Funding the Green New Deal

How we could Save for the Planet

Richard Murphy and Colin Hines with a foreword by
Caroline Lucas
Finance for the Future LLP

November 2019

Funding the Green New Deal
How we could Save for the Planet

Foreword

There is growing consensus on the urgent need for a Green New Deal to transform our economy and society to meet the challenges of the climate and nature crises, and to reverse inequality. There is also growing recognition that it is both sensible and necessary for the government to borrow to invest in the future of our society, so that we can modernise our economy and move beyond fossil fuels. An economic system based on endless credit fuelling endless emissions while flooding wealth up to those who already have most has driven us to the point of climate, ecological and social collapse. Now we must find ways to rein in the power of big finance and channel credit responsibly to where it is needed, into a Green New Deal.

With even the International Monetary Fund's former chief economist, Olivier Blanchard, acknowledging that with interest rates at record lows, now is the time for governments to borrow to invest, Richard Murphy and Colin Hines ask who could provide the funds for that investment. There is a healthy market for government bonds but, as they show, ordinary savers could also play a vital role in channelling investment into Green Bonds. According to this briefing, over 80 per cent of UK financial wealth is held in accounts that benefit from a tax incentive of some kind, whether they be pensions or ISAs. They suggest that by making small changes to the tax reliefs due on both types of account, funds can be redirected into Green Bonds and towards the Green New Deal, providing both a safe place for our pensions and savings, and the means to invest in our collective future.

As Murphy and Hines remind us, people investing in pensions and savings will largely be from older generations who can thus play a vital part in the Green New Deal. They can save for their own benefit and at the same time benefit all of us, and in particular, younger generations. This inter-generational rebalancing could be another key element of the Green New Deal, and merits further investigation. Working together, we can create a better future. For all of us, and for the planet we share.

Caroline Lucas
Green party parliamentary candidate for Brighton Pavilion
December 2019

Funding the Green New Deal
How we could Save for the Planet

Richard Murphy with Colin Hines
November 2019

1. Summary

The Green New Deal is the political issue that will dominate the decades to come. It is the term used to describe the wide range of policies required to transform our economy and society to both tackle climate change and the negative impact that austerity has had on so many communities and public services.

At its core the Green New Deal is a massive investment programme that will create well-paid, long term, skilled jobs in every constituency of the UK while modernising almost every aspect of our infrastructure. But that, of course, comes at a cost. We estimate the investment needed to be up to £100 billion a year, which is a little less than 5 per cent of UK national income at present. The inevitable question that always arises is 'how will you pay for it?'

In this briefing we suggest that the Green New Deal need not be paid for out of tax. Indeed, we suggest that to fund investment of the sort required out of tax would be inappropriate.

We also suggest that we do not expect that the Green New Deal will be paid for with quantitative easing, because that might only be required if there is another major economic downturn, and whether that will happen is not known.

Instead we suggest that the government borrow the funds required to finance the Green New Deal by issuing bonds.

Most importantly the issue that we address is how to find buyers for those bonds. Whilst there is already a vibrant market for government bonds, and there is also very strong evidence that existing markets would buy more of them[i], we think that it is important to ensure not only that all the bonds that will fund the Green New Deal will be sold, but also that that people be given the chance to become involved directly in this vital process of change. As a result we propose some simple rule changes to ISAs and pension contributions that could ensure that all

the investment required for the Green New Deal could come from these two sources, if need be.

ISAs are tax free savings accounts available to people tax resident in the UK. Collectively, £70 billion a year is saved in different kinds of ISA accounts. If, to secure this tax free status these funds had to be invested in Green New Deal bonds paying an average of1.85 per cent, which is the current average cost of UK government borrowing, then we have no doubt that all this sum would be available for investment in the Green New Deal[1].

In addition, if pension rules were changed so that in exchange for the tax relief given on these contributions, which costs £54 billion a year at present, 25 per cent of all contributions had to be invested in Green New Deal related bonds then more than £25 billion could come into the Green New Deal programme from this source as well.

In other words, two straightforward changes in savings rules could provide all the funds required to purchase the Green New Deal bonds that will be issued to finance this programme. It really is that simple.

As this briefing shows, the Green New Deal need not cost the earth and absolutely any saver will be able to have a role in it.

We could, quite literally, save for the planet.

2. The Green New Deal

The Green New Deal is a programme to modernise almost every aspect of our society, economy and infrastructure that will:

- Safeguard our planet by limiting, adapting to and then reversing climate change;
- Ensure good food for all by supporting biodiversity;
- Create well-paying jobs for the long term to create and maintain:
    - Energy efficient housing that will keep us warm in winter and cool in summer;

[1] ISAs do at present permit investment in shares and securities as well as cash. We continue with this idea, replacing cash based accounts with government backed Green New Deal bonds whilst share-based accounts are replaced by Green New Deal investments issued by business, to which we refer late in this briefing. We do, however, think that government backed Green New Deal bonds will be the major part of the investment portfolio of ISA account holders for some time after the changes that we propose are introduced.

- New supplies of clean energy,
  - Fast, plentiful public transport to replace carbon fuelled vehicles,
  - A modern 'circular economy' to minimise waste and resource use;
  - The new forms of regenerative agriculture needed to grow the food we eat;
  - The biodiverse forests that can enhance our landscape and absorb carbon;
  - Businesses that can meet our needs in a sustainable fashion, and
  - The social facilities we will need in the future.
- Create a safe place for our savings by putting them to good use, with a government guarantee to back them up;
- Safeguard older peoples' futures by underpinning our pension funds.

3. The cost of the Green New Deal

No one can be quite sure what the Green New Deal will cost: the future is, by definition unknowable, and circumstances will change once the programme is underway. But we can make estimates. And we know what is needed to begin. The best current estimate is that the cost of making the UK a net zero carbon economy might be at least £1 trillion and much of this will have to be spent by 2030 – the date by which, according to the timetable set by the science, the UK needs to reach net zero emissions. The result is that the Green New Deal might cost £100 billion a year.

That is an indisputably large sum, but to put it in context it is just 5 per cent of the UK's national income or around the same amount that we spend on education each year[ii], whilst the £1 trillion total cost is about 8 per cent of the UK's national wealth at present. The totals might sound big, but the investment would modernise almost every aspect of our infrastructure, creating jobs and reducing inequality and, in the grand scheme of things they seem like a small price to pay to ensure we play our part in preserving life on earth.

4. The government's spending options

Not all the costs of the Green New Deal will be paid by the government. A significant contribution will, of course, be paid by business as it transforms its processes to be net zero-carbon compliant. That said, the estimate of £100 billion is for likely government spending per annum. In that case how this cost will be funded has to be considered.

A government has three ways it can fund its spending and investment. They are:

- Taxes
- Borrowing
- Money creation (usually referred to as quantitative easing at present).

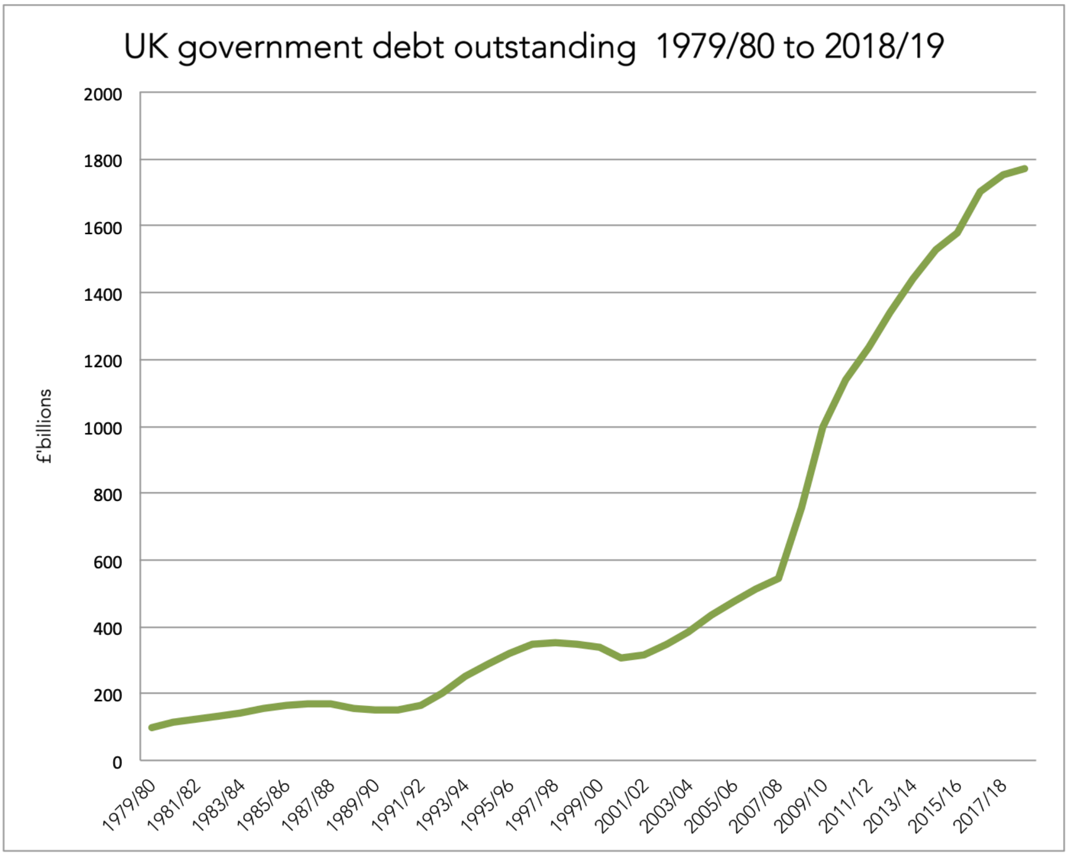
There are no other legally acceptable options. Ignoring occasions when governments might want to run deficits or surpluses to boost or suppress economic activity to suit their current economic policy these three funding sources would normally be used for the following purposes:

Tax	To pay for day to day spending costs, like the routine costs of schooling, health care, pension payments, defence and so on.
Borrowing	To pay for investments. These might be in buildings, such as schools and hospitals, or in transport systems, but also in IT and other such assets that might last some time.
Money creation	Traditionally this has been used sparingly. Since 2009 £435 billion of quantitative easing has happened, but whilst that is over 20% of all UK government borrowing in total that is still only enough to fund the Green New Deal for four years. And, in any event, money creation is only seen as a valid policy option in a time of financial crisis when markets need support. It has not been used for routine funding.

The vast majority of the estimated cost of the Green New Deal is required to fund investment. A small part (for example, Green New Deal management costs and, once it is going, the maintenance costs of Green New Deal assets) may not be, but most is, and so based on the logic of this table borrowing should be the main way to fund the Green New Deal.

5. UK government borrowing

UK government debt has grown steadily over time. Repayment is always rare in a year:



Source: House of Commons Library and Office for Budget Responsibility[iii]

As is apparent, total UK debt outstanding has risen significantly in the last decade. This has been the result of the UK government borrowing an average of £94 billion a year from 2008/09 to 2018/19, although it is running at a somewhat lower rate than this at present. It is this borrowing that has led to total gross UK government debt outstanding before quantitative easing is taken into account of in excess of £1,800 billion. The important point to note is that this average sum borrowed per annum shows that the UK government has the capacity to borrow at least £100 billion a year.

6. Who might borrow and raise funds to finance the Green New Deal?

The Green New Deal is a programme that will need to involve all aspects of government. It includes the creation of a National Investment Bank whose job it will be to help the private sector gear up for the Green New Deal and to invest in the research and development need to ensure that the Green New Deal is delivered. We therefore expect Green New Deal borrowing to be by:

- Central government
- Devolved governments
- Local authorities, including those run by mayors
- NHS trusts
- Housing associations and others supplying social housing
- Network Rail and other transport authorities

Other options may follow.

Green New Deal investments may also be made available by the private sector. These might include:

- Shares
- Bonds
- Managed investments packaging a mix of Green New Deal investments

Along with the borrowing of the government institutions noted we think that these private sector investments might also qualify to be part of this Green New Deal funding programme so long as they could be audited to show that the funds raised were used to pay for new projects related to the deliver of the Green New Deal. Strict monitoring of this would be required, but it is important to realise that the Green New Deal will include more than government sector activity.

7. How might the funds required be raised?

The government could fund its borrowing by running an overdraft with the Bank of England. In practice it does not, largely because EU law does not permit it. Instead, and presuming that this will remain the case in the future, it issues what are call bonds or 'gilts' instead. These bonds guarantee a fixed interest rate a year payable until the bond is repaid. The repayment period varies greatly. Terms of between a year and fifty years are used, but five to ten-year gilts are common and popular[iv].

The bond cannot be redeemed until the end of the period for which it has been issued. However, there is an active market in these bonds in London and as a result it is always possible to sell a government bond at a current price, which usually reflects the current interest rate. This may not be the same as the price paid for it, especially if interest rates had moved significantly since the bond was issued, although that is becoming less commonplace now.

Short-term government bonds are, in effect, very little different to fixed term deposit accounts which many savers now use with banks and building societies to lock up funds for a period and increase the interest that they earn.

8. Repaying the borrowings

It's important to note that when bonds are repaid this does not usually, if ever, impose a cost on tax revenues. The government repays bonds that come due for repayment by issuing new bonds at current interest rates. The funds redeemed are usually immediately reinvested in new bond issues so that, as the graph of government borrowing noted above shows, net repayments of bonds almost never take place. We expect this to continue in the future.

In that case bond issues can fund the investment required for the Green New Deal programme and there is no need to plan to repay the borrowing in question: historical precedent shows that this repayment does not happen. That said, if it was desired that repayment take place then it might be funded in four ways:

Reason for repayment	Reason the repayment arises
The asset invested in pays a return that allows borrowing to be repaid out of the surplus made	• The surplus earned on renting social housing • The savings made from investing in energy saving • The return on investment in new methods of energy generation • The trading surplus from selling services e.g. for the use of new transport systems • The profit from investment in new technology
The investment promotes economic activity that results in more tax being paid because more people are employed	• Investment in the economy creates what are called 'multiplier effects'. This means that not only does a pound invested become the income of the person who works on the investment project, but that when they spend the proceeds that often involves paying others who in turn spend more. Given that tax is paid at every stage of this process government investment has been shown to be more than capable of paying for itself in tax terms by simply promoting more economic activity, as the Green New Deal would do.

Alternatively, and more likely, the amount of future borrowing to fund the Green New Deal might be reduced if these surpluses arise. Our point is that repayment is not an issue to worry about: historically the situation has always been managed with ease and there is no reason to think that borrowing for the investment needed for the Green New Deal will change this.

9. Who might buy these bonds?

According to recent research government bonds are held as follows[v]:

Institution	Percentage of total government debt owned	Explanatory notes
UK pension and insurance companies	30%	Held for those who save with these institutions
The UK government	25%	This is debt owned by the Bank of England under the quantitative easing programme and effectively cancelled as a result
Other UK banks and financial institutions	17%	Not usually owned by these institutions themselves but held for their customers who have ISA and other savings products and portfolios held with these institutions. UK banks hold very few government bonds most of the time.
Overseas institutions	27%	Overseas pension funds, life assurance companies and savers.

In other words, it is always the case that government bonds are bought by savers. In this context it is useful to look at the makeup of UK financial wealth. The latest data is from 2016:

Breakdown of aggregate total wealth for Great Britain, June 2016

	£ billion	Percentage
Property Wealth (net)	4,516	35.5
Financial Wealth (net)	1,630	12.8
Physical Wealth, such as cars and other assets	1,230	9.6
Private Pension Wealth	5,354	42.0
Total Wealth (including Private Pension Wealth)	12,730	100.0
Total Wealth (excluding Private Pension Wealth)	7,376	58.0

Source: Office for National Statistics[vi]

Of net financial wealth £600 billion (4.7% of the total) is in ISA (Individual Savings Accounts) arrangements[vii]. This means that in total 46.7 per cent of total wealth and 85.3 per cent of all financial wealth, including pensions, is saved in tax incentivised accounts (pensions and ISAs) in the UK.

This means that those in these tax incentivised arrangements are by far the most likely buyers of these bonds, and so what is required is a plan to encourage them to do so.

10. Selling Green New Deal bonds

It would seem that there are three essential characteristics that will sell Green New Deal bonds, most especially in an era of financial stress, which many are forecasting to be likely given that there has been no major economic downturn since 2008. They are:

- A tax incentive;
- An acceptable rate of return;
- A government guarantee of the sort that cash deposits enjoy and which many ISA accounts benefit from as a result.

Each of these is addressed in turn:

Tax incentive

About £70 billion[2] is saved in ISAs a year[viii]. If ISA tax relief was dependent on these new funds being invested in the Green New Deal[3] in future at a government-guaranteed interest rate (see below) we think that all this money might be available for investment in Green New Deal bonds which would be specifically made available for this purpose.

About £100 billion a year is paid into UK pension funds each year and all of that money gets tax relief from the government[ix]. The total tax subsidy costs £54 billion a year[x]. If 25 per cent of those contributions were required to be invested in Green New Deal bonds in exchange for that tax relief that would supply about £25 billion a year of funding to the Green New Deal.

Together these simple changes might by themselves provide the sum required for the Green New Deal. Some other, outside, investors are bound to be attracted as well, as they are now to UK government bonds as noted above. In that case we are also confident that these proposals could help fund the cost of business transitioning to new ways of working, as the climate crisis requires as well.

Interest rate

The average interest cost of UK government debt since the beginning of 2018 has been 1.85 per cent, with little variation appearing over this period, and with the Office for Budget Responsibility expecting it to only rise very slowly over coming years[xi]. We suggest that overall this be the interest rate paid on Green New Deal bonds, although the rate might vary depending on the time period for which funds were committed. The annual cost of this interest would be less than the current annual tax subsidy to ISAs[xii] and would be covered many times over by the additional tax paid by those working on Green New Deal funded projects.

A government guarantee

At present the UK has what's called a Financial Services Compensation Scheme[xiii]. This means that anyone who has up to £85,000 in a bank deposit account is

---

[2] The sum includes new savings and funds rolled over from an old account to a new one. Since under the proposal being made tax relief would only be available on new accounts investing in Green New Deal bonds this is the correct figure to use for the purposes of this analysis.
[3] We are not proposing that existing ISA accounts would lose their tax relief: the proposal would only apply to new accounts. Top ups to old accounts would not, however, be allowed.

guaranteed to be repaid by the government if that bank fails. This provides a government backstop guarantee for all UK savings.

We suggest that the Green New Deal should involve a similar guarantee. Every single Green New Deal approved savings product should be backed up by the government to the same limit as that used the Financial Services Compensation Scheme, although we also suggest that it might be appropriate to consider an overall cap per saver to prevent this being exploited by some.

11. What role does Green Quantitative Easing play in this?

The capital cost of the Green New Deal can be paid for by borrowing, as this briefing shows. In that case only a relatively small part of the cost of the Green New Deal, such as the cost of interest on Green New Deal bonds, would have to be covered by taxation. In practice we suggest that the additional tax revenues that those employed on Green New Deal activity would pay should more than cover such costs.

In that case, there is little role for green quantitative easing in this process as matters stand at present. In that case it would only do what it was ever designed for, which is to provide a guarantee that funding will be available if all other options fail as can happen, for example, in the event of serious economic downturns of the type seen in 2008/09. Beyond that, it would also be the mechanism that could be used to ensure that there will always be a market for Green New Deal investments. But, again, we strongly suspect it will never be required for that purpose.

What we proposed in this briefing is a comprehensive mechanism for funding the Green New Deal that is simple, effective, affordable and completely comprehensible by almost any saver. We can avoid all complications like green quantitative easing, and so we suggest we should.

12. Publication details

This briefing was written by Richard Murphy and Colin Hines and published by Finance for the Future LLP, 33 Kingsley Walk, Ely, Cambridgeshire, CB6 3BZ.

Richard Murphy can be contacted via richard@richardmurphy.org.uk

The authors would like to thank Ruth Potts and Andrew Simms for helpful comments.

13. Endnotes

[i] https://www.ft.com/content/c7fd4e22-07ae-11ea-a984-fbbacad9e7dd

[ii] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/752202/Budget_2018_red_web.pdf page 4

[iii] https://researchbriefings.parliament.uk/ResearchBriefing/Summary/SN05745#fullreport

[iv] https://www.dmo.gov.uk/responsibilities/gilt-market/about-gilts/

[v] https://fullfact.org/economy/guide-economy-debt/

[vi] https://www.ons.gov.uk/peoplepopulationandcommunity/personalandhouseholdfinances/incomeandwealth/bulletins/wealthingreatbritainwave5/2014to2016

[vii] https://www.gov.uk/government/collections/individual-savings-accounts-isa-statistics

[viii] https://www.gov.uk/government/collections/individual-savings-accounts-isa-statistics

[ix] Author estimate based on a number of sources covering the range of pension funds that exist.

[x] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/833859/Table_6_Cost_of_Pension_Tax_and_NICs_Relief__2012-13_to_2017-18_.pdf The government offsets the cost of tax paid on past pension contributions in this table: that is not in accounting terms a valid thing to do: the cost of current tax reliefs excludes this offset.

[xi] https://obr.uk/forecasts-in-depth/the-economy-forecast/conditioning-assumptions/#ukinterestrates

[xii] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/737597/Dec_17_Main_Reliefs_Final.pdf

[xiii] https://www.fscs.org.uk/