

SUSTAINABLE ENERGY, 26.10.16

Penny Cole (Broad Alliance Against Unconventional Gas Extraction), Nick Gott (Green Party), Callum Macleod (Our Forth - Portobello).

The meeting was chaired by David Somervell (Sustainability Adviser to Edinburgh University). Mark Ruskell (Green MSP) sent his apologies and stepped in, along with Penny Cole (Broad Alliance Against Unconventional Gas Extraction) and Callum Macleod (Our Forth - Portobello).

1. Presentation by Nick Gotts (RIC Edinburgh, Scottish Green Party Policy Committee and Energy Policy Review Group)

Renewable Energy for Scotland, and the Scottish Green Party

Outline

Disclaimer – I’m a late stand-in for Mark Ruskell MSP, and I’m not speaking *for* the Scottish Green Party, just giving some basic facts plus some of my own views.

- Context
- Current energy consumption and near-future trends in Scotland
- Current Scottish Green Party energy policy (and what needs changing)

Context

- Greenhouse gases, Anthropogenic Global Warming (AGW), ocean acidification
- Need for secure, affordable energy for all (35% of Scottish households are fuel-poor)
- Climate Change Act (Scotland) 2009
- Paris agreement enters into force in November: fine aspirations, very weak on action
- New Scottish Government Energy Strategy: 14 new pieces of legislation planned
- New Climate Bill at Holyrood:
 - Draft Climate Change Plan “3rd Report on Policy and Proposals”, January 2017
 - Consultation March-April 2017
 - Bill “later in this Parliament”

Current (2013) Energy Production and Consumption in Scotland

- Production:
 - 88% oil and gas
 - 73% of all primary energy exported
- Consumption:
 - 144 TWh in total – down 14.1% from 2005-7 (target was 12% down by 2020, but...)
 - 21% electricity, 54% heat, 25% transport
 - Excluding transport:
 - 41% of energy use is domestic

- 59% is industrial/commercial

Renewable Shares and 2020 Targets

	2014 share	2020 Target
Electricity	49.6%	100%
Heat	2.7%	11%
Transport	3.9%	0%
Total	13.1%	20%

Non-renewable electricity sources

- The majority of this is from the nuclear power stations at Hunterston and Torness.
- These are beyond their designed lifespan, and are not likely to last more than another 10 years.
- They have to be run at full power to be efficient
- The other big contribution is from the gas-fired power station at Peterhead
- The last Scottish coal-fired power station, Longannet, closed in 2016

Renewable Electricity Sources

Total 2015 Renewable Electricity Output 21,760 GwH, made up as follows:

- Wind 13,899 GwH
- Hydro 5806 GwH
- Biomass 1866 GwH, consisting of:
 - Landfill gas 503 GwH
 - Sewage sludge digestion 26 GwH
 - Other biomass 1337 GwH
- Solar Photovoltaic 187 GwH
- Marine (wave/tidal) 2 GwH

Source: DECC Energy Trends section 6, table ET_1.xls

Current Scottish Green Party Energy Policy: General Principles

We believe that sustainable energy policy should provide due regard to the total environmental, social and economic impact both on today's generation and generations to come. All people should have fair access to the energy they need to meet their basic requirements, whilst minimising the negative environmental impacts of energy provision and

maximising employment in the green economy. To achieve this, we will reduce Scotland's overall demand for energy to a sustainable level, and will obtain that energy from an integrated mix of non-polluting, renewable sources. Support will be provided to develop renewable electricity and renewable fuel for heating and transport, both nationally and for use within homes and communities.

Source: Policy Reference Document 2016-06-06

Current Scottish Green Party Energy Policy: Main Points (1)

- Strategic Energy Agency, and Strategic Plan of Resources
- Reducing demand
- Energy rationing: cap-and-trade system
- Ending fuel poverty:
 - National Retrofit Strategy,
 - living wage, citizen's income, reformed tariffs
 - tight regulation of suppliers
 - smart meters

Current Scottish Green Party Energy Policy: Main Points (2)

- Replacing fossil fuels:
 - renewable energy targets based on SEA
 - redirection of funding from nuclear into R&D for renewables especially transport and heat
 - Green Investment Bank
 - Bans on fracking, underground coal gasification, coal-bed methane
 - Moratorium on opencast coal (sustainable jobs needed for sustainable communities), new oilfields
- Decentralised and public supply network
 - Maximum local control, reform of planning system
 - Reduction of transmission losses
- Continued export of electricity

Current Scottish Green Party Energy Policy: Main Points (3)

- Phase out nuclear a.s.a.p.
 - No incineration of waste for power
 - No biofuels for transport
 - Reducing oil dependency
 - (Moratorium on new oil fields)
 - Work toward Zero Oil Import Target
 - Depletion protocol
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Scottish Green Party Energy Policy – Main Gaps

- Just Transition
 - 2016 manifesto promise to create 200,000 jobs in “sustainable industries”
 - Briefly mentioned in PRD under “Workers’ Rights”
 - *Not* discussed under “Energy”
- Specifics on how and when fossil fuel use will be reduced:
 - Especially considering nuclear phase-out
 - Intermittency of many renewable sources
 - Need to replace gas-fired heating of buildings
 - Need to replace petrol and diesel in road transport
- Returning energy generation to public/community ownership
- Behaviour change

Future Renewables: Electricity

- Onshore wind is still growing fastest
- Offshore wind, wave and tidal, biomass all have huge potential
- However, **intermittency** is the key problem
 - Storage: pumped hydro, batteries (including domestic, electric cars), other technologies
 - Larger and smarter grids
 - Demand management (domestic and industrial)

Future Renewables: Heat and Transport

- Heat:
 - Better insulation
 - Combined heat and power
 - Switch to electric heating
- Transport
 - Electric vehicles
 - Hydrogen?
 - Biofuels?
 - P2G, artificial photosynthesis?