NEW ECONOMICS FOUNDATION

FIVE WAYS TO FUND A GREEN NEW DEAL

NEW
ECONOMICS
FOUNDATION

CONTENTS

INTRODUCTION

Momentum is building around a Green New Deal[1] – an idea first developed by NEF and others in 2008,[2] and now adopted by a growing number of movements and political parties around the world, including in the UK.[3]

The Green New Deal would be a major, government-wide mission to respond rapidly to the climate emergency through a programme of state-led investment in a new generation of good jobs in clean industry, business and infrastructure – in particular targeted at the people and places that most need a 'just transition' to a new economy.

It's a plan that meets the scale of the climate crisis head on. We need ambition to properly respond in a socially just way to the imperative of climate breakdown. It places the state firmly at the heart of the climate response, in a way we have almost forgotten how to do after decades of neoliberal economic policy.

Inevitably, as with all ideas that change the rules of our economy, some people will accuse it of costing too much. But there's no question that we can and should fund this type of investment.

All investment costs money, but our economy needs huge investment and we can afford it. And unlike the kinds of high carbon spending we have made for decades, funding a Green New Deal will be a win-win: good for both people and the planet.

WE CAN AFFORD IT. WE CAN'T AFFORD NOT TO.

The world has a handful of years to act on the climate emergency. The UK is keen to be seen as a leader on the global stage, but is way off pace at home.[4] The UK government is committed to delivering 'net zero'* emissions by 2050, but Labour and the Green Party have already pledged to bring this date forward to 2030.

A programme like the Green New Deal is essential to marry radical climate action with social justice and the rebalancing of the economy. When wars need to be fought, or banks bailed out, governments do not hesitate to find the money.

The government's total annual spending is around 38% of GDP per year.[5] Spending on the climate emergency each year only needs to increase to 2%

* NEF does not support the use of overseas offsets to balance out UK emissions within a 'net' calculation.

of GDP in the short term,[6] ramping up to 5% to deliver change at pace.[7] Former Chancellor Philip Hammond attempted to criticise the new 'net zero by 2050' target by saying that it would cost "more than £1 trillion".[8] This was a one-sided estimate that ignored the multitude of jobs, innovation and resilience it would unlock (see proposal 2) – and which in any event represents only 1.5% of GDP[9] over that period.

Governments can borrow very cheaply; the money they have available to spend can be increased by the things they spend money on, through higher tax receipts; and they can if needed rely on central banks for help. Provided their spending supports productive investment – the cornerstone of the Green New Deal – any arguments against borrowing are based on political ideology rather than economic fact.

This pamphlet sets out five of the ways we should fund the Green New Deal:

1. Public borrowing
2. Multipliers: valuing future benefits
3. Taxing those most responsible
4. Re-directing dirty subsidies
5. Transforming the Bank of England

PUBLIC INVESTMENT DRIVING PRIVATE FINANCE

The Green New Deal must be led by democratic choices. This requires greater state involvement and a much bigger role for direct government investment.

That certainly does not mean that there is no role for the private sector in delivering the Green New Deal – far from it. The Green New Deal's headline ambitions and determination to guide innovation and investment towards a clean and fair economy will help provide the certainty to private investors that they have been lacking after many years of half-hearted government climate policy.[10]

But private markets will not deliver the social justice that is integral to the Green New Deal and the delivery of a just transition. Markets alone have little incentive to support the workers, communities and places whose livelihoods would be most directly affected by a poorly managed transition away from high carbon work. The more that the private sector is left to finance the transition to 'net zero' without stewardship, the greater the risk that the costs of the transition will fall on the less well-off in society – for example through higher everyday energy bills. In other words, without the approach of a Green New Deal, the low-carbon transition risks increasing inequality.

However the 'five ways' that we set out in this pamphlet are about simultaneously ramping up the leadership and economic role of the state whilst also setting a clear and supportive framework for private investment as well.

FIVE WAYS TO FUND A GREEN NEW DEAL

Image: Tinmouse Animation Studio

1. BORROWING

"Humanity will not come to an end if we double debt-to-GDP ratios, but it could come to an end if we fail to tackle climate change" – **Professor Simon Wren-Lewis, University of Oxford**[11]

A climate emergency means an end to business as usual. Business as usual for the last decade has been characterised by austerity – which has harmed people and held the economy back.[12]

A Green New Deal however, needs government investment. The most obvious and best way it can do this is by borrowing. One of the most important things any government should do is use its power to borrow at ultra-low interest rates.

There has never been a smarter time in history for the government to borrow to invest. Interest rates are at or near record lows[13] and likely to remain so for the foreseeable future.[14] Modern state-led investment programmes will

Did you know: The Austrian government just issued a 100 year bond (a loan) at an interest rate of 1.2%, well below inflation. If inflation remains at its current level, in 100 years' time Austria would only effectively have to pay back 50% of what it owes.[16]

be hugely attractive to international markets that want reliable, long-term returns on their money. There is a global 'savings glut': hundreds of trillions of pounds of savings[15] looking for something safe to invest in with a modest return.

Sometimes people argue against borrowing by saying that it will increase debt for future generations. But borrowing is a fair way to pay for useful and productive things across time. Future generations will directly benefit from investments we make today, and borrowing helps to spread the payments across generations.

The main problem is we are stuck with arbitrary limits ('fiscal rules') on the amount of borrowing that can be carried out and debt that can be incurred.[17] These rules, which have evolved over time, currently capping borrowing at 2% of GDP by 2020/21 – a level far too low, even for an economy not facing the threat of climate breakdown.

The rules also insist that the national debt must be falling. With a handful of years to launch and finance a Green New Deal, the first step must be to rewrite the rules to reflect the logic of climate emergency.[18] New rules must reflect what the government can genuinely afford to spend, and take into account both the benefits of extra spending and the costs of not investing enough.

ACTION 1:

Change the rules on borrowing. *Bin the arbitrary rules on how much debt and borrowing the government is allowed to undertake, and make new rules fit for the climate emergency.*

Image: Tinmouse Animation Studio

2. MULTIPLIERS: VALUE FUTURE BENEFITS

"With hindsight, I now realise that I underestimated the risks. I should have been much stronger in what I said in the report about the costs of inaction. I underplayed the dangers." –

Lord Stern, author of the Stern Review on the Economics of Climate Change, speaking in 2016[19]

The flip side of borrowing is that many things on which money is spent can more than pay for themselves in the long run. Government spending represents income to businesses and families, and their spending in turn creates more income for others. And all of this income generates taxes for government. There is also a world of difference between borrowing to support day-to-day consumption, and the kind of transformative re-kitting of the economy that would be unleashed by a Green New Deal.

We are, after all, talking about investment that will create jobs and economic benefits in homes, skills, infrastructure, and cities. A programme like the Green New Deal would, for example:

Create a new generation of decent, well-paid jobs in the places that need them the most. This would underpin not just the future tax receipts to the government but also the rejuvenation of local places, many of which have seen their economies suffer as jobs and investment have focused on the richest parts of the country[20] or been offshored.

Spur world-leading innovation and new business models, which could make the UK the go-to place for tomorrow's zero carbon know-how. Smart business leaders have for many years demanded more ambitious action on climate.[21] It could help encourage UK companies to properly invest [22] after years of the uncertainty from Brexit and a lack of green policy commitment from the government.

Save the nation millions of pounds every year in energy bills by properly insulating our inefficient homes,[23] which would also reduce the amount of new heating infrastructure we need to build.

Make our towns and cities green, liveable and attractive places to thrive and work, bringing economic activity, footfall and community back to the heart of the high street.

Shield communities from climate impacts we will be unable to avoid, such as more floods or heatwaves. Flood defences, for example, quickly pay for themselves in avoided damages.[24]

A major problem is that the Treasury's economic world view is too narrow to cope with the far-reaching economic potential from ambitious climate action – its models don't even properly account for the huge harm that climate breakdown would itself cause.[25] They are designed to produce estimates of 'costs' which go-slow ministers can use to hold back climate action, rather than properly understand the long-term benefits.

ACTION 2:

Use better economic models *that properly balance the up-front 'costs' of the Green New Deal against the wealth of long-term economic benefits it would bring.*

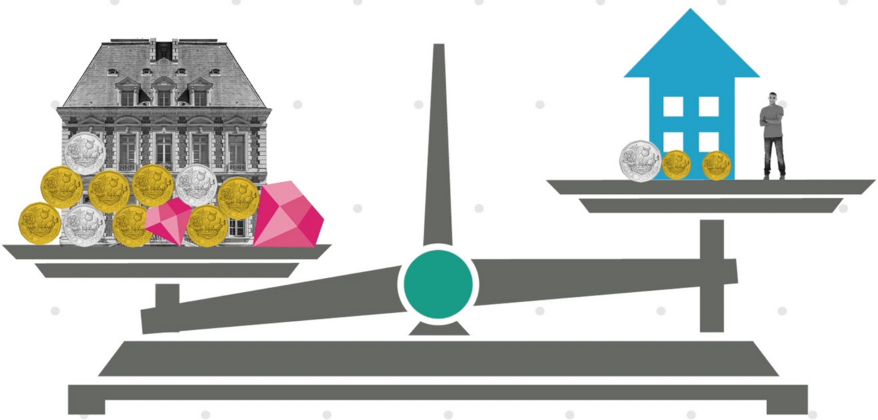

Image: Tinmouse Animation Studio

3. TAX THOSE MOST RESPONSIBLE

"The great tragedy of the climate crisis is that seven and a half billion people must pay the price – in the form of a degraded planet – so that a couple of dozen polluting interests can continue to make record profits." –

Professor Michael Mann, October 2019[26]

Taxation is a vital tool for making sure the right people are paying for climate action, that pollution is discouraged, and that clean economic activity is given the leg up that it needs. The productive investment under a Green New Deal would result in new business models, more and better paid jobs, and stronger local economies. All of this will help bring in healthy tax receipts in the long-run. But right now, we need to make sure we are taxing the right things in the right way.[27]

The mission of a Green New Deal is to simultaneously decarbonise while making the economy fairer. Yet the UK has a fundamentally unfair tax system, where income from wealth is taxed far less than income from work,[28] and wealthy families are taxed too little overall. One estimate suggests that between £90 billion and £120 billion could be raised if income from wealth was taxed the same as income from work.[29]

Nor do we tax pollution properly or fairly. The wealthiest are far more

Did you know: 58% of the UK public support higher taxes on environmentally-unfriendly products, and only 15% think they should be lower.[32]

responsible for climate breakdown than the poorest – for example in 2013, 70% of the total number of flights were taken by only 15% of the population, while 57% of the population took no flights abroad at all.[30] NEF has proposed a Frequent Flyer Levy[31] which would see tax rates on plane tickets rise sharply the more flights you take.

We also give a huge effective subsidy to the owners and shareholders of fossil fuel companies like Shell and BP by not properly taxing the carbon emissions that their business model depends on. Instead, we pay to mitigate the negative effects of the industry – like cleaning up after floods, or the treating the effects of air pollution.

Tax reform under a Green New Deal must ensure that:

Taxes must be fair. There should be no 'poll tax for the planet' – any new taxes must be weighted towards those who pollute the most and have the largest ability to pay.

People should see visible improvements to their lives as a result of the taxes they pay – for example, much better public transport in those places introducing congestion charging,[33] or free home insulation for the fuel poor.

Pollution taxes should be part of phasing out fossil fuels in the medium-term, not legitimising them – this is essential given the pace of carbon cuts needed. Money raised should be used for urgent transitional funding, not come to be relied upon by the Treasury. If successful, revenue will fall away anyway.

ACTION 3:

Implement fair carbon taxation *as part of a Green New Deal.*

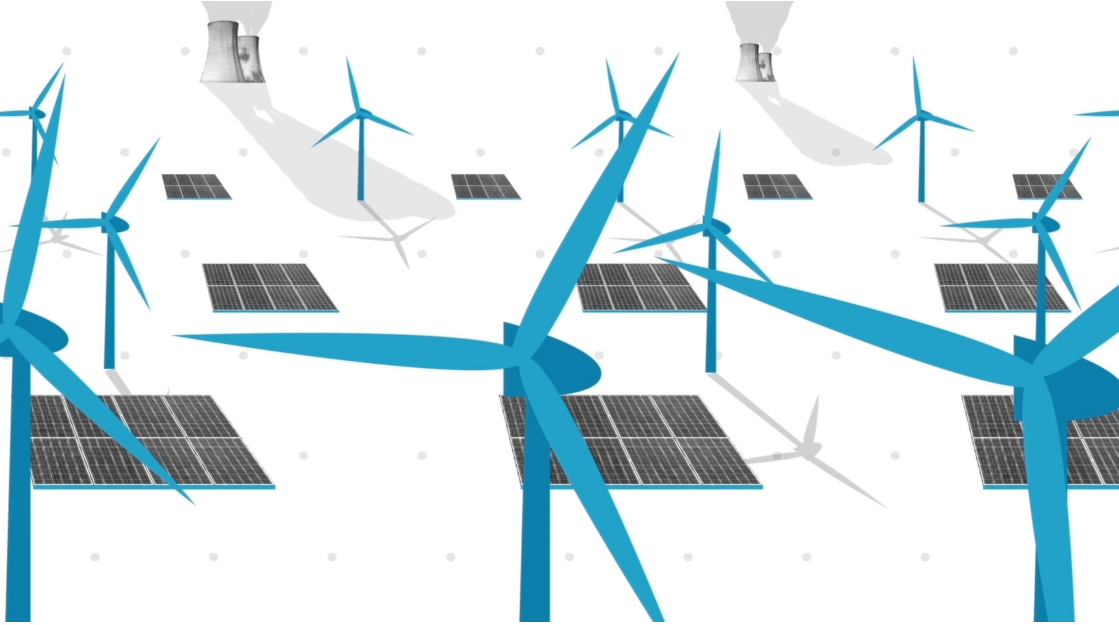

Image: Tinmouse Animation Studio

4. REDIRECT DIRTY SUBSIDIES

“Removing fossil fuel subsidies, which typically benefit the rich more than the poor, could gain up to 4% of global GDP.” –

International Monetary Fund, 201934

Paying for a Green New Deal is not just about giving money to the things that we *do* want to see, but about removing support from things that we *don't*. Behind the scenes the government still gives many billions of pounds in economic support to high carbon activity. Estimates for the overall level of subsidy vary depending on definitions – the European Commission, for example, reported that the UK has the biggest fossil fuel subsidies in Europe, at about £10.5 billion per year.[35]

There are many different types of direct and indirect fossil fuel subsidy. For example:

Tax rates for North Sea oil and gas production have been cut so much over recent years to encourage production that some firms now receive more in tax rebates from the Treasury than they pay in corporation tax – over £1 billion in rebates between 2015 and 2017.[37]

Every year the government provides far more loans or guarantees to UK companies to support them winning

Did you know: In 2019 an investigation revealed that loan support from the government which had supposedly been earmarked for clean energy instead supported UK companies to invest in Argentina's fracking industry.[36]

overseas fossil fuel contracts than it does for clean energy.[38]

Aviation pays no fuel duty or VAT on the kerosene it uses[39] - as compared to the 58p per litre that drivers of petroleum cars pay.[40]

The Treasury argues that none of these are subsidies – but trying to define your way out of a problem only underlines how deeply entrenched that problem is. The intention is to prop up the economics of fossil fuel businesses despite the urgent need to act on climate. The more reliant we are on fossil fuels, the harder it is to transition away from them rapidly and fairly.

These are dangerous subsidies at a time when a huge stimulus is needed in clean infrastructure as part of a Green New Deal. Renewable energy companies, local people and councils wanting to install their own community power, have spent much of the last decade reeling as the government has hacked away at subsidies for clean energy, costing jobs and hugely undermining the attractiveness of the UK for zero carbon investment.[41] Where possible, subsidies currently given to fossil fuels should be redirected towards the move to net zero.

ACTION 4:

Commit to review and reverse by 2025 *all direct and indirect subsidies for fossil fuels, making sure each is phased out in a way that enables a just transition for those whose jobs they currently support.*

Image: Tinmouse Animation Studio

5. TRANSFORM THE BANK OF ENGLAND

"I don't normally quote bankers, but James Gorman, who is the CEO of Morgan Stanley, said the other day: 'If we don't have a planet, we're not going to have a very good financial system.' Ultimately, that is true." –
Mark Carney, Governor of the Bank of England, October 2019

An essential final part of funding the Green New Deal is making sure the Bank of England is pulling in the same direction. The Bank's governor, Mark Carney, has been increasingly firm on the risks of climate change to economic stability (see above). Climate breakdown has the potential to wipe out many trillions of pounds worth of assets – making the 2008 financial crash seem like a walk in the park.[42]

But the Bank is not yet fully walking the walk on climate change. It has promised to assess and publish the risks that the climate transition poses to its own operations and lending.[43] But it has an even more powerful role, which is to make sure financial markets take climate change very seriously and act accordingly.

The net effect of the 'quantitative easing' money-printing schemes the Bank led after the crash was skewed towards high carbon sectors, because it followed the market and didn't set any green criteria.[44] And the Bank is not attaching green conditions to its existing programmes, such as the near-0% interest loans it gives to commercial banks.[45] These programmes could be used much more strategically, redesigned to channel funds towards low-carbon investments and exclude environmentally harmful ones. The Bank should penalise dirty lending across the economy by making it harder for banks that give loans to fossil fuels to get credit.[46]

Other banks are needed too to direct low-interest funding to the sectors and places that most need it. A public national investment bank should be established which provides Green New Deal projects with cheap finance, which the Bank of England could help to fund. It should be supported by a network of local banks that intimately understand the investment needs and transition pathways of different regions.[47] Most important is that the Green New Deal becomes a central mission for the Treasury, which should then make sure that the Bank does everything it can – including helping to keep treasury borrowing costs low – to open the taps of finance for the green transition.

ACTION 5:

Give the Bank of England a clear mandate *to support the Treasury in its central mission of building a Green New Deal.*

NO LONGER 'IF' BUT 'WHEN'

All important government programmes cost money, from educating our children to funding the NHS. Responding rapidly to climate breakdown is as important as they come. The costs of inaction in climate terms alone will be staggering.[48]

A Green New Deal is now essential to respond to the climate breakdown in a way that makes sure the people and places that most need a better economy actively benefit from cleaner jobs and industry. *Whether* we can build a Green New Deal is a question of political choice, not economic practicality. The question of feasibility is no longer about *if*; but about how far, how fast and *when*.

We bailed out the banks. Now it is time to bail out the planet, which is – of course – far too big to fail.

ENDNOTES

1 Fahnbulleh, M., Powell, D., Pendleton, A., Stirling, A., Van Lerven, F., & Balata, F. (2019). A Green New Deal in the UK. London: New Economics Foundation. Retrieved from https://neweconomics.org/2019/04/a-green-new-deal

2 Green New Deal Group (Simms, A., Pettifor, A., Lucas, C., Secrett, C., Hines, H., Leggett, J., Elliott, L., Murphy, R., & Juniper. T.). (2008). *A Green New Deal: Joined-up policies to solve the triple crunch of the credit crisis, climate change and high oil prices*. London: New Economics Foundation, on behalf of the Green New Deal Group. Retrieved from https://neweconomics.org/2008/07/green-new-deal

3 Labour for a Green New Deal (n. d.). Retrieved from https://www.labourgnd.uk

4 Committee on Climate Change [CCC]. (2019). Reducing UK emissions – progress report to Parliament 2019. London: CCC https://www.theccc.org.uk/publication/reducing-uk-emissions-2019-progress-report-to-parliament/

5 Office for Budget Responsibility [OBR]. (2019). March 2019 Economic and fiscal outlook: Charts & Tables. Retrieved from https://obr.uk/efo/economic-fiscal-outlook-march-2019/

6 Stirling, A., Powell, D. & Van Lerven, F. (2019). Changing the fiscal rules. London: New Economics Foundation. Retrieved from https://neweconomics.org/2019/07/changing-the-fiscal-rules

7 Harvey, F. (2019, November 4). Charities say next UK government must bring forward climate targets. The Guardian. Retrieved from https://www.theguardian.com/environment/2019/nov/04/charities-next-uk-government-bring-forward-climate-targets; Murphy, R. (2019), Funding the UK Green New Deal. Retrieved from https://www.taxresearch.org.uk/Blog/2019/09/16/funding-the-uk-green-new-deal/

8 Merrick, R. (6 June 2019). Philip Hammond accused of trying to kill off landmark action on global warming by claiming bill will top £1 trillion. The Independent. Retrieved from https://www.independent.co.uk/news/uk/politics/climate-change-global-warming-crisis-philip-hammond-uk-2050-a8947011.html

9 Pettifor, A. (2019). On Philip Hammond and £1 trillion. Retrieved from https://progressiveeconomyforum.com/blog/on-philip-hammond-and-1-trillion/

10 UK Parliament, Environmental Audit Committee. (2018). MPs sound alarm as green investment plummets to lowest for ten years. Retrieved from https://www.parliament.uk/business/committees/committees-a-z/commons-select/environmental-audit-committee/news-parliament-2017/green-finance-report-published-17-19/

11 Wren-Lewis, S. (2019, February 18). The case for funding a Green New Deal through government debt. New Statesman. Retrieved from https://www.newstatesman.com/politics/economy/2019/02/case-funding-green-new-deal-through-government-debt

12 New Economics Foundation. (2019). Austerity hitting UK economy by almost £100bn this year- more than £3,600 per household. Retrieved from https://neweconomics.org/2019/02/austerity-hitting-uk-economy-by-almost-100bn-this-year-more-than-3-600-per-household

13 A long-run history of the official Bank of England rate can be found in: Bank of England. (2018). A millennium of macroeconomic data. Retrieved from https://www.bankofengland.co.uk/-/media/boe/files/statistics/research-datasets/a-millennium-of-macroeconomic-data-for-the-uk.xlsx

14 For a forecast of the Bank Rate up to Q1 2024, see Office for Budget Responsibility. (2019). March 2019 Economic and fiscal outlook: Charts & Tables. Retrieved from https://obr.uk/efo/economic-fiscal-outlook-march-2019/

15 Bernanke, B.S. (2015). Why are interest rates so low, part 3: The Global Savings Glut. Brookings. Retrieved from https://www.brookings.edu/blog/ben-bernanke/2015/04/01/why-are-interest-rates-so-low-part-3-the-global-savings-glut/

16 Financial Times. (2019). Austria sells 'century bond' with yield of just 1.2%. Retrieved from https://www.ft.com/content/abe7c3fa-9807-11e9-8cfb-30c211dcd229

17 Stirling, A., Powell, D. & Van Lerven, F. (2019). Changing the fiscal rules. London: New Economics Foundation. Retrieved from https://neweconomics.org/2019/07/changing-the-fiscal-rules

18 For a more detailed discussion, see: Stirling, A., Powell, D. & Van Lerven, F. (2019). Changing the fiscal rules. London: New Economics Foundation. Retrieved from https://neweconomics.org/2019/07/changing-the-fiscal-rules

19 McKie, R. (2016, November 6). Nicholas Stern: cost of global warming 'is worse than I feared". The Guardian. Retrieved from https://www.theguardian.com/environment/2016/nov/06/nicholas-stern-climate-change-review-10-years-on-interview-decisive-years-humanity

20 Powell, D., Balata, F., & van Lerven, F. (forthcoming). Trust in transition. London: New Economics Foundation.

21 See for example, the Prince of Wales's Corporate Leaders Group on Climate Change: Aiming for Zero: Business leadership for a net zero economy. (n. d.). Retrieved from https://www.corporateleadersgroup.com/reports-evidence-and-insights/collections/net-zero

22 Stirling, A. & Arnold., S. (2019). Tackling the Productivity Puzzle: A higher Minimum Wage and a 4-day Week. Retrieved from. https://neweconomics.org/2019/04/tackling-the-productivity-puzzle

23 Committee on Climate Change [CCC]. (2019, February 21). UK homes unfit for the challenges of climate change. Retrieved from https://www.theccc.org.uk/2019/02/21/uk-homes-unfit-for-the-challenges-of-climate-change-ccc-says/

24 University of Bristol. (2017). Benefits of dikes outweigh costs – effective measures for reducing future flooding. Retrieved from https://www.bristol.ac.uk/news/2017/july/benefits-of-dikes.html

25 Ackerman, F. & Daniel, J. (2014). Misunderstanding climate policy. The role of economic modelling. Report for Friends of the Earth (England, Wales & Northern Ireland) and WWF-UK. Retrieved from https://friendsoftheearth.uk/sites/default/files/downloads/synapse-misunderstanding-climate-policy-low-res-46332.pdf

26 Taylor, M. & Watts, J. (2019, October 9). Revealed: the 20 firms behind a third of all carbon emissions. The Guardian. Retrieved from https://www.theguardian.com/environment/2019/oct/09/revealed-20-firms-third-carbon-emissions

27 Powell, D. (2019). Why 'Net Zero Emissions by 2050' needs a Green New Deal. Retrieved from https://neweconomics.org/2019/05/why-net-zero-emissions-by-2050-needs-a-green-new-deal

28 Nanda, S. & Parkes, H. (2019). Just tax. Reforming the taxation of income from wealth and work'. London: IPPR. Retrieved from https://www.ippr.org/research/publications/just-tax

29 Nanda, S. & Parkes, H. (2019). Just tax. Reforming the taxation of income from wealth and work'. London: IPPR. Retrieved from https://www.ippr.org/research/publications/just-tax

30 Devlin, S. & Bernick, S. (2015). Managing aviation passenger demand with a frequent flyer levy. London: New Economics Foundation. Retrieved from https://neweconomics.org/uploads/files/58e9fad2705500ed8d_hzm6yx1zf.pdf

31 Ibid.

32 Ipsos MORI & Deloitte. (2019). The State of the State infographic. Retrieved from https://infogram.com/1p907qvvr0ry7kh71z6lx323eqf31g3er6w within https://www2.deloitte.com/uk/en/pages/public-sector/articles/the-citizen-view.html

33 Badstuber, N. (2018, March 12). London congestion charge has been a huge success. It's time to change it. City Metric. Retrieved fromhttps://www.citymetric.com/transport/london-congestion-charge-has-been-huge-success-it-s-time-change-it-3751

34 International Monetary Fund. (2019, August 14). Fuel for thought: ditch the subsidies. Retrieved from https://blogs.imf.

org/2019/08/14/fuel-for-thought-ditch-the-subsidies/

35 Carrington, D. (2019, January 23). UK has biggest fossil fuel subsidies in the EU, finds Commission. The Guardian. Retrieved from https://www.theguardian.com/environment/2019/jan/23/uk-has-biggest-fossil-fuel-subsidies-in-the-eu-finds-commission

36 Ambrose, J. (2019, October 22), 'UK to use finance meant for green energy to support fracking in Argentina. The Guardian. Retrieved from https://www.theguardian.com/environment/2019/oct/22/uk-to-use-1bn-meant-for-green-energy-to-support-fracking-in-argentina

37 Cahill, H. (2018, October 13). Treasury forced to hand over £1 billion in tax refunds to oil giants as North Sea profits decline. This is Money. Retrieved from https://www.thisismoney.co.uk/money/news/article-6272799/Treasury-forced-hand-1bn-tax-refunds-oil-giants-North-Sea-profits-decline.html

38 UK Parliament, Environmental Audit Committee. (2019). UK Export Finance's support for the energy industry. Retrieved from https://publications.parliament.uk/pa/cm201719/cmselect/cmenvaud/1804/180405.htm

39 U Seely, A. (2019). Taxing Aviation Fuel. Briefing Paper Number 523, 22 October 2019. London: House of Commons Library. https://researchbriefings.files.parliament.uk/documents/SN00523/SN00523.pdf

40 Office for Budget Responsibility. (n. d.). Fuel duties. Retrieved from https://obr.uk/forecasts-in-depth/tax-by-tax-spend-by-spend/fuel-duties/

41 Harvey, F. (2019, May 30), 'Renewable energy jobs in the UK plunge by a third. The Guardian. Retrieved from https://www.theguardian.com/environment/2019/may/30/renewable-energy-jobs-in-uk-plunge-by-a-third

42 Van Lerven, F. (2018). Alarm Bells Begin to Ring on the Financial Risks of Climate Change. Huffington Post. Retrieved from https://www.huffingtonpost.co.uk/entry/alarm-bells-begin-to-ring-on-the-financial-risks-of_uk_5ad5ec57e4b0d9951b85ba27

43 Van Lerven, F. (2019). Central Banks waking up to Climate Change. Retrieved from https://neweconomics.org/2019/04/central-banks-waking-up-to-climate-change

44 Matikainen, S., Campiglio, E., & Zenghelis, D. (2017). The climate impact of quantitative easing. The Centre for Climate Change Economics and Policy. London: LSE. Retrieved from http://www.lse.ac.uk/GranthamInstitute/wp-content/uploads/2017/05/ClimateImpactQuantEasing_Matikainen-et-al-1.pdf

45 Van Lerven, F. (2018). The Bank of England and a 1.5C Green Transition: Reshaping Finance. London: New Economics Foundation. Retrieved from https://neweconomics.org/uploads/files/reshaping-finance.pdf

46 Van Lerven, F. (2018). Greening the Banks. Retrieved from https://neweconomics.org/2018/12/greening-the-banks

47 Van Lerven, F. (2018). Reshaping Finance for a 1.5C World. London: New Economics Foundation. Retrieved from https://neweconomics.org/2018/10/reshaping-finance-for-a-1-5c-world

48 Carter, Z., & Kaufman, A. C. (2019). The War on Climate Change Won't Be Won Quibbling over the Green New Deal's Costs. Huffington Post. Retrieved from https://www.huffingtonpost.co.uk/entry/green-new-deal-costs-climate-change_us_5c66285be4b01757c369e3df?ri18n=true

WWW.NEWECONOMICS.ORG
info@neweconomics.org
+44 (0)20 7820 6300 @NEF
Registered charity number 1055254
© 2019 New Economics Foundation

NEF is a charitable thinktank, wholly independent of political parties and committed to being transparent about how it is funded.

WRITTEN BY:
David Powell, Lukasz Krebel, Frank van Lerven

PUBLISHED:
November 2019

ACKNOWLEDGEMENTS:
Andrew Pendleton, Alfie Stirling, Fernanda Balata, Margaret Welsh, Tinmouse Animation Studio