



Our response to Ofgem's RIIO-ED2 Draft Determination Consultation Questions

Annex 3: Distribution Net Zero Fund

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1. Introduction and Executive Summary

This section contains SP Energy Networks' views on the proposals put forward by Ofgem in their RIIO-ED2 Draft Determinations regarding the Distribution Net Zero Fund (herein also referred to as 'DNZF' or 'the fund').

In our RIIO-ED2 Business Plan, we proposed to create a fund which would stimulate an efficient and inclusive transition to Net Zero for communities in our licence areas while generating learnings that will benefit customers across the UK. Targeting the most vulnerable areas, the £30m DNZF would support innovative low carbon projects led by local organisations that aim to decarbonise key vectors such as transport and heat.

Designed to remove the blockers that community led low carbon projects face, the fund would:

- Explore innovative solutions to tackle decarbonisation challenges across disadvantaged communities while ensuring that no customer is left behind in the energy system transition. The success of our Transmission Green Economy Fund shows that supporting such projects can have far-reaching impacts; we expect that the learnings generated by the fund will be applied across the country to accelerate a just transition to Net Zero and leave long-lasting legacies that stimulate further decarbonisation of our communities.
- Deliver meaningful and lasting outcomes strictly linked to our role as a DNO. These include considerable emissions reductions and cost savings for our communities and vulnerable customers, whole system benefits, boosting local economic growth and generating new skills in the low carbon economy. Through Social Return on Investment modelling (presented in Appendix 3 along with several examples of projects that could be funded through the DNZF), we estimated that these outcomes would deliver a total benefit of £116.38m during the first 5 years of operation.

Given its clear benefits, Ofgem's rejection of the Distribution Net Zero Fund from the RIIO-ED2 price control limits the opportunity to meaningfully support our communities in their transition to Net Zero at a crucial time for vulnerable families and the planet.

In this response, we have argued the following key messages:

- The size of the DNZF funding pot – £30m – is justified in that it strikes a balance between fuelling the Net Zero ambitions of our communities, deliverability and maximising impact and value for money for our customers. This is explored in Section 4.
- There is a clear need case for funding and support that targets community-led low carbon projects; these are both vital to unlocking a Net Zero transition in our communities and beyond, and are likely never to come to fruition due to the barriers they face. We present this needs case in Section 2.
- We are uniquely placed to deliver this funding, as a DNO and a business, due to our unique mix of skills, insight and access to the energy system, and our successful track record in kickstarting low-carbon innovation driven by our communities, among other factors. We explore this in Section 3 below.

- The DNZF falls outside the scope of our baseline activities or specific baseline expectations set by Ofgem. The resources required to deliver the fund can only be deployed with the support of a dedicated allowance. This is explored in Section 5.

2. The Distribution Net Zero Fund is needed

This is a time of unprecedented change for our business, the wider energy sector and society as a whole. In an effort to lower the devastating potential of the climate emergency, society is mobilising to lower the emission of greenhouse gases and meet ambitious Net Zero targets.

Our customers and communities will play a critical role in the transition to Net Zero. Their efforts to decarbonise heat and transport, use energy more efficiently and adapt their behaviours to market signals will radically transform the energy system and profoundly impact our business.

We recognise that a one-size-fits all approach to the energy transition is not feasible; communities will face different challenges in achieving Net Zero targets while ensuring that no customer is left behind. Driven by their insight into customers' needs and local characteristics, community organisations are uniquely placed to identify targeted solutions to specific obstacles.

Our experience shows us that the solutions found by these organisations can have far-reaching impacts in tackling similar challenges across communities and boost broader decarbonisation efforts in the areas impacted. Funding provided by the Transmission Green Economy Fund to First Bus – the largest bus operator in Glasgow – offers an example of how the support given to low-carbon community projects can leave a long-standing legacy and stimulate further decarbonisation. First Bus received funding to begin the green transformation of its Caledonia bus depot in Glasgow, the UK's largest. The funding was used to launch Glasgow's first two electric buses since the 1960s and then to install 11 rapid 150kW DC charging units allowing for further electric buses to be introduced. The funding kickstarted First Bus's decarbonisation journey in Glasgow and given their prominence, generated a movement towards green transport for the city as whole. Learnings from this initial project and confidence in the technology were built upon by developing infrastructure to host 300 electric buses, of which 150 will be introduced shortly. Please find additional case studies on projects funded through the Transmission Green Economy Fund in Appendix 4.

However, our extensive track record in supporting low-carbon community projects and our comprehensive engagement with over 100 different stakeholders on this topic alone tells us that local organisations face daunting challenges in bringing vital Net Zero projects to fruition.

The biggest barrier that local organisations face in developing low-carbon projects is the lack of available funding options; this is especially true for third sector community organisations. This finding is supported by our stakeholders, who routinely highlighted this point during our business plan and ongoing engagement (97% of the stakeholders we engaged on this topic agreed that a low carbon pot of funding similar to the Transmission Green Economy Fund was needed in the ED2 price control – please find more stakeholder evidence in Appendix 2), it is apparent from our experience in delivering the Transmission Green Economy Fund and our analysis of 18 funds across Scotland, England and Wales. Overall, we have concluded that while funding exists, it is not enough to meaningfully enable the ambition of the communities we serve.

"Funding for innovative net zero projects, including electric vehicles, is extremely scarce and challenging, particularly for charities and third sector organisations. That is why it is vitally

important that funding from companies such as SPEN as it will play an increasingly important part in enabling communities, particularly within the Third Sector, to transition to Net Zero.”

– [REDACTED], Manager, Community Transport Glasgow

“There is a huge appetite out there for low carbon funding but very little available. The recent public sector decarbonisation fund in England is massively oversubscribed and whilst a number of our local authorities put bids in, only a couple were successful”

– [REDACTED] Environment Officer at Liverpool City Region

The ongoing cost of living crisis is set to sharply aggravate this barrier, as more funding and resources are diverted to support the immediate needs of millions of households being pushed into fuel poverty and budget deficits widen at a local government level. The impact of the ongoing crisis will be felt most acutely in disadvantaged areas where the lack of investment will further exacerbate inter-generational fairness and the risk of being left behind in the energy system transition.

Other significant barriers faced by low-carbon community projects include:

- A lack of inclusivity in the existing funds that can leave smaller local organisations behind due to their limited resources, expertise and project management experience.
- The lack of understanding of the network and the impact that it can have on project feasibility

It is at this critical time that our disadvantaged communities need bold yet targeted and flexible solutions that will empower them to meet their Net Zero targets while mitigating the rising cost of energy. We believe that the Distribution Net Zero Fund is one of these solutions, extending the necessary support to our communities so that they can avoid compromising between progressing in the energy transition and the wellbeing of vulnerable customers.

Designed in alignment with Scotland’s, Wales’ and the UK’s Net Zero aims, the fund will help remove the obstacles that local organisations face in developing low carbon projects and support a just transition to Net Zero for our disadvantaged communities and beyond. It will do so by:

- Prioritising disadvantaged communities in offering funding to projects that will allow local organisations to tackle decarbonisation challenges while delivering far reaching environmental, social and whole-system benefits and replicable lessons;
- Offering a range of funding options to reduce long-term income uncertainty and lower the risk of community projects to make them viable (but we note that we will not offer funding for grid connections or reinforcement works as part of this initiative);
- Opening the fund to a wide range of projects and organisations, making it accessible for smaller organisations, charities and social enterprises to maximise inclusivity;
- Supporting organisations throughout the application process by deploying our unique skills and knowledge to mitigate the challenges and maximise the impact of projects brought forward by local organisations. This support will also facilitate the participation of smaller organisations with limited resources and experience

3. Why we are best placed to deliver this fund as a business and as a DNO

We believe that our skillset, successful track record, and our role as a DNO place us in a unique position to deliver any funding in support of community-led low-carbon projects:

- **Leveraging our unique mix of skills, we will maximise the impact of any low-carbon project funded by the DNZF, delivering unparalleled value for money for our customers**

Our teams bring together a unique mix of engineering excellence, network visibility in the short and longer term, and expertise in selecting, funding and supporting community-led low carbon projects (through our experience with the Transmission Green Economy Fund). Working closely with local partners who have designed a bespoke and innovative solution to their community's needs, this blend of skills, knowledge and experience will allow us to mitigate each project's challenges, augment its strengths and explore further impact opportunities. Leveraging our unique position, we will maximise the impact delivered by any community project funded through the DNZF, thereby delivering the most value for the lowest cost for our customer base. We believe that no other organisation in our licence area can deliver the same value for money profile on investments that will facilitate a Just Transition to Net Zero for our communities, particularly the most disadvantaged.
- **Independent, impartial position in the energy system** – As a DNO, we are a neutral facilitator of the energy system transition; we have no commercial interest in the projects being funded and can therefore be wholly impartial in the sourcing, selection, funding and support of low carbon community projects that hold the most promise for our customers
- **Unparalleled footprint in our licence area** – As a DNO, we have a comprehensive web of established relationships across both network areas. The depth and breadth of these relationships will prove highly beneficial to the success of the fund, for example, by sourcing a wide range of impactful community projects and leveraging existing relationships to enhance the effectiveness of new and established projects
- **Unmatched access to vulnerability data** – The DNZF will aim to prioritise low carbon community projects that impact those customers who are most at risk of being left behind in the energy system transition. It is therefore essential to have granular visibility of where these customers live. The insight produced by our newest NIA project, VEST (Vulnerability in the Energy System Transition), again positions uniquely; this innovative solution leverages data, customer engagement and advanced geospatial mapping to estimate the likelihood of customers being left behind for each LSOA we serve. Allowing us to pinpoint the areas most at risk will further drive our ability to enhance the impact delivered by community projects funded by the DNZF
- **Successful track record of the Green Economy Fund** – Since 2018, our award-winning Transmission Green Economy Fund, has enabled us to support Scotland's green ambitions. The 35 projects funded have played an important role in decarbonising transport and heat and have helped to educate the workforce of the future with crucial skills in low-carbon technologies. The proven governance arrangements, internal processes and methods we have developed to successfully source, select, fund and support low carbon community projects will be redeployed on the DNZF to maximise impact and ensure we hit the ground running and waste no time in driving value for our customers.

While we are confident that we are best placed to deliver the Distribution Net Zero Fund, we are deeply aware that our customers would fund this initiative at a time of exceptionally high energy costs. Our recent engagement with customers, however, highlighted their strong support for the fund: over 81% of customers are willing to pay *at least* the cost of the fund, with only 3% of customers believing that we should not pursue this initiative. Considered along with the reasons above and the benefits we expect to deliver, the support from both customers and stakeholders gives us a high level of confidence that we are best placed to deliver the funding that our communities need at a critical time.

"The DNO understands where the generation & consumption lie and where the pinch-points are; they see the larger picture and are already anticipating changes in consumption, choices and behaviour."

— [REDACTED] Chair, Teviot Electric Car Club

"SP Energy Networks are in the best position to administer the net zero fund as they have local communities and customers at the heart of their interest.

They play a key role to the public and private sector transitioning Scotland's infrastructure and education system. They play a critical role in speeding up the process of Scotland working towards its net zero targets by 2045."

— [REDACTED], Senior Manager, Energy Skills Partnership

4. £30m is an appropriate funding pot for the Distribution Net Zero fund

We proposed a £30m funding pot for the DNZF in our RIIO-ED2 Business Plan. The size of the funding pot was determined by balancing consideration on the fund's deliverability, its ability to generate lasting impact and the growing need for low-carbon project funding.

On the one hand, our experience with the Transmission Green Economy Fund has taught us that as the funding to deploy increases, so do administration costs, logistical challenges and wider efforts from experts across our business. This relationship, however, is not linear. Leveraging our experience, we determined that a £30m fund would result in the optimal balance of costs and investments; minimising the cost to deliver funds as a proportion of the funds deployed, a pot this size would maximise value for money for our customers and communities.

On the other hand, we considered the substantial need for low carbon project funding, especially by community-led third sector organisations that typically struggle to access funding. Conventional bottom-up cost assessment was not appropriate for the DNZF as the degree of uncertainty and complexity of the Net Zero transition makes macro assessment generally unreliable. While our starting point was informed by the £20m in funding deployed via the Transmission Green Economy Fund, this was increased considering the inclusion of our SPM license area (not covered by our Transmission business), coupled with the growing calls for financial support we heard from stakeholders (find more stakeholder evidence on the gap in funding for low-carbon community projects in Appendix 2).

Furthermore, we considered that a £30m pot could deliver considerable impact to both the communities receiving assistance and to customers across the UK through the learnings generated by the innovations funded. To better bring to life the *direct* impact of this fund on our communities, we have modelled 52 low-carbon projects that could be supported through the DNZF. SROI modelling of

these projects indicates that funding of £30 deployed over these projects could deliver a total benefit £116.4m over the 5-year duration of the fund for our most disadvantaged communities (please find an extract of these projects and details on the social value this estimate in Appendix 3) The increased benefits expected for this initiative, compared to the amount presented in our Distribution Net Zero Fund annex to the RIIO-ED2 Business Plan reflect more accurate modelling based on the 52 aforementioned projects.

Our experience with the Transmission Green Economy Fund tells us that these estimates are realistic. We have tracked the outcomes delivered by this £20m fund over the years; these included (i) over 300 low carbon technology installations for customers and community organisations, (ii) 58 full-time green economy jobs, (iii) over 1100 knowledge sharing sessions and (iv) over 600tCO₂e in carbon savings delivered solely during the first four years of the fund. A conservative estimate of the benefits delivered by the Transmission Green Economy Fund has found that over the 5 years since its inception, the fund delivered a total benefit of £65.8m to customers and communities.

“Considering that this was the first time that this [the Transmission Green Economy Fund] has been done, it was a remarkable success and the actual difference it’s making in people’s lives. I don’t think it is quantifiable in that sense. For me in any business case you are making, you know the success of all these projects should be your starter for ten.”

– [REDACTED], Manager, Community Transport Glasgow

“We have received funding via Green Economy Fund which has been a huge benefit to our organisation and think it creates fantastic opportunities for communities and non-profit organisations to develop unique projects and inspire others.”

– [REDACTED], Director, Agile City CIC

5. The Distribution Net Zero Fund stretches beyond baseline expectations and activity

While the funding and support provided to low-carbon community projects will play a key role in achieving our disadvantaged communities’ Net Zero ambitions, this initiative stretches beyond our usual activities as a DNO Under baseline funding, we can finance a variety of activities from keeping the lights on to supporting vulnerable customers during power cuts but we do not have access to the dedicated resources necessary to deliver the DNZF Ofgem has previously supported this reasoning, awarding a £5m UIOLI allowance to our Transmission business for the delivery of a Net Zero Fund.

The fund also goes clearly beyond all relevant baseline expectations set out by Ofgem in the ED2 business planning guidance:

- **Vulnerability baseline expectations** – Ofgem expects DNOs to (i) have an extensive network of partnerships from multiple sectors, (ii) make use of referral channels and signposting to *support customers* and (iii) be involved in two-way flow partnerships *supporting vulnerable customers* The fund goes beyond these expectations by supporting projects led by local organisations in disadvantaged areas that will indirectly impact all customers within these communities In doing so, the funding provided by the DNZF is complementary to that delivered under the vulnerability incentive, enabling us to take a ‘whole community’ approach to address vulnerability while promoting a just transition to Net Zero

- **Environmental Action Plan (EAP) baseline expectations** – Any carbon emissions stemming from the community-led projects funded by the DNZF will not contribute directly to the reduction of SPEN's Business Carbon Footprint (BCF), instead, it will contribute to the reduction of our communities carbon emissions. The support and funding provided to these projects, therefore, goes beyond baseline expectations for the EAPs.
- **Stakeholder Engagement expectations** – No specific baseline expectations were set for stakeholder engagement activities; however, Ofgem expressed that DNOs would be expected to engage with local communities to help facilitate the Net Zero transition as part of the ED2 price control. The fund goes well beyond these expectations by playing a proactive role in funding community projects and proactive guidance that will drive local Net Zero ambitions, activities for which no funding is available under baseline allowances.

6. Additional measures to demonstrate the value of the Distribution Net Zero Fund

We propose to complement the delivery of the Distribution Net Zero Fund with an additional set of measures that will (i) communicate transparently the impact delivered by this initiative, (ii) its critical role in filling gaps and removing obstacles to a Just Transition and (iii) hold us accountable for the impact we expect it to deliver on customers and communities

- We commit to not using any of the initiatives funded by the DNZF or any outcomes linked to these initiatives in demonstrating our performance under any output or regulatory scheme (e.g. the Vulnerability Strategy Delivery ODI). The activities funded will be reported separately in all instances.
- We will set up and regularly publish in full detail (i) our community partners' satisfaction with the fund, (ii) the outcomes delivered by each project funded, (iii) a measurement of the social value delivered by these outcomes, produced by an independent third party.
- We will set up and regularly publish the results of a governance system aimed at ensuring that only projects falling in the following categories are funded by the DNZF: (i) projects that wouldn't otherwise be supported under any of the existing outputs or regulatory incentive, (ii) projects that do not constitute CSR, (iii) projects that fall within our role to bring about Just Transition to Net Zero.

Finally, the nature of the use-it-or-lose it mechanism we have requested will ensure that any funding not deployed to support our communities will automatically be returned to customers.

Appendix 3.1 Stakeholder Support for the Distribution Net Zero Fund

a. Introduction

This document provides extensive evidence of strong stakeholder and customer support for the proposed Distribution Net Zero Fund gathered throughout the RIIO ED2 engagement program. Over 100 stakeholders were engaged specifically to test and design all aspects of the fund.

As demonstrated by the feedback presented in the sections below, stakeholders truly believe that the proposed Distribution Net Zero Fund would offer vital support for communities, unlocking the Net Zero transition and generating learnings that will impact customers across the country. Stakeholders also shared their views that, as a DNO, SPEN is best placed to deliver this support.

b. Stakeholder feedback

i. Why funding similar to the Transmission Green Economy fund should exist in RIIO-ED2

Stakeholders delivered a clear message that the Transmission Green Economy fund was instrumental in driving the Net Zero ambitions of organisations and communities as a whole. Considering the impact of our previous fund, our stakeholders consistently supported the introduction of a similar fund in the RIIO ED2 regulatory period. Some of the main drivers that led our stakeholders to call for the inclusion of a similar fund follow:

- Stakeholders saw the lack of suitable funding available as the biggest barrier preventing communities from joining the energy system transition and agreed that the proposed Distribution Net Zero Fund would help projects overcome this barrier preventing them from coming to fruition

"There is a huge appetite out there for low carbon funding, but very little is available. The recent public sector decarbonisation fund in England is massively over-subscribed, and whilst a number of our local authorities put bids in, only a couple were successful."

Principal Environmental Officer, Liverpool City Region

"It is definitely something that SPEN needs to pursue because if we're looking at the community level, the amount of money needed upfront to start off projects and keep them going is quite beyond the reach of most communities, even those with community benefits."

Representative, Business & enterprise group

- The Transmission Green Economy Fund was seen as well managed, organised and efficient. This allowed to mitigate project challenges and maximise the impact delivered.

"We participated in the Green Economy Fund and found the funding and organisation extremely well structured. Some aspects of these projects include participation and or support from the Distribution business, so having the Distribution company also provide funding support is very helpful in ensuring smooth projects."

Business Development & Capital Delivery Manager, Scottish Water Horizons

- Stakeholders praised the inclusivity of the Green Economy Fund and highlighted the importance of low-carbon project funding being open to smaller organisations, such as

charities and non-profits, which typically struggle to find suitable funding options. Beyond the openness of funding criteria, stakeholders felt that providing broader support beyond the funding provided, allowed organisations with less experience and resources to bring their innovative projects to fruition

"It would be welcome to ensure the continuity of the Green Economy Fund thanks to this Low Carbon Fund. Few funds are open to charities, and almost none of them cover energy efficiency works, contrary to what the SPEN Green Economy Fund did. This fund gave charities a chance to fund innovative projects."

"All the support that was provided by the fund, whether technical, legal or on project management aspects, was very helpful for organisations that may not be familiar with the management of projects of such a scale. It also facilitated projects carried out by members of the public or private sector and provided extra help so these projects can come to fruition."

Climate Change Manager, Edinburgh World Heritage

- The size of the funding pot was also seen as a critical factor by some stakeholders in unlocking low-carbon community innovation, further highlighting the need for funding and practical support.

"The level of funding involved in the SPEN Green Economy Fund means that it made a massive difference. Keeping this level of investment, in the long run, will enable organisations with innovative ideas to work on and propose new projects – it is very challenging to develop innovative projects when there is no guarantee for funding as it is a time-consuming exercise and requires resources to do so."

Climate Change Manager, Edinburgh World Heritage

- The pervasive view was that the profound impact that the Transmission Green Economy Fund delivered strongly supports the inclusion of similar funding in the RIIO-ED2 period. The near totality of the over 100 stakeholders we engaged to shape the DNZF 97% felt that SPEN should offer a similar low-carbon fund in the next regulatory period.

"Considering that this was the first time that this has been done, it was a remarkable success and the actual difference it's making in people's lives. I don't think it is quantifiable in that sense. For me, in any business case you are making, you know the success of all these projects should be your starter for ten."

Manager, Community Transport Glasgow

"We have received funding via Green Economy Fund which has been a huge benefit to our organisation and think it creates fantastic opportunities for communities and non-profit organisations to develop unique projects and inspire others."

Director, Agile City CIC

"The Green Economy Fund or the new fund ED2 being in existence, it helps unlock projects that otherwise wouldn't be able to get done. Would we be able to do what we were doing without that support? No! Some of that would have fallen by the wayside. It's made it possible to do it."

- Representative, Project HALO

ii. Why DNOs are best placed to offer this type of funding

Stakeholders argued that SPEN is best placed to offer a “Low Carbon” fund. The main arguments that the stakeholders brought forward in support of the idea were as follows:

- DNOs have unique knowledge of the regional energy infrastructure, including constraints and anticipated demand, and an understanding of what is required to achieve Net Zero. This knowledge would allow SPEN to optimise their funding allocation to ensure that the projects being funded maximise benefits to both the network and customers.

“Yes [distribution network operator is best placed to offer this type of funding]. The DNO understands where the generation & consumption lie and where the pinch-points are; they see the larger picture and are already anticipating changes in consumption, choices and behaviour.”

- Chair, Teviot Electric Car Club

“Yes [distribution network operator is best placed to offer this type of funding]. A DNO obviously has expert knowledge of the energy business and has a unique knowledge of the regional electricity infrastructure.”

Director, Chester Community Energy

- Stakeholders believe that in addition to making better funding decisions, SPEN’s unique knowledge and expertise could also help communities solve any issues that may arise throughout the lifecycle of their projects. They believe that this holistic level of support creates unique value for the projects being funded.

“The operator will have knowledge, expertise and understanding of the issues and the potential solutions that communities put forward.”

Development and Fundraising Manager, Forth Valley College

“When it comes to energy, you are experts in the field. It's seen as something you deliver, you're used to, and you're interested in. You're the experts, and in that respect, you're a trusted organisation. People will trust you to help them overcome their challenges.”

- Energy and Carbon Reduction Officer, Qwest Services

- DNOs have a better grasp of government targets, evolving technologies and customer needs than other organisations, allowing the likes of SPEN to make better funding decisions
“Due to the targets set by the government and evolving technologies, the distribution network operator is best placed to assess and offer this funding.”

Service Delivery Manager (Vehicle Maintenance & Electrification), North Lanarkshire Council

- Many stakeholders argued that DNO are well placed to deliver low-carbon innovations as they are likely to be more open to funding innovative projects and would generally create opportunities for stimulating innovation. Stakeholders believed that this could lead to investment in projects that will potentially have the greatest impact on the immediate communities and lead to learnings that will facilitate a just transition to net zero across communities.

“A Distribution network operator could provide a different approach in terms of stimulating innovation and proposing funding schemes in comparison to existing programmes run by usual funders such as Governments or Charities. Understanding innovation is also key for Distribution network operators to adapt the network to new uses/requirements from users. The Green Economy fund allowed for flexibility, and this enabled innovation/innovative projects to be delivered.”

Climate Change Manager, Edinburgh World Heritage

- Some also believed that SPEN's position at the "forefront of innovation" and given the knowledge of wider system needs positioned us well to guide organisations towards achieving Net Zero targets.

"Yes [distribution network operator is best placed to offer this type of funding]. As a distribution network operator, you are at the forefront of innovation and have a wide view of the industry, educational and customer needs. You are the driver behind Scotland meeting its Net Zero targets that will make Scotland a better environment for all."

Sector Manager – Construction, Energy Skills Partnership FE Colleges

- According to stakeholders, SPEN is seen as an independent and trusted organisation that cares about the long-term future of the network. Due to this fact, stakeholders agreed that SPEN could be trusted to make impartial funding decisions that would benefit the network, communities and the Net Zero agenda as a whole.

"Representatives from the Scottish Power are seen as trusted, safe or trusted entity to work with. A respected entity but also an entity that has a long-term goal of continuing to operate within the UK and therefore will be there for the long term."

Representative, Mentone Energy Consultancy

"You are trusted by your customers. You have got that leadership piece that you could present, trusted by your stakeholders as well, with the likes of us. So, it's really good to be able to pull that one together. You are in the communities where all this going on. You have got an awareness of the wider low carbon skills agenda and how it impacts the distribution network. The impacts on air source heat pumps, micro renewables and it has a direct impact on yourselves, so it makes sense to have a direct link into that with communities, with skills to maximise opportunities in your geographic area."

- Representative, Energy Skills Partnership

Appendix 3.2 – Model Distribution Net Zero Fund and Social Impact Forecast

a. Extract of Distribution Net Zero Fund Model Projects (full list available upon request)

The projects in the table below form a representative view of the types of initiatives that could receive funding going forward. As they are model projects, none of these are already in line to receive funding. The DNZF will fund only low carbon projects proposed by community groups and organisations. The outcomes (and the relative benefits) delivered by this fund will, therefore, depend on the nature of the projects proposed by communities.

Project Category	Description	Needs Addressed	How the Project Facilitates the Energy System Transition	Outcomes	Duration	Cost
Community Project	We will support the installation of demand management equipment for 50 rental homes in fuel poverty in the Glasgow east-end, which will unlock new learnings around (i) assessing the effectiveness of the installation of this equipment for those unable to install LCTs and (ii) gain a better understanding of their energy usage.	Fuel poor customers in rented homes face obstacles in installing funded LCTs or energy efficiency interventions. Demand management equipment can offer an easy way to implement a solution to lower bills with little customer involvement.	Demand management equipment provides insight into how the use of energy can be flexed to lower bills and lower the carbon intensity of fuel poor customers where no technology of fabric solutions can be installed, allowing to refine load forecasting – freeing up capacity at system level and educating customers on the opportunities of flexibility.	<ul style="list-style-type: none"> - 50 rental homes receiving demand management equipment - Bill savings of £100 per customer per year - Reduce carbon emissions by 0.899 tCO2e/y - Improving knowledge of available support - Improving technical knowledge 	1 year	£300,000
Community Project	We will work with partners in the delivery of micro-district heating networks, providing heat	The project aims to reduce heating bills for fuel-poor and vulnerable customers,	In the face of the energy price crisis - reducing heating bills for those in need will serve to free up funds for their potential	<ul style="list-style-type: none"> Bill reductions for fuel poor customers - A reduction in tCO2 - Improving knowledge of available support 	2 years	£900,000

	to 80 properties in Dumfries and Galloway. This will serve to unlock learnings for the further rollout of micro-district heating schemes in the UK.	and reduce carbon emissions.	subsequent investment into LCTs.	- Improving technical knowledge		
Community Project	We will partner with Glasgow City Council to test flexible energy solutions in 200 homes in Glasgow. This includes the installation of flexible energy technologies, including battery storage. Testing these solutions will serve as a test bed for a further rollout.	In the face of Net Zero targets, it is important that alternative ways are found to power households.	Flexibility services will play a central role in enabling the energy system transition on the consumer end.	<ul style="list-style-type: none"> - Improving knowledge of and access to cleaner energy - Offer energy advice - Help with energy tariff switching - Improving knowledge of available support - Improving technical knowledge 	2 years	£950,000
Community Project	The funding of feasibility studies on the development of community energy projects in partnership / engagement with Community Energy Scotland. This will be done with the aim of guiding the use of	Community anchor organisations and their community energy projects will play an essential role in helping to meet Net Zero targets, bringing environmental benefits to communities and increasing economic	Community energy refers to the delivery of community-led renewable energy, flexibility, energy demand reduction and energy supply projects. These can range from energy efficiency improvements to the generation of renewable	<ul style="list-style-type: none"> - Bill savings - CO2e reductions from generation - CO2e reductions from demand reduction Gross economic value add - Improving knowledge of available support - Improving technical knowledge 	2 years	£350,000

	community energy funding and building knowledge in the space.	activity and bill savings to customers. However, our research has highlighted that the future of community energy is unclear. These feasibility studies will be conducted to better direct investment in the space, and therefore, increase the likelihood of impactful projects taking place.	power and matching local demand with generation. These help reduce the impact of climate change, and therefore, will play an important role in helping to meet the challenge of a just transition to Net Zero.			
Community Project	We will partner with Liverpool City Council to fund a series of feasibility studies which seek to identify the approaches that can be taken to retrofit residential homes within the most vulnerable areas in the city.	The challenge of decarbonising residential homes in highly vulnerable areas, to ensure all customers can be enabled to join the energy transition.	It is crucial that the energy system transition is done in a just manner. Exploring top-down approaches to utilise the relevant funding to address this challenge will aid in facilitating a just transition.	- Improving living conditions - Job creation - Improving access to cleaner energy - Improving knowledge of available support - Improving technical knowledge	2 years	£350,000
Heat	We will fund the installation of battery storage for 50 off-gas electrically heated fuel poor homes in Liverpool where the installation of	Fuel poor customers using electric heaters face the highest heating costs. The installation of battery technology, along with	Decarbonise power use while keeping bills low, promoting a just transition. Provides insight into how fuel poor customers with sole access to electric	- 50 customers offered battery storage & ToU tariffs - Bill savings of £70 per customer per year	1 year	£100,000

	other LCTs is not feasible. This will provide learnings on the effectiveness of this solution where other avenues are not readily available.	ToU tariffs, lowers the cost of heating where immediate alternatives are not available.	heaters shift their behaviour when batteries and ToUs are available, leading to more precise load forecasting. Opens the opportunity for customers to provide flexibility services to the grid.	- Improving knowledge of available support - Improving technical knowledge		
Heat	The installation of battery storage technology in 150 off-gas homes in SPD areas with high incidences of fuel poverty. This will provide insight into how fuel poor customers engage with batteries.	Target properties that are electrically heated and have been specifically identified as in or at risk of fuel poverty.	Better understand what effect a decentralised storage facility would have on managing demand and reducing carbon emissions.	- 754 TCO2 savings over the lifetime of the battery units - The creation of 8 jobs - 133 LCTs installed 423 customers receive advice and support directly through the project - Improving knowledge of available support - Improving technical knowledge	4 years	£1,250,000
Other	We will fund 25 electrical apprenticeships in the Liverpool area - targeting young adults in fuel poor households - to ensure knowledge to install and maintain LCTs is disseminated.	At present, there is a low level of awareness of LCTs at all levels of society (relative to the scale that is required to meet Net Zero targets).	This directly serves to increase the number of people who can not only operate, but also install and share knowledge about LCTs. The uptake of LCTs is central to achieving Net Zero targets.	- Gross economic value add - Improving technical knowledge - Job creation - Improving access to cleaner energy	3 years	£750,000
Transport	We will carry out e-mobility optioneering	This will be done with the aim of accelerating the e-mobility rollout.	Accelerating the e-mobility rollout will play an important role in	- The accelerated rollout of e-mobility in Glasgow	3 years	£300,000

	studies for 6 local authorities in Glasgow, unlocking knowledge about its benefits at scale.		decarbonising transport in the areas in question.	- Improving access to cleaner energy		
Transport	We will launch an electric car club in Dundee City with 10 EVs - serving as a low cost car hire service and provide insights about the demand for such a service at present ahead of a potential further rollout.	In a bid to improve transport for vulnerable people in an area of low car ownership, this will make vital transport to medical appointments, job interviews or even just shopping, less expensive and easier for those who need additional support.	By shifting the transport patterns of a customer group to EVs and playing a role in the electrification of transport.	- CO2 and tax/fuel savings associated with EVs in comparison to combustion engine vehicles Implementation of energy efficiency measures - Improving access to cleaner energy	1 year	£287,587

b. Social Impact Forecast

A social impact valuation has been conducted, capturing the outputs of the model projects set out above in alignment with the following (as indicated in RIIO ED2 Business Plan Annex 4B.4: Distribution Net Zero Fund) which reflect the minimum level of outputs that will be achieved should the fund go forward

- Support for more than 50 low carbon projects that would not proceed without our support and funding. 25% of the projects funded will be community projects, aligning to our community strategy
- More than 230 low carbon technologies installed.
- Guidance, support and tangible benefits for more than 14,000 customers and communities in vulnerable situations, including reduced energy bills for those in fuel poverty.
- A boost for the low-carbon economy with the creation of 80 direct and 970 indirect jobs.
- Reducing cities and communities' carbon by 5,500 tCO₂e a year across the lifetime of the projects, resulting in better air quality and health benefits for our cities and communities.

As these reflect the minimum outputs that will be realised, this calculation forms a conservative estimate of the benefits that will accumulate over the lifetime of the fund. Where the outcomes in the model projects table exceed those in the bullet list above (i.e. *more than 230 low carbon technologies are to be installed and more than 14,000 customers will be supported*) we have capped the benefits calculation to reflect the minimum values

Reporting Figures	
Total cost The total cost of the fund	£30.0m
Total gross present value The value of all future benefits	£116.4m
NPV The value of all future benefits, minus costs	£88.7m
SROI The net benefits delivered by the project per £ spent to deliver it	£3.20

As such, we expect the £30m fund will produce gross benefits (over the lifetime of the fund, i.e. RIIO-ED2) of £116.4m. The above has been calculated by employing the industry-wide approach to social impact valuation, using proxies gathered from the proxy bank and reputable sources in line with optimism bias guidelines. Moreover, we have applied conservative scale of impact factors – notably, at most 50% of the benefits have been attributed to SPEN, accounting for the important role our partners will play in the deployment of support

Please note that the social value modelling below does not include the profound impact that the learnings generated by the innovative projects funded can have on how a just transition to Net Zero is achieved by communities not directly impacted by these projects

Appendix 3.3 Transmission Green Economy Fund Case Studies

Tackling fuel poverty with Warmworks (allocated funds £1,250,000)

This project saw Warmworks target properties that are electrically heated and have been specifically identified as in or at risk of fuel poverty. By helping to make energy bills more affordable, the project has made a significant positive impact on the lives of residents. Through this project, we installed battery storage technology in 133 off-gas homes in the Stewartry area, where fuel poverty is disproportionately high. A major Kirkcudbright substation is also being upgraded nearby.

The project has helped us better understand what effect a decentralised storage facility would have on managing demand and reducing carbon emissions. We took on valuable learnings for grid management and the incorporation of future technologies. We can now evaluate the real life performance and reliability of battery storage equipment and controllers. 133 batteries have been installed, creating a unique opportunity to reduce energy bills for fuel-poor householders, all while creating a virtual power plant to support the development of network balancing services for DNOs.

"The Green Economy Fund event in Glasgow provided some insight into the successes and challenges of other projects, and was an excellent way to learn how others have overcome obstacles and led the way to deliver. Communications and support from the GEF team have always been open and accessible, supported by the knowledge that their aims are aligned to those of the projects in supporting consumers and the sustainability of the energy network."

– Simon Kemp, Warmworks

Essential food deliveries to our communities with Food Train (allocated funds £452,413)

Food Train applied for funding to replace their fleet of diesel-fuelled delivery vehicles with electric vehicles. They also wanted to expand their support for older people in Stirling and Renfrewshire to cover neighbouring Clackmannanshire and East Renfrewshire. Food Train supports older people and informal carers through its grocery delivery service and signposting to other support. This support for community, combined with their aim to reduce the carbon emissions associated with these activities, made it a good fit for the fund. Our grants enabled the replacement of nine ageing diesel vans with 100% electric alternatives and seven vehicle charging points. These vehicles now deliver grocery shopping to more than 600 older people every week.

"The project has made a significant difference to our organisation, the communities we operate within and, importantly, to the lives of hundreds of vulnerable individuals and their families – particularly during one of the most difficult times our country has seen. Our GEF project has been a magnificent opportunity to start our 'going electric' journey while extending our reach to many more older people."

– Gaynor Grant, Food Train

Building greener parks with Edinburgh City Council (allocated funds £482,107)

City of Edinburgh Council wanted to undertake a £7m restoration of Saughton Park. The restoration would provide high quality facilities and create a focal point for a wide range of

people and activities. The Council wanted to work out how they could reduce the energy costs associated with running the park. Any savings could be reinvested back into the park to secure: (i) Affordable venue hire for community groups, (ii) Lower energy costs for the café tenant, (iii) Free or low-cost activities benefiting the 24,000 people living in the local catchment area.

The Council wanted to install a microrenewables system which would allow Saughton Park and its community facilities to be operated off-grid. This was part of a strategy to future proof the park's energy system, ensure security of supply, protect against future cost increases of grid electricity prices. The park's refurbishment also needed to be compatible with the Council's pledge for the city to be carbon neutral by 2030

The park's proximity to the Water of Leith river offered an ideal opportunity to harness hydropower to meet the energy demands of the site's buildings. In fact, the weir running through Saughton Park had previously supplied both water and energy to 17 mills, breweries and other works in Gorgie – beginning in 1790. This meant that the project also offered a fittingly low carbon tribute to Scotland's industrial revolution. The Council worked with Arcus Consultancy to design a closed-loop, low-carbon energy solution – the first of its kind in any UK park. The system is made up of a 39kW Archimedes Screw on the Water of Leith, and provides all the electricity the park needs, including two ground source heat pumps which heat the park's buildings. Any spare electricity generated is sold back to the grid, providing the Council with extra revenue for running the park. Initially, project development was halted due to a lack of funding, despite the project team trying several funding routes. The Council eventually applied to the GEF; requesting £482,107 to support the purchase and installation of the Archimedes Screw. The application was approved, and the project went ahead.

The Archimedes Screw was successfully installed and began generating low carbon electricity on 12 February 2020. The Council attributed the project's success to strong leadership, involvement of a wide range of stakeholders, and securing community buy-in at an early stage. The project team received significant political support too, as this project was seen as a statement of the Council's ambition to create a greater focus on sustainability within the visitor economy.

Since it began operating in February 2020, the hydro scheme has generated 70,500kWh of low carbon electricity, saving the equivalent of 10,970kg of carbon dioxide. Over the 25 years the hydro scheme is expected to run, it's estimated to generate 5,000MWh of electricity and save 1,800 tonnes of carbon dioxide emissions. The Council also expects to save £15,000 a year on energy costs for running the park. This money will be reinvested into improving the park and providing benefits to the local community.

Accessible travel goes all-electric with Community Transport Glasgow (allocated funds £900,000)

Community Transport Glasgow (CTG) applied for funding to upgrade its ageing fleet from diesel to low-carbon passenger vehicles. CTG's social purpose is to provide not-for-profit transport solutions to enable affordable, reliable and accessible transport to the vulnerable communities we serve. This made them a good fit for the fund. We launched Glasgow's first ever all-electric minibuses. This gave us an ideal test bed for the operation of electric minibuses across the country. CTG provided transport solutions to 75,000 passengers. As our communities recover from COVID we anticipate that these passenger figures will at least be the same.

"As a third sector organisation, this funding is transformational to Community Transport Glasgow (CTG), as it has enabled us to renew our ageing fossil fuel fleet with a new fully electric fleet. The funding from the Green Economy Fund not only enables CTG to build on our social purpose, it also reduces our service's environmental impact on our local communities."

–Graham Dunn, Manager at Community Transport Glasgow