Scottish Government’s Draft Energy Strategy

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Director of Energy and Climate Change
1. A quiet revolution
2. Charting a new course
3. Scotland’s draft energy strategy
1. A quiet revolution

2. Charting a new course

3. Scotland’s draft energy strategy
Using the 1990-2014 inventory, Baseline was 77.257 MtCO$_2$e. 2014 was 41.886 MtCO$_2$e. This represents a 45.8% reduction from the Baseline Period to 2014.
Electricity generated (GWh) from renewable sources, Scotland, 2000-2015

Renewable Target Progress 59.4% in 2015

Renewable generation as a % of gross Consumption

Hydro, Wind, Bioenergy, Other, Renewable Target Progress

Scottish Government Rìaghaltas na h-Alba gov.scot
Electricity generation in 2015, Scotland and UK

- Scotland:
  - Pumped Hydro: 1%
  - Renewables: 42%
  - Oil: 2%
  - Gas: 4%
  - Coal: 17%
  - Nuclear: 35%

- UK:
  - Pumped Hydro: 1%
  - Renewables: 25%
  - Oil: 1%
  - Gas: 30%
  - Coal: 24%
  - Nuclear: 21%
1. A quiet revolution

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Charting a new course

Scottish Energy Strategy: The future of energy in Scotland

DRAFT CLIMATE CHANGE PLAN
The draft third report on policies and proposals 2017-2032

Climate Change (Scotland) Act 2009
2009 asp 12

CONTENTS

PART 1
EMISSIONS REDUCTION TARGETS

Scottish Government
Rìaghaltas na h-Alba
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Charting a new course – decarbonising

Emissions reduction trajectory

Using the 1990-2014 inventory, Baseline was 77.257 MtCO₂e
2014 was 41.886 MtCO₂e
This represents a 45.8% reduction from the Baseline Period to 2014

42% reduction by 2020
(44.809 MtCO₂e)

80% reduction by 2050
(15.451 MtCO₂e)
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Aims for energy policy

Scotland’s Draft Energy Strategy

‘Whole-system’ view
• Economic modelling, informing view of Scotland’s future energy supply and demand
• Integrated approach to heat, power and transport
• New 50% ‘all energy’ 2030 renewables target
• Renewed focus on energy efficiency and energy demand reduction

2050 energy transition
• Long-term plan, consistent with requirements of the Climate Change Plan
• Flexible to future changes in technology and patterns of energy use
• Managed transition of energy supply, post-nuclear

A smarter model of local energy provision
• Encouragement for new localised models of energy supply and use
• Enhanced role for local planning and local ownership
• New economic opportunities of energy storage and ‘smart’ energy solutions
‘Whole system’?

Final energy consumption

- Heat: 22%
- Transport: 25%
- Electricity: 53%

Scotland
Yearly pattern of energy use - Scotland
1) Transforming energy use

**Headlines**

- Scotland’s energy efficiency programme
  - Consultation on district heating regulations and local heat and energy efficiency strategies
  - Consultation on energy efficiency standards for private rented homes
  - Proposal for phased regulation and standards for existing buildings
  - Consultation on appropriate incentives to secure private investment
  - Review of energy performance of non-domestic buildings regulations

- Improved energy efficiency in manufacturing and industry

- Consumers, smart technology in the home, new retail models

- Low carbon transport
2) Meeting our energy supply needs

Headlines

- Increasing the generation of renewable and low carbon energy
  - 50% ‘all energy’ 2030 renewable target
  - Challenge to industry to invest ‘without subsidy’

- Exploring the role of new energy sources
  - Hydrogen demonstration at scale
  - Fracking consultation

- Highly regulated north sea oil and gas, a sector in transition

- Demonstration and commercialisation of CCS and CCU

- Increasing the flexibility, efficiency and resilience of the energy system
2) Meeting our energy supply needs

50% all energy target – 2030 scenarios

- High Renewable Electricity, Low Renewable Transport
  - Heat
  - Transport
  - Electricity
  - 50%

- High Renewable Electricity
  - Heat
  - Transport
  - Electricity
  - 54%

- TIMES
  - Heat
  - Transport
  - Electricity
  - 44%
3) Smart, local energy systems

Headlines

- Local energy plans
  - Area-based approach, drawing on best data on supply and use
  - Enhanced role for local authorities and city regions to deliver new local energy system investment
  - Consult on the development of a regulatory framework for local heat and energy efficiency strategies

- Supporting the demonstration of innovative projects
  - Substantial grant and finance support, e.g. through Low Carbon Infrastructure Transition Transition Programme (LCITP) and district heating loans

- Partnership between communities, private and public sectors
  - Shared ownership – half of new projects by 2020
  - Explore potential for a government owned energy company and a Scottish renewable energy bond