



Department for
Business, Energy
& Industrial Strategy

THE FUTURE FOR SMALL-SCALE LOW- CARBON GENERATION

Response to consultations
on policy proposals for a Smart Export
Guarantee, and on proposed amended
licence conditions

June 2019



OGL

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Introduction

Policy context

The Industrial Strategy set out four Grand Challenges to put the UK at the forefront of the industries of the future. One of these Grand Challenges is maximising the advantages for UK industry from the global shift to clean growth. The framework for achieving clean growth and affordable energy for businesses and households was set out in the Clean Growth Strategy¹ and sits at the heart of the Industrial Strategy².

The UK has made substantial progress in building a successful renewables industry as part of our move to a low-carbon economy and to support meeting our carbon reduction and renewable energy targets. In 2017, businesses active in the low-carbon and renewable energy economy generated £44.5 billion in turnover and employed an estimated 209,500 full-time equivalent employees.³ Installed capacity of renewable electricity generation has more than quadrupled since the end of 2010 from 9.3GW to 44.4GW at the end of 2018,⁴ supported by the Renewables Obligation, the Contracts for Difference scheme and the small-scale Feed-In Tariffs (FIT) scheme. Our Industrial Strategy sets out how government will ensure that the UK continues to benefit from the transition to a low-carbon economy.

Coupled with this, government is committed to driving forward the policies needed to improve the resilience and flexibility of our energy system through decentralised energy. We are seeing more generation located nearer to peoples' homes, greater demand with the increased use of electric vehicles, the ability to store energy, and potential for avoiding investment in new generation assets through, for example, demand-side response or battery storage to manage electricity more flexibly. There is enormous potential for greater home energy management through smart meters, smart appliances and smart tariffs. As a result of these developments, we expect significant changes to patterns of supply and demand in the future as we move to a smarter, more flexible energy system.

Development of the proposals for a Smart Export Guarantee

The FIT scheme was instrumental in driving the development of the low- carbon sector at both a domestic and small-scale commercial level. The FIT scheme gave the public a stake in the transition to a low-carbon economy and in turn fostered reductions in energy costs for households, businesses and communities that generate electricity. Since its introduction in 2010, the FIT scheme has supported the installation of over 850,000 installations, a total of over 6.6GW of UK generation capacity.⁵

Following consultations in 2015 and 2018, the FIT scheme's generation tariff and flat rate export tariff closed to new entrants from 31 March 2019 (subject to several limited extensions and grace periods). Government took this decision in the context of a steady fall in the cost of

¹ *The Clean Growth Strategy*, published in October 2017 and available at www.gov.uk/government/publications/clean-growth-strategy

² *The Industrial Strategy – Building a Britain Fit for the future*, published in November 2017 and available at www.gov.uk/government/publications/industrial-strategy-building-a-britain-fit-for-the-future

³ *Low carbon and renewable energy economy, UK: 2017*, published in January 2019 and available at www.ons.gov.uk/economy/environmentalaccounts/bulletins/finalesimates/2017

⁴ *Energy Trends*, published by BEIS in March 2019 and available at www.gov.uk/government/news/uk-energy-statistics-statistical-press-release-march-2019

⁵ According to data in the *Central Feed-in Tariff register* as of March 2019

low-carbon generation, a move towards cost-reflective pricing, and a continued desire to minimise the costs of support schemes to consumers.

In his speech *After the trilemma – 4 principles for the power sector*, the Secretary of State for Business, Energy and Industrial Strategy highlighted the “need to ensure that innovative businesses of the present and future can capture the system and network benefits of persuading customers to reduce their energy demand. Sometimes that will mean consumers becoming producers. Smart meters, data access, smarter networks and the right rules and incentives are necessary for this transformation”.⁶

The government believes small-scale low-carbon electricity generation should be brought forward through competitive, market-based solutions. In this system, the private sector can innovate and invest, and technologies can compete on their own merits, bringing value to the system which can be captured. We expect that as the energy system becomes smarter and more flexible, the market will grow, and consumers will be offered an increasing range of innovative services and bundled smart products. These services will support the integration and optimisation of onsite low-carbon generation.

However, a call for evidence in July 2018⁷ suggested that some form of government intervention is needed while these innovative markets for small-scale low-carbon generation are still emerging and in January 2019 we published a policy consultation on ‘The future for small-scale low-carbon generation’.⁸ It proposed to introduce a mandatory supplier-led mechanism – the Smart Export Guarantee (SEG) – to remunerate small-scale low-carbon generators for electricity they export to the grid. The consultation sought views on areas including the potential design of the mechanism, tariff type, which suppliers would be obligated to offer the tariff and to whom, other eligibility criteria including metering and certification requirements, and proposed arrangements for administering and monitoring. An impact assessment was published alongside the consultation.⁹

Responses to the initial ‘Part A’ policy consultation

The consultation ran for eight weeks between January and March 2019 and received 3,360 written responses. One hundred and eighty-two were individual replies from energy suppliers, renewable electricity developers, trade associations, community energy organisations, NGOs, local authorities and members of the public. The remainder were broadly similar responses sent in the context of a campaign, broadly welcoming the introduction of an export tariff but suggesting a guaranteed market rate, partly on the grounds that this would give people the confidence to invest in solar.

Public consultation events were held in London, Glasgow and Cardiff to discuss the proposals, and the Rt. Hon. Claire Perry MP, Minister for Energy and Clean Growth, met several suppliers to consider the opportunities and practicalities of implementing the SEG.

⁶ *After the Trilemma - four principles for the power sector* – a speech by BEIS Secretary of State in November 2018, and available at www.gov.uk/government/speeches/after-the-trilemma-4-principles-for-the-power-sector

⁷ *The future for small-scale low-carbon generation: a call for evidence*, published in July 2018 and available at www.gov.uk/government/consultations/the-future-for-small-scale-low-carbon-generation-a-call-for-evidence

⁸ *The future for small-scale low-carbon generation: consultation on a Smart Export Guarantee*, published in January 2019 and available at www.gov.uk/government/consultations/the-future-for-small-scale-low-carbon-generation

⁹ *Impact Assessment on consultation on future of small-scale low-carbon generation*, published in January 2019 and available at assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/769587/smart-export-guarantee-impact-assessment.pdf

All responses received as part of the consultation and stakeholder engagement process were considered in developing the final policy positions.

‘Part B’ consultation on proposed changes to electricity supply licence conditions

The SEG will be implemented through new secondary legislation and by modifications to conditions of the electricity supply licence, using primary powers in the Energy Act 2008.¹⁰

Following the closure of the ‘Part A’ policy consultation, we have developed draft licence modifications which will be used to implement the main elements of the SEG. We issued a further, four-week ‘Part B’ consultation on these draft modifications on 29 April 2019.¹¹

Responses to the ‘Part B’ consultation

Twenty-seven responses were received, including views from members of the public, trade associations, Ofgem, and companies and organisations involved in the electricity supply sector. In addition, meetings were held with some businesses and organisations that asked to discuss the proposed changes in more detail prior to responding. The key points raised in response to the consultation are summarised later in this document.

In view of the responses to the consultation, and discussions during the consultation process, some changes have been made to the proposed licence conditions.

Next steps

The government plans to implement the SEG in Great Britain through new secondary legislation, *The Smart Export Guarantee Order 2019*, and modifications to the Conditions of the Electricity Supply Licence, using primary powers in the Energy Act 2008.

It is envisaged that Ofgem will issue guidance for suppliers in the run up to the new requirement becoming mandatory, setting out what they will need to do to ensure that they are compliant with the SEG requirements.

Guidance will also be published for exporters who may be able to benefit from the SEG, explaining what they are entitled to, and offering some guidance on how to comply with some of the requirements of the SEG (such as meeting sustainability criteria and being prepared to demonstrate suitable product and installation safety accreditation).

The date when all relevant suppliers will need to be compliant with SEG requirements is expected to be **31 December 2019**.

We will monitor how the SEG is working during the first years of operation to assess whether meaningful and innovative tariffs and contracts are coming forward. If we consider that insufficient progress is being made, we will consult on reviewing the operation of the SEG.

¹⁰ *The Energy Act 2008*, published in 2008 and available at www.legislation.gov.uk/ukpga/2008/32/contents

¹¹ *The future for small-scale low-carbon generation: Part B*, published in April 2019 and available at www.gov.uk/government/consultations/the-future-for-small-scale-low-carbon-generation-part-b

Summary of decisions

More detailed summaries of the points raised, and the subsequent policy decisions, are set out in the remainder of this document.

- The government **intends to implement a Smart Export Guarantee**, which will enable anaerobic digestion, hydro, micro-combined heat and power (with an electrical capacity of 50kW or less), onshore wind, and solar photovoltaic exporters with **up to 5MW capacity** to receive payment for exported electricity.
- Licensed suppliers with **150,000 and over domestic customers** will be required to provide at least one tariff offer to any eligible exporter (and they are free to offer more than one tariff); other suppliers may participate on a voluntary basis.
- To provide space for the small-scale export market to develop, **there will not be any specified minimum tariff rate**, other than that a supplier must provide payment greater than zero at all times of export.
- To provide space for innovative approaches **suppliers will be free to choose the form of the tariff** they offer – provided they meet the requirements of the SEG. This will allow for relatively simple tariff offers to be implemented quickly, with an expectation that with time increasingly smart approaches will be implemented.
- **Exported power must be metered**, with a meter capable of reporting exports **on a half-hourly basis**, and meters **must also be registered for settlement** – though the SEG design is flexible and does not necessarily require half-hourly readings.
- The government **does not plan to require a central register of SEG installations**, on the grounds that it would create additional burdens while offering limited benefits.
- The obligation under the SEG only applies to low-carbon electricity exporters – however, the government recognises that smart systems may take various forms and the SEG therefore **provides suppliers with the flexibility** to purchase power from more complex systems including small-scale storage, and other forms of generation, if they choose to do so (and provided they are co-located with a SEG installation).
- **The government will ask Ofgem to report annually** on the provisions made by suppliers for smaller scale exporters, including the range, nature and uptake of tariffs offered by suppliers in response to SEG obligations (as well as any other similar tariffs suppliers are willing to share details of). The government will review this to monitor whether the market is delivering an effective range of options for small exporters.
- To benefit from the SEG, suppliers must be satisfied that exporters' installations are suitably safe, which could in practice mean obtaining from exporters evidence that their installation is **certified to the Microgeneration Certification Scheme, or equivalent, standards**. Suppliers will also need to be satisfied that installations using anaerobic digestion meet **sustainability criteria and feedstock requirements as verified by Ofgem**. There will not be a requirement to meet any particular energy efficiency standard in order to be an eligible exporter.

Consultation response: Overall approach

The consultation proposed the introduction of a SEG which would place an obligation on certain electricity suppliers to purchase electricity exported to the grid from small-scale low-carbon generators, allowing suppliers to determine the level of remuneration for that electricity.

It defined the broad objectives of the SEG as:

- Ensuring small-scale generators are compensated by the market for the value of their exported electricity;
- Establishing a framework for the sector which provides room for the market to develop options, promoting innovation and competition, in particular the growth of aggregators and a digital marketplace;
- Enhancing the role small-scale generators play in driving a smarter energy system, using smart meters and time-of-use tariffs, which will allow more consumers to benefit from location and time-specific electricity prices.

It proposed that the SEG mechanism should be cost-reflective and market led, helping to level the playing field for small-scale low-carbon generation whilst supporting the transition to a smart and flexible energy system. The SEG would be made available to the same range of small-scale low-carbon technologies that were eligible for the FIT scheme, up to a 5MW capacity (or up to 50kW for micro-combined heat and power).

Question 1 asked whether the SEG, as proposed, would provide a suitable and practical route to market for exported electricity from small-scale generators.

This question received mixed responses. Several suppliers, trade associations, consultancies and individuals felt that in principle the SEG could provide a viable stepping stone to a dynamic low-carbon export market, although many caveated their responses by suggesting that its success would be determined by the final design of the mechanism. Some electricity suppliers indicated that they were exploring the potential for purchasing small-scale generation. Almost all suppliers considered that the SEG should be kept as administratively simple as possible to allow them to innovate and provide the most meaningful remuneration.

However, many generators, installers, community groups, some NGOs and individuals, including over 3000 campaign responses, argued that the SEG as currently proposed would not be sufficient to encourage future growth in the small-scale sector. Many considered that generators and households would not be fairly compensated for the market value of their exported electricity unless the SEG mandated a floor price that was guaranteed over a long term. They argued that this could impact on the UK's ability to meet carbon targets, and that the proposed approach would not be an effective driver of employment or investment.

There was concern that contract lengths offered by suppliers may also vary, which could make it difficult for community organisations in particular to secure affordable finance to develop projects.

Timing was raised by several respondents, with concern that a hiatus between the closure of the FIT scheme and the introduction of the SEG requirements could have a detrimental impact on the UK's small-scale electricity sector.

Question 2 sought views on how the SEG could support innovation towards the smart energy transition.

Respondents had mixed views on this question. Some respondents considered that the SEG (particularly when coupled with other measures encouraging time-of-use tariffs) could aid the transition to a smarter energy system, although much would depend on the flexibility of the scheme and scope for industry to bring forward innovative solutions. Others, including some larger suppliers, generators and trade associations were concerned that given the proposal for exports to be metered and settled, any delays in the roll-out of smart metering infrastructure, or associated technical challenges, could act as a barrier to the deployment of the SEG and its ability to support wider policy objectives.

Government Response

Government recognises that small-scale generation and battery storage can play an important role in cutting carbon emissions as part of a flexible and efficient energy system, both reducing local demand and providing clean power. Building on the success of the FIT scheme, the SEG can help the UK to transition to an energy system that is smarter and cleaner, whilst keeping consumers firmly at its heart.

The government intends to legislate to introduce the SEG in Great Britain. The scheme will be supplier-led, and market driven, in line with our ambition to use market mechanisms to promote innovation and competition in the energy sector, including small-scale low-carbon electricity generation. We have already started to see positive signals of a nascent market emerging and we expect to see more suppliers bidding competitively for electricity to give exporters their best market price, while providing the local grid with cleaner, greener energy.

The SEG will ensure low-carbon generators do not export electricity to the grid for free and could act as a springboard to the development of a robust and competitive market for small-scale low-carbon generation. The government expects that over time, as the cost of small-scale generation and storage drops, and domestic-scale energy management technology enabled by smart metering becomes more widespread, there will be an increase in the number of innovative tariffs and offerings in the market. A key measure of the success of the SEG will be the development of a competitive and robust export market, with suppliers offering meaningful and innovative tariffs. This should enable small-scale low-carbon and smart technologies to compete on a level playing field, as we move away from subsidies to market-based solutions.

Having considered the concerns raised by consultation respondents regarding some of the more prescriptive approaches to a SEG, the government intends to keep the components of the SEG as simple as possible. This should allow suppliers flexibility to build on this initial design, adapting and innovating whilst maintaining the necessary protections for generators and consumers. It will also minimise the cost of associated administrative arrangements, providing scope for suppliers to provide meaningful tariffs.

This approach will allow the design of a variety of types of tariff, which could reflect suppliers' business models and the preferences of various types of generators. This could for example include allowing tariff designs tailored to particular technology types, which support specific behavioural changes based on market signals, or which reflect the ability to export consistently at times of peak demand and/or low generation. Suppliers would be free to set these tariffs at rates, and with contract lengths, which are attractive to the market.

We note the concerns raised by some about the impact that possible smart metering technical issues and delays in the roll-out may have on operability in the SEG. We consider that the issues with smart meters are transitional and we will continue to engage with the sector to accelerate solutions.

Government decisions on overall approach to the SEG

The government intends to legislate to introduce the SEG in Great Britain, subject to the will of Parliament. Suppliers will be required to offer at least one tariff to eligible exporters. The government will not prescribe a specific form of tariff: suppliers could therefore offer flat rate or time-variable tariffs, or smart tariffs of their own design.

The SEG will be a market-based mechanism, with suppliers free to set prices, in line with government's objective to move towards market pricing.

In keeping SEG requirements as simple as possible, suppliers will have maximum flexibility to build on it, adapt and innovate – for example by tailoring tariffs to appeal to owners of various types of small-scale generation, as well as wider smart infrastructure such as electric vehicles and domestic-scale storage systems. The government believes this approach will maintain the necessary controls to protect generators and consumers, while aligning with government's vision for a smarter and more flexible future energy system.

Design and operation of the SEG

Which suppliers should the SEG obligation apply to?

The consultation proposed that larger electricity suppliers would be required to offer to purchase the electricity which small-scale generators export to the grid, and that smaller suppliers could also participate on a voluntary basis. The consultation sought views on which suppliers should be required to participate, and initially proposed that the SEG requirement could apply to suppliers with over 250,000 domestic electricity supply customers, mirroring the threshold for mandatory FITs licensees.

On 11 February, BEIS issued a consultation update¹² including a specific proposal on the minimum supplier threshold, seeking further views on two specific options raised by consultees: adopting a lower threshold of 150,000 domestic customers (which would be more in line with the obligations placed on suppliers in respect of schemes such as the Energy Company Obligation (ECO)), or applying the SEG obligation to all suppliers.

Question 26 asked if the threshold for mandatory SEG suppliers should be set at 250,000 or more domestic electricity customers (mirroring the threshold for mandatory FITs licensees) or, if not, what alternative threshold would be appropriate.

A number of mainly larger suppliers considered that, provided the SEG mechanism is made as simple as possible, the threshold should be lowered or removed. Some suggested that only requiring larger suppliers to comply would put them at a competitive disadvantage, as non-obligated suppliers would face fewer administrative costs and could offer more competitive tariffs outside of the 'government mandated SEG'. Some respondents commented that offering a SEG would be less costly to suppliers than their functions under the FIT scheme (as they would be free to set prices and avoid the need for complex levelisation processes) so the threshold could be different.

Some respondents – notably smaller and medium sized suppliers – suggested that the threshold should be maintained at the proposed 250,000 level as it aligns with the current obligation level under the FIT scheme. They argued that the threshold should not be aligned with ECO thresholds, noting that growing suppliers passing the threshold for the first time could see higher compliance costs as they would not have legacy FITs customers (and hence have systems and processes in place that could be adapted). Others were concerned that if very small suppliers were required to participate in the SEG obligation, they may see only very small volumes of customer uptake, potentially leading to poor-quality implementation and damaging the reputation of the sector.

Some industrial suppliers sought clarity on whether non-domestic only suppliers can voluntarily take on domestic consumer exports even if they do not hold a domestic supply licence. They did not consider that non-domestic suppliers should be mandated to take on domestic suppliers but considered that making allowances for them to participate on a voluntary basis would drive competition and provide additional options for both supplier and exporter.

Various respondents, including generators, trade associations and other industry sectors, argued that applying a lower threshold, or no minimum threshold, would provide more choice and competition in the market.

¹² *Minimum supplier size threshold: Update*, published in February 2019 and available at www.gov.uk/government/consultations/the-future-for-small-scale-low-carbon-generation

Government Response

Government has considered the responses and on balance considers there is a reasonable case to reduce the initially proposed threshold to include licensed suppliers with 150,000 and above domestic customer accounts. This would align with BEIS policy to reduce thresholds on other schemes and facilitate a more competitive export market for eligible small-scale low-carbon generators.

At this stage, we do not consider there is a case to mandate all suppliers. We note that several suppliers with fewer than 150,000 customers have indicated that their scale relative to the likely initial administrative costs of the necessary systems mean they would face disproportionate administrative burden to deliver a SEG in the near future. We also note that the SEG is not expected to add to consumer energy bills and is therefore not subject to significant concerns about distortions to competition between suppliers. However, we would encourage those suppliers with fewer than 150,000 domestic customers, who choose to do so, to participate in the SEG on a voluntary basis and comply with the SEG legislation and / or provide alternative offerings independent of the SEG. We will continue to monitor the implementation of the SEG and keep this decision on the threshold under review.

Similarly, we do not consider it necessary to mandate 'non-domestic' suppliers with more than 150,000 industrial customers to provide SEG-compliant tariffs given that some of these companies may not have systems in place for offering services to domestic consumers (making impacts of any administrative changes disproportionately burdensome). However, these companies are not prevented from providing SEG tariffs and / or other export tariff offerings outside of the SEG, and we would encourage them to consider doing so to drive forward greater competition.

Government decision on mandatory supplier threshold

The government intends to require suppliers with 150,000 or more domestic customers to offer a SEG tariff to eligible small-scale exporters.

Smaller suppliers and those larger suppliers who normally supply non-domestic customers can opt to become voluntary SEG licensees and provide SEG compliant tariffs, but must adhere to the licence conditions of the SEG.

All suppliers can also choose to provide additional offerings for exported electricity outside the SEG arrangements.

Forms of tariff under the SEG

The consultation proposed that SEG providers would be required to purchase exported electricity from eligible generators – meaning SEG providers will be required to offer at least one tariff for eligible exported electricity. Several 'forms' of tariff were suggested, which varied from simple flat-rate pence per-kilowatt-hour approaches to more complex variable tariffs with a time-of-day dimension, and which could be benchmarked against wholesale power markets. The consultation noted that suppliers could be free to offer more than one tariff option. It also proposed that all exported electricity should be metered and registered for settlement in accordance with the Balancing and Settlement Code (BSC).

Question 3 sought views on the various proposed tariff options.

There were a wide range of responses from suppliers, generators, installers and trade associations with a clear majority supporting a flat-rate tariff, followed by the two suggested types of variable tariff. Reasons given for choosing these options were that the simpler tariffs would provide greater certainty to generators / consumers on likely income, be easier to understand for those not familiar with the energy market and could be implemented more quickly. Some respondents considered that the necessary technology and infrastructure was not sufficiently developed at present to enable the more advanced tariffs to operate.

Some individuals and companies providing smart technology solutions supported the more complex options of variable tariffs linked to the market, which they considered would help raise awareness of the need to balance supply and demand on the electricity system in line with the move towards a smarter, more flexible grid.

Government Response

We recognise that some suppliers will not be ready to move to smarter types of tariff immediately and consumers and generators have argued that they would prefer the certainty of a simple fixed tariff at least in the short term to provide certainty on likely income levels. However, over time we expect suppliers to increase their SEG offerings reflecting half-hourly price variations to reflect the wider electricity system conditions and maximise the benefits available to energy consumers. We consider the roll-out of smart meters, introduction of market-wide half-hourly settlement, combined with distribution networks opening up the delivery of network requirements to market-based solutions and changes to network charging arrangements, will all help enable this transition to smarter export tariffs. The requirement under SEG for exported electricity to be metered and settled is consistent with these wider changes in the electricity market.

Government has decided that components of the SEG including tariff type will initially be as simple as possible. As a minimum this would be a 'simple' flat-rate tariff (i.e. option A in the 'Part A' consultation document) but can also be more innovative (i.e. along the lines of the variable options B to E). Remuneration for exported electricity must be greater than zero at all times, and exports should be metered and registered for settlement in accordance with the BSC. This approach will give suppliers opportunities to produce a range of more sophisticated tariffs and avoid stifling innovation by being overly prescriptive.

Some smarter tariff offerings are already coming forward. We expect these to become widespread. We will monitor the market to assess the types of export tariffs being offered to small generators, and will review and make legislative changes (following consultation) to the design of the SEG tariff that suppliers will be required to offer in the future, if we consider that further intervention is needed to bring forward smarter more innovative offerings.

Government decision on tariff form

Suppliers will be required to offer a tariff that provides a remuneration for exported electricity that is greater than zero at all times of export and metered. The level of the tariff will otherwise be for suppliers to determine.

We will monitor the market and will review and make legislative changes (following consultation) if we consider that further intervention is needed.

Should the SEG have a minimum or 'fair' floor price?

The consultation proposed that the SEG would be a market-driven mechanism, with suppliers free to decide what payment rates and contract lengths, they would offer – subject to certain limitations, such as a requirement that remuneration must always be greater than zero, even at times of negative pricing in the wider electricity market. This would enable suppliers to determine the value of exported electricity, compete for customers, and take account of the administrative costs associated with offering SEG tariffs. Unlike in schemes such as the FIT, there would be no provision for 'levelisation' (a process where suppliers with proportionally fewer FIT customers make cross-payments to those with more, to spread the costs of running the FIT scheme fairly). Suppliers would instead be expected to make their own judgements on viable and competitive tariff offers.

Question 4 sought views on the proposed approach of government not taking a role in price setting, but rather leaving tariff levels to suppliers to determine.

Most respondents disagreed with this proposed approach, arguing that government should have some form of active role in price setting – whether in the form of a floor price, or some other type of guidance on what would constitute a 'fair' price. Many respondents argued that without a 'fixed' minimum floor price, potentially one based on the wholesale value of exported electricity, there was no guarantee that suppliers would offer 'fair' tariffs.

Several respondents suggested that without a meaningful floor price, the SEG would not provide the necessary security for investment and argued that this would undermine the development of the small-scale low-carbon sector. Some suggestions were made that a hybrid approach could be adopted – such as making a relatively short-term intervention to require a floor price greater than zero, but with an expectation that once a competitive market became established, the government could move to a less interventionist approach.

Some respondents also raised the issue of whether floor prices could be guaranteed for a certain time period – noting that the confidence provided by a relatively long-term contract would help make some small-scale business models more investable.

Those respondents who believed the government should not be involved in price setting, including a number of suppliers, argued that for SEG to be successful in delivering a competitive market for small-scale low-carbon generation it should be market-led.

Government Response

The FIT scheme has been successful in bringing forward deployment of small-scale installations, but this has come at a cost to consumers, who fund the scheme through their electricity bills. As the costs of renewable technologies have reduced, particularly for solar PV and onshore wind, the government believes that we need to move from a consumer-funded subsidy model to a competitive market based system with cost-reflective pricing in line with the vision to meet our climate change commitments at the lowest net cost to UK taxpayers, consumers and businesses, in line with the vision set out in the Industrial Strategy¹³ and the Clean Growth Strategy.¹⁴ The government therefore plans to implement a SEG obligation where tariff rates and contract lengths will be determined by suppliers.

¹³ *The Industrial Strategy – Building a Britain Fit for the future*, published in November 2017 and available at www.gov.uk/government/publications/industrial-strategy-building-a-britain-fit-for-the-future

¹⁴ *The Clean Growth Strategy*, published in October 2017 and available at www.gov.uk/government/publications/clean-growth-strategy

We will, as proposed in the consultation, legislate to ensure that generators receiving SEG tariffs are not required to pay suppliers at times when relevant market prices are negative. We believe this approach is proportionate on the basis of keeping the SEG as simple as possible. Introducing systems to provide for small generators to make payments to suppliers would increase the administration and set-up costs and add an unnecessary degree of risk and complexity for small generators.

The future market value of electricity is inherently uncertain; we understand the concerns expressed by many respondents and recognise that this market-led approach is unlikely to provide the same level of long-term income certainty offered by previous subsidy schemes such as the FIT. The transition from subsidised export to market competitiveness will inevitably have an impact on the manner in which the small-scale generation sector operates.

However, the falling trend in the cost of some small-scale generating technologies, which is expected to make small-scale generation increasingly competitive in the market - coupled with the spread of storage and demand-shifting technologies that allow consumers to manage their consumption more efficiently and export more actively – provide significant opportunity for the development of a dynamic and competitive market in this sector as it moves away from depending on subsidy.

The spread of smart metering technology means these generators may face new choices on how to design and operate future low-carbon generation, as under this flexible approach SEG suppliers could offer incentives to generators to export their power at times of peak prices and consume it at times of low prices – providing benefits to the energy system as a whole.

Since the closure of the FIT scheme, there have been encouraging early signs that a nascent export market is developing. Some suppliers are offering or trialling export tariffs, either in line with the wholesale price or at levels comparable with the FIT export tariff rate. We believe that these encouraging signals show that suppliers are keen to engage in this market and meaningful and competitive offerings will come through, without government taking the role of price setting.

The government will continue to engage with stakeholders in the sector as the SEG develops and will actively monitor the development of this market, including the range of options available to small-scale exporters. The government will ask Ofgem to report annually on the provisions made by suppliers for smaller scale exporters, including the range, nature and uptake of SEG tariffs (as well as any other similar tariffs suppliers are willing to share details of). The government will review this to monitor whether small-scale low-carbon generators are able to access the market and effectively sell exported electricity to the grid competitively. We will review the SEG tariff arrangements and potentially make legislative changes (following consultation) if we consider that competitive tariffs, reflective of market values, are not coming forward.

Government decisions on setting ‘minimum’ tariff levels

The level of remuneration under SEG tariffs will be determined by suppliers, in line with the aim of moving away from direct subsidy to cost reflective pricing and competitive market-based solutions.

The government recognises that the move from subsidy schemes to a competitive market will be a significant change for the small-scale low-carbon generation sector and will actively monitor the development of this market.

The government will consider reviewing these tariff setting arrangements, if it becomes clear that small generators are not able to access a competitive range of export tariff options.

Impact on the sector, including community projects

Question 6 sought views on how the SEG could allow innovation, bring forward additional routes to market, and create a competitive tariff offer.

Responses were mixed with many suppliers suggesting that the SEG as proposed was too prescriptive and could result in most remuneration for exports occurring outside of the SEG, where suppliers would have more scope to innovate. Some expressed concern that the smart infrastructure, especially smart meters, would not be in place in time, leading to technical and practical implementation issues.

A few respondents suggested that alternative mechanisms, such as peer-to-peer trading and virtual power plant models, should be explored to help further unlock revenue opportunities that are not accessible to individual customers.

Question 7 sought views on whether the proposed arrangements would create additional challenges for certain sectors (for example complex community projects or less mature technologies) and how these could be mitigated.

Respondents considered that the SEG provides some additional challenges for certain types of small-scale renewables and low-carbon generation such as hydroelectric power, small-scale wind power and anaerobic digestion. A few suggested that solar PV would also face challenges, arguing that projects have not yet reached a stage of development where they would be able to deploy on a non-subsidised basis.

Many respondents also expressed concerns that community projects would face particular challenges under the SEG – noting that the SEG would not offer the same prospect of a long-term income at a predictable level, and that the levels of income were also likely to be lower. Many respondents noted that a market-based income from the SEG may not be the best form of support for community energy and that alternative mechanisms may be more effective – suggesting that specific financial incentives should be designed for these groups rather than amendments to the SEG as currently presented.

Community and local energy groups generally considered that the SEG in its current format was not a viable 'route to market' for their projects and outlined in their responses what they considered to be some of the additional challenges compared to private sector projects, including restrictions in ability to choose the most cost-effective sites or locations, the difficulty of securing suitable commercial expertise, and the challenges of securing financing for new installations. They suggested that whilst some smaller projects focussing on self-consumption could still come forward under the SEG, the absence of an export tariff at a guaranteed level would impact on the ability of projects to deliver wider benefits, such as determined investment in tackling unemployment, community services, housing provision, fuel poverty, transport, health and wellbeing. They recommended that in addition to setting meaningful and long-term tariffs under the SEG, government should consider wider measures to support the sector with some referencing a Community Energy Manifesto¹⁵ launched by Green Alliance which highlighted several similar points.

Some respondents, whilst acknowledging that the lack of certainty on return poses a risk for investment, considered that the market was likely to address this challenge by offering innovative financing deals and fixed term contracts.

¹⁵ A Manifesto for Community Energy, published by Green Alliance and available at green-alliance.org.uk/community_energy_manifesto

Government Response

The government notes that the various different technologies eligible for SEG tariffs have varying cost levels and are also likely to differ in other characteristics such as when they produce power in the day, how predictable it is, and the extent to which they can generate on demand. The intended light touch and flexible approach to the SEG, which allows suppliers to develop a broad range of tariff types, should enable tariffs to be offered that suit particular types of generation. More generally the market-led approach to the SEG will favour approaches with lower costs, which we believe is the right approach for a competitive market.

We recognise that a wide range of community projects were developed under the FIT scheme, with a very diverse set of characteristics and business models. The FIT provided a relatively secure long-term income, and while it was arguably better suited to supporting some types of project than others, the overall level of income provided was clearly helpful in supporting the wider community sector. The SEG is a different, and more market-driven mechanism that – in recognising that small-scale generation technology has advanced and is now closer to being market competitive – will not necessarily provide the same degree of uniformity and long-term predictability as was available to community developers under the FIT.

The government recognises the values of community projects. We very much encourage suppliers to develop a range of tariffs that are tailored to the particular needs of community installations, for example by offering options with longer timescales that are attractive to third party sources of funding. Outside the SEG, negotiated power purchase agreements may also offer avenues for income for community projects that include generation at a larger scale, where long-term agreements can be reached that reflect and make the most of the economies of scale inherent to some of these projects.

However, we recognise that the SEG may not deliver the same level of bankability for some types of community project as the FIT scheme, and more widely that power-export-based schemes may not be the best type of support for many community schemes that have broader aims, such as funding energy efficiency improvements. The government is continuing to support communities who want to generate energy locally, by providing £15 million of funding for feasibility studies, with community schemes already powering the equivalent of 67,000 homes in England and Wales. Alongside this, we have funded the establishment of five new regional centres of excellence, driving the development, ambition, and scale of local energy projects through local government and are exploring further measures to support this important sector.

We are also working with a range of community groups to develop new business models and partnerships, both private and public. This will enable communities to have a stake in energy projects, providing benefits not only to the community but also to investors. We will continue to offer our full support to communities who want to take action to save energy and tackle climate change through developing their own local energy schemes and will explore how we may support communities further.

Government decision on specific sectoral impacts

Government recognises that community projects may face particular challenges, and notes that while the SEG will ensure that community-led small-scale low-carbon generation projects have access to the electricity market, it may not necessarily offer the same degree of both predictable and long-term income that was available under the FIT scheme.

The government supports the community sector in a variety of ways and will continue to consider the most effective ways to promote community energy schemes.

Duration of the SEG policy

Question 5 asked if the requirement for suppliers to offer a SEG tariff should have a fixed end date.

Most respondents felt that the SEG should not have a fixed end date, with generators and individuals suggesting that the SEG should be ongoing to provide certainty unless and until a strong and competitive market for smart offers is established. Some respondents suggested regular reviews of the SEG should be carried out by BEIS and/or Ofgem (with various intervals suggested, mostly ranging from annual to five-yearly).

Government Response

The small-scale low-carbon export market is a new and emerging one, and the SEG is a new mechanism that significantly differs from previous policies. In view of the various uncertainties involved the government is not, at this stage, setting an end date for the SEG.

We will monitor the types of export tariffs being offered to small generators to assess the development of the small-scale low-carbon export market and will keep the operation of SEG under review. We expect that in the longer term, once a robust and mature market is in operation, a mandated SEG will no longer be necessary.

Government decision on duration of the requirement to offer a SEG

Government will not set an end date for the SEG but will keep the SEG and wider export market under review.

Transparency and tariff setting arrangements for suppliers

The consultation flagged the importance of suppliers clearly setting out the tariff rates available under the SEG, to give visibility of the price generators would receive for exports. It suggested that consideration should be given as to whether there is a need for appropriate guidance to help inform SEG suppliers and eligible generators of factors that might need to be taken into account when setting tariffs. This could include for example administrative arrangements, the value of the exported electricity to the SEG supplier, and any other comparable market prices, which give a reasonable proxy to the value of exported electricity and the risk allocation between the SEG supplier and the customer (for example imbalance risk).

The consultation also proposed requiring Ofgem to produce a report on the tariffs offered by SEG suppliers to encourage transparency by suppliers and greater competition in the market. This report could also provide information on other non-SEG export tariffs or offerings provided by suppliers and/or other parties, such as aggregators.

Responses received to the consultation

Question 9 asked for views on whether the SEG can and should be linked to other mandatory communications requirements on suppliers.

Some respondents were unsure of the meaning of this question. Of those that did respond, most considered that given its novel nature SEG should not be linked to other mandatory communication requirements (for example those relating to billing for electricity supply).

In general, respondents felt suppliers should be able to apply their discretion rather than mandating them to communicate in certain ways. Almost all respondents flagged the need for

consistent and clear communications between suppliers and generators to aid understanding and to mitigate any risk of mis-selling.

Question 10 asked for views on whether there was a need for guidance on the administrative arrangements that suppliers will need to consider in order to set a SEG tariff.

Responses were mixed but the majority of generators, trade associations and individuals considered that guidance would be needed, particularly in the initial phase of the SEG, to set standards and ensure consistency between suppliers, and to facilitate switching.

It was suggested that guidance could cover practical issues, such as frequency and timing of payments, as well as providing steers on what could constitute fair payment rates and contract lengths.

Other respondents, including many suppliers, felt that SEG tariffs should be as simple as possible and left to the market to administer – and that as a consequence of this, guidance along the proposed lines would not be necessary.

Question 11 sought views on what factors suppliers would consider when developing SEG tariff offers, and what additional costs they expect might be incurred as a result of providing SEG tariffs.

Most responses from suppliers considered that the main factors influencing the way a supplier sets tariffs would be whether they are obliged to, whether they have an overarching renewable and smart energy strategy, and the desired popularity of the tariff.

A number of larger established suppliers, as well as smaller independent companies provided details of the types of additional costs they would expect to incur when setting a SEG tariff, including changes to business processes, new or significantly updated IT systems, and the recruitment and training of personnel needed to design, implement and operate new export tariff offers. It was generally recognised that the extent of required changes would vary from supplier to supplier, depending on the nature of systems and IT platforms used by particular suppliers. It was suggested that some of the more complex possible approaches to implementing a SEG would be more administratively burdensome, and lead to correspondingly higher costs, although little evidence on actual costs was presented.

Conversely, some generators, trade associations and members of the public considered that suppliers should already be making changes to systems as part of the move to a smarter electricity market and were concerned that some suppliers would overestimate administrative costs to justify offering lower tariffs.

Question 12 sought views on whether an annual report should be published on the market for small-scale exporters supported by the SEG.

Most respondents considered that the government should ask Ofgem to publish a report, and an annual frequency was generally supported. Various arguments were advanced in favour of a report, including that it would promote transparency in the market and could help consumers understand the range of offerings.

It was also suggested that the report would be a useful tool in assessing the outcomes of the SEG policy, and identifying whether consumers were in practice able to gain access to the export market – as well as highlighting where the SEG could require adjustments in the future to address any issues or improve its effectiveness with time.

Some respondents noted that a report could usefully also include some coverage of further tariffs or offerings that were similar to – but not necessarily fully compliant with – the SEG criteria.

Some respondents – notably suppliers – argued that care should be taken to ensure that the range of information that they would need to be provided to inform the report should not be overly detailed or onerous to assemble. Some respondents also noted that the scope of information would need to be carefully considered to avoid requiring material that would be overly commercially sensitive.

Government Response

Transparency on export offerings is essential for the success of the SEG. Suppliers are required under their electricity supply licence to provide clear and accurate information on tariffs offered to their customers and adhere to various customer service standards, and these provisions will apply equally to the operation of the SEG.

Third parties may also provide information on export tariffs: for example, the Solar Trade Association has recently set up a 'league table' on its website¹⁶ to monitor early export tariff offerings. As the low-carbon export market grows, online price comparison services provided by organisations such as Citizens Advice could potentially also cover export tariffs and allow generators to assess what combinations of import and export tariffs would work best for them.

The government will ask Ofgem to report annually on the provisions made by suppliers for smaller scale exporters, including the range, nature and uptake of SEG tariffs (i.e. tariffs offered by suppliers in response to SEG obligations). The government will also ask Ofgem to ask if suppliers will voluntarily share any information on other similar tariff offers, and – provided suppliers are willing to share details – report on them. The government will review this to monitor whether the market is delivering an effective range of options for small exporters. We believe that this report is an important means of monitoring whether consumers who are small-scale low-carbon exporters are able to gain access to the electricity market and receive income for the power they produce. It will also enable us to monitor a key part of the development of a wider smart energy system where consumers are empowered to manage their electricity import and export.

The core focus of the annual report will be tariffs offered by suppliers in response to SEG obligations, however if suppliers are willing to share information on similar offerings that may not be within the scope of the SEG, this will also be considered. This report will focus on 'standardised' offerings and is not expected to cover 'one-off' negotiated PPA agreements that may arise outside of the SEG between some of the larger 'small' generators and suppliers.

In addition to the evidence collected through this consultation, we have continued to engage with suppliers to understand the range of different administrative costs that they may need to take into account when setting SEG tariffs. We have concluded that whilst there may be some common activities, such as upgrading IT systems and processes, and training/recruiting new staff, the impacts of these will vary from supplier to supplier depending on their existing business systems. Given that suppliers, rather than government, have expertise in this area, and to allow the maximum scope for innovation as the export tariff market to develop, we do not consider that there are benefits in producing central guidance to suppliers on how to set tariffs.

We will, however, monitor closely the levels of tariffs being offered through the annual report published by Ofgem alongside trends in energy wholesale prices. We will consider reviewing the tariff setting arrangements if we consider that offerings are not reflective of market values or unreasonable discounts are being factored in.

¹⁶ *Understanding the Smart Export Guarantee: Smart Export Guarantee league table*, published by the Solar Trade Association and available at www.solar-trade.org.uk/resource-centre/advice-tips-for-households/smart-export-guarantee/

Government decision on transparency and tariff setting arrangements

The government will ask Ofgem to report annually on the provisions made by suppliers for smaller scale exporters, including the range, nature and uptake of SEG tariffs (as well as any other similar tariffs suppliers are willing to share details of).

This report will form a key basis for the government's monitoring of whether the small-scale export market is delivering competitive, innovative tariffs, alongside other factors such as trends in energy wholesale prices.

Timing and transition to the SEG following FITs closure

The FIT scheme closed to new installations on 31 March 2019 with several time-limited extensions and grace periods.

The consultation recognised that depending on the market offerings at the time, some newly deployed small-scale low-carbon generation installations may not have a 'route to market' available to them for a short period of time. It proposed that a generator unable to receive support under the FIT scheme (due to the closure of the scheme) would be eligible to apply for the SEG once it is implemented. However, retrospective payments would not be made to generators for electricity exported to the grid prior to their acceptance onto the SEG.

Given that the proposed SEG is supplier-led the consultation sought evidence on the timescales needed by suppliers to have the systems in place to start offering the SEG to generators.

Consultation responses

Question 8 asked how long it will take for suppliers to put systems in place to administer the SEG, and sought views on the likely associated administrative costs.

Many suppliers suggested that further clarity was needed on the final design of SEG to be able to assess the necessary lead-in time and likely costs. Several suppliers suggested that it would be difficult to commission and deploy new or upgraded IT systems, train staff, and develop business models to start administering the SEG by summer 2019, even if the more straightforward flat-rate tariff option was implemented. Many indicated that they would not be able to start work on making changes to systems until they had clarity on the final SEG design and sight of the associated final legislation and licence conditions. Suggested timescales for making these changes ranged from a few months to several years.

Generators, consumers and individuals expressed concern about a potential lengthy hiatus following the closure of the FIT scheme and urged government to introduce the SEG as soon as possible.

Government Response

Government recognises the need to minimise the hiatus between the closure of the FIT scheme to new installations from 31 March 2019 and the introduction of the SEG. Following the closure of the consultation in March we have worked closely with Ofgem, suppliers and generators to design and develop the necessary legislation to implement the SEG in a very short space of time.

We have considered carefully the evidence provided by a range of stakeholders on the time needed by the electricity supply industry to put in place the necessary systems and processes

to operate the SEG and expect that mandated suppliers will be required to offer SEG tariffs from the 1 January 2020.

This does not preclude suppliers bringing forward SEG (and non-SEG) export tariffs before this date. Indeed, we are pleased to note that since we consulted on the SEG in January 2019 some suppliers have already brought forward offerings. A generator that has been unable to receive support under the FIT due to the closure of the scheme and who does not already benefit from one of the current export offerings, will be eligible to apply for a SEG tariff.

Government decision on timing for introduction of SEG

Mandated suppliers will have to offer at least one SEG compliant tariff from the 1 January 2020.

This does not preclude suppliers offering SEG (and non-SEG) export tariffs before then.

Eligibility requirements for low-carbon generators

The consultation proposed criteria that installations would need to meet to be eligible for SEG tariffs, including:

Technology type: Anaerobic digestion, hydro, micro-combined heat and power, onshore wind, and solar photovoltaics.

Capacity limit: Up to 50kW for micro-combined heat and power and up to 5MW for all other technologies.

Metering: Relevant exports must be metered using a meter capable of metering half-hourly export volumes.

Certification: Solar PV, wind and micro-CHP installations up to and including 50kW must ensure they use equipment certified by the *Microgeneration Certification Scheme* or an equivalent scheme, and that it is installed by an installer certified by the *Microgeneration Certification Scheme* or an equivalent scheme.

Anaerobic digestion, hydro, and other technologies with installations above 50kW, must as a minimum provide the same details as are required under the *Microgeneration Certification Scheme* or an equivalent scheme.

Energy efficiency: Installations are not required to meet energy efficiency criteria.

Other support: The consultation proposed that installations in receipt of government support through the FIT scheme for the electricity generated by the installation, either for self-consumption or export to the grid, could not also receive payments under the SEG.

It also proposed that generators applying for the SEG should be required to declare to the SEG provider if the installation in question, or individual elements of the generating equipment, have received or are receiving any other government support including locally, or regionally.

Sustainability: The consultation proposed that anaerobic digestion plants would be required to meet sustainability criteria and be subject to feedstock restriction rules, broadly in line with the standards operating under the FITs scheme.

Co-located storage: The consultation sought views on how SEG installations co-located with storage should be treated under the SEG.

Technology type and capacity limits

Consultation responses

We proposed broadly mirroring the eligibility requirements for capacity and technology as set out under the FIT scheme (i.e. anaerobic digestion, hydro, wind, and solar photovoltaics up to 5MW, and micro-combined heat and power up to 50kW). Feedback from stakeholders largely agreed with this approach although some suppliers suggested the SEG should only be available to domestic scale projects as larger installations could receive support through power purchase agreements (PPAs).

Government Response

We recognise that the SEG is likely to be of interest primarily to domestic scale solar projects but have decided to retain the eligibility requirements for technology and capacity as proposed to ensure all small-scale projects can access the SEG if needed (and we would not wish to exclude these larger projects from the SEG).

Government decision on eligible technologies and capacities

The SEG arrangements will apply to anaerobic digestion, hydro, micro-combined heat and power (with an electrical capacity of up to 50KW), onshore wind, and solar photovoltaic exporters with up to 5MW capacity.

Metering requirements

The consultation proposed that any tariff offered by suppliers must be metered and settled using a meter capable of measuring half-hourly exports – in other words, the amount of electricity exported could not be estimated ('deemed'). The deployment and functionality of smart meters will enable this, but the consultation did not rule out the use of alternative types of export meters which could meet the same metering and settlement requirements.

Consultation responses

Question 14 asked for views on the proposed metering requirements for the SEG.

While a number of respondents had concerns over the ability of smart metering infrastructure to deliver the SEG, the majority agreed with the proposed metering requirements without expanding on their reasoning. Concerns raised included reported difficulties in accessing data from first generation ('SMETS1') meters which were not enrolled in the data network run by the *Data Communications Company* (DCC) and where the consumer has switched supplier, and the lack of testing to date by suppliers of export data recordings from more recent second generation ('SMETS2') meters. A few respondents, mostly representing generators, suggested that export flows should be based on estimates ('deemed') rather having to be metered.

Some respondents argued that the smart meter roll-out was not sufficiently developed in its progress to deliver the proposed approach to the SEG, while a few respondents commented that not all locations can currently access a smart meter.

Only a few respondents discussed other types of export meters (as opposed to smart meters); of these most supported the use of these alternatives so long as meters could measure half-hourly export data. A small number of suppliers suggested that allowing the use of 'export only' meters could impact on the smart meter rollout. Several suppliers considered that the current process for raising an export Meter Point Administration Number (MPAN) to settle export and attribute to the correct supplier could be complicated and overly reliant on action by the operators of electricity distribution networks.

Question 15 sought views on whether non-SMETS stand-alone export meters, with an ability to record half-hourly export, are available – and sought information on their cost.

Only a few consultees responded to this question. It was suggested that non-SMETS export meters are on the market with an ability to measure half-hourly export. An AMR (advanced meter reading) meter was given as an example for larger installations. However, those that did point to meters on the market noted that installation and operational costs would be significantly greater than using a SMETS smart meter for measuring half-hourly export, especially for data collection services.

Government Response

Government believes that moving away from deemed to metered export is essential in supporting cost reflective pricing and the move to a smart, flexible energy system.

We will therefore implement the metering requirements broadly as proposed in the consultation. All exported electricity will need to be metered and registered for settlement in accordance with the BSC. This includes electricity exported from installations with a capacity of less than 30kW where the current BSC exemptions relating to registering for settlement will no longer apply. The meter used must be capable of measuring exported electricity volumes on a half-hourly basis, but exports will not initially need to be settled half-hourly.

Whilst the initial SEG requirements do not mandate a variable tariff, we expect to see smarter tariffs such as those with a 'time of day' element become increasingly widespread, and half-hourly metering is supportive of a move towards a smarter, more flexible energy system.

We expect that SMETS-compliant smart meters provided to domestic customers by suppliers will meet the above requirements, but we do not propose precluding the use of any other type of export meter, as long as it is able to measure electricity on a half-hourly basis and complies with other relevant metering legislation (set out in the new 'SEG' electricity supply licence conditions). A second MPAN will be required to both retrieve export data via the DCC and register export volumes for settlement under the SEG.

Distribution Network Operators have confirmed that they provide MPANs free of charge to domestic homes when asked to do so by suppliers. They have also confirmed that they recover the costs through network charges on suppliers. To standardise this process, an amendment to the Master Registration Agreement¹⁷ has increased the number of MPANs a supplier can register as a bulk request to 50. This change was implemented through the 'MAP CP 0297' change proposal and took effect on 28 February 2019.¹⁸

We note the concerns raised by both suppliers and trade associations around the metering infrastructure which is required in order to deliver the SEG, relating to both SMETS1 and SMETS2 meters. However, we consider that these issues are transitional and short-term in nature, and as a result will not prevent the development of the SEG. The process for enrolling SMETS1 meters into the DCC has started and is scheduled for completion by end-2020. SMETS1 enrolment is expected to address issues that have arisen with accessing export data from SMETS1 meters, for example where the import and export suppliers are different or where the consumer has switched supplier since the SMETS1 meter was installed.

Energy suppliers have a responsibility to ensure that the meters they install are compliant with SMETS standards, and the DCC provides environments to test the functionality of meters on an end-to-end basis, including for measuring electricity export. This functionality has not generally been required until now, given metering under the FIT scheme was largely undertaken on a deemed basis – however, the forthcoming introduction of new export tariffs into the market as a result of the SEG is likely to accelerate the testing of export functionality. We will continue to engage with both suppliers and trade associations in the sector to support them during the transition in the run up to the SEG implementation date.

¹⁷ The *Master Registration Agreement* (MRA) is an agreement that sets out the rules associated with the electricity supplier registration process for Great Britain. It sets out terms for the provision of *Metering Point Administration Services* (MPAS Registrations), and procedures in relation to the Change of Supplier to any premise/metering point.

¹⁸ *MAP CP 0297 - Introduction of procedure for raising Export MPANs*, a change to the *Master Registration Agreement* implemented in February 2019, and available on the MRA website at www.mrasco.com/changes/change-tracker/introduction-of-procedure-for-raising-export-mpans/

Government decisions on metering

Exported power must be metered, with a meter capable of recording the amount exported in each half-hourly period. Meters at SEG installations must also be registered for settlement – including in premises where the installed capacity is less than 30kW. Exports will not initially need to be settled on a half hourly basis.

However the SEG design is flexible and depending on tariff design does not necessarily require readings to be taken of the amount exported in each half-hour period, with the possibility of suppliers allowing periodic manual meter readings of the cumulative amount of exported power (for example on a monthly basis) since the last reading was taken.

Energy efficiency standards

Consultation responses

Question 16 sought views on whether installations entering the SEG should be required to meet a certain energy efficiency standard – proposing that this should not be a requirement.

Most respondents agreed that compliance with certain energy efficiency standards should not be mandated under the SEG. Arguments for this included that this would allow a larger number of properties and households, including some more challenging properties such as listed buildings, to benefit from the installation of low-carbon technologies. Some respondents believed that energy efficiency requirements would add unnecessary complexity and add to the cost of implementing SEG. The few that disagreed considered that the proposal would undermine the need for government to promote and increase uptake of energy efficiency standards in buildings.

Government Response

Installations entering into a SEG agreement will not be required to meet specific energy efficiency standards. Whilst government recognises the importance of energy efficiency, we do not believe that the SEG is an appropriate mechanism to promote specific types of energy efficiency standards. Our intention is to aid those who may have previously found it difficult to enter into the market through the FIT scheme, such as listed buildings, and a requirement based on Energy Performance Certificates may produce barriers to ensuring many householders can seek a 'route to market' and benefit from receiving remuneration for the low-carbon electricity they export to the grid.

Government decision on energy efficiency standards

There will not be a requirement to meet any particular energy efficiency standard in order to be able to benefit from SEG arrangements.

Certification and consumer protection

Consultation responses

Question 28 sought views on the preferred approach to help ensure consumer protection, as well as on other factors that should be considered.

Most respondents supported the proposed approach to consumer protection, with some respondents satisfied that a certification in line with the Microgeneration Certification Scheme (MCS) or an equivalent quality assurance scheme, would ensure a suitable standard of consumer protection for consumers seeking a SEG tariff. A few respondents flagged the importance of ensuring that schemes other than the MCS, with equivalent standards, are able to operate in the small-scale export sector.

A significant number of respondents who were broadly supportive of the need to ensure consumer protection expressed concern about the ability of suppliers to determine eligibility for SEG installations, with a few noting that suppliers would not necessarily have the expertise to make this assessment. A few respondents argued that the requirement on energy suppliers to determine eligibility – and the administrative cost of doing so – could make the promotion of SEG tariffs less attractive to potential participants.

It was noted that the approach needed to be consistent with the development of the *TrustMark* government-endorsed quality scheme which covers work a consumer chooses to have carried out in or around their home,^{19,20} and that MCS and Trust Mark are working together to ensure that in the future there will be consistent standards and protection across the energy efficiency and renewables market.

Question 29 noted that *SEG policy is focused on power generation, however increasingly we anticipate that installations will be integrated with battery and vehicle-to-grid technologies. It asked what additional technical challenges might need to be considered, for example relating to installation standards, and how this would affect the development of the market.*

Most respondents felt that the design of the SEG should be compatible with the use of electric vehicles (EVs) and storage facilities, as well as power generation. There was general agreement that the SEG should be kept simple for suppliers and generators, and some respondents were concerned that complexity could arise for example from having several storage installations on one site. There was strong agreement for having appropriate regulatory standards for EVs and storage devices to protect consumers, with some suggesting these should form part of a consumer code.

Government Response

Government aims to ensure that adequate standards for installations and consumer protection are met where practically possible. We would encourage generators to install new micro-generation equipment using products and services provided by an appropriate accreditation certification scheme, and for suppliers to make offerings to encourage this behaviour.

¹⁹ In 2015, Dr Peter Bonfield was commissioned by government to chair an independent Review of Consumer Advice, Protection, Standards and Enforcement for UK home energy efficiency and renewable energy measures. The review produced 27 recommendations, including setting up a quality mark against which those involved in the design and installation of energy efficiency and renewable energy measures will be assessed and certified. The report, *Each Home Counts: Review of Consumer Advice, Protection, Standards and Enforcement for Energy Efficiency and Renewable Energy*, was published in December 2016 and is available at www.gov.uk/government/publications/each-home-counts-review-of-consumer-advice-protection-standards-and-enforcement-for-energy-efficiency-and-renewable-energy

²⁰ Further information on *Trustmark* is available at www.trustmark.org.uk/

One such scheme is MCS, an independent certification scheme that provides a certification for products and installers. We are aware that other companies are looking to bring forward comparable certification schemes.

To be entitled for SEG payments, generators will therefore need to demonstrate to the satisfaction of suppliers that:

- For solar PV, wind and micro CHP installations up to and including 50kW, MCS certified, or equivalent, equipment has been installed by an MCS-certified, or equivalent, installer.
- For AD and hydro, as well as solar PV and wind installations larger than 50kW, the same standards as are required under the MCS or an equivalent certification process have been met.

Suppliers will have discretion in determining how to satisfy themselves that these standards have been met. To assist with this process, MCS noted that they are actively developing an application programming interface (API) to be used by suppliers, free of charge, that would automate the process of cross checking an MCS certificate number against the *MCS Installation Database* to verify certification, thus reducing the administrative burden with monitoring MCS certification.

It is worth noting that suppliers can choose to offer their tariffs, outside of the SEG arrangements, to installations which cannot evidence to their satisfaction that equipment has been certified to an MCS or equivalent standard, and that the installer is also certified to MCS or an equivalent standard. However, the government *strongly* discourages suppliers from offering tariffs to installations that cannot demonstrate that adequate consumer protection standards have been met.

We also recognise the importance of providing clarity and confidence to consumers using low-carbon and energy efficiency products. Noting the development of the *TrustMark* scheme, we will keep this decision under review.

Government decision on certification and consumer protection standards

To benefit from the SEG, exporters must be able to demonstrate to suppliers that their generating equipment, and its installation, has been adequately certified. This in practice means providing evidence that they are certified to MCS or an equivalent standard.

SEG tariffs for installations receiving support from schemes

Consultation responses

Question 17 sought views on whether exporters receiving local, regional or national support should be able to receive SEG tariffs.

Most respondents argued that receiving local or regional support (such as grants or the Renewable Heat Incentive (RHI)) should not prevent generators receiving SEG payments, on the grounds that the proposed approach to a SEG would make it a 'route to market' rather than a subsidy, and that there was not therefore a risk of 'double subsidy'. A few respondents disagreed with this approach without giving a reason.

Most respondents believed installations should not be able to receive FITs and SEG export payments for the same volumes of electricity at the same time. Some concerns were expressed about how suppliers would, in practice, be able to identify whether prospective SEG recipients were already receiving FIT payments.

Government Response

As proposed in the consultation, suppliers will not be obligated to make SEG payments to installations receiving payments for exported electricity under the FIT (or from another supplier). Installations accredited under the FIT may opt out of receiving FIT export payments and choose to receive export payments under the SEG, in accordance with the FIT scheme rules.

The BSC should prevent all cases of double payment for SEG exports. By requiring exported electricity to be registered for settlement, in accordance with the BSC, a process will be carried out which allows each 'unit' of exported electricity flowing onto the grid from an eligible SEG installation to be linked to its relevant supplier. It will therefore be clear if more than one supplier is claiming and making payment on the same volume of exported electricity. Ofgem are intending to develop the Central FITs Register to enable suppliers to more easily check if installations are in receipt of FIT export payments. Further information will be set out in Ofgem's guidance.

Installations or elements of generating equipment in receipt of other forms of government or local or regional support (including the RHI and Renewables Obligation) will not be precluded from receiving payments under the SEG (subject to meeting SEG eligibility criteria). To minimise the administrative burden, the government does not envisage that these generators would need to declare the receipt other forms of support to SEG providers.

Government decisions on interaction with support from schemes

SEG suppliers will not be obligated to make SEG payments to installations receiving payments for exported electricity under the FIT or from another supplier.

Eligible low-carbon generators in receipt of other types of support will not be prevented from receiving SEG payments.

Anaerobic digestion – sustainability criteria and feedstock restrictions

Consultation responses

Question 22 sought views on whether anaerobic digestion installations supported under the SEG obligation should be subject to comparable sustainability criteria and feedstock requirements as applied under the FIT.

Most respondents acknowledged the need for sustainability criteria to be in place but some were concerned that this could increase the administrative burden on suppliers. They argued that this may make SEG tariffs uncompetitive compared to other export tariffs on the market, which might not necessarily be low-carbon. Respondents generally considered that the administrative burden for checking compliance with sustainability rules should not lie with suppliers, but with a regulatory body such as Ofgem.

Question 23 sought views on proposed reporting and administrative processes, including on potential arrangements for payment adjustment for ineligible electricity, noting that the proposals drew to some extent from those used under the FIT scheme.

Just over half of the respondents agreed that administration and reporting could usefully be based on FITs processes – however, most felt that the administrative burden of the SEG should be lower than under the FIT scheme. Most respondents felt that if the administrative burden was comparable to that of the FIT, it would be likely to make SEG tariffs less

competitive than alternative export offerings. As these may not be low-carbon, this might therefore indirectly drive less sustainable generation. Many responses cited the differing nature of the FIT (a subsidy) and the SEG (market-driven mechanism) as an argument for less prescriptive reporting procedures to be put in place.

Question 2 of the 'Part B' consultation built on the responses to the 'Part A' consultation and sought views on a proposed approach to sustainability requirements. It noted that under the proposals, a SEG Licensee would not be obliged to make SEG Payments to a SEG Generator that had not met the sustainability requirements and feedstock restrictions of the SEG Order. It noted that where possible, government proposed to align these restrictions with other electricity schemes. For AD generators to evidence they have met the relevant sustainability requirements and feedstock restrictions, they would need to adhere to the Authority's administrative arrangements for these restrictions.

Most respondents broadly supported the proposed approach to sustainability requirements for anaerobic digestion plants, although a few commented that they would also need to see the final legislation and licence conditions to be able to offer full comments. Some respondents noted that it would be important for Ofgem to provide suitable guidance on administrative aspects of these requirements, to ensure that it was clear who would be responsible for what parts of the process.

Some respondents commented that it would be desirable for an automated process to be created that suppliers could use to checking whether sustainability requirements had been met, rather than having to manually process any evidence of certification.

Government Response

We do not intend for SEG generators to be able to seek SEG payments for electricity generated by biogas which is not sustainable. Anaerobic digestion generators will be entitled to receive SEG payments provided they can demonstrate compliance with sustainability criteria and feedstock restrictions. The government's mandatory sustainability criteria for biomass for heat and power generation ensures biomass reduces carbon emissions and is sourced sustainably, reducing the risks of generating energy from material which does not achieve a substantial greenhouse gas saving or has a detrimental impact on land with a high ecological value. The feedstock restrictions aim to reduce the use of crops in Anaerobic digestion installations, and incentivise the use of waste feedstock instead, as this tends to offer the greatest greenhouse gas emissions savings.

We note the concerns expressed by some stakeholders about the risk of potentially burdensome administrative and reporting requirements leading to installations seeking support under 'non-SEG' tariffs which may not necessarily require compliance with sustainability or feedstock rules. We have therefore decided that whilst the actual standards and criteria will be consistent with those applying to Anaerobic digestion installations supported through the FIT scheme, the process for administering, reporting and demonstrating compliance will be simplified slightly to minimise burdens on suppliers and generators.

Ofgem will have a role in verifying compliance with the sustainability and feedstock criteria and the precise procedures will be set out in Ofgem guidance. Generators will need to agree Fuel Measurement and Sampling (FMS) procedures with Ofgem to enable Ofgem to determine whether the installation is capable of operating on sustainable fuel. As with sustainability under the Renewables Obligation, FIT and Renewable Heat Incentive schemes, it is intended that the generator will provide information regarding the sustainability and types of feedstock that they have used to Ofgem on a regular basis. Installations above 1MW will also be required to produce an independent annual sustainability audit report.

Ofgem will inform the generator whether sustainability criteria or feedstock requirements have been met. The supplier may ask the generator to share this information and will also be able to check with Ofgem whether the sustainability and feedstock criteria have been met. There will be no mechanism to reduce or recoup payments at Ofgem's direction, but suppliers will not be obligated to pay an Anaerobic digestion installation for any period that the fuels used to generate exported electricity did not meet the criteria. Further information will be set out in Ofgem's guidance.

We will remain open to potential changes in sustainability criteria and feedstock restrictions, and these may be updated in the future. Working with Defra, we will continue to assess and monitor any impacts any increased uptake of Anaerobic digestion may have on air quality.

Government decision on AD sustainability and feedstock requirements

Exporters using anaerobic digestion will need to demonstrate to suppliers that they meet sustainability criteria and feedstock requirements as verified by Ofgem.

Co-location with storage

Question 18 asked, *where storage is co-located with an eligible generation technology, whether SEG payments should be made on 'brown' electricity exported from storage or limited to exported 'green' electricity.*

The majority of respondents were in favour of SEG payments being made on 'brown' electricity (electricity imported from the grid) exported from a storage device. The administrative burden, additional costs of the metering requirements, the need to support the development of a smart, flexible system and low-carbon energy system, and the likely low levels of export volumes were all cited as reasons to allow SEG payments on 'brown' electricity.

However, a few respondents expressed concern, suggesting that the primary purpose of the SEG should be to support only renewable generation and to decarbonise the electricity system. A few suppliers were concerned that allowing payments on brown electricity might mean that such electricity would not be eligible to receive Renewable Electricity Guarantees of Origin (REGOs).

Question 19 asked for views on the proposed metering arrangements when co-locating storage with generation technologies eligible for the SEG.

Most respondents agreed that additional metering should not be mandated to separate electricity generated on site and then exported (via a storage device or not) from that imported from the grid, stored and then exported. Supporting arguments were based on the need to keep arrangements simple and prevent metering being a barrier to uptake of the SEG.

Question 20 sought views on the scope for gaming opportunities if SEG payments were to be made on 'brown' electricity exported from co-located storage devices.

Many respondents thought there was some risk of gaming. The risk was thought to be minimal for generation or storage assets below 1MW capacity due to the costs of additional metering compared to the low volume of electricity involved, and the greater benefits of self-consumption. Some considered that there was a greater risk for larger capacities (as they had sufficient capacity to manage the import/export of electricity in response to real-time electricity market prices), and for generators with innovative solutions.

Several respondents argued that the flexible provision of electricity at the times the grid needs it, by importing and re-exporting grid-sourced electricity through a battery, did not constitute gaming and should be encouraged.

Question 21 sought views on whether the SEG should make provision for installations where eligible and non-eligible technologies, and storage, are co-located, and whether specific metering arrangements would need to be made.

Most respondents suggested that storage not connected to renewable generation and just using grid supplied energy (i.e. a stand-alone storage device) or connected to non-renewable generating equipment should not be eligible. Some argued that it would be inappropriate to require suppliers to offer a guarantee that is not cost-reflective of the value of electricity exported from this type of device and that this could lead to undue support for higher-carbon generation.

Government Response

Following careful consideration of the consultation responses, we have decided not to prevent SEG payments being made on so-called 'brown' electricity exported from a storage device and/or from non-renewable generating equipment co-located with a SEG technology. This recognises the current difficulties in finding cost-effective technical solutions for separating 'green' and 'brown' electricity discharged through the storage device. It is also consistent with government's wider policy aims for smart systems and flexibility. Smart energy solutions, such as electricity storage and demand side response, enable us to de-carbonise our energy system more cost-effectively – for example, by helping to balance the system at lower cost, maximising the usable output from intermittent low-carbon generation (such as solar and wind), and deferring or avoiding the need for costly network upgrades and new generation build.

Allowing SEG payments to be received for some 'brown' electricity is consistent with these aims, opening up new market opportunities for smart solutions to be used in a way which supports the energy system – for example, enabling domestic consumers to store excess power from rooftop solar PV during the day and using this in the evening when prices rise, while still leaving scope for exporting some power to the grid when demand is high. Moreover, allowing for 'brown' electricity payments will also leave scope for coordinated use of other smart solutions which could help consumers manage onsite demand, for example vehicle-to-grid technology for (dis)charging EVs. Conversely preventing payments on 'brown' electricity, particularly from co-located non-renewable generation could act as a barrier to the deployment of electric vehicles.

However, we recognise the concerns raised by some electricity suppliers about the impact that allowing payment on 'brown' electricity might have on their ability to source 100% 'green' electricity and REGOs. We have decided that SEG licensees will not be *obliged* to make SEG payments on the 'brown' element of exported electricity. Suppliers may choose to require generators to demonstrate to their satisfaction that adequate additional technical solutions are in place to isolate 'green' exports. Generators wishing to claim REGOs must ensure they comply with REGO requirements, which may necessitate separate metering for co-located storage and/or any non-renewable generation.

We have considered carefully the risks of gaming to increase SEG payments by using batteries to store grid imported electricity and then re-export. We expect that the main business case for installing a battery at the household and small-scale level is to increase self-consumption of the generation from a co-located renewable installation, rather than exporting to the grid at time of high demand. This is because the value of avoiding imports is likely to be higher than the value provided by SEG export tariffs, meaning exporting to the grid is unlikely to be the best use of any stored generation. Where electricity is exported to the grid, we would expect this to be 'green' as it is more viable to charge the battery with the low-cost generation from the renewable installation, rather than importing 'brown' power from the grid at a cost.

Government decisions on co-location

SEG payments may be made on grid-sourced electricity ('brown' electricity) where storage and / or a non-low-carbon generator is co-located with the SEG installation.

However, it will not be *mandatory* for suppliers to make SEG payments on the 'brown' element of exported electricity, if they do not wish to do so.

Suppliers may choose to require generators to demonstrate to their satisfaction that adequate additional technical solutions are in place to isolate 'green' exports.

Implementation, administration, oversight and review of the SEG

The consultation set out details of the proposed roles for BEIS, Ofgem and suppliers in delivering, administering, enforcing and reviewing the SEG.

It also set out a vision of the 'customer experience' including proposals for how generators might find a SEG provider, demonstrate compliance with eligibility criteria and register for payment.

Administration of the SEG

Question 24 sought views on the proposed functions of BEIS, Ofgem, and suppliers in delivering and operating the SEG – and on enforcement requirements.

Most respondents broadly supported the proposed roles, particularly for BEIS and Ofgem. A number of suppliers suggested obligations and enforcement should be suitably 'light touch' for a primarily market-based mechanism; with some comment that suppliers should not be required to verify the eligibility of installations.

Question 30 asked if the process for applying to the SEG was practical, and whether it was likely to ensure only eligible generators are able to participate in the SEG?

Just over half of the respondents agreed that the proposed process for applying for a SEG tariff was practical and will ensure only eligible generators participate. The need for simplicity, clear guidance and a cost-effective proportionate approach was stressed.

Those who disagreed suggested that there was no need for an application and that all domestic small-scale solar generators should be eligible without exception. There was concern that introducing greater requirements on suppliers to assess compliance of generators would create greater costs. It was also suggested that the review of complex larger applications would be challenging for suppliers who may not have the necessary expertise and there could be inconsistency in assessing eligibility.

Some respondents felt that the process was not described in enough detail and suggested that the final process should be subject to further consultation.

Question 32 sought views on whether the proposals for the treatment of settlement were practical for suppliers to implement, and compatible with the BSC.

Most respondents felt the proposals were practical for suppliers to implement, and compatible with the BSC. However, concerns were raised around the supporting smart meter infrastructure. It was noted that where the export provider was different to the generator's retail provider, the export provider may not have access to the data from the smart meter.

Additionally, some suppliers noted there could be challenges in collating this data. There was also concern that any system introduced may need to be updated once half-hourly settlement is introduced. The suitability of the proposals for domestic generators was raised as it was suggested there were higher administrative costs associated with the process of collecting the export data.

Government Response

Government has noted the messages from respondents about the need to keep SEG simple. We have worked closely with Ofgem to streamline where possible the administrative arrangements for implementing and operating the SEG, whilst maintaining the necessary controls to protect consumers. We consider this approach is appropriate for a market-based, rather than subsidy mechanism and will provide space for suppliers to innovate and come forward with meaningful smart export tariffs under the SEG.

Details of the main roles and responsibilities with respect to BEIS, suppliers and Ofgem - including the enforcement action required by suppliers and Ofgem - have changed slightly from our proposed position and are summarised below. Further information will be provided in Ofgem guidance.

ORGANISATION	MAIN FUNCTIONS
BEIS	<p>Legislating to provide the framework for the SEG.</p> <p>Monitoring and evaluating the SEG for the purposes of assessing whether small-scale low-carbon generators are able to effectively sell exported electricity to the grid.</p> <p>If necessary reviewing the operation of the SEG.</p>
Ofgem²¹	<p>Issuing some limited guidance on how the SEG obligation operates.</p> <p>Enforcing supplier obligations under the legislation, for example ensuring SEG licensees offer a SEG tariff to eligible generators.</p> <p>Assessing the sustainability criteria and feedstock restrictions for Anaerobic digestion.</p> <p>Collecting data from suppliers on tariffs provided and numbers of installations / amounts of electricity supported under the SEG and using this to report annually on the market for low-carbon exporters.</p>
Suppliers offering SEG tariffs	<p>Sharing publicly their status as a SEG licensee and notifying Ofgem of their status and/or any changes.</p> <p>Providing a SEG tariff to a SEG generator as regards an eligible installation.</p> <p>Ensuring to their satisfaction that generators meet SEG eligibility criteria.</p> <p>Making payments to eligible SEG generators based on verified export meter readings.</p> <p>Handling and resolving complaints raised by generators and where these complaints are passed to the Energy Ombudsman.</p> <p>Providing Ofgem with the data required for the publication of annual reports.</p>

²¹ As the SEG is not dealing with public monies, Ofgem will not be involved in counter fraud activities in the same way that it is for other government funded environmental and social schemes.

With regards to the treatment of settlement, SEG licensees must:

- Register the export meter of an eligible generator for settlement, including for generation with a capacity of less than 30kW; and
- Settle the exported electricity volumes in accordance with the BSC, and in the future in accordance with any changes that are made to the export settlement arrangements following the conclusion of the *Electricity Settlement Reform Significant Code Review*.

Government decisions on administration of the SEG

The scheme will be supplier-led, with BEIS providing the overarching legislative framework and Ofgem monitoring the obligated suppliers' compliance with the requirements of the mechanism.

Suppliers must register the export meter of an eligible generator for settlement and settle the exported electricity volumes in accordance with the BSC (including generation with a capacity of less than 30kW).

Central register of installations receiving SEG tariffs

Question 31 asked if deployment of installations through the SEG should be submitted to a central register administered by Ofgem.

Most respondents felt that there should be a central register of installations under the SEG. Arguments in favour included the scope for using the data to assess and measure the performance of the SEG, and that a register could be used as a platform to enable suppliers to check if generators were already in receipt of a FIT export tariff.

However, many suppliers questioned the need for detailed information on installations, given that the SEG was designed as a market-led policy. Many were concerned about the additional administrative burdens of recording information on a register, especially if this had to be done manually.

Question 3 of the 'Part B' consultation noted that the licence conditions had been drafted to include a central register, to be held by the Authority, which would hold details of particular installations receiving tariffs offered in the context of the SEG.

However it also noted that following analysis of the responses to the 'Part A' consultation process, government recognised that there were practical challenges in maintaining such a register, and that it may be of limited value in assessing whether small generators are able to access a competitive range of tariffs. It therefore welcomed further comments on both the proposed conditions, and on the wider question on the inclusion and merits of a register.

Most respondents to the 'Part B' consultation felt that, on balance, it would be preferable not to introduce a central SEG register. Respondents noted that creating it and maintaining its accuracy over a number of years would create a complex and potentially costly administrative burden. Some commented that as generators could benefit from tariffs outside the SEG, the register would be unlikely to reflect a complete list of relevant small-scale exporters, and could therefore have limited value. Several respondents believed that the proposed market condition report would provide a more useful measure of whether the objectives of the SEG were being achieved.

Several respondents commented that the proposed approach appeared to rely on suppliers manually inputting information to a register, in a manner comparable with the existing *Central Feed-in Tariff Register*. They argued that this approach, which typically involved communication by e-mail, had been overtaken by wider technological development in the sector and, and that adopting such an approach under the SEG would mean introducing an inefficient process that would slow down the ability of suppliers to switch customers between providers, and increase administrative costs. It was argued that it would be preferable to rely on processes that could be automated, and that worked with existing data flows within the industry.

Several respondents did, however, note that if a register was not introduced there remained a need for a system to prevent generators from being able to 'game' the SEG - by applying for multiple SEGs from different suppliers, or by simultaneously receiving export payments under SEG tariff and the FIT scheme. Some respondents commented that the existing *Central Feed-in Tariff Register* could usefully be developed to include an *application programming interface* (API), which would make it relatively straightforward for suppliers to establish whether recipients were already receiving payment for exported electricity from third parties.

One respondent noted that the *MCS Installations Database* is, in effect, a central register of the UK's small-scale low-carbon energy installations, and that it could potentially become the central register, or form part of the registration solution for installations in receipt of a SEG-based tariff.

Some respondents questioned the utility of asking for information on the size and type of batteries that were associated with installations seeking SEG tariffs, noting that while this was potentially of some interest to suppliers, the benefit to government of holding this information in a central register was unclear.

Government Response

Following analysis of responses to both the original and 'Part B' consultations and stakeholder engagement, we recognise that there are some practical challenges in maintaining a central register of installations receiving SEG-compliant tariffs. Suppliers would not be obliged to provide information on installations offered non-SEG-compliant export tariffs which mean that it would be of limited value in tracking deployment of low-carbon installations and in assessing whether small generators are able to access a competitive range of tariffs.

We consider that Ofgem's annual reporting on the provisions made by suppliers for smaller scale exporters may be a more effective means of monitoring whether the market is delivering an effective range of options for small exporters.

We do, however, recognise the importance and potential of data relating to deployment of small-scale low-carbon installations for use in optimising our energy system, improving functionality of local energy markets and fostering innovation in the energy system. The government will assess the opportunities for collecting the necessary information and making such information more accessible and will look to work closely with industry to identify alternative and more appropriate solutions. The Energy Data Taskforce²² was established to develop a set of recommendations for how industry and the public sector could work together to facilitate greater competition, innovation and markets in the energy sector through improving data availability and transparency. We will consider the options further in light of the recommendations which will be published in due course.

²² Further information on the Energy Data Taskforce is available at es.catapult.org.uk/impact/specialisms/energy-data-taskforce/

Government decision on a central register of installations receiving SEG tariffs

The government does not plan to require a central register of SEG installations, on the grounds that it would create additional burdens and offer limited benefits.

Arrangements for cases where SEG providers fail

Question 27 sought views on what, if any, arrangements should be put in place in case suppliers either lose their supplier licences or go into administration.

Most respondents believed there was a need for special arrangements to cover such circumstances, and the *Supplier of Last Resort* (SoLR) was cited by many as an appropriate mechanism. Respondents expressed concern that the potential uncertainty that might result from the loss of an income stream could impact the financial viability of installations.

However, some respondents suggested that as the SEG was a commercial offering, generators were accepting the risk and if it materialised the contract should simply be ruled null and void, with the generator free to seek a new contract with another supplier.

A few respondents commented that whilst the SoLR arrangements were important in the domestic market – because the ability to ensure continuity of electricity import was essential for consumers – the same could not necessarily be said of exported power, where the loss of payments during a transition period was unlikely to have the same degree of negative consequences for the consumer.

Government Response

Having considered the responses received, the government considers that SoLR type arrangements primarily focus on ensuring continuity of supply, which is an essential service for many consumers. Adding similar arrangements to cover payments for export would place additional burdens on suppliers to take on the credit of the customers of the failed supplier who have unpaid export payments. This could discourage suppliers from participating in the voluntary SoLR process and we do not want the SEG to introduce an additional barrier for suppliers to engage in this process.

The government has decided that there will be no specific arrangements set out in the SEG in the event that a supplier either loses its supplier licence or goes into administration. SEG arrangements will be contained in a contract between a supplier and generator and any arrangements in the case of a supplier losing its licence or going into administration should be provided for in this contract.

Government decision on arrangements for cases where SEG providers fail

There will be no specific arrangements set out in the SEG in the event that a supplier either loses its supplier licence or goes into administration.

Impacts, wider issues and review

Question 13 asked for views on our assessment of the impacts of the SEG on certain groups such as those in or at risk of fuel poverty or energy intensive industries (EIs).

The majority of respondents agreed that SEG would not have negative impacts on the bills of those who are at risk of fuel poverty or EIs because the mechanism was market-based and would not carry policy costs to be passed onto customers. A few suggested that the SEG could potentially reduce costs to consumers and industry on the grounds that increased renewable deployment could benefit these groups.

Some expressed concern that implementation and / or operation of SEG tariffs would have administrative costs, and that suppliers might choose to pass these on to retail customers in general, rather than accounting for the costs in their SEG offerings. Others suggested that the SEG would incentivise 'behind the meter' deployment, and in doing so reduce the number of customers contributing towards wider network and policy costs, thereby increasing costs for these other customers.

Many respondents did not believe that the SEG would ensure that a route to market remains viable for small-scale low-carbon projects which benefit the fuel poor, notably in the case of social housing and community projects – with a lack of certainty over returns, and a reduced ability to secure long-term contracts, raised as the key issues. Some respondents considered that the impact assessment was not sufficiently detailed and the impact of SEG on these groups should continue to be monitored.

Question 25 asked for views on the review process proposal for the SEG or suggestions for alternative approaches.

There was widespread support among respondents for a review and / or evaluation process, alongside some requests for more clarity on its timing and scope. Some respondents suggested that the review should recognise that low uptake of 'SEG' tariffs may not mean the policy had failed, if the market had developed to the point where it was offering alternative approaches.

Question 33 asked if there are any other issues that respondents wished to raise as part of their response to the consultation.

Relatively few specific issues were raised, with most respondents emphasising points raised elsewhere in their responses. These included general support for the broad direction of the SEG, the need for the mechanism to be kept simple, concern about reduction in investor certainty resulting from lack of guaranteed tariff and contract lengths, and concerns that the smart meter rollout and smart metering infrastructure would not be able to deliver the ambition of the SEG.

Government response

We have considered the points raised about the impacts of the SEG on EIs, those at risk of fuel poverty and other groups. An updated impact assessment, published alongside this document, assesses these impacts qualitatively. Based on responses received, the assessment made at the consultation stage that we do not expect the SEG to have a net negative impact on consumer bills still holds.

With suppliers setting the tariff levels for the SEG, we expect that tariffs will reflect the value of the exported electricity and take account of the costs of providing and administering the SEG, therefore no additional costs are expected to be passed on to other consumers. The impact

assessment notes that under the SEG there are challenges for projects that provide benefits to those in fuel poverty (such as community projects) and therefore the impact of SEG on addressing fuel poverty may be limited.

We will monitor how the SEG is working during the early years of operation to assess whether meaningful and innovative tariffs and contracts are coming forward. If we consider that insufficient progress is being made, we will look to consult on the operation of the SEG.

Modifications to electricity supply licences

The 'Part B' consultation received significantly fewer responses than the 'Part A' consultation, although those that were received were generally detailed and carefully considered.

In considering the proposed changes to licence conditions, many respondents also reiterated points that were previously raised in the context of the 'Part A' policy consultation, with notable issues mentioned being a desire for the SEG to be as simple as possible, for the minimum size threshold for mandated SEG suppliers to be lowered, and for the tariffs offered to generators in SEG contracts to be set by government and linked to the market.

Some respondents expressed concerns regarding implementation timescales – suggesting that introducing an obligation on certain suppliers to provide a SEG tariff by the end 2019 could be challenging to deliver. Our responses to these points are set out in the response to the 'Part A' consultation.

Several respondents made the point that it was difficult to provide comments on the licence conditions before the final design of SEG and the associated Order had been confirmed and signalled the need for guidance to enable suppliers to correctly interpret some of the provisions.

Proposed changes to licence conditions

Question 1 of the 'Part B' consultation sought general views on the proposed new licence conditions, which are required to implement the Smart Export Guarantee.

'Green' and 'brown' electricity

Some respondents were unclear about the policy intent relating to the treatment of 'green' electricity (low-carbon) versus 'brown' electricity (such as imported power re-exported from co-located storage devices) set out in the draft licence conditions. Respondents generally felt that the legislation should be flexible enough to enable suppliers to choose but not be required to make payments for 'brown electricity'.

As noted in the response to the 'Part A' consultation, the government has decided that SEG payments may be made on grid-sourced electricity ('brown' electricity) where storage and / or a non-low-carbon generator is co-located with the SEG installation, but it will not be mandatory for suppliers to make SEG payments on the brown element of exported electricity if they do not wish to do so. This policy intent is provided for in the draft licence conditions, but we have amended the definitions of 'green' and 'brown' export and amended the provisions on 'export' to provide further clarity.

Settlement

Some respondents were uncertain about whether the draft licence conditions required suppliers to register the export meters of all eligible generators for settlement BSC, given the current exemption under the BSC for smaller (below 30kW) capacities.

As noted in the response to the 'Part A' consultation, under the SEG, suppliers have responsibility for registering the export meters of eligible generators for settlement in accordance with the BSC; this includes generation with a capacity of less than 30kW. We have updated the definitions of 'export' and 'export meter' in the licence conditions to clarify this position.

Information requirements

Some respondents were concerned about the amount of information that suppliers would be required to collect and hold in order to comply with the licence conditions and considered this would be an additional burden on their processes, with additional costs likely to feed through in the form of lower SEG tariff offerings. In particular they queried the need to hold information from generators on storage devices and questioned what this might be used for.

We have considered these points carefully and decided to remove the requirement for suppliers to collect information on storage devices. This is in line with the wider decision to no longer require a central SEG register set out in the response to the 'Part A' consultation and will reduce the administrative burden on suppliers and costs associated with setting a SEG tariff.

Certification

Some respondents requested that the *Microgeneration Certification Scheme*, and other equivalent schemes, should be asked to introduce publicly accessible *application programming interfaces* (APIs) in order for suppliers to be able to verify declarations or evidence of certification provided by prospective generators.

The government recognises the benefits of APIs being applied to registers of certification, which can assist with rapid and cost-effective registration of new customer-supplier relationships, and help suppliers check that suitable certification arrangements are in place – and thus that consumers are protected from harm.

Decisions on the introduction of APIs are of course a matter for the management of certification schemes, however the government strongly encourages all relevant certification schemes to develop these approaches.

Scope of SEG tariffs

Some respondents sought clarification on whether a tariff rate of zero would be compatible with SEG requirements. The government intends that the licence conditions should require payments for exported electricity to be greater than zero, so zero would not be a suitable tariff rate.

One respondent sought clarification on what would constitute a tariff under the SEG arrangements. The government considers that these would be tariffs offered by suppliers (SEG licensees) and accepted by eligible generators (SEG generators) which met particular characteristics contained in the licence conditions. A tariff under the SEG arrangements is required to be offered to any generator who meets the technology and capacity eligibility criteria, and where appropriate, can demonstrate to the satisfaction of the supplier that it complies with suitable consumer protection standards (MCS or equivalent certification) and in the case of anaerobic digestion meets sustainability and feedstock criteria. A tariff under the SEG arrangements must be above zero. Electricity exported must be metered and settled and the SEG generator must not also be in receipt of FITs export payments or a SEG payment from another supplier. Where the supplier chooses, payments under the SEG arrangements must also only be for electricity originating from a 'green' source.

Providing SEG licensees offer to make SEG payments in accordance with the SEG arrangements outlined above, the SEG legislation does not preclude suppliers offering, and generators accepting tariffs or other types of remuneration packages which do not comply with

the components of the SEG obligation, such as a tariff that drops below zero at certain times (but higher at other times) payments on unmetered exports, or annual cash payments that do not depend on the volume of exported electricity. These would not be subject to the SEG arrangements. Similarly, generators and SEG licensees can agree on an export offering which meets the core components of SEG, but decide that they wish to formalise the agreement under a PPA or private contract rather than operate under the SEG, in which case they would not be subject to the SEG arrangements (in these cases, we would expect that SEG licensees and SEG generators would be clear that the agreement is not being entered into under the SEG).

Summary of government decisions on proposed changes to licence conditions

The licence modifications have been updated in the light of the consultation responses and further discussions, in particular to clarify the provisions relating to co-location of SEG installations with storage, arrangements for settlement under the BSC, and information requirements.

Ofgem will publish guidance to suppliers and generators on the operation of the SEG.

This publication is available from www.gov.uk/government/consultations/the-future-for-small-scale-low-carbon-generation

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