

		Conservative	Green	Labour	Liberal Democrats	SNP
Key priorities		Brexit, schools, NHS, police	Environment, Brexit	Broad focus, Green Industrial Revolution	Brexit, climate emergency	Independence, Brexit, NHS
Net zero target		2050	2030	Energy: in the 2030s Food production: 2040	2045	Net zero all emissions by 2045 and carbon neutral by 2040
Generation	Targets	<p><b>40 GW of offshore wind by 2030</b></p> <p>'increasing' commitment to renewables.</p>	<p><b>100% renewable electricity by 2030</b></p> <p>70% of the UK's electricity from wind power by 2030.</p> <p>Support other renewables to provide remaining electricity supply by 2030.</p> <p>Solar panels and other forms of renewable generation for one million homes a year.</p> <p>No new nuclear</p> <p>Build more interconnectors</p>	<p><b>90% renewable electricity by 2030</b></p> <p>7,000 offshore turbines (roughly equates to 52 GW).</p> <p>2,000 onshore turbines (roughly equates to 6 – 9 GW).</p> <p>Enough solar to cover '22,000 football pitches' (capacity unclear).</p>	<p><b>80% renewable electricity by 2030</b></p> <p>Require all new homes to be fitted with solar panels.</p> <p>Build more interconnectors.</p> <p>£12bn over five years to support renewables.</p>	<p>Bring to market a £3bn portfolio of projects, including renewables, waste and construction.</p> <p>Decarbonise the gas grid.</p> <p>Opposing new nuclear.</p> <p>Reform the transmission charging regime.</p> <p>Press for the ditching of plans to quadruple VAT on homes solar.</p> <p>Allow onshore wind and solar to bid for CfD</p>
	Technologies	<ul style="list-style-type: none"> <li>▪ Offshore wind</li> <li>▪ Carbon capture and storage</li> <li>▪ Nuclear (fission and fusion)</li> <li>▪ Hydrogen from gas</li> </ul>	<ul style="list-style-type: none"> <li>▪ Wind</li> <li>▪ Solar</li> <li>▪ Geothermal</li> <li>▪ Tidal</li> <li>▪ Hydro</li> <li>▪ Energy storage</li> <li>▪ Interconnectors</li> <li>▪ Demand management</li> </ul>	<ul style="list-style-type: none"> <li>▪ Offshore/onshore wind</li> <li>▪ Solar PV</li> <li>▪ 'New' nuclear</li> <li>▪ Tidal</li> <li>▪ Storage</li> <li>▪ Interconnectors</li> </ul>	<ul style="list-style-type: none"> <li>▪ Wind</li> <li>▪ Solar</li> <li>▪ Interconnectors</li> <li>▪ Tidal</li> <li>▪ Wave</li> <li>▪ Energy storage</li> <li>▪ Demand response</li> <li>▪ Smart grids</li> <li>▪ Hydrogen</li> </ul>	<ul style="list-style-type: none"> <li>▪ Carbon capture, utilisation and storage</li> <li>▪ Wave</li> <li>▪ Tidal</li> <li>▪ Offshore wind</li> <li>▪ Onshore wind</li> <li>▪ Solar</li> <li>▪ Interconnectors</li> </ul>

Heat/Energy efficiency	Targets	<p>£9.2bn on energy efficiency in homes, schools and hospitals.</p> <p>Support creation of new kinds of homes that have low energy bills, and which support our environmental targets.</p> <p>Invest £6.3bn to improve the energy efficiency of 2.2m disadvantaged homes.</p> <p>£3.8bn Social Housing Decarbonisation Scheme which will focus on insulation for 2 million social homes.</p> <p>£2.5bn Home Upgrades Grants which will replace boiler, provide insulation and replace energy systems for 200k homes.</p> <p>The grant will cover costs up to £12k and apply to fuel poor households, both private and social, with poor energy efficiency.</p>	<p>Insulate every home that needs it by 2030.</p> <p>Improve one million existing homes and other buildings a year to above EPC A.</p> <p>Ensure all 8m rented homes are A rated for energy efficiency or as close as possible by 2030.</p> <p>All buildings built by private developers are built to Passivhaus standard or equivalent.</p> <p>Manufacturers required to manufacture only the most energy efficient appliances.</p>	<p>50% renewable heat by 2030.</p> <p>Upgrade all of the UK's 27m homes to the highest energy efficiency standard.</p> <p>Reduce the average household energy bill by £417 per household per year by 2030.</p> <p>Zero-carbon homes standard for all new homes.</p>	<p>Zero-carbon heating by 5<sup>th</sup> year of parliament.</p> <p>10yr programme to insulate all homes by 2030.</p> <p>All new homes and non-domestic buildings to be built to a zero-carbon standard, by 2021, raising to Passivhaus standard by 2025.</p> <p>£6bn/year investment on insulation and heating.</p> <p>Cut energy bills, end fuel poverty by 2025.</p> <p>Free retrofits for low-income homes.</p> <p>Graduated Stamp Duty Land Tax by energy rating of property.</p> <p>Reduce VAT on home insulation.</p>	<p>From 2024, all new homes must use renewable or low carbon heat.</p> <p>Tax incentives to enable people to make the switch to low carbon heating more affordable.</p> <p>Reduction in VAT on energy efficiency improvements in homes, ending the Treasury's 20% tax.</p>
	Technologies	Nothing stated	<ul style="list-style-type: none"> <li>▪ Heat pumps</li> <li>▪ Solar thermal</li> <li>▪ Geothermal</li> <li>▪ Biomass</li> </ul>	<ul style="list-style-type: none"> <li>▪ Heat pumps</li> <li>▪ Hydrogen</li> <li>▪ Solar hot water</li> </ul>	<ul style="list-style-type: none"> <li>▪ Heat pumps</li> <li>▪ Passivhaus</li> <li>▪ Piloting projects to determine the best future mix of zero-</li> </ul>	Nothing stated

			<ul style="list-style-type: none"> <li>Passivhaus</li> <li>Stored heat technologies</li> <li>District heat networks</li> </ul>	<ul style="list-style-type: none"> <li>District heat networks using waste heat</li> </ul>	carbon heating solutions	
Transport	Date/target	Consulting on the earliest date to phase out the sale of new conventional petrol and diesel cars.	End the sale of new petrol and diesel fuelled vehicles by 2030.	Ending new sales of combustion engine vehicles by 2030.	All new cars are electric by 2030.	Campaign UK government to bring forward plans to move to electric vehicles to match the Scottish target of 2032.
	Infrastructure	<p>[Investment in first Budget includes] EV infrastructure including a national plug-in network; and Gigafactory; and clean energy.</p> <p>Invest in greater public transport and electric buses.</p> <p>£1bn on completing a fast-charging network to ensure that everyone is within 30 miles of a rapid electric vehicle charging station.</p>	<p>Spend £2.5bn a year on new cycleways and footpaths.</p> <p>Encourage public transport over cars.</p> <p>New infrastructure for electric coaches across the country.</p> <p>Electrifying all the railways lines that connect cities.</p> <p>Stop building new runways and all increased road capacity.</p> <p>Network of EV charging points across the county by requiring their construction through the planning system and encouraging the private sector to deliver them.</p>	<p>Investment in three new gigafactories and four metal reprocessing plants.</p> <p>Investment in electric vehicle charging infrastructure and in electric community car clubs.</p>	<p>Reform vehicle tax.</p> <p>Cut VAT on EVs to 5%.</p> <p>Increase rate of installations of charging points.</p>	<p>Invest £500m in improved bus priority infrastructure.</p> <p>Reduce emissions from Scotland’s railways to zero by 2035.</p> <p>Improved connections between Scotland and England, to reduce domestic flying.</p> <p>£17m loan funding and diesel scrappage scheme to help people buy ULEVs.</p> <p>Make Highlands and Islands the 1<sup>st</sup> net zero aviation region by 2040. Trials of low or zero emission flights starting in 2021.</p> <p>Re-design vehicle and tax incentives such as reduced VAT on bicycles and incentives to use ULEVs</p>

Misc

Moratorium on fracking unless the science shows categorically that it can be done safely.

Introduce the Office for Environmental Protection with legal targets including for air quality.

Focus on plastic pollution and recycling.

Ban fracking

Prepare for the rapid decommissioning of North Sea oil rigs and the phasing out of the UK's remaining coal plants and coal mines.

Deploy CCS on the manufacturing of iron, steel and cement.

Ban advertising of flights and introduce frequent flyer levy.

Double the capacity of the electricity networks.

Apply a carbon tax on fossil fuel imports and domestic extraction.

Remove subsidies to oil and gas industries.

Invest £2bn/yr to help people through the transition to a low carbon economy.

Ban fracking

Bring network companies and suppliers back into public ownership.

Windfall tax on oil companies.

Retraining and providing new jobs for energy workers.

Ban fracking

Ensure NIC, National Grid, Ofgem and Crown Estate work together to deliver net zero objective.

Implement G7 pledge to end fossil fuel subsidies by 2025.

End UK Export Finance for all fossil fuel related activities.

Support CCS for cement and steel production.

Create a Green Investment Bank.

Just Transition funding for areas negatively affected.

Statutory duty on all LAs to produce a zero-carbon strategy – devolve powers and funding to enable this.

Set a binding EU-wide net zero target of 2050.

Refuse to enter trade agreements with countries that have policies counter to the Paris Agreement.

No support for fracking

Support reforms to the UK tax system to support greener choices including scrapping VAT increase on domestic solar.

Ofgem database of people who have not switched suppliers alongside a national free switching service, which compares the whole market.

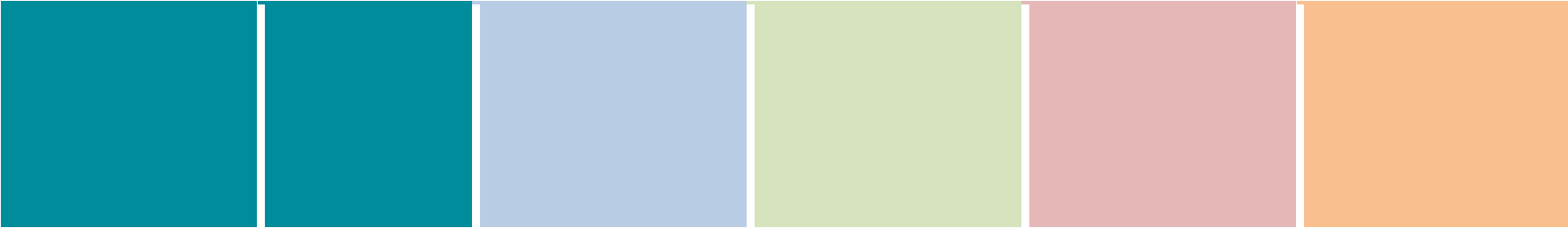
Greater consumer protection and engagement within the energy retail sector including a cap on credit and a minimum of quarterly bills.

Stick with future EU emission standards.

Put the transition to net zero at the heart of the Scottish National Investment Bank's work.

Climate Emergency Skills Action Plan to support a just transition.

Ring fence oil and gas receipts to create Net Zero Fund. 12% of



which will go to a Net Zero Industrial Strategy.

Pressure UK govt to accelerate CCUS in Scotland

## Analysis

If we needed reassurance that the climate emergency is firmly rooted in political priorities, this election should give it in spades. The manifestos of all major parties include the phrase climate emergency and they have taken part in leaders' debate specifically on climate change (with the exception of the Conservatives). The SNP's manifesto is perhaps not as ambitious as others, but it is based in reality, following years of Scotland leading the UK in their climate policies. The SNP policies could be a crucial factor if coalition discussions take place in the case of a hung parliament – including some of their ongoing policies not outlined in the manifesto, such as the Just Transition Commission, which the Liberal Democrats seemed to suggest could be emulated in the UK, at our recent Renewable Futures conference.

### Net zero targets

The manifestos compete somewhat on the date to achieve net zero; the Greens with an ambitious 2030, Lib Dems looking to 2045, the SNP staying consistent with their 2045 target already in place, and the Conservatives sticking with 2050. Labour seem to have backed away from naming a date, instead splitting the target into a net zero energy system 'within the 2030s' and net zero food production by 2040. Most also aim for a date for zero carbon electricity, with varying routes for achieving that. Again, Greens are the most ambitious with 100% renewable by 2030, with the Conservatives not providing any estimate. The aims for generation don't raise any surprises – most parties advocate a broad range of technologies, with LD, Greens, Labour and SNP looking to boost solar and onshore wind, but the Tories sticking with offshore wind as we would expect. All parties except the Conservatives are keen to boost marine energy. Interestingly, Labour have plumped for 'new nuclear power needed for energy security', in contrast to their recent, comprehensive report 'Thirty by 2030', which assumes that the 90% renewable target can be met by 2030 without any new nuclear.

### Heat and energy efficiency

Decarbonisation of heat through new technologies and increased energy efficiency has arguably been given more attention than in any previous political strategy and this is reflective of the industry's consistent message that this is one of our biggest challenges over the next decade. There isn't really a consistent route to achieve this, which is understandable, as there is little industry agreement on the best route forward at this stage. However, if we are to make the significant progress necessary on decarbonising heat, clear leadership from government is needed on an immediate and ambitious plan.

### Points of interest

- The just transition concept is also more prevalent in the manifestos than it has been before – Labour, LDs, Greens and SNP all recognise the necessity for transitioning fairly and equitably to a net zero carbon society. It's positive to see this being properly addressed and concepts like the Green New Deal, which has a just transition at its heart, have influenced both the Green and Labour manifestos.
- The nationalisation of energy network and supply companies is still a flagship policy for Labour – something we've been addressing recently in our [Energy Networks for the Future](#) paper.
- Most parties want to ban fracking, with the exception of the Tories who have of course just announced their 'moratorium'.
- Taxation and ending subsidies for fossil fuels is featured in Labour, LD, Green and SNP manifestos.
- The SNP, with the benefit of being the party in power, have put some very specific policies on energy in their manifesto, calling out Ofgem on the transmission charging regime, suggesting amending the CfD regime to bring back onshore wind and solar, and targeting the change to VAT rules for solar. Their proposal for an accessible database on all customers who haven't switched suppliers may raise some eyebrows.

## Thirty by 2030

Labour have set out some broad upfront targets in their manifesto, but refer to a larger document, [Thirty by 2030](#), which sets out very detailed policy goals and evidence on transforming the energy system, particularly how to delivery decarbonisation of heat. Not all policy recommendations from this report have been taken forward in the manifesto, so cannot safely be relied on as official Labour policy, but it is an interesting read and a very comprehensive plan for decarbonising the energy system – more so than I've ever seen a political party produce.

## Links to manifestos

[Conservative](#)

[Green Party](#)

[Labour](#)

[Liberal Democrats](#)

[SNP](#)

