carbon and affordable.

EPRG's work on ERM during the ESRC grant period built on a substantial body of work prior to 2005: in a series of articles Newbery identified the problems of wholesale market design and criticized the proposed (2001) British electricity trading arrangement reforms at public presentations in the run-up to the decision. Although this research was unsuccessful in terms of policy impact at the time, it has become clear in the recent consultations over the Electricity Market Reform (DECC, 2010) that the current market design is not fit for purpose and will need reform in the directions already identified by earlier EPRG research. In May 2011, the House of Commons Energy and Climate Change Committee reported to that effect. David Newbery acted as a special advisor this Committee and also provided a briefing at the start of the EMR Inquiry along with EPRG's David Reiner (Dec 2010). Michael Grubb submitted a Memorandum to the Electricity Market Reform (4th Report, May 2011), based on an EPRG paper which is cited in the Committee Report<sup>21</sup>. Michael Pollitt worked on the cost of the EMR to consumers e.g. did a report for WHICH.

Impact. EPRG work around ERM influenced government directly via the Energy and Climate Change Committee and DECC's consideration of policy options. It also influenced the EU and industry. The published papers by EPRG on the genesis and development of liberalised markets around the world provided very useful

---

<sup>21</sup> Low carbon electricity investment: the limitations of traditional approaches and a radical alternative' Tim Laing and Michael Grubb EPRG Working Paper September 2010



background material for DECC officials developing policies on Electricity Market Reform.

There was a recognition from DECC that their department was not originally designed for its current role - rather it was designed for free market, independently regulated world, with minimal government intervention. Given that this has changed, involving 'massive' scale of intervention, DECC was looking for help especially from economists with long track record in the electricity market. EPRG was seen by DECC as *'the premier group in electricity markets'*.

DECC considered that EPRG *'made a direct impact on how we reform the market and design our instruments. EPRG are on our list of people to consult when progressing policy in these areas'*. Whilst there is no specific idea on market reform which is 'labelled' as being EPRGs, they have they had a sizeable influence on policy, having influenced the wider shape and implementation of electricity market reforms. DECC considered that *'EPRG are part of a group of 20-30 people who have influenced this policy process'*.

Early in 2011 DECC was looking into the need for a design for a capacity mechanism for the UK Electricity Market: essentially writing government policy for ensuring supply of the electricity system. DECC conducted a background review on security of supply and wider activities and found *'EPRG papers and David Newbery's papers in particular extremely valuable'* in this work. These papers were produced by EPRG pre-2011.

After DECC asked for a meeting with EPRG, a number of DECC staff working on EMR headed up to Cambridge to discuss the issues and ask for advice. A number of EPRG experts were also present. DECC staff commented that they found the discussions *'very useful – enabled them to get a grip on the main issues'*. However, it took DECC a while to convince EPRG researchers that they were not in fact looking for the perfect solution, as they were constrained to start from a certain position (as policy makers). Whilst the optimal solution may have been best, DECC had a particular starting point. EPRG was both *'supportive and critical'* of government in the EMR process. Different EPRG people were pushing different ideas, some practical (e.g. capacity payments, what government wanted to achieve) others discussing it at a higher level and arguing that the capacity mechanism was not needed. Subsequently the capacity mechanism is being designed by DECC as part of EMR. DECC found the EPRG researchers present *'better than many academics in regard to communicating their findings'*.

DECC built on the Cambridge sessions by inviting David Newbery into DECC to do a half day seminar which was attended by 15-20 people *'on the fundamental issues of electricity systems'* which DECC found *'really valuable'*.

According to DECC, a number of suggestions made by EPRG *'are now being proposed for legislation'* including: (i) reform of balancing markets (discussed at an

EPRG teach-in session at DECC, 7th Apr 2011, CMI working paper 58); (ii) introduction of a carbon tax (EPRG Seminar presentation, 14th May 2010); (iii) de-risking of wind contracts (EPRG WP 1120, July 2011); (iv) delaying implementation and carefully designing capacity mechanism (EPRG Dinner, 8th Dec 2011). Whilst the dates of some of these liaisons are outside of the ESRC grant period, it was clear that research undertaken during the grant period was instrumental in provision of this advice.

EPRG PhD student Christian Winzer was seconded into DECC to assist on electricity market design. The department was keen on secondments and was interested in having an academic secondee. Newbery's papers on electricity market design influenced the setting up of the secondment and Winzer's regular contact with EPRG and Newbery himself was seen to be beneficial.

EPRG's impact in this field has been more widespread than Whitehall. At the EU level, EPRG have indirectly influenced the European Commission (EC) via its work through the UK government. The EC's UK Director General has tapped into UK activity including Electricity Market Reform. Capacity markets and security of supply are topics of direct interest to the EC. An EU stakeholder reported that EPRG *'had been able to clarify things and increased our understanding of the UK situation'*.

EPRG also helped industry unpack the impacts of the EMR, especially via their Energy Policy Forum. For example, one industry stakeholder was impressed with EPRG's quality of thinking on EMR which provided insights which helped the company in its early thinking. The advice was *'very specific advice, but high quality'* and a *'sense check'* on the likely impact of the EMR package. Another industry stakeholder found EPRG helpful on the carbon market and financing of the electricity market in general, describing them as *'quite responsive in terms of giving feedback and seeing impact from industry perspective'*.

Key findings and success factors. DECC's team have found face to face interaction with EPRG very useful: *'much more useful than other forms of communication'*. Papers were found to have been helpful to some extent but contribution of EPRG's experience, through making themselves available, had been particularly valuable. EPRG had also made valuable offers to allow officials to bounce ideas off them: DECC considered that *'it is in this sort of informal interaction that problems are actually solved'* (describing this as being covered by EPRG's funded research time, rather than consultancy) The Economics Advisory Group with the Secretary of State was also a useful route.-

EPRG papers were valued by DECC because they were *'readable for a non-expert'*, quite contextual giving an overview of the history, challenging conventional mythology which *'was very valuable for policy makers as it's not something we are good at doing'*.

EPRG and David Newbery in particular were valued as they were seen to have a huge amount of knowledge on EMR, for example on the relationship of the system operator to the rest of electricity network; also on wider market reforms.

## Case study C. 21stC Living Project - RESOLVE

Background and research The 21st Century Living Project looked at the gap between our knowledge about climate change and our lack of behaviour change towards sustainable lifestyles.

—

Four project partners, RESOLVE, The Eden Project, Homebase and Acona, worked with 100 households and delivered a range of interventions to support and measure attitude and behaviour change over eighteen months.

Each household received an initial and final environmental audit, an attitudinal survey, personalised information and 'green' equipment and £5000 to spend on environmental improvements. They were also provided with support, information and targeted interventions during the year. In addition, 61 of the households were also given thermal imaging of their properties.



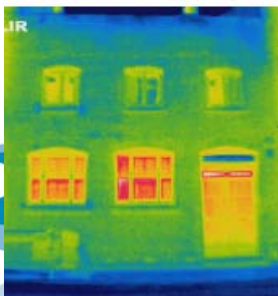
The project was hosted by the Home Retail Group, with RESOLVE being bought in to provide academic rigour.

RESOLVE undertook to understand the values of the families involved in this research by developing a baseline and follow-up values survey. This enabled segmentation of the survey group by their attitudes to 'green issues' and analysis of change in values by segment.

Through this input of academic standards and the provision of accurate survey data RESOLVE was able to provide a firm and independent foundation for the project conclusions that were drawn for business, policy makers and others.

Impact. The project and research produced a set of conclusions and recommendations. The 'top five' being listed as;

- It's easier to change than people think. At the end of the project the participating households thought almost every change was easier to make than they had thought it would be at the beginning.
- It's not all middle class. Everyone made changes across all social groups, and the households from the C2 and D social groups did significantly better in the end.



- Simple interventions work. The thermal imaging and energy monitors changed attitudes and behaviour.
- Utility billing needs radical reform. Project staff found it really difficult to locate data showing whether households were successfully cutting consumption.
- Giving people money unlocks investment. The £500 payment led to additional expenditure in 61% of homes, roughly at the rate of £1 for every £1 of grant.

The project showed that it is possible to draw together business, campaigning organisations, academics and others in a joint project with practical and tangible activities, with each partner sector gaining a better understanding of each other's needs and roles. RESOLVE in particular learned more about how to report to business and translate findings for non academic audiences.

Key findings and success factors. The project was willing to 'take an honest look' at what was happening in real people's homes, and work closely with them to find out about what motivated or prevented change. This meant that all partners had to be willing to buck convention and throw out the rule book when analysing the data. The results around class, materialism and other motivators to change, were different from those reported in earlier academic work, and possibly from those 'expected' from the project. Having shown this difference from conventional wisdom it was essential that the project partners had worked with an academic partner to validate the results and lend an independent and rigorous eye to all the work.

## Case study D. Ofgem's Project TransmiT - EPRG

Background and research. Project TransmiT is Ofgem's independent review of the charging arrangements for gas and electricity transmission networks, and the connection arrangements that DECC has explicitly left for Ofgem and the industry to resolve. Its first phase collected evidence to determine whether all or part of the transmission charging regime should be modified. It also aimed to identify what changes can be made to facilitate the timely connection of new (including low carbon) generation. In addition to seeking views on these issues from stakeholders, the project also drew on the expertise of an independent advisory panel and a number of reports prepared by experienced academic commentators, including EPRG/David Newbery<sup>22</sup> who advised on reforms to the British transmission access arrangements, a topic that EPRG have long argued should also include the design of suitable market arrangements.

Impact. According to Ofgem, EPRG's research has been '*very influential*' on the 'TransmiT' project. Initially, when Ofgem commissioned EPRG to produce a paper alongside other commissioned research, the scope of the TransmiT project was very broad. As a result of the EPRG paper (and to some extent the others), Ofgem realised they were asking too broad a question with the project. So it has had influence in terms of narrowing the scope of the work undertaken. The EPRG work has led to Ofgem dividing the TransmiT project into two phases.

### Key findings and success factors

As David Newbery notes<sup>23</sup>: '*Transmission pricing is an excellent example where economics adds real value to what traditionally has been primarily a topic for electrical engineers, as the laws of physics cannot be ignored when considering the management of meshed networks. Engineers are concerned to optimize systems typically under unified ownership (the typical situation before 1990), while in liberalized electricity markets individual generators decide where to locate and when to generate – decisions that are guided by transmission access pricing and which impact on the efficiency of the electricity system, and where incentives and their design are critical. Newbery (2011) demonstrates the potential distortions that current renewables policy introduces into these decisions, and shows how they could be resolved by suitable contracting under the current Electricity Market Reform. This area is one where the inter-disciplinarity of EPRG, which has members and Associates who are engineers, scientists and lawyers, as well as main-stream economists, has been critical to convincing industry and Government of the validity and soundness of our conclusions*'.

---

<sup>22</sup> Newbery, D (April 2011) "High level principles for guiding GB transmission charging and some of the practical problems of transition to an enduring regime". EPRG, University of Cambridge.

<sup>23</sup> Newbery, D (29 April 2011) "EPRG REF Impact: Pilot for Economics". Faculty of Economics and Director, Electricity Policy Research Group, University of Cambridge.

## Case study E. Nuclear power – SEG

Background and research. SEG's Final Report cited its work on nuclear power as an example of a high impact activity: *'research and policy engagement on the economic and policy with respect to nuclear power in the UK. Led by Gordon MacKerron and Jim Watson, SEG has contributed significantly to policy and public debates on new build and waste issues'*.

Impact. This has been a long, slow burning example of influence. SEG's involvement in the nuclear debate stretched back to SPRU (pre-SEG). One government end user described SPRU as having a *'pro-renewables, anti-nuclear'* stance, whereas SEG was *'more balanced'* than SPRU with *'not such an aggressive, anti-nuclear line'*. This end user saw SEG's role in nuclear as being *'part of developing a UK consensus'*, particularly in the wake of the sharp policy change that had occurred in relation to nuclear policy, from the Labour government position of *'formally no objection to nuclear but it must pay its way'* (which in reality meant that no new nuclear power stations would be built) – to the position of *'we need nuclear urgently'*. The reason for the policy change being the overriding case for low carbon.

A government end user described Gordon MacKerron as a *'very distinguished nuclear expert and advisor, SEG or no SEG Gordon was an important player'* and stated that Jim Watson was also known as an important figure in relation to nuclear *'but also energy issues more widely'*.

Another government end user stated that MacKerron *'had real impact'* in relation to work on radioactive waste, but that he *'had an agenda'* stating that academics look for *'perfect solutions, not practical ones'*. An industry stakeholder thought that *'Gordon MacKerron had a key role 10 years ago advising the Cabinet Office 10 years ago on energy, in particular nuclear'*, but less so recently. Between 2003 and 2007 MacKerron was Chair of the Committee on Radioactive Waste Management (CoRWM) – so for a time he was half SPRU/SEG half CoRWM.

One end user described SEG as having a much more balanced prospectus than SPRU (SPRU had various component parts, some of which were seen as campaigners as much as analysts), referring to SEG as *'high quality analysts'*.

MacKerron was asked, and provided, commentary to senior people in the Cabinet. When Chris Huhne became Secretary of State and had an initial briefing from senior civil servants – MacKerron was part of this and provided input on the reality of nuclear power economics. MacKerron himself considered that he contributed to persuading the SoS who he described as *'a sceptic of this issue'*.

MacKerron also wrote a paper for the National Nuclear Centre of Excellence (NNCE, the Centre had a very brief life and has now been wound up; it looked at non-proliferation especially with regard to countries with nuclear technology of concern to the UK). The paper concerned reprocessing spent fuel including whether to store

or dispose directly. Despite the NNCE being disbanded, there are plans to publish the paper.

Key findings and success factors. SEG was influential in the nuclear debate chiefly because of personalities and contacts. One government end user *'felt that everyone knew Gordon MacKerron and he had personal contacts with policy makers, so too Jim Watson'*.

When SEG began MacKerron was already heavily engaged and contracted with government on nuclear power. Nuclear is a very polarising issue SEG saw their position as neither a supporter nor an opponent – rather they were a participant researching evidence, a broker and trusted source.

SEG/MacKerron did considerable media work in relation to nuclear (e.g. Observer, Guardian, Radio 4, Newsnight, plus inputs to documentaries). They saw informing the public as being important and according to a SEG researcher *'this may help to persuade people that it's worth spending the money on nuclear power'*.

–  
Gordon MacKerron: This way is more likely to leave us in the dark. The Government says it is committed to nuclear energy, but has done nothing to make it more attractive. The Prime Minister's announcement last week opens up the danger of the country being left with no new reactors, nor any greener alternatives. Sunday 13th January 2008

–  
Professor Gordon MacKerron: Fallout guy. Chris Arnot talks to the man charged with working out what we should do with our nuclear waste. 27th September 2005

This is an example of cumulative impact, where SEG have built up a body of expertise over time and become a trusted source on a subject over a period of years. Rather than any particular paper or piece of research, SEG built a credible reputation as people who understood the problem. And they engaged actively with public policymakers.



## Case study F. Ofgem's RPI-X@20 review - EPRG

Background and research. Ofgem undertook a detailed review of energy network regulation looking at how best to regulate energy network companies to enable them to meet the challenges and opportunities of delivering the networks required for a sustainable low carbon energy sector.

Pollitt's paper 'Regulatory Electricity Networks in an age of rising real prices' (27 Sept 2007 presentation to the EPRG/CEEPR London Conference) was the No.1 reference/citation for the review. EPRG's Stephen Littlechild was also involved: his work on constructive engagement was cited too. Michael Pollitt advised on the 5th Electricity Distribution price Control the 5th Transmission Price Control and the 2nd Gas Distribution Price Control utilising his work on efficiency analysis.

Impact. EPRG's Michael Pollitt's acted as an in-house consultant to Ofgem and, according to Group Director David Newbery, Pollitt's work on incentive regulation led to '*important change in form of regulation ... and ...innovation to reduce costs*'. Again according to the EPRG Director another consequence was the formation of the Low Carbon Network Fund (LCNF) set up to encourage competitive bids for innovation in distribution networks (this drew on EPRG research) to reduce costs and increase renewables. Ofgem Chair Alistair Buchanan referred to both Littlechild's and Pollitt's work in his speech:

*'Leading regulatory thinkers including Littlewood Doucet and Michael Pollitt (Ofgem's in-house consultant) have been advocating quite different approaches to regulation recently. They have probed whether consumer advocate public contest easier settlement models are the next step for GB'.*