CHIEF OFFICERS LIAISON GROUP MEETING

Room 3E-91, Victoria Quay, Edinburgh, EH6 6QQ
Thursday 25th May 2017 – 10:00a.m.

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AGENDA

1. **WELCOME AND APOLOGIES FOR ABSENCE.**

2. **PRESENTATIONS**
   (a) Cycling Scotland – by Peter Jackson
   (b) Marketing Strategy – by Keith Fisken

3. **MINUTES**
   (a) Chief Officers Liaison Group of 2nd February 2017.
   (b) Partnership Board of 2nd March 2017.

4. **MODEL 3 SESTRAN PROGRESS REPORT –** Verbal Report by George Eckton

5. **FINANCIAL REPORTS –** Reports presented by Iain Shaw
   (a) Unaudited Annual Accounts 2016/17 – (Verbal update)
   (b) Treasury Management Annual Report

6. **NATIONAL TRANSPORT STRATEGY 2 / PLANNING REVIEW –** Verbal report by George Eckton

7. **UPDATE ON COUNCIL ADMINISTRATIONS –** Verbal updates by Chief Officers

8. **CONSULTATIONS REPORTS**
   (a) Scottish Energy Strategy – Report by Emily Whitters
   (b) Parking Consultation – Report by George Eckton
   (c) Low Emission Zones – Verbal report by George Eckton
   (d) Scottish Expert Advisory Panel on the Collaborative Economy – Report by Lisa Freeman
   (e) National Transport Strategy Review: Call for Evidence – Report by Lisa Freeman
   (f) 20 MPH Private Members Bill – Report by Catriona Macdonald

9. **ANNUAL REPORT –** Verbal Report by George Eckton **/** Sophie Pugh

10. **RTS – UPDATE BY PARTNER AUTHORITY –** Report by Catriona Macdonald

11. **PROJECTS UPDATE / EU UPDATE –** Report by Jim Grieve

12.   **WEBSITE –** Verbal Report by Angela Chambers

13.   **SERVICE LEVEL AGREEMENTS –** Report by George Eckton

14.   **MaaS Scotland –** Report by George Eckton/Catriona Macdonald/Lisa Freeman

15.   **AOCB**

16.   **DATE OF NEXT MEETING**
Thursday 24th August 2017 – Room 3E-91, Victoria Quay, Edinburgh, EH6 6QQ

Angela Chambers
Business Manager
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EH6 6QQ

18th May 2017

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CHIEF OFFICER LIAISON GROUP MEETING
10:00AM THURSDAY 2ND FEBRUARY 2017

Present:

George Eckton (GE)	SEStran (Chair)
Angela Chambers (AC)	SEStran
Julie Cole (JC)	Falkirk Council
Neil Dougall (ND)	Midlothian Council
Peter Forsyth (PF)	East Lothian Council
Ken Gourlay (KG)	Fife Council
Jim Grieve (JG)	SEStran
Ewan Kennedy (EK)	City of Edinburgh Council
Graeme Johnstone (GJ)	Scottish Borders Council
Graeme Malcolm (GM)	West Lothian Council
Iain Shaw (IS)	CEC – Treasurer Services to SEStran
Emily Whitters (EW)	SEStran

Apologies:

Lesley Deans	Clacks Council
Andrew Ferguson	Fife Council
Peter Jackson	SEStran

Ref.		Actions
1.	**Welcome and Apologies for Absence**	
1.1	GE welcomed the group to the meeting and apologies are noted as above.	
2.	**Cycling Scotland Presentation**	
2.1	Postponed to next meeting on 25 May 2017.	
3.	**Minutes**	
(a)	Chief Officer Liaison Group – 27 October 2016 Agreed as a correct record.	
(b)	Partnership Board – 2 December 2016 (DRAFT) For Noting.	
4.	**Model 3 - SEStran Progress Report**	
4.1	GE provided a verbal update to the group as follows: • At first stage of consultation process, City Deal wider issues involved • Cllr Hinds has written to all partner authority Chief Executives, outlining the process and seeking council consideration as soon as is practicable. A request has also been included, asking to be made aware when reports are going to council/committees. Officers' provided a round-table update on reporting timescales and GE noted that there is recognition from City Deal that timings are not now appropriate and will be decoupled from Model 3.	

5.	**Financial Reports**	
(a)	<u>Budget 2017/18</u> IS gave a verbal update and the following key points are for noting: • The Board report is being prepared on the assumption of a 5% reduction in council requisitions, however, there is an indication that Scottish Government will continue with the same level of funding as in previous years. • Group discussed budget challenges and the value of partnership working.	
(b)	<u>Finance Officers Report</u> IS reported that the forecast is for an underspend on the 2016/17 budget but is on track and a report will be circulated following budget meeting with SEStran managerment.	
6.	**National Transport Strategy 2 – Pre-Consultation**	
6.1	GE advised the group that the consultation will be taken to all forums to gather views, which will be used to work up a report for the Board.	
6.2	The group discussed various issues including the Transport Bill, changes to legislation, rail/bus powers and decriminalised parking. GE commented that there were linkages to the planning white paper and outlined the process for influencing a response.	
7.	**Review of Forums**	
7.1	GE provided a verbal update to the group and summarised discussions at the December Board. The Equalities and Access to Healthcare forums have merged and there is support for the Bus/Rail Forums to continue, although various stakeholders have indicated their preference for a strategic/integrated forum, however, it will be for the new Board to decide future requirements.	
8.	**Rail Infrastructure Strategy**	
8.1	GE presented the consultation paper, summarising the key points and asked Officers for their comments. The group discussed Newburgh Station and agreed, in general, that it was difficult to influence rail issues. This was followed by a discussion on ECMA representation and membership, which Officers' are now considering.	
9.	**Planning White Paper**	
9.1	GE introduced the paper, highlighting the proposals in relation to regional planning. There is a clear indication of future partnership working around land use and transport planning. GE asked Officers for their views on RTPs moving forward. A general discussion followed and all recognised the opportunities that could emerge from the review.	
10.	**Equalities Outcomes 2017-2021**	
10.1/	EW presented the report, advising that SEStran, in consultation with key stakeholders have developed 2 outcomes, which was agreed to be proportionate to the size of the organisation. A mainstreaming report is	

10.	Equalities Outcomes 2017-2021	
/10.1	being drafted and will be presented to a future Board, before publication in April. The group all agreed that EW had produced a good piece of work.	
11.	Climate Change Plan	
11.1	The report was presented by EW, summarising the main targets that the SG has set to reduce carbon emissions and SEStran's duties as a public body. Following on from a request for comments, the group discussed emission zones, electric vehicles and congestion. GE noted that an Energy Strategy would be brought back in May for further comment.	
12.	Business Plan 2017/18	
12.1	JG presented the draft plan, highlighting the new format, which provides a more focussed, streamlined document. The plan sets out key priorities for the next financial year and KPIs, which will be monitored and reported to Officers and the Board on a quarterly basis. Officers welcomed the improved format.	
13	Projects Update/City Deal/EU Update	
13.1	The report was presented by JG, providing an update on key issues. He noted that a marketing specialist has been appointed to lead on the roll-out of the RTPI digital screens.	
14.	AOCB	
14.1	GE noted that he had been asked to sit on the SCOTS Active Travel Task Group and will circulate remit when available. He advised that he is happy to progress on behalf of the partner authorities if required.	**GE**
14.2	Low Carbon Travel and Transport Challenge Fund. GE asked the group if there was any interest in bidding for funding. The group noted the difficulties in obtaining match funding. GE commented that he would be happy to discuss further and assist with applications.	
14.3	JC/GJ to discuss potential costs for pre-STAG business case.	
15.	Date of Next Meeting	
15.1	The date of the next meeting is 10:00am on **Thursday 25 May 2017, in Room 3E-91, Victoria Quay, Edinburgh, EH6 6QQ.**	

PARTNERSHIP BOARD MEETING

**HELD IN CONFERENCE ROOM 3, VICTORIA QUAY, EDINBURGH EH6 6QQ
ON THURSDAY 2 MARCH 2017
2.00 P.M. – 4.50 P.M.**

PRESENT:	<u>Name</u>	<u>Organisational Title</u>
	Cllr Lesley Hinds (Chair)	City of Edinburgh Council
	Humza Yousaf MSP	Minister for Transport and the Islands
	Charles Anderson	Non-Councillor Member
	Councillor Tony Boyle	West Lothian Council
	Councillor Gordon Edgar (Vice-Chair)	Scottish Borders Council
	Phil Flanders	Non-Councillor Member
	Councillor Jim Fullarton	Scottish Borders
	Councillor Russell Imrie (Senior Vice-Chair)	Midlothian Council
	John Martin	Non-Councillor Member
	Councillor Adam McVey	City of Edinburgh Council
	Neil Renilson	Non-Councillor Member
	Sandy Scotland	Non-Councillor Member
	Barry Turner	Non-Councillor Member
	Councillor Michael Veitch	East Lothian Council
	Cllr John Wincott	Fife Council

IN ATTENDANCE:	<u>Name</u>	<u>Organisation Title</u>
	Craig Beattie	City of Edinburgh Council
	Julie Cole	Falkirk Council
	George Eckton	Partnership Director SEStran
	Andrew Ferguson	Fife Council (Legal)
	Ken Gourlay	Fife Council
	Joanne Gray	Transport Scotland
	Jim Grieve	SEStran
	Peter Jackson	SEStran
	Graeme Johnstone	Scottish Borders
	George Lowder	Transport for Edinburgh
	Graeme Malcolm	West Lothian Council
	Martin McDonald	Scottish Parliament
	Iain Shaw	City of Edinburgh Council
	Emily Whitters	SEStran

APOLOGIES FOR ABSENCE:	<u>Name</u>	<u>Organisational Title</u>
	Cllr Nick Gardner	City of Edinburgh Council
	Cllr Bill Henderson	City of Edinburgh Council
	Cllr Tom Coleman	Falkirk Council
	Cllr Stephen Bird	Falkirk Council
	John Jack	Non-Councillor Member
	Peter Forsyth	East Lothian Council
	Neil Dougall	Midlothian Council

ORDER OF BUSINESS

The Chair confirmed that the Order of Business was intended to be as per the agenda, but following a request from Neil Renilson, supported by John Martin and Charlie Anderson, it was agreed that item 19, Review of Forums would be accelerated if possible.

APOLOGIES

Apologies were received as above.

A4   **ADDRESS BY MINISTER FOR TRANSPORT AND THE ISLANDS**

The Board welcomed Mr Humza Yousaf MSP, Minister for Transport and the Islands, who outlined his vision for transport to contribute to growth of South East of Scotland and Scotland as a whole.

The Minister addressed the Board on a number of issues, including: National Transport Strategy consultation; the likelihood of a new Transport Bill in the first half of the current Parliamentary term, consisting of three elements: responsible parking, strengthening the powers of the Road Works Commissioner, and buses, focusing on local franchising; railway enhancement; active travel; and the Climate Change Plan.

The Minister then answered questions from Members, on, amongst other topics, the East Linton/Reston station improvements; dualling of the A1; buses; performance management of transportation objectives; climate change/pollution; concessionary travel; the Strategic Transport Projects Review; electric car charging points; Air Passenger Duty; powers and functions of Regional Transport Partnerships, and their funding; City Deal; the Road Works Commissioner's powers; funding allocations; the Levenmouth Rail Project and the Selkirk bypass.

Decision

The Board noted and welcomed the attendance and address by the Minister for Transport and the Islands.

A5.   **MODEL 3 SESTRAN PROGRESS REPORT**

The Board considered a report by George Eckton, Partnership Director and Andrew Ferguson, Secretary, providing an update on the progress with "Model 3" consultation initiated by the Board in December 2016.

Decision/

Decision

The Board noted the update, and the need to continue the consultative process until later this year, with an initial analysis of consultation responses to be tabled to the Board by December, 2017.

A6.   **NATIONAL TRANSPORT STRATEGY - PRE-ENGAGEMENT SURVEY**

The Board considered a report by George Eckton, Partnership Director, advising of an early engagement survey seeking opinions on transport policy at all levels, in the context of the development of a National Transport Strategy 2 by Scottish Ministers as outlined in the Programme for Government 2016-17.

Decision

The Board noted the pre-engagement survey.

A7.   **PLANNING WHITE PAPER**

The Board considered a report by George Eckton, Partnership Director, summarising the key issues emerging from the Scottish Government's "Places, People and Planning: A consultation on the future of the Scottish planning system" publication. There was a discussion on the terms of the consultation and in particular the proposals relating to regional planning and the statutory conflict of Regional Transport Partnerships.

Decision

The Board: -

(i)   Noted the summary of issues raised by the Scottish Government consultation on the future of the Scottish planning system;

(ii)   Delegated to the Chair to sign off the final response to the Scottish Government Planning consultation prior to the 4 April; with the final response being circulated to the Board;

(iii)   Partnership Director in consultation with the Chair to sign off the final response to the UK Industrial Strategy consultation prior to the 17 April.

A8.   **MINUTES**
The following minutes were approved:-

A8.a – Partnership Board of 2nd December 2016; subject to change of location being amended;

A8.b – Performance & Audit Committee – 17 February 2017

A8.c - RTP Chairs - 7 December 2016 (noted)

A9   FINANCIAL REPORTS

The Board considered financial reports by Iain Shaw presenting the third update on financial performance of the core revenue budget of the Partnership for 2016/17, in accordance with the Financial Regulations of the Partnership. This report presents an analysis of financial performance to the end of January 2017.

(a)   Revenue Budget 2017/18

The Board considered a report by Hugh Dunn, Treasurer, outlining a revenue budget for 2017/18, together with the share of net expenses to be paid by each constituent council.

Decision

The Board:-

(i)   approved the proposed core revenue and revenue projects budget for 2017/18, as detailed in Appendices 1 and 2, and agreed that the treasurer be authorised to requisition the individual constituent authorities for amounts as follows:

Clackmannanshire	£6,256
East Lothian	£12,553
Edinburgh	£60,763
Falkirk	£19,303
Fife	£44,838
Midlothian	£10,645
Scottish Borders	£13,891
West Lothian	£21,751
	£190,000

(ii)   noted that financial planning for 2018/19 would be developed for consideration by the Partnership Board in autumn 2017;

(iii)   noted that the proposed budget was subject to a number of risks and that all income and expenditure of the Partnership will continue to be monitored closely with updates reported to each Partnership meeting.

(b)/

(b)   Finance Officer's Report/

The Board considered a report by the Treasurer presenting the third update on financial performance of the core revenue budget of the Partnership for 2016/17, in accordance with the Financial Regulations of the Partnership.

Decision

The Board noted:-

(i)   it was currently forecast that core expenditure in 2016/17 would under spend by £16,000 against the approved revenue budget of the Partnership and that this underspend would meet project costs in 2016/17;

(ii)   all income and expenditure would continue to be monitored closely with updates reported to each Partnership meeting; and

(ii)   the month end balance of indebtedness between the Partnership and City of Edinburgh

(c)   Treasury Management

The Board considered the report proposing an Investment Strategy for 2017/18.

Decision

The Board approved the continuation of the current arrangement outlined in Appendix 1 to the report.

(d)   Internal Audit Report

The Board considered a report by Hugh Thomson setting out the internal audit work undertaken by Internal Audit for the Financial Year 2016/17.

Decision

The Board noted the contents of the report.

(e)   External Audit Plan

The Board considered a report by Scott Moncrieff, the Partnership's External Auditors

Decision/

Decision

The Board noted the details in the report, also noting that there were ongoing discussions between the Partnership Director and Scott Moncrieff on fee levels.

A19   REVIEW OF FORUMS

The Board considered a report by George Eckton, Partnership Director seeking further comments from the Board members on the proposals. The Chair had proposed that the subject was effectively left to the next SEStran Board as a legacy issue pending the outcomes of the review of transport governance and planning review proposals.

Decision

The Board:-

   (i) noted the current position with regard to comments on the Review of Forums;

  (ii) agreed the transfer of the Air Forum responsibilities to the operator be delayed, pending further consideration by the Board at a future meeting;

 (iii) agreed with the recommendation of the Performance and Committee and Chair of the Board to post pone further debate meetings of SEStran Forums until the June, 2017 Board meeting, when there may be emerging legislative proposals on Regional Partnership working; and

  (iv) noted that all outstanding forum meetings have been held or scheduled.

A10   LEGAL OFFICER'S REPORT – CONSULTATION ON PROPOSED CHANGES TO COUNCILLORS' CODE OF CONDUCT

The Board considered a report by Andrew Ferguson, Secretary and Legal Adviser, relating to:

   (i) a consultation on the Councillor's Code of Conduct; and

  (ii) Changes to Standing Orders following the December Board

Decision

The Board:-

   (i) agreed a response to the consultation along the lines suggested at paragraph 2.4 of the report; and

(ii) delegated authority to the Secretary and the Legal Adviser, to implement changes to Standing Orders to reflect the decision of the Board, in relation to membership, quorum and substitution provisions (including those relating to the Chair) as regards the Performance and Audit Committee.

A11.   RAIL INFRASTRUCTURE STRATEGY

The Board considered a report by George Eckton, Partnership Director, providing the Board with a summary of Transport Scotland's consultation setting out their vision for Rail Infrastructure in Scotland to allow a position to be agreed by the Board and then submitted by Friday 3rd March.

Decision

The Board noted the consultation paper and mandated the Chair to sign off the consultation response by 3rd March, 2017.

A12.   SCOTTISH GOVERNMENT CLIMATE CHANGE PLAN

The Board considered a report by Emily Whitters, Business Support Officer, and George Eckton, Partnership
Director SEStran, outlining the reduction targets of the Climate Change Plan and the measures that Scottish Government would look to improve.

In discussion, the need to co-ordinate the responses to the Plan with those for the Planning Review and the National Transport Strategy was noted.

Decision

The Board:-

(i) noted the evidence submitted to the Rural Economy and Connectivity committee;

(ii) noted the suggested proposals of the Draft Plan/RPP3 and the suggested points of a SEStran response;

(iii) agreed that SEStran should provide representations to Scottish Ministers on RPP3 prior to 20 March and delegated to the Partnership Director, consultation with the Chair, to sign off the final response;

(iv) delegated to the Partnership Director, in consultation with the Chair, to provide a SEStran response to the draft Scottish Energy response by 30th May;

(v) noted the proposal for a forthcoming public consultation on Parking in Scotland and, if issued between March-June, 2017 delgated the Partnership Director to submit a final response; and

(vi) noted the proposal for a forthcoming public consultation on Low Emission Zones and, if issued between March-June 2017 and delegated the Partnership director to submit a final response.

A13. BUSINESS PLAN 2017-18

The Board considered a report by Jim Grieve, Head of Programmes, outlining the changes to the format of the forthcoming year's Business Plan for SEStran.

Decision

The Board approved the contents of the Draft Business Plan 2017/18.

Sandy Scotland declared an interest in the following item as a Director of Cycling Scotland.

A14. PROJECTS UPDATE/EU UPDATE

The Board considered a report by Jim Grieve, Head of Programmes providing the Board with an update on the key aspects of projects and appraisal undertaken in the last quarter, seeking their agreement on a number of project grant awards and the potential strategy of focusing grant schemes on delivering maximum EU match funds for the SEStran region.

Decision

The Board:-

(i) noted the content of the report;

(ii) as recommended by the Performance and Audit Committee, approved the grant awards for City of Edinburgh Council for 38,000, St. Andrews university for £3917.50 and Edinburgh and Lothians Greenspace Trust for £65,000;

(iii) as recommended by the Committee, approved the contribution from SEStran of £40,000 to the Diaches Braes Project;

(iv) agreed to focus SEStran's two grant schemes (STATGS & RCNGS) on achieving greater value for money by seeking to attract EU match funding for investment in potentially larger projects; and

(v)   agreed any underspend evident at the end of the current year be carried forward into the financial year 2017/18 and assigned to the Sustainable and Active Travel Grant Scheme.

A15   ACTIVE TRAVEL TASK FORCE

The Board considered a report by Lisa Freeman, Project & Strategy Officer and George Eckton, Partnership Director outlining the recommendations on ways to tackle the barriers to the delivery of ambitious walking and cycling projects in Scotland, to create more attractive places and to encourage more active travel.

Decision

The Board noted the report, and the deadline for responses on the Consultation of 7th March.

A16   EQUALITY OUTCOMES 2017 - 2021 & EQUALITY MAINSTREAMING REPORT

The Board considered a report by Emily Whitters, Business Support Officer and George Eckton, Partnership Director outlining a new set of Equality Outcomes covering the period April, 2017 – 2021 to enable SEStran to better perform the equality duty.

Decision

The Board approved the Equality Mainstreaming Report and the Equality Outcomes Report.

A17.   SCOTTISH GOVERNMENT CONSULTATION ON GENDER REPRESENTATION ON PUBLIC BOARDS (SCOTLAND) BILL

The Board considered a report by Emily Whitters and George Eckton seeking views on the practical application of the Bill's provisions and offering consultees an opportunity to offer views on how to strengthen the Bill.

Decision

The Board:-

(i)   noted the consultation on the Draft Gender Representation on Public Boards (Scotland) Bill and delegated to the Partnership Director, in consultation with the Chair to sign off the final consultation response; and

(ii)   agreed to support SEStran in signing up to the 5050 by 2020 pledge as recommended by the Equalities & Healthcare Forum and Performance and Audit Committee.

A18/ BOARD DIVERSITY SUCCESSION PLANNING

The Board considered a report by George Eckton, Partnership Director, providing an update on progress with a final Board Diversity Succession Plan for SEStran, required under the 2016 Scotland Regulations of the Equality Act as part of SEStran's 2017-2021 Equality Outcomes, proposals for a Succession Planning Committee and the retrospective collection of SEStran Board Diversity data relating to gender.

Decision

The Board:-

  (i) agreed the Board Diversity Succession Plan, pending receipt of 2015-2017 Board Diversity data;

(ii) agreed that SEStran should commit to the transparent, inclusive and outreaching process of appointment of new Non-Councillor Board members in 2018;

(iii) agreed that SEStran transition from a Board Diversity Working Group to a formal Succession Planning Committee which should meet annually to oversee and monitor Board appointments;

(iv) agreed the attached initial terms of reference for the Succession Planning Committee, delegating to the Secretary and Legal Adviser, in consultation with the Chair, to make the necessary changes to Standing Orders;

(v) noted the delay in the Scottish Government proposal to survey members of Public Boards; and

(vi) agreed that prior to the publication of the Board Diversity Succession plan, SEStran board members should be sent a voluntary survey to enable retrospective identification of board gender balance between 2015 – 2017.

A20 PROCUREMENT UPDATE

The Board considered a report by Jim Grieve, Head of Programmes, on a number of procurement issues.

Decision

The Board noted the report

A21/

A21   UPDATE ON NON-COUNCILLOR MEMBER BOARD VACANCY

The Board considered a report by George Eckton, Partnership Director, updating the Board on the progress with the appointment to the current Non-Councillor member vacancy on SEStran's Board and subsequent further vacancy generated by the resignation of a further Non-Councillor Member.

Decision

The Board:-

(i)   Recommended the appointments of: Doreen Steele and Brian Sharkie as a Non-Councillor Board Members for subsequent approval by Scottish Ministers; and

(ii)   Noted the decision by the Chair to utilise the current recruitment process, following advice from the Secretary and Partnership Director, to fill a Board vacancy which arose before conclusion of the process and the use by the Partnership Director of Item 40 of SEStran's Standing Orders to progress the issue as a matter of urgency.

A22   AOCB

None

A23   DATE OF NEXT MEETING

Noted as Friday 23rd June, 2017, Conference Room 1, Victoria Quay, Edinburgh, EH6 6QQ

A24   VALEDICTORY

As this meeting was the Chair's last in office before the local government elections, she wished all Members well for the future and thanked Officers for their support.

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ANNUAL TREASURY REPORT 2016/17

1   Purpose of report
The purpose of this report is to provide an Annual Treasury Report for the financial year 2016/17.

2   Summary
The Partnership has adopted the CIPFA Code of Practice on Treasury Management in the Public Sector, and under the code, an Annual Report on Treasury Management has to be submitted to the Partnership after the end of each financial year.

3   Investment Out-turn 2016/17
3.1   The Partnership's Investment Strategy has been to maintain its bank account as part of the City of Edinburgh Council's group of bank accounts. Any cash balance is effectively lent to the Council, but is offset by expenditure undertaken by the City of Edinburgh Council on behalf of the Partnership. Interest is given on month end net indebtedness balances between the Council and the Partnership and for financial year 2016/17 is calculated in accordance with the recently withdrawn Local Authority (Scotland) Accounts Advisory Committee's (LASAAC) Guidance Note 2 on Interest on Revenue Balances (IoRB). In line with recent short term interest rates, the investment return continues to be small, but the Board gains security from its counterparty exposure being to the City of Edinburgh Council. Net end of month balances for the financial year were:

	£
Opening Balance	-572.561.36
30 April 2016	353,248.41
31 May 2016	468,020.96
30 June 2016	443,635.10
31 July 2016	450,025.48
31 August 2016	448,405.34
30 September 2016	443,062.64
31 October 2016	450,977.53
30 November 2016	419,569.22
31 December 2016	489,618.78
31 January 2017	254,100.62
29 February 2017	262,208.45
31 March 2017	159,905.84

3.2   Interest is calculated from the average monthly balance over the opening balance and 11 months. The interest rate applied was 0.189%, giving an interest amount of £620.28 payable to the Partnership.

4   Recommendations
4.1   It is recommended that the Partnership notes the Annual Report for 2016/17.

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HUGH DUNN
Treasurer

Appendix   None

Contact/tel   Iain Shaw, Tel: 0131 469 3117
(iain.shaw@edinburgh.gov.uk)

Scottish Government Draft Energy Strategy

1. **INTRODUCTION**

1.1 The Scottish Government published the draft energy strategy, included at appendix 1, on the 24th January 2017. This is a strategy for the period up to 2050; a timeframe the Scottish Government believe to be appropriate to consider a full energy transition.

1.2 The strategy is underpinned by Scotland's climate ambitions, as determined by Scotland's Climate Change Act[1]. The strategy is therefore closely linked with the draft Climate Change Plan[2] which SEStran responded to earlier this year[3].

1.3 The plan seeks to meet future transport needs substantially through electricity or alternative fuels, presenting new infrastructure challenges and new patterns of behavior of users.

1.4 A new 'all energy' renewables target is proposed for 2030, an ambitious target to deliver the equivalent of half of Scotland's heat, transport and electricity needs from renewable sources and drawing together the ambition for a full transition in each area of energy supply and use.

1.5 As noted, the draft energy strategy is closely integrated with the draft climate change plan. SEStran will seek to make a response raising similar issues around the focus on ULEVs, behavioural change incentives, the need for co-design and encouraging greater use of shared / active travel modes.

2. **SESTRAN'S PROPOSED RESPONSE**

2.1 SEStran welcome the ambition for Scotland to have reduced transport emissions by over a third by 2032 and with almost complete decarbonisation of the Scottish Economy by 2050. This will be a challenge for all sectors but particularly, in our view, transportation given long standing behavioural habits, current fueling technologies and long lead-in times for consumer purchasing habits to change. These factors will need to be considered if targets such as 40% of ultra-low emission vehicles (ULEVs) by 2032 are to be realised.

2.2 While the draft Energy Strategy recognises that there is a clear pick up in terms of ULEVs registered in Scotland, there is still a significant gap between that figure and other conveniently fueled vehicles. There is a requirement for clear public leadership on this matter to drive behavioural change and instill in all consumers that they can confidently buy and drive ULEVs over the next 10-15

[1] http://www.gov.scot/Topics/Environment/climatechange/scotlands-action/climatechangeact
[2] http://www.gov.scot/Resource/0051/00513102.pdf
[3] http://sestran.gov.uk/wp-content/uploads/2017/03/1487862217.pdf

years. This will be critical if transport is to meet it's share of the 2030 "all-energy" target outlined in the draft strategy.

2.3 We welcome the balance outlined in the strategy between hydrogen, electricity and fuel cells. Across the SEStran region, transport in the future may be fueled in different manners dependent upon the urban or rural geography in question.

2.4 We would comment that a lot of consumer confidence could be engendered by proposals for a Government Owned Energy Company (GOEC) working with regional or local stakeholders to equalize current short-term fluctuations in the price of transport fueling due to global market conditions and any price differentials due to the outcome of geography e.g. current enhanced price of oil-based products due to transportation costs.

2.5 Given the predicted increase in population we should balance supply side measures with demand restraint to achieve emissions goals. SEStran has a successful and ever-growing Liftshare scheme[4] and it would be welcome if further proposals and policies could be considered alongside a recognition of the role of RTPs in promoting it. The increase in lift-sharing opportunities could have a related co-benefit in terms of potential inclusion and accessibility impacts across urban-rural geographies.

2.6 However, the draft energy strategy and RPP3 focus on reducing the emissions impact of individualised modes of transport must not implicitly or inadvertently be allowed to strategically promote greater use of individual motorised modes over collective or active modes and so potentially contribute to the further decline of bus or rail modes of transport. There is a potential equity impact on those, who in the future despite interest-free loans, can't afford or access for other reasons individualised ULEVs.

2.7 Alongside any equality impact, these ULEVs could still have externalities around economic and social impact e.g. congestion, albeit the environmental externalities of their carbon emissions would have been greatly reduced. The draft energy strategy also ends with a commitment to work with local authorities moving forward which is welcomed in terms of co-design principles. However, in terms of transport we would suggest that RTPs would offer a clear route for delivery of regional low-carbon outcomes and would be grateful if the final strategy made a similar commitment to work with RTPs on the issues of transport energy moving forward. In conclusion, we would welcome further discussion, in co-design terms, on policies that look at hypothecation of revenues back to further transport projects to deliver improvements to collective modes of transport and resource the maintenance and adaptation of our existing networks to climate change and increased demand.

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[4] https://liftshare.com/uk/community/sestran

2.8 At present, the strategic approach is very much focused on a supply-side revolution of fueling of vehicles but if the incentives outlined in the document are not sufficient to change certain long-standing behavior patterns, it may also be prudent to ensure that RPP3 also have policies and proposals to restrain demand in terms of equitable and re-distributive schemes. That comment notwithstanding, SEStran welcome proposals for access limitation policies for certain vehicles e.g. Low Emissions Zones and would welcome further discussions with Scottish Government over how these can be resourced and rolled out over the period of 2017 – 2032. We also recognise the co-benefits such policies could have for air quality and healthier outcomes for Scotland, as well as their demand management impact on transport choices towards potentially greener and more sustainable modes of transport and distribution.

3. RECOMMENDATION

3.1 Officers are asked to comment upon the suggested points of response to the draft energy strategy.

Emily Whitters
Business Support Officer
18th May 2017

Appendix 1 – Draft Energy Strategy

Scottish Energy Strategy:
The future of energy in Scotland

Scottish Government
Riaghaltas na h-Alba
gov.scot

Contents

Ministerial foreword

The choices we make about energy are among the most important decisions we face. The supply of safe, reliable energy underpins the continued growth of the Scottish economy and delivery of key services. Our energy industry provides high quality jobs and a vibrant climate for innovation. Affordable energy provision is a prerequisite for healthy, fulfilling living and productive, competitive business.

This is a strategy for the period to 2050; an appropriate time frame in which to consider a full energy transition. We can be proud of the expertise and innovation within our oil and gas industry and the industry will continue to have a key role as Scotland makes its transition to a low carbon economy. The exploration and production of oil and gas in Scottish waters will continue to provide high-value employment and a stable energy supply for decades to come. Our ambition is that these strengths should also provide the engineering and technical bedrock for the transformational change in Scotland's energy system over the coming decades.

Scotland's climate ambitions underpin the priorities laid out in this draft strategy consultation, determined by Scotland's Climate Change Act, together with our objectives to create a dynamic, sustainable and inclusive economy. A new 2030 'all energy' renewables target is proposed in this draft Energy Strategy – setting an ambitious challenge to deliver the equivalent of half of Scotland's heat, transport and electricity needs from renewable sources and drawing together the ambition for a full transition in each area of energy supply and use.

This is an exciting period, as Scotland's energy supply mix changes. Scotland's electricity production has seen huge shifts in recent years, following the closure of the last coal-fired thermal station. One of Scotland's proudest recent achievements is the huge increase in new renewable electricity supply. As this document is published, the task to fully decarbonise electricity production has been largely achieved in Scotland – well ahead of other countries, which will now have to make a similar transition to prevent the damaging effects of global climate change. Scotland's achievements leave us with a different kind of energy challenge from that of most countries; one where heat and transport take on even greater significance than electricity.

We are already seeing the benefits of Scotland's ongoing transition, with over forty thousand people employed in the low carbon and renewable energy economy in Scotland. In sectors such as low carbon heating, our supportive policy environment has allowed Scottish-based companies to compete globally. Such opportunities are likely to increase in future years, as the international market for low carbon goods and services continues to grow.

Our patterns of energy use are changing too. We are now more efficient than ever in the use of energy – and further major shifts in our energy use lie ahead. The car that we drive today, for example, is typically fuelled with petrol or diesel. Our future transport needs will be met substantially through electricity or alternative fuels; presenting new infrastructure challenges and new patterns of behaviour for users. How consumers engage with these choices will be guided by 'smart' technologies, providing better information on energy use and a better platform for informed decisions on when it is best to consume energy.

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Choices about the scale of supply and consumption of energy have substantially broadened in recent years. Consumers can now generate energy for their own needs, from solar panels or a wind turbine for example. In the future, groups of consumers may choose to invest jointly in new local energy solutions. The ability to store energy is also changing dramatically, with local solutions to complement larger-scale, national infrastructure provision. Scotland will need a more flexible energy system, which can accommodate the many choices that consumers and generators will make in the future. This energy challenge represents an exciting opportunity to capture the economic benefits of pioneering these approaches, here, in Scotland.

Most important of all, we recognise that energy remains unaffordable for too many in Scotland. The resultant fuel poverty creates misery for individuals and families. This is driven partly by high energy prices, but a further significant driver is a building stock that is, all too often, profoundly wasteful in energy. While significant strides have already been taken in improving the energy efficiency of domestic properties, improving the energy efficiency of all of Scotland's building stock – both domestic and non-domestic – and, eventually, decarbonising the heat supply to those buildings, stands as the major long-term energy challenge for Scotland. This draft Energy Strategy aims to set out how

Scotland can meet the needs of those who are least able to pay for their energy, through supporting energy solutions that provide warmer homes and better outcomes for consumers overall.

We hope that in the months ahead, in finalising our Energy Strategy, this document stimulates debate about the energy challenges in Scotland and the policies needed to meet the aspirations of the people of Scotland to deliver a secure, sustainable energy future for all, in the best interests of our communities, economy and environment.

PAUL WHEELHOUSE MSP
Minister for Business, Innovation and Energy.

Responding to this consultation

We are inviting responses to this consultation by 30 May 2017.

Please respond to this consultation using the Scottish Government's consultation platform, Citizen Space. You can view and respond to this consultation online at: https://consult.scotland.gov.uk/energy-and-climate-change-directorate/draft-energy-strategy/.

You can save and return to your responses while the consultation is still open. Please ensure that consultation responses are submitted before the closing date of 30 May.

If you are unable to respond online, please complete the Respondent Information Form (see 'Handling your Response' below) to:

Energy Strategy Consultation
Energy and Climate Change Directorate
The Scottish Government
4th Floor, 5 Atlantic Quay
150 Broomielaw,
Glasgow
G2 8LU

It would be helpful to have your response by email or using the electronic response form. The electronic response form can be accessed at the following website address: https://consult.scotland.gov.uk.

You can also email your response to energystrategy@gov.scot

Handling your response
If you respond using Citizen Space (http://consult.scotland.gov.uk/), you will be directed to the Respondent Information Form. Please indicate how you wish your response to be handled and, in particular, whether you are happy for your response to published.

If you are unable to respond via Citizen Space, please complete and return the Respondent Information Form included in this document at Annex B. If you ask for your response not to be published, we will regard it as confidential, and we will treat it accordingly.

All respondents should be aware that the Scottish Government is subject to the provisions of the Freedom of Information (Scotland) Act 2002 and would therefore have to consider any request made to it under the Act for information relating to responses made to this consultation exercise.

Next steps in the process
Where respondents have given permission for their response to be made public, and after we have checked that they contain no potentially defamatory material, responses will be made available to the public at: http://consult.scotland.gov.uk.

If you use Citizen Space to respond, you will receive a copy of your response via email.

Following the closing date, all responses will be analysed and considered along with any other available evidence to help us. Responses will be published where we have been given permission to do so.

Comments and complaints
If you have any comments about how this consultation exercise has been conducted, please send them to:

Energy Strategy Consultation
Energy and Climate Change Directorate
The Scottish Government
4th Floor, 5 Atlantic Quay
150 Broomielaw,
Glasgow
G2 8LU

Scottish Government consultation process
Consultation is an essential part of the policy-making process. It gives us the opportunity to consider your opinion and expertise on a proposed area of work.

You can find all our consultations online at: http://consult.scotland.gov.uk. Each consultation details the issues under consideration, as well as a way for you to give us your views, either online, by email or by post.

Responses will be analysed and used as part of the decision-making process, along with a range of other available information and evidence. We will publish a report of this analysis for every consultation. Depending on the nature of the consultation exercise the responses received may:

• indicate the need for policy development or review;
• inform the development of a particular policy,
• help decisions to be made between alternative policy proposals; and
• be used to finalise legislation before it is implemented.

While details of particular circumstances described in a response to a consultation exercise may usefully inform the policy process, consultation exercises cannot address individual concerns and comments.

1. A 2050 VISION FOR ENERGY

A strong low carbon economy – sharing **the benefits across our communities,** reducing social inequalities, and creating a vibrant climate for innovation, investment and high value jobs.

A modern, integrated, clean energy system, delivering reliable energy supplies at an affordable price in a market that treats all consumers fairly.

Introduction

1. Central to the continued inclusive growth of the Scottish economy is the need for secure, reliable and affordable energy supplies. The Scottish Government has consistently made better energy provision a guiding objective.

2. Scotland has long benefited from its substantial energy reserves. As a centre of the industrial revolution, Scotland was at the forefront of the development of the coal industry, and, since the 1970s, we have grown to become an international centre of expertise in oil and gas subsea engineering. Today, we are a knowledge hub for energy exploration and production, for power system engineering and a host of modern, renewable energy technologies and systems – placing Scotland at the forefront of the challenge to decarbonise the global economy.

3. This draft Scottish Energy Strategy seeks to build on these strengths. It explores the choices we face about Scotland's future energy system, against the requirements of:

   • the continued, sustainable and inclusive growth of Scotland's economy;
   • secure, reliable supplies of energy when they are required;
   • achieving better outcomes for consumers of energy with more affordable energy requirements; and
   • long-term, sustained decarbonisation - as set out by Scotland's 2050 climate change targets.

4. The draft Energy Strategy is composed as a free-standing companion to the draft Climate Change Plan – designed to provide a long term vision to guide detailed energy policy decisions over the coming decades. The forecasts and targets set out here are consistent with the ambitions laid out by the Climate Change (Scotland) Act 2009. Driven by the same ambition, the publication of the draft Climate Change Plan and this draft Energy Strategy reinforce our position in the vanguard of the international move towards a low carbon future.

5. Together, these statements shape action to deliver:

   • a modern, integrated, clean energy system, delivering reliable energy supplies at an affordable price, in a market that treats all consumers fairly; and
   • a strong, low carbon economy – sharing the benefits across our communities, reducing social inequalities and creating a vibrant climate for innovation, investment and high value jobs.

6. Scotland's consumers – our households and businesses – must be at the heart of this approach. The energy system envisaged in this strategy will deliver opportunities for suppliers and consumers of energy alike, addressing in particular the damaging impact of poor energy provision for those in fuel poverty.

7. Securing the economic, environmental, social and commercial benefits of this new approach is a shared endeavour. The Scottish Government, in partnership with local government and its enterprise agencies, will work closely with citizen groups, communities, the Scottish company base, academic institutions, regulators and other representative bodies to maximise the opportunities that arise from the evolution of Scotland's energy system.

8. A suite of interlinked priorities and actions are presented for consultation throughout this document, with suggested new or revised energy targets to guide the implementation of the long term vision.

9.   There are four separate consultation documents published to accompany this draft Scottish Energy Strategy:

•   Onshore Wind Policy Statement;
•   Scotland's Energy Efficiency Programme;
•   Local Heat & Energy Efficiency Strategies and District Heating; and
•   Unconventional Oil and Gas.

10. **The Scottish Government's 2050 energy vision is aligned to three themes:**

A WHOLE-SYSTEM VIEW

A STABLE, MANAGED ENERGY TRANSITION

A SMARTER MODEL OF LOCAL ENERGY PROVISION

A WHOLE-SYSTEM VIEW

11. The Scottish Energy Strategy sets out a whole-system view of energy policy, examining where our energy comes from and how we use it – for power (electricity), heat and transport. This integrated approach recognises the interactions and effects that the elements of the energy system have on each other. **A new 2030 'all-energy' target for the equivalent of 50% of Scotland's heat, transport and electricity consumption to be supplied from renewable sources, captures the ambition in this system-wide approach (this is set out in Chapter 3).**

12. The 'whole-system' approach is best represented by the introduction of Scotland's Energy Efficiency Programme (SEEP). SEEP highlights a renewed emphasis on energy efficiency as a strategic priority, designated as National Infrastructure Priority in June 2015; recognising the significant economic benefits of energy efficiency investment and the importance of tackling fuel poverty.

13. SEEP is a long-term (15-20 year) programme designed to improve the energy efficiency of both domestic and non-domestic buildings with the ultimate aim of decarbonising heat supply; making energy more affordable and reducing carbon emissions from the built environment.

14. Improved energy efficiency helps households and businesses to have more control over their fuel bills, which will contribute to tackling fuel poverty through reduced costs and achieve health improvement benefits through people having warmer homes. By reducing the costs of energy to Scottish businesses, we know productivity, and therefore economic competitiveness, is likely to improve. Further, by building a Scottish supply chain to harness investment in energy efficiency measures, we can deliver new growth and jobs to the Scottish economy.

15. SEEP is currently in the design phase and is discussed in more detail in the accompanying consultation document. This initial consultation will inform the final design of the Programme.

16. While SEEP is a cornerstone of the Scottish Government's 'whole-system' approach to energy policy, in all areas of our energy system, a suite of new policies and programmes will be required. In particular, as more of our heat and transport needs are met by electrically-powered technologies (such as heat pumps and electric cars), we must plan for the new skills and new investment required to meet the extra demands on the electricity grid and energy networks.

Introduction

A STABLE, MANAGED ENERGY TRANSITION

17. Scotland is leading by example in tackling climate change. Our overall approach to energy is determined by the need to further decarbonise the whole energy system, in line with emissions reduction targets set out in the current Climate Change (Scotland) Act 2009, which requires an 80% reduction in harmful greenhouse gas emissions across our entire economy and society between 1990 and 2050.

Strengthened ambition of the Scottish Government to tackle climate change

The Scottish Government is committed to achieving the climate change targets set by the 2009 Climate Change (Scotland) Act – some of the most stretching ambitions in the world.

The 2016 Programme for Government commits the Scottish Government to a new Climate Change Bill, in response to the increase in global ambition in the UN Paris Agreement and including a new and more testing 2020 emissions reduction target.

18. Through strong leadership in the transition to a low carbon economy, the Scottish Government's approach to energy can help deliver a range of priorities set by Scotland's Economic Strategy[1] and our National Performance Framework [2].

19. World class energy provision – and the continued growth of the energy sector itself - will be a vital contributor to efforts to boost our economy while working in harmony with the natural environment, and tackle inequalities in Scotland - enhancing our quality of life for decades to come. This complements our leadership in the transition to a more circular economy, taking a smarter approach to the way we use and manage material resources.

20. Key factors underpinning a stable, managed transition are:

* a strong oil and gas sector that supplies a skilled workforce, investment, research and development, and critical infrastructure to facilitate the transition to a largely decarbonised energy system;
* a balanced energy supply mix, with Carbon Capture and Storage (CCS) facilities supporting the cost-effective decarbonisation of heat, power and industry;
* a vibrant investment climate for low carbon energy production, with increased network interconnection and energy storage, along with new, thermal electricity generation;
* support for innovation and research and development in new technologies, shared ownership and business models, delivering better outcomes for energy consumers and the economy; and
* support for Scottish business to compete globally, growing their share of international markets and boosting export growth.

A SMARTER MODEL OF LOCAL ENERGY PROVISION

21. In recent years, Scotland has moved progressively away from traditional models of centralised energy provision and passive consumption. Scottish companies and communities have pioneered the development of innovative local energy systems. In particular, the desire for renewable generation in areas of constrained electricity grid, thereby limiting export potential, has driven remarkable innovation in technology, systems, business and engineering models for local provision.

22. Scotland's communities and island populations are increasingly playing an active and important part in the delivery of innovative, low carbon, local smart energy systems in partnership with local government and a range of private and public sector bodies.

23. With the creation of local solutions to meet local needs – so-called decentralised or distributed energy systems – there is the potential to create vibrant local energy economies. Heat, electricity and storage technologies combined with demand management and energy efficiency measures on an area-by-area basis, could realise substantial local economic, environmental and social benefits.

24. The Scottish Government has committed long-term funding to develop local energy systems, through a number of initiatives, such as:

- the Low Carbon Infrastructure Transition Programme (LCITP);
- Home Energy Efficiency Programme – Area Based Schemes;
- the Scotland Heat Map;
- the District Heating Loan Fund;
- the Renewable Energy Investment Fund (REIF);
- the Community and Renewable Energy Scheme (CARES); and
- schemes delivered under CARES such as the Local Energy Challenge Fund and the Infrastructure and Innovation Fund.

25. Through the implementation of the Scottish Energy Strategy, the Scottish Government reiterates its commitment to supporting the development of local energy economies as part of a varied and proportionate response to the challenges brought by the transformation of Scotland's energy system.
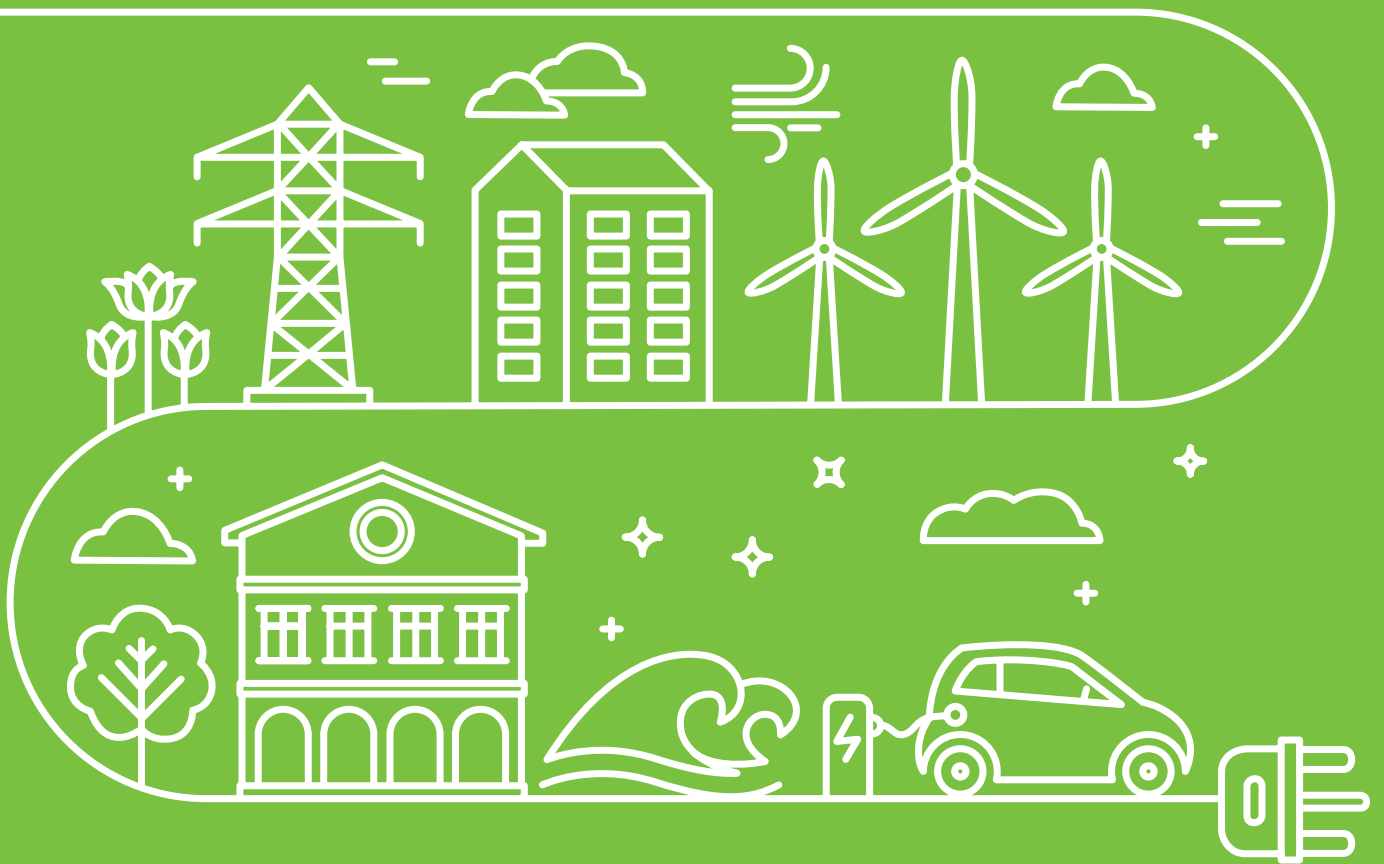
NAVIGATING THE SCOTTISH ENERGY STRATEGY

26. This consultation document presents the key components of a 2050 Scottish Energy Strategy. Throughout the document, there are questions, seeking views on the vision and its optimal delivery.

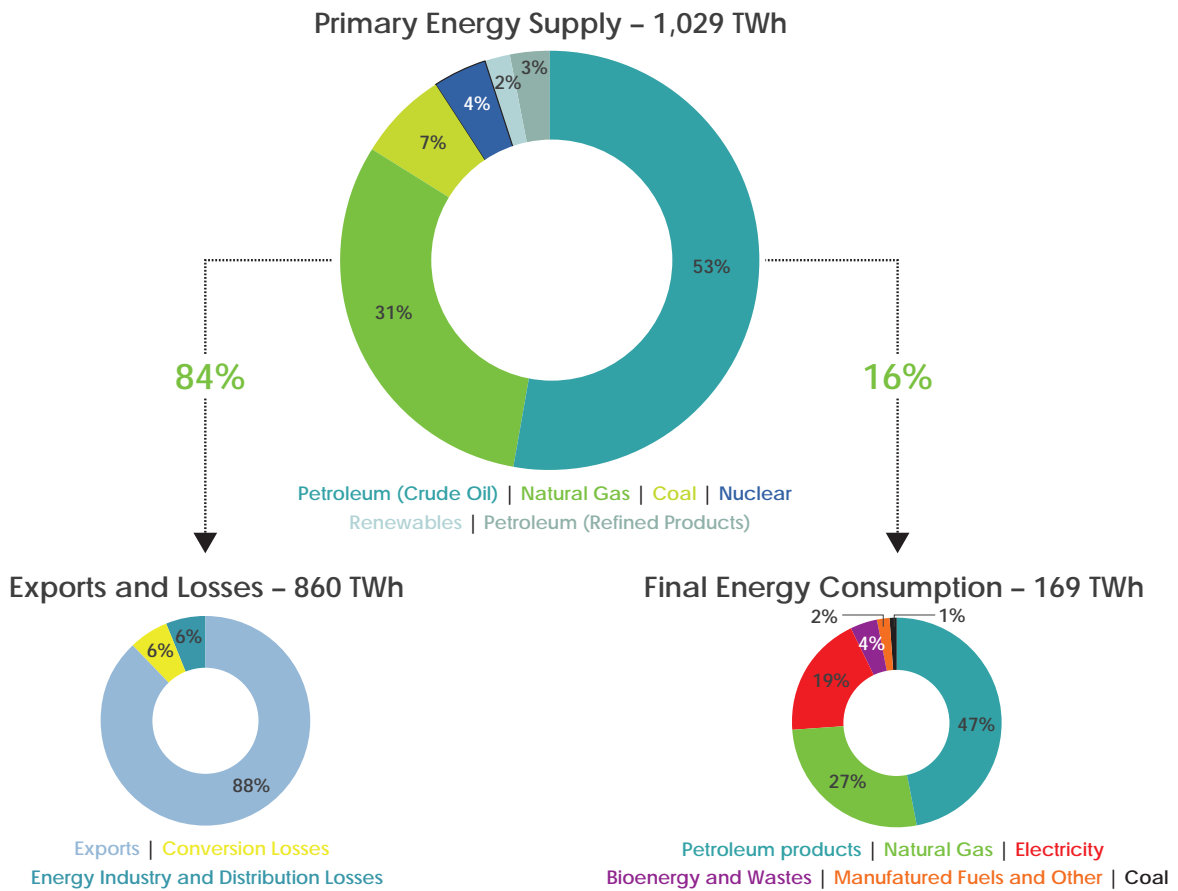# 2. UNDERSTANDING SCOTLAND'S ENERGY SYSTEM

ENERGY PRODUCTION

27. Scotland is energy-rich. The supply of energy from a variety of plentiful indigenous sources constitutes one of the largest sectors of the Scottish economy. Oil and gas remain key sources of energy in Scotland – accounting for a combined value of 87% of total primary energy in 2014; with the vast majority of Scotland's heating and transport needs supplied by fossil fuels[3].

Diagram 1: Scotland's Primary and Final Energy, 2014

Primary Energy Supply – 1,029 TWh

53%
31%
7%
4%
2%
3%

Petroleum (Crude Oil) | Natural Gas | Coal | Nuclear
Renewables | Petroleum (Refined Products)

84%   **16%**

Exports and Losses – 860 TWh

88%
6%
6%

Exports | Conversion Losses
Energy Industry and Distribution Losses

Final Energy Consumption – 169 TWh

47%
27%
19%
2%
4%
1%

Petroleum products | Natural Gas | Electricity
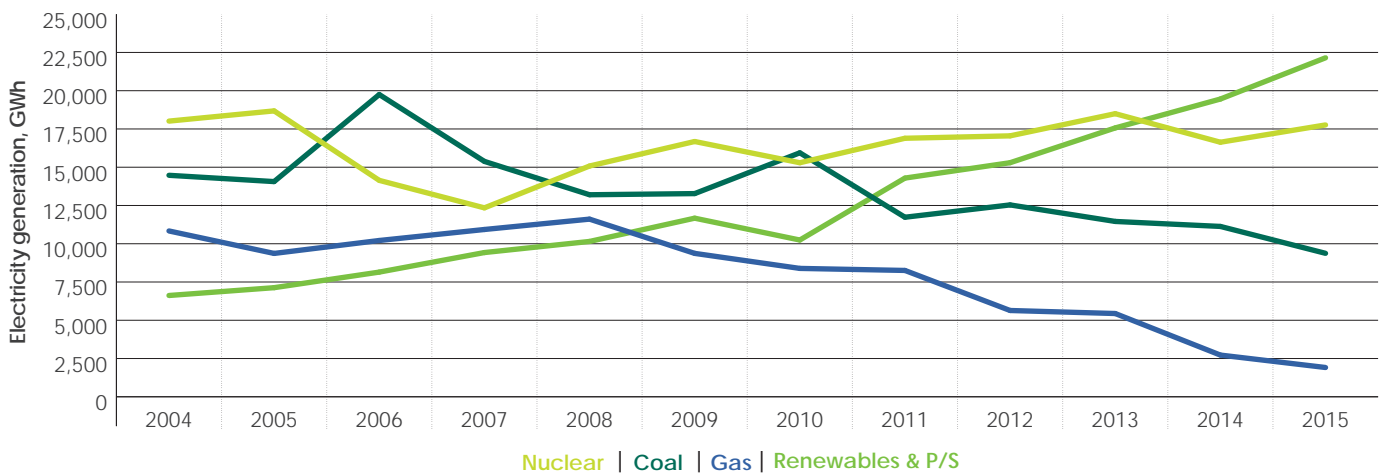Bioenergy and Wastes | Manufactured Fuels and Other | Coal

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3. All figures presented here are contained within the forthcoming publication of Energy in Scotland.

28.   Scottish energy production is also a substantial contributor to both the UK and EU energy systems.

SCOTLAND IS ESTIMATED TO BE THE LARGEST OIL AND SECOND LARGEST GAS PRODUCER IN THE EU ON AN INTERNATIONALLY COMPARABLE BASIS, AND PRODUCED 95% OF THE OIL AND 58% OF THE GAS PRODUCED IN THE UK IN 2015	SCOTLAND IS A NET ELECTRICITY EXPORTER TO THE REST OF THE UK – EXPORTING 29% OF ELECTRICITY GENERATED IN SCOTLAND IN 2015	RENEWABLE ELECTRICITY GENERATION IN SCOTLAND CONTRIBUTED 26% OF TOTAL UK RENEWABLE GENERATION IN 2015	ONSHORE WIND IN SCOTLAND CONTRIBUTES NEARLY 60% OF THE UK'S ONSHORE WIND CAPACITY

SCOTLAND PRODUCED 92% OF UK HYDROELECTRICITY GENERATED IN 2015

ELECTRICITY PRODUCTION AND RENEWABLE ENERGY GENERATION

Diagram 2: Electricity generation by fuel type

Nuclear | Coal | Gas | Renewables & P/S

Source: https://www.gov.uk/government/statistics/energy-trends-december-2016-special-feature-article-electricity-generation-and-supply-figures-for-scotland-wales-northern-ireland-and-england-2

29.   Over the last 15 years, considerable change has occurred in the production of electricity in Scotland. The power sector has become largely decarbonised, with the closure of the last coal-fired power station, Longannet, in 2016. In 2015, re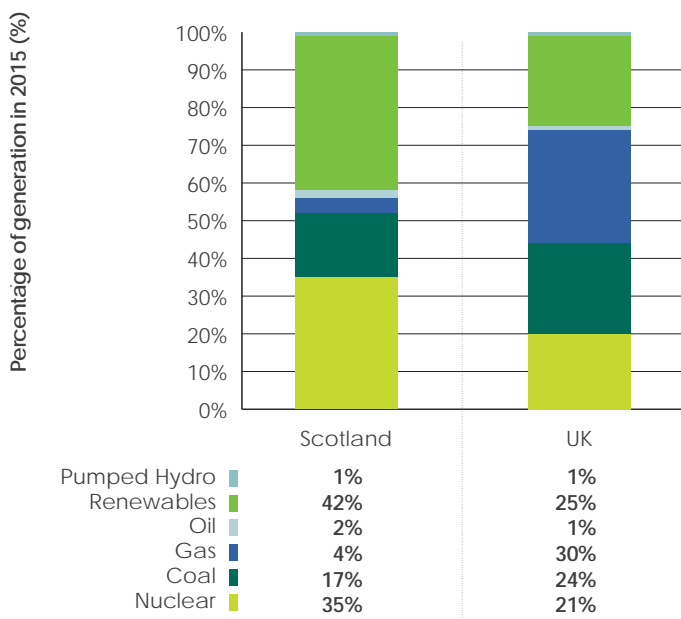newables represented the biggest source of electricity production (42%) and served the majority of Scottish needs alongside the two remaining nuclear plants in Scotland (35% of generation). A very small proportion of electricity (4%) was (in 2015) generated by a gas-fired power station at Peterhead.

30. The emissions intensity of electricity generation has fallen substantially in recent years. Official figures show that the average carbon intensity of electricity generated in Scotland has fallen by nearly 40% between 2010 and 2014, to less than 200 grams of carbon dioxide for every kilowatt hour generated (on average).

31. The Scottish electricity generation sector operates within an integrated Great Britain wide electricity system, and while there have been considerable changes over the same period, the pace of decarbonisation has been relatively slower GB-wide. Coal and gas remain major contributors to GB-wide electricity generation, accounting for over half of all electricity generated in 2015.

32. Renewables generated the equivalent of 59.4% of Scotland's electricity requirements in 2015, from just over 10% in 2001. Most of this growth can be attributed to onshore wind, complementing the post-war investment in large-scale hydro.

33. Recent years have seen a growth in small scale installations of renewable energy from solar, biomass and hydro power, aided by the UK Feed in Tariff (FiT) which supported renewable generation schemes under 5 megawatts in size. Scotland's renewable energy success is built on the consistent support of the Scottish Government, together with a hitherto stable UK-wide support regime.
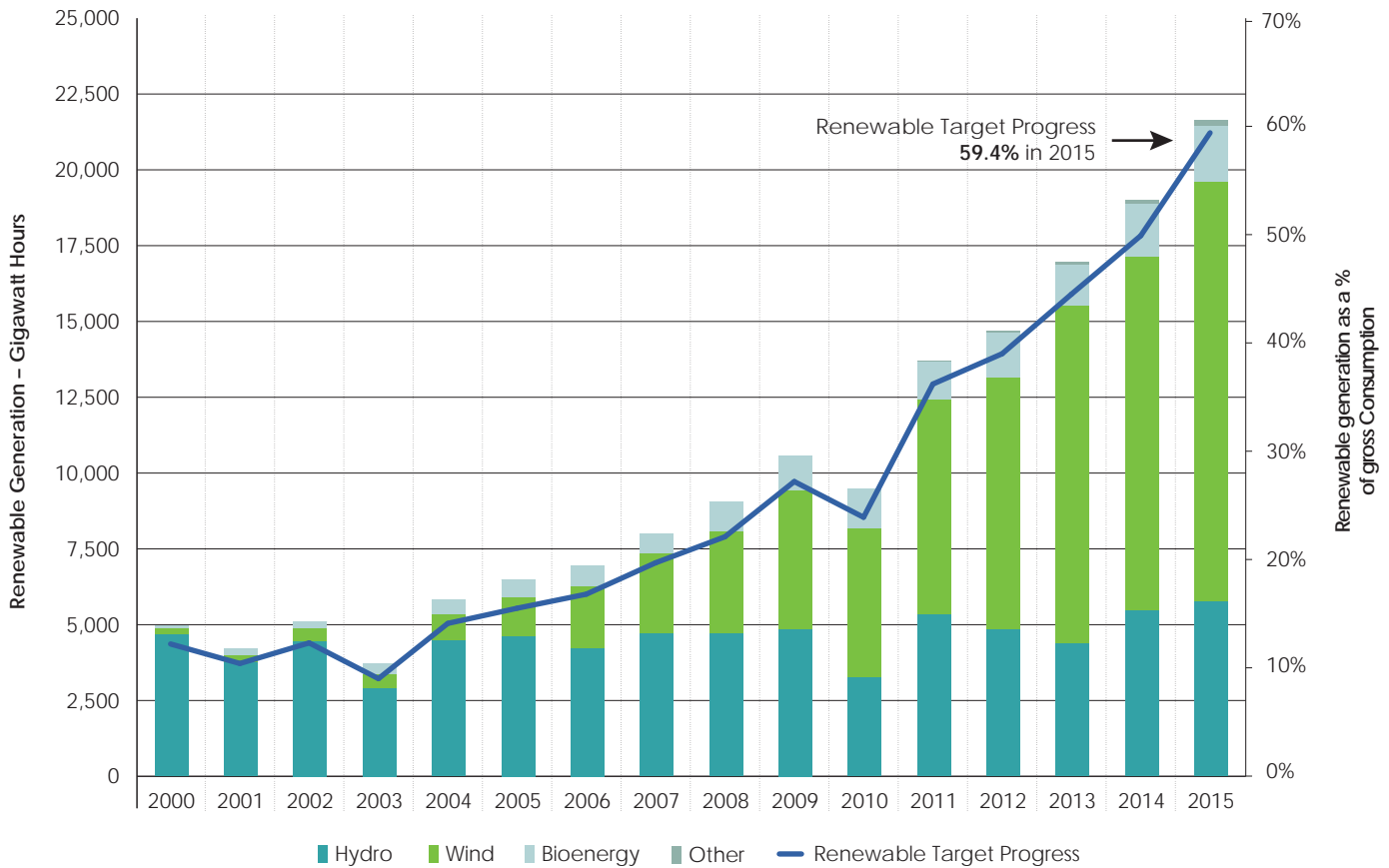
Since the UK General Election in 2015, there have been substantial, negative changes to support for key renewable energy technologies arising from UK Ministers' decisions. Notwithstanding these changes, by 2015, renewable energy and its associated infrastructure is now a major industrial sector in its own right, helping to sustain economic growth and employment of 14,000 jobs in Scotland. Renewable energy also generated £5.4 billion in turnover in Scotland, or 18.3% of the total UK turnover in this important sector.

Diagram 3: Electricity generation in 2015, GB and Scotland

	Scotland	UK
Pumped Hydro	1%	1%
Renewables	42%	25%
Oil	2%	1%
Gas	4%	30%
Coal	17%	24%
Nuclear	35%	21%

Source: https://www.gov.uk/government/statistics/energy-trends-december-2016-special-feature-article-electricity-generation-and-supply-figures-for-scotland-wales-northern-ireland-and-england-2

Diagram 4: Electricity generated (GWh) from renewable sources, Scotland, 2000-2015

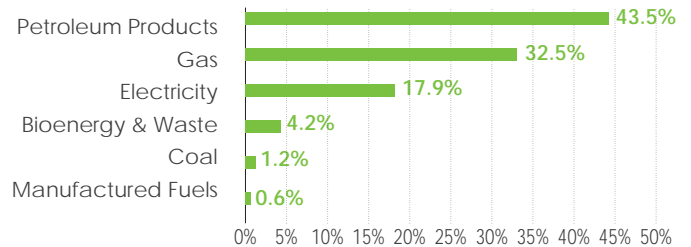Source: https://www.gov.uk/government/statistics/regional-renewable-statistics

34. Alongside this progress at a national level, the Scottish Government has been a firm supporter of community and locally-owned renewables. Scotland now has 595MW of community and locally-owned renewable capacity. There are a total of 15,570 locally and community-owned renewables sites in Scotland at present. The two largest power sources continue to be onshore wind (273MW) and biomass (162MW).

35. 2015 has seen the largest annual increase in renewable heat output since measurement began in 2008/09 – up by over 1,100 GWh in a single year. In 2015 an estimated **1,504 GW of renewable heat capacity** was operational in Scotland, producing an estimated **4,165 GWh of useful renewable heat.** Biomass contributed the majority of this, with contributions from heat pumps, energy from waste and solar thermal. These estimates suggest that in 2015 Scotland produced enough heat from renewable sources to meet between 5.3% and 5.6% of non-electrical heat demand.

36. Low carbon transport continues to grow. Electric vehicle (EV) uptake is increasing. At the end of June 2016, there were 3,575 electric cars and vans licensed in Scotland (eligible for the UK Government's plug-in car and van grant schemes). This is compared to 2,050 at the end of June 2015. More EVs were sold in Scotland in 2015 than the previous four years combined, with 2016 sales on track to rise further. Our ChargePlace Scotland network has expanded to over 600 publicly available EV charging points, equating to over 1,200 charging bays. This includes over 150 'rapid' charge points, one of the most comprehensive networks in Europe. Renewable energy is an input to the transport sector in the form of biofuels - which, in 2015 made up 3.2% of total road fuels used in the UK.
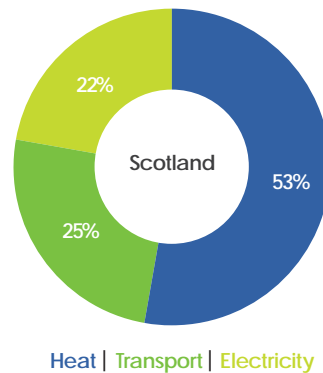
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⚡ ENERGY CONSUMPTION

37.	Electricity consumption represents 22% of Scotland's overall energy demand and use of transportation fuels 25%. The consumption of heat accounts for 53% of the energy consumed by Scotland's homes and businesses. Addressing this demand represents a key challenge for the future in balancing the needs of consumers with a lower carbon secure energy system.

38.	Scotland's heating requirements are supplied predominantly from natural gas at present. In 2015, an estimated 79% of homes used natural gas as their primary heating fuel.

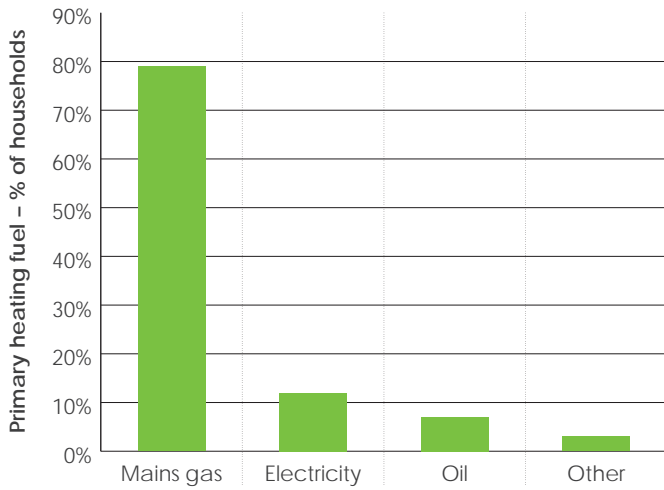### Diagram 5: Energy Consumption by Fuel Type

Fuel Type	Percentage
Petroleum Products	43.5%
Gas	32.5%
Electricity	17.9%
Bioenergy & Waste	4.2%
Coal	1.2%
Manufactured Fuels	0.6%

Source:	https://www.gov.uk/government/collections/total-final-energy-consumption-at-sub-national-level

Diagram 6: Energy demand in Scotland

Scotland
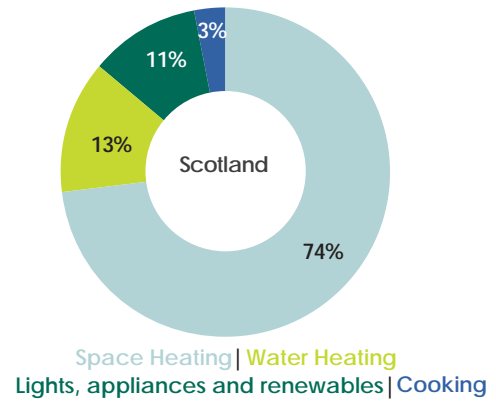
Heat 53% | Transport 25% | Electricity 22%

Source:	https://www.gov.uk/government/collections/total-final-energy-consumption-at-sub-national-level

Diagram 7: Primary heating fuels in Scotland

Diagram 8: Household energy use in Scotland

Space Heating | Water Heating
Lights, appliances and renewables | Cooking

39. Despite the widespread use of gas as a heating fuel, there remains a high proportion of households in Scotland with no access to the national gas network. According to the Scottish House Condition Survey, approximately 16% (nearly 400,000) of Scottish households are off the gas-grid, with two-thirds of those homes in rural areas. The increased dependence on electricity for heating is demonstrated in the differences in average electricity consumption between Scottish distribution zones, with a substantially higher consumption of electricity in the North of Scotland.

40. Scotland's heating requirement is even more marked at domestic level. Almost 90% of the energy requirement for Scotland's homes is for space and water heating.

41. Gas consumption, as a proxy for heat demand, has fallen considerably over the past decade. An average Scottish domestic consumer now consumes nearly a third less gas than a decade ago. Rising gas prices, improvements in energy efficiency measures and underlying economic conditions, which have depressed household disposable incomes in real terms, have all contributed to this trend of declining consumption.

Diagram 9: Average household gas consumption

Source: https://www.gov.uk/government/collections/sub-national-gas-consumption-data
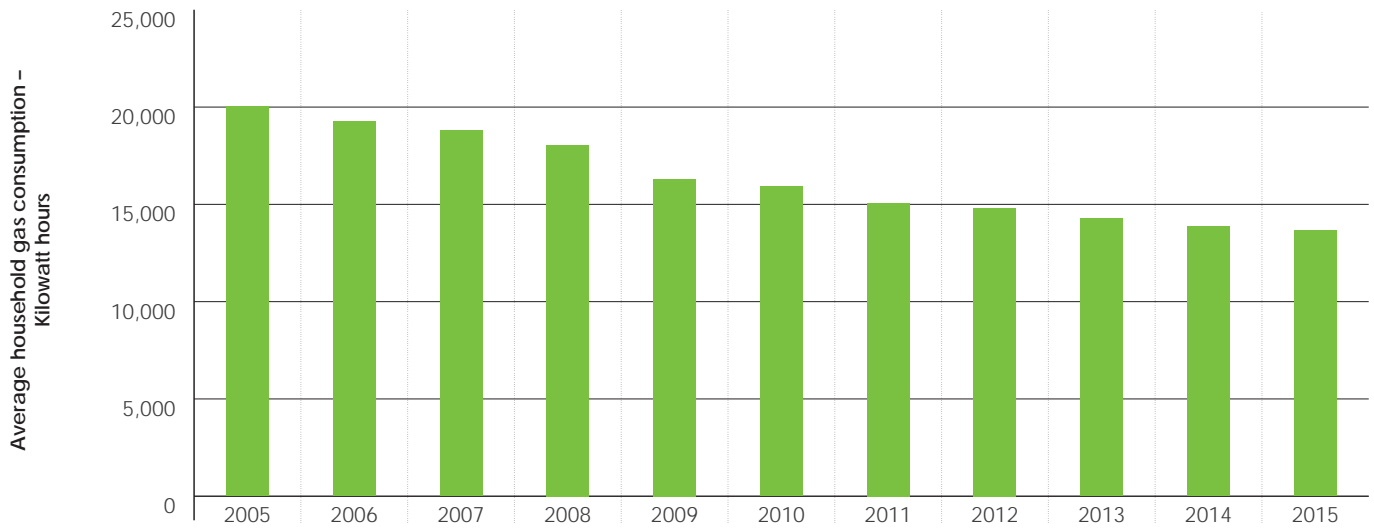
Diagram 10: Yearly Pattern of energy consumption
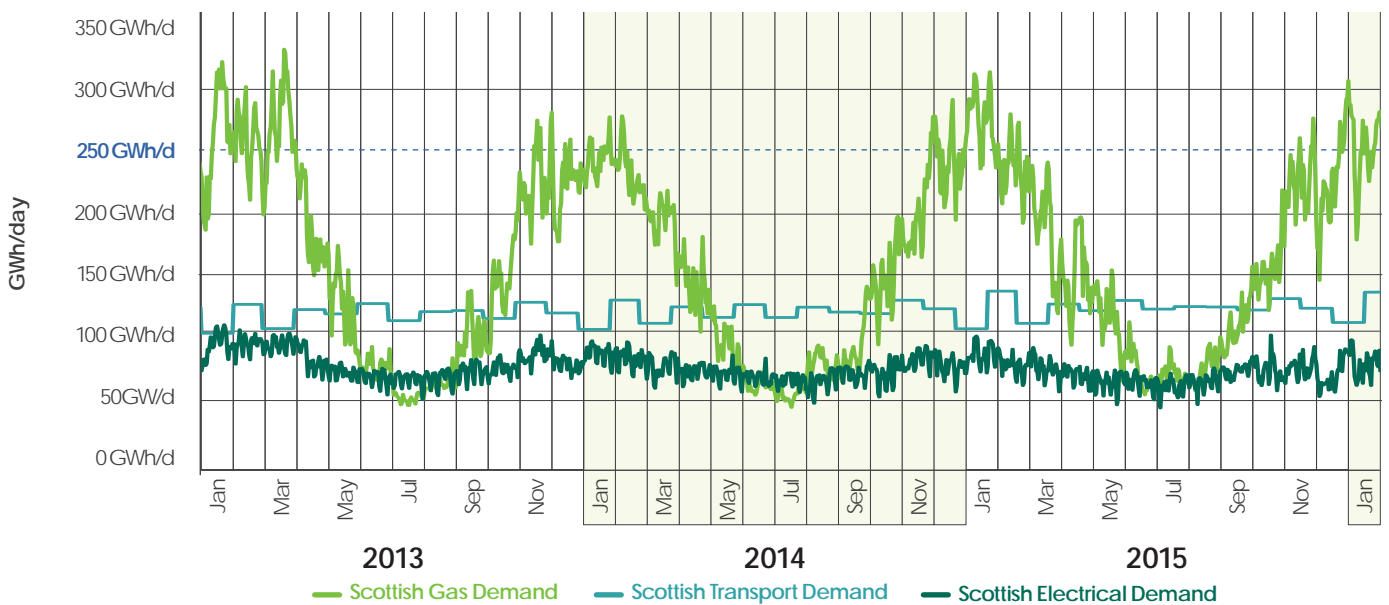
42. The pattern of our energy use over the year demonstrates the value of gas in managing the large swings in energy consumption, the seasons drive our energy use up in the winter. This pattern also demonstrates the potential value in storing energy, within days and seasons, to offset energy demand at peak times. Energy can be stored in different ways including as potential energy in pumped hydro storage facilities, as chemical energy such as batteries, biomass or hydrogen or as thermal energy in individual properties (such as a hot water tank or a battery) or as large-scale storage used with a heat network. The appropriate storage system will depend on factors including costs, geographic opportunities, how that energy needs to be used, and level of flexibility necessary.

43. The peaks and troughs in gas demand (both within a day and across the seasons) are far greater than the variations in electrical demand. They create a challenge for electricity generating assets and networks which, in the absence of storage, may be underutilised for long periods if electricity is used to meet heat and transport demands.
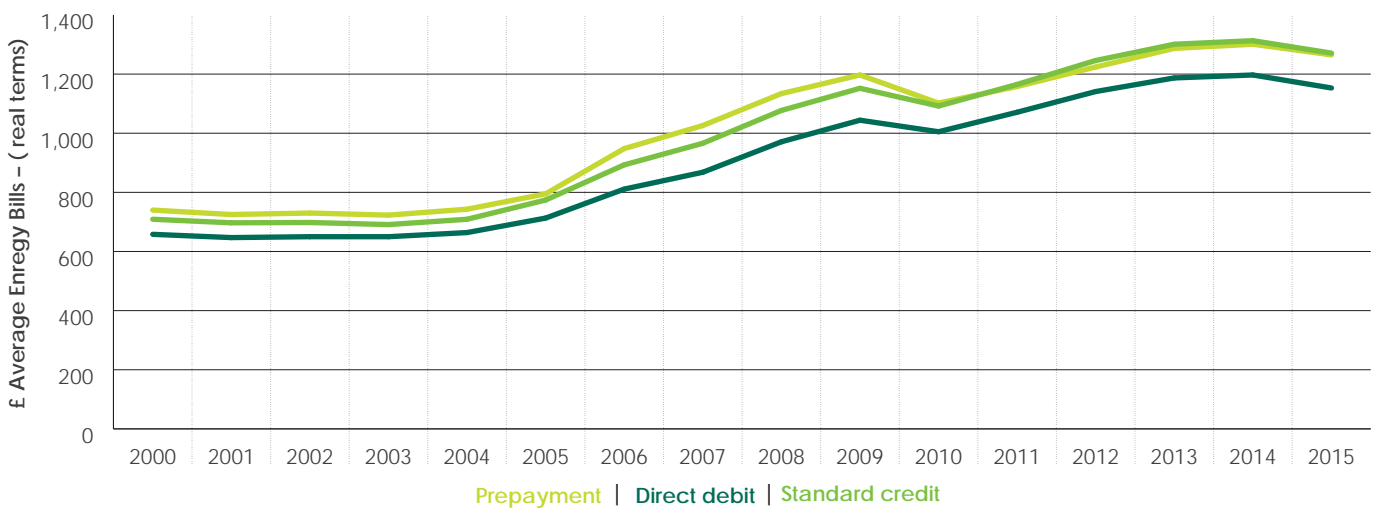
44

£ ENERGY PRICES

44. Average annual domestic gas and electricity bills in Scotland have increased by up to 114% and 50% respectively between 2004 and 2015. However, the cost that consumers face varies depending on the method used to make payment.

On average, electricity and gas consumers across Scotland using standard credit and pre-payment methods face approximately 10% higher bills than those using direct debit.

Diagram 11: Average annual domestic gas and electricity bills, Scotland, 2000-2015


Prepayment | Direct debit | Standard credit

Source: https://www.gov.uk/government/statistical-data-sets/annual-domestic-energy-price-statistics

45. The cost of a unit of gas is similar across Scotland and the rest of the GB energy market for domestic consumers, however the unit price of electricity differs considerably within Scotland. Consumers in the North of Scotland paid between 8 and 9% more per kilowatt hour of electricity, depending on payment type, than, on average, the rest of Great Britain.

46. However, when compared to domestic energy prices across Europe, the UK is below average for both gas and electricity (diagrams 12 and 13).

Diagram 12: Average domestic electricity prices for medium consumers in the EU15, January to June 2016

Source: https://www.gov.uk/government/statistical-data-sets/international-domestic-energy-prices
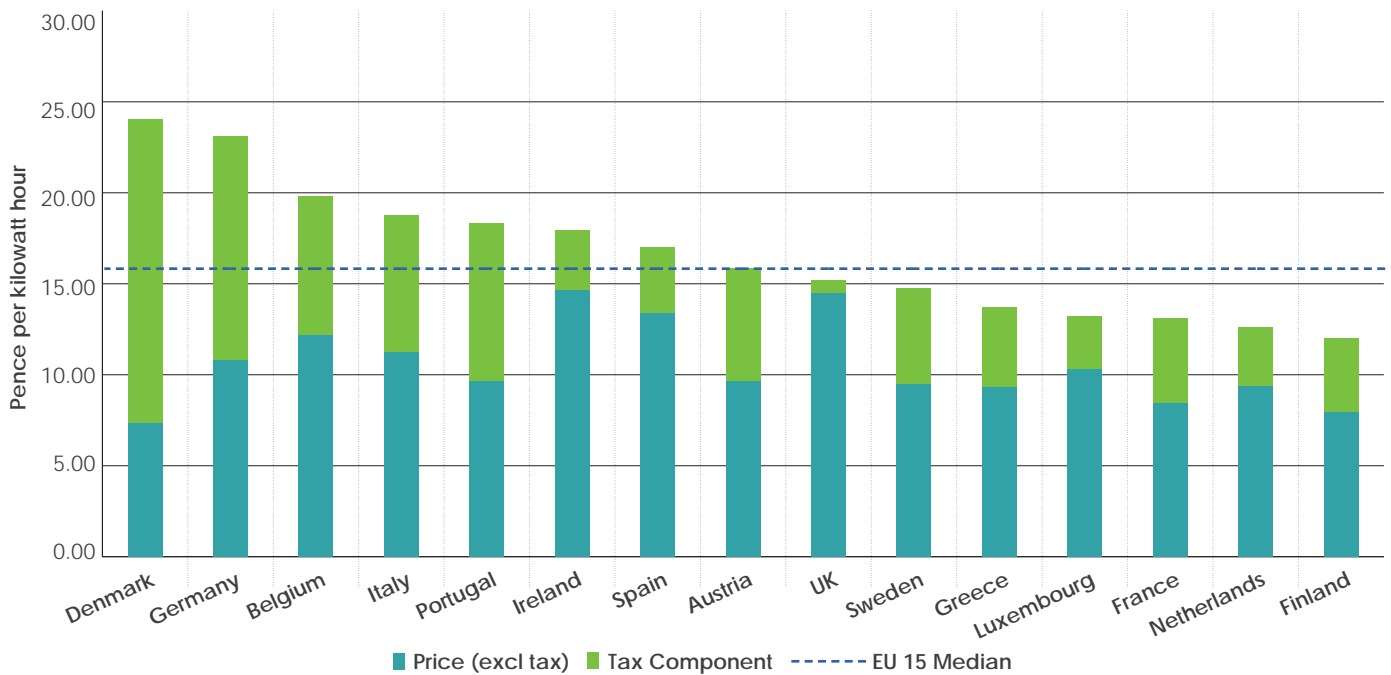
Diagram 13: Average domestic gas prices for medium consumers in the EU15, January to June 2016

Source: https://www.gov.uk/government/statistical-data-sets/international-domestic-energy-prices
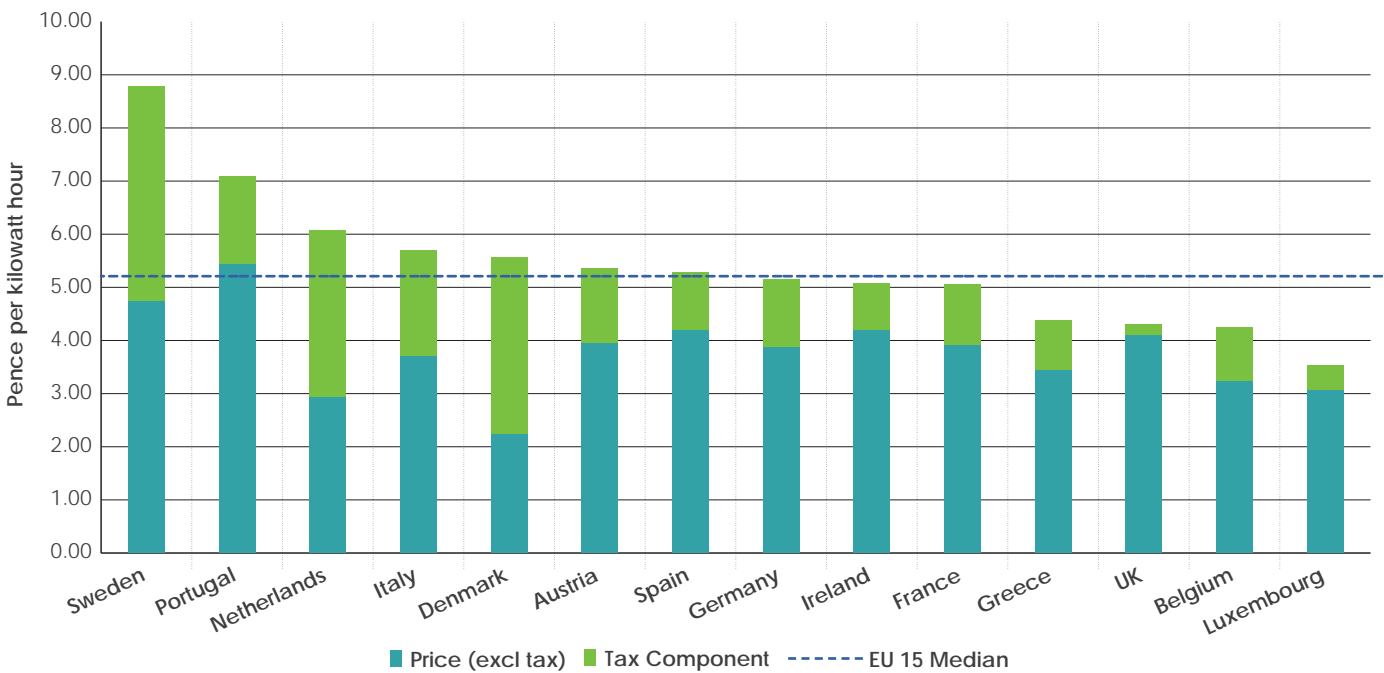
ENERGY EFFICIENCY

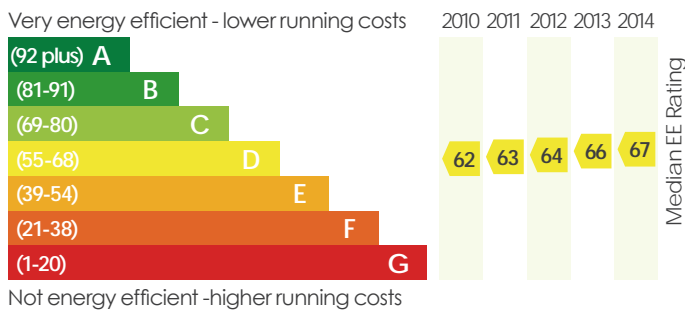47. The Scottish Government has allocated over £650 million since 2009 on a range of Fuel Poverty and Energy Efficiency programmes to help the most vulnerable in society heat their homes affordably. This investment, allied to new building standards, has contributed to a significant increase in energy efficiency: the Scottish House Condition Survey shows that just over two-fifths (42%) of homes in 2015 rated EPC band C or above, an increase of 74% since 2010. Scotland now has proportionately 40% more homes with a good EPC rating (C or above) than England.

Diagram 14: Average energy efficiency levels of households, Scotland, 2010-2015

Very energy efficient - lower running costs

(92 plus) A		
(81-91) B		
(69-80) C		
(55-68) D		
(39-54) E		
(21-38) F		
(1-20) G		

2010 2011 2012 2013 2014

62 63 64 66 67

Median EE Rating

Not energy efficient - higher running costs

Source: http://www.gov.scot/Topics/Statistics/SHCS

ECONOMIC IMPACT

48. The positive economic impact of the energy sector can be seen throughout Scotland, the UK and Europe.

- In 2015, oil and gas production was estimated to be worth £10 billion to the Scottish economy and supported an estimated 124,500 jobs across Scotland in 2016.
- Scotland is estimated to be the largest oil producer and second largest gas producer in the EU on an internationally comparable basis.
- Supply chain sales in the oil and gas sector reached £23 billion in 2014, with international activity accounting for over 53% of total sales.
- In 2014, the low carbon and renewable energy economy supported 43,500 jobs in Scotland. This accounts for 9.7% of the total UK employment in this sector (higher than population share).
- It also generated £10.7 billion in turnover, 12.9% of the total UK turnover in this sector.

49. The strength of our energy sector in Scotland can also be seen through the rate at which businesses are expanding into international markets and diversifying into low carbon and innovative technologies, with Scottish energy exports totalling £14 billion in 2014.

🌍 EXTERNAL TRENDS AND DEVELOPMENTS

50. At a critical point in the development of the energy system in Scotland, the future path will be determined by the response to a number of important trends and developments, in particular:

- UK Government policy;
- new powers for the Scottish Parliament; and
- membership of the European Union.

The role of UK Government policy

51. Recognising that much of Scotland's energy policy currently remains reserved, the Scottish Government will continue to work with the UK Government and the GB energy regulator (Ofgem) and System Operator (National Grid) to create an environment that encourages efficient investment in new, clean generation and sets an appropriate regulatory framework to maintain secure supplies and enhance system flexibility. The Scottish Government's priority is to ensure the market works for all consumers, and particularly those vulnerable to fuel poverty.

52. Working within the single GB Energy market, we have a common interest in sharing energy resources with our neighbours. Scotland offers safe and secure supplies of electricity and gas and can continue to assist the rest of the UK in meeting its legally-binding renewable energy targets.

53. In the last two years, the UK Government has made a number of decisions which have undermined the hitherto stable investment climate for energy – such as the decision to remove £1 billion worth of funding commitment to developing Carbon Capture and Storage facilities and a suite of announcements to axe support to key renewables technologies.

54. **It is now more important than ever that the Scottish Government sets its own vision for energy, with clear priorities and ambitions for future energy provision, articulating the opportunities for existing and emerging sectors within that system.**

55. A new UK Industrial Strategy and Emissions Reduction Plan will be published by the UK Government in the coming year. If the UK Government chooses a progressive approach, there remains a great opportunity to re-invigorate investment in the low carbon economy and signal clearly the UK's sincere commitment to tackling climate change.

An enhanced role for the Scottish Parliament

56. New devolved powers included in the Scotland Act 2016 will see the Scottish Government and Scottish Parliament take on a number of responsibilities that will have a bearing on the energy system, including:

- a consultative role for the Scottish Government in the design of renewable incentives;
- onshore oil and gas licensing powers;
- devolution of new powers over energy efficiency and fuel poverty such as the Energy Company Obligation (ECO);
- devolution of the Crown Estate in Scotland[4];
- parliamentary scrutiny over the Energy Regulator; and
- devolution of consumer advice and advocacy powers.

57. In implementing the final Scottish Energy Strategy, we will explore how the use of the full set of powers available to the Scottish Government can support the measures required to reshape the Scottish energy system.

Membership of the European Union

58. The Scottish Government has been a vocal supporter of the EU's efforts to integrate energy markets across Europe. The European Commission's latest energy package includes a host of proposals in line with the aims of this draft Energy Strategy, particularly around future renewables and energy efficiency targets, and supporting consumer participation in energy markets.

59. The European internal energy market is vital to delivering affordable energy and to driving decarbonisation and investment in renewables. EU legally-binding renewable energy and energy efficiency targets have played a defining role in stimulating the huge growth in renewable energy in Scotland, which has seen significant inward investment flows into Scotland. Internal market rules also ensure fair access for suppliers, set a framework for interconnection and provide protection for consumers. This contributes to lower energy costs, greater security of supply and the competitiveness of our businesses and the Scottish economy.

60. In December 2016, we published 'Scotland's Place in Europe'[5], a set of proposals designed to mitigate the risks for Scotland of being taken out of the EU. We believe that it is in the interests of both Scotland and the UK that the UK as a whole should remain within the European Single Market, through membership of the European Economic Area and active cooperation in other areas. In the event the UK Government adopts an alternative approach, Scotland's Place in Europe sets out a further, differentiated approach, which would allow Scotland to retain single market membership as part of the UK.

61. The final Energy Strategy, published later in 2017, will include an assessment of the latest position on these key areas and any significant but as yet unknown developments affecting Scotland's energy system.

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4 Devolution of the management of the Crown Estate in Scotland creates significant opportunities for Scotland, local communities and industry which we are keen to maximise. On 4th Jan 2017 the Scottish Government published the 'Consultation on the Long Term Management of the Crown Estate in Scotland' which seeks views on how the Crown Estate in Scotland should be managed in future and what reforms are needed.

5 http://www.gov.scot/Resource/0051/00512073.pdf

51

3. MEETING OUR ENERGY SUPPLY NEEDS
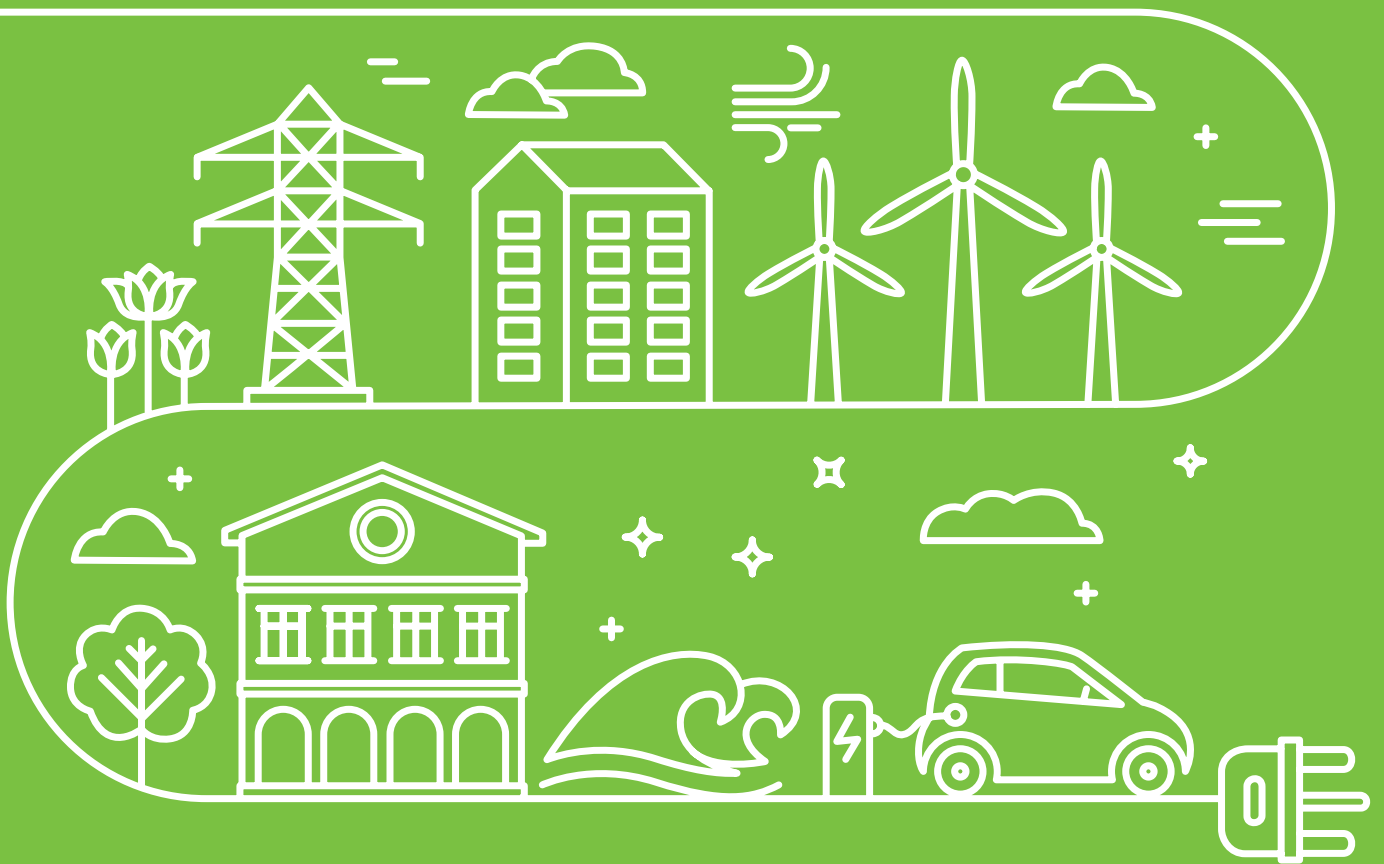
2050 VISION

- Scotland has achieved almost complete decarbonisation of the energy system – in line with domestic and international climate change targets – with the equivalent of half of all energy consumed delivered from renewable sources by 2030;
- Scotland is a world leader in renewable and low carbon technologies and services – and continues to offer technology solutions in oil and gas, and excellence in subsea engineering. This knowledge and expertise is exported internationally;
- Scotland's urban communities benefit extensively from low carbon heat networks;
- Carbon capture and storage is operational at large-scale and has played a crucial role in decarbonising Scotland's energy system and industrial processes;
- New forms of flexible generation and demand management services are widespread; and
- Shared ownership of renewables and of local energy systems maximise the benefits to Scotland's communities.

KEY FACTS

75% OF TOTAL ENERGY CONSUMPTION IN SCOTLAND IS SUPPLIED BY OIL AND GAS

79% OF PRIMARY HEATING IS FROM GAS

59.4% OF SCOTLAND'S ELECTRICITY CONSUMPTION IS MET BY RENEWABLES

LOCAL GENERATION OF ELECTRICITY AND HEAT HAS INCREASED BY 400% SINCE 2011 AND NOW ACCOUNTS FOR ALMOST 600 MW OF OPERATIONAL CAPACITY

TRANSFORMING THE ENERGY SYSTEM

62. The transformation of the energy system in Scotland, as part of the drive to tackle climate change, has the potential to bring new economic, environmental and social opportunities to individuals, businesses and communities. Modernising energy provision in this way will require careful management and substantial investment from both private and public sources.

63. Scotland is already an internationally-renowned centre of energy innovation and expertise across a wide range of technologies and services. We are well positioned to take advantage of future supply chain opportunities – diversifying into burgeoning areas of activity such as oil and gas decommissioning, offshore wind energy, energy system management and marine renewables, and capitalising on new emerging opportunities such as energy systems integration and low carbon heat.

64. The future energy mix in Scotland will be determined by factors including:

- the rate of innovation in energy technologies;
- the relative cost of producing energy across a range of technologies;
- energy demand (itself driven by innovation and changing lifestyles) and consumers' response to a more flexible energy system;
- global market conditions;
- regulatory framework (e.g. the grid charging regime, removal of barriers to more flexible generation and demand side measures, or retail market); and
- political decision making and support offered by government schemes.

65. The uncertainties of forecasting our energy transition means a flexible approach must be taken towards decarbonisation to help encourage a balanced combination of energy sources, adaptable to changing market conditions. This will enable Scotland's energy system to react and respond effectively to changes in supply and demand.

66. **This draft Energy Strategy does not, therefore, specify a single energy mix for 2050; but instead seeks to highlight the range of technologies and fuels that will supply our energy needs over the coming decades.** It focuses on the following five priorities:

- continuing to support the recovery of North Sea oil and gas as a highly regulated source of hydrocarbon fuels;
- supporting the demonstration and commercialisation of Carbon Capture and Storage and CO_2 Utilisation;
- exploring the role of new energy sources in Scotland's energy system;
- increasing renewable energy generation; and
- increasing the flexibility, efficiency, and resilience of the energy system as a whole.

67. We have drawn on a range of sources and analyses in setting these priorities. To complement the economic modelling which underpins the draft Climate Change Plan, the Scottish Government has consulted a range of energy specialists and considered analysis published by a number of research organisations, including the Committee on Climate Change, Energy Technologies Institute, International Energy Agency, Ofgem, and National Grid.

Non Domestic Rates

The Scottish Government recognises the important interaction between the energy system and the tax regime. The business rate regime plays an important role in commercial investment decisions. The Scottish Government's objective is to maintain a highly competitive business rates regime, including the following proposals for 2017-18:

- a reduction in the rates poundage;
- an expansion of rates relief under the Small Business Bonus Scheme; and
- limiting the application of the large business supplement to fewer properties.

Unlike other parts of the UK, there is a permanent exemption from rating valuation for micro-generation plant. We have also committed to expand the current rates relief relating to new-build and community-benefit renewable energy schemes in the context of the 2017 revaluation.

The 'Barclay Review' is an external review of business rates, established to explore how rates in the future might better reflect economic conditions and support investment and growth. It is due to conclude in summer 2017. A Scottish Government response will follow quickly.

CONTINUING TO SUPPORT THE RECOVERY OF NORTH SEA OIL AND GAS AS A HIGHLY-REGULATED SOURCE OF HYDROCARBON FUELS

68. A challenge for all global energy systems is the availability of cost-effective substitutes for hydrocarbons. Hydrocarbons remain embedded within all advanced economies and are used in the following ways:

- in energy systems – hydrocarbons are used in power generation, transportation, and space heating;
- in industry – oil and gas provide important feed-stocks for industrial and chemical processes; and
- in manufacturing – hydrocarbons are a raw material in many everyday products.

69. Despite efforts to reduce greenhouse gas emissions, it is likely that fossil fuel consumption will be prevalent for decades to come and, under some scenarios, global demand for oil and gas will continue to rise until the middle of this century[8]. The IPCC 5th Assessment Report states that even at very low concentration levels of CO_2, a significant fraction of global energy supply in 2050 may be provided by fossil fuels.

70. Over the past five decades, North Sea oil and gas production has established an industry that has generated over £330 billion in corporation tax and duties and currently supports over 330,000 jobs across the UK, of which 124,500 are estimated to be in Scotland. Oil and gas continues to meet around three quarters of our total energy needs in Scotland and is a significant strand of export-related economic activity in supplying hydrocarbons for non-producing nations in the EU and further afield.

71. At this stage in the transition, the Scottish Government remains committed to maintaining domestic oil and gas production and maximising economic recovery from the oil and gas fields in the North Sea and west of Shetland.

72. Production of oil and gas in the North Sea is a highly-regulated industry, with some of the most advanced and comparatively least polluting production methods in the world. In maintaining domestic production, our offshore oil and gas industry can contribute more to lowering net global emissions than under a scenario where Scotland becomes more dependent on imports. This is due to a number of possible imported crude oil sources having a higher carbon-intensity than Scottish production[9].

73. This approach also has wider economic benefits. As the UK is now a net importer of oil and gas, a balanced approach where we reduce our reliance on imported fossil fuels, where practical to do so, can help reduce exposure to cost and supply fluctuations; minimising our exposure to security of supply risks. This is supported by analysis under the UK's fifth carbon budget produced by the Committee on Climate Change[10].

74. Moreover, as part of a managed transition, the oil and gas industry should also seek to strengthen actions to reduce the carbon intensity of the global energy mix. This could include the production of new, lower carbon fuels, and the further exploration of new business models which increase the penetration of lower carbon technologies. Utilising knowledge and know-how from the oil and gas industry will be essential if cost effective renewable energy generation is to be achieved.

8 International Energy Agency's World Energy Outlook 2016, New Policies Scenario.

9 2011 HIS Cera Inc, 'Oil Sands, Greenhouse Gases and European Oil Supply': *Getting the Numbers Right.* Available at: https://cdn.ihs.com/ihs/cera/Oil-Sands-Greenhouse-Gases-and-European-Oil-Supply.pdf

10 'The Fifth Carbon Budget – the next step towards a low-carbon economy', Chapter 4. Available at: https://www.theccc.org.uk/publication/the-fifth-carbon-budget-the-next-step-towards-a-low-carbon-economy/

A positive contribution from the oil and gas sector

Ahead of the United Nations COP21 Summit in Paris, oil and gas companies representing more than 10% of global primary energy supply vowed to strengthen investments in natural gas, Carbon Capture and Storage and renewables. Investment and R&D from these companies could substantially improve the rate of technological development in low carbon technologies.

The expertise gained through 40 years' experience of operating in the North Sea, such as vital subsea skills, will prove invaluable for the engineering and innovation challenges posed by the low carbon transition.

Scotland's expanding offshore wind supply chain builds on established expertise and experience in oil and gas and significant investment in port and harbour infrastructure - such as Nigg Energy Park, test and demonstration facilities at Hunterston and Levenmouth - and support for inward investment and supply chain development.

In addition, the infrastructure that is in place from our hydrocarbon energy system provides a range of future opportunities. For example, many of the skills and supply chain requirements for future hydrogen infrastructure already exists in the oil and gas sector, with vast experience of producing, storing and transporting gases.

ACTIONS:

The Scottish Government will:

☐ continue to work with the Oil and Gas Authority (OGA), the UK Government and industry to avoid premature cessation of production and maximise economicw recovery of oil and gas through encouragement of innovation and investment, in line with Scotland's Oil and Gas Strategy, the OGA Corporate Plan and its Sector Strategies;

☐ with input from the Energy Jobs Task Force, provide continued ongoing support for the oil and gas industry as it adapts to the current economic challenges, ensuring that the sector can be competitive for decades to come;

☐ maximise opportunities for the transfer of skills and knowledge from the offshore oil and gas sector to support the development of manufacturing and low carbon industries - through the Energy Jobs Taskforce and the Energy Skills Action Groups and supported by the Transition Training Fund, and through the implementation of the Skills Investment Plan;

☐ support investment in the Oil and Gas Technology Centre, creating the conditions which help realise the ambition for Scotland to be the "go to" place for oil and gas technology solutions; and

☐ work with our enterprise agencies to implement the Decommissioning Action Plan, maximising the economic benefits from decommissioning of oil and gas assets for the Scottish supply chain - developing the infrastructure and capability to secure Scotland as an international decommissioning centre of excellence.

⬢ EXPLORING THE ROLE OF NEW ENERGY SOURCES

75. Advances in technology mean that new and innovative ways of using hydrocarbons are emerging. Some of these advances could have a transformative impact on the energy system and lead to lower net carbon emissions, such as:

- production of hydrogen as a low carbon energy carrier; in stationary power and Combined Heat and Power (CHP), in the gas main supply for heating, or to power fuel cells in cars, vans, buses or even marine vessels; and
- Liquid Natural Gas, Compressed Natural Gas and Liquid Petroleum Gas – in particular, biomass-derived versions of these – to join liquid biofuels as options for replacing fossil diesel and petrol as cleaner fuels in internal combustion engines.

76. Scotland's existing hydrocarbon industries will be well placed to capitalise on these new opportunities.

77. To support the emergence of new technologies and energy sources in a way that maximises their benefits to the economy and for consumers, and in an environmentally sound way, the Scottish Government will draw on the range of powers available to it, including the land use and marine planning systems (see box), energy consenting and licensing.

Planning

Land Use Planning

- The planning system plays an essential role in planning and delivering energy projects, through the development management process for projects from local scale to larger scale commercial schemes, and also development plan policies. The Scottish Government has published a consultation on the future of the Scottish Planning System. Responses are invited to the proposals by 4th April 2017. The Consultation will pave the way for a planning bill to be brought forward later in 2017.
- As part of an infrastructure first approach to development, land use planning will play a key role in helping to deliver new low carbon energy projects and infrastructure, informed by the strategic approaches set out in this Energy Strategy and as described by our consultation on Local Heat and Energy Efficiency Strategies.

Marine Planning

- The marine planning system supports the sustainable development of offshore renewable energy in Scotland's Seas. Published in March 2015, Scotland's National Marine Plan establishes the strategic framework and planning policies for managing the marine area around Scotland. Marine licensing and consenting decisions for offshore renewable energy projects are made in accordance with the Plan.
- Sectoral Marine Plans for Offshore Wind, Wave and Tidal Energy contain Scottish Government policies, including their spatial strategy, that steer commercial scale offshore renewable energy development. They contain the key strategic social, economic and environmental considerations for progressing offshore renewable energy.

78. In some cases, the Scottish Government may choose not to support particular technologies, on environmental or social grounds, or because of their potential negative impact on greenhouse gas emissions. Underground Coal Gasification (UCG) is an example of a technique the Scottish Government has chosen not to support, following a thorough assessment of the scientific evidence[11], and as set out to Parliament in October 2016, it is proposed that UCG will have no place in Scotland's energy mix[12].

79. In all cases, the Scottish Government is committed to examining the evidence and engaging with citizens of Scotland to gather their views and understand their needs and perspectives. Our approach to evaluating the potential impact of unconventional oil and gas is an example of this evidence-based and measured approach.

Unconventional oil and gas

- The Scottish Government has put in place a moratorium on proposed developments involving hydraulic fracturing or coal bed methane extraction in Scotland. No such developments will be permitted while the moratorium remains in place.
- The Scottish Government has also undertaken an extensive period of evidence-gathering, which has included analysing and assessing the potential economic, social, health and climate change impacts.
- Accompanying this draft Energy Strategy consultation will be a full public consultation on unconventional oil and gas (UOG). Individuals, communities, businesses and interest groups across Scotland will all have an opportunity to put their views across on the range of evidence available to Scottish Ministers.
- Once that consultation closes and the responses have been independently analysed, Ministers will consider the full range of evidence, and make a recommendation to Parliament on the future of unconventional oil and gas in Scotland and invite Members of the Scottish Parliament to vote on the issue.

80. The Scottish Government also recognises the importance of understanding how new energy sources and industries can be developed or introduced in a way that promotes economic opportunity, while minimising any significant additional long-term pressure on meeting Scotland's climate change targets, or other sectors.

81. This draft Energy Strategy proposes to explore the role for hydrogen in the energy system in Scotland and seeks views on our approach to doing so.

82. At point of use hydrogen is a zero emissions fuel, and by 2050 could be a major component of the UK's energy system.

83. The versatility and flexibility of hydrogen gas and hydrogen fuel cells offers the potential to provide a range of services to the energy system and to integrate low carbon solutions across the heat, power and transport sectors.

84. Fuel cells could enable the more efficient use of natural gas, through combined heat and power (CHP) applications at a range of scales. Fuel cells using natural gas can be modified to operate using hydrogen at a later date.

85. The Scottish Government has supported a number of projects which demonstrate how hydrogen produced from renewable sources via electrolysis can be produced, stored, and used when required for local energy and transport. There is significant potential for these projects to be replicated or scaled-up in the future. Hydrogen may have the potential to deliver the lowest cost and least disruptive solution for the decarbonisation of heat.

11 Independent Report on Underground Coal Gasification, October 2016 - http://www.gov.scot/ Publications/2016/10/2704
12 http://news.gov.scot/speeches-and-briefings/paul-wheelhouse-statement-on-underground-coal-gasification.

Hydrogen as a means to decarbonise heat

- The draft Climate Change Plan pathway includes a moderate amount of hydrogen gas in the gas network from the mid-2020s. This is consistent with some test sites in the UK and Europe.
- However, there may be areas of the gas network where hydrogen could fuel 100% of the gas demand – as is proposed by the H21 Leeds City Gate project[13]. In Scotland, the Scottish Government is supportive of SGN's interest in the practical demonstration of blending hydrogen with natural gas in the network. In the longer term, these trials could be extended to carry 100% pure hydrogen, as part of a carefully planned conversion to parts of the gas network.
- While more analysis will be required, there is some evidence to suggest that hydrogen can offer significant cost savings for customers compared to alternative low carbon heat sources such as electricity, or district heating. A recent KPMG report also found it more practical and more acceptable to customers[14].
- Hydrogen gas at scale will most likely require natural gas (methane) as the source feedstock and as such in order to be low carbon, carbon capture and storage facilities will be a necessary system requirement. **Scotland is therefore uniquely placed to support an emerging hydrogen economy**.
- These proposals, at national scale, have the potential to substantially reduce the total system cost of decarbonisation, but they will require further innovation in technology, high-volume hydrogen production at an acceptable cost, and a carefully managed hydrogen 'switch over' – as with the switch to natural gas in the 1970s.
- Coordinated activity by the public and private sectors over the next five to ten years will be essential to achieve any large-scale roll out of hydrogen and fuel cell technologies from the mid-2020s.

✔ ACTIONS:

The Scottish Government will:

- ☐ following publication of the final Climate Change Plan, review the role for new technologies and energy sources as transitional fuels for use in transport, heat and industry, with practical demonstrations where necessary;
- ☐ consider how planning can support the future energy system, through policies within the current and future iterations of Scottish Planning Policy and the National Planning Framework; and
- ☐ collaborate with UK government, local government, industry and academia on the UK hydrogen routemap, establishing the strategic basis for hydrogen in the energy system, whilst continuing to fund innovative projects involving hydrogen.

CO₂ SUPPORTING THE DEMONSTRATION AND COMMERCIALISATION OF CARBON CAPTURE AND STORAGE AND CO2 UTILISTAION

86. Scotland's North Seas are the largest carbon storage resource in Europe. Coupled with our existing oil and gas capabilities, ready supply chain, and existing pipeline and platform infrastructure, this means that Scotland is currently the best-placed country in Europe to realise Carbon Capture and Storage (CCS) on a commercial scale.

87. The near-term demonstration of small scale projects leading to the medium and large-scale deployment of CCS, along with the development of CO_2 Utilisation[15] (CCU) applications, will be critical for the cost-effective decarbonisation of heat, power and industry.

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13 http://www.northerngasnetworks.co.uk/wp-content/uploads/2016/07/H21-Report-Interactive-PDF-July-2016.pdf
14 http://www.energynetworks.org/assets/files/gas/futures/KPMG%20Future%20of%20Gas%20Main%20report%20plus%20appendices%20FINAL.pdf

15 CCU is a process whereby CO_2 from point sources is recovered and converted into commercially valuable products, including bio-oils, chemicals, fertilisers and fuels.

88. The United Nations Inter-Governmental Panel on Climate Change (IPCC), the International Energy Agency (IEA) and the UK Committee on Climate Change all identify CCS as an essential lowest cost climate mitigation technology. The IPCC's fifth assessment report states that without CCS it would cost 138% more, globally, to achieve a scenario keeping the rise in global average temperatures to below 2 Degree Celsius.

89. The development of CCS would protect Scottish businesses against future carbon price rises and secure economic benefit in the supply chain. This knowledge and expertise could be transferred to international markets, with Scotland playing a leading role in global decarbonisation efforts.

90. Scotland has the existing pipeline infrastructure and CO_2 storage capacity to support the development and deployment of commercial scale CCS. If managed and planned effectively, Scotland could have strategically located CCS decarbonisation systems across the country. This could be achieved by, for example:

- ensuring Scotland's competitive advantage in CCS is maintained by protecting our legacy oil and gas infrastructure and the extensive CO_2 storage potential in our depleted oil and gas fields for repurposing for use in a future CCS system;
- supporting the transition efforts of Scottish oil and gas firms and domestic supply chain companies to deploy their expertise and skills to develop future CCS industrial opportunities; and
- building on Scotland's world-renowned academic and research reputation, including the links between the Scottish Government and European projects proposed in the North Sea Basin in Norway and the Netherlands, and applying the learning from the collaborative CCS research work being developed in Guangdong Provence in China.

91. The Scottish Government welcomes the report on CCS in the UK by the parliamentary advisory group led by Lord Oxburgh showing that CCS technology can be delivered at just £85/MWh over a 15-year period; a lower cost and faster delivery than nuclear power and comparing favourably to many renewable energy options[16]. However, efforts to realise the commercialisation of CCS in Scotland have suffered a set-back as a result of the UK Government's decision to remove £1 billion worth of funding to a ground breaking project. There is now an urgent need for strong inter-governmental collaboration and the Scottish Government will continue to press the UK Government to offer a renewed CCS strategy to mobilise CCS activity and secure a demonstrator project in Scotland.

✔ **ACTIONS:**

The Scottish Government will:

☐ work with industry to assess opportunities for small scale CCS demonstration and CO_2 utilisation projects in Scotland across a range of sources including the application of CCS within industrial processes;

☐ explore the opportunity to combine bioenergy production and CCS – with a view to maximising the benefits for the energy system as a whole;

☐ maintain pressure on the UK Government to align its CCS strategy with Scottish energy priorities;

☐ support the commercialisation of CCS through securing a demonstrator project, building on the conclusions of the Scottish and UK Government funded research into CCS; and

☐ work with industry and the Oil and Gas Authority to ensure the retention of existing critical infrastructure, including key oil and gas pipelines suitable for use with CCS.

16 Lowest Cost Decarbonisation for the UK: The Critical Role of CCS – available at: http://www.ccsassociation.org/news-and-events/reports-and-publications/parliamentary-advisory-group-on-ccs-report/

INCREASING THE GENERATION OF RENEWABLE AND LOW CARBON ENERGY

92. The Scottish Government is committed to supporting the continued growth of the renewable energy sector in Scotland, as a key driver of economic growth and an essential feature of the future energy system.

93. Scotland's renewable energy success has been built on a high level of ambition and leadership by the Scottish Government, together with, until 2015, a relatively stable UK-wide support regime.

94. Since December 2012, the Scottish Government has provided significant capital finance to support renewables through our Renewable Energy Investment Fund (REIF) operated by Scottish Enterprise. To date the fund has focused on marine energy and community renewables – filling a market gap.

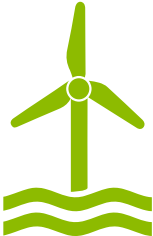### Renewable Energy Investment Fund

- Over the past four years, REIF has given vital support to most of the major projects deployed in the community energy sector in Scotland. Scottish Enterprise – working in strong partnership with the CARES contractor Local Energy Scotland, and with other partners, including Social Investment Scotland and commercial lenders – has helped to facilitate deals and streamline diligence costs of community energy projects. REIF has been vital to the development of the marine energy sector in Scotland, and has been recognised in Europe in this regard as a template for investment.
- To date, £59 million has been invested through REIF to support over 30 projects, levering in more than twice this amount in private investment.
- REIF has been responsive to market conditions and policy priorities. For instance, it has been instrumental in driving forward shared ownership of energy projects – supporting pioneering projects such as Fintry to make the most of their investment opportunity, and underpinning the Stewart Energy partnership project in Lesmahagow.
- Future support will be designed accordingly to align with priorities emerging from the finalised Energy Strategy and to reflect market need.

95. Our success is demonstrated by the most recent statistics showing that 59.4% of Scotland's electricity consumption came from renewable sources in 2015 – meaning that the 2015 interim target of 50% has now been exceeded, and installed capacity continues to grow - towards the existing 2020 target of 100%.

96. Scotland's natural renewable resources have an important role to play in contributing beyond the borders of Scotland, and can contribute cost effectively to decarbonising the wider-GB and European energy system. Scottish renewable electricity is estimated to have displaced over 13 million tonnes of CO_2 across the GB system in 2015.

97. The Scottish Government Heat Policy Statement 2015 reiterated an ambition for 11% of heat demand to be met by renewable sources by 2020. Significant progress has been made towards this target with renewable heat representing 5.3% to 5.6% of non-electrical heat demand. And renewables in transport now represents 3.2% of road transport fuels in the UK, towards the 2020 target of 10%.

98. These sectors each contribute to the existing renewable energy target to deliver 30% of energy from renewable sources by 2020. Indicative figures show we are halfway toward this target, with 15% of energy from renewables in 2014.

99 Scotland's climate change targets require the complete decarbonisation of the electricity sector, with a significant contribution from renewables. Modelling indicates that between 11 and 17 Gigawatts of installed renewable capacity will be required by 2030. Likewise in heat and transport, significant progress in decarbonising energy supply will be required with a considerable role for renewable sources. The Scottish Government's new ambition to deliver 50% of all energy needs from renewable sources is designed to provide unambiguous support for the further growth of the Scottish renewables industry.

2030 Renewable Target

- This draft Energy Strategy seeks views on the implementation of a new 2030 'all-energy' renewables target – to deliver the equivalent of 50% of Scotland's heat, transport and electricity consumption from renewable sources.
- We have made good progress to date, with the equivalent of 15.2% of Scotland's consumption estimated to have been met from renewable sources in 2014, more than double the share in 2009.
- Scottish Government analysis underpinning the draft Climate Change Plan shows that by 2030, the equivalent of between 44% and 50% of Scotland's demand for energy for heat, transport and electricity could be generated by renewable sources.
- While this level of renewables will be challenging, a 50% target represents an ambitious but achievable goal. Setting this target demonstrates the Scottish Government's commitment to a renewable future – and to the continued growth of a successful renewable energy sector in Scotland.
- Our Energy Strategy must remain flexible to advances in technologies and wider market developments, however. **Alongside the 50% renewables target, we also invite views on how we might set an alternative target or targets to encourage the full range of low and zero carbon energy technologies to achieve the most cost-effective pathway towards our long-term emissions reduction targets.**

100. Renewable technologies can offer significant economic opportunities, enabling new or emerging sectors to develop products and services for use in Scotland and around the world, and provide more stable costs for industry and households.

101. Greater provision of renewable energy offers the opportunity for Scotland to capitalise upon our established expertise. Scotland already outperforms other parts of the UK low carbon sector – generating 18% of all UK turnover at £5.6 billion in 2014.

102. Scottish companies and research institutions are now at the forefront of innovation in renewable technologies and services. Financial support from the Scottish Government and its enterprise agencies have established Scotland as a world leading location for research, development and commercialisation of a range of renewable energy technologies and services.

103. Scotland has particular expertise offshore. Our support for floating offshore wind best-demonstrates the Scottish Government's continued commitment to future renewable technologies. Recently, our support for other low carbon technologies as a partner for renewables, especially new forms of energy storage, has helped to demonstrate new business models. With the appropriate market support, these types of project can offer better services to the grid and better outcomes to consumers.

104. For at least two decades, Scotland has cultivated a particular specialism in marine renewable technologies, which offer so much potential to the Scottish economy – and to rural communities throughout the world. With Scottish Government support, the MeyGen project in the Pentland Firth is the world's first utility scale tidal array. The Offshore Renewable Energy Catapult is also based here, building expertise in offshore wind and marine technologies. And the longer term potential of wave energy is supported through the establishment of Wave Energy Scotland - a bold new initiative to support wave energy technology development.

105. As other countries look to further develop this sector there will be opportunities for Scottish companies to export their skills and expertise.

106. But renewable technologies remain expensive options in most cases when compared with traditional fuels. The Scottish Government's priority is therefore to see the cost of renewable energy provision continue to reduce - resulting in lower costs to the consumer.

107. A recent study by the Department for Business, Energy and Industrial Strategy (BEIS) showed the potential for renewable technologies to reduce costs, becoming more cost-effective generation sources than conventional gas fired power stations into the 2020s. The lifetime cost of onshore wind is estimated to fall to £63 per megawatt hour generated, below the comparable cost from gas in the same timeframe. Offshore wind costs are also estimated to reduce, becoming competitive with gas by 2030. This analysis demonstrates the potential for onshore wind, offshore wind and solar PV to produce electricity at a lower cost per megawatt hour than the proposed Hinkley C development. To unlock these cost reductions, it is imperative that deployment continues, utilising the rich pipeline of renewable projects in Scotland.

Technology	Opportunity
Onshore wind	• Current and consented onshore wind capacity is enough to power the equivalent of every household in Scotland twice over. • Onshore wind currently provides lowest cost renewable electricity at scale. • Now a mature renewable technology – marking an important point in the development of the industry. **To support the future development of onshore wind in Scotland, the Scottish Government will:** • **consult widely with stakeholders on a range of factors influencing the next phase of onshore wind, as set out in the accompanying Onshore Wind Policy Statement;** • **work with industry to meet the challenge of delivering onshore wind without subsidy, including the scope for use of public sector and corporate Power Purchase Agreements;** • **under the current consultation and beyond, we will continue to work with industry and island councils to make the case for remote island wind being a distinct technology; and** • **continue to work with the Ministry of Defence, air navigation service providers and developers to support a more proportionate and affordable approach to mitigating impacts from onshore and offshore wind development on aviation radar.**
Offshore wind	• There is huge optimism for further development of offshore wind in Scotland. Scottish waters remain open for business and the pipeline of development continues to grow • 25% of Europe's offshore wind resource can be found around Scotland's coastline. • Offshore wind is a large-scale technology with the potential to play a pivotal role in our energy system over the coming decades. • Innovation in offshore wind, and especially in technologies like floating wind, which offer scope for development in deeper water, will play a significant role in positioning Scotland as a world centre for energy innovation. **To support the future development of offshore wind in Scotland, the Scottish Government will:** • **continue to support innovation and cost-reduction, through our Enterprise Agencies and partners such as the Carbon Trust and Offshore Renewable Energy Catapult; and until closure, deliver support for offshore wind under the Renewables Obligation (Scotland).**
Hydro power	• Hydro power in Scotland is a mature and reliable source of electricity – accounting for 27% of all renewable electricity generated in 2015. • 88% of total UK hydro capacity is in Scotland - enough to power the equivalent of over 1,000,000 homes. • Hydro power (including pumped hydro storage - covered elsewhere) will play an important role as part of a balanced energy portfolio and we are keen to work constructively with the UK Government and the industry to ensure hydropower's sustainable future. **The Scottish Government will:** • **reinforce its commitment to encourage and promote hydro power within the limits of our powers and continue to create a supportive environment for small scale and community hydro power in Scotland.**

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Technology	Opportunity
Marine renewables	• Scotland has a third of UK's tidal stream resources and two thirds of its wave resources. • The potential exists to generate more electricity than we currently need from the waters around the Scottish coast. • Scotland is home to the world's leading wave and tidal test centre (The European Marine Energy Centre); the world's largest planned tidal stream array (MeyGen); and the world's largest tidal turbine (Scotrenewables). • In summer 2016, Scottish firm Nova Innovation successfully deployed a second tidal turbine in the Bluemull Sound and began exporting power to the Shetland grid. **To support the future development of marine energy in Scotland, the Scottish Government will:** o **work with the sector to demonstrate to the public and private investment community the strong industrial potential of marine energy and to press for continued UK Government support;** o **continue to offer support through REIF and other financial mechanisms; and** o **support innovation and cost-reduction through the continued funding of Wave Energy Scotland.**
Solar PV	• Solar Photovoltaic (Solar PV) capacity in Scotland is estimated to be enough to power the equivalent of approximately 50,000 homes. • Favourable levels of solar radiation combined with temperate climate is conducive to further solar PV investment – especially in Eastern Scotland and the Central Belt. • Combining storage with wind and solar assets presents the most valuable solution for the energy system as a whole, allowing demand to be managed locally. **To support the future development of Solar energy in Scotland, the Scottish Government will:** o **consider the on-going role for solar (and other renewable technologies) as part of a further review of energy standards within building regulations; and** o **ensure that Good Practice guidance for shared ownership developments fully recognises the opportunities for solar.**

Technology	Opportunity
Bioenergy	• Biomass provides almost all (90%) of existing renewable heat in Scotland – sustaining rural employment. • Biomethane is currently used for heat but could also provide a renewable feedstock for electricity production, which when combined with CCS, can result in negative emissions. • Biofuels in transport, when from sustainable sources can deliver significant carbon savings when compared to fossil fuels. **To support the future development of Bioenergy in Scotland, the Scottish Government will:** o **commit to the development of a whole-system Bioenergy action plan, following the publication of the final Climate Change Plan.**

Renewable Electricity

108. The main technologies that generate renewable electricity are onshore and offshore wind, wave and tidal, hydro-power, solar photovoltaic panels and bioenergy – a summary of these technologies and the Scottish Government's proposed actions are set out in the Box above.

109. In the immediate future, the renewable energy sector faces investment challenges. Current uncertainties over the support for renewables under UK revenue support schemes – including remote island wind, offshore wind (both floating and fixed) and wave and tidal under the Contracts for Difference scheme – are now jeopardising the future deployment of renewable electricity technologies in Scotland. The Scottish Government calls on the UK Government to provide greater long-term certainty over these support mechanisms – and for greater clarity on the future of the Levy Control Framework, under which the costs of renewables support is currently managed.

110. Onshore wind is now a mature renewable electricity generation sector and is now the lowest cost renewable electricity technology. But new projects now face a highly uncertain route to market. With the right regulatory framework, new onshore wind projects can be economically viable without subsidy – sometimes known as a 'subsidy-free' or 'merchant' wind.

111. **This draft Energy Strategy sets a challenge to the renewables industry to make Scotland the first area in the UK to host commercial onshore wind development without subsidy. The accompanying draft onshore wind policy statement sets out further detail and invites views on this position.**

112. As well as the 'route to market' concerns, it is important to consider a range of factors influencing the next phase of onshore wind, including our approach to repowering wind farms that are reaching the end of their 25 year planning permission period.

113. With appropriate regulatory support, offshore wind development has a very bright future in Scotland. The offshore resource in Scottish waters is amongst the best in the world. The cost of offshore wind continues to fall and our understanding of its potential impacts on sensitive marine wildlife is improving, which will support the long term sustainable development of the technology. There are several fixed offshore wind projects in development and now a substantial pipeline of innovative floating wind projects, offering a glimpse of the enormous potential for this technology. Scotland is at the forefront of offshore renewables generation with world-leading innovative projects in offshore wind, including the European Offshore Wind Deployment Centre, Beatrice offshore wind farm, Aberdeen Bay and Hywind Scotland, the world's largest floating offshore wind farm.

114. Solar and hydro-electric schemes – both small and large-scale – have considerable potential to support the decarbonisation of Scotland's electricity supply. Particularly when combined with storage they present the most valuable solution for the energy system as a whole, allowing demand to be managed locally. Recent cuts by UK Ministers to financial instruments supporting solar and conventional hydro-electricity projects and the absence of a price stabilisation mechanism to support investment in further pumped hydro storage capacity are hampering investment in these vital technologies.

115. As discussed in Chapter 5, the Scottish Government's approach to renewable energy must also continue to drive innovation in new local energy system models, and increase the scope to work in partnership with host communities and local government to enhance the uptake of shared ownership with local communities.

116. Our ambitions in these areas are framed by two new targets:

- 1 GW of community and locally-owned energy by 2020, and 2 GW by 2030; and
- at least half of newly consented renewable energy projects will have an element of shared ownership by 2020.

117. These targets mark a sustained commitment to ensuring that the benefits of renewable energy projects are shared with communities. The Scottish Government is now exploring the scope for the Scottish Government to offer increased Power Purchase Agreement (PPA) provision under a 'sleeve arrangement' within the national collaborative contract (which allows public bodies to choose green electricity). The tender for a replacement of the current contract will start in late 2017. More information on this proposal can be found in the accompanying Onshore Wind Policy Statement. If the contract is expanded, the Scottish Government would seek to ensure that community energy or small scale projects (not just onshore wind) are in a position to submit commercially viable bids to sleeve their energy through the main contractor. This might require some aggregation of the proposition. Support to help community and small scale projects develop their tendering abilities would be a necessary part of this proposal.

Renewable Heat

118. Renewable heat is predominantly generated by woody biomass and biogas, often converted to biomethane, solar thermal and heat pumps. In the future, deep geothermal may also feature as a renewable heat source.

119. Our renewable heat sector is growing – and in combination with innovative business models, new technologies and new heat infrastructure, Scotland has the potential to deliver considerable carbon savings by addressing heat needs at the local scale.

120. Just as with renewable electricity, however, it will be necessary to provide regulatory and stable financial support to stimulate the required levels of private investment in decarbonised heat solutions. The Scottish Government has consistently championed the need for support of this kind, whilst supporting efforts to identify opportunities for heat efficiency, heat recovery, and renewable sources.

121. The continuation of the UK Renewable Heat Incentive (RHI) scheme (or an equivalent) beyond 2021 will be critical to encouraging investment in and development of renewable heat technologies to the benefit of householders and businesses across Scotland. The RHI should not exclude key renewable heat technologies – such as solar thermal – and must continue to use the most up to date information to determine support levels, taking into account Scottish circumstances.

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17 The United Kingdom (UK) National Comprehensive Assessment of District Heating and Cooling (2015), required by the European Union (EU) Energy Efficiency Directive 2012, estimated that 4TWh p.a. (7%) of Scotland's total heat demand in 2025 could be met by district heating and cooling on a socially cost-effective basis. https://www.gov.uk/government/publications/the-national-comprehensive-assessment-of-the-potential-for-combined-heat-and-power-and-district-heating-and-cooling-in-the-uk

122. Some low carbon heating solutions, such as heat pumps, rely on electricity, which will increase demand not only on the electricity generation sector, but place additional pressure on the distribution network.

123. As a means of distributing heat to homes, businesses and public buildings, district heating allows the efficient use of a range of heat sources, creating a heat network which can supply towns or whole cities. While not appropriate for all areas[17], in the right locations district heating can result in lower carbon emissions, more affordable heating and supply long-term investment in infrastructure which can be adapted to meet changing energy demands.

124. Half of the total estimated capacity of district heating schemes in Scotland are currently supplied by renewable sources.

125. However, there are challenges in delivering the benefits of district heating, including:

- reducing the cost of capital for large-scale infrastructure. With a smaller customer base than the gas network – the cost of new schemes and extensions cannot be socialised across all customers, which increases the risk and cost of capital;
- consumer protection – district heating is currently a largely unregulated market and a Special Working Group was established to identify the necessary steps for regulation of the market; and
- district heating is only applicable in certain areas – being most economical where heat density is high enough.

126. The accompanying District Heating Regulations consultation paper considers the role that regulation could play in developing District Heating in Scotland, as part of SEEP.

Glasgow Housing Association (GHA), in partnership with WSP Parson Brinckerhoff and Scottish Gas, have been grant awarded £2.5 million through the Scottish Government's Local Energy Challenge Fund to implement a new, innovative district heating scheme in South Glasgow. The project will demonstrate the **UK's largest air source heat pump**, which has been manufactured by Glasgow-based Star Renewable Energy, and is focused on improving quality of life for residents by engaging users with their energy usage and tackling fuel poverty. The system will incorporate 350 homes in total, the majority of which are owned and managed by the housing association.

Using electricity from onsite solar photovoltaic panels, it will use thermal storage, a 10,000 litre hot water store, to balance the load profile with greater efficiency. The system controls will also allow electricity grid management services by advancing power consumption in periods of grid surplus and demand reduction in periods of grid deficit.

Renewable Fuels for Transport

127. In the transport sector, renewable energy is supplied by biofuels (gaseous and liquid), which, when from sustainable sources can deliver significant carbon savings when compared to fossil fuels.

128. There are, however, a range of issues that mean they are not a panacea to transport sector decarbonisation:

- quantities of sustainable biomass for biofuel manufacture are limited and would be unable to meet current demand for road fuel production;
- some bioenergy crops can cause wider social and economic problems – if they compete for land for food production, for example;
- the emissions savings relating to biofuels depend heavily on the type of material used to generate the fuel; and
- current biofuels can only be used in small amounts and remain compatible with existing engine designs and despite developments in new generation biofuels, only incremental additional use is expected in the medium term.

Thermal storage

Thermal storage provides a way of managing the peaks and troughs of heat demand over a period of time. Heat stores may store heat in the form of hot water, for example in large insulated tanks, above or below ground or in phase change materials, often taking up less space than hot water. However technologies can range significantly in scale: from hot water tanks and electric storage heaters in homes providing hours of storage to large-scale underground tanks (or old mines) holding hundreds of thousands of m^3 of water providing inter-seasonal storage for a district heating network.

Greater thermal storage capacity has the potential to reduce the cost of delivering our heat needs. Thermal storage can be used alongside heat recovery, solar thermal panels, heat pumps, biomass boilers, and combined heat and power (CHP). It can be part of a wider approach to managing our energy system, including the electricity network.

Thermal storage can utilise intermittent energy sources such as wind and wave generation, and potentially bringing down the cost of decarbonisation through greater efficiency. Thermal storage can enable CHP plant to run at maximum capacity, reducing the number of hours run at part load which enhances overall efficiency. It can provide 'grid balancing services' by enabling electricity generation equipment such as CHP to be switched on and off at short notice without negatively affecting the heat supply that users need.

The CIBSE Code of Practice for Heat Networks provides guidance on thermal storage in heat networks and the cost of financing such stores is supported through Scottish Government Programmes such as the District Heating Loan fund and innovative applications for individual homes have been supported through the Local Energy Challenge Fund.

129. These issues have resulted in an expectation that effective biofuel use for transport decarbonisation in the overall transport sector is unlikely to reach above 10% for some time.

130. The main mechanism for the promotion of biofuel use, the Renewable Transport Fuel Obligation (RTFO), is set by UK Department for Transport. A consultation on proposed amendments to the RTFO is open until 22 January 2017[18]. The proposals include a range of measures to reduce the impact of transport by increasing the supply of biofuels, making them more sustainable, and realising the industrial opportunities from developing advanced biofuels. They include:

- establishing long-term targets to 2030 to provide industry certainty;
- a growing sub target for the contribution of advanced 'development fuels';
- setting a sustainable contribution from crop derived fuels and encouraging fuels from waste;
- extending rewards under the obligation to include aviation fuels, hydrogen and renewable fuels of non-biological origin; and
- targeting those transport sectors that are difficult to decarbonise such as aviation and freight.

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18 https://www.gov.uk/government/consultations/renewable-transport-fuel-obligation-proposed-changes-for-2017

ACTIONS:

The Scottish Government will:

- [ ] call on the UK Government to provide a stable, supportive regulatory regime to provide certainty to renewable investors and developers - giving appropriate support for investment in renewable energy, establishing a route to market for onshore wind, and clarifying the future for the Levy Control Framework

- [ ] seek to address grid constraints in Scotland for distributed power generation at local, regional and national level, through engaging with the National Infrastructure Commission and working with local authorities, Ofgem, National Grid and Distribution Network Operators;

- [ ] put in place measures which ensure that at least half of newly consented renewable energy projects will have an element of shared ownership by 2020;

- [ ] support the future development of a wide range of renewable technologies through addressing current and future challenges, including market and wider policy barriers (see box on pages 41-43);

- [ ] building on the successes of REIF, design future support to meet energy priorities;

- [ ] following the final Climate Change Plan, begin work on a Bioenergy Action Plan to enhance our understanding of the opportunities of bioenergy for Scotland's energy system;

- [ ] continue to offer financial support and advice to domestic and business customers of all sizes to uptake renewable heat technologies and asks that the RHI continue to cover a wide range of technologies including, biomass, heat pumps and solar thermal renewables to allow all potential Scottish investors and customers to obtain the benefits of the RHI scheme;

- [ ] work closely with the UK Government to ensure adequate incentives are put in place to continue to encourage the uptake of emerging renewable heat technologies post 2021 when the current RHI will end;

- [ ] carefully consider with local government the role for regulation in the development of District Heat Networks on a large scale, and for the development of Local Heat and Energy Efficiency Strategies as part of Scotland's Energy Efficiency Programme; and

- [ ] following the current consultation, work with the UK Government to ensure the RTFO provides an important long term contribution to the decarbonisation of transport.

INCREASING THE FLEXIBILITY, EFFICIENCY AND RESILIENCE OF THE ENERGY SYSTEM AS A WHOLE

131. While efforts to reduce demand and achieve efficiencies in Scotland's use of electricity will have an impact on the amount of electricity we consume, the potential for large scale electrification of heat and transport will place increased demand on the renewable electricity sector and the networks that support it.

132. The draft Climate Change Plan pathway shows that electricity demand could increase by approximately 30% in Scotland as a result of further electrification. To accommodate this increase, flexibility and efficiency of the electricity system will be of increasing importance as well as the resilient supply of electricity throughout Scotland.

133. Scotland has been at the forefront in experiencing and meeting network challenges that are a result of decarbonisation and decentralisation. In recent decades we have connected some of our best renewable energy resources located in places remote from our main population centres. This has been achieved through considerable investment in our transmission and distribution network assets. Over the period 2013-21 at least £7 billion will be invested in Scotland's electricity transmission networks alone.

134. Continued network investment is required to harness Scotland's remaining renewable resource potential and meet future challenges and deliver opportunities. This is especially true of the Scottish islands. The further development of the transmission network to connect the Northern and Western Isles of Scotland could release some of the best and untapped renewable resources in Europe.

135. There is also great potential for investment in a range of smart, flexible and grid-friendly technologies that can provide a range of benefits to the energy system in Scotland. These technologies can maximise our renewable energy potential, use existing assets more fully, balance energy supply and demand, and enhance the efficiency of the energy system. This is closely linked to our ambitions for new local energy system models. Emerging evidence suggests that flexibility measures, alongside an increased penetration of renewables, is the basis for a future "lowest cost" system[19].

136. Innovation and development works in Scotland have demonstrated that these technologies can work to allow bottlenecked parts of the energy system to be managed in a more strategic way, for example:

• Scottish Power Energy Networks' Accelerating Renewable Connections (ARC) project used smart technologies to improve access to the distribution network and facilitate generation around network constraints at both distribution and transmission voltages. The £8.4 million trial was funded by Ofgem's Low Carbon Network Fund (now the Network Innovation Competition); and
• Orkney is home to what was the UK's first smart grid, enabling renewable generation to be connected to Orkney's distribution network at a considerably lower cost than conventional network management. A new Active Network Management approach has been devised to make better use of the existing network by instructing generators to control their output to match the available network capacity.

137. As well as new flexibility mechanisms and battery storage, pumped hydro storage (PHS) is a mature and highly flexible technology, and, as one of the few large scale means of storing energy, could play an even greater role in our future energy system. Pumped hydro storage currently provides 24 GWh of aggregate storage capacity in Scotland, a range of ancillary services to the grid and is highly complementary to renewables investment, such as onshore wind.

138. In Scotland, Scottish Power is proposing an expansion of its existing Cruachan plant, whilst SSE is proposing their 600MW project at Coire Glas and conversion of its existing Sloy Hydro power station to PHS, both which have been consented by the Scottish Government. 2020 Renewables with Buccleuch are developing plans for a 400MW PHS at Glenmuckloch surface coal mine which was recently consented by the Scottish Government and the ILI Group are proposing three 400MW PHS stations in Scotland.

Scotland's islands

- Many of Scotland's island communities are already successfully demonstrating complex energy solutions: energy innovation is being driven by their isolation from mainland energy and supply networks, and the availability of some of the most powerful renewable energy resources in Europe.
- Orkney's role as a 'living laboratory' has great advantages in terms of identifying problems and solutions to energy challenges from which other parts of Scotland can learn:
  o Orkney is home to what was the UK's first smart grid, enabling renewable generation to be connected to Orkney's distribution network at a considerably lower cost than conventional network connection; and
  o Orkney's 'Surf and Turf' and 'BIG HIT' projects demonstrate a fully integrated energy model where hydrogen is produced using electricity from tidal and onshore wind turbines, stored in a fuel cell, and used to provide low carbon heat, power and transport. The projects will benefit the community through providing employment and training as well as reduced harbour electricity costs and increased revenue.

- However, despite these opportunities, our island communities face higher fuel costs and often have harder-to-treat housing and more extreme weather conditions, meaning that fuel poverty rates on the Islands are some of the highest in Scotland.
- Moreover, the lack of interconnection with mainland electricity networks acts as a barrier for renewable developments when competing for market support with projects across mainland Britain.
- The Scottish Government has long argued for a separate Contracts for Difference allocation process for remote island wind and has worked in partnership with UK Government and Island Councils to form the Scottish Island Renewables Delivery Forum – an intergovernmental working group set up to address the barriers to the deployment of island wind and marine technologies.
- The Forum funded research that found that, while island wind could capture some of Europe's best wind resources providing benefits up to £725 million for Island economies from 2015 to 2040 as a result of construction and operation of renewables generation, the projects face unique costs that obstruct deployment under existing support mechanisms.
- The recent announcement made by the UK Government to consult on the treatment of non-mainland GB onshore wind projects has jeopardised financial investments made by developers in good faith and undermines Scotland's renewables potential.

19 https://www.e3g.org/library/plugging-the-energy-gap

139. The Scottish Government endorses the recommendations of the Pumped Storage Working Group which was established to work with government and key stakeholders to better understand the opportunities and barriers to deploying new pumped hydro storage capacity in the UK. This group recently commissioned an independent report that highlighted the value of PHS to the grid[20].

140. Enhanced flexibility and network expansion can be complemented by increased connection with other electricity markets and networks. When energy resources and assets compete fairly, increased connection can allow for their more efficient use between countries.

141. In 2017, the UK Government and Ofgem will design a routemap for flexibility and smart energy systems in order to facilitate greater flexibility in the energy market. The Scottish Government intends to participate fully in this process.

Balanced electricity mix

142. The Scottish Government supprts a balanced mix of electricity supply. As well as renewable technologies, in the absence of adequate storage capacity, thermal electricity generation is required to provide important base-load capacity and support the resilience of the electricity system.

143. At the moment, there are not sufficient incentives in the market to build new, efficient thermal generation in Scotland. A number of market and regulatory changes will be required – most of which are reserved to the UK Government – in order to deliver the resilient, low carbon electricity mix in Scotland envisaged in this strategy.

144. The Scottish Government takes the view that important strategic and regional factors merit much stronger consideration in future system design and planning as part of the transition to a low-carbon future energy system. These include the location of existing infrastructure and sites designated for energy production, existing transmission infrastructure, sources of large-scale industrial emissions and proximity to pipeline and storage networks.

145. The current transmission charging regime, for example, has a particularly detrimental effect. The North-South gradient of location charges actively discourages the rebuilding of thermal plant in Scotland where new thermal assets have an important role to play in contributing towards system operability, resilience and restoration. This is a priority concern for us and we eagerly await the publication of National Grid's Northern Security Assessment.

146. Looking ahead to 2050, this Energy Strategy must consider a future after the current generation of nuclear electricity plants in Scotland. The Scottish Government's policy is that these plants should not be replaced with new nuclear generation, under current technologies.

147. **To ensure Scotland can continue to benefit from reliable, flexible generation capacity in the future, this draft Energy Strategy invites views on the future of Scotland's decommissioned thermal generation sites.**

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20 The Benefits of Pumped Storage Hydro in the UK: https://www.scottishrenewables.com/publications/benefits-pumped-storage-hydro-uk/

ACTIONS:

The Scottish Government will:

- [ ] work in collaboration with BEIS and Ofgem in developing the Smart Energy Plan for the UK: seeking a fair treatment for storage and flexibility mechanisms, including pumped hydro storage (PHS);

- [ ] reiterate the proposal for the UK Government to implement a 'cap and floor' regime to provide a more appropriate regime for PHS and work with key stakeholders to realise the opportunities and overcome the barriers to deploying new PHS capacity in Scotland;

- [ ] support innovation and demonstration of new forms of storage – including support for The Power Networks Demonstration Centre (PNDC) – a unique world-class facility designed to accelerate the adoption of new, 'smart' technologies within advanced power grids – and work under the Energy Technology Partnership; and

- [ ] work with industry, academia, local authorities and environmental groups to consider proposals for re-powering existing large-scale electricity generating sites – recognising their potential strategic role in future system design and planning as part of the transition to a low carbon energy system.

Consultation questions

- What are your views on the priorities presented in this chapter for energy supply over the coming decades? In answering, please consider whether the priorities are the right ones for delivering our vision.
- What are your views on the actions for Scottish Government set out in this chapter regarding **energy supply**? In answering, please consider whether the actions are both necessary and sufficient for delivering our vision.
- What are your views on the proposed target to supply the equivalent of **50% of all Scotland's energy consumption from renewable sources by 2030**. In answering, please consider the ambition and feasibility of such a target.
- What are your views on the development of an appropriate target to encourage the full range of **low and zero carbon energy technologies?**
- What ideas do you have about how the onshore wind industry can achieve the viable commercial development of **onshore wind** in Scotland without subsidy?
- What are your views on the potential future of **Scotland's decommissioned thermal generation sites?**
- What ideas do you have about the role of **hydrogen** in Scotland's energy mix and the development of hydrogen production in Scotland?

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4. TRANSFORMING SCOTLAND'S ENERGY USE

🔭 2050 VISION

- Scotland's domestic and non-domestic buildings have undergone a low carbon transformation – substantially reducing greenhouse gas emissions and delivering a host of economic, social, health and regeneration benefits.
- Scotland has an energy market that delivers fair outcomes for all consumers – particularly those on low incomes and at risk of fuel poverty.
- Scotland has successfully managed a widespread shift to a low carbon transport system – by 2032 over 40% of all new cars sold each year are Ultra Low Emission Vehicles.
- Scotland has achieved a significant improvement in the efficient use of energy – with our manufacturing and industrial sector delivering enhanced competitiveness and improved energy efficiency.

ℹ️ KEY FACTS

THE AMOUNT OF ENERGY WE USE IS FALLING – 15.2% REDUCTION BETWEEN 2005-07 AND 2014

53% OF SCOTLAND'S ENERGY IS USED TO PROVIDE HEAT TO BUILDINGS AND INDUSTRY

22% OF SCOTLAND'S ENERGY IS USED TO PROVIDE ELECTRICITY TO BUILDINGS AND INDUSTRY

25% OF SCOTLAND'S ENERGY IS USED IN TRANSPORT

🌿 TRANSFORMING SCOTLAND'S ENERGY USE

148. The consumption of energy in Scotland is predominately in heating (53%), transport (25%) and electricity (22%). However, due to a number of factors, the way we use energy in Scotland has changed over the past decade, with final energy demand now around 15.2% lower (Diagram 15).

149. As we have demonstrated success in meeting our existing energy efficiency target, the draft Energy Strategy consultation provides the opportunity to seek views on a new, more stretching energy efficiency target in line with the European Commission's proposed 30% target for 2030 (see Box on page 56).

150. This changing profile creates opportunities for individuals, businesses and communities across Scotland. The realisation of these opportunities is critical if Scotland is to meet its climate change targets in the most affordable way and deliver wider social benefits including tackling fuel poverty.

Diagram 15: Final Energy demand reduction, Scotland, 2005-07 to 2014

Source: https://www.gov.uk/government/collections/total-final-energy-consumption-at-sub-national-level
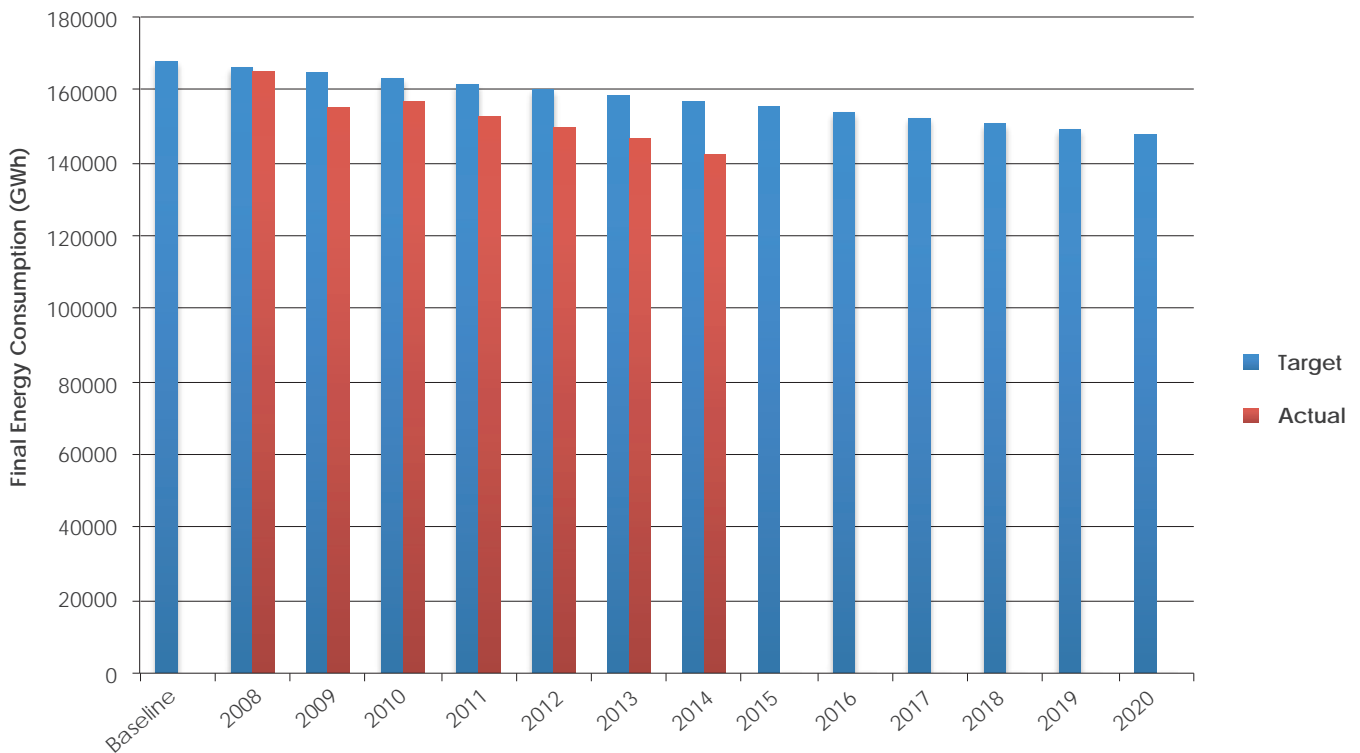
151.   The Scottish Government is focused on four priority areas in the short to medium-term:

• addressing the need to reduce demand and increase energy efficiency through the development of Scotland's Energy Efficiency Programme;
• helping energy consumers to manage their bills, harnessing smart technology in the home and supporting new business models in the retail energy market;
• supporting the introduction of viable, lower carbon alternatives across all modes of transport; and
• delivering enhanced competitiveness and improved energy efficiency in Scotland's manufacturing and industrial sectors.

Setting a 2030 energy efficiency target

The European Commission's Winter Package proposes an EU-wide 2030 energy efficiency target of 30%. The Scottish Government proposes setting a new 2030 energy efficiency target, in doing so we will seek to deliver the same level of ambition for Scotland – setting a new, ambitious pathway for how efficiently energy is used.

The Scottish Government Energy Efficiency Action Plan (2010) set a target to reduce energy consumption from a 2005-2007 baseline by 12% by 2020. In 2014, final energy consumption was 15.2% lower than baseline, achieving the required level of consumption earlier than envisioned.

ENERGY CONSUMPTION TARGET
12%
reduction in total final energy consumption by 2020

In 2014, final energy consumption was
15.2%
lower than baseline 2005-2007

Any new energy efficiency target for Scotland, while challenging, should be achievable and consistent with the Climate Change Plan. It is also imperative to be able to monitor progress against the target in a transparent way.

Given the integrated nature of energy systems, we are keen to ensure that the Scottish target is consistent with ambition across the EU energy system, and **we would like to seek views on whether we should set a new 2030 energy efficiency and how best to reflect the EU's ambition to implement an EU-wide 30% energy efficiency improvement by 2030.**

Although our previous target was based on final energy consumption, we are considering whether it is more appropriate to set a new target that captures changes in the intensity of our energy use which takes account of the effect of, for example, economic cycles, energy prices and weather patterns on our energy consumption patterns[21].

ADDRESSING THE NEED TO REDUCE DEMAND AND INCREASE ENERGY EFFICIENCY THROUGH THE DEVELOPMENT OF SCOTLAND'S ENERGY EFFICIENCY PROGRAMME

152. In June 2015, the Scottish Government designated energy efficiency as a National Infrastructure Priority. The cornerstone of our approach will be Scotland's Energy Efficiency Programme (SEEP).

153. The 2016 Programme for Government confirmed multi-year funding to support this 15 to 20 year programme and to a minimum of £0.5 billion for SEEP over the four years from 2017/18.

154. Our vision is that by 2050, through SEEP, we will have transformed the energy efficiency and heating of our buildings so that, where technically feasible and practical, buildings are near zero carbon. This will make our homes, shops, offices, schools and hospitals warmer and easier to heat, and by reducing energy demand, we can help tackle fuel poverty, help businesses improve their energy productivity and competitiveness and release savings in the public sector.

155. Scotland's Energy Efficiency Programme (SEEP) has the potential to deliver multiple benefits, including:

• creation of a substantial Scottish market and supply chain for energy efficiency services and technologies, supporting an estimated 4,000 jobs per annum across Scotland once full operational;
• measurable health and early years improvements through people living in warmer homes; and
• regeneration of communities through upgraded building stock.

21. The 'Energy in Scotland 2016' publication uses the non-domestic sector as an example of one method for measuring this.

156. SEEP will radically improve the energy efficiency of Scotland's homes and buildings in the commercial, public and industrial sectors[22]. The programme is further enhanced by the devolution of new powers over energy efficiency and fuel poverty, such as the Energy Company Obligation (ECO). Over time, SEEP will also increase adoption of low carbon heating solutions.

157. The Scottish Government, and its partners in local government, already manage a range of delivery programmes to support building owners and tenants to improve the energy efficiency and decarbonise the heat supply of their buildings. Some of these programmes, such as Warmer Homes Scotland, operate on a national basis, whilst others, such as Home Energy Efficiency Programme: Area-Based Schemes (HEEPS:ABS), are supported by national funding, but designed and delivered locally with our partners in local government. SEEP will build on the success of our existing programmes, whilst looking to improve the design and delivery in conjunction with stakeholders where possible.

158. The Programme is characterised by three key phases:

- a **design stage** – including the setting of formal targets for the Programme through the Climate Change Plan and Energy Strategy – which is expected to run through to early 2018;
- a **phased development stage** in which the key elements of the Programme are developed and deployed over time to create the overall programme structure which is expected to run through until 2021/22; and
- **full deployment stage** of the Programme which would be subject to regular review, evaluation and refinement.

159. A crucial next step for SEEP will be to consult on energy efficiency standards for homes in the private rented sector. The programme will also consider phased regulation and standards for existing buildings. Financial incentives which secure private sector investment will be considered as a route to securing the scale of change required. This will be complemented by new heat regulations to support the development of heat networks. An initial consultation on the design of SEEP and a more detailed consultation on heat regulation accompany this draft Energy Strategy.

✔ **ACTIONS:**

The Scottish Government will:

☐ make significant investment and employ targeted regulation to make Scotland's buildings near zero carbon by 2050, in a way that is socially and economically sustainable and supports Scotland's long-term inclusive growth;

☐ consult upon district heating regulations and local heat and energy efficiency strategies;

☐ consult upon the minimum standards of energy efficiency in private rented sector housing;

☐ review the Assessment of Energy Performance of Non-domestic Buildings (Scotland) Regulations 2016, with the intention of further regulations from 2020 to improve the performance of existing non-domestic buildings; and

☐ continue to provide funding and support streams to drive domestic, commercial and public sector energy efficiency retrofit.

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22. SEEP Pilot projects are already being funded by the Scottish Government in 11 local authorities, looking at integrated programmes to improve the energy performance of residential, commercial and public buildings, together with investments to decarbonise the heat supply.

HELPING ENERGY CONSUMERS TO MANAGE THEIR BILLS, HARNESSING SMART TECHNOLOGY IN THE HOME AND SUPPORTING NEW BUSINESS MODELS IN THE RETAIL ENERGY MARKET

160. The Scottish Government is committed to ensuring all consumers pay a fair price for energy. A summit with utility companies in December 2016 agreed actions that can be taken in partnership with power companies, regulators, and local government to deliver more rapid progress in this area.

161. Although the existing market provides scope for households to save money on their energy bill by switching, a low level of consumer engagement in the market still persists. This may be due to higher levels of customer loyalty to former regional suppliers, although this would not explain why so few customers are switching to best value tariffs with their existing supplier. Consumers that are engaged in the market are typically higher income earners, with access to both a mains gas supply and with Internet access for comparison shopping, and the ability to pay by Direct Debit.

162. Smart systems and new technologies – such as Smart Meters and digitally controlled home heating devices and thermostats – can help address this. In particular, information from Smart Meters could be used to provide tailored energy efficiency solutions and advice. In conjunction with Smart Meters, future innovations in tariffs could also allow consumers to react to changes in prices in real time.

163. Such new technologies and innovative tariffs provide scope for targeted action to empower the most vulnerable consumer groups, and potentially help tackle fuel poverty. However, this will only be optimised with the installation of the next generation of meters, which are better placed to facilitate flexibility in payment options.

164. The Scottish Government is also supportive of the introduction of new retail market participants and innovation in non-traditional business models for energy retail markets, which have the potential to reduce costs for consumers and communities. These include local energy supply companies, not-for-profit models, renewable energy only suppliers, and suppliers for social housing.

165. Examples of such models include:

- **Our Power:** a community benefit society established by Scottish social housing providers, with the aim of reducing heat and fuel costs by passing benefits from the energy sector to our communities; and
- the **Tower Power project in Edinburgh**: by aggregating electricity use from a whole tower block in Dumbiedykes, the residents will be able to purchase their energy as an industrial load – securing cheaper rates. A community company is being set up to run the project, in the interest of the local residents.

166. The Scottish Government supports further tariff and innovation, but will seek to promote a market that works equally well for all Scottish energy consumers. In such a dynamic environment market regulation needs to adapt to complement the market while ensuring consumers are effectively protected. The energy regulator, Ofgem, is currently undertaking a widespread review of its consumer regulation framework, to rely more on principles in the way it regulates the retail energy market[23].The Scottish Government will closely monitor these developments over the coming year.

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23. https://www.ofgem.gov.uk/publications-and-updates/upcoming-consultation-future-retail-market-regulation-policy-consultation-broad-principles

✔ **ACTIONS:**

The Scottish Government will:

☐ engage with UK Government, Ofgem and consumer groups to secure effective regulation of the retail energy market;

☐ support the development of robust new business models that offer reduced costs to energy consumers, through existing support mechanisms;

☐ work collaboratively with energy suppliers to explore ways of helping low income households with their energy bills;

☐ explore opportunities to achieve synergies between energy efficiency programmes and the Smart Meter roll out; and

☐ support Home Energy Scotland to improve consumers' understanding of their consumption patterns and help reduce energy bills, to enhance the consumer experience of Smart Meter roll out.

SUPPORTING THE INTRODUCTION OF VIABLE, LOWER CARBON ALTERNATIVES ACROSS ALL MODES OF TRANSPORT

167. Transport is estimated to account for 25% of Scotland's total energy use. The split of energy used to transport people and goods on the roads is around 60:40 respectively.

168. As set out in the draft Climate Change Plan, by 2035 we envisage a significant decarbonisation of road transport, with emissions reduced by 5 $MtCO_2e$ or more compared to today. Air quality in urban areas will have noticeably improved; and our population will be enjoying the social, health and economic benefits from these improved transport systems.

169. Encouraging people to change their travel behaviours to switch away from cars to active travel and public transport options, as well as greater use of vehicle sharing mechanisms (e.g. car clubs and lift-sharing) and journey replacement with video/tele-conferencing, will begin to reduce emissions for these journeys. However, these measures alone will not bring about the emission reductions prescribed by the Climate Change (Scotland) Act 2009.

170. The reduction in transport emissions and associated energy demand will also require increased efficiency of petrol and diesel vehicles and widespread adoption of low emissions car and van technologies.

171. New car and van efficiency limits are set by the EU and the current set of targets are set up to 2020-21. With the EU and UK, the Scottish Government will negotiate stretching emission standards for new cars (and vans) beyond 2020 (2021), and negotiate an emission standard for Heavy Goods Vehicles from 2025. In addition, by 2032 the proportion of ultra-low emission new cars and vans registered in Scotland annually is expected to reach or exceed 40% by 2032.

172. The proposed increase of Ultra Low Emissions Vehicles (ULEVs), such as electric cars and vans, in the market will place an increased demand on electricity supply and has the potential to put a strain on local distribution grids. Research funded by the energy regulator Ofgem, My Electric Avenue[24], demonstrated that demand side response solutions such as smart charging, can help to ease this strain cost-effectively.

173. Transport Scotland and Urban Foresight published an 'EVs & Energy Systems' report in 2016[25] which concluded that large numbers of EVs across Scotland will offer an invaluable resource to support 'whole system' energy solutions, providing significant and distributed energy storage capacity, able to absorb intermittent loads from renewable generation, help integrate more micro-generation, increase energy efficiency and potentially be a source of grid power input when required.

24. http://myelectricavenue.info/
25. http://urbanforesight.org/wp-content/uploads/2017/07/Energy_systems_working_paper_4.0.pdf

✓ ACTIONS:

The Scottish Government will:

☐ fund active travel infrastructure and behaviour change programmes at record levels until at least 2021;

☐ refresh 'Switched On Scotland – A Roadmap to Widespread Adoption of Plug-in Vehicles' by Spring 2017;

☐ with the EU and UK Government, negotiate stretching emission standards for new cars (and vans) beyond 2020 (2021);

☐ with the UK Government, negotiate vehicle excise duty differentials between ultra low emission vehicles (ULEVs) and conventional vehicles support and encourage the take up of ULEVs;

☐ enhance the capacity of the electric vehicle charging network (ChargePlace Scotland);

☐ provide interest-free loans through the Energy Saving Trust to enable the purchase of EVs by both consumers and businesses until at least March 2020;

☐ with local authorities, review licensing regulations and consider introducing incentives to promote the uptake of ULEVs in the taxi and private hire sector, with loan funding for vehicle purchase until at least March 2020; and

☐ promote the benefits of EVs to individuals and fleet operators and increase awareness and confidence in the viability of EVs as an alternative to petrol and diesel vehicles.

🏭 DELIVERING ENHANCED COMPETITIVENESS AND IMPROVED ENERGY EFFICIENCY IN SCOTLAND'S MANUFACTURING AND INDUSTRIAL SECTORS

174. Scotland's industrial sector accounts for over half of Scotland's exports and total business research and development expenditure. The sector also sustains a significant number of high-value jobs across Scotland.

175. Industry in Scotland plays a leading part in the collective European and UK efforts to decarbonise. Scottish industry is increasingly adopting sophisticated IT and automated technology, and investing in the deployment of modern and more energy-efficient equipment, reutilising waste heat, and reducing costs through improved competitiveness and enhanced productivity. These advances make factories smarter, safer, more efficient and environmentally sustainable.

176. Reducing the use of energy in our industries is critical to the achievement of our climate change goals, and is a key priority in Scotland's Manufacturing Action Plan[26] alongside the circular economy priority which is promoting reuse, remanufacture and use of recycled materials - also reducing energy demand. However, the Scottish Government is also committed to protecting domestic industries at risk of relocation overseas where climate or energy regulation is less stringent (referred to as 'carbon leakage'). These dual objectives will require co-ordinated and sustained action by industry, government, and other key stakeholders, and our draft Climate Change Plan sets out in detail our policy outcomes and supporting policies for decarbonisation of industry.

177. Comparative effort from other major economies such as the US, China, India, Brazil in reducing their industrial emissions under the Paris Agreement will be essential to avoid carbon leakage, achieve large-scale improvements in productivity and maintain competitiveness.

26. https://www.scottish-enterprise.com/knowledge-hub/articles/insight/scotlands-manufacturing-action-plan

Scottish Water

Scottish Water is one of Scotland's largest users of electricity, requiring around 445GWh to provide essential services to 2.49m households and 152,000 businesses from over 4500 operational sites.

Scottish Water has focussed on renewable energy generation and energy demand management to reduce costs and lower its carbon footprint.

Energy initiatives across the business over the last five years have cut base electricity consumption by 4.5% and doubled Scottish Water's renewable generation capacity to over 54 GWh since 2013. Renewable capacity is generated from hydro turbines, wind turbines, solar schemes, biomass plants and combined heat and power plants alongside third party owned wind turbines hosted on Scottish Water land which generate a further 223 GWh.

In just three years Scottish Water has raised the annual financial benefits from its energy programme to over £7 million, cut carbon emissions by 15% since 2006-07 and facilitated over £0.3bn of private investment on its estate, making a significant contribution to national economic, carbon and renewable energy targets. By the end of 2016/17 Scottish Water will be generating and hosting more renewable energy than it consumes annually, and over twice by 2018.

Adopting this approach is beneficial to customers. Over 70 of its water and wastewater treatment plants are either self-sufficient or partly sufficient in their power requirements over the year leading to lower operating costs and a more sustainable business.

178. There are potential co-benefits for business competitiveness and energy productivity of investment in industrial energy efficiency, which reduces operating costs and can protect against any rise in energy prices, and industrial heat recovery, which could provide an income stream. These enhancements in the competitiveness and productivity of Scotland's manufacturing sector will contribute to the Scottish Government's wider objectives of sustainable economic growth, and will ensure that high quality manufacturing jobs continue to be located in Scotland, benefiting all people across Scotland, in both urban and rural areas.

✔ ACTIONS:

The Scottish Government will:

☐ support business, industry and public sector collaboration through working with Scottish Enterprise, Highlands and Islands Enterprise, Scottish Environment Protection Agency and the Scottish Manufacturing Advisory Service - providing a platform to explore ways to improve industrial competitiveness and productivity, as a key route to decarbonisation;

☐ provide new incentives and packages of business support to help facilitate industrial decarbonisation, through Scotland's Manufacturing Action Plan and SEEP;

☐ seek to provide leadership and advice to industry through the Scottish Energy Advisory Board, and associated leadership groups, pooling expertise from the key industrial sectors in Scotland and providing a strategic framework for managing this transition;

☐ work with the UK Government and EU institutions to minimise the impact of Brexit on progress towards industrial decarbonisation – maintaining a level playing field on regulation; and

☐ enable local authorities to take a strategic approach to decarbonising heat and improving energy efficiency at local level, including identifying and developing opportunities to reduce or utilise energy waste from industrial processes.

Consultation questions

- What are your views on the priorities presented in this chapter for transforming energy use over the coming decades? In answering, please consider whether the priorities are the right ones for delivering our vision.
- What are your views on the actions for Scottish Government set out in this chapter regarding transforming **energy use**? In answering, please consider whether the actions are both necessary and sufficient for delivering our vision.
- What ideas do you have about what **energy efficiency target** we should set for Scotland, and how it should be measured? In answering, please consider the EU ambition to implement an energy efficiency target of 30% by 2030 across the EU.

5. DELIVERING SMART, LOCAL ENERGY SYSTEMS

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🔭 2050 VISION

- Scotland is a leader in the development of local energy systems, providing local solutions to local needs with improved consumer benefit.
- Expertise in the management of local energy systems, coordinating the supply, storage and use of many devices, has developed to become a significant Scottish export industry.
- Local communities play an active part in the delivery of innovative, low carbon energy systems, have the opportunity to influence energy planning from the outset, and receive community benefit from renewable energy generation.
- Local energy plans, drawing on the best data on energy supply and use, are drawn-up in collaboration with local authorities in every area of Scotland, acting as a commercial investment prospectus and coordinating an area-based approach to public investment.

ℹ️ KEY FACTS

WE HAVE ALREADY EXCEEDED OUR 2020 TARGET FOR 500 MW OF COMMUNITY AND LOCALLY-OWNED ENERGY WHICH HAS BEEN INDEPENDENTLY ESTIMATED TO BE WORTH UP TO £2.2 BILLION OVER THE OPERATIONAL LIFETIME OF THOSE PROJECTS.

£35 MILLION HAS BEEN MADE AVAILABLE THROUGH COMMUNITY AND RENEWABLE ENERGY SCHEME (CARES) SINCE 2013 TO SUPPORT COMMUNITY AND LOCAL ENERGY.

CARES HAS SUPPORTED NEARLY 600 OPERATIONAL COMMUNITY AND LOCALLY OWNED PROJECTS SINCE 2013, OF WHICH 265 WERE COMMUNITY SCHEMES.

Smart, Local Energy Systems

179. The Scottish Government is committed to supporting the development of local energy economies as part of a varied and proportionate response to the challenges brought by the transformation of Scotland's energy system.

180. For more than a decade we have supported communities in Scotland to develop their own renewables schemes, resulting in nearly 600 operating installations across Scotland, with active projects ranging from small scale hydro schemes of under 100 kW to wind farms of up to 9 MW. As well as contributing positively to our targets for renewable electricity and heat, these projects bring valuable local revenue to support a wide range of local needs.

181. The erosion of support at a UK level has made the future development of 'standard' standalone community energy schemes much more challenging. We are looking at how to adapt CARES to meet this challenge, for instance through the aggregation of demand, whilst also applying other levers – such as targeted non-domestic rates relief – to facilitate development. We also need to maximise the opportunity for community stakes in larger commercial schemes – and the new CARES contract due to be in place from April 2017 will reflect this priority.

182. While we have a proud legacy of community energy projects in Scotland, what we think of as community energy is now shifting towards new models designed to be viable in a more difficult market. Not only does this mean a shift towards shared ownership (of commercial schemes), but also a broadening of policy scope towards smart local energy systems using non-traditional business models - and innovation in energy tariffs to offer different kinds of value to consumers of locally generated energy.

183. With a focus on local energy, we can help tackle some of our most pressing issues, from security of supply, to demand reduction, making energy supplies more affordable for households and businesses, and to stimulate regeneration and local economic renewal.

184. Our priorities for supporting the developing of Smart, Local Energy Systems are:

- directly supporting the demonstration and growth of new innovative projects; and
- developing a strategic approach to future energy systems in partnership between communities, the private and public sectors.

DIRECTLY SUPPORTING THE DEMONSTRATION AND GROWTH OF NEW INNOVATIVE PROJECTS

185. The Scottish Government already supports a number of initiatives that enable local and community projects to be developed including:

- Low Carbon Infrastructure Transition Programme (LCITP);
- CARES Local Energy Challenge Fund (LECF);
- CARES Infrastructure and Innovation Fund (IIF);
- Renewable Energy Investment Fund (REIF); and
- District Heating Loan Fund (DHLF).

186. Although at an early stage, using support from these schemes many areas of Scotland are already implementing local energy projects, utilising the funding opportunities available, and acting as standard bearers for other Scottish communities.

187. The Low Carbon Infrastructure Transition Programme (LCITP) has been specifically designed to drive investment in and delivery of low carbon infrastructure projects across Scotland. The intervention focuses on supporting the acceleration of low carbon infrastructure projects across the public, private and community sectors to develop investment grade business cases to assist projects to secure private capital finance.

188. It also allows for the demonstration of low carbon projects through open funding invitations and widens the opportunity for these Scottish solutions to be replicated and marketed both nationally and internationally. To date LCITP has supported over 40 low carbon projects towards investment grade business cases through the £76 million fund.

189. These projects are at the cutting edge of innovation, and provide a basis for learning as we seek to mainstream a local energy approach.

190. However, as these schemes are new and innovative, not all schemes will succeed. It is only in testing new models of local energy economies that we will create learning and identify solutions. To ensure wider learning is captured from these projects, we have put in place, via ClimateXChange, two long-term independent research programmes to monitor and evaluate both social and economic impacts from Scottish local energy projects.

Projects funded through Scottish Government schemes

Levenmouth Community Energy Project in Fife uses electricity produced locally by a 750kW wind turbine, supplemented by solar, to produce green hydrogen by electrolysis. The hydrogen it produces will fuel one of the largest fleets of dual fuel hydrogen-powered vehicles in Europe. Powered at site and by an additional dispenser at Bankhead, the system is utilised by the councils own fleet of hydrogen vehicles.

Sunamp's East Heat project has installed innovative heat batteries that utilises renewable energy and off-peak tariffs to store heat in housing association properties helping tenants to access lower cost heating and hot water.

Biomass district heating in Wick
Ignis Wick Ltd (the operating subsidiary of Ignis Biomass Ltd), with assistance from the Scottish Government's District Heating Loan Fund has invested over £2.5 million in the Wick District Heating Scheme.

The heat network now supplies over 200 domestic customers (of which over 90% is social housing) with low cost heat, as well as a care home, the Highland Council's Assembly Room and the distillery.

In March 2016, the Green Investment Bank and Equitix announced their acquisition of Ignis Biomass Ltd. Plans are in place to upgrade existing infrastructure as wells as commission a number of smaller-scale stand-alone CHP systems for major users in and around Wick.

ACTIONS:

The Scottish Government will:

☐ continue to support low carbon investors through a variety of existing Scottish Government grant and loan support schemes – including REIF – carefully assessing projects in order to maximise the wider system benefits of low carbon investment; and

☐ under CARES continue to support community and local renewable energy schemes.

DEVELOP FUTURE ENERGY SYSTEMS IN PARTNERSHIP BETWEEN COMMUNITIES, THE PRIVATE AND PUBLIC SECTORS

191. To help to manage the decentralisation of energy provision and maximise the opportunities from our whole system approach, we are seeking views on a requirement for a more coordinated approach to the local planning of energy and heat solutions.

192. This approach could provide opportunities for communities to not only develop their own energy projects, but also to have their voices heard in the processes by which energy projects are planned.

193. The Scottish Government already supports local authorities to develop strategies for district heating infrastructure through the Heat Network Partnership Strategy Support Programme, and through Scotland's Heat Map. Complementing this draft Energy Strategy is our consultation on the development of regulation for local authorities to produce Local Heat and Energy Efficiency Strategies that will support area-based energy efficiency and heat programmes.

STRATEGIC APPROACHES TO ENERGY SYSTEMS

Scotland's Heat Map[27] is an interactive web map that allows users to identify where there are opportunities for decentralised energy projects across Scotland, for example for heat networks, to assess heat density and proximity to heat sources. The tool can help to visualise heat demand and sources, and how these can be connected in an efficient way to reduce the cost of heat supply and the carbon intensity of heat generation.

Energy Masterplanning is an existing strategic approach to bring forward energy projects. Scottish Enterprise has developed an energy masterplanning approach, providing a good model of effective local energy planning. The approach sets out an evidence-based method, by which communities, and public and private bodies can collaborate on planning for decentralised energy networks. Outputs include spatial maps that allow stakeholders to identify energy opportunities at the earliest possible stage and can assist the commissioning of projects in consideration of the wider energy context.

194. The effectiveness of a strategic approach to planning for energy and heat at a local level is tied to the success of SEEP and the efficiency of our new building stock, changes to local transport systems, and the opportunities that smart technology and flexible grids will enable. These all provide options and direction to how local energy strategies can be effectively implemented.

195. There will be an enhanced role for local authorities and city regions in this strategic approach, which will help to deliver new investment and to manage the local challenges of decarbonisation. Collaboration between a variety of organisations and levels of government, communities, and private sector partners is essential to its success.

196. There may also be a role for new institutions and delivery agencies. In the 2016 Programme for Government, two proposals were made, which seek to support the growth of renewables in Scotland, and in particular support our ambitions around community and locally owned energy, these are:

- explore the potential to create a **government owned energy company** (GOEC) to help the growth of local and community projects. This will include empowering communities to use the income from energy development to support other communities develop their energy potential; and
- explore the creation of a **Scottish Renewable Energy bond** in order to allow savers to invest in and support Scotland's renewable energy sector.

197. In this consultation we are seeking your views on what form a new organisation might take and what might be the extent of its responsibilities.

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27. www.gov.scot/heatmap

Government owned energy company and Scottish Renewable Energy bonds

Government-owned energy company (GOEC)

- A GOEC should address specific market failure or add value through accelerating progress towards relevant policy aims and goals, and could take on a number of potential roles:

    o deliver/support existing and new schemes and initiatives;
    o deliver energy infrastructure including district heating;
    o coordinate the procurement of energy efficiency and heat technology measures;
    o act as an energy supplier, delivering on a not-for-profit basis; or
    o administer a Scottish Renewable Energy Bond (see below).

- There are a number of existing local, UK and international examples of publicly-owned energy companies:

    o Aberdeen Heat and Power - established in 2002 by Aberdeen City Council as a not-for-profit independent company limited by guarantee to develop heat and power scheme for the city;
    o Bristol Energy – established in 2014 as a private company limited by shares, wholly owned by Bristol City Council. The company is a licensed supplier of electricity and gas. The municipal energy company aims to offer fair and transparent electricity and gas tariffs for domestic and business customers. Surpluses are reinvested in local services. Although the company is owned by Bristol City Council, anyone is Great Britain can become a customer;
    o Danish Energy Agency (Denmark) – established in 1976 and now forms *part of the Ministry of Energy, Utilities and Climate*. The Agency administers energy and supply in Denmark, as well as climate initiatives. It is responsible for tasks linked to energy production, supply, transportation and consumption, including energy efficiency and savings, national CO_2 targets and initiatives to limit emissions of greenhouse gases. The Agency supports building-policy initiatives, with a focus on sustainable building. The Agency employs around 400 people.

- We recognise that there may be other options to consider which are not highlighted above and would welcome all views on the potential role and impact(s) of a GOEC.

Scottish Renewable Energy Bonds

- In recent years 'green bonds' have become a growing source of finance for low carbon projects, for example the 'World Bank Green Bond'[28]. Bonds offer a route for investors to receive a pre-determined and regular return on their investment by loaning money to a fund for a fixed period.

- The role for 'green bonds' and alternative financial models for supporting low carbon technologies and services is also an area of interest to the Scottish Government and this draft Energy Strategy seeks views on the role for additional financial mechanisms in Scotland.

- Scottish Renewables have published a discussion paper[29] on how Scotland could widen the benefits of renewable energy by creating an energy fund. This could raise investment capital through a bond scheme. This is a helpful starting point but there are other options that could be pursued. For example, there are wider examples of successful bonds issued by Scottish Government and others, in relation to raising capital, for example to build social housing. These could be further explored to assess their compatibility with renewable energy projects.

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28. The World Bank Green Bond raises funds from fixed income investors to support World Bank lending for eligible projects that seek to mitigate climate change or help affected people adapt to it.
29. https://www.scottishrenewables.com/publications/scottish-renewable-energy-bond-discussion/

✔ **ACTIONS:**

The Scottish Government will:

☐ explore the potential to create a Government-owned energy company (GOEC) to help the growth of local and community energy projects; and

☐ explore the development of a regulatory framework for Local Heat and Energy Efficiency Strategies that will support area-based energy efficiency programmes, in conjunction with COSLA and local authorities.

Consultation questions

- What are your views on the priorities presented in this chapter for developing smart, local energy systems over the coming decades? In answering, please consider whether the priorities are the right ones for delivering our vision.
- What are your views on the actions for Scottish Government set out in this chapter regarding smart, local energy systems? In answering, please consider whether the actions are both necessary and sufficient for delivering our vision.
- What are your views on the idea of a Government-owned energy company to support the development of local energy? In answering, please consider how a Government-owned company could address specific market failure or add value.
- What are your views on the idea of a Scottish Renewable Energy Bond to allow savers to invest in and support Scotland's renewable energy sector? In answering, please consider the possible roles of both the public and private sectors in such an arrangement.

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6. DELIVERY, MONITORING AND ENGAGEMENT

2050 VISION

- Scotland will have a thriving energy sector with public and private sectors working together to deliver the 2050 vision.
- Scotland will continue to work at the leading edge, adapting and taking advantage of new energy technology.
- The public will be informed, helping to deliver and shape Scotland's energy future.

WORKING IN PARTNERSHIP TO SUSTAIN A THRIVING ENERGY SECTOR IN SCOTLAND

198. Securing the benefits of the low carbon transition and the associated transformation of Scotland's energy system will require deep collaboration between the public and private sector.

199. The **Scottish Energy Advisory Board** has played an important role in providing advice on all aspects of the energy sector to the First Minister of Scotland since 2009. Following the publication of this strategy, the SEAB will be re-focussed on the new themes of this strategy. The remit of SEAB will be to provide oversight and advice – with a supporting network comprised of industry and consumer-led advisory groups.

200. As the strategic approach to local energy schemes takes on a greater significance, Scotland's local authorities will play a pivotal role in Scotland's energy future. The Scottish Government will work closely with **local authorities** and COSLA in the design and implementation of Scotland's Energy Strategy, including SEEP and to support the development of local heat and energy efficiency strategies, providing the basis of public and private infrastructure investment in the future.

201. Our **Enterprise and Skills Agencies** will continue to have an essential role in helping to create a high quality environment for business growth, with better connections to the global market. This includes:

- reducing the cost base of energy supply sector technologies through collaboration, innovation and scale;
- supporting the supply chain to capitalise on new and emerging opportunities at home and abroad;
- maintaining and increasing the provision of high level skills in science and engineering – and enabling the transfer of skills to deliver energy efficiency in buildings and manufacturing and to develop new low carbon industries; and
- creating a supportive and collaborative business environment for entrepreneurship, research and innovation in energy sector, increasing competitiveness.

202. On finalising this Strategy, the enterprise and skills agencies' objectives will be further aligned towards its strategic aims. The Scottish Government will work with Skills Development Scotland to review the priorities and actions of the Skills Investment Plan in light of this Energy Strategy.

203. Scotland has world-class research & innovation capacity and facilities to support the advancement of technologies and processes which will allow the Scottish Government to reach its objectives in the Energy sector. A whole-system view of energy systems requires a whole-system response, and the Scottish research base is ideally positioned to translate excellent research into economic impact.

204. The Scottish Government, along with the Scottish Funding Council, is supporting the Energy Technology Partnership (ETP), the largest power and energy research partnership in Europe, which promotes collaboration between universities and industry to delivery energy R&D capability across a range of technologies. The ETP is an affiliation of 12 university partners, a strong knowledge and skills base in energy related research and innovation which will support the development of our future energy systems.

MONITORING SCOTLAND'S ENERGY STRATEGY

205. This Energy Strategy is designed for the long-term – with the flexibility to respond to developments in energy technologies and changes in consumer behaviour in the coming decades.

206. It will be therefore be important to monitor and adapt Scottish policies to ensure they continue to support the long-term vision set by the Strategy.

207. The Scottish Government plans to publish an **Annual Energy Statement** in the summer of each year that will take into account:

- the latest energy statistics;
- greenhouse gas emissions statistics; and
- a wide range of information that is already collected on the effectiveness of Scottish Government and UK Government energy schemes.

208. The Annual Energy Statement will take account of the Climate Change Plan monitoring framework and the relevant energy indicators.

DEEPENING PUBLIC ENGAGEMENT

209. Neither government nor communities alone have all the resources to solve the complex problems of energy provision. By working together in a meaningful way we can achieve more, and through continued dialogue and engagement we aim to ensure that the policies and actions put in place to deliver this Strategy are the right ones.

210. Constructive dialogue with stakeholders over recent months and years has helped to shape the draft set out here. The Scottish Government is committed to continuing and strengthening these channels of communication over the coming years.

211. The consultation on this draft Energy Strategy will include new approaches to public participation and engagement, as we finalise the priorities for Scotland's energy system.

212. Our objectives are to:

- raise awareness and improve understanding of the choices, opportunities and challenges facing Scotland as we move towards decarbonising the energy system;
- encourage a greater sense of ownership and control amongst communities and individuals as consumers, producers and investors in their energy system; and
- improve the design of programmes and initiatives through sharing ideas and listening to and feeding in the views of the public in designing policy.

Public engagement

Our approach to deepening public engagement on energy issues must allow flexibility to adapt overtime, but will be comprised of three core components:

Information sharing and awareness raising

- By making information readily available and raising awareness of the choices presented by a move towards decarbonising the energy system, we intend to enable and encourage public engagement in making those choices.

- We will use digital technologies to make information accessible and data open. The Scottish Government identified the need to refresh its Digital Strategy and set out its thinking in an interactive dialogue hosted online. This will shape and inform our approach.

Local conversations

- We will encourage and support communities to hold local conversations about local energy systems; stakeholder organisations to engage with local communities; and communities to share ideas and good practice with each other.

Consultation, engagement and deliberation

- We wish to combine the mutual strengths, capacities, skills and ideas of communities, industry, and other stakeholders in shaping and delivering Scotland's future energy system.

- We will embed meaningful consultation, engagement and deliberation into this strategy by using a range of tools, methods and platforms to involve people in the decisions that affect them..

Consultation questions

- What ideas do you have about how Scottish Government, the private sector and the public sector can maximise the benefits of working in partnership to deliver the 2050 vision for energy in Scotland?
- What ideas do you have about how delivery of the Energy Strategy should be monitored?
- What are you views on the proposed approach to deepening public engagement set out in this chapter?

213. The Scottish Government is committed to developing an engagement plan and will publish this plan as part of the final Strategy.

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ANNEXES

ANNEX A   SUMMARY OF CONSULTATION QUESTIONS

1	What are your views on the priorities presented in Chapter 3 for energy supply over the coming decades? In answering, please consider whether the priorities are the right ones for delivering our vision.
2	What are your views on the actions for Scottish Government set out in Chapter 3 regarding energy supply? In answering, please consider whether the actions are both necessary and sufficient for delivering our vision.
3	What are your views on the proposed target to supply the equivalent of 50% of all Scotland's energy consumption from renewable sources by 2030? In answering, please consider the ambition and feasibility of such a target.
4	What are your views on the development of an appropriate target to encourage the full range of low and zero carbon energy technologies?
5	What ideas do you have about how we can achieve commercial development of onshore wind in Scotland without subsidy?
6	What are your views on the potential future of Scotland's decommissioned thermal generation sites?
7	What ideas do you have about how we can develop the role of hydrogen in Scotland's energy mix?
8	What are your views on the priorities presented in Chaper 4 for transforming energy use over the coming decades? In answering, please consider whether the priorities are the right ones for delivering our vision.
9	What are your views on the actions for Scottish Government set out in Chapter 4 regarding transforming energy use? In answering, please consider whether the actions are both necessary and sufficient for delivering our vision.
10	What ideas do you have about what energy efficiency target we should set for Scotland, and how it should be measured? In answering, please consider the EU ambition to implement an energy efficiency target of 30% by 2030 across the EU.
11	What are your views on the priorities presented in Chapter 5 for developing smart, local energy systems over the coming decades? In answering, please consider whether the priorities are the right ones for delivering our vision.
12	What are your views on the actions for Scottish Government set out in Chapter 5 regarding smart, local energy systems? In answering, please consider whether the actions are both necessary and sufficient for delivering our vision.
13	What are your views on the idea of a Government-owned energy company to support the development of local energy? In answering, please consider how a Government-owned company could address specific market failure or add value.

14	What are your views on the idea of a Scottish Renewable Energy Bond to allow savers to invest in and support Scotland's renewable energy sector? In answering, please consider the possible roles of both the public and private sectors in such an arrangement.
15	What ideas do you have about how Scottish Government, the private sector and the public sector can maximise the benefits of working in partnership to deliver the vision for energy in Scotland?
16	What ideas do you have about how delivery of the Energy Strategy should be monitored?
17	What are you views on the proposed approach to deepening public engagement set out in chapter 6?

RESPONDENT INFORMATION FORM

Please Note this form **must** be completed and returned with your response.

Are you responding as an individual or an organisation?

☐   Individual

☐   Organisation

Full name or organisation's name

Phone number

Address

Postcode

Email

The Scottish Government would like your permission to publish your consultation response. Please indicate your publishing preference:

☐   Publish response with name

☐   Publish response only (without name)

☐   Do not publish response

Information for organisations:

The option 'Publish response only (without name)' is available for individual respondents only. If this option is selected, the organisation name will still be published.

If you choose the option 'Do not publish response', your organisation name may still be listed as having responded to the consultation in, for example, the analysis report.

We will share your response internally with other Scottish Government policy teams who may be addressing the issues you discuss. They may wish to contact you again in the future, but we require your permission to do so. Are you content for Scottish Government to contact you again in relation to this consultation exercise?

☐   Yes

☐   No

Improving Parking in Scotland

1.   INTRODUCTION

1.1   Since obtaining powers under the Scotland Act 2016, the Scottish Government is undertaking a detailed review of parking in Scotland. The consultation[1] seeks views on how parking laws could be made clearer, what parking restrictions and exemptions should apply, the best approach to managing parking and the location of vehicles in today's town centres, including improving accessibility for all.

2.   CONSULTATION

2.1   The consultation highlights that in recent years there has been significant and continuing cross-party support for proposals to address the issues of irresponsible parking and to attempt to clarify laws surrounding parking in Scotland. In March 2016, the UK Parliament passed the Scotland Act 2016, which included the devolution of powers that enable the Scottish Parliament to now legislate on parking matters. The consultation also highlights the current duties via the Equality Act for local authorities to consider in aspects of parking policy and shared space provision.

2.2   The consultation highlights the current laws on parking, the role of Traffic Regulation Orders, the interplay with the Equality Act and duties in certain aspects, parking on the pavement and other examples of legislative action or regulation. The current enforcement arrangements across Scotland and the split between criminalised and decriminalised enforcement is summarised alongside issues of resourcing and proposals for consistent enforcement across Scotland either via sharing services or national restrictions applied via TROs. The paper then summarises several identified issues through previously tabled legislative proposals: asymmetry in legislation to recognise urban and rural; resourcing of enforcement as well as awareness raising and education and issues of vehicle displacement especially in areas of limited existing capacity.

2.3   The consultation paper also provides a summary of matters to be addressed on the enforcement of Disabled Persons' Parking Places around enforcement of existing parking and the reporting of misuse of Blue Badges. There are also proposals set out as to parking and incentives for Ultra-Low Emission Vehicles. There is then several questions around assessing impact and a final question to enable any further comment. A full list of consultation questions is contained in Annex 1.

2.4   The SEStran Partnership Director has been involved in the working group to develop the consultation. Comment has previously been submitted about the need to evidence that "irresponsible" parking is a recurring strategic issue across Scotland that would require a national imposed approach to

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[1] https://www.transport.gov.scot/our-approach/industry-guidance/parking/

enforcement or a recurring local issue differing across Scotland and requiring a flexible local approach beyond on circumstances. We have highlighted that a possible middle ground between a solely national or local approach is a Regional Strategy on Parking across all 7 RTPs which provide an opportunity to take a strategic approach to parking whilst retaining an element of local flexibility married to national consistency.

2.5 In terms of education and awareness we have sought to ask Transport Scotland whether the public are clear about their rights and responsibilities currently to enable and promote further behaviour change. We have welcomed in the final consultation, the dropping of the "responsible" aspect of the original proposal, as whether evidence that the public have a reasonable understanding of what is their responsibilities it doesn't seem appropriate have any level of subjectivity introduced into legislative proposals albeit reasonableness would be prefaced on legal definition, the public might view reasonable parking as somewhat different.

2.6 We have previously made comment about the need to be clear that a number of councils don't cost recover enforcement costs from revenue raised. Some local authorities do but for others there isn't the economies of scale and it does point to the need to consider a shared service approach on this matter. In terms of equality impact we have raised the need to consider exemptions on a temporary basis for any controlled parking zones for pavement parking, for example, cancer patients. These groups may not be able to walk a distance from a non-controlled zone to their home and need temporary exemptions alongside other groups who have temporal limits to their protected characteristic status e.g. maternity.

2.7 In response to the request for final comments prior to issue of the consultation paper. SEStran observed when building on our evidence[2] to Parliament on the RPP3 the need for an investigation and legislative discussion on the potential introduction of workplace parking charges in Scotland and our representations on this matter as part of the RPP3 process. The response was that there wasn't a substantive question on the matter to be included in the final document but that respondents could address the matter as part of their consultation under the final "any further comment" question. It is proposed that SEStran continue to advocate for the introduction of the legislative provisions to enable such a regime in Scotland, which were previously removed from the Transport (Scotland) Bill in 2000/01.

3. CONCLUSION / RECOMMENDATIONS

3.1   The paper seeks to invite comment on the current Parking consultation.

George Eckton   Sophie Pugh
Partnership Director   **Undergraduate Technical Officer**
18th May 2017

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[2] http://www.parliament.scot/S5_Rural/SEStran.pdf

Annex 1 – List of Consultation Questions

Q 1. Do you think parking, including on pavement, at dropped kerbs and double parking is a problem in your area?

If yes, how have you, your family or friends been affected by parking problems?

Where did this occur (e.g. type of street or area) and how often?

Legislation

Q 2. Why do you think the motorists may choose to pavement park?

Q 3. Do you think new legislation is needed?

If yes, what areas of the law need to be amended?

Q 4. If a new law is required, should it cover all roads with footways, including private roads that are not adopted by local authorities and trunk roads?

If not, why not?

Q 5. Do you think any new law should apply to all vehicles (e.g. HGVs, vans, taxis, cars, motorbikes, etc.)?

If not, which type of vehicles should the law not apply to?

Q 6.   Do you think there should be exemptions applied to allow pavement parking to take place, particularly due to local concerns about access for vehicles and lack of alternative parking provision?

If yes, what should those exemptions be?

If no, why not? (Please be as specific as possible)

Implementation & Enforcement

Q 7. Should there be consistent approach to parking enforcement across Scotland?

If yes, how should this be taken forward?

Q 8. Local authorities in some parts of Scotland have DPE powers and are responsible for parking enforcement. In other areas Police Scotland retains responsibility.

What is your views on rolling out Decriminalised Parking Enforcement regimes across Scotland?

What is your views about the proposal to share services to provide some access to a "traffic warden service" in areas without DPE?

What should Police Scotland"s involvement be in future?

Q 9.   Currently moving traffic violations are a matter for the police, however, do you think local authorities should be able use CCTV and/or Automatic Number Plate Recognition (ANPR) systems for enforcement of:

parking in areas where safety benefits can be delivered to all road users, around schools for example?

Some moving vehicle contraventions like banned turns?

If not, why not? (Please be as specific as possible)

Traffic Regulation Orders (TROs)

Q 10. Do you think it is a good idea in principle to allow local authorities to exempt specific streets or areas from national restrictions for pavement parking?

 If so, what is the best mechanism for doing this (e.g. TRO or other form of local resolution)?

Displacement of vehicles

Q 11. Do you think controlling pavement, dropped kerbs and double parking could have unintended or negative consequences in your area?

If so, what would the effects be?

Who would be affected?

What type of street or area would experience these consequences?

Town Centre Regeneration

Q 12. Do you think controls on parking are likely to increase or reduce the costs and impact on businesses in town centres?

If yes, what should we be doing to reduce any impact on businesses in town centres?

What other arrangements should be considered to deliver parking improvements that help support town centre regeneration?

Disabled Parking Bays

Q 13. Do you think that on-street disabled persons" parking places are being enforced in your area?

If not, how could this be done better?

Do you think members of the public should report misuse where it is observed?

Q 14. Have you witnessed misuse of a disabled persons" parking space?

If so, did you report it?

If not, did anything prevent you from reporting it?

Should disabled persons" parking places be enforceable at all times?

Do you think the level of penalty for misuse of local authority disabled persons" parking space is acceptable?

If not, what level would you consider to be acceptable?

Q 15. Do you think off-street disabled persons" parking spaces, including private car parks, are being enforced in your area?

If not, how could this be done better?

Q 16. What impact do you think disabled persons" parking space misuse has on Blue Badge holders?

Emissions Vehicles

Q 17. Are you supportive of local authorities" trialling or introducing parking incentives (such as discounted, free or preferential parking) for ULEVs?

If yes, what should these incentives be?

If no, why not?

Q 18. Are you supportive of local authorities trialling or introducing specific measures to help people who, live in flats or tenements (with no dedicated-off street parking) charge their vehicles?

If yes, what should these incentives be?

If not, why not?

Q 19. Do you think the use of ULEV-only charging bays should be monitored and enforced by local authorities?

If yes, please say why.

If no, how should they be enforced and who should be responsible for this enforcement?

Assessing Impact

Q 20. Are there any likely impacts the proposals contained within this consultation may have on particular groups of people, with reference to the „protected characteristics" listed above? Please be as specific as possible.

Q 21. Do you think the proposals contained within this consultation may have any additional implications on the safety of children and young people?

If yes, what would these implications be? Please be as specific as possible.

Q 23. Are there any likely impacts the proposals contained in this consultation may have upon the privacy of individuals? Please be as specific as possible.

Q 24. Are there any likely impacts the proposals contained in this consultation may have upon the environment? Please be as specific as possible.

Conclusion

Q 25.   Do you have any other comments that you would like to make, relevant to the subject of this consultation that you have not covered in your answers to the previous questions?

Scottish Expert Advisory Panel on the Collaborative Economy

1. INTRODUCTION

1.1 On the 24th of April, the Scottish Government, Scottish Expert Advisory Panel on the Collaborative Economy opened its consultation on the Collaborative Economy. As stated in the consultation portal, the collaborative economy has revolutionised the ways in which goods and services are purchased, consumed and provided. This has accelerated in recent years with advances in technology. The collaborative economy allows access to the sharing or provision of goods and services, assets and resources without the need for ownership. Prominent examples of this include Uber, Airbnb, Deliveroo, Hassle, Kickstarter and Task Rabbit.

2. CONSULTATION

2.1 The panel's consultation aims to collate advice and expertise in this area to make recommendations to Scottish Ministers in regards to policy and regulations. The Panel seeks to take advantage of the opportunities that the collaborative economy has to offer, while understanding its potential economic and social challenges.

2.2 Scottish Government work to date has identified that the Panel should consider how to:

- Ensure that regulation is fit for purpose and that an appropriate balance is struck to allow competition to flourish;

- Protect and empower consumers and identify clear routes to redress;

- Support Scotland's business base to digitally transform and compete in the evolving market place; and

- Ensure that the wider economic, social and community impacts, including taxation, social inclusion and employment conditions, are understood.

2.3 The Expert Advisory Panel on the Collaborative Economy will be considering a number of areas, including:

- Balancing competition and regulation

- Peer to Peer accommodation

- Implications for taxation

- Workers' rights

- Transportation & logistics

- Collaborative financing

- The changing role of consumers (to also being providers)

- Implications for creating social value and supporting public services

3. CONCLUSION / RECOMMENDATIONS

3.1 Responses are invited by 26th of May 2017. It is proposed that SEStran will respond to the consultation following any comments from the SEStran Chief Officers meeting received on the 25th of May.

Lisa Freeman
Strategy and Projects Officer
18th May 2017

Appendix 1 – Draft SEStran consultation response to the Scottish Expert Advisory Panel on the Collaborative Economy

1. What are the key opportunities that you see for the collaborative economy in Scotland?

The 'collaborative' or 'shared economy' has great potential to unlock underused capacity. In Scotland, we are lucky to already have well established initiatives and innovation that supports this ideology and could be used to support the collaborative economy moving forward.

The transport network of the South East of Scotland can at peak times be close to capacity and a lot of this demand is underutilised individualised vehicles travelling on the network imposing social, economic and environmental externalities on communities. The value of the collaborative economy is this space is to use underutilised assets, such as under-occupied cars relative to their capacity, to reduce congestion on road networks and to offset the need for further capacity expansion of network based on non-collective motorised modes of transportation. This could reduce the need for the introduction of demand restraint policies such as workplace parking charges and also reduce negative outcomes from irresponsible parking of vehicles if the overall number within an area could be managed through collaborative measures.

In our Business Plan for 2017-18[i] we have committed to measure progress towards the corporate SEStran target, that will contribute towards reducing traffic congestion, carbon emissions and encouraging the use of sustainable modes of transportation, which is: "By 2022, to reduce the percentage of people commuting to Edinburgh by single occupant car from each local authority area in South East Scotland by 10% compared to a 2001 base. For Edinburgh residents working out with the City Council area, to reduce their reliance on the single occupant car for commuting by 10% also over the same period."

SEStran in recent years have been directly involved in a number of projects which seek to mainstream the benefits of the collaborative economy and achieve the target stated above, these are listed below:

TripshareSEStran.com

Link: www.TripshareSEStran.com

In terms of Transport, a notable example is TripshareSEStran.com. TripshareSEStran.com is South East Scotland's Regional Car Share Portal. Set up in 2006, the scheme now hosts over 8,600 car share members. The scheme is comprised of SEStran's eight constituent Local Authorities and four Health Board areas. Partnership working and links to individual Travel Plans has been key to the continued success of Tripshare. Car sharing, as part of a wider Travel Plan or Transport Strategy, has the ability to significantly reduce the number of single occupancy vehicles on Scotland's road network.

Within the SEStran Regional Transport Strategy (RTS), SEStran identifies Car Sharing as an 'high priority'. As an action, the RTS states that SEStran should continue to promote the scheme and engagement with European Car Sharing projects. SEStran has continued to do so and has been successful in attracting funding for the following car share projects that are also relevant to this consultation:

SHARE-North

Link: http://share-north.eu/

The 'SHARE-North' project (funded through Interreg North Sea Region) addresses the concept of 'Shared Mobility' and looks at the development, implementation and promotion of Car Clubs, Bike Sharing and Car Sharing. The planned living labs will integrate modern technology with activities to support changes in mobility behaviour. The objectives are: resource efficiency, improving accessibility (incl. non-traditional target groups), increased efficiency in the use of transport infrastructure, reduction of space consumption for transport, improving quality of life and low carbon transport.

Our partners in Belgium, Auto Delen.net and Taxi Stop, have introduced a 'Green Deal' Initiative. The aim of the Green Deal is to accelerate the growth of shared mobility (car-sharing, carpooling and bike-sharing) in Flanders. The Green Deal is a partnership of many different organisations who are keen to assist in the removal of barriers to the alternatives of car ownership.

The Green Deal, launched the 27th of March 2017, is an agreement between several parties and the Flemish government. 80 organisations have already signed the deal with three Flemish Ministers: Bart Tommelein (Energy), Ben Weyts (Transport and public works) and Joke Schauvliege (Environment). The signing organisations have chosen their own actions to contribute to the 4 objectives of the green deal by 2020.

Which are as follows:

- Increasing the number of Car-Sharers (Car Club members) to 80,000
- The number of employers undertaking actions to support carpooling (aka Car Sharing in the UK) to 1,000
- Increase the number of bike sharers to 40,000
- Increase the number of shared electric cars by 5 times the amount recorded today, and ensure there is an offer of shared electric bikes.

Link: http://gedeeldemobiliteit.be/english/

CHUMS

Link: http://chums-carpooling.eu/

The 'CHUMS' (Changing Habits for Urban Mobility Solutions) project (funded through Intelligent Energy Europe) demonstrated that carpooling is a viable and convenient option that overcomes traditional social, behavioural, and cultural barriers associated to sharing. CHUMS has helped many people already to change their travel habits to and from work.

The aim of CHUMS was to attract individual car drivers, match them with suitable sharers, and retain them and their interest in carpooling, creating an environment where carpooling is habit.

CHUMS combined three simple measures which, when combined, have shown to have a greater impact than other schemes on carpooling success in organisations

across Europe. The three elements that when combined generate the CHUMS approach were: Car Pool Week, Personalised Travel Planning and a Mobility Jackpot Lottery.

SocialCar

Link: http://socialcar-project.eu/

The 'SocialCar' project (funded through Horizon 2020) aims to integrate public transport information, car-pooling and crowd sourced data to provide a single source of information for the traveller to compare multiple options/services. SocialCar will provide a 'one-stop shop' planning, booking and payment service for multimodal and multi-service journeys, via web and a mobile app. The project responds to the challenge of matching travel requests with the integrated public-private transport supply. The design of SocialCar is based on open source software, and the user experience is complemented by a reputation-based social mechanism. The SocialCar innovation is twofold: technological (the potential of open data and GNSS, the electronic payment services for transport) and economic (new mobility service models, public-private partnerships in the passenger's transport domain)

2. What are the key challenges that you see arising for the collaborative economy in Scotland?

'Disruptive services' is a term that is often used to describe such shared or collaborative initiatives. Scotland's largest challenge is how it enables these initiatives but, not to the detriment of public services. From a transport perspective, these schemes could be in direct competition with the more traditional modes of public transport delivery. The challenge is to enable such schemes to enhance or improve the current provision of services where there are mobility or accessibility negative outcomes currently without impacting on the core public transportation network.

For example, the current draft Scottish Energy Strategy and Climate Change Plan (RPP3) focus on reducing the emissions impact of individualised modes of transport and we recognised that the collaborative economy can play a key part in achieving this outcome. However, we were also clear that interaction between these sectors must not implicitly or inadvertently be allowed to strategically over-promote greater use of individual motorised modes over collective or active modes and so potentially contribute to the further decline of regulated bus or rail modes of transport. There is a potential equity impact on those who in the future, can't afford or access for other reasons collaborative economy based modes of transport.

However, a positive result of these challenges is that it addresses the issue of access and ownership of vehicles. Shared modes can enable communities to overcome gaps in provision. The collaborative economy could help to connect people to access goods and services that aren't normally available to them. This could also address the issue of ownership, which could in turn break barriers and or access to employment. The emerging findings of the recent RSA Inclusive Growth Commission report highlighted that there are numerous communities across the UK within a few miles of improvements to transport opportunities that do not always benefit, through either an

ingrained mind-set or the cost of travel. Shared Transport services and accessibility can be a preventative measure against low skilled or economically inactive areas becoming further excluded.

There is clear evidence that a lack of accessibility to transport options has a limiting effect on opportunities and that those who are least skilled, or remote from the labour market have the least location flexibility in seeking new job or training opportunities. Therefore, SEStran views transport and accessibility/affordability of transport as integral to an inclusive economy

The RSA Inclusive Growth Commission argues that "social and physical infrastructure should be on a par when it comes to investment appraisal. This is one of the central means through which social and economic policy can be brought together. High quality physical infrastructure – such as railways, roads, local transport, new developments and broadband – is essential in building economic connectivity, maximising the efficiency of productive activity and connecting labour markets to areas of economic opportunity. But the value of physical infrastructure is diminished when particular places or neighbourhoods are unable to connect to its benefits, for example because the skills base is too low to take advantage of job opportunities, or health and complex social issues act as barriers to participation. It is therefore just as important to invest in 'social infrastructure' that develops the capacities and capabilities of individuals, families and communities to participate more fully in society and economic growth: early years support; education, skills and lifelong learning; Early intervention and prevention-oriented, rather than reactive, public services; and community development and capacity building. There is for SEStran clear potential benefits from the sharing economy in relation to the delivery of these objectives and outcomes

3. Are contributors (consumers, providers and businesses) to the collaborative economy suitably protected by existing legislation?

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
Consumers	○	○	○	✖	○
Providers	○	○	○	✖	○
Businesses	○	○	✖	○	○

If not, what are the gaps/how could it be improved?

The gig economy is often a supplementary income for most of people providing these services. There has been a significant amount of political discussion regarding zero hour contracts and the support for employees within this area. For example, with

regards to ride hailing apps such as Uber and Lyft, each driver is considered an independent contractor, and is not directly employed by the business. After overhead costs, such as insurance and vehicle payments, drivers could potentially earn well below the minimum wage. In addition to this, rating systems within these apps could hold a negative or unfair weighting over individual drivers, diminishing their opportunities to earn. More should be done to protect and ensure workers' rights within the gig economy.   There must be some consideration in policy between those who are considered a direct employee and those who are considered self-employed.

With regards to consumer protection, additional legislation could be used to enhance background checks and training for drivers/providers. In addition to this, further collaboration with these businesses could be done to assists customers with mobility impairments. Uber are currently addressing this with 'UberAssists' (cars with drivers who have received additional training on helping seniors and people with disabilities) and 'UberWAV' (Wheelchair Accessible Cars), however globally, only a small number of Uber vehicles are wheelchair accessible. Due to drivers being considered self-employed, mandatory driver training or other measures to prevent disability discrimination could imply its drivers are employees and undermine Uber's ability to argue otherwise.

There is also the related issue of the new powers devolved to the Scottish Government concerning consumer protection and the proposal outlined in the Strategic Assessment of Markets in Scotland for a Consumer Scotland taskforce. It would be useful to consider how shared economy transport and specifically mobility share user's consumer experience could be considered in setting new performance outcomes for sector in terms of regulation to enhance consumer experience and prevent consumer detriment. The Scottish Government's recent statement in December 2016 on consumer protection highlighted the need to deliver better outcomes for consumers and business and to take action to better measure impact of outcomes

4. Do you think that the collaborative economy is suitably regulated whilst still allowing competition and innovation to flourish?

With an ever-increasing growth in popularity, the sharing economy has grown exponentially in a very short period of time. However, the question often asked is whether this is this being done in an ethical way. A recent report by Price Waterhouse Cooper states that:

 'By 2025, we estimate that many areas of the sharing economy will rival the size of their traditional counterparts, with platforms in five sectors generating Europe-wide revenues worth over €80bn and facilitating nearly €570bn of transactions'.

Regardless of this impressive growth, regulation should be reasonable and should come from government, and not from organisations using their weight and influence to steer policy.

(http://www.pwc.co.uk/issues/megatrends/collisions/sharingeconomy/future-of-the-sharing-economy-in-europe-2016.html)

5. What do you think are the barriers which are constraining growth of the collaborative economy in Scotland?

In general, there has been a slow reaction, in terms of Policy, towards the collaborative/shared economy. It will be those who react the quickest, who will stand the best chance of creating opportunities and utilise the value of this dynamic sector. Scotland has been proactive to the increasing demand in digital skills within the sector and has started to invest in this area, of which CodeClan (Edinburgh's digital skills and coding academy) is a good example. Further investment in incubators and skills academies in 'STEM' (Science, Technology, Engineering and Maths) fields, specifically for underrepresented groups, could a long way to encourage competition and further sector specific opportunities.

Many outcomes of the collaborative economy require preventative spend and long lead-in times to deliver tangible results and the required behavioural change. There is also a need to develop a strategic model of co-production of such transport collaborative policies and proposals to enable benefits to be realised and enable commitment to policies for the long-term which utilise a collaborative economy approach. SEStran has recently actively benefited from co-designing active travel projects with communities through partnership with Young Scot and Sustrans. SEStran has found through work with Young Scot on a project called X-Route and its co-design is a useful method to support and collaborate children and young people in planning of policies and proposals.

Certainly, an eye-catching result of the survey was that 75% of respondents had not heard of the term "active travel", which highlighted the need to manage our messages to young people better when seeking to initiate behaviour change and deliver long-term place-based solutions which lead to habitual behaviour and use of space. This support and direct engagement of children and young people has raised significant insights into the delivery of current plans and policies, and it is suggested such methods could be useful to the delivery of planning related outcomes. The positive engagement we had from young people highlights the positive outcomes which can emerge from supporting Children and Young People. Also, for SEStran such support is integral to the delivery of our statutory Equality Outcomes 2017-2021 and actions to increase participation in public life of currently under-represented groups such as Children and Young People as part of our Public Sector Equality Duties. The collaborative economy approach could have for us these wider benefits across society.

6. What role do you think government should play?

The Government should provide a structured supporting role, both through policy and funding opportunities. Access to incubator initiatives and funding should be used to drive innovation and encourage collaboration across different sectors.

For example, as part of the previously mentioned 'SocialCar' project, SEStran, in collaboration with Product Forge and CodeBase, hosted a Transport 'Hackathon' (marathon of information analysis or hacking marathon) on Thursday 4th May – Sunday 7th May in Edinburgh.

The aim of the Transport Hackathon was to promote the themes of SocialCar and to understand how people currently use transport services in the South East of Scotland. The event aimed to understand how, through digital methods, we could make services better for everyone in the future.

The event consisted of a room full of entrepreneurially-minded data scientists and analysts, designers, software engineers and transport industry professionals. These participants spent 3 days and 3 nights developing product prototypes to improve transport services within Scotland. Participants from this wide range of backgrounds and skills formed teams to work on a product prototypes with support from industry experts in the transport sector and the wider technology community.

Providing this open, innovative and collaborative space, SEStran were keen to see participants use this event to bring their digital expertise to challenges faced by the transport industry in Scotland, expand professional networks, fix problems within the sector or even launch a new product or start-up. Highlights of this event can be viewed via this link: https://www.youtube.com/watch?v=Wfdb65eyL1g

In addition to policy support, the Government should be encouraged could host more of these collaborative events to drive innovation in the Collaborative economy. The open data strategy produced by the Scottish Government can be used to enhance this opportunity. However, more could be done to improve the access and quality of data produced by both the gig economy and the public sector. Ultimately looking at a minimum of a 3* quality rating from the universally recognised 5* schema proposed by Sir   Tim   Berners-Lee   for   the   deployment   of   Open   Data (https://www.w3.org/DesignIssues/LinkedData.html).

This would this drive both innovation and competition. Not only is this good for consumers, it is also good for employees. Multiple service options can influence competitive pricing for consumers and workers will have enhanced professional mobility.

7. Do you have any general comments about the collaborative economy?

Whilst the predominant focus of the collaborative economy in transport is towards Ride hailing apps and car clubs, such as Uber, Lyft and Enterprise Car Club. Bike sharing schemes also fall under this heading and are considerably overlooked. With the current Scottish Government target of one in ten journeys being made by bike by 2020. Considerations must be made towards ownership and access. To emphasise this, the recent Scottish Household survey (2015), shows that within the most deprived areas within the SEStran Region, 78.6% of households in these areas did not have access to a bicycle. By facing the issue of ownership and access to alternative modes of transport, could not only help Scottish Government work towards its own ambitious targets, it could go a long way in addressing social mobility across the country.

Availability of Bikes in Sestran area

No bikes available for private use by households: 2015 (%)							
Household type:							
Single adult	Small adult	Single parent	Small family	Large family	Large adult	Older smaller	Single pensioner
72.6	56.9	70.4	43.6	38.7	43.9	74.7	91.2
by annual net household income:							
up to £10,000 p.a.	over £10,000 - £15,000	over £15,000 - £20,000	over £20,000 - £25,000	over £25,000 - £30,000	over £30,000 - £40,000	over £40,000 p.a.	
83.0	83.6	74.3	67.0	59.4	49.4	37.7	
Scottish Index of Multiple Deprivation:							
1 - Most Deprived	2	3	4	5 - Least Deprived			
78.6	73.4	63.3	55.1	53.0			
SEStran	64.3						
Clackmannanshire	East Lothian	Edinburgh, City of	Falkirk	Fife	Midlothian	Scottish Borders	West Lothian
67.0	54.9	64.8	65.5	67.4	53.7	63.0	66.0

Scottish Household Survey 2015, Transport Scotland

SEStran would also like to highlight the role of collaboration in the delivery of public services. This view seeks to promote for discussion a position where public authorities are consumers as well as service providers within a collaborative economy and to discuss how they could collaborate between each other and with others to deliver benefits to communities. For example, we are currently continuing discussions with our constituent councils about how collaboration or intelligent centralisation of current individual local authority functions could provide a greater capacity, resilient and opportunity for growth of all sectors of the economies within the South East of Scotland.

The Board of SEStran has previously highlighted the increasing disaggregation of strategic transport planning across Scotland. Identifying that, with the expected growth of Edinburgh City Region up to 2050, there should be active consideration and evaluation of some form of strategic integrated authority involving service aggregation from more local tiers of governance currently. This is the type of collaboration advocated by the 2014 Commission on Strengthening Local Democracy in Scotland.

Currently SEStran is a Model 1 Regional Transport Partnership (RTP), with a primary duty to produce a regional transport strategy. A Model 3 is an enhanced method of partnership delivery and potentially but not necessarily a collaborative decision making framework. Considering the City Region Deal proposals relating to transport and infrastructure, active consideration has been given in 2016/17 to utilising the provision in the Transport (Scotland) Act 2005 for the Regional Transport Authority to become a Model 3 authority. In effect this would mean assuming the powers of a Passenger Transport Executive or simply providing a mechanism for councils to collaborate and share resources whilst retaining local decision making. These continuing discussions have been underpinned by research[ii] and advice from Professor Tom Rye at Edinburgh Napier University.

SEStran in their our response to the recent Planning Review consultation[iii] observed that there is no doubt that economies of skill and scale in Scotland could potentially

be gained by integrating some currently separately managed and governed services under one roof, joining together with other areas to commission or share larger scale services and staff where appropriate, and aggregating functions into regional shared support services. As well as strengthening local democracy, this may be a necessity if, politically, local communities wish their representatives to protect services of public interest in the current fiscal context. The Commission on Strengthening Local Democracy in 2014 concluded that intelligent collaboration and sharing was a necessary element of fundamental subsidiarity and for SEStran these would seem key tenants in drawing up legislative change proposals on the future of the Scottish regional planning systems: land-use, transport, economic development.

SEStran would also argue that there is a clear and expanding role potentially for regional transport agencies in terms of public service collaboration. SEStran believe that in order to ensure the delivery of a functional and accessible labour market, allow all to access training opportunities, provide skilled workers for enterprises and efficiently deliver products and services to new and existing markets we need clear consideration of efficient transport network for inclusive growth and how we can collaborate to deliver positive outcomes.

The joint RTP/COSLA/Transport Scotland "Develop to Deliver" report highlighted that transport and accessibility is a significant and frequently raised issue within the Community Planning system especially around access to training, jobs and other development opportunities. The Royal Town Planning Institute in their recent "Poverty, Place and Inequality" report highlight the significant severance effect of area-based disadvantage for individuals. Those living in certain less affluent areas are from evidence less mobile, more reliant on public transport and less able to commute to job opportunities given expensive and/or fragmented transport networks. Previous studies have highlighted that those who are least skilled or most remote from the labour market have the least locational flexibility in seeking new job or training opportunities and that this rather than lack of skills or training has particularly afflicted some communities and individuals within them in terms of receipt of positive outcomes.

RTPs could be a key collaborative mechanism for addressing these gaps and delivering the outcomes required across several Local Outcome Improvement Plans (LOIPs) on the strategic and cross-boundary issue of transport infrastructure and services in tandem with enterprise, development and skills agencies and perhaps through the emerging proposals for Regional Economic Forums. SEStran was aware that in their pre-election manifesto Scotland's Independent Regeneration Network highlighted, as one of two important overarching contextual elements the importance of adequately accessible, efficient and affordable transport infrastructure, especially around the need to link within and between communities.

[i] http://www.sestran.gov.uk/wp-content/uploads/2017/05/2017_18_BP-1.pdf
[ii] http://www.sestran.gov.uk/publications/pta-models-of-organisation-for-regional-transport-governance/
[iii] http://sestran.gov.uk/wp-content/uploads/2017/03/17_03_17_sestran_planning_consultation_response.pdf

National Transport Strategy Review: Call for Evidence

1. **INTRODUCTION**

1.1 From December 2016, Transport Scotland issued an early engagement survey seeking opinions on transport policy at all levels in the context of the development of a National Transport Strategy 2 by Scottish Ministers as outlined in the Programme for Government 2016-17.

1.2 With input from the Board, SEStran submitted its pre-consultation response by 31st March 2017. Following on from the early engagement survey, Transport Scotland has now launched its 'Call for Evidence' on behalf of the NTS Review Research and Evidence Working Group. The Research and Evidence Group comprises of independent academic experts and Transport Scotland officials. The Group's remit is to ensure the wider National Transport Strategy review process is informed by best practice and detailed evidence.

2. **CONSULTATION**

2.1 To influence strategic thinking on transport policy, the group are seeking evidence, including international research, on what transport policy, land use and technological or digital interventions would be most effective in supporting the Scottish Government's Strategic Objectives; delivering a transport system that enables Scotland to be wealthier and fairer, smarter, healthier, safer & stronger, and greener.

2.2 The NTS2 will look at how Scotland can successfully address the strategic challenges facing the transport network and how it can make the most of the opportunities that present themselves. Transport Scotland has committed to delivering a collaborative co-design of NTS2 by giving individuals and communities across Scotland a greater say in influencing the development of transport policy at local, regional and national level.

2.3 To complement the 'Call for Evidence', from Summer 2017, Transport Scotland intend to conduct a more in-depth engagement campaign. Including stakeholder events and engagement activities making use of online/digital platforms.

3. **SESTRAN RESPONSE OVERVIEW**

3.1 SEStran welcomes this opportunity to support the development of the National Transport Strategy, and will continue to provide key evidence and best practice examples. Through reference of the SEStran Regional Transport Strategy and Delivery Plan 2017/18, we will highlight SEStran's key priorities and projects. Such as the SEStran Thistle Assistance Card, BusTrackerSEStran and TripshareSEStran.com and the impact they have on our Regional transport

network. As mentioned within the Early Engagement response, SEStran commented that there needs to be change in how we understand transport and its relationship to the achievement of the Government's Economic Strategy and its central focus of delivering Inclusive Growth. As referenced, the Royal Society of the Arts Inclusive Growth Commission final report showcases the need for an integrated economic and social policy highlighting the need for place-based strategies to deliver inclusive growth across the UK. There should also be a clearer relationship between the planning of transport infrastructure/services and planning for all terms of infrastructure, physical and social.

3.2 SEStran, in its consideration of a Model 3 proposal, has previously observed that there is no doubt that economies of skill and scale in Scotland could potentially be gained by integrating some currently separately managed and governed services under one roof, joining together with other areas to commission or share larger scale services and staff where appropriate, and aggregating functions into regional shared support services. Such a structural challenge will be a challenge and an opportunity to build in resilience to public services, it may also be a necessity if, politically, local communities wish their representatives to protect services of public interest in the current fiscal context.

4.   CONCLUSION/RECOMMENDATIONS

4.1 Evidence must be submitted by the 14th of July 2017. The paper seeks to invite comment from Chief Officers, which will be incorporated into a response from SEStran and comments are invited by 23rd June.

Lisa Freeman
Strategy and Projects Officer
18th May 2017

Appendix 1 – Call for Evidence Questions

8.e Appendix 1

Economic growth and inclusive growth

1. What does evidence say about the ways in which transport can best support economic growth and do so in a cost-effective way? What are the implications of this in terms of inclusive economic growth (economic growth that distributes its benefits fairly across society)?

Transport mode choice and demand

2. To what degree are travel behaviours such as mode choice (including freight transport) and demand amenable to intervention? Which policy interventions change behaviours or demand and why? What does research tell us about the types of interventions that fail to change behaviours, particularly over the long term?

Environmental impact of transport

3. What does evidence suggest the most effective means of reducing transport's local (air quality) and global (climate change) emissions are? How have other countries reduced the environmental impact of transport and to what degree are any such measures also likely to be successful in Scotland? When are routes to reducing carbon emissions from transport also consistent with tackling air quality issues, and when are they not?

Active travel (e.g. walking and cycling)

4. What does the evidence suggest are the best ways to achieve improved health outcomes from active travel? What are the most important constraining factors to the uptake of active travel that can be targeted by policy in the Scottish context?

Safe and resilient* transport

5. What are the current and emerging risks to the safe operation and resilience of Scotland's transport network and what does evidence say about the ways in which these risks can be best managed? What does evidence tell us about what adaptation measures (in response to environmental, or other, changes) may be effective to respond to changing pressures on the network?

Transport governance

6. What does evidence say the most effective forms of governance and institutional arrangements around transport might be, in order to meet the Scottish Government's strategic objectives?

* the capacity to plan for, respond to and recover from negative impacts

7. In the next 20 years, what will be the most significant changes and new technologies influencing the way people live, work and consume that will impact on travel behaviour and demand? Are there examples of places that have already experienced some of this change and therefore provide evidence on how travel behaviour might change in Scotland? How can uncertainties about the future be robustly considered in transport strategy development?

20mph Private Members Bill

1.   INTRODUCTION

1.1   This paper presents the consultation on a Private Members Bill to change the default speed limit in built up areas across Scotland from 30mph to 20mph.[1] The proposed Bill will reset the current default national speed limit from 30mph to 20mph for restricted roads. Roads that are close to housing, walkways or busy public spaces will automatically have the current 30mph speed limit replaced with a 20mph limit. This change will replace the current TRO process local authorities follow to create 20mph roads.

2.   Consultation

2.1   The bill proposal set out in this consultation is to change the default speed limit from 30mph to 20mph on restricted roads (covering the vast majority of residential and built-up areas). Section 81(1) of the Road Traffic Regulation Act 1984 sets the current 30mph default speed limit. Powers over the national speed limit were devolved to the Scottish Parliament under the Scotland Act 2016. Under this Bill all restricted roads currently designated 30mph by default will be lowered to 20mph.

2.2   The arguments set out for 20mph speed limits can be considered in the broad categories of safety, health and reduced emissions.
- Safety - A reduced speed limit will not only reduce the likelihood of accidents occurring but if they do occur it will reduce the severity of the accident and will lower the chances of those involved being killed.
- Health - Lowering speed limits will help encourage 'active travel' where people choose to travel by foot, bicycle etc. An increase in mobility and active travel will have clear health benefits for all involved.
- Reduced emissions - Both petrol and diesel cars produce significantly less PM10 in 20mph limits than when in 30mph limits.

2.3   There are also implications for equality. The consultation document highlights a report by Fife Council reviewing their rollout of 20mph areas which noted the fact that SIMD (Scottish Index of Multiple Deprivation) areas show a greater reduction in casualties when compared to non-SIMD areas (34% vs 20%). People in lower incomes are less likely to drive to work or for leisure activities. As such, the bill proposal can have a greater positive impact on those on lower incomes.

2.4   The consultation[i] closes in August and Chief Officers are invited to discuss the proposal and the merits of collaborating on a SEStran response and the impact these proposals could have on the objectives and targets of the Regional Transport Strategy

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[1] https://greens.scot/sites/default/files/20mph%20Consultation%20paper.pdf

3. CONCLUSION / RECOMMENDATIONS

3.1 The paper seeks to invite comment on the current 20mph Private Members Bill consultation and agreement that SEStran should respond to the consultation.

Catriona Macdonald
Projects Officer
18th May 2017

Appendix 1 - Consultation Questions

Appendix 1 – List of Consultation

Questions Aim and approach

1. Which of the following best expresses your view of the proposal to replace the current 30mph default speed limit on restricted roads with a 20mph limit?

☐ Fully supportive

☐ Partially supportive

☐ Neutral (neither support nor oppose)

☐ Partially opposed

☐ Fully opposed

☐ Unsure

Please explain the reasons for your response.

2. Could the aims of this proposal be better delivered in another way (without a Bill in the Scottish Parliament)?

☐ Yes (if so, please explain below)

☐ No

☐ Unsure

Please explain the reasons for your response.

3. What do you think would be the main advantages, if any, of the proposal?

4. What do you think would be the main disadvantages, if any, of the proposal?

5. What measures do you think would be needed to maximise compliance with the new national 20mph speed limit on restricted roads? (Examples might include advertising, signage or police enforcement.)

Financial implications

6. Taking account of both costs and potential savings, what financial impact would you expect the proposed Bill to have on:

   (a) the Scottish Government

☐ Significant increase in cost

☐ Some increase in cost

☐ Broadly cost-neutral

☐ Some reduction in cost

☐ Significant reduction in cost

☐ Unsure

(b) Local authorities

☐ Significant increase in cost

☐ Some increase in cost

☐ Broadly cost-neutral

☐ Some reduction in cost

☐ Significant reduction in cost

☐ Unsure

(c) Motorists

☐ Significant increase in cost

☐ Some increase in cost

☐ Broadly cost-neutral

☐ Some reduction in cost

☐ Significant reduction in cost

☐ Unsure

(d) Other road users and members of the public

☐ Significant increase in cost

☐ Some increase in cost

☐ Broadly cost-neutral

☐ Some reduction in cost

☐ Significant reduction in cost

☐ Unsure

(e) Other public services (e.g. NHS, Fire and Rescue Services etc)

☐ Significant increase in cost

☐ Some increase in cost

☐ Broadly cost-neutral

☐ Some reduction in cost

☐ Significant reduction in cost

☐ Unsure

Please explain the reasons for your response.

7. Do you believe there will be any other benefits to reducing the speed limit from 30mph to 20mph?

Equalities

8. What overall impact is the proposed Bill likely to have on equality, taking account of the following protected characteristics (under the Equality Act 2010): age, disability, gender re-assignment, marriage and civil partnership, pregnancy and maternity, race, religion and belief, sex, sexual orientation?

☐ Positive

☐ Slightly positive

☐ Neutral (neither positive nor negative)

☐ Slightly negative

☐ Negative

☐ Unsure

Please explain the reasons for your response.

9. Could any negative impact of the Bill on equality be minimised or avoided? Sustainability of the proposal

10. Do you consider that the proposed bill can be delivered sustainably, i.e. without having likely future disproportionate economic, social and/or environmental impacts?

☐ Yes
☐ No
☐ Unsure
Please explain the reasons for your response.

General

11. Do you have any other comments or suggestions on the proposal to establish a 20mph default speed limit on restricted roads?

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i https://greens.scot/sites/default/files/20mph%20Consultation%20paper.pdf

RTS – Update by Partner Authorities

1. INTRODUCTION

1.1 This paper seeks an update from Chief Officers of each council on their work to deliver outcomes surrounding the four objectives of SEStran's Regional Transport Strategy (RTS) (economic growth, improving accessibility, and delivering environmentally sustainable outcomes whilst promoting healthier choices). Chief Officers will be aware that previously their was a regular update item on past agendas and it is proposed that this is introduced with an update on significant items at each meeting and a submission once a year of written information on progress on delivering the statutory RTS for inclusion in the SEStran Annual Report.

2. RTS OBJECTIVES

2.1 Economy – to ensure transport facilitates economic growth, regional prosperity and vitality in a sustainable manner.

2.1.1
- To maintain and improve labour market accessibility to key business/employment locations, from all localities and communities.
- To maintain and improve connectivity to the rest of Scotland, the UK and beyond.
- To support other strategies, particularly land-use planning and economic development.
- To reduce the negative impacts of congestion, to improve journey time reliability for passengers and freight.

2.2 Accessibility – to improve accessibility for those with limited transport choice (including those with mobility difficulties) or no access to a car, particularly those living in rural areas.

2.2.1
- To improve access to employment;
- To improve access to health facilities;
- To improve access to other services, such as retailing, leisure/social and education;
- To influence decisions on the provision of public transport to make it more affordable and socially inclusive.

2.3 Environment – to ensure that development is achieved in an environmentally sustainable manner.

2.3.1
- To contribute to the achievement of the UK's national targets and obligations on greenhouse gas emissions;
- To minimise the negative impacts of transport on natural and cultural resources
- To promote more sustainable travel;
- To reduce the need to travel;

- To increase transport choices, reducing dependency on the private car.

2.4 Safety and Health – to promote a healthier and more active SEStran area population.

2.4.1
- To improve safety (accidents) and personal security;
- To increase the proportion of trips by walk/cycle;
- To meet or better all statutory air quality requirements;
- To reduce the impacts of transport noise.

2.5 Corporate – to continually improve performance to achieve greater efficiency and effectiveness in SEStran service delivery.

2.5.1
- To deliver best value;
- Seek to reduce our carbon emissions & positively influence other regional stakeholders;
- To deliver robust data governance and practice;
- To promote the delivery, monitoring and mainstreaming of our Equality Outcomes.

3. CONCLUSION / RECOMMENDATIONS

3.1 Chief Officers are invited to agree to the introduction of a standing verbal item on each meeting and to provide written updates on any actions that are seeking to progress the four main objectives of the RTS for inclusion in the SEStran annual report and monitoring of the delivery of the RTS.

Catriona
Macdonald
Projects Officer
18th May 2017

Projects Update/ EU Update

1. INTRODUCTION

1.1 The report provides the Board with an update on key aspects of projects and appraisal undertaken in the last quarter and covers the latest position on the process for the UK leaving the EU.

2. REAL TIME PASSENGER INFORMATION

2.1 Since appointing the marketing specialist 181 digital display screens have been distributed. Locations include TISO outdoor shops, Tesco Bank and Napier University. Further marketing of the screens, along with a wider promotion of SEStran's other initiatives has led to the Partnership Director appointing Keith Fisken on a temporary basis for 6 months, with a possible further extension.

2.2 The acquisition of 'Ticketer' ticket machines with associated back office technology, funded jointly by the ERDF challenge fund and SEStran, is now complete and 6 operators are now equipped with hardware and software necessary to allow them to be part of BustrackerSEStran. Albeit that the scheduled bus time data is now in the system, Ineo Systrans have yet to complete the necessary interface between the existing system and Ticketer, to allow the additional operators live times to be broadcast. This is despite assurances from them that it would be complete by the end of the last financial year.

3. SESTRAN THISTLE CARD – APP DEVELOPMENT UPDATE

3.1 The Thistle Card and App is designed to replicate the original SEStran Thistle card with an initial page for the customer to input their protected characteristic using the same previously agreed symbols. The second page displays the information to be shown to the bus driver.

3.2 The new Thistle Card App was added to the app store in a soft launch to gain feedback. SEStran has now incorporated the feedback received from stakeholders to date, and would now like to encourage members to circulate the app through their own communications channels.

3.3 Since the last SEStran Partnership Board, SEStran conducted promotional campaigns on Forth 1 and Forth 2, which has led to a sustained increase in take up of the card. Notably, East Lothian Council, which has requested an additional 3000 Thistle Cards for distribution from public buildings.

3.4 In addition to this, the Thistle Card and App have been nominated for awards in both the Scottish Transport Awards and the Chartered Institute of Highways and Transport awards. Both award nominations recognise the

Thistle Cards contribution in improving access to public transport for those with a disability or mobility need.

4.   Sustainable and Active Travel Grant

4.1   The SEStran Sustainable and Active Travel Grant Scheme aims to support and encourage Travel Planning and Active Travel measures. SATGS can be used to support physical measures implemented as part of a Travel Plan and provide support for organisations actively developing a Travel Plan.

4.2   Grants have in the past ranged from £500 to £25,000 and normally up to a maximum of 50% of any proposal, although in exceptional circumstances higher awards may be made. However, other options for the use of this fund will be considered in 2017/18.

5.   Regional Cycle Network Grant Scheme (RCNGS)

5.1   SEStran operates the Sustrans funded Regional Cycle Network Grant which seeks to encourage the development of the Cycle Network throughout the Region, in particular cross-boundary infrastructure.

5.2   The RCNGS can be used to support feasibility studies, design work, the development of infrastructure and monitoring, as well as supporting innovation and public engagement. The maximum limit for grant funding in previous years was £25,000 but this has now been removed to encourage a broader range of applications. SEStran is currently seeking new projects for funding in the new financial year.

5.3   In anticipation of a reduced level of expenditure in the RTPI project, as a result of a reduced need for further development work, it is proposed to increase the budget under the heading of Sustainable and Active Travel Grant Schemes and look to achieve best value for investment by seeking to match fund potentially larger schemes in combination with the Regional Cycle Network Grant Scheme and EU funding.

6.   European Projects Update

6.1   **SocialCar'** aims to integrate public transport information, car-pooling and crowd sourced data in order to provide a single source of information for the traveller to compare multiple options/services.

6.2   As part of the Communications Work Package for SocialCar, SEStran hosted a Local Transport Hackathon (or Hacking Marathon) on the 4th-7th of May. This Hackathon, in partnership with Product Forge, saw 8 teams of multi-disciplined data and design experts create digital solutions for a range of transport issues. SEStran used this event to promote the objectives of SocialCar and assist in the recruitment of test users for Test C of the SocialCar Project. Highlights from the event can be found here: https://www.youtube.com/watch?v=pXNsf5QE7QY

The last SocialCar General Assembly meeting was held in Budapest on the 10th-12th of March. This meeting focused on the 3 test phases of the SocialCar app and the future Business Case for the app's legacy.

6.3   **'SHARE-North'** addresses the concept of 'Shared Mobility' and looks at the development, implementation and promotion of Car Clubs, Bike Sharing and Car Sharing. The planned living labs will integrate modern technology with activities to support changes in mobility behaviour. The objectives are: resource efficiency, improving accessibility (incl. non-traditional target groups), increased efficiency in the use of transport infrastructure, reduction of space consumption for transport, improving quality of life and low carbon transport.

6.4   The last Consortium Meeting was held on the 19th - 21st April. The meeting focused on the last reporting period of the project. Members also shared best practice on the promotion of shared mobility and travel planning. WYCA (West Yorkshire Combined Authority) is to share experience on the promotion of Travel Plans to businesses with SEStran moving forward.

In addition to this, SEStran are aiming to hold a future focus group on Car Clubs and Shared Mobility in rural areas. Further details of this will be circulated to the Board once content and dates have been set.

6.5   **REGIO-MOB** aims to promote "learning, sharing of knowledge and transferring best practices between the participating regional and local authorities to design and implement regional mobility plans (or Regional Transport Strategies) bearing in mind the stakeholders with regional relevance and contributing to the sustainable growth of Europe." Accordingly this project provides an opportunity for SEStran to attract European funding towards the necessary development of the RTS and to learn and share knowledge with other cities throughout Europe. The project will attract 85% funding from Europe.

6.6   SEStran held a Stakeholders Meeting in Edinburgh on 17th May which discussed the best practices that have been presented so far from Rome, Italy and Western Macedonian Region of Greece. The last REGIO-MOB consortium workshop was held in Llubljana, Slovenia on the 23rd to 25th May. The Slovenian partners presented their two best practices; Park and Rides and Sustainable Urban Mobility Plans (SUMPS). The next workshop will be held in Krakow, Poland on 20th to 22nd June and will be attended by SEStran Officers and two representatives from TRI Napier.

7.   **Opportunities for New European Projects**

7.1   **Interreg, North West Europe**

SCRIPT (Sustainable Carbon Reduction in Port Transport)
It is well understood that transport, in general, is a major contributor to carbon emissions totals and freight transport's contribution is significant; with a concentration around ports and their hinterland as a result of the

necessary traffic required to transfer goods to and from the ports.

7.1.1 SEStran and the project partners' objective is to engage with ports and freight transport operators and their supply chains in selected estuarine and inland waterway locations within the North-West Europe area to reduce transport related Greenhouse Gas emissions. The focus will be on port hinterlands and in main routes to and from ports. A series of pilot studies is proposed (e.g. using intelligent transport systems (ITS) to improve flows at congested junctions and mode transfer from road to sea) to test options with a view to sharing knowledge and effecting long-term improvements. The Netherlands, Germany, Belgium are all represented in the project, in addition to SEStran and Peel Ports, bringing a variety of inland and estuarine ports located in different environments.
Stage one of a two stage process was submitted on 18th May. Included in the proposal is that SEStran will take on the role of lead partner.

7.2   Interreg, North Sea Region

7.2.1 SURFLOGH (Sustainable Urban Logistics Hubs)
The original SURFLOGH project bid, aimed at improving the role of logistic hubs in the network of urban logistics in the North Sea Region, submitted in the previous call last year, was unsuccessful. However, led by the Province of Drenthe in the Netherlands, the partnership and bid has been re-cast with SEStran remaining as a full partner along with Napier University's Transport Research Institute (TRI) and re-submitted at the beginning of February. A response to the bid is expected in June 2017.

7.2.2 MaaSRural (Mobility as a Service in Rural Areas) The central aim of this project is to demonstrate the viability of Mobility as a Service (MaaS) as a sustainable transport solution including first and last mile transport in rural areas in the North Sea Region. MaaS stimulates the use of more sustainable transport modes, reduces car use and emissions caused by transport. MaaS is cost efficient and demand driven and can prevent social inclusion of specific groups strongly depending on decreasing public transport services.

Proposed Project Deliverables:

1. Study the demand for MaaS services, on Maas user groups and on tailor-made MaaS offer.

2. Develop and validate business models per user group;

3. Carry out well-documented MaaS pilots in rural areas involving:
   - Car users to reduce car use
   - Specific groups to prevent social exclusion
   - As MaaS aims to increase car sharing and reduce car ownership this might result in more use of zero emission vehicles

4. Develop a handbook for the roll-out of MaaS in rural areas in the NSR, based on the gained knowledge during the MaaS pilots;

5. Set-up a collaborative platform for authorities of rural areas in the NSR to share gained knowledge of the functioning, benefits and roll-out of MaaS in rural areas.

It is proposed that the MaaSRural bid will be submitted to the Interreg North Sea Region Programme in June 2017

7.3   Horizon 2020

7.3.1   I-MAsS (Inclusive Mobility As a Service)
In partnership with Leeds University, Institute for Transport Studies and CENIT in Spain, SEStran is currently pursuing a bid to Horizon 2020. The consortium for this project now includes 8 academic/research institutes, 5 cities/regions and approximately 10 demonstration projects in total. SEStran's role in this project will be a demonstration project in partnership with Young Scot, called yTravel. yTravel will aim to develop and deliver innovative ways to provide inclusive mobility and accessibility solutions to all young people aged 16-25 years living in the South East of Scotland, based on co-produced identification of needs and innovative solutions. Unfortunately, although the I-MAsS project passed all of the threshold assessment criteria, the bid was unsuccessful.

7.3.2   INSTINCT
This bid in partnership with Napier's TRI which sought to address the long-standing problem of the integration of transport infrastructure and urban development policies was submitted. It was to focus on the development and take-up of practical measures by municipal, regional and national governments, and public transport companies and organisations, to improve this integration and so deliver more sustainable transport and spatial development on the ground. It was envisaged that this in turn would increase the attractiveness and convenience of sustainable modes of transport (public transport, cycling and walking) and at the same time reduce transport-related energy use and greenhouse gas emissions. Unfortunately the bid was rejected.

8.   EU Exit

8.1   The Article 50 negotiation process has been formally initiated with much media noise about so called "hard or soft Brexit". Ultimately it is a negotiation process with each side, or indeed all sides of the 28 counties involved, looking for the best out-come for themselves.

9.   Scottish Transport Awards 2017

9.1   Now in its 15th year, the prestigious Scottish Transport Awards 2017 brings together the transport community to recognise and celebrate industry

achievements across Scotland.

Supported by the Scottish Government and Transport Scotland, this year's ceremony will be held at the Radisson Blu Hotel in Glasgow on 15th June 2017.

Roy Brannen, Chief Executive, Transport Scotland on the Scottish Transport Awards:

 "These Awards are a great opportunity to recognise the contribution by our professionals in improving and enhancing Scotland's transport networks. Everyday Transport Scotland sees the effort, collaboration and results from everyone involved in providing a successful journey for Scotland's travelling public, and I am delighted to be asked to take on the task of helping to judge and identify these nominated schemes that showcase the best approach."

9.2   SEStran has put forward four entries for the awards, as follows:

- **BustrackerSEStran**, with an emphasis on the digital screens element.

- **Thistle Card**

- **X-Route** To remind the Board, this involved groups of young people, from various socio-economic backgrounds across the south east of Scotland, discussing the barriers they face when considering using active travel as a means of transport. The report was conducted using Young Scot's Co-design method, where young people are involved much earlier in decision making process through a highly participative approach developing informed insights, ideas, recommendations and solutions for service development, policy and practice.

- **REGIO-MOB**, which is described above and was entered under the category "Transport Team / Partnership of the Year", highlighting he international partnership and focus on sustainable transport.

10.   Recommendations

10.1   The Board is invited to:

- Note the content of the report;
- With reference to Item 5.3, as recommended by the Performance & Audit Committee (P&A), approve grant awards for City of Edinburgh Council for £8000, St Andrews University for £3917.50, and Edinburgh and Lothians Greenspace Trust for £65,000;
- With reference to Item 5.4, as recommended by the P&A, approve a contribution from SEStran of £40,000 to the Diaches Braes project;
- Agree to focus SEStran's two grant schemes (STATGS & RCNGS) on achieving greater value for money by seeking to attract EU match

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funding for investment in potentially larger projects.

- Agree any underspend evident at the end of the current year be carried forward into the financial year 2017/18 and assigned to the Sustainable & Active Travel Grant Scheme.

Jim Grieve
Head of Programmes
18th May 2017

Policy Implications	Change of emphasis on SEStran's two grant schemes by potentially combining funds to seek larger levels of EU match funding.
Financial Implications	As detailed in this report, particularly the sections highlighted in the 'Recommendations'.
Equalities Implications	Promotional campaigns underway to attract more users to the Thistle Card and to public transport.
Climate Change Implications	RTPI promotional campaign seeks to increase usage of Bus services across the SEStran area.

Service Level Agreements

1. **INTRODUCTION**

1.1 The South East of Scotland Transport Partnership receives specialist support and advice via Service Level Agreements with constituent councils. City of Edinburgh Council provide financial support and services, Falkirk Council provide Human Resources advice and services, and Fife Council provide clerking services and legal advice to the Partnership. In late March 2017, Fife Council advised that they could only extend the SLA with SEStran until September 2017, this is due to internal re-organisation and diminishing resources with the council, outsourcing of resource can't continue and there is a need to focus on core Council business. City of Edinburgh and Falkirk Councils have accepted extensions to their SLAs until May 2018.

2. **Replacement Options**

2.1 The Regional Transport Partnerships (Establishment, Constitution and Membership) (Scotland) Order 2005 makes provision for services by others, as does the Partnership standing orders, but neither require a constituent council to provide those services under an SLA. Fife have provided Secretary and Legal Services since the statutory beginning of the Partnership. The Partnership Director has in early April 2017 written to all the other 7 constituent councils to seek any expressions of interest in providing clerking and legal services from October 2017. At time of writing, only Falkirk Council have responded to say they don't have the capacity to provide further services. In consultation with the Secretary, Officers have also sought to scope out the capacity for external training on the clerking services to provide an in-house situation. In addition, other public sector bodies have been approached to see if they could provide clerking services under an SLA, leaving the provision of legal advice on an ad-hoc basis with recall to a framework agreement or similar arrangement with external legal advisers. If this is the outcome required, Fife Council have offered to help draft the necessary documentation over the Summer. It would be welcome if Chief Officers, could seek further clarity from their relevant service department, if they could provide clerking and legal services to SEStran under an SLA from October 2017 onwards.

3. **CONCLUSION / RECOMMENDATIONS**

3.1 The paper asks Chief Officers to note the forthcoming change of SLA provider to SEStran for clerking and legal services, seeking their support in scoping opportunities for other councils to provide these services and recognises the long service provided by Fife Council to the Board.

George Eckton
Partnership Director
18th May 2017

MaaS Scotland Membership

1. INTRODUCTION

1.1 The report provides Chief Officers with further information on a membership proposal from a new organisation MaaS Scotland, where SEStran could join and provide representation for all 8 constituent councils.

2. MASS Scotland

2.1 The Scottish MaaS Alliance has emerged over the last 3 years and SEStran has had involvement with the Programme Director through our EU mobility sharing projects. In March 2017, Scottish Enterprise supported the formalisation of the Alliance under the management of Technology Scotland, partnered with ScotlandIS, and has been renamed MaaS Scotland in the process. The next step in this procedure is to create a structure that will support members in growing their market, increasing their profitability, and serving their communities.

2.2 In terms of growing the market and creating partnerships between a variety of sectors, MaaS Scotland have created a public sector category of membership. As members, SEStran councils would have the opportunity to lead or partner in developing Phase 1 Projects within Scotland, providing an opportunity to secure the potential of MaaS for your communities. This will also allow you to build important national and international networks that will support your objectives in the coming years.

2.3 Details of membership benefits are available on the website at www.mass-scotland.com ,however, SEStran understands that on the basis of being a public sector body the cost to join would be £500 for SEStran and would have the following benefits:

- **Membership of European MaaS Alliance** through MaaS Scotland group membership. Includes access to EU MaaS networks, latest news and key industry reports.
- **Membership of Technology Scotland and ScotlandIS –** membership of MaaS Scotland allows access to all activities and benefits provided by our host organisations.
- **Priority access and discounts for all MaaS Scotland events** organised through Technology Scotland and/or ScotlandIS.
- **Access to new markets and projects** in the UK, Europe and further afield and access to other MaaS partnerships; *e.g.* Travel Spirit (Manchester) and West Midlands/Whim.
- **Priority access to Phase 1 MaaS projects** in Scotland and elsewhere. This is a pre-procurement phase. We are currently assessing 7 MaaS phase 1 projects that we will present to members.

- **Access to funding organisations –** for example Scottish Government, Scottish Enterprise, Innovate UK, Scottish Councils and City Deals and other MaaS networks both national and international.
- **Improve links to other companies and key stakeholders** including Regional Transport Partnerships, Innovate UK/KTN, the Transport Catapult and others.
- **Access to information and latest news** on MaaS developments globally, including key industry collateral through Technology Scotland and partner organisations.
- **Improving your profile within the MaaS Community** by becoming part of an exciting new network that promotes networking and information exchange.

3. CONCLUSION / RECOMMENDATIONS

3.1 It is recommended to Chief Officers that SEStran join MaaS Scotland on behalf of our constituent councils for an initial year.

George   Eckton   Lisa   Freeman   Catriona Macdonald
Partnership Director   **Strategy & Projects Officer**   **Projects Officer**
18th May 2017

Appendix 1 - MaaS Scotland Brochure

Why Join?

1 Membership of EU MaaS Alliance
...through MaaS Scotland group membership. Includes access to EU MaaS networks, latest news and key industry reports.

2 New Markets and Projects
MaaS Scotland membership gives companies access to new markets and projects in the UK, EU and beyond

3 Priority Access to Phase 1 MaaS Projects
Priority access to Phase 1 MaaS projects in Scotland and elsewhere

4 Links to Key Stakeholders
Including local councils, central government, regional transport partnerships, Innovate UK, the Transport Catapult, KTN and others

5 Events and networking
Priority access and discounts to all MaaS Scotland events organised through Technology Scotland and/or ScotlandIS

6 Information and News
Access to the latest information and news on MaaS globally, including key industry collateral

7 Full Membership of Host Organisations
Free, full membership of Technology Scotland and ScotlandIS through MaaS Scotland, including all activities and benefits
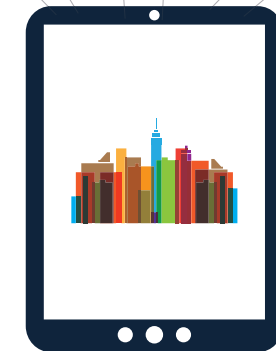
Sign up now

MaaS Scotland

Join MaaS Scotland now

To sign up visit:

www.maas-scotland.com

or get in touch at:

info@maas-scotland.com

MaaS Scotland

www.maas-scotland.com
info@maas-scotland.com
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What is MaaS?

Over the last decade, Mobility as a Service (MaaS) has emerged as the dominant force in mobility development, driven not only by advances in technology and the way we use it, but also by people's needs and values.

With increasingly complex and fast-moving lifestyles, people want personalised services that are convenient, carefree and easy to use.

MaaS fulfils users' needs for mobility with a wide range of on-demand, tailor-made transport services.

With convenience in mind, MaaS brings all means of travel, transport providers and payment options together into one single service, giving customers instant access to all public transport, from trains and trams to buses and bikes.

Whether it's the office commute, visiting friends, or a spontaneous weekend away, MaaS will revolutionise your travel in the smartest way possible.

Our Vision

At MaaS Scotland, we believe in rethinking mobility in a way that is smarter, faster and greener than ever before.

Our aim is to work with companies and organisations to create the future of mobility, that is, the integration of various forms of transport into one single mobility service.

All over Scotland, our team is planning initiatives that will engage local councils, transport operators, service providers and end-users. By encouraging shared work and collaboration, we plan to drive Scotland's MaaS community to offer new and alternative ways to travel, address user needs and develop technological solutions.

The result will be the development of a thriving network here in Scotland and beyond, enabling a future of smart, efficient and sustainable mobility.

MaaS in Scotland

Scotland is in an excellent position to play an active role in the global development of MaaS. It has strong capability in ICT, energy and transport, the three key areas of MaaS. It also has a supportive government framework and the right characteristics in terms of scale and geography to develop and test MaaS ecosystems.

With an appetite from industry, strong existing capability and support from Scotland's leading technology trade associations, MaaS Scotland is now planning a range of initiatives to continue developing its national and international links, securing Scotland's future as one of the leading locations for the development of MaaS.

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