

Church of Scotland

GENERAL ASSEMBLY 2010

Energy Consumption and Carbon Footprints in Church Buildings: Progress Report on General Assembly Deliverance 2009



Background

The General Assembly 2009 agreed the deliverance to

instruct Presbyteries, in association with the Church and Society Council, to produce a plan for each congregation in their bounds, setting out how they will measure energy consumption in their church buildings, ascertain their carbon footprint and achieve a year-on-year reduction of 5% of their carbon footprint using the Eco-Congregation Scotland carbon footprint module; and instruct the Church and Society Council, in consultation with the General Trustees, to report to the General Assembly of 2010 on the implementation of this instruction.

The report of the Church and Society Council to the General Assembly 2010 fulfils this commitment and sets out what had been done to February 2010. However the early deadline for inclusion of material time in the report means that the report is not up to date in progress in implementing the instruction.

This progress report has been prepared to give a fuller picture about the implementation of the deliverance across Scotland.

Role of the Church and Society Council

The deliverances of the General Assembly were communicated to all presbyteries in September 2009. In October 2009 the Secretary of the Church and Society Council wrote by e-mail to all presbytery clerks to explain the reasons for the deliverance, attaching a simple two page guide and carbon calculator. The calculator and other supporting material were published on the climate change pages of the Church of Scotland website.

The Secretary wrote again to all presbytery clerks by e-mail in February 2010 asking them to let the Climate Change Officer have details of their response to the instruction by the end of March 2010. Presbyteries that had not acknowledged or responded to these communications were contacted again on 24 March.

Response by presbyteries

Presbyteries have made great progress in responding to this challenge, many including discussion of the instruction at presbytery meetings, debating its role in their lives and encouraging congregations to become involved. Some presbyteries have held conferences that have been particularly helpful in raising awareness.

Presbytery conferences on climate change have been successful in bringing together congregations to learn about climate change and encouraging them to

learn about each other's work, the work of eco-congregations and about external sources of advice and support from organisations such as the Energy Saving Trust (EST). An example was the conference held by the Presbytery of Dumbarton on 23 January 2010, when representatives from most congregations in the presbytery met together with the Climate Change Officer, a speaker from the EST, and the Minister of Abbotsford Church in Clydebank, Roddy Hamilton, to discuss the General Assembly instruction and how they could respond. As an example of practical action in the presbytery, the congregation of Radnor Park Church has reduced the carbon footprint of their church heating by over half by joining a district heating system operated by Clydebank Housing Association. Such an opportunity is not open to all congregations but demonstrates the remarkable results that can be achieved in church buildings by creative approaches to church heating.

Summary of Responses by Presbyteries

At the end of April 2010:

- 37 presbyteries have responded to the Church and Society Council about the instruction.
- Of these 22 have submitted information and data about energy consumption and carbon footprints of individual congregations.
- 9 presbyteries have not yet responded and we do not have information on whether these presbyteries have implemented the instruction.

The data returned provides a rich source of information on energy uses in church buildings. The range of carbon footprints given in the returns is striking. In many rural church buildings the figure is less than ten tons per annum. For example, in Dunkeld and Meigle, five out of eight churches included in the presbytery response have carbon footprints of less than ten tons. In an urban setting the figures can be much higher. In the Presbytery of Edinburgh return for example 13 churches have carbon footprints of over 30 tons a year, and many more have similar carbon footprints when church halls are taken into account.

From the returns we have received it is not possible to give accurate summaries for the total carbon footprint for the Church of Scotland or presbyteries. This would be misleading for a number of reasons.

- The energy consumption and associated carbon footprint of churches is associated with a number of factors including the size of church and associated buildings, its use through the week and its heating system. An average that does not take account of these distinctions would be of limited use.
- The figures returned by individual congregations to presbyteries are incomplete as are the returns from presbyteries as a whole to Church and Society Council, so comprehensive figures are not available.
- Data may not always be accurate. Some congregations for example may have relied on estimated readings supplied by energy companies so the figures may not reflect actual consumption.
- The calculation of carbon footprint relies on the estimates of the amount of CO₂ released to the atmosphere with a particular energy source. These coefficients are supplied by the UK Government and the figures for electricity

are subject to change and revision on a regular basis. As the energy mix (nuclear/coal/renewables, etc.) of different power stations changes so the figures will always be estimates rather than precise figures.

For these reasons the tables in the appendix do not include average figures for presbyteries or for the church estate as a whole.

However the value of the information to congregations and presbyteries lies elsewhere. It provides:

- figures for individual congregations to serve as a benchmark to measure progress resulting from future action
- data to help congregations compare their consumption with other congregations in similar circumstances in the presbytery
- information for the presbytery to have an oversight of energy management in congregations across its area.

These opportunities go well beyond the remit of the deliverance but do demonstrate the potential that carbon footprint data can have to help congregations manage their energy use and the contribution to climate change.

Comments and Issues Raised by Presbyteries

A number of presbyteries have raised a range of issues and comments about the instruction. These comments are extremely useful and they identify some of the challenges involved in measuring energy use, carbon footprints and the challenges involved in seeking to reduce carbon footprints. The table below summarises some of the main comments and issues raised by presbyteries. Further details are given in the appendix of presbytery responses.

ISSUES AND CONCERNS RAISED BY PRESBYTERIES	
COMMENT	RESPONSE
A number of the responding churches have already taken significant steps to reduce energy consumption, and the associated fuel costs.	This is ongoing work. Good energy management of church buildings is a standing concern for all congregations; both to conserve precious financial resources and to reduce our carbon footprints. The General Assembly instruction reinforces the need for continuing steps to reduce energy use and fuel costs, as will rising fuel costs in the coming decade.
Why should we reduce carbon footprints by 5% a year?	The General Assembly 2009 agreed that climate change poses ' <i>a serious and immediate threat to people everywhere, particularly to the poor of the earth; and that climate change represents a failure in our stewardship of God's creation.</i> ' The Scottish Parliament has set challenging targets for reducing the emission of greenhouse gases by 42% by 2020 and by 80% by 2050. Congregations can take a lead in Scotland in

	<p>their church buildings, their homes and in their communities to help meet these targets. A 5% cut, year on year, will take us towards the target of an 80% reduction by 2050.</p>
<p>Is it feasible to reduce carbon footprints by 5% year on year?</p>	<p>Many congregations have already taken on this challenge and some have exceeded this target. With advice and support from the Energy Saving Trust, General Trustees and elsewhere many more can do so. In almost all churches there will be opportunities to reduce energy use, save money and reduce carbon footprints.</p>
<p>The 5% target is too blunt: congregations need to have more sophisticated target setting.</p>	<p>This may well be the case for congregations that have already taken action to reduce their carbon footprint and have developed skills and experience in energy management. There are a variety of more sophisticated monitoring and management systems available to help congregations reduce energy use and carbon footprints. These may require professional help or support to put into effect.</p>
<p>The capital cost of energy efficient measures is too great - we can't afford to reduce our carbon footprint.</p>	<p>For every energy efficiency measure there is a payback period – the time taken to recoup the outlay. The payback period will become shorter as energy costs rise and shorter still if a subsidy or grant is available. The Energy Saving Trust or General Trustees will be able to advise and help identify the most cost effective way to reduce energy use.</p>
<p>The bills we receive from our energy supplier are not always accurate. Some of the readings are estimates so we can be sure how much energy we are using.</p>	<p>It is good practice to read your energy meters on a regular basis, say once a month, and submit the readings to your energy supplier. This can often now be done online. This will ensure that both the congregation and the energy supplier have an accurate record of the amount of energy used in the property.</p>
<p>There is conflict between the policies of reduction in carbon footprint, and that of making better use of premises and of reaching out within communities to make use of the church's facilities.</p>	<p>This is a profoundly important point. We are concerned that congregations do nothing to detract from the mission of the Church and encourage all congregations to use their buildings to the fullest possible extent.</p> <ul style="list-style-type: none"> • Increasing usage of the building does not necessarily mean increasing its carbon footprint – as often the bringing the building up to temperature is the mostly costly part of the equation; • Increasing usage can also generate some income which can subsequently be used to implement some steps to promote carbon savings; • Sometimes running events in the church buildings means making carbon savings elsewhere – that needs to be understood and factored in as appropriate. <p>Therefore increased use of a building can lead to a more efficient use of energy. Rather than</p>

	<p>heat the building for one day a week, using it more often and sharing the bill with others can be more efficient. Bringing people together in one place, for example a lunch club might allow people to reduce energy use in their own homes. Congregations are urged to do both: be both a focus for life and worship in your community and a beacon of good energy management.</p>
<p>There are differences across congregations as to how manses should be dealt with in respect of control of energy consumption.</p>	<p>The responses from presbyteries and from individual ministers have suggested that the cost of heating some manses and their associated carbon footprint is unacceptably high. In part this is due to the size and age of some manses. There may even be cases where ministers are living in fuel poverty (paying out over 10% of their disposable income to heat the manse). Ministries Council are concerned about this and are proposing a deliverance to the GA 2010 examining the future of Manse provision.</p>
<p>The cold weather in the winter of 2010 has resulted in increased bills so we can't make a cut of 5% in our carbon footprint this year</p>	<p>The weather will continue to change from year to year and it is likely that many heating bills will be higher in 2010 than 2009. What is important is to try and reduce energy consumption and carbon footprints by a little (or by a lot) year on year. The figure of 5% is a target but it may not be possible to achieve this in each year. In some years like 2010 it may not be possible, in other years it may be possible to exceed this target.</p>
<p>Where can I get advice on energy saving and carbon reduction measures that I could use in a church or manse?</p>	<p>The Energy Saving Trust has been established to help individuals, small businesses and community groups cut their energy bills and their carbon footprints. It can help with energy advice and audits and possibly with financial support. The General Trustees heating consultant (Andrew MacOwan) and Energy Advisers (Argyle Energy) can also provide advice and support.</p>

Appendix: Responses by Presbyteries.

This appendix gives for each presbytery that has responded:

- a table summarising the information received
- comments made by presbytery clerks and others in the presbytery.

This information can be revised and completed as further information is received from presbyteries.

Aberdeen

Presbytery	Aberdeen (31)
Presbytery contact	Donald Brown
Responses	14/ 37 (3 without premises)
Commitment to carbon reduction	not indicated

Name of congregation	List of buildings in each congregation included in plan	Carbon footprint of each building in tonnes of carbon dioxide (CO ₂) for the year	Has congregation made a commitment to reduce carbon footprint by 5%?
Aberdeen: Bridge of Don Oldmachar	Church + Halls	19.2	
Aberdeen: Cove		No premises	
Aberdeen: Craigiebuckler	Church + Halls	53.53	
	Manse	5.18	
Aberdeen: Midstocket	Church + Halls	65.24	
	Centre	14.31	
Aberdeen: New Stockethill		No premises	
Aberdeen: Ruthrieston West	Church + Halls	34.57	
	Manse	9.37	
Aberdeen: St John's Church for Deaf People		No premises	
Aberdeen: St Machar's Cathedral	Church + Halls	52.34	
	Manse	4.41	
	St Machar's Hall	5.63	
Aberdeen: St Stephen's	Church + Halls	25.67	
Aberdeen: South Holburn	Church + Halls	13	
	Manse	8.14	
Aberdeen: Torry St Fittick's	Church	30.81	
	Halls	12.64	
Aberdeen: Woodside	Church + Halls	23.3	
	Manse	9.41	
Cults	Church + Halls	34.1	
	Outreach Centre	59.88	
Peterculter	Church + Halls	41.4	
	Manse	2.12	

Comments

Across the responses were a number of comments. The main ones are summarised below.

A number of the responding churches have already taken significant steps to reduce energy consumption, and the associated fuel costs.

- Installation of condensing boilers for CH plants.
- Improvements in building insulation.
- Installation of modern controllable timing devices.
- Installation of thermostats on CH radiators.
- Installation of improved lighting schemes and low power luminaries

Some challenged the instruction to reduce carbon footprint by 5% year on year.

Adoption of this policy is not considered to be practicable as, in many instances, energy savings will be produced as a result of capital expenditure programmes and not simply by improved management of their energy consumption. Key to improved energy consumption will, for example be derived from:-

- replacement of old, and inefficient, CH boiler installations;
- improvements to CH control systems;
- upgrading of electrical installations, and flow control for CH systems, to provide increased flexibility of power utilisation;
- reduction of heat losses from buildings – for example; insulation improvement, attention to heat loss through the structure, windows, doors, and general draught control measures; and,
- possibly the introduction of zero carbon energy sources – ground-source heat recovery, solar or wind power installations.

Such improvements frequently incur high initial costs. While these may bring about significant reductions in both carbon footprint and annual cost their introduction may be inhibited by lack of access to appropriate capital funds.

Congregations with older properties, and those with lower incomes, in which they are presently fully committed to maintaining the fabric, may be unwilling, or unable, to commit to energy saving strategies. These congregations may be undertaking equally significant programmes which effectively contribute to climate change issues.

They must be provided with equal opportunity to be credited for these contributions through, for example, their promotion and involvement with recycling, reuse, and reduction, strategies.

There is a conflict between the policies of reduction in carbon footprint, and that of making better use of premises and of reaching out within communities to make use of the church's facilities.

A number of the responding churches point to the extensive, and growing, use being made of their facilities as part of their successful 'outreach' programmes within their community and beyond.

Inevitably, as these programmes develop, and as use of facilities increase, there will be greater energy use (heating and lighting) and thus, even with a high efficiency energy policy, an associated increase in carbon footprint is almost inevitable!

There are differences across congregations as to how manses should be dealt with in respect of control of energy consumption.

While the manse is provided by the church, the cost of heat, light, and power, is borne by the minister.

In some cases the property may be of an older generation, be poorly insulated, and may not be well insulated, or have a high efficiency CH system installed.

Congregations feel that they do not wish to impose energy reduction targets on their minister which might result in there being an implied pressure which could result in unnecessary tensions being created.

Conclusion

Aberdeen Presbytery agrees that significant effort must be put into reducing our conspicuous energy consumption and the associated increase in CO₂ emissions to the atmosphere.

While not wishing to undermine the efforts of the Church and Society Committee we suggest that the poor responses received to the questionnaire may indicate that the 'carbon footprint reduction instruction' is not appropriate to the needs of the church today.

Aberdeen Presbytery therefore suggests that focus be placed on a wider range of achievable aims.

Angus

Presbytery	Angus (30)
Presbytery contact	Donald W. MacIntyre
Responses	23/ 35
Commitment to carbon reduction	14 (1 by 10%) + 1 undecided + 1 awaited

Name of congregation	List of buildings in each congregation included in plan	Carbon footprint of each building in tonnes of carbon dioxide (CO ₂) for the year	Has congregation made a commitment to reduce carbon footprint by 5%?
Arbirlot	Church	9.07	Yes
	Hall	3.46	Yes
	Manse	2.29	Yes
Arbroath: Knox's	Church + Hall	15.2	No
Arbroath: Old and Abbey	Church + related buildings	60.3	Yes
Arbroath: St Andrew's	Church + Halls	55.13	Yes
Arbroath: West Kirk	Church Buildings	14.7	Yes
	Church Cottage	3.94	Yes
Barry	Church Buildings	3.46	Undecided
Brechin: Cathedral			Awaited
Brechin: Gardner Memorial	Church	1.98	Yes
	Halls	7.74	Yes
Carmyllie	Church + Sunday School Hall	6.14	No
Carnoustie	Church	17.14	Yes
	Hall	9.53	Yes
Carnoustie: Panbride	Newton Church + Halls	10.58	No
	Panbride Church	1.75	No
Dun + Hillside	Dun Church	5.37	Yes
	Dun Church Hall	2.14	Yes
	Hillside Church	15.11	Yes
Eassie and Nevay	Church	3.31	No
Farnell	Church	4.4	Yes
Forfar: East and Old	Church	19.29	No
	Hall	14.35	No
Forfar: Lawson Memorial	Church	22.61	Yes
	Hall	2.95	Yes
Friockheim Kinnell	Church	4.37	Yes
	Hall	2.9	Yes
Guthrie and Rescobie	Rescobie Church & Hall	13.44	No
	Guthrie Church & Hall	5.81	No

Inverkeilor and Lunan	Church	4.79	No
	Hall	1.68	No
Kirriemuir: St Andrew's	At present no figures can be given		Yes
Montrose: Old and St Andrew's	Church	16.23	Yes
	Halls	8.3	Yes
	Swanson Rooms	0.44	Yes
Oathlaw Tannadice	Church	8.76	Yes
The Glens and Kirriemuir: Old	G & K Old Church	20.16	Yes, 10%
	Cortachy Church	5.48	Yes, 10%
	Memus Church	4.46	Yes, 10%
	Prosen Church	1.692	Yes, 10%

Angus presbytery is holding a presbytery conference on 29 May.

Comments passed by the presbytery included: 'As you will see some of our congregations did not respond despite several reminders, excuses range from "don't want to know " to "the church should not be wasting time on projects like this".'

There appears to be a problem with the electricity suppliers accounting systems which has caused problems. Some of the information might not be entirely accurate.

Annandale and Eskdale

Presbytery	Annandale and Eskdale (7)
Presbytery contact	Rev David Pitkeathly
Responses	15/ 23
Commitment to carbon reduction	7

Name of congregation	List of buildings in each congregation included in plan	Carbon footprint of each building in tonnes of carbon dioxide (CO ₂) for the year	Has congregation made a commitment to reduce carbon footprint by 5%?	Comments
Annan: Old	Church and Hall	33.2	Yes	
	Manse	6	Yes	
Annan: St Andrews	Church	15.8		Feel there is a conflict between laudable aim of Council and mission in the parish. Have already taken steps to reduce footprint as an eco-congregation.
	Hall	3.6		
	Manse	vacant		
Brydekirk	Sanctuary	8	Yes	
	Hall	3.4	Yes	
Canonbie United	Was renovated in 2009 and they felt that they could give no figures.			
Dornock	Church	1.8	No	
	Baxter Hall	4.8	No	
Kirtle-Eaglesfield	Eaglesfield Church	1.5	Yes	
	Kirtle Church	4.4	Yes	
	Kirtle Manse	vacant	Yes	
Liddesdale	Church	9.5	No plans at present	
	Manse	No figure given	No plans at present	
	Saughtree Church	1.1	No plans at present	
Lochmaben	Church	8.6	Yes	
	Hall	8.6	Yes	
	Manse	12	Yes	

Lockerbie: Dryfesdale, Hutton and Corrie	Reluctant to give figures. They have concerns about the arbitrary 5 % figure. They are trying to increase sanctuary use but would consider a solar or wind scheme. Their hall is due for renovation and they believe figures would be meaningless.			
	Hutton Church is used on a very limited basis and heating is kept to a minimum. The manse has a new efficient boiler and they will do a survey with a view to improving insulation.			
Middlebie	Church	1.28	Yes	
Moffat: St Andrew	Church and hall	2.3	Not yet	
	Manse	5.4	Not yet	
St Mungo	Sanctuary only	7.95	No	Heating only on 15 hours a week but prepared if grants available to look at alternative forms of heating.
The Border Kirk	Sanctuary + Hall, Carlisle	26.4	Yes	Buildings used extensively up to 7 days a week, day and evening. Reluctant to lose community group tenants, coffee shop and outreach projects. Will seek to monitor energy use, change bulbs and replace boiler in the manse.
	Sanctuary Longtown	2.6	Yes	
	Manse	6.5	Yes	
Tundergarth	Sanctuary only	2.6		
Wamphray	Sanctuary only	8.5	Yes	

Ardrossan

Presbytery	Ardrossan (12)
Presbytery contact	Rev Gillean MacLean
Responses	23/ 30
Commitment to carbon reduction	8

Name of congregation	List of buildings in each congregation included in plan	Carbon footprint of each building in tonnes of carbon dioxide (CO ₂) for the year	Has congregation made a commitment to reduce carbon footprint by 5%?
Ardrossan: Barony St John's	Church + Halls	18.35	YES
Beith: High	Church	24.44	YES
	Hall	16.09	YES
Beith: Trinity	Church	29.4	NOT YET
Brodick	Church	11.12	NOT YET
	Hall	9.07	NOT YET
	Manse	6.52	NOT YET
Corrie	Church	9.39	YES
Cumrae	Church	21.89	NOT YET
Dalry: St. Margaret's	Church	54.8	NOT YET
	Hall	5.11	NOT YET
	Manse	0.11	NOT YET
Dalry: Trinity	Church	8.75	NOT YET
Fairlie	Church	6.26	NOT YET
Kilmory	Church	25.87	YES
Kilwinning: Old	Church + 2 Halls	34.64	NOT YET
Lamlash	Church	7.49	YES
	Hall	11.39	YES
Largs: Clark Memorial	Church	13.69	NOT YET
	Hall	19.25	NOT YET
Largs: St Columba's	Church	55.37	NOT YET
Largs: St John's	Church + Hall	49.03	NOT YET
Lochranza and Pirnmill	Church	4.10	NOT YET
	Hall	0.66	NOT YET
Saltcoats: New Trinity	Church	23.34	NOT YET
Saltcoats: North	Church	20.17	NOT YET
Stevenston: Ardeer	Church	19.3	YES
Stevenston: High	Church	55.33	NOT YET
West Kilbride: Overton			NEXT YEAR (UNION IN PROGRESS)
West Kilbride: St Andrews			NEXT YEAR (UNION IN PROGRESS)
Whiting Bay and	Church + Hall	10.33	NOT YET

Kildonan			
	Manse	5.1	NOT YET

Ayr

Presbytery	Ayr (10)
Presbytery contact	Rev James Crichton
Responses	27/ 49 (+1 without buildings)
Commitment to carbon reduction	3

Name of congregation	List of buildings in each congregation included in plan	Carbon footprint of each building in tonnes of carbon dioxide (CO ₂) for the year	Has congregation made a commitment to reduce carbon footprint by 5%?
Alloway		14.63	
Annbank		13.19	No
Ayr: The Old Kirk		29.36	No
Ayr: St Columba		27.12	No
Ayr: St James'		18.05	
Ayr: St Leonard's		34.11	No
Ayr: Wallacetown		24.90	No
Ballantrae		11.74	No
Catrine		6.72	No
Craigie		7.13	No
Dailly		12.08	Yes
Dalrymple		11.77	No
Fisherton		8.79	Yes
Girvan: North		25.14	No
Girvan: South		15.85	Yes
Mauchline		40.28	No
Monkton + Prestwick: North		63.31	No
Muirkirk		13.47	No
Ochiltree		60.41	
Old Cumnock: Old		5.06	No
Old Cumnock: Trinity		223.20	No
Prestwick: Kingcase		43.45	No
Prestwick: St Nicholas		44.33	No
St Colmon		1.94	No
Straiton		6.86	No
Troon: St Meddans		60.01	Pending
Troon: Portland		61.57	No

Dumbarton

	Dumbarton (18)
Presbytery	
Presbytery contact	Norma Moore
Responses	13/ 35
Commitment to carbon reduction	6

Name of congregation	List of buildings in each congregation included in plan	Carbon footprint of each building in tonnes of carbon dioxide (CO ₂) for the year	Has congregation made a commitment to reduce carbon footprint by 5%?
Cairns Milngavie	Church + Halls	72.42	No
Craigrownie	Church	9.66	No
	Hall	2.3	No
Dalmuir Barclay Church		21.85	
Faifley Clydebank		50.63	
Helensburgh: The West Kirk	Church + Halls	47.1	Yes
	Manse	11.8	Yes
Jamestown Parish Church	Church	170	Yes
	Lennox Hall	7	Yes
	Manse	5.59	Yes
Kilbowie St Andrew's Clydebank		21.69	
Killermont Bearsden		71.01	
Kilmarnock + Gartocharn	Kilmarnock Manse	18.12	
	Kilmarnock Church	4.81	
	Gartocharn Church	6.09	
Radnor Park Clydebank	Church + Halls	41.14	Yes
	Manse	7.29	Yes
Rosneath St Modan's	Church	17.26	
St Paul's Milngavie		68.68	

Dumfries and Kirkcudbright

Presbytery	Dumfries + Kirkcudbright (8)
Presbytery contact	Rev Logan Kirk
Responses	20/ 39
Commitment to carbon reduction	3

Name of congregation	List of buildings in each congregation included in plan	Carbon footprint of each building in tonnes of carbon dioxide (CO ₂) for the year	Has congregation made a commitment to reduce carbon footprint by 5%?
Carsphairn	Church	3.68	No
Castle Douglas	Church + Hall	78.5	No
Closeburn	Church	9.9	No
Cummertrees	Church	1.98	Yes
Dalbeattie	Church + Church Centre	41.8	Yes
Dalry	Church + Session House	4.2	No
	Manse	15.15	No
Dumfries: Maxwelltown West	Church + Hall	26.94	No
Dumfries: Northwest	Church + Hall	28.01	No
Dumfries: St George's	Church	31.8	No
Dumfries: Troqueer	Church + Church Hall	27.50	No
Dunscore	Church	10.2	No
Durisdeer	Church + Hall	11.07	No
Kirkgunzeon	Church	1.31	No
Kirkmichael, Tinwald + Torthorwald	Kirkmichael Church	5.05	No
	Tinwald Church	4.82	No
	Torthorwald Church	0.52 (out of use for part of the year)	No
Mouswald	Church	43.05	Yes
Penpont, Keir + Tynron	Penpont Church	5.1	No
	Penpont Hall	4.12	No
Ruthwell	Church + Session House/ Hall	8.87	No
Sanquhar: St Bride's	Church	19	No
Tarff + Twynholm	Church	6.53	No
Thornhill	Church	11.39	No

Dalbeattie Church is working with the Crichton Carbon Centre in Dumfries to measure and reduce the carbon footprint associated with its activities. There is a dilemma that promoting spiritual vitality and reducing carbon footprints may be pulling in opposite directions: how can this be resolved?

Dunfermline

Presbytery	Dunfermline (24)
Presbytery contact	Stuart McPherson
Responses	11/ 24
Commitment to carbon reduction	not indicated

Name of congregation	List of buildings in each congregation included in plan	Carbon footprint of each building in tonnes of carbon dioxide (CO ₂) for the year	Has congregation made a commitment to reduce carbon footprint by 5%?
Beath + Cowdenbeath: North		19.56	
Carnock + Oakley	Carnock	2.47	
	Oakley	1.99	
Cowdenbeath: Trinity		31.85	
Culross + Torryburn		13.6	
Dalgety		34.09	
Dunfermline: Townhill + Kingseat	Kingseat	5.0	
	Townhill	15.0	
Inverkeithing		20.39	
Lochgelly + Benarty: St Serf's	Lochgelly	24.6	
	Benarty	6.89	
North Queensferry		3.67	
Saline		10.7	
Tulliallan + Kincardine		24.75	

Dunkeld and Meigle

Presbytery	Dunkeld + Meigle (27)
Presbytery contact	Rev John Russell
Responses	7/ 21
Commitment to carbon reduction	1 + 2 discussing the option

Name of congregation	List of buildings in each congregation included in plan	Carbon footprint of each building in tonnes of carbon dioxide (CO ₂) for the year	Has congregation made a commitment to reduce carbon footprint by 5%?
Alyth	Church	34.48	No
	Airlie St Hall	12.47	No
	Manse	7.32	No
Ardler, Kettins and Meigle	Kettle Church	0.40	No, but trying to reduce
	Kettle Hall	1.44	No, but trying to reduce
	Meigle Church	1.89	No, but trying to reduce
	Meigle Hall	1.55	No, but trying to reduce
Bendochy	Church	6.47	No
Bendochy	Hall	0.76	No
Blairgowrie	Church	44.64	No, but discussing the matter
	Manse	9.81	No, but discussing the matter
Fortingall & Glenlyon	Fortingall Church	13.47	No
	Glenlyon Church	1.75	No
Tenandry	Church	2.93	Yes
	Stables Cottage	9.55	Yes

Edinburgh

Presbytery	Edinburgh (1)
Presbytery contact	Michael Cunliffe
Responses	56/ 85
Commitment to carbon reduction	29 + 4 awaited

Name of congregation	List of buildings in each congregation included in plan	Carbon footprint of each building in tonnes of carbon dioxide (CO ₂) for the year	Has congregation made a commitment to reduce carbon footprint by 5%?
Albany Deaf Church of Edinburgh		can't do calculation at present	
Balerno	Church	42.54	Yes
Barclay Viewforth		In process of merging	
Blackhall St Columba's	Church + Halls	7.72	No
Bristo Memorial Craigmillar	Church	33.86	
Broughton St Mary's	Church	10.75	Yes
Canongate	Church	29.2	No
Carrick Knowe	Church	48.83	Yes
	Halls	13.14	Yes
	Manse	13.89	Yes
Colinton Mains	Church	26.83	Yes
	Manse	4.64	Yes
Corstorphine Old	Church	3.14	
	Halls	6.44	
Corstorphine St Anne's	Church	57.6	Yes
	Halls	17.5	Yes
Craigmillar Park	Church + Halls	25.08	No
Cramond	Church	4.34	Yes
	Halls	52.52	Yes
Dalmeny	Church	9.46	Yes
	Halls	52.52	Yes
Davidson's Mains	Church + Halls	220.55	Yes
Drylaw	Church + Halls	49.99	No
	Manse	11.14	No
Duddingston	Church	12.8	Yes
	Halls	14.58	Yes
	Manse	19.51	Yes
Fairmilehead	Church	84.39	
Gilmerton	Church	12.7	No
Gorgie	Church	25.98	Awaited
	Manse	14.92	Awaited
Greenbank	Church + Halls	71.99	Yes
	Manse	8.58	Yes
Greenside	Church + Halls	35.1	No
	Manse	8	No

Greyfriars Tolbooth and Highland Kirk	Church	57.04	Yes
High (St Giles')	Church	178	
	Manse	10	
	Other	7	
Holyrood Abbey	Church + Halls	43.38	Yes
	Manse	10.07	Yes
Juniper Green	Church	29.5	Yes
	Manse	10.54	Yes
Kaimes Lockhart Memorial	Can't do calculation at present		
Kirkliston	Church	6.64	No
	Halls	17.67	No
Kirk o'Field	Figures not available at present		
Leith North	Church	25.7	Yes
	Other	5.98	Yes
Leith St Serf's	Church	29.6	Yes
Leith St Thomas' Junction Road	Can't do calculation at present		
Leith South	Church + Halls	55.79	Awaited
Leith Wardie	Church + Halls	47	Yes
	Manse	13	Yes
Liberton	Church	17.41	Yes
	Halls	44.34	Yes
Liberton Northfield	Church	17.15	No
	Manse	5.4	No
Mayfield Salisbury	Church	101.05	
Newhaven	Church	23.2	No (but looking at savings)
	Manse	4.1	No (but looking at savings)
New Restalrig	Church	26.75	Yes
Old Kirk	Church	17.14	
Pilrig St Paul's	Church	31.9	Yes
Portobello Old	Church	27.81	
Portobello St James'	Church	18.28	Yes
	Halls	11.49	Yes
	Manse	10.78	Yes
Portobello St Philip's Joppa	Church	59.2	Yes
	Halls	15.6	Yes
	Manse	5.45	Yes
Queensferry		Awaited	Awaited
Ratho	Church	21.4	Awaited
	Halls	1.4	Awaited
Reid Memorial	Church + Halls	70.71	Yes
	Manse	5.73	Yes
Richmond Craigmillar	Church	36.51	Yes
	Manse	5.12	Yes
St Andrew's and St George's	Church	57.4	Yes
St Cuthbert's	Church + Halls	134.35	Yes
St David's Broomhouse	Church	22.03	Yes

	Manse	4.09	Yes
St George's West	lin process of merging		Yes
St Martin's		5.35	
St Nicholas' Sighthill	Church	44.11	Yes
	Manse	32.8	Yes
St Stephen's Comely Bank	Church + Halls	61	No
	Manse	9.85	No
Stockbridge	Church + Halls	40.9	Yes
	Other	49.15	Yes

The presbytery held a conference on 10 February that looked in detail at the issues and challenges surrounding the issue.

A number of issues were raised by congregations.

Does the instruction to reduce carbon footprints clash with the mission of the church to become more active and use its buildings to better effect? How can these two issues be reconciled? There are many practical difficulties facing church property conveners.

At St. Giles Cathedral the Energy Saving Trust carried out a survey which highlighted both energy consumption and the limited opportunities to reduce this in a historic listed building. These challenges of reducing energy consumption in St. Giles are considerable but the EST survey was a very useful first step.

Falkirk

Presbytery	Falkirk (22)
Presbytery contact	Norah Summers
Responses	3/ 36
Commitment to carbon reduction	not indicated

Name of congregation	List of buildings in each congregation included in plan	Carbon footprint of each building in tonnes of carbon dioxide (CO ₂) for the year	Has congregation made a commitment to reduce carbon footprint by 5%?
Cumbernauld: Abronhill	church + halls	38.1	
Falkirk: Old and St Modan's	church + halls	61.54	
Falkirk: St James'	church + halls	29.24	

Greenock and Paisley

Presbytery	Greenock + Paisley (14)
Presbytery contact	Robert Nicol
Responses	17/ 57
Commitment to carbon reduction	17

Name of congregation	List of buildings in each congregation included in plan	Carbon footprint of each building in tonnes of carbon dioxide (CO ₂) for the year	Has congregation made a commitment to reduce carbon footprint by 5%?
Barrhead: Bourock	Church and Halls	52.96	Yes
Bridge of Weir: Freeland	Church and Halls	26.21	Yes
Bridge of Weir: St Machar's Ranfurly	Church and Halls	25.34	Yes
Elderslie Kirk	Church and Halls	21.26	Yes
Gourock: St John's	Church and Halls		Yes
Greenock: Mount Kirk	Church and Halls	22.34	Yes
Greenock: Old West Kirk	Church and Halls	10.38	Yes
Kilmacolm: Old	Church and Halls	29.65	Yes
Paisley: Glenburn	Church and Halls	10.52	Yes
Paisley: Laigh Kirk	Church and Halls	32.44	Yes
Paisley: St Columba Foxbar	Church and Halls	27.34	Yes
Paisley: Sherwood Greenlaw	Church and Halls		Yes
Paisley: Wallneuk North	Church and Halls	71.08	Yes
Port Glasgow: St Andrew's	Church and Halls	41.77	Yes
Renfrew: North	Church and Halls	62.76	Yes
Renfrew: Old	Church and Halls	65.34	Yes
Skelmorlie + Wemyss Bay	Church and Halls	22.20	Yes

Hamilton

Presbytery	Hamilton (17)
Presbytery contact	Alasdair Sutherland
Responses	6/ 83
Commitment to carbon reduction	2

Name of congregation	List of buildings in each congregation included in plan	Carbon footprint of each building in tonnes of carbon dioxide (CO ₂) for the year	Has congregation made a commitment to reduce carbon footprint by 5%?
Coatbridge: New St Andrew's	Church + Halls	50.7	commitment to reduction; possibly less than 5%
East Kilbride: Greenhills	Church	24.62	
	Manse	5.55	
Larkhall: Trinity	incomplete information		
Newmains: Bonkle	Church + Hall	12.87	
Uddingston: Burnhead	Church + Offices + Halls	27.3	Yes (tbc)
Wishaw: Cambusnethan North		10.41	

Irvine and Kilmarnock

Presbytery	Irvine + Kilmarnock (11)
Presbytery contact	Barbara Urquhart
Responses	8/ 29
Commitment to carbon reduction	8

Name of congregation	List of buildings in each congregation included in plan	Carbon footprint of each building in tonnes of carbon dioxide (CO ₂) for the year	Has congregation made a commitment to reduce carbon footprint by 5%?
Dreghorn and Springside	Church	61.5	Yes
	Halls	65.8	Yes
	Manse	23.3	Yes
Irvine: St Andrew's		24.1	Yes
Kilmaurs: St Maur's Glencairn	Church	9	Yes
Kilmarnock: Henderson	Church + Halls	40.73	Yes
Kilmarnock: St John's Onthank	Church + Halls	27.92	Yes
	Manse	2.07	Yes
Kilmarnock: Old High Kirk	Church	30.04	Yes
Stewarton: John Knox	Church + Manse	24.36	Yes
Stewarton: St Columba's	Church + Halls	37.26	Yes

Jedburgh

The GA decision is in principle, heavy-handed - "urge", yes ; "encourage", certainly ; "instruct", mistake - and could lead to some rather meaningless returns.

Our congregation have recently replaced the heating systems in all three church buildings and in the manse. In that sense, we are ahead of the game, but will be tarred with the same brush as those who have made little progress.

It's easy enough to reduce your carbon footprint simply by cutting down on your activities ... but is that really conducive to fulfilling the Great Commission?

Kincardine and Deeside

Presbytery	Kincardine + Deeside (32)
Presbytery contact	Maurice Jones
Responses	10/ 20
Commitment to carbon reduction	3

Name of congregation	List of buildings in each congregation included in plan	Carbon footprint of each building in tonnes of carbon dioxide (CO ₂) for the year	Has congregation made a commitment to reduce carbon footprint by 5%?	Notes/Comments
Aberluthnott	church + hall	Not yet calculated for all buildings	YES	Exploring new lighting system for Aberluthnott Church.
Arbuthnott, Bervie and Kinneff	3 churches, 1 church centre, 1 hall + 1 manse	Bervie Church: 22.5	YES	Arbuthnott and Kinneff Churches only used every second week. Draught excluders fitted to all buildings and door closers to church centre. Loft and pipe insulation to manse. Close management of all heating control settings for maximum efficiency.
Banchory-Ternan: East	Church, halls + manse	Under evaluation		Planning major redevelopment of church with energy awareness at the heart of the design. Church has joined with other Banchory organisations to seek funding for a full local energy efficiency study.
Banchory-Ternan: West	Church , halls +	Complex plan of church and		Registered as eco-

	manse	halls has delayed calculation.		congregation in 2005 and applying for an award in 2010. Working on a plan to reduce footprint.
Birse and Feughside	Church, halls + manse	Latest footprint not yet calculated		Won Eco-Congregation Scotland award in Nov 2009 and continue this work.
Drumoak-Durris	2 churches, 2 halls + 1 manse	27.6		5 year strategy agreed. Plan for one infrastructure project each year. Future projects are already being planned, to be ready for implementation.
Laurencekirk	1 church + 1 manse	Not yet calculated for all buildings	YES	Laurencekirk Hall is presently being renovated with energy efficiency as part of the brief.
Portlethen	Church, halls + manse	Not yet calculated		Processing registration with Eco-Congregation Scotland.
Stonehaven: Fetteresso	Church, halls + manse			Eco-Congregation Scotland Module 1 complete and targets set.
Stonehaven: South	Church, halls + manse			Registered as eco-congregation for a few years and progressing with appropriate projects.

Lanark

Presbytery	Lanark (13)
Presbytery contact	Colin Gibson
Responses	7/ 24
Commitment to carbon reduction	Not specified

Name of congregation	List of buildings in each congregation included in plan	Carbon footprint of each building in tonnes of carbon dioxide (CO ₂) for the year	Has congregation made a commitment to reduce carbon footprint by 5%?
Black Mount	Church	3.87	
	Manse	8.97	
Cairngryffe		12.7	
Carluke: St John's		31.38	
Coalburn		16.05	
Culter		7.43	
Forth: St Paul's		44.1	
Libberton and Quothquan		3.38	

Melrose and Peebles

Presbytery	Melrose & Peebles (4)
Presbytery contact	John Stewart
Responses	21/ 26
Commitment to carbon reduction	8 + 4 monitoring

Name of congregation	List of buildings in each congregation included in plan	Carbon footprint of each building in tonnes of carbon dioxide (CO ₂) for the year	Has congregation made a commitment to reduce carbon footprint by 5%?
Bowden and Melrose	Bowden Church	4.16	If possible
	Melrose Church and Halls	28.23	If possible
Broughton Glenholm and Kilbucho	Broughton Church	7.72	YES
Caddonfoot	Church	6.52	NO
Carlops	Church	5.51	YES
Earlston	Church	12.43	NO
	Hall	9.28	NO
Ettrick and Yarrow	Ettrick Kirk	1.61	NO
	Kirkhope Church	2.53	NO
	Yarrow Kirk	5.50	NO
Galashiels: Old Parish and St Paul's	Church and Halls	43.00	NO
Galashiels: Trinity	Church and Halls	15.99	NO
Heriot	Church	3.10	Not firm – will monitor
Innerleithen, Traquair and Walkerburn	Innerleithen Church	22.33	
	Innerleithen Church Hall	12.82	
	Traquair Kirk	3.53	
	Walkerburn Church	1.80	
Kirkurd and Newlands	Newlands Church	6.70	YES
Maxton and Mertoun	Maxton Church	0.99	NO
	Mertoun Kirk	9.70	NO
Newtown	Newtown Church	3.01	NO
Peebles: Old	Church and Halls	72.04	NO
Peebles: St Andrew's Leckie	Leckie Memorial Church	21.19	YES
	St Andrew's Leckie Hall	2.14	YES

Skirling	Church	3.89	YES
St Boswells	Church	4.27	NO
	Hall	7.08	NO
Stobo and Drumelzier	Stobo Kirk	4.96	YES
Stow	Church	11.48	Not firm – will monitor
Tweedsmuir	Tweedsmuir Kirk	4.60	YES
West Linton St Andrew's	Church	4.40	NO
	Old Hall	19.60	NO
	New Hall	14.30	NO

Most congregations are not able at this time to make the commitment to a year on year decrease until some kind of base figure is apparent – e.g. after one year's monitoring of the situation

Moray

Suggested an alternative approach to promote awareness and reduce the carbon footprint of the Church.

Calculate the total energy costs for the Church of Scotland

Once a figure has been decided upon divide by 20 to obtain the precise 5% required by the General Assembly then divide by the total membership of the Church then you have the target for each individual member to aim for.

Individual congregations will know the total target for their own congregation and Sessions or Boards could monitor their own progress and possibly reorganise their building management to contribute to the total.

Include a simple rule that any carbon saving that reduces or curtails in any way the Mission and Outreach of the Congregation could not be used to reach the target. Any saving that reduced the heating in any pensioner's home would similarly be disqualified.

Ross

Presbytery	Ross (39)
Presbytery contact	Hugh Steele
Responses	14/ 21
Commitment to carbon reduction	not indicated

Name of congregation	List of buildings in each congregation included in plan	Carbon footprint of each building in tonnes of carbon dioxide (CO ₂) for the year	Has congregation made a commitment to reduce carbon footprint by 5%?
Alness	Church	11.98	
Avoch	Church	4.12	
	Hall	1.8	
Contin	Church	8.19	
	Manse	5.59	
Dingwall: Castle Street	Church + Hall	19.69	
Dingwall: St Clements	Church	17.65	
Fearn Abbey and Nigg	Church	10.88	
	Hall	0.78	
	Manse	11.44	
Ferintosh	Church + Hall	15.62	
	Manse	10.34	
Killearnan	Church	2.93	
	Hall	3.86	
Knockbain	Church	6.84	
Lochbroom and Ullapool	Church	0.73	
Rosskeen	Church + Hall	18.15	
	Manse	13.47	
Tain	Church	26.5	
	Hall	7.83	
Tarbat	Church	8.15	
Urray and Kilchrist	Church	4.95	
	Hall	7.92	
	Manse	15.8	

St. Andrews

Presbytery	St Andrews (26)
Presbytery contact	Ewan Falconer
Responses	25/ 36
Commitment to carbon reduction	1

Name of congregation	List of buildings in each congregation included in plan	Carbon footprint of each building in tonnes of carbon dioxide (CO ₂) for the year	Has congregation made a commitment to reduce carbon footprint by 5%?
Abdie and Dunbog	Church + Hall	4.39	
Anstruther	Church	69.27	
	James Melville Manse	1.99	
	Hew Scott Hall	5.59	
Auchtermuchty	Church	3.83	
	Hall	4.61	
Cameron	Church	4.02	
	Sunday School Rooms	0.71	
Carnbee	Church	2.01	
Crail	Church	6.96	
	Hall	4.74	
Cupar: Old & St Michael of Tarvit	Church	18.31	
	Hall	14.19	
Cupar: St John's	Church + Hall	62.63	
Dairsie	Church	3.5	
	Hall	0.71	
Falkland	Church	13.95	
Freuchie	Church + Hall	12.71	
Kilrenny	Church	5.92	
	Hall	9.42	
Largo: St David's	Church	13.24	
	Hall	14.34	
Largoward	Church	4.07	
Leuchars: St Athernase	Church	14.98	
	Coachhouse	2.35	
Monimail	Church	6.33	
Newburgh	Church + Hall	1.86	
Newport-on-Tay	Church + Hall	15.73	
Pittenweem	Church + Hall	11.05	
St Andrews: Holy Trinity	Church	22.28	
	Hall	10.52	
St Andrews: Hope Park	Church + Halls	26.09	
	Basement Rooms	3.67	

	+ Office		
St Andrews: Martyrs'	Church + Hall	6.63	
St Andrews: St Leonard's	Church + Hall	43.85	
Tayport	Church	13.63	
Wormit	Church + East Hall	13.55	Yes
	West Hall	8.31	Yes

Stirling

Presbytery	Stirling
Presbytery contact	Rev Sally Foster-Fulton
Responses	16/ 46
Commitment to carbon reduction	7

Name of congregation	List of buildings in each congregation included in plan	Carbon footprint of each building in tonnes of carbon dioxide (CO ₂) for the year	Has congregation made a commitment to reduce carbon footprint by 5%?
Alloa: St Mungo's		26.7	Yes
Balfron	Can't provide numbers at present		No
Balquhidder	Church buildings	17.63	
Buchanan	Church	9.86	
Cowie and Plean	2 Churches	25.8	Yes
	Manse	Not occupied	Yes
Drymen	Can't provide numbers at present due to renovation works		
Dunblane: Cathedral	Cathedral	33.46	
	Halls	16.46	
	Cross Cottage	6.84	
	Manse	7.05	
Fallin	Church + Hall	24.43	Yes
Fintry	Church	5.4	Yes, if possible
	Session House	2.2	Yes, if possible
Gargunnoch	Church, Vestry + Ross Andersen Room	6.44	Yes
	Manse	Figures not available	Yes
Killearn	Church + Hall	38.57	Not yet
Kippen	Church buildings	21.38	
Menstrie	Church + Halls	28.8	
Muckhart	Church	6.98	Yes
Norrieston	Church	7.17	No
	Halls	1.62	No
Stirling: St Ninian's Old	Church	22.9	Yes
	Halls	14.8	Yes

The presbytery held a well attended joint conference with the Stirling eco-congregation network on 20 February at Bridge of Allan church.

Congregations in the presbytery have been supportive about taking energy saving measures but some have been concerned about the implications of a making a commitment to cuts of 5% cut year on year.

It was noted that where use of church halls has increased there will have been an increase in energy consumption.

It was noted in one congregation that 'We have never taken gas or electricity readings in the past but will do so on a quarterly basis from April 2010'.

Sutherland

Presbytery	Sutherland (40)
Presbytery contact	Mary Stobo
Responses	11/ 14
Commitment to carbon reduction	4

Name of congregation	List of buildings in each congregation included in plan	Carbon footprint of each building in tonnes of carbon dioxide (CO ₂) for the year	Has congregation made a commitment to reduce carbon footprint by 5%?
Altnaharra and Farr	Farr Church	2.9	
	Syre Church	1.2	
	Altnaharra Church	0.5	
Assynt and Stoer	Church	7.88	Yes – if practicable
	Manse	vacant	Yes – if practicable
Creich	Church	4.71	
Durness and Kinlochbervie	Kinlochbervie Church	1.6	
	Manse	11.8	
Eddrachillis	Church + Hall	1.41	Yes – if practicable
	Manse	15.71	Yes – if practicable
Kildonan and Loth Helmsdale	Church	6.81	
Kincardine, Croick and Edderton	Kincardine Church	6.9	Yes
	Edderton Church	2.9	Yes
	Croick Church	0.4	Yes
	Croick Mission Hall	0.05	Yes
Lairg	Lairg Church		
	Manse		
Melness and Tongue	Tongue Church	3.2	Yes
	Melness Church	8.0	Yes
	Manse	6.5	Yes
Rogart	Rogart Church		
Rosehall	Church	7.5	

Questions were raised whether the improvements necessary to reduce carbon footprints could be counterproductive if the materials used would embody a larger carbon footprint than the amount being saved – if the payback period is too long there is little point in making any improvement.

The cold weather in Sutherland the winter of 2010 will inevitably lead to an increase in the energy use and carbon footprints of some churches. Variations in the weather mean that consumption will vary from year to year.

One church noted that it relied in part on estimated meter readings which may not be a true record of consumption.