



**CARES Infrastructure and Innovation Fund Project Number P42241**

## **SMILEGOV Island Energy Audits**

### **Final Project Report**

**November 2015**

#### **Executive Summary**

Through this CARES project, the Scottish Islands Federation (SIF) has collaborated with Community Energy Scotland (CES) to devise and trial methodology to enable eight island communities to research and better understand their own overall energy use, by undertaking Island Energy Audits.

This initiative was inspired by SIF's joint involvement with CES in 'SMILEGOV', a 30 month project to monitor, support and report on island energy developments and plans throughout Mediterranean, Baltic and Atlantic regions of Europe.

Community led island energy audits have been completed for Arran, Bute, Gigha, Iona, Lismore, Luing, Mull and The Small Isles, as islands which opted to participate in the wider SMILEGOV project. Two other island communities, Cumbrae and Skye aspired but lacked local capacity to undertake audits.

CES led an initial training session for interested islanders in Oban in May 2014 to brief auditors and also provided mentoring guidance and technical advice throughout. Data templates were completed for each participating island presenting details of overall energy consumption.

Each audit report is expected to be revisited, revised and updated over time to inform development of strategic energy action plans focussed on each island, to support and empower more island communities as key stakeholders engaged in shaping more sustainable energy futures for themselves.

Copies of each audit report will be available to the island organisations which commissioned them, and to their respective Local Authorities. SIF will post all reports online for the benefit of others interested.

#### **Aims of the Project**

- To build the capacity of island communities to better understand and constructively address energy issues and concerns
- To gather and present data to inform and support development of Sustainable Energy Action Plans and energy projects for participating islands
- To develop a transferrable methodology for conducting energy audits on islands.

## **Introduction**

Clean, affordable, reliable energy supply is inherently vital to the resilience of all communities, but can present particular challenges for islands.

The Scottish Islands Federation (SIF) is an NGO acting on behalf of its members to promote and advance the interests of Scotland's island communities. SIF member organisations recognise mutually supportive benefits of working together, sharing information and a strong collective voice. See [www.scottish-islands-federation.co.uk](http://www.scottish-islands-federation.co.uk)

SIF negotiated partnership arrangements with Community Energy Scotland (CES) for purposes of participation in the European SMILEGOV project, running from April 2013 to September 2015. See [www.sustainableislands.eu](http://www.sustainableislands.eu). SMILEGOV builds on experience of an earlier Project, 'IslePact' also concerned with monitoring, supporting and reporting sustainable energy developments on Islands. SMILEGOV encompasses island networks operating throughout Europe and beyond,

A key theme of SMILEGOV is to promote awareness of the Pact of Islands (PoI), which entails development of Island Sustainable Energy Action Plans (ISEAPs) [See [www.sustainableislands.eu/pact-of-islands/what-is-pact-of-islands](http://www.sustainableislands.eu/pact-of-islands/what-is-pact-of-islands)]. In June 2015, at a special ceremony in Brussels, SIF signed PoI adherence forms on behalf of North Ayrshire, Argyll and Bute and Highland Councils. (Ratification is pending).

With significant experience of engaging communities and local authorities in SEAPs, CES recognises baseline energy audits as integral to effective strategic planning. CES devised methodology and plans for the project **as appended**.

## **Project Background and Context**

This Island Energy Audit Project arose through SIF's involvement in SMILEGOV, but has been separately funded in its own right through CARES, to address local needs, interests and circumstances of our participating cluster of Scottish island communities.

As a SMILEGOV consortium member and 'island cluster leader', SIF has been committed to supporting the engagement of a number of Scottish islands, in relation to European targets concerned with renewable generation, energy efficiency and reducing CO2 emissions.

ISEAPs, as envisaged by PoI and SMILEGOV, entail more coordinated and effective approaches to sustainable energy planning into the future, to particularly address the needs of insular communities. Participatory engagement of all relevant stakeholders is seen as essential to expedite processes of development and implementation of all kinds of island energy projects.

Elsewhere in Europe, projects often tend to be led by Municipal or Regional Councils. With an essentially different model of governance applying on Scottish Islands, SIF

has worked in partnership with CES to report and support community led energy project developments in the Scottish context to SMILEGOV.

In Scotland, the CARES programme administered by Local Energy Scotland is vital to islands aspiring to renewable energy projects to benefit their communities. SIF cited the CARES scheme and also Community Energy Scotland early on to SMILEGOV colleagues as examples of Scottish Good Practice, effectively empowering island based NGOs to generate both energy and revenue to address local needs.

Baseline data is especially integral to more effective strategic energy planning in island situations, where significant potential for efficiencies, renewable generation and fuel substitution often applies.

CARES funding was identified as an appropriate means to initiate an unprecedented programme of Island Energy Audits to inform strategic energy planning for each Scottish island participating in SMILEGOV.

At the outset, SIF recognised that distinct Multi Level Governance considerations apply to islands in Highland, North Ayrshire and Argyll and Bute Council areas, as compared to administrations in Western Isles, Orkney and Shetland, where island perspectives are integral (rather than marginal) to Council considerations. Efforts to recruit SMILEGOV participants through SIF networks were focussed accordingly.

### **Participation**

SIF had initially set out to identify islanders and others interested in opportunities to participate in a free online training course on island energy issues, presented through SMILEGOV. See [www.energyacademy2020.eu](http://www.energyacademy2020.eu) Invitations were networked through SIF, CES, local authorities and other bodies, with a special meeting convened for island delegates at CES Conference in 2013.

Building on contacts established, interest of individual islanders and organisations in undertaking an Island Energy Audit on behalf of a relevant local organisation was canvassed.

It was established through consultations that a programme of learning, research and reporting involving unpaid volunteers was unrealistic, so CES proposed a CARES project.

The process of participating in this CARES project effectively shaped SIF's cluster of participating SMILEGOV islands as:

- Arran (North Ayrshire): Arran Community Council: Audit Completed
- Bute (Argyll) : Fyne Futures: Audit Completed
- Cumbrae (N. Ayrshire): Cumbrae Initiative Community Company: Phase 1 only
- Gigha (Argyll): Gigha Heritage Trust: Audit Completed
- Iona (Argyll): Mull and Iona Community Trust: Audit Completed
- Lismore (Argyll): Lismore Community Trust: Audit Completed

- Luing (Argyll): Luing Community Trust: Audit Completed by CES
- Mull (Argyll): Mull and Iona Community Trust: Audit Completed
- Sleat (Skye - Highland): Sleat Community Trust: Withdrew
- Small Isles ( Canna, Eigg, Muck, Rum - Highland): Small Isles Community Council: Audit Completed

In every instance, auditors were recruited because they were associated with or known to an island based community organisation: 7 island based Development Trusts; 2 Community Councils; 1 Housing Association subsidiary.

The involvement of these island organisations in the project was primarily concerned with formalities of contractual arrangements and administrative procedures for payment of fees to auditors undertaking the work.

Each island organisation entered into agreement with SIF to commission an island energy audit for a specified fee. In the case of the Small Isles, the work effectively encompassed 4 island communities, while Sleat's would represent only a part of Skye.

Fees payable for each audit varied to reflect the scale and scope of challenges, taking into account population size and relevant prior work available to facilitate data assembly. The level of fees was notionally set at a minimum hourly wage well below any professional rate for the work, but with no qualifications or specialist experience were required. Auditors' modest fees proved adequate to deliver of 8/10 audit reports, (though not for completing every one to the same standard).

SIF expected that a strong sense of local ownership of the resulting reports would not only inform but also motivate local interests and other stakeholders to follow up the Audit process with consideration of ISEAPs. Besides aiming to present useful baseline data to support more effective local energy planning, the engagement and training of islanders as energy auditors was also seen as positive local capacity building activity, in SMILEGOV terms.

With the exception of Iona, all islands involved had local experience of developing energy projects. Whilst some auditors thus brought relevant personal insight to tasks, the overall nature of the work was new to all.

### **Programme and Methods**

SIF required that each auditor should be readily contactable by telephone and email and also have access to online resources and support material deposited by CES in a Googledocs folder.

See <https://drive.google.com/folderview?id=0B65JYJPB7PhQLV9CX2VDRU90OHc&usp=sharing>

An initial face to face training meeting was convened to include all who were able to attend. Most auditors also participated in 2 subsequent telephone conferences and/or 1:1 calls with CES, with more regular contact by email and phone towards the end of the audit process.

This overall approach could be readily transferred to any other group of remote 'lay' energy auditors, incorporating some valuable lessons learned through this pilot scheme.

SIF and CES had been concerned at the outset not to overwhelm trainees with more information and ideas than could be readily digested and applied to each phase of their work.

Phase 1 focussed on text to set the audit in context, including a draft inventory of locally significant energy consumers and preliminary appraisal of sectors for consideration.

Phase 2 of the audit process as originally envisaged, primarily concerned gathering or estimating energy data from various key sources and presenting it for CES review.

Phase 3 entailed collating, processing and presenting information to finalise draft reports.

Each phase of work had been intended to trigger instalments of 1/3 of each auditor's total fee payable, subject to CES review of progress, feedback, advice and guidance.

In fact several auditors opted at the end of 2014 to defer second payments of fee instalments in favour of opportunity to effectively combine phases 2 and 3, engaging in 1:1 consultations with CES' Technical Mentor as required, especially towards the culmination of their activity in early 2015.

Full fees were paid out to auditors on the basis of CES guidance following review of finalised drafts.

The successful kick off meeting and training session took place in Oban on 30th May 2014. Material prepared by CES for the occasion is available in the project's 'Googledocs' folder.



Representatives of Argyll and Bute Council, Bute Community Power, SSE and CES discuss 'Communications'



Representatives of CES, Lismore, Eigg, Mull and SSE in workshop session



The Team who delivered the Oban Training event (L-R Simon McKinney, Terry Hegarty, Camille Dressler, Benny Talbot)

### **Practical Challenges**

Schedule slippage became an unfortunate feature of the project early on, mainly due to other commitments of auditors during busy summer months. Concerned that the pace of the slowest should not hold others back, a flexible approach to teleconference mentoring sessions was adopted to engage auditors who were at roughly the same stage of their work.

Skye's auditor withdrew due to other commitments without a replacement identified. Cumbrae's also resigned with no replacement, followed by Luings, who also felt he lacked time to tackle the work involved. With no obvious replacement available within Luings' small community, CES completed the job, presenting basic data gathered through desk based online research, as informed by willing local contacts on the island.

A replacement auditor was successfully recruited for Mull (early in 2015) but was unable to complete the work as fully as she would have liked within the time available, alongside other commitments. As local Project Officer for Mull's ACCESS project, she intends to revisit and update the report, when opportunity allows.

These setbacks were each discussed with LES at the time.

Whilst it had originally been anticipated that all draft audit reports would be finalised by December 2014, key reporting milestones and telephone conferences were necessarily rescheduled to allow for differing rates of progress achieved by individual auditors. Only Bute's final draft was actually submitted in 2014, the remainder in 2015.

The patience and cooperation of Local Energy Scotland and CES staff in accommodating revised schedules and outputs has been very much appreciated by SIF and all concerned.

### **Other Issues**

SIF found that the project required significantly greater investment of time than anticipated, notably in terms of:

- Administration (including drafting and circulating tailored contracts; communications with auditors re. fees etc. Also, some reports produced on non standard IT programmes gave rise to unforeseen formatting glitches.)
- Ongoing liaison with CES and communicating support, technical guidance and feedback to auditors (including omissions, necessary clarifications, revisions etc.).
- Leadership and coordination, including regular dialogue with CES to ensure that each auditor's advice requirements were expediently addressed through mentoring and guidance arrangements.
- Overall management support for the project including line management of the Project Officer

Auditors brought widely varying degrees of experience, expertise and commitment to the role. Teleconferences might have been more productive if self selection into 2 (or more) distinct groups encompassing 'Novices' and 'More experienced' people had been arranged at the outset, for mentoring purposes.

The relative inexperience of some auditors in terms transferring spreadsheet data to tables, graphs and pie charts suggested potential for special tutorial sessions, but in the event, expectations were lowered with 1:1 guidance provided on an ad hoc basis. A dedicated 'helpline' with expert guidance 'on tap' from the beginning, might also have been helpful to some, but less cost effective.

Shared discussion of the work proved engaging and useful. eg Some auditors' qualms about approaching local businesses for information, uncertainties about classifying holiday homes and inclusion of transport fuel data, resonated soundly with others.

In practice, timings for shared (c.1 hr +) telephone conference calls were set according to busy participants' rate of progress and convenience, involving some evenings and weekends. The scope of telephone mentoring sessions might usefully have been expanded had high speed broadband technology been available to all.

On some islands, deliberate promotion of energy advice for households and businesses might have naturally and usefully complemented the audit initiative. Beyond making appropriate referrals to appropriate agencies, such activity was not expected of auditors, though it might usefully feature as an element of any such future project.

Flexible mentoring arrangements through CES proved critical to overall success.

**Finalised audits for Arran, Bute, Gigha, Iona, Lismore, Luing, Mull, and Small Isles are **appended**.**

A copy of each report (with typos and errors amended as appropriate) will be available to each respective Local Authority - Highland, North Ayrshire and Argyll and Bute.

SIF is particularly keen to supply relevant input and data from islands to better inform Councils of energy challenges within their jurisdiction, especially where these might be usefully addressed through ISEAPs.

**Appraisal and Analysis of Audit Reports**

See appended CES Report for -

- Summary of audit findings
- Strengths and Weaknesses of Methodology and Data
- Renewable Energy Opportunities
- Key Learning
- Recommendations for Future Work

**Outcomes**

- Iona's Energy Audit was very much welcomed by Iona Community Council which established a working group to consult key specialists and potential stakeholders with a view to exploring local energy project possibilities. Notification of the Audit Report was shared with representatives of a range of relevant interests (October 2015), and an application for CARES project has been submitted.
- The Small Isles audit report was used as supporting evidence for a renewable energy application by Canna to the Big Lottery. It also supported an HIE funded project looking at potential for an island to develop a circular economy. Audit data is also being used by the Rum Community Association to explore potential for expansion of their renewable scheme and by the University of Strathclyde in the context of a transnational coastal communities project involving Scotland and Brazil.
- Arran's auditor set out to engage the High School in the exercise, with some success, and has also led establishment of Arran Community Energy to progress a 50% community stake in a proposed hydro scheme, although grid constraints apply.
- Lismore's auditors were disappointed to learn that neither a community wind nor a community hydro scheme seems immediately feasible on the island, but with recent advice from CES, hope that their efforts may inform useful ways forward



towards strategic local energy planning. Some local interest in electric vehicles was recently reported which SIF intends to follow up.

- Other islands in SIF's SMILEGOV Cluster now have the benefit of an initial baseline energy assessment to inform scope for a range of further activity and research.

### **Follow Up Plans**

SIF will encourage and support auditors and their respective organisations to build on knowledge gained and also to update audit data over time.

A three year programme of proposed SIF activity recently under discussion with the Scottish Government includes elements specifically focussed on development of island energy plans and projects. SIF thus looks forward to monitoring, supporting, and reporting local developments, including longer term outcomes of this project over coming years.

Islanders' perspectives can evidently be inspired, and their capacity enriched, by meeting to share knowledge and experience with one another. Some of the auditors who first met at the Oban training event came together again over 12 months later on Bute in June 2015, to further review island energy issues, and to brief an MP and MSP.

Particular constraints facing island energy projects were effectively identified, notably including: Grid constraints; accessibility of data; planning constraints; local capacity and consistency of government support.

### **Conclusion**

SIF is pleased that 8 Island Energy Audit reports now serve as a basis for further progress, and plans to build on contacts and experience. SIF also hopes that other islanders in Scotland and overseas may be inspired by the work and achievements of our pioneering team of island energy auditors.

It is evident that the process of developing more sustainable energy strategies for islands may usefully engage islanders as data gatherers, subject to effective quality control measures to verify or qualify information.

Due to the generic nature of energy challenges facing islands, it is increasingly recognised in Scotland as elsewhere, that islands may serve as valuable test beds for emergent technologies as well as proving grounds for more effective multilateral approaches to strategic local energy planning for sustainability.

Whilst prospects for additional generation of renewable power by island community interests currently seem to hang in the balance, pending review of crucial pre-accreditation policies, manifestly abundant local natural renewable energy resources are potentially available to serve island communities able to harness them.

SIF intends that the work of this project should inform and help to focus investment in effective long term measures to enhance the sustainability and resilience of islands through strategic energy plans and projects.

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