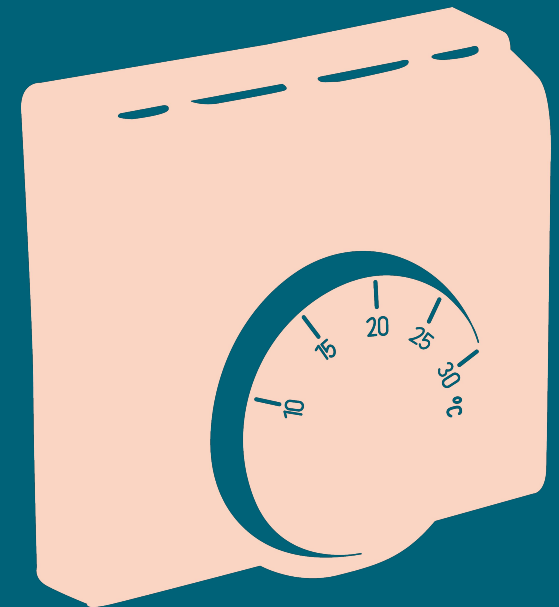


Lessons for net zero

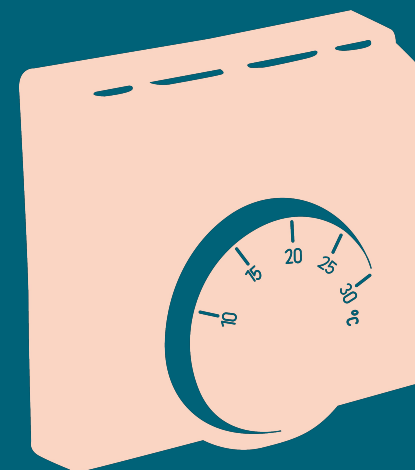
Discussion paper

What past energy efficiency and low carbon home improvement schemes tell us



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Introduction

The immediate impacts of the COVID-19 crisis are still being felt across the country. As the first wave of the virus has started to come under control, the focus is turning to economic recovery.

It is essential that investments to boost the economy also help to get the country back on track to meet its target to reach net zero carbon emissions by 2050. The Committee on Climate Change (CCC) has led calls for a **green economic recovery**, with a focus on investing in low carbon programmes that will generate new jobs, reduce emissions, change behaviour and create a fairer economy.

In the 2020 summer budget statement, the government announced the **Green Homes Grant scheme**, to help people fund energy efficiency improvements for their home. This is a step in the right direction. But much more needs to be done to meet the challenges of cutting fuel poverty and meeting the net zero target. There needs to be significant investment to improve energy efficiency and support the move to low carbon heat.

Any new schemes must learn from, and build on, the lessons from the past in this area. Previous policies to improve the efficiency of homes and to encourage investments in energy efficiency and other low carbon home technologies have had mixed success. There have also been some notable failures that must not be replicated in future schemes.

Meeting net zero won't be possible without the support and buy-in from people across the country. That's why we're calling for a **net zero homes guarantee** to inform, protect and support people to make the changes.

This discussion paper brings together what we know about previous schemes from our research and the experience of our clients and advisers.

Introduction

The paper focuses on schemes to promote energy efficiency and renewable energy technologies that have been delivered across Great Britain to improve homes.

The main schemes referenced are:

The Energy Company Obligation, an energy efficiency scheme delivered by energy suppliers from 2013 to present

The Green Deal, a government loan scheme for energy efficiency and other low carbon home improvements, that ran from 2013 to 2015

The Renewable Heat Incentive, a government scheme to fund renewable heating systems from 2016 to the present

The Feed-in Tariff, a government scheme to fund microgeneration systems, mostly solar panels, which ran from 2012 to 2019

More detail on these schemes can be found in the background section at the end of the paper.

While these schemes have been running, Citizens Advice has been providing statutory advocate and advice for energy consumers, through the Citizens Advice Consumer Service. We also deliver a number of energy advice outreach programmes, including Big Energy Saving Week, Big Energy Saving Network and the Energy Advice Programmes (formerly known as Energy Best Deal).

This paper is informed by evidence from the Consumer Service, the Local Citizens Advice network and our research and advocacy work.

Lessons identified

Inform

- 1 Design and implement a simple and easy to access consumer journey
- 2 Take all opportunities to influence behaviour

Protect

- 3 Make clear that the government will take action to protect consumers from rogue traders
- 4 Demonstrate that there is regular, effective, monitoring and enforcement of standards of work
- 5 Provide trusted redress routes

Support

- 6 Avoid boom and bust
- 7 Provide incentives that consumers will respond to
- 8 Schemes should be sustainable and fair

1. Design and implement a simple and easy to access consumer journey

Energy efficiency and low carbon measures are complex. Poorly designed schemes can add to the confusion. Designing a scheme with appropriate monitoring, advice and support can help consumers to navigate this complexity.

The experience of our clients and advisers, shows that the approach used in the Energy Company Obligation (ECO) scheme, often creates a poor customer journey¹. In this scheme, energy suppliers can each choose their own approach to meeting the targets they are set by the government. As a result, there is no easy way for consumers to find out what measures are on offer from each supplier. In previous versions of ECO, a consumer in the target group could be referred into the scheme and go through an online and home assessment, only to be told that they did not qualify for support or would have to pay an unexpected additional cost to have efficiency measures installed².

With schemes like the Green Deal, impartial third-party advice, tailored to the consumer and their property, was crucial. But this kind of advice has often been hard to come by³. In the Green Deal, assessments were supposed to help consumers shop around between different Green Deal providers. But assessments were often tied to a particular provider, and many consumers did not receive their advice reports until long after they had their assessment⁴. Until recently there was no single web resource for trusted information on making energy efficiency or low carbon home improvements. The government's new Simple Energy Advice site should help close this gap, although it is likely to require further development to do so.

2. Use all opportunities to influence behaviour

Use regulation to create effective and low-cost incentives

In 2012 the government considered introducing a new scheme, known as consequential improvements, through planning rules.

This would have required homeowners to upgrade the energy efficiency of their home if they built an extension or made other significant changes to their property. It had previously been implemented successfully by some individual local councils. However, the UK government decided not to introduce it because of more short-term policy concerns, and the lack of a long-term strategy for carbon reduction.

A similar thing happened with the Zero Carbon Homes policy, which aimed to set high energy standards for new homes being built. As a result of the government decision to abandon the policy in 2015, many new homes continue to be built without measures needed to reach net zero.

Between the time that the Zero Carbon Homes policy was abandoned and the new Future Homes Standard taking effect, around 2 million additional homes will need retrofitting⁵. These homes will have to have measures retrofitted at some point in the future, at considerable avoidable cost and disruption.

Research shows there are points in people's lives when they tend to be more predisposed to making energy efficient home improvements⁶. These are sometimes called trigger points. Examples are when someone moves home, or carries out major building work on their home. Government schemes could be more effective if they can engage consumers making these changes with accessible offers.

3. Make clear that the government will take action to protect people from rogue traders and scams

Energy efficiency and low carbon schemes have often been marred by scams and mis-selling.

The launch of the Green Deal, in particular, saw a rapid rise in related scams. Common cases involved people/companies not registered with the scheme using the Green Deal brand to scam consumers on the doorstep⁷. However some cases of mis-selling were from firms registered with the Green Deal's oversight body, Home Energy and Lifestyle Management Systems (HELMS), a Green Deal provider operating primarily in Scotland, caused problems for thousands of customers, who have been left out-of-pocket through hidden costs⁸.

The way the Green Deal and ECO were designed, with the intention they would blend together, was unintentionally confusing for consumers. They did not provide a clear offer of support for people when they first engaged with the scheme. With ECO, there was no easy way to tell if a trader was part of the scheme or not.

The government's own messaging on the 2 schemes added to the confusion, as it was focused on boosting uptake of the scheme rather than making sure consumers got a good deal. The Advertising Standards Agency upheld a complaint against government Green Deal adverts for overstating its benefits⁹.

These types of issues can occur across schemes and technologies. Citizens Advice has also heard from people who installed low-carbon heating technologies, through the Renewable Heat Incentive (RHI), who are now paying more for their energy bills, and believe they were mis-sold their heating system¹⁰. The uncertainty around the costs and savings associated with home energy technologies increases the risk of either intentional or unintentional mis-selling.

RHI and the Feed-in Tariff for solar panels resulted in confusing offers that resulted in some consumers being left confused and out of pocket. With these schemes, people could sign over their regular subsidy payments to the company installing their system, to cover the cost of the system. This is a good idea in principle, as it helps people to install systems if they cannot afford to pay for them upfront.

In practice, it led to circumstances where consumers signed long contracts - up to 25 years - with terms they didn't fully understand and little recourse if they changed their mind. It gives a third-party company an interest in the property, which can create problems if the consumer wants to sell it. Many of the complaints against HELMS involve this kind of arrangement. The situation for consumers can become even more complicated if these companies later stop trading. →

Make clear that the government will take action to protect consumers from rogue traders and scams

→ Recently, we've seen a new trend of products and services targeted at households with existing insulation or renewable energy systems¹¹. Households with solar panels are now being targeted by firms selling add-on products, like solar voltage boosters, that may cost a lot and provide little benefit.

In certain areas, households are being targeted by firms offering insulation removal. These companies trade off well-known problems with cavity wall insulation, but in practice some appear to be scams¹².

The Green Homes Grant scheme will require that installers belong to 1 of 2 industry quality marks, Trustmark or MCS¹³. This should:

- help consumers to identify legitimate traders
- ensure high standards of behaviour from firms in the scheme

We also expect the design of the scheme to take steps to prevent cold-calling and doorstep-selling by registered firms.

These quality marks will only be effective at raising standards if they are effectively monitored and enforced. There will need to be frequent monitoring of consumer experience, particularly early in the scheme, to make sure that any scams or mis-selling activity is identified and action taken.

Having 2 different industry quality marks will be confusing to consumers. Ideally, there should be a single, comprehensive net zero homes protection framework for providers and installers of low carbon home improvements. This must include sufficient funding for enforcement.

The changes needed for British homes to reach net zero emissions are of a scale that is wider and more far-reaching than any previous scheme has sought to tackle. Learning from the Green Home Grant will be vital to the successful design and implementation of future schemes.

4. Demonstrate that there is regular, effective monitoring and enforcement of standards of work

Previous schemes have had well documented problems with substandard work, particularly with insulation installations through ECO.

The most common and serious quality failures leave households suffering from damp in their property where insulation has either been installed badly, or shouldn't have been installed in the first place¹⁴. This is most common with cavity wall insulation but also occurs with solid wall insulation, which has been installed in fewer homes. We regularly get calls to our Consumer Service from people telling us it has caused damage to building work and interiors, and left them with long-term problems in their homes that are costly to resolve, disruptive and distressing¹⁵. Damp and mould in the home can lead to increased health problems, particularly respiratory illness¹⁶.

A shortfall in quality is apparent in other areas too. Energy Performance Certificates (EPCs) can be inconsistent and vary significantly. Research on past schemes found that different assessors gave the same property a significantly different EPC rating¹⁷. This undermines their key purposes to help consumers to understand and make decisions to improve the performance of their homes. It also creates knock-on problems for policies that use EPC ratings for example as qualifying criteria or as a benchmark of success.

Quality problems are a particular risk for energy efficiency and low carbon technologies. Few people are familiar with these technologies and it's hard to tell good work from bad. With products like insulation, faults may be invisible and take months or years to come to light¹⁸.

This means quality standards, independent monitoring of firms and installations, and strong enforcement where installers fall short, are essential for future schemes. While preventative measures, like training and inspections of installations, can be expensive, these costs are outweighed by damage that poor quality work can do.

In past schemes, quality assurance measures have been patchy. In ECO, the regulator, Ofgem, required regular monitoring from energy suppliers, but this only covered a sample of work. It's not clear this was followed up with strong enough sanctions to prevent repeat offending¹⁹. Or that it covered all the relevant aspects of the installation that required to deliver quality outcomes²⁰. Ultimately, as the problems with insulation show, it did not always stop poor quality work getting through. →

Demonstrate that there is regular, effective monitoring and enforcement of standards of work

→ Other schemes, like the Green Deal, had different monitoring requirements. But there was little coordination between bodies or across schemes. There were few systematic checks on installations in the months and years after they were done, to check for long-term problems²¹.

These shortfalls are particularly likely where schemes did not have 1 single body ultimately responsible for, and effectively held account for, delivering quality. Things appear to have been managed better in schemes with a single central delivery body, as with those run by the governments of Wales and Scotland²².

The Green Homes Grant scheme will require that installers belong to 1 of 2 industry quality marks, Trustmark or MCS²³. However, physical inspections of work will be needed before, during and after installation, to ensure that quality is being delivered in practice. We expect that the government will put new monitoring requirements in place for the scheme, although, at the time of writing, these have not been announced.

5. Provide trusted redress routes

If something does go wrong with the installation of a new energy efficiency measure or low carbon heating system, it is important that the consumer can quickly and easily get it resolved. But too often in past schemes people have faced a redress process that is confusing, difficult and frustrating. The responsibility of installers and scheme bodies to consumers should not end when the work is completed.

Analysis of calls to Citizens Advice show that many consumers have struggled to understand how to get their complaint resolved. Others find none of the organisations involved willing to take responsibility for the work, and their complaints are disputed between manufacturers and installers, contractors and subcontractors, and installers and guarantee providers²⁴.

With installations under ECO, it has often been hard for people to find the firm that did the work in the first place. While the work was paid for by energy companies, it was normally carried out by third-party installers, with whom the householders might have had no contract, and little contact. Energy companies are not required to act as the contact point for consumer complaints as they are for problems with energy supply. As issues can take many

years to come to light, and turnover in the sector is high, firms are often no longer trading by the time the consumer raises a concern. Alternatively it is difficult to trace a firm if it is now trading under another name²⁵. Until recently, there were no particular standards for complaints handling for firms installing or funding ECO measures, although other schemes have had better processes. Nor was there a single body responsible for ultimately making sure consumers get appropriate redress, for example an Ombudsman. The requirement for Trustmark membership in ECO has brought some standards on complaints handling and dispute resolution.

Most schemes require that installations are also covered by a warranty, but warranties and guarantees do not always provide the protection that consumers expect from them. For work done through Feed-in Tariff and, particularly, ECO some consumers have found it difficult to get help from guarantee providers²⁶. In some cases guarantee providers have relied on over-generous or ambiguous exclusion clauses to avoid paying out, or would only pay a fraction of the costs of the damage.

6. Avoid boom and bust

Several past policies have had to either ramp-up very quickly or have ended abruptly. This kind of stop and start can be bad for consumers and businesses.

An example of this is the Green Deal Home Improvement Fund (GDHIF), the last major scheme to provide grants for energy efficiency in England. The first release of grants were awarded more quickly than expected, and the scheme was put on hold without any notice. The second release of grants were all taken up within 24 hours²⁷. Calls to Citizens Advice suggest this led to confusion for firms and businesses²⁸. Some businesses advertised offers that were unintentionally out of date. Consumers signed up for measures on the basis they would get a grant, only to later be asked to pay for the whole cost.

With the Carbon Emissions Reduction Target (CERT), (the home energy efficiency improvements programmes that preceded ECO), the rush to meet targets in a short timescale led to companies inflating prices²⁹. These costs were ultimately paid for by energy consumers.

Tight timescales also create additional opportunities for pressure-selling. We saw this with the FiT scheme, at the time its subsidy rate dropped, as well as with the GDHIF.

When schemes end with no follow-up, as with the GDHIF, people who missed out are left at a dead-end. This may weaken trust in government schemes and put them off engaging with this market in future. The same could happen if the scheme that follows is significantly more or less generous.

Some homeowners are already put-off by what they view as inconsistent government policy in this area³⁰. A lack of long-term certainty also makes it harder for reputable firms to get involved in the market and invest in skills. Ultimately, experience has proven that inconsistent policy can lead to higher delivery costs and lower quality work.

7. Provide incentives that consumers will respond to

Past schemes have been successful where measures included a significant subsidy or other incentive for consumers. Schemes failed where they did not effectively reflect research on consumer preferences.

Consumer awareness of, and appetite for, energy efficiency and low carbon home improvements is low. Savings on energy bills alone are not enough to motivate most people to make these improvements. Incentives are needed to overcome a range of barriers, including inertia and lack of trust in the sector³¹.

The Green Deal scheme provided loans to cover the cost of energy efficiency installations. This was only likely to appeal to a small number of households who wanted to install measures but lacked the savings to pay for them. The loan conditions were broadly competitive, but not an incentive in themselves³². And they also created additional barriers for consumers, like concerns about selling their home with a loan attached. As a result they provided little incentive for the vast majority of households who were not already thinking about installing measures³³. This was already clear from research at the time³¹. The National Audit Office found that the government did not fully integrate evidence into the design and implementation of the Green Deal³⁴. According to government research, the Green Deal and ECO did not have any impact on the number of people considering energy saving measures. This was despite 84% of

consumers at the time being concerned about steep rises in energy prices³⁶. As a result of this, and the scheme being overly complex, only around 14,000 households took up the Green Deal. This was far below the government's expectations³⁷.

The government introduced a subsidy scheme alongside the Green Deal, the Green Deal cashback, to boost uptake. This did not have much impact, likely because it was too complex, and the incentive it provided was too small.

Schemes have been much more successful at persuading consumers to act when they've provided a clear and significant monetary incentive. An example is the GDHIF, a successor to the Green Deal cashback, or the Feed-in Tariff. As well as providing a good return, these schemes were also relatively simple and easy to understand³⁸.

Grants and subsidies are not the only ways to encourage people to take up these schemes and make home improvements. Research suggests other forms of incentive, for example different council tax or stamp duty rates, could be more effective and provide better value³⁹. However, some government spending on incentives may be necessary, and should be viewed in the context of the considerable scale of the challenge. To meet net zero targets, 17 million homes need to make energy efficiency improvements in England alone.

8. Schemes should be sustainable and fair

While strong incentives are often necessary to get consumers to act, if designed badly, they can be wasteful, and provide a windfall to already well-off households.

The GDHIF provided a high level of support for the few households who were able to access them. But they were set at a rate that the government at the time was not able to sustain, leaving other consumers with no support, and did not provide value for money compared to other schemes⁴⁰.

In the initial stages of the Feed-in Tariff, the high payment rate gave households who could afford to invest in solar panels an overly-generous return⁴¹. Both the Feed-in Tariff and Renewable Heat Incentive required consumers to find the capital to pay for the upfront cost of the installation, and then gave them a regular subsidy in return. This meant they mainly rewarded wealthy householders in larger homes. In the case of the RHI, it meant new heating systems did not necessarily go to those households off the gas grid who could save the most on their bills.

Grants could have been a better way to fund the FiT and RHI. Not only would they have helped more lower-income households, they would also be simpler, and potentially cheaper, to manage. Recent evidence also suggests that grants are also more cost-effective, over the long-term, than subsidised loans, like the Green Deal⁴².

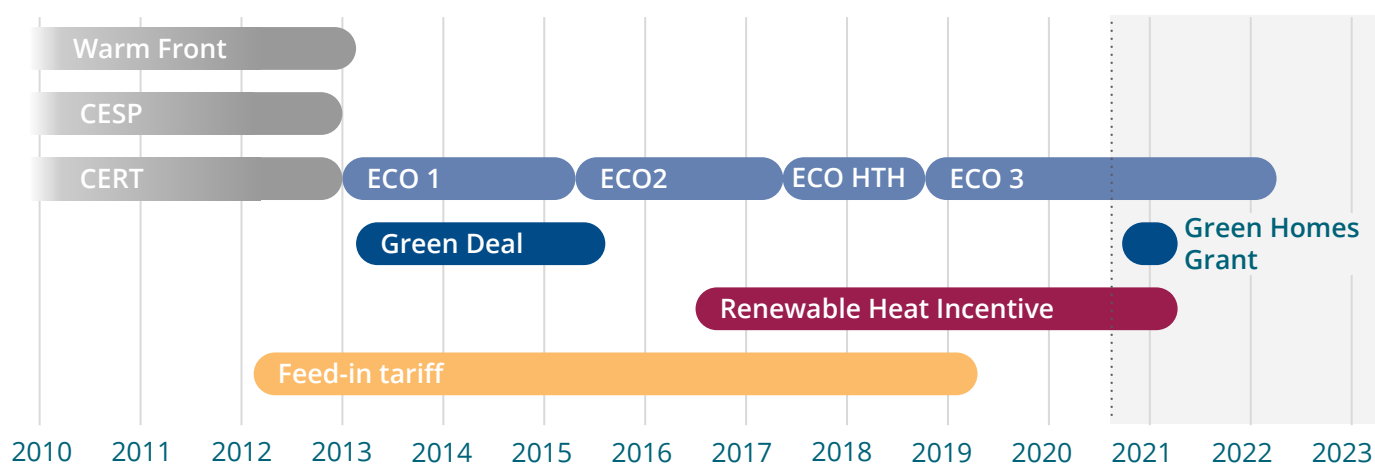
Background

This paper focuses on schemes to promote energy efficiency and renewable energy technologies that have been delivered across Great Britain to improve homes. It does not look at issues specific to rental properties.

Schemes covered

Energy efficiency	Energy Company Obligation
	Green Deal
Renewable heat	Renewable Heat Incentive
Solar panels	Feed-in tariff

Timeline of schemes



The Energy Company Obligation

The Energy Company Obligation (ECO) provides funding for energy efficiency improvements in homes, through targets set for energy companies. Over a given period, each large energy company must fund these improvements to meet a target they are set by the government. ECO has most commonly funded free or subsidised insulation and replacement boilers. However, the details of the support on offer can vary between energy companies and their delivery partners.

The current ECO targets run until 2022, but the government has said the current level of funding will continue until 2028.

ECO started in 2013 and replaced 3 earlier schemes

Scheme	Aim	Funding
Carbon Emissions Reduction Target (CERT) ⁴³	Carbon reduction	Target on energy companies
Community Energy Saving Programme (CESP) ⁴³	Carbon reduction	Target on energy companies
Warm Front ⁴⁴	Fuel poverty	Government funding

The current ECO scheme is focused on meeting fuel poverty. Most funding is reserved for households on a low income or someone with a disability. Until recently, the ECO targets were split between fuel poverty and carbon reduction related targets, with each part of the scheme having different eligibility criteria and measures on offer.

The size of the ECO scheme, in terms of funding, has decreased since it started: from around £1.12 billion per year to £640 million per year.

In England, ECO is currently the only national energy efficiency scheme to tackle fuel poverty. Both Scotland and Wales have additional funding to supplement ECO (Warmer Homes Scotland and Nest, respectively).

ECO is imprecise at targeting fuel poverty. As of 2018, only around 30% of those eligible for the scheme were in fuel poverty.

Because of both the targeting rate and the level of funding of ECO, the Committee on Fuel Poverty, the government's advisory body, says that more funding is needed to meet the fuel poverty target for England. It has called for the government to fund a new scheme of energy efficiency improvements for households in the least efficient homes. The 2019 Conservative manifesto committed to spend £2 billion on a scheme of this kind.

Green Deal

The Green Deal provided loans for homeowners, landlords and tenants to pay for a range of home improvements including insulation, solar panels, and energy efficient glazing. The scheme was based on the principle that households would make loan repayments smaller than the savings on their bills resulting from the energy efficiency improvements. However, in practice this was not guaranteed.

The Green Deal was not a personal loan, instead the repayments were made by a charge on the property. For the life of the loan any new occupant of the property would be required to make repayments.

Take-up of the Green Deal was low and, in summer 2015, the government stopped funding the Green Deal and the scheme was closed to new applicants. The Green Deal Finance Company was then sold to a private sector company - it is not currently offering Green Deal loans.

The Green Deal Cashback and Green Deal Home Improvement Fund

Alongside the Green Deal, the government introduced two successive grant schemes: the Green Deal Cashback and the Green Deal Home Improvement fund. These gave consumers a discount on the cost of energy efficiency measures. This was paid for by government funding.

Green Deal Cashback ⁴²	Launched February 2013	15,500 measures installed
Green Deal Home Improvement Fund ⁴²	Launched March 2014	41,500 measures installed

Although these schemes were closely related to the Green Deal, they could still be accessed by consumers who were not taking out a Green Deal loan.

A third scheme, Green Deal Communities provided grants for local projects.

The new Green Homes Grant scheme is the first attempt since the Green Deal and these related schemes to encourage consumers to invest in energy efficiency measures for their home.

Renewable heat: the RHI

The domestic Renewable Heat Incentive (RHI) provides funding for consumers installing renewable heating systems, including heat pumps, solar thermal and biomass boilers. The funding is intended to close the gap in costs between traditional boilers, that burn fossil fuels, and low-carbon heating systems, which tend to be more expensive. The scheme takes the form of regular payments, made every quarter, to participating households. The funding comes from government spending.

Following a recent extension, the scheme is set to close to new applicants in 2021.

The government set a target of 513,000 installations for the domestic RHI. As of January 2020 the number is well short of this target, at around 80,000 installed systems⁴³.

The new Green Homes Grant scheme, which will run concurrently with the RHI, will provide an alternative incentive for households installing a renewable heating system.

Solar panels: The domestic Feed-in Tariff

The domestic Feed-in Tariff (FiT) provided funding for consumers installing microgeneration technologies, mainly solar panels, to increase the uptake of these technologies. The scheme took the form of regular payments to participating households, based on how much electricity the system they installed could generate. Consumers received this payment even if they use all the electricity produced by their solar panel themselves. The funding for the FiT comes from energy companies, who recover the cost through charges on electricity bills.

The domestic FiT closed to new applicants in 2019. It is being succeeded by the Smart Export Guarantee, which is based on the amount of electricity that goes back into the grid.

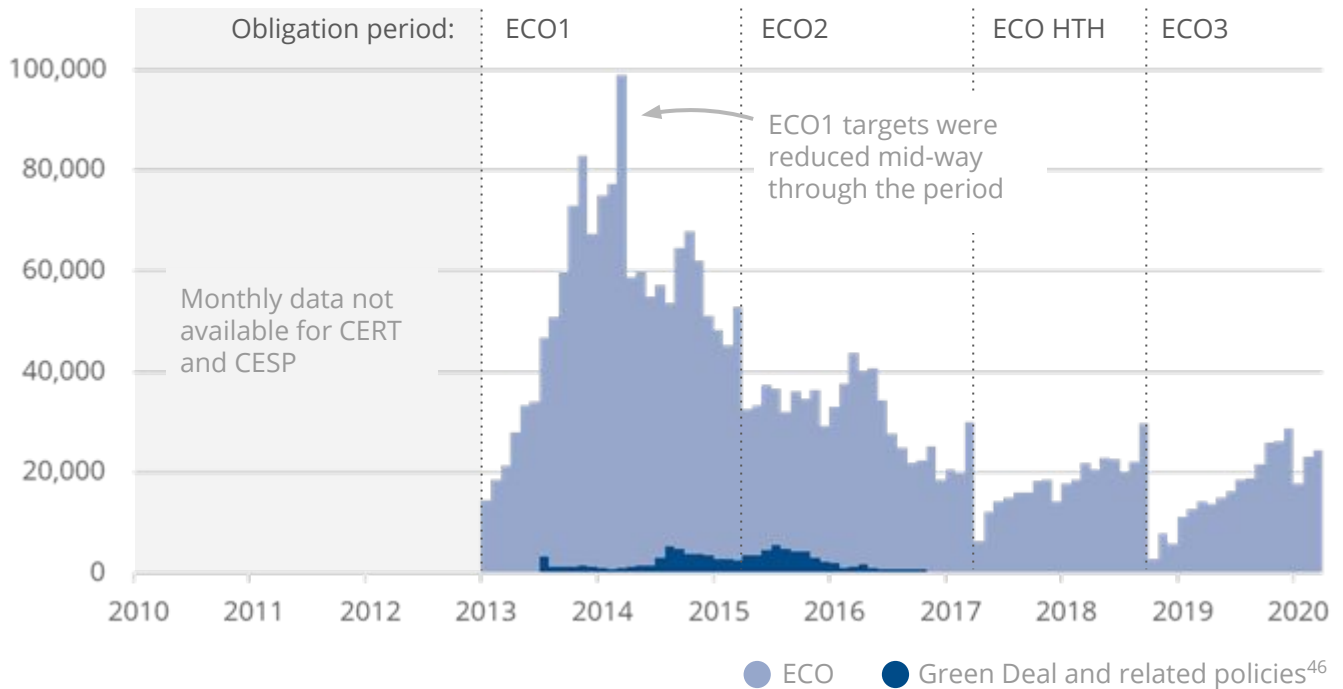
The Feed-in Tariff supported around 900,000 installations of solar panels under 4 megawatts in size, the vast majority of which are domestic installations⁴⁴.

Installations over time

These charts show installation rates for the main energy efficiency and low carbon support schemes on the same scale. In terms of numbers of installations ECO has been by far the largest scheme, while RHI has had relatively low take up.

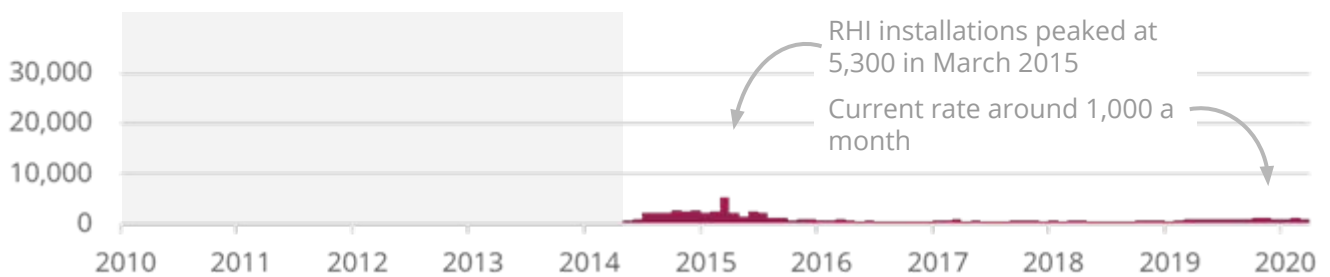
Energy Company Obligation and Green Deal

Measures installed, by month⁴⁵



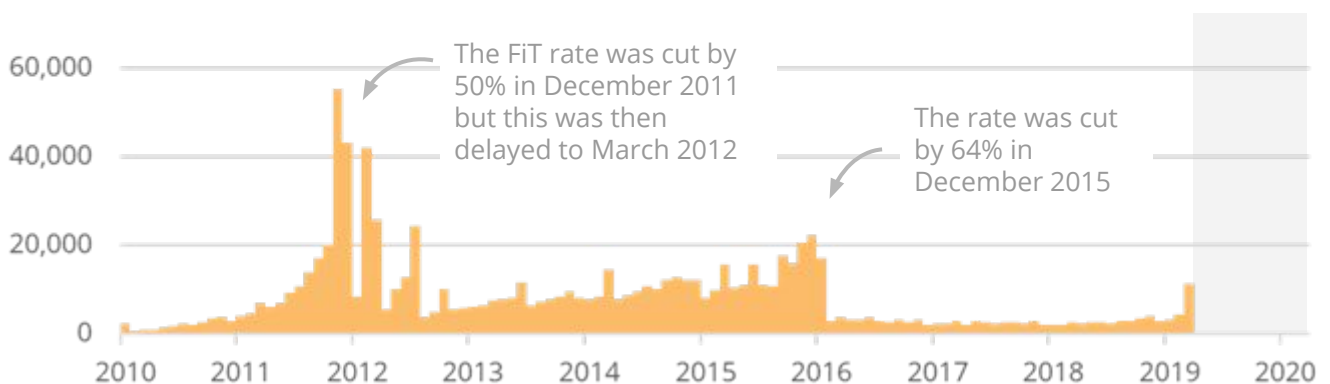
Renewable Heat Incentive⁴³

Accredited domestic applications, by month⁴⁷



Feed-in tariff

FiT Installations of solar panels below 4kW, by month⁴⁸



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