BiGGAR Economics

Economic Justification of Community Benefit Funds

April 2025

A BiGGAR Economics Note

Summary

There is an economic case for community benefit funding to be paid from the energy transition.

- High “economic rents” are paid to landowners: they must derive mainly from ownership since they cannot be justified by costs to landowners, which are minimal.
- The ownership of land suitable for renewable energy is highly concentrated, giving landowners market power.
- Energy market conditions mean that developers themselves will not make excessive profits.
- Scottish Enlightenment figures, including Adam Smith, articulated the economic justification for intervening in cases of “economic rent”.
- Natural capital is generally considered to be in common ownership, so the wider public should benefit from any “economic rents”.
- Local communities have a stronger sense of ownership of local natural capital and so have a stronger claim.

Background

This section outlines how community benefit funds are currently perceived and why an economic case needs to be made for their existence

Need for an Economic Justification for Community Benefit Funds

The renewable energy sector is **delivering one of the key strategic priorities** of both the UK and Scottish Governments. While it is doing this, it is generating **more in tax revenues than it is in developer profit**.

The sector is **less profitable than average** for the UK economy, and it is currently **struggling to attract the investment** needed to meet the Scottish and UK targets for net zero.

Parts of the sector are already paying community benefit funding. These payments are equivalent to a significant proportion of developers' profits, which contributes to the difficulty developers have in making projects financially viable.

Therefore, there needs to be a solid economic argument for why community benefit funds should be paid.

Is Community Benefit Funding Compensation?

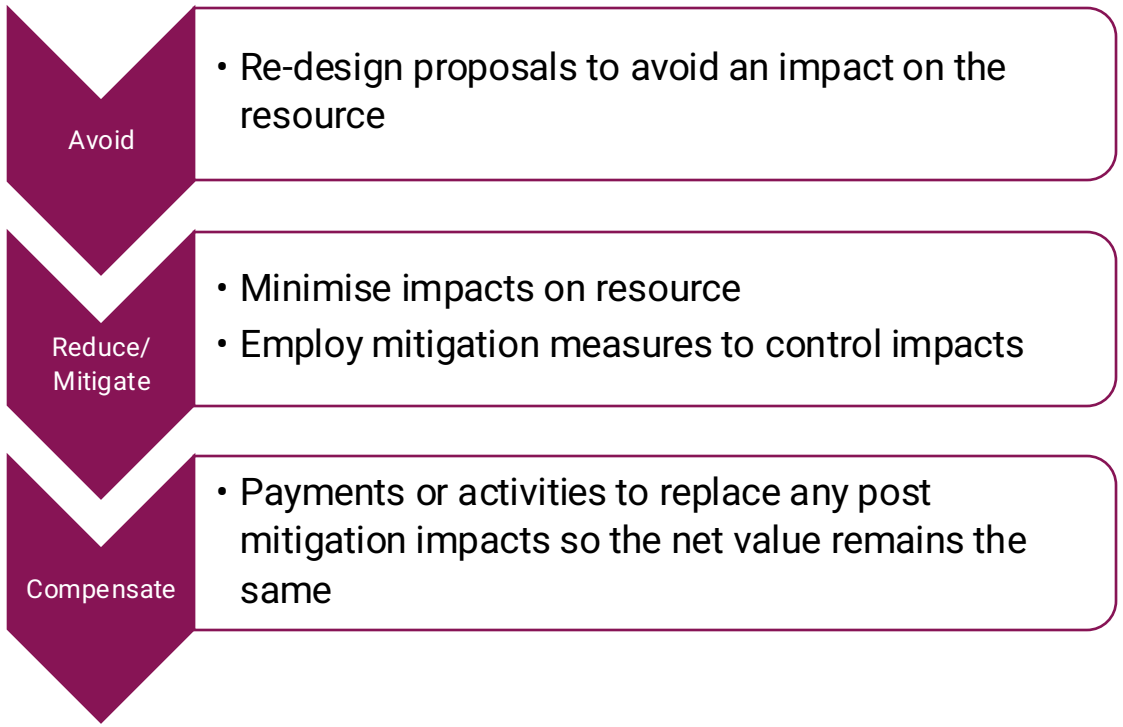
A common misconception of community benefit funding is that it is compensation for communities that host infrastructure.

Community Benefit Funding is not compensation

Compensation would imply that there are economic costs borne by local communities that have been identified, and these impacts remain after avoidance and mitigation.

The Environmental Impact Assessment process identifies potential impacts and the mitigation measures that the developer would take to reduce these impacts. The Community Benefit Funding is not dependent on finding significant negative effects on local communities. Similarly, it does not vary depending on the scale of any impacts identified.

If it is compensation, it would be in line with what was paid by other industries for similar impacts. But it is not.



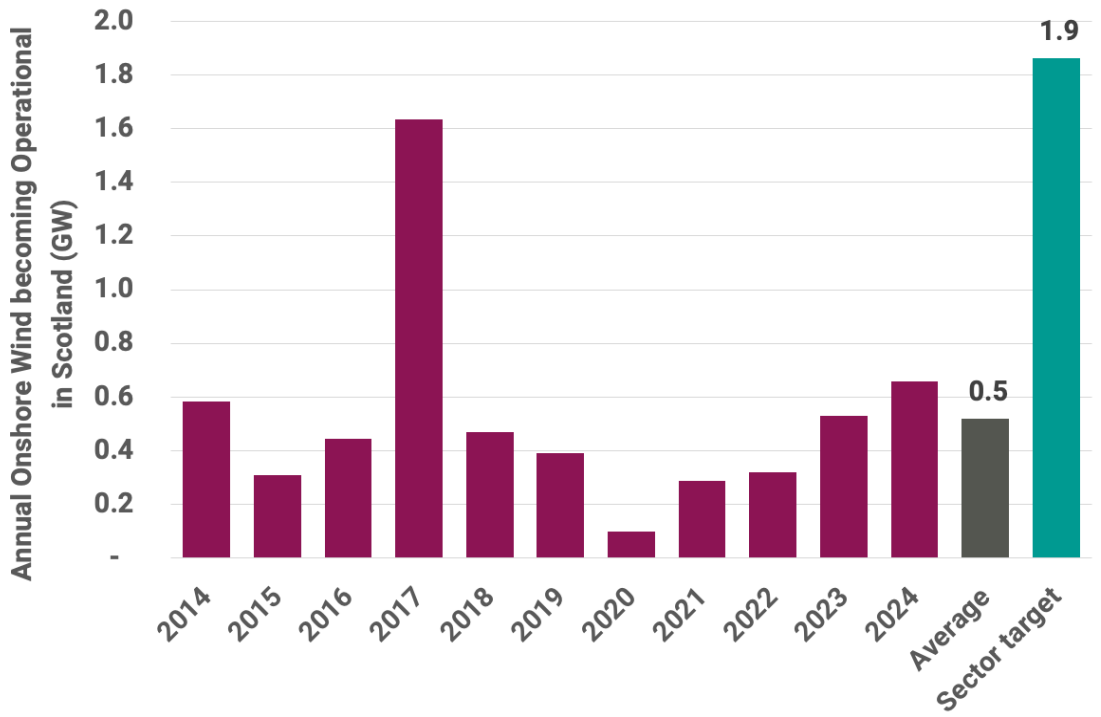
Onshore Wind Experience of Community Benefit Funding

The most established community benefit funding guidance is within onshore wind.

Community benefit funding was introduced initially for onshore wind projects over ten years ago and the Scottish Government guidance value is an index **linked to £5,000 per MW per year**. This value was established while onshore wind in Scotland was subsidised as part of the Renewables Obligations Certificates (ROCs).

Scotland will need to almost quadruple the level of average construction of onshore wind in the next five years to meet the target of 20 GW of onshore wind by 2030. One of the challenges the sector faces is **attracting the £13.5 billion of capital investment** needed to build these projects due to the comparatively low level of financial return achieved by the projects.

Onshore Wind Construction, Trends and Targets in Scotland



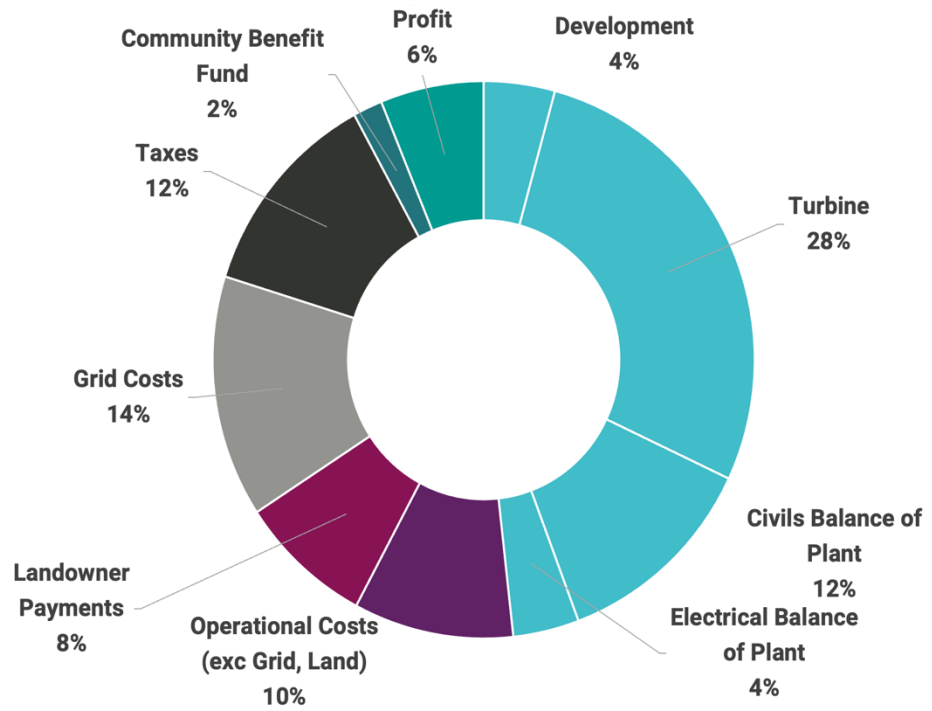
Onshore Wind Experience of Community Benefit Funding

Community Benefit Funds are currently considered to be a voluntary share of developer profits.

For every £100 of income that is received by an onshore wind farm, approximately £2 is paid out as Community Benefit Funding. Approximately £6 is retained as developer profits.

The Community Benefit Funding is considered a share of the profits, rather than a general cost associated with the operation of an onshore wind farm. Hence, they are not considered material to planning. Unlike landowner payments.

Distribution of income from an onshore wind farm



Source: BiGGAR Economics Analysis of data received from Scottish onshore wind developers

The economic justification for redistributing value from the energy transition

This section introduces the concepts used to make an economic case for community benefit funding.

Land and Economic Rent

Definitions

Status of Land

The distribution of land ownership in Scotland is highly concentrated. Land is a distinct asset, with every piece having a different level of access to infrastructure and potential renewable energy resources. Across Scotland there is a limited supply of land that is suitable for renewable energy.

This limit confers scarcity, a characteristic associated with monopoly power and the ability to earn returns above and beyond what would be possible in a competitive market. From an economic perspective this is fundamentally inefficient.

"Economic Rent"

The scarcity of land enables landowners to accrue economic rent. This is unearned income, above the cost incurred by the landowner to make that land available for use.

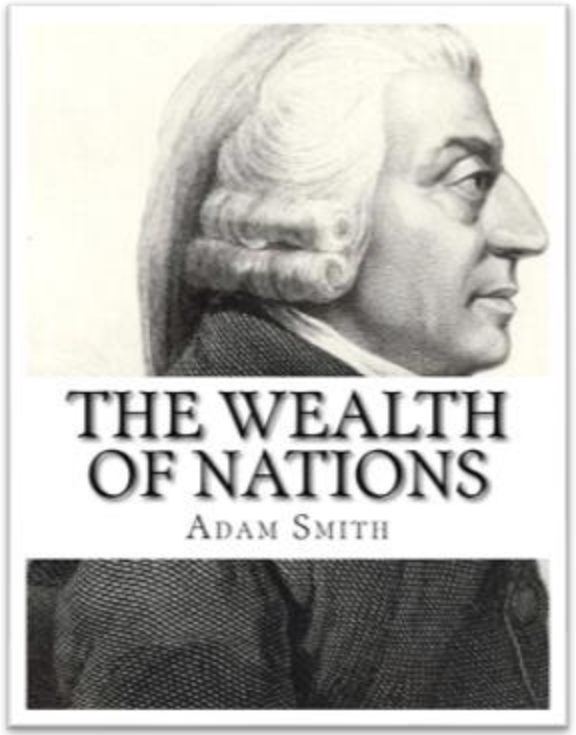
Land and Economic Rent

The concept of economic rent, in relation to land and natural capital, date back to the Scottish Enlightenment economists, including Adam Smith.

The Wealth of Nations

In the Wealth of Nations, Adam Smith highlights the extractive nature of economic rent with regards to Natural Capital.

"He (the Landlord) sometimes demands rent for what is altogether incapable of human improvements. Kelp is a species of sea-weed, which, when burnt, yields an alkaline salt, useful for making glass, soap, and for several other purposes. It grows in several parts of Great Britain, particularly in Scotland, upon such rocks only as lie within the high-water mark, which are twice every day covered with the sea, and of which the produce, therefore, was never augmented by human industry. The landlord, however, whose estate is bounded by a kelp shore of this kind, demands a rent for it as much as for his corn-fields."



Land and Economic Rent

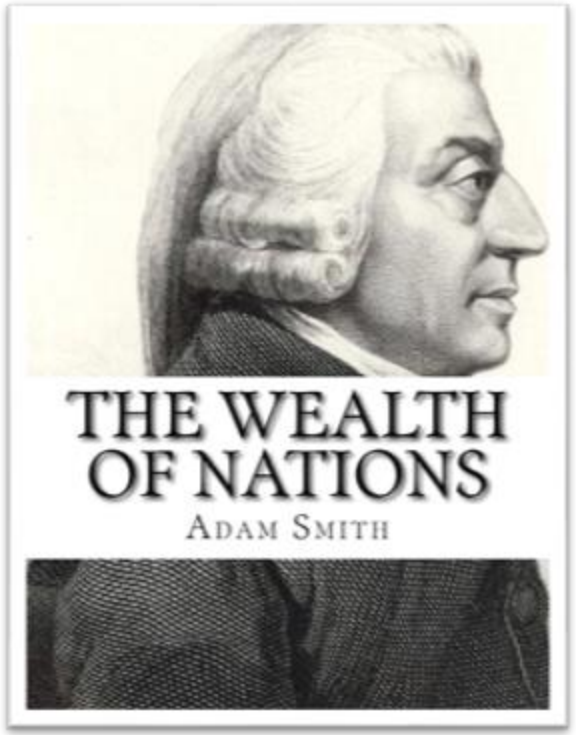
The concept of economic rent, in relation to land and natural capital, date back to Adam Smith.

The Wealth of Nations

In this case, "*what is altogether incapable of human improvement*" is the wind, sunlight or water which passes across the land.

Adam Smith proposed land taxes be applied to address the issue of economic rent. These taxes would diminish the private returns from economic rent and instead accrue the benefits of scarce assets like land to the public.

It is noteworthy that while diminishing the private returns, the taxation proposed should not be at a level that would reduce the private returns to that which is below the opportunity cost for the landowner. The landowner would still be incentivised to make the land available and this would, therefore not reduce the value generated by the land.



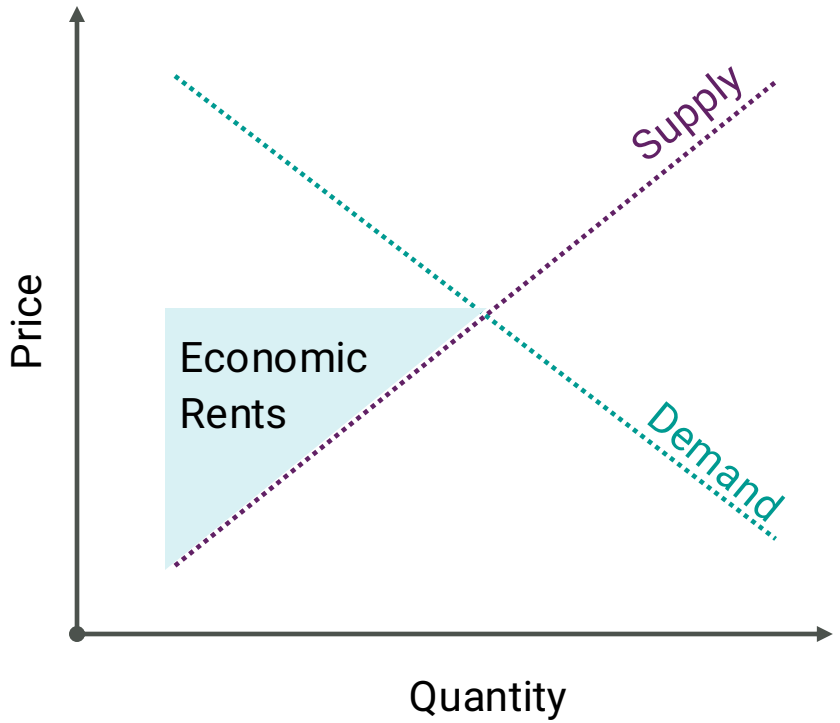
Economic Rent Explained: in Dynamic Markets

Economic rents exist in dynamic markets, but they are short term and support innovation.

In a hypothetical dynamic market (see figure), the market will set the level of price and quantity produced based on the demand for the product and the supply of the product at different price points.

Organisations that are able to provide products at a price higher than costs of bringing forward these factor of production will receive economic rent. However, these will be temporary, due to competition as other organisations will innovate until they can also provide the product at a lower price point, which over time will reduce the cost.

Example:



Economic Rent Explained: in Land for Energy Transition

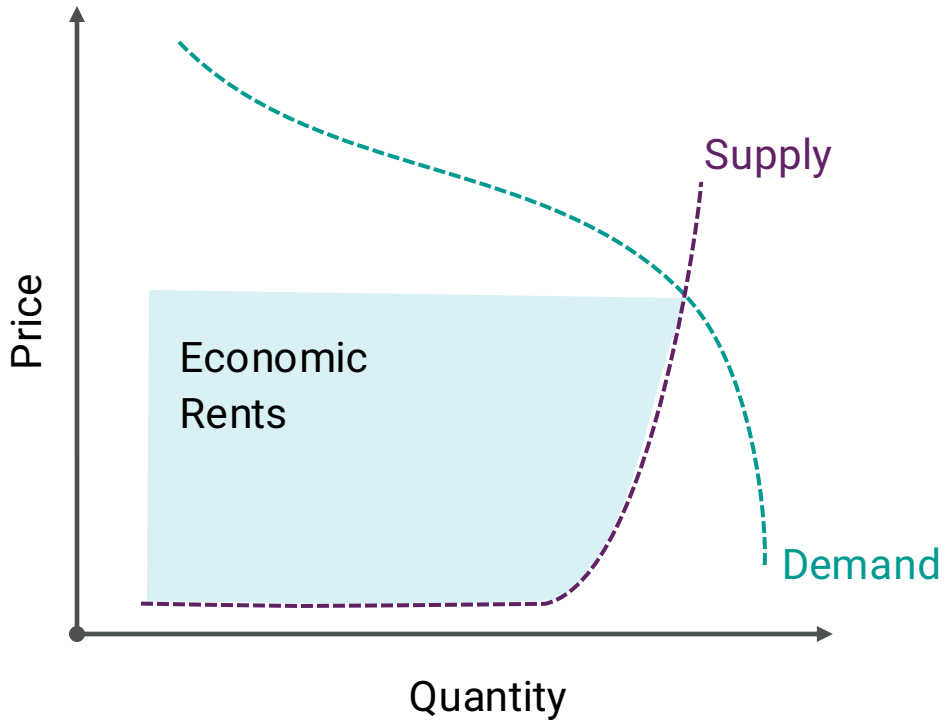
Economic rents are sticky in the land market.

The market for land used in the energy transition is different. Land is a finite resource therefore in limited supply. Those who own it have an oligopolist position.

The cost required for most land that is used in the energy transition is minimal (see figure). In particular, the deployment of some technologies will not hinder the ability to continue to use the land to produce agricultural output.

The existence of economic rents in the land market for the energy transition does not stimulate innovation in the same way that it does in other markets. There are limited opportunities to reduce the costs of bringing forward urban areas for energy generation or to open up new land for development.

As a result, land can generate significant economic rents over the long term.



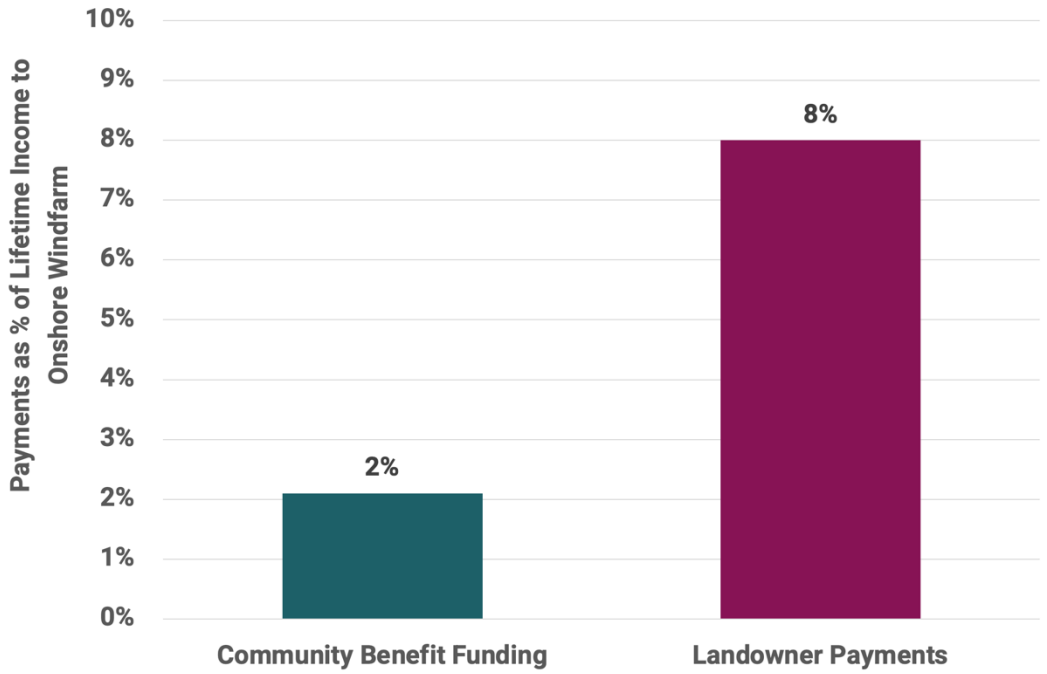
Scale of Economic Rents

Over the lifetime of an onshore wind farm in Scotland, the landowner will receive £4 of income for every £1 of Community Benefit Funding

Landowner payments have increased in recent years as a percentage of revenue from an onshore wind farm. In part, this is due to a greater level of self-awareness of the market position of landowners.

Landowners will typically initially receive between 4 – 6% of the revenue of an onshore wind farm, but this will increase over time to between 10 - 15% during the lifetime of the project. On average, a landowner for onshore wind could expect to receive approximately 8% of the revenue for an onshore wind farm. This is equivalent to **£400m per year** once Scotland reaches its 20 GW target.

Community benefit funding is currently worth approximately 2% of turnover.



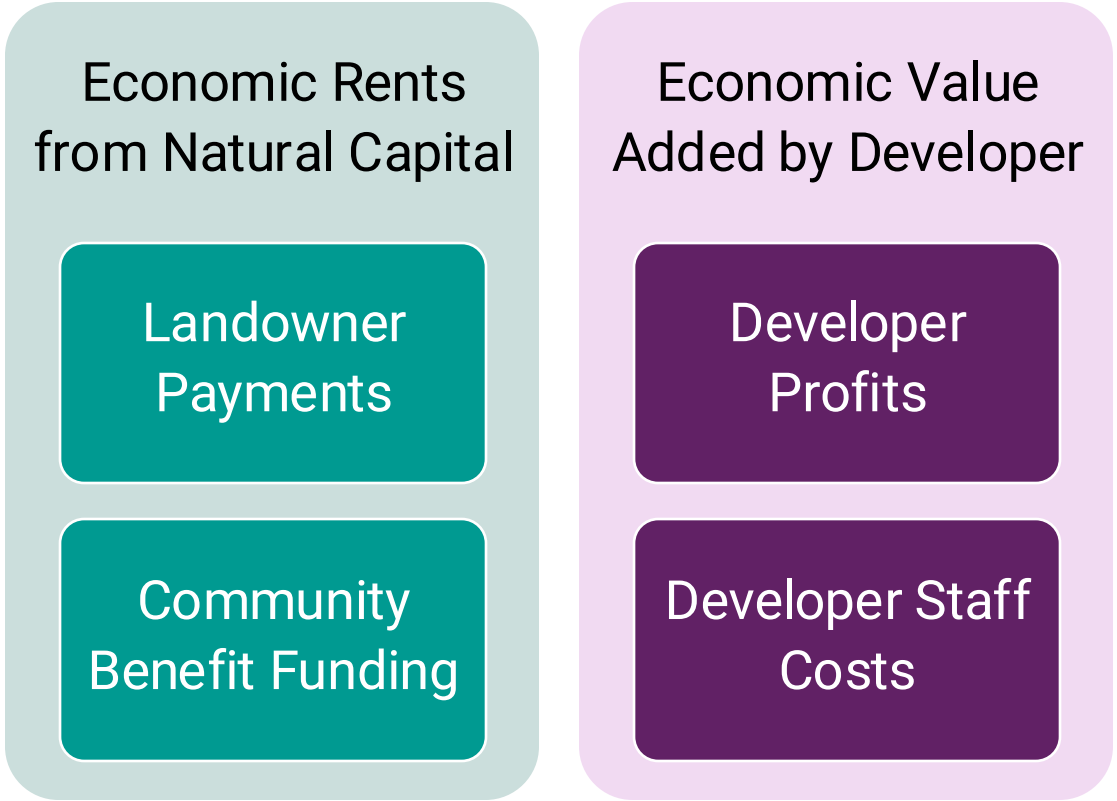
Source: BiGGAR Economics Analysis of data received from Scottish onshore wind developers

Categorisation of Community Benefit Funding

Based on this justification, how should CBF be perceived.

The economic case for community benefit funding is that due to the shortage of suitable land and the low cost to landowners of bringing this land into use, economic rents exist within the energy transition. Economic rents are inefficient and should be redistributed to the public. This redistribution is community benefit funding.

Therefore, if community benefit funding is being a sub-set of end value, it should be considered as part of the economic rents form natural capital, the same as landowner payments.



Why is Market Intervention Necessary?

Addressing economic rents will require intervention, either as a tax or community benefit charge.

Why are economic rents inefficient?

Economic rents are inefficient because they inflate the prices that the end consumer pays. This can result in a lower level of production than would occur in an efficient market.

The price elasticity for electricity consumption is low, as most people are not able to quickly reduce the level of electricity they consume. However, the construction of energy generation infrastructure is very sensitive to price as a result of the Contracts for Difference Auction.

Therefore, economic rents result in a higher price paid by the electricity consumer and a lower level of electricity generation than would occur in an efficient market..

Tax

The proposition for Adam Smith is that taxes are required to adjust the value of economic rents. In this way, the excessive profits are redistributed to the general public, rather than collected by an individual.

Taxes are applicable for the energy transition, such as Non-Domestic Rates or Corporation Tax, however these primarily fall on the developer, rather than the profits received by the landowner.

Summary: Economic Rents in Land for Energy Transition

The economic rents paid to landowners lead to inefficient market outcomes.

The impacts of this inefficiency are:

- The consumer pays £100s millions more each year for electricity produced by renewables; and
- Less renewable electricity generation is constructed because developers cannot raise the money needed to construct the projects.

Community Benefit Funding or Landowner Tax?

The method used to adjust for market failures as a result of economic rents is ultimately a political decision. However, this section provides an economic argument for Community Benefit Funding to be part of this adjustment.

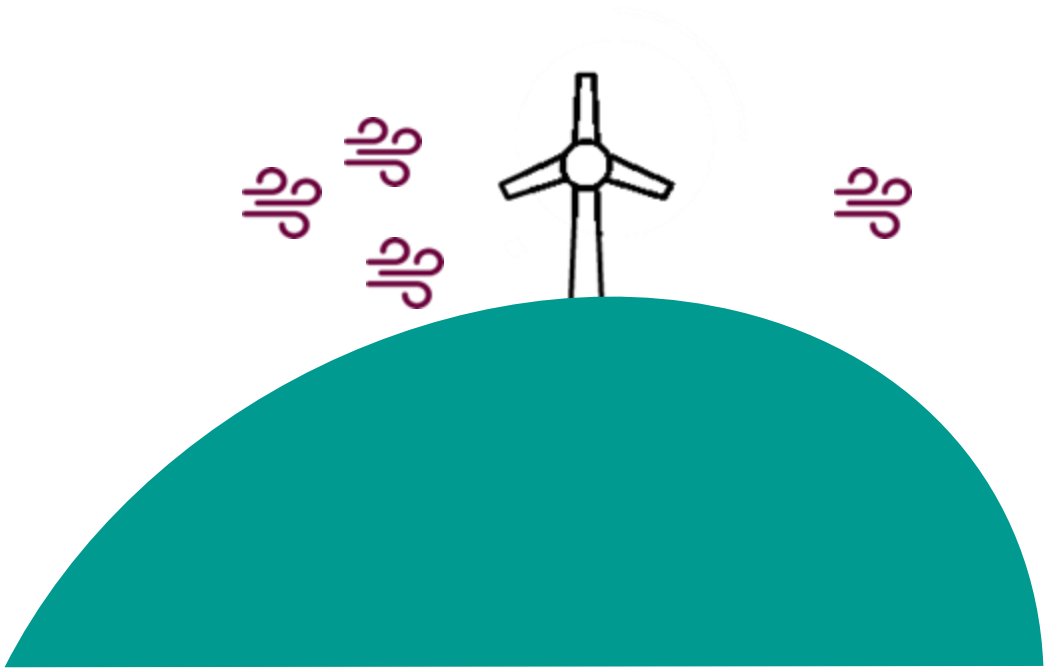
Fixed and Transient Natural Capital

Landowners are able to negotiate economic rents because the land is required to extract the value from the transient Natural Capital that passes across it, such as the wind.

The value that is generated in the energy transition comes from our ability to harness the power of the weather, rather than the land. However, without the land, it is not possible to erect the structures used to capture this power and generate value.

In this paper, the following terms are used

- **Fixed Natural Capital**: such as land, trees and other aspects of Natural Capital which are fixed; and
- **Transient Natural Capital**: such as water, wind and sunlight which are aspects of Natural Capital which move.



Fixed and Transient Natural Capital

Other agencies are already considering this split, when considering the approach to carbon markets.

"In theory, a landowner owns their land from the heavens to the centre of the Earth. This means that ownership of the ground includes ownership of the airspace above the land as well as the soil and anything which has attached to the land such as hedgerows or trees. However, this does not mean that the landowner owns everything which is present on or moving through their land. Wild animals which are flying, running or crawling over the land are ownerless. Water flowing through the land is also not owned by the landowner but is a communal thing – meaning that it is outwith ownership and available for the use of everyone. Air, including CO2, circulating in the atmosphere is also a communal thing."

Dr Jill Robbie – Senior Lecturer in Private Law, University of Glasgow

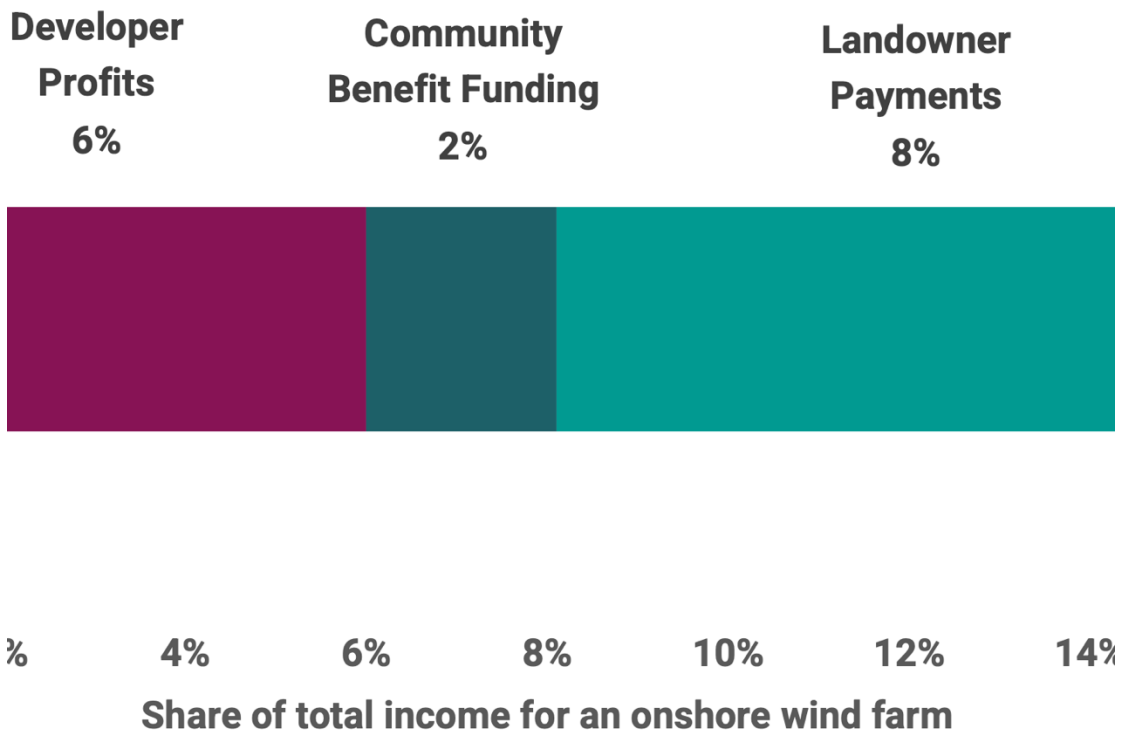
Who Owns Natural Capital (2022) Sustainable Land Commission

Impact of Who Pays Community Benefit Funding

The distribution of income matters for project viability and addressing economic rents.

Currently, landowners receive more in rental payments than the developer will make in profits for a typical onshore wind farm in Scotland.

As a result of this, onshore wind projects are struggling to raise the finance needed to progress to construction. By transferring the burden of community benefit funding from developers to the landowners receiving the economic rents, electricity generation projects will become more viable and Scotland will be more likely to achieve its Net Zero targets.

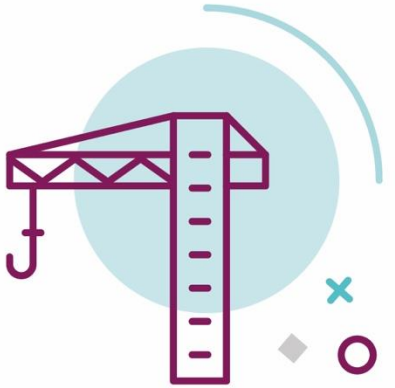


Benefits of Fixing Community Benefit Funding

The benefits of fixing community benefit funding are significant.

An approach to Community Benefit Funding focused on economic rents will result in:

- **More renewable energy generation**: More projects will receive investment and be constructed and we are more likely to meet our Net Zero targets;
- **More economic impact**: The energy transition has the potential to be a significant driver of economic growth in Scotland, but only if projects are constructed;
- **More Community Benefit Funding**: Communities only receive income when projects are operational, therefore if there is more generation, there will be more funding for communities; and
- **More income to landowners**: Conversely by reducing landowner payments to support deployment, the income to landowners is likely to increase as more projects are constructed.



Case for Community Benefit Funding

The case for community benefit funding, rather than a tax, is that it is a more efficient method of collection.

Adam Smith Again

Adam Smith advocated that any taxation should meet the following criteria:

- Certainty of how the tax due is determined;
- The burden should be proportionate to the ability to pay;
- Convenience; and
- Efficiency of collection.

Currently, a land value tax does not form part of the Programme for Government and waiting for it to do so is likely to reduce the level of certainty within the sector and will be inefficient in the short term.

Case for Community Benefit Funding

The case for community benefit funding, rather than a tax, it would reallocate the value to those who perceive ownership of the transient natural capital.

Local claims to transient Natural Capital

Landowners can extract economic rents because the land is a requirement to generate value from the transient Natural Capital which passes across it. In Scotland, the right to the value of this transient Natural Capital is assumed to be communal. However, it could be argued that the community that lives local to the development has a greater right to this value, than the wider public.

Consider the song, *The Fog on the Tyne*, written by Lindesfarne and sung by Newcastle United fans and Paul Gascoigne since 1990. In the song, the Newcastle community claim ownership of the fog that sits on the River Tyne. A resident of Manchester, Glasgow or Lerwick would neither dispute this nor challenge this claim.

In the same way, a resident local to a wind farm will perceive a greater level of ownership of the wind which passes over the development than somebody who lives 100 miles away.

Summary: Case for Community Benefit Funding from Landowner Rents

The burden of community benefit funding should transfer from developers to landowners.

There is an economic case for community benefit funding for the energy transition. This can either be funded voluntarily, as it is currently, or through taxation.

To address the economic rents and market inefficiencies, **the burden of Community Benefit Funding should be on landowners**, as it is landowner payments that constitute the economic rents within the energy transition.

The process for developing a voluntary mechanism could learn from previous examples of where a collaborative and voluntary approach has worked in the past, such as the Scottish Government's Good Practice Principles for Community Benefit and the Onshore Wind Sector Deal.

This will result in economic rents being redistributed locally, to the communities that share the transient Natural Capital that is used to generate the value.

If it is not feasible to negotiate a voluntary mechanism to redistribute landowners' economic rents, the Scottish Government should introduce legislation to address this.

Value of Community Benefit Funding

This section outlines the considerations that need to be made regarding the value of community benefit funding

Charge or Profit Share?

The approach to setting any value of community benefit funding will depend on if it is considered a standard charge or a share of the value generated.

Charge

- Fixed cost per set variable (MW installed, hectares used etc)
- Fix costs is the current approach applied to capture economic rents, namely land rents
- Security of income
- Ambivalent to development of the sector

Profit Share

- Linked to the value added by the developers
- Public perception, including within communities, that this is where value is extracted.
- Potential to be responsive to development of the sector

A fixed charge is more aligned with the concept of capturing economic rents associated with Natural Capital for the public. While a profit share is determined by the value added by the developer, which does not receive economic rents.

Uniformity or Accuracy?

What should be the key principle in setting values?

The economic justification for community benefit funding does not suggest that there should be a uniform level of payment across projects. The economic justification would suggest that the level of community benefit funding should be bespoke for each project, depending on the level of economic rent and the value added by the natural capital, linked to the profitability of each site.

However, we are mindful that implementing a policy, even a voluntary one, that is bespoke to each project is likely to be unrealistic. Therefore, the following things should be considered if any guidance is provided on the level of community benefit funding any technology should pay.

Criteria

- **Support investment** – the level of CBF should not stop projects from proceeding, as value can only be created for communities if projects are constructed;
- **Taken from economic rents** – community benefit funding should aim to capture value that would otherwise be paid as economic rents; and
- **Transparent** – the approach to defining the level of community benefit funding should be transparent and agreed at the planning stage;

Implications by sub-sector

The economic case for community benefit funding has different implications for some different technologies involved in the energy transition

Implications for Different Technologies

Onshore Wind

- Onshore wind is likely to generate the highest level of economic rents of all the subsectors of the energy transition due to:
  - the relatively low density in power generation; and
  - the fact that animals can still graze near turbines and therefore the opportunity costs for most landowners is very low.
- Community Benefit Funding per MW should therefore be higher for onshore wind than it is for other technologies.

Implications for Different Technologies

Offshore Wind

- The landowner in the offshore wind sector is Crown Estate Scotland, which owns the right to the seabed on which offshore wind farms are built.
- The economic rents will therefore accrue to Crown Estate Scotland because it will have a low cost of bringing this seabed forward for development.
- Crown Estate Scotland receives money on behalf of the people of Scotland, and therefore the economic rents are already distributed.
- There is therefore no need for an additional Community Benefit Funding mechanism for offshore wind generation assets.

Implications for Different Technologies

Solar panels

- The landowner will be receiving economic rents.
- However, these may be lower than those received by landowners hosting onshore wind assets because there is likely to be a greater cost to hosting solar generation because it places greater restrictions on which agricultural produce can be grown or reared on that land.

Implications for Communities and Land Ownership

Building renewable energy projects on public or community-owned land will capture a greater share of the value from Scotland's natural capital.

Profits from land ownership

As discussed earlier, the finite nature of land, and the high demand for sites for energy generation mean that the economic rents from natural capital and renewable energy currently accrue to landowners.

Therefore, to maximise the public benefits from natural capital, policy should support energy projects being built on land that is owned publicly or by communities

Implications for communities

Land purchases are likely to be expensive. However, there is the potential to use existing, or new, community benefit funds to make these purchases.

How can we maximise public value?

In this section we discuss how a holistic approach to public value, rather than a focus on community benefit funding, can maximise the socio-economic benefits of the energy transition to Scotland.

Moving Beyond Market Failure

Traditional approaches to public policy will not be enough to 'maximise' benefits.

- Traditional welfare economics focuses on (first) addressing market failure (and then) redistributing wealth to improve social equity.
  - This approach will not increase wealth – merely redistribute it.
  - Any increase in public wealth will be at the expense of the private sector.

- *Maximising* benefits needs a new approach, in which the public and private sectors to work together to actively grow the economy. This will require:
  - A **step-change in approach** by both sectors.
  - Emphasis on **collaboration rather than compliance**.
  - Built on relationships characterised by **mutual trust and respect.**

- People cannot not be forced to collaborate
  - A voluntary approach is essential.

"Fixing markets isn't enough. We have to actively shape and create them and tilt the playing field in the direction of the growth we want."

Mariana Mazzucato

Further Reading

Further Reading

Adam Smith (1776) An Inquiry into the Nature and Causes of the Wealth of Nations

Andy Wightman (2025) Land Reform (Scotland) Bill: MSP Briefing for Stage One Debate 26 March 2025

BiGGAR Economics (2024) Onshore Wind Finances and Economic Development

Dr Jill Robbie (2022) Carbon Markets, Public Interest and Landownership in Scotland

Pinset Masons (2019) Supreme Court: Community benefit not planning material consideration

Scottish Government (2014) Good Practice Principles for Community Benefit from Onshore Renewable Energy Developments

Scottish Land Commission (2018) Land Focus: Land Value Tax

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