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30<sup>th</sup> August 2021

Dear Patrick,

I am responding on behalf of the Scottish Government and ministers to Ofgem's minded to position on the electricity network Access and Forward-looking Charge Significant Code Review (SCR), published on 30<sup>th</sup> June 2021.

The Scottish Government is focused on delivering a green recovery and just transition to net zero by 2045. Our recent Update to the Climate Change Plan<sup>1</sup> set out the pathway to achieve this, taking into account the following statutory targets:

- 75% reduction in GHG emissions by 2030 compared with a 1990 baseline
- Net zero by 2045
- Remove fuel poverty, as far as is reasonably possible by 2040
- Deliver at least 6 TWh of heat demand via heat networks by 2030

These targets and the policies that support them (Annex A) prioritise economic, social and environmental wellbeing; in meeting them will keep Scotland on track to achieve net zero by 2045, as well as contribute to the wider GB pathway to net zero by 2050.

We have reservations over the extent to which some of the reforms proposed in this consultation fit with the Scottish Government's commitment to achieve net zero within our statutory timescale. **We would therefore urge Ofgem to set out clearly and publicly the ways in which it believes that the SCR is consistent with, and will contribute towards, achieving net zero.**

We accept the principles which underlie the SCR and the need to reform network charging. However, we believe that these reforms should reflect devolved, regional and local policies and ambitions, and the ways in which our electricity networks will need to evolve in achieving these. This is a point that Ofgem recognised as part of its

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<sup>1</sup> [update-climate-change-plan-2018-2032-securing-green-recovery-path-net zero \(13\).pdf](#)

helpful involvement earlier this year in agreeing the Gas and Electricity Networks: Development Principles<sup>2</sup>

With this in mind, we believe that Ofgem's minded to position and impact assessment fall short of fully assessing and considering the implications for regional and devolved policy in the following areas.

### **Reform of Transmission Network Use of System (TNUoS) Charges**

Transmission charging remains a barrier, and a particular disadvantage, for projects located in Scotland or Scottish waters. While we welcome Ofgem's decision to undertake further analysis, including a wider review of TNUoS charges, this needs to take place and provide clarity and certainty as quickly as possible if it's to avoid putting at risk our ability to meet Scotland's 2030 targets.

A coordinated approach which sees Ofgem working with industry, government and network companies to define the scope and establish a clear timetable for this review is an important first step.

We would also encourage Ofgem to ensure that its regulatory reforms are properly coordinated. For example, the Offshore Transmission Network Design Review is currently consulting on options to refine the offshore TNUoS methodology which are based on the prevailing methodology for onshore connections. This could lead to unintended consequences – for example, changes introduced offshore failing to have the intended effect as stakeholders wait for the outcome of the promised wider TNUoS review.

### **Impact of TNUoS charges on Small Distributed Generation (SDG)**

The proposed introduction of TNUoS charges to SDG will also be felt disproportionately in Scotland. Our analysis shows that the proposals will have an impact across 6.8GW of operational capacity and a future project pipeline of 6.1GW, with a mean net revenue loss for onshore wind generation in Scotland of around £4.8m.

Annex B sets out our analysis of this point. We recognise that the intended effect of this reform is incentivising additional new transmission focused generation rather than smaller distribution generation, existing Scottish generation classed as SDG is at risk of becoming exposed to a more volatile set of costs. We would urge Ofgem to consider some 'grandfathering' of existing cost rules for this reason.

While Ofgem's consultation states that "The negative impacts on Scottish renewable producers are balanced against positive revenue impacts for most other technologies and for all technologies in most zones south of Scotland." It is our view that this appears to be based on a narrow assessment.

National Grid's Future Energy Scenarios identifies 44GW of onshore wind that is required to connect to the GB electricity network by 2050 under the consumer transformation scenario. While Ofgem has used this scenario in its modelling, it does

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<sup>2</sup> [Gas and electricity networks: development principles - gov.scot \(www.gov.scot\)](https://www.gov.scot/publications/gas-and-electricity-networks-development-principles/pages/2/index.aspx)

not address the proportion of the 44 GW – the vast majority of which would be expected to develop in Scotland – which would be at risk as a result of the higher costs which these charges would impose, or how it would be replaced with generation in England and Wales

Anecdotal evidence from stakeholders suggests that the introduction of TNUoS charges will make a significant proportion of these projects unable to progress which will threaten both UK and Scottish targets. This appears to be at odds the UK Governments proposals for a diverse energy mix.

Ofgem's charging reviews and decision making should take fully into account the effects on renewables project costs, ensuring that these do not present barriers to investment and progress in Scotland. We would strongly encourage Ofgem to review the impact assessment of this change.

### **Impact on ED2 Business Plans**

Scottish ministers have repeatedly and consistently highlighted the need for clarity and certainty as part of the backdrop against which progress towards net zero will be made. It is therefore concerning that a number of decisions which were expected as part of the Access SCR have been delayed.

For instance, it is impossible to fully assess the impacts of the proposed changes without clarity on expected reform for Distribution Use of Service (DUoS) charging. This is particularly relevant for customers that will connect to remote parts of the network, and who may face proportionately higher costs when socialised.

The absence of detail on this issue could also affect Distribution Network Operators' (DNO's) ability to deliver their ED2 business plans which will run from 2023 to 2028, and which will clearly be vital to the Scottish Government's 2030 statutory target and beyond to net zero by 2045.

In order to move towards a more strategic investment model, as intended under ED2, the network companies must have certainty over how costs should be recovered. We would strongly encourage Ofgem to set out a clear plan and timetable for charging – a measure that will provide DNO's with essential information without affecting investments planned in the early stages of the ED2 price control.

### **Timing and Transitional Arrangements**

We welcome and support the proposal to remove up-front reinforcement charges for demand customers. However, we share concerns that the timing for the implementation of this measure – not scheduled to take effect until 2023 – could have unintended consequences. We would urge Ofgem to consider all options to support continued investment prior to the implementation of such changes.

The recent Green Recovery funding model was an excellent example of an agile approach to investment that achieved best possible deal for consumers, both on cost and on delivering net zero carbon emissions. A similar approach may help to address some of the implementation challenges set out below

The Scottish Government, led by Transport Scotland, is currently working with bus operators to achieve our ambition to “remove the majority of diesel buses from public service by 2023”. This will require those fleet operators, working with the relevant DNOs, to make investments in the infrastructure required to accommodate increased electricity demand – potentially ahead of the proposed 2023 implementation date.

We are also aware that a number of housing developers have struggled with the high network reinforcement costs associated with installing the heat pumps that will make a vital contribution to the Scottish Government target that all new homes are to use zero emission heating systems from 2024. There is a risk that developers may seek to move connection dates beyond 2023 in order to benefit from Ofgem’s proposed change.

We encourage Ofgem to work with DNO’s to review this scale of this risk, and to ensure that there is sufficient resource to deal with the expected volume of applications which may not have been anticipated in ED2 plans.

Energy networks will play a vital role in the transition to net zero by making economic and efficient investments in infrastructure to transmit our abundant renewable resources across the country, enabling further decarbonisation through electrification of heat and transport, while managing overall costs to the consumer.

We are keen to continue working closely with Ofgem on the issues set out above, and to help improve understanding of the implications of the SCR for the wider energy system in Scotland. We would be happy to discuss any aspect of our response with you.

Regards,

Michael Rieley  
Head of Electricity Networks and Regulation  
Directorate of Energy and Climate Change | Scottish Government

## ANNEX A: SUMMARY OF SCOTTISH TARGETS AND POLICIES

- The aim of this annex is to ensure that Ofgem understands the depth and breadth of relevant legislation and policy documents.
- The list below constitutes a policy framework which lays out targets and actions including the use of devolved policy levers, provision of financial support, and work with local authorities, DNOs and other stakeholders.

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Devolved Framework	<b>The Scotland Acts including 1998, 2012, 2016</b> <ul style="list-style-type: none"><li>- The Scottish Parliament, and hence Scottish Government, derives its responsibilities from a number of acts of the UK parliament.</li><li>- These set out areas of legislative responsibility reserved to the UK Parliament those devolved to the Scottish Government.</li><li>- Reserved areas include generation, transmission, distribution and supply of electricity.</li><li>- Relevant devolved areas include environment and planning, heat and energy efficiency policy, fuel poverty.</li></ul>
Scottish Parliament	<b>Climate Change (Emissions Reduction Target) (Scotland) Act (2019)<sup>3</sup></b> <ul style="list-style-type: none"><li>- Sets the emissions reduction targets for the Scottish Government and is the key piece of Scottish Parliamentary legislation driving the decarbonisation of the energy sector.</li><li>- Sets statutory and legally binding targets, planning and reporting requirements, including:<ul style="list-style-type: none"><li>o Net zero year (2045)</li><li>o Interim targets (2020, 2030, 2040)</li><li>o Annual targets, calculated as linear interpolations between the interim / net zero targets</li><li>o A requirement to produce a climate change plan every five years laying out proposals and policies for delivering the emissions targets</li><li>o Requirements for annual reporting by the Scottish Government to the Scottish Parliament on progress against the annual targets.</li><li>o A requirement that, where any one annual target is met, an update to the climate change plan to compensate for missed emissions.</li><li>o Enshrines the requirements that climate change plans need to reflect Just Transition principles, describing how the plan: supports environmentally and socially sustainable jobs, low carbon investment and infrastructure; maintains consensus with workers trade unions and other organisation; creates high value work; addresses inequality and poverty.</li></ul></li></ul>

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<sup>3</sup> <https://www.legislation.gov.uk/asp/2019/15/enacted>

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## Other relevant legislation

- The **Fuel Poverty (Targets, Definition and Strategy) (Scotland) Act 2019**<sup>4</sup> set targets relating to the eradication of fuel poverty in Scotland. The bill requires that, by 2040, as far as reasonably possible, no household in Scotland is in fuel poverty and in any event no more than 5% are in fuel poverty and no more than 1% are in extreme fuel poverty.
- The **Heat Networks (Scotland) Act 2021**<sup>5</sup> Designed to set up a regulatory framework for heat networks in Scotland, including the identification of Heat Network Zones – areas which are particularly suitable for the construction and operation of a heat network. This also includes a target to deliver at least 6 TWh of heat demand via heat networks by 2030

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Core energy  
and climate  
change policy  
documents

### Climate Change Plan

- The Climate Change Plan (CCP) is a statutory requirement of both the 2009 and 2019 Climate Change (Scotland) Acts.
- Scottish Government produced a Climate Change Plan Update<sup>6</sup> (CCPu) in December 2020 - a key strategic document on our green recovery from COVID-19.
- **The revised targets are amongst the most ambitious in the world, with a 75% reduction in greenhouse gases by 2030 (against a 1990 baseline), and net zero by 2045.**

### Energy Strategy<sup>7</sup>

- Lays out a vision for the whole energy system, consistent with the 2018 Climate Change Plan, describing how Scottish Government will decarbonise the energy system.
- Defines key principles and priorities, including the need to take a whole system approach, deliver smarter local energy systems, and ensure inclusive growth.
- Sets key, high level targets, to drive energy system decarbonisation including:
  - o The equivalent of 50% of the energy for Scotland's heat, transport and electricity consumption to be supplied from renewable sources by 2030.
  - o An increase by 30% in the productivity of energy use across the Scottish economy

The Scottish Government will publish a revised and refreshed Energy Strategy by December 2021. This will align with the targets set out in the CCPu and requirements of the Green Recovery.

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<sup>4</sup> <https://www.legislation.gov.uk/asp/2019/10/enacted>

<sup>5</sup> <https://beta.parliament.scot/bills/heat-networks-scotland-bill>

<sup>6</sup> [Securing a green recovery on a path to net zero: climate change plan 2018–2032 - update - gov.scot \(www.gov.scot\)](https://www.gov.scot/publications/climate-change-plan-2018-2032-update/pages/12.aspx)

<sup>7</sup> <https://www2.gov.scot/Resource/0052/00529523.pdf>

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## Annual Energy Statement<sup>8</sup>

- Provides an overview of the development of the Scottish energy system, progress against targets, and commentary on key energy statistics. The Annual Energy Statement contains:
  - o a summary of the key statistics from the Annual Compendium of Scottish Energy Statistics (ACSES), and progress against our energy targets;
  - o an overview of key developments in the energy sector;
  - o a summary of key achievements and plans under each of the six Strategic Priorities; and
  - o an update on external monitoring and engagement activity.

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## Other core Scottish Government policy documents relevant to energy **National Transport Policy<sup>9</sup>**

- Published in February 2020, and sets a vision for a sustainable, inclusive, safe and inclusive transport system – helping to deliver a healthier, fairer and more prosperous Scotland for communities, businesses and visitors.
- Sets out priorities, including to reduce inequalities, take climate action, help to deliver inclusive economic growth and improve health and well-being.
- Highlights Scotland's leading role in promoting electric and other low emission vehicles.
- Recognises the need for Scotland to develop and manage the necessary EV charging and other network infrastructure.
- Aims to ensure the transition to more space efficient and sustainable vehicles such as public and shared transport.

## **National Planning Framework (NPF3<sup>10</sup> and NPF4<sup>11</sup>)**

- Third National Planning Framework – NPF3 – is the spatial expression of the Government Economic Strategy, and of our plans for infrastructure investment.
- Statutory development plans, produced by local authorities and other planning bodies, must have regard to the NPF, and Scottish Ministers expect planning decisions to support its delivery.
- NPF4 is in preparation and will incorporate Scottish Planning Policy<sup>12</sup>.
- NPF4 is likely to look very different from NPF3, with a longer time-horizon to 2050, fuller regional coverage and improved

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<sup>8</sup> <https://www.gov.scot/publications/annual-energy-statement-2019/>

<sup>9</sup> National Transport Strategy: Protecting our Climate and Improving Lives

<sup>10</sup> <https://www.gov.scot/publications/national-planning-framework-3/>

<sup>11</sup> Further information on the preparation of NPF4 can be found at: [www.transformingplanning.scot](http://www.transformingplanning.scot)

<sup>12</sup> <https://www.gov.scot/publications/scottish-planning-policy/>

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alignment with wider programmes and strategies, including on infrastructure and economic investment.

### **Infrastructure Investment Plan**

- The Draft Infrastructure Investment Plan<sup>13</sup> (IIP) was published on 24 September 2020 and covers the next five financial years (from April 2021).
- The IIP sets out a common, single vision for all our infrastructure investment choices: “Our Infrastructure supports Scotland’s resilience and enables inclusive, net zero, and sustainable growth”
- Underpinning this vision are three supporting themes:
  - Enabling the transition to Net Zero Emissions and Environmental Sustainability
  - Driving Inclusive Economic Growth
  - Building Resilient and Sustainable Places
- The IIP includes details of around £24 billion of major projects and national programmes – with more to be confirmed in future years.
- It is published alongside the Capital Spending Review Framework<sup>14</sup> – acting as a dual strategic approach meaning confidence in matching funding and finance to decisions about what infrastructure to prioritise.
- The IIP includes commitments to invest in infrastructure which will have an impact on energy networks – for example, £1.6 billion over the next five years on energy efficiency measures.

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Sector-specific  
policy  
documents  
(Existing)

### **Scotland’s electricity and gas networks: Vision to 2030<sup>15</sup>**

- Considers the crucial role that Scotland’s electricity and gas networks will play in achieving the Scottish Government’s ambitions to decarbonise the whole energy system – heat, transport and electricity.
- Sets out the key activities currently underway, and the factors and processes which will influence investment, innovation and growth across Scotland’s energy networks.
- Looks at the key choices that will need to be taken over the coming decade, and the extent to which Scottish needs, circumstances and ambitions – for renewables, community energy development, and the need to put consumer interests at the heart of the energy transition – should influence these processes and decisions.
- Highlights actions that Scottish Government will take, and that UK Government and the GB-wide regulatory framework need to make.

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<sup>13</sup> <https://www.gov.scot/publications/national-mission-local-impact-draft-infrastructure-investment-plan-scotland-202122-202526/>

<sup>14</sup> <https://www.gov.scot/publications/investing-jobs-capital-spending-review-framework-2021-22-2025-26/>

<sup>15</sup> <https://www.gov.scot/publications/vision-scotlands-electricity-gas-networks-2030/>



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## **Energy Consumer Action Plan<sup>16</sup>**

- Aims to ensure that active, confident and energy-efficient consumers are enabled by fair, inclusive policy design that reflects consumers' interests to engage in a consumer-centric transparent market.
- Sets out a series of commitments which include:
  - Establishing an independent Energy Consumers Commission
  - Building on newly commissioned research to encourage lively public debate amongst Scottish consumers
  - Advocating for energy market reforms to the UK Government, industry and Ofgem
  - Investing in new approaches to energy affordability through our Improving Consumer Outcomes Fund.
  - Exploring ways to promote more holistic support for vulnerable consumers.

Progress against these actions will be published in the Scottish Government's Annual Energy Statements.

## **Energy Efficient Scotland Route Map<sup>17</sup>**

- Lays out a vision that by 2040 our homes and buildings are warmer, greener and more efficient.
  - Energy Efficient Scotland (the Programme) sees us delivering on energy efficiency as a national infrastructure priority.
  - Energy Efficient Scotland delivers across two key policy areas of Government - fuel poverty and climate change.
  - It targets emissions reductions in the residential and services sectors of 23% and 59% respectively by 2032 on 2015 levels in line with the 2018 Climate Change Plan, and will be updated accordingly.
  - Other key targets included in the Route map are:
    - By 2040 all Scottish homes achieve an EPC C (where technically feasible and cost effective).
    - Maximise the number of social rented homes achieving EPC B by 2032.
    - Private rented homes to EPC E by 2022, to EPC D by 2025, and to EPC C by 2030 (where technically feasible and cost effective)
    - All owner occupied homes to reach EPC C by 2040 (where technically feasible and cost effective).
    - All homes with households in fuel poverty to reach EPC C by 2030 and EPC B by 2040 (where technically feasible and cost effective).
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<sup>16</sup> <https://www.gov.scot/publications/energy-consumer-action-plan-putting-consumers-heart-scotlands-energy-transition/>

<sup>17</sup> <https://www.gov.scot/publications/energy-efficient-scotland-route-map/>

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- Our non-domestic buildings will be assessed and improved to the extent this is technically feasible and cost effective by 2040.

Sector-specific policy documents (In development)

### **Heat Decarbonisation Policy Statement**

- In line with advices from the Committee on Climate Change we are committed to publishing a Heat Decarbonisation Policy Statement setting out actions to decarbonise heat supply to buildings. This was planned for summer 2020 but will be delayed due to the Covid emergency and is now expected in December 2020.<sup>18</sup>

### **Hydrogen Action Plan**

- In the 2019 Programme for Government, Scottish Government committed to produce a Hydrogen Action Plan<sup>19</sup>. The timing of the Hydrogen Action Plan is uncertain at present due to Covid; however, we expect that it will be published before the first draft of ED2 business plans are submitted to Ofgem's Challenge Group in late Q2 2021.

### **Local Energy Policy Statement**

- We consulted on a draft Local Energy Policy Statement in 2019<sup>20</sup>, and aim to publish a final Statement and accompanying delivery framework shortly.
- This will lay out an approach underpinned by 10 key principles we wish to see adopted by those developing or participating in local energy projects.
- The policy will support Scotland's move away from power generated from fossil fuel plants to substantial increases in renewable generation. This means there is a greater role for considering local energy solutions to meet local energy needs.
- Once published, the next step will be working with stakeholders to progress the various work streams identified in the delivery framework, with an overarching aim to encourage the adoption of the 10 Principles as good practice by all those developing local energy projects.
- Adopting this policy will support the Scottish Government targets for 1 GW by 2020 and 2 GW by 2030 of community and locally owned renewables.

### **Local Heat and Energy Efficiency Strategies (LHEES)**

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<sup>18</sup> <https://www.gov.scot/publications/update-renewable-heat-target-action-2019/>

<sup>19</sup> <https://www.gov.scot/binaries/content/documents/govscot/publications/publication/2019/09/protecting-scotlands-future-governments-programme-scotland-2019-20/documents/governments-programme-scotland-2019-20/governments-programme-scotland-2019-20/govscot%3Adocument/governments-programme-scotland-2019-20.pdf>

<sup>20</sup> <https://www.gov.scot/publications/scottish-governments-local-energy-policy-statement-consultation/>

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- The function of LHEES will be to define and drive action on heat decarbonisation and energy efficiency improvement at the level of the local authority.
  - We aim to put LHEES on a statutory footing, and for LHEES to be developed for all parts of Scotland.
  - LHEES will delivery by:
    - o undertaking an assessment of different pathways towards decarbonising the building stock
    - o identifying the most suitable solution for local areas
    - o assessing energy efficiency needs at a local level
  - We are currently developing a methodology – a step by step guide – for how LHEES should be delivered.
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## Annex B: SDG TNUoS Charging Reform Impact Analysis,

1. The preferred option set out in the consultation is likely to have a disproportionately high cost effect on Scottish generation. This is due to the nature of TNUoS charging and the increased costs associated with Scottish geographical DNO zones. Whilst the intended effect of this reform is incentivising additional *new* transmission focused generation rather than smaller distribution generation, *existing* Scottish generation classed as SDG is at risk of becoming exposed to a more volatile set of costs without some kind of 'grandfathering'<sup>21</sup> of existing cost rules.
2. Scotland has a higher concentration of renewable generation per GVA compared to the rest of the UK<sup>22</sup>, and renewable generation is more often comprised of smaller site developments or BTM/SDG generation. This consequently means that the introduction of TNUoS charging for SDG generators will be felt disproportionately in Scotland.
3. There is evidence gathered in the quantitative analysis published alongside the consultation which shows a high cost increase per £/Kw for Scottish generators, particularly renewable technologies, shown below in figure 1. Note that Scottish renewables, which are in distribution zones 1 & 2, see high reductions to net revenues due to this change.

Figure 1: Impacts on net revenues of distribution-connected producers over modelled period 2024 - 2040 (£/kW, PV, discounted to 2023)

	D1	D2	D3	D4	D5	D6	D7	D8	D9	D10	D11	D12	D13	D14
CCGT_existing	15.62	56.76	52.83	68.82	50.08	54.80	71.31	-	26.25	42.10	0.26	-	-8.39	24.78
CCGT_new	-	-	54.26	53.92	50.69	37.70	64.60	60.28	-	-	-2.79	-55.02	-	18.57
OCGT_existing	72.29	-	49.73	50.20	-	41.30	80.60	75.19	-2.12	-	14.79	-	30.84	63.55
OCGT_new	-	-	52.22	51.66	49.18	39.15	64.02	76.43	40.94	53.99	-0.11	-51.61	1.98	36.07
GT	54.46	61.51	55.53	55.80	55.56	50.54	97.58	92.76	41.74	79.19	33.49	-27.22	57.21	85.06
H2_CCGT	-481.5	-248.9	7.98	47.59	81.17	81.49	130.26	128.43	74.64	108.63	63.08	12.07	70.16	126.06
Onshore_wind	-369.0	-226.4	8.36	35.79	60.13	38.31	52.29	47.92	-2.41	6.26	-35.84	-39.58	12.46	-7.22
Solar	-318.9	-162.4	-9.16	6.05	47.77	43.00	71.69	76.22	58.50	71.54	68.94	55.18	70.52	68.68
Biomass	-248.5	-117.8	12.44	46.88	72.55	60.65	82.81	89.54	49.86	66.18	32.48	-14.87	22.91	57.37
Hydro	-492.0	-265.0	-16.59	28.26	69.34	66.32	125.73	129.98	91.70	130.86	98.90	67.42	96.96	116.43
Battery	3,895.1	57.0	33.24	20.81	44.35	11.73	32.39	29.03	-44.04	-32.16	-182.32	-185.61	-73.09	34.71

4. The quantitative analysis shows that reductions to net revenue for Scottish renewables are very pronounced, and states in its text that **“The negative impacts on Scottish renewable producers are balanced against positive revenue impacts for most other technologies and for all technologies in most zones south of Scotland.”**
5. According to the Renewable Energy Planning Database (REPD)<sup>23</sup> Scotland presently has 485 active generators of rated at under 100MW, who would be affected by the introduction of TNUoS charging for SDGs. There are an additional 236 generators in planning stages which fit this category in Scotland.
6. Using the National Grid Embedded Generation Register<sup>24</sup>, combined with the above Ofgem modelling of net revenue changes for generators, it is possible to map the effects of these reform changes against existing renewable generators which fit the

<sup>21</sup> “Grandfathering” in this context means maintaining the existing charging rules for already connected generators.

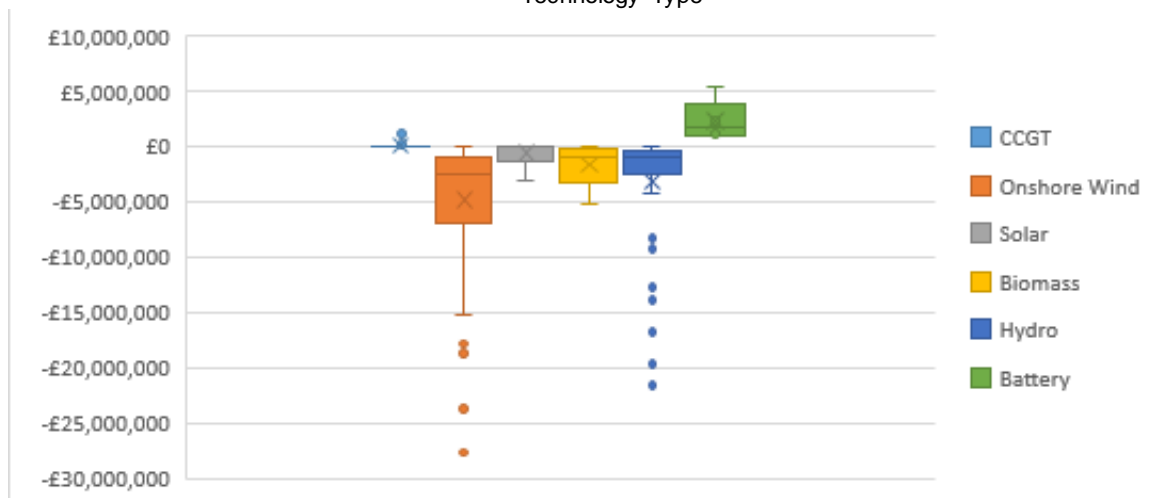
<sup>22</sup> [UK regional renewable statistics](#)

<sup>23</sup> [Renewable Energy Planning Database](#)

<sup>24</sup> [National Grid Embedded Generation Register](#)

criteria. Please note that this is an indicative analysis, carried out only on already existing generators under 100 MW in Scotland, within the “leading the way” FES scenario. This FES scenario is the most optimistic FES outlook on achieving net zero.

Figure 2: Estimated Net Revenue Effects over 2024-2040 on Existing Scottish <100MW Generators, by Technology Type



7. The above figures show significant negative effects on Scottish renewable generators. There are significant negative outliers present for onshore wind and hydro power stations present, due to larger sites located in the D1 (SHET) region, which see higher costs per Kw. For the sake of clarity of estimates, the mean net revenue change for each technology is shown in figure 3 below.

Figure 3: Table of Mean Net Revenue Changes over 2024-2040 for Scottish <100MW Generators

Technology Type	Mean Net Revenue Change
CCGT	£527,868.00
Onshore Wind	-£4,811,694.57
Solar	-£1,590,447.56
Biomass	-£1,602,110.00
Hydro	-£4,053,073.33
Battery	£2,272,237.40