



Accelerating Public and Private Sector Collaboration for Net Zero

An Edinburgh Science Climate Co-Lab Event

Meeting Notes

21 March 2023 2.30-6.30pm

Baillie Gifford Boardroom, 1 Calton Hill, Greenside Row, Edinburgh EH1 3AN

Chaired by: Stefanie O’Gorman, Director of Sustainable Economics, Ramboll



Introduction

Welcome from Dr Simon Gage OBE, Director, Edinburgh Science

Welcome from Caroline Cook, Head of Climate, Baillie Gifford

Baillie Gifford have been investing since 1908. Over that time we've got more clients, and a bigger and more prosperous world. We need to get on top of climate change if we are to exist for another 100 years. Investing in long term growth companies, we see real-term structural shifts happening.

The growth that we see as investors is in now in low carbon categories, e.g., energy, cars, PV. What we've seen here is that the market humours us: things look really slow until they're not. Take for example the growth of the iPhone. We know technology is coming through. We're really trying to move at pace and this is where cooperation between public and private organisations really matters. It is great that you've organised this round table today, and thank you to everyone for coming to share your perspectives with me today.

Stefanie O'Gorman, Director of Sustainable Economics, Ramboll

Thanks and welcome. Ramboll is wholesale invested in sustainability across all disciplines. This is an opportunity for us to take that culture. We've just launched our 'Close The Gap*' report which requires pace and scale – my two key words for today.

Sara Grainger, Team Leader for the Low Carbon Accelerator, Transport Scotland

The Low Carbon Economy Directorate exists to get greenhouse gasses out of the transport system.

The transport system is interlinked with the fossil fuel industry and this must change. Changing that for every vehicle by 2045 is going to cost a lot of money. We need to change the entire fuelling infrastructure. Involves a lot of risk. But also profit to be made and benefits to be had.

But who pays for that? Who should pay for that? Who benefits? Who should take the risk? And who takes the profit?

Likely candidates to pay for this are the finance sector, passengers, fuel companies, manufacturing companies, governments, international community etc. If we think of all of these, who should pay for the transition? Who takes the risks and who profits? What does 'fair' look like, what does 'effective' look like?

Nobody in this room doesn't know this but just to be clear: when the public sector pays that's tax payers. When businesses pay, they either take a cut to the profits or they pass it on to consumers. It isn't as straightforward as it looks.

A case study:

Buses and coaches. In both cases a zero emission vehicle costs at least 1/3 more upfront than diesel, and then charging point installation can be up to millions. We talk to key stakeholders including finance sector, supply chain, charging and fuelling infrastructure providers and it's so hard because there are so many things that need to happen at the right time and in the right order before anything actually happens. Everything needs to be done for it to work. We need to find a way for it to work collaboratively across the public and private sector.

Bus decarbonisation task force – In 2021 we set up a bus decarbonisation working group with members from bus sector, finance, energy, etc. We didn't include users or trade unions which was a mistake that we fixed in second iteration. They were given 12 months to co-design a pathway to zero emission buses. No timeline, we just wanted

to know what needed to happen without deadlines. The group started with all reasons why it's hard with challenges and hurdles, nobody knew how to do everything or how to engage with energy companies.

That's really important: people only know how to do their bit. This collaboration lowered some of the hurdles.

Financing this is an ongoing discussion. £130million from Scottish Government, private sector investing around the same. Energy consumers have paid their share, entrepreneurs have taken some risks. No evidence that passengers have paid anything as yet, is that fair? The Task Force came to end with actions for everyone. What we achieved was some goodwill and trust, which allows change to happen.

We are doing the same thing again this time with unions etc. to look at trucks and HGVS. So far they've had four meetings and they've agreed issues, challenges and hurdles. This sector is harder than buses because the tech's less ready and because there's 38,000 HGVs in Scotland. In hearing from each other they've often found things which make them say 'oh that changes everything' – there are finance projects around types of battery, there is demand from HGV companies.

A shared understanding of the problem is the first step, and where public and private work together it is really quite motivating to be in the room.

Q&A/ discussion

Given buses and trucks will need fuel, have the energy companies been involved – those who produce hydro?

For bus decarbonisation, Scottish power, BOK, SSE Network, Bus Manufacturers who have sister companies who produce hydrogen were all engaged with.

We invest in sectors in such different ways: and with infrastructure, sometimes we massively invest in something while other times we completely leave it to the market. Which industry do we select, who do they serve? Trains very good at attracting investment in rail infrastructure, but is that the best place to put your funding? Rail infrastructure is supporting middle class Britain, whilst nurses are the ones paying for and using the buses. Who pays is exactly the right question to ask, and the Infrastructure Commission for Scotland is asking that question too.**

Demand reduction is important. We do NOT want to take every vehicle that exists and swap it for electric, that would be a waste of an opportunity. We want fewer cars overall. And now that there are more delivery vans on the road we ask – Did Amazon pay their taxes for that public EV charging infrastructure?

Policy interventions are needed to ensure that companies pay up. How do we get to a point in the conversation where we can unlock these profits for public benefit? Is it down to company behaviour or policy? All previous transport systems have been based on fossil fuels and fossil fuel companies have made BILLIONS, they still are, why can't they pay? They're still looking at how they can make money as they decarbonise.

Regarding accessing companies' excessive profits, Exxon has threatened to sue the EU*** over an excess profit levy (windfall tax) as they believe they are entitled to the profits. Legislation such as the Energy Charter Treaty means that they may well be perfectly entitled to do this in the eyes of the law. Policy needs to protect government and public interest over that of companies.

Another way to look at this: Is it fair to point the blame to particular companies? We've ALL created the world as it is and benefitted from it, we've all been complicit. For example, the bus company has profited from bus travel, but I also benefitted by using the bus.

On a broader scale of who pays – what US has shown with the Inflation Reduction Act (IRA) is that the stick that we have applied across UK and EU has not really worked very well. IRA approach has much more impact. Through the IRA, the US have subsidised whole clean energy value chains, making investment and usage attractive throughout.

For this to work, government ministers need to leave their silos and see the bigger picture – how does their department (e.g. energy) feed into another minister’s (e.g. transport).

Bringing the EU Oil Majors on board with the green infrastructure conversation is an opportunity. There’s a view that oil and gas isn’t welcome at the table, but we cannot do it without them cooperating in some way. Could we leverage their wealth and expertise? An example is Aberdeen City Council working with Shell.

Cllr John Alexander, Dundee City Council Leader

Transportation has failed me every step of the way today, starting with a train signal failure and ending with a run from St Andrews Square! I was determined to get here and I am glad I am here.

I am the Leader of Dundee City Council but also the chair of Scottish Cities Alliance. The reality is that politicians will make some great announcements and soundbites, but sometimes the detail is lacking. We need some meat on the bone if we are to reach net zero by 2030 or 2040. We need to be honest about scale.

Dundee, with 150k people, is relatively small. We’ve been trying to change and diversify the city. Physical transformation has been happening; the more intangible – environmental/social are a core focus moving forward.

In Dundee we have a lot of opportunities around EV. Some of the best available technology is here, for example the Princes Street Charging Hub, and we have the best EV expertise anywhere in the UK. Our local college was one of the first in Scotland to look at some of the opportunities that come on the back of EV – mechanics in particular. Dundee is one of 18 cities recognised by CDP for transparency in terms of its climate goals.

Dundee has always recognised that politicians will not achieve on their promises without the help of the private sector. Opportunities are presented by being a port: hydrogen; tidal power; working with EDEN. All of this has an application in improving education and social mobility. This all requires honest, clear collaboration with private sector.

The thinking between different organisations – both public and private – needs to be joined up. A number of years ago we set up a Regional Performance Centre for Sport. We managed to get funding to build an energy centre that could also heat private homes. We’ve built it, built the pipeline, but it’s not connected. How do we utilise that existing asset? Whose responsibility is that? We can’t get over that final line. Public sector has taken on some heavy lifting but it means nothing if we can’t connect the dots with our private sector partners. What stops us unlocking this, planning, finance, business cases? I want to finish that pipeline so that it can benefit the people of Dundee and raise profits for the private sector.

Q&A/ discussion

Procure a partner, not a solution. This means engaging with a partner that you are willing to work with, using their expertise to design the solution. The power that the council has, is the enabling power to facilitate these projects on the ground. Is this the way that you are working with private sector partners?

We must identify partners through a transparent selection process – we do need to ensure that the procurement process reflects what we are trying to achieve with regard to designing a solution. That means that we need to get the voices of business, and how they would go about our particular challenges, into the procurement decision process so that we can procure the best partners.

But in this case – how do we know what ‘good’ looks like? Our energy company is looking at regionalisation as part of a wider masterplan. This means working with Local Authorities (LAs) where we’re helping to shape the master plan, but then working with individual businesses in the area to help to bring things in. E.g., HGV, ship-to-shore power. How do we make that happen in different regions? What’s good for Edinburgh may not be good for Dundee. To do this, it helps if LAs can facilitate working groups, using the knowledge of local organisations to

determine what is the best fit for a region. Also, LAs can help with planning and facilitation to make an area more attractive to investors and businesses.

One power infrastructure company has been given investment by our company to deploy £24m. We can put the cables in the ground, situate batteries, develop solar. Therefore, we have a deep pipeline of opportunity, but individual projects in different localities all have their own challenges. It's knowing what's BEST for that area. Do they want jobs? Do they want to keep certain people already there happy? Is there bad air quality, meaning that there is an extra priority to decarbonise vessels and get EV HGVs?

The "Master plan", in short, cannot be 32 versions of the same plan.

And once again, who pays? What about for district heating schemes? It must be affordable to the beneficiary of the solution.

The beneficiary of the *service* doesn't fundamentally get a change in service – you still heat your home, you still get around on the bus. Why should they pay? They're still getting the same. The *financial* beneficiary of a district heating solution may be the house builders, in the case of newbuilds, not the house holder.

Co-Lab Discussion

One company has built a solar farm in partnership with Scottish Government. This worked well because there has been a clear vision and sense of direction – and a good, shared business case for both the company and the government, which enabled the project to have specific objectives. This is in contrast to some public-private partnerships, particularly with LAs, where the projects are not well-defined from either party. We need to be really clear about the problems that we are trying to solve together. Uncertainty embeds more risk in the whole process and widens the implementation gap between goals and actions.

Defining a robust shared business case would also help people to understand the amount of money needed to enable a certain outcome, e.g. scaling up a technology. Granted, sometimes this is unknown – but it can be chunked up into smaller areas of progress. You can say, Ok, this smaller goal requires this much investment.

When there is a clear plan, it may be easier for the private sector to provide discounted financing across the entire value chain. The plan also needs to include the "how": how will we brief the council?; what is our stakeholder engagement plan?; how will we alleviate the barriers?; how will we find the money?

The thing that can unlock this clear planning, is government policy.

Is there a role for an advisory body who does its best to provide a steer to public bodies, where to focus and where to concentrate investment? Perhaps SNIB and the CCC?

The issue with SNIB is that none of their people are technologists, they lack capacity to do the analytics and give that in-depth guidance. These are 100-year choices. Victorian scale changes. BIG decisions. This requires thinking about these projects in a systemic context as opposed to standalone. Helpfully, projects which fit into such a long-term strategy are often the ones which are highly investable.

One idea is to design a solutions portfolio, where projects are linked up with one another at a city and regional scale. Of course, there would have to be interaction between cities and regions too, to ensure that the solutions designed at a regional level are compatible with one another. Consultancies could jump into that space quite readily.

The Scottish Cities Alliance can help give some of that clarity to both leaders and residents of cities. When things roll out at different paces in different cities, it hampers a nationally joined-up approach to behaviour change.

Consider the view that we will see the biggest impact in dense urban centres. How are city leaders able to link you – the private sector – into that conversation in a way that is beneficial to you. Important opportunity to short circuit some of these conversations, get everyone together to identify short- and medium-term wins. We're focusing too regionally, we should scale across the eight main cities.

The Carbon Neutral Cities Alliance do this globally. ****

There is loads of innovation and many useful conversations happening in Scotland, however we need to improve at scaling-up. The Scottish Government was talking about setting up a climate intelligence unit to bring everything together.

But perhaps we don't need more forums to do the thinking – many exist already. We need to improve the quality and efficiency of these conversations. This will stem from that point made earlier about being really clear about what the problem is – this will ensure that the most relevant stakeholders are around the table to work on each specific part of the problem.

We need to create plans related to the overarching goals – for example, a government net zero plan – with tangible, clear, short-term deliverables which clearly consider the stakeholders that need to be involved to respond to each element of the problem and stakeholders who need to be involved to bring it all together. This will help to alleviate the implementation gap between numbers and action, and facilitate the pace and scale needed to actually deliver these goals. The differing timescales between public and private sector need to be brought into alignment.

However, it is tricky to reconcile the idea that solutions need to be designed collectively with the need to be absolutely clear on an issue before any stakeholders are brought round the table. This links into what was said earlier about procuring a partner, not a solution. Perhaps co-design of the solutions is the first step, followed by identification of implementation partners? The conversation needs to include people with knowledge from the outset and the role of consultancy is vital.

With regard to bringing the public along as a key stakeholder in all of this, carbon literacy is fundamental. The public need to understand why we are doing this. Remember many members of the public are also the people who are doing the work, for example heating engineers who may not be fully on board with the need to install heat pumps. So, they haven't been trained to install heat pumps and they haven't ordered any – they are also not seeing huge demand from their customers. We need to make sure everyone understands in order to drive the demand.

There is a Green Heat Taskforce headed by Patrick Harvie MSP. However, they have not got the £1.4 billion which is what has been deemed as needed to get this sector off the ground. One issue is that by nature, the civil service is not particularly skilled in business – grant funding happens a lot, without any expectation of return on investment. So, the civil service does not really know how to invest. This is where they need to get a steer from the private sector – then the civil service can drive that demand to make it investible.

This circles back to the discussion on business case. Grant funding is obviously not designed as a profit-generating activity, but what if the government did enable itself to make profit as opposed to spending entire budgets without expectation of return? Mark Carney's £150 trillion announcement at COP26 is to be an investment in climate solutions, which will make a financial return as well as social returns.

There is a skills gap in government: within the civil service itself should be some understanding of investment decisions, profitability and ESG goals. The civil service needs to understand these if they are to receive, and spend, investment as a business would. With investors and banks increasingly investing in cities across the UK, this is becoming more important. There is an opportunity for the public and private sectors to work together to deliver different models of investment to de-risk or scale opportunities.

It is also important to have mid-level academics and middle-managers in the room as they have experience on the ground.

Key take-home messages

- Facilitating trust between businesses and governments through greater engagement and discussion can help the two begin to work more cohesively and bring their goals and timelines into alignment.
- Growing skills and understanding of investment and business cases within the Civil Service and local authorities will help their projects to become more investible.
- We need to recognise how overarching goals (master plans) will need to create long-term value chains, whilst identifying how specific projects fit into these value chains. This will help identify what the business case is for each project, and this streamlining will help us to identify the stakeholders who need to be involved.
- **One idea is to co-design a solutions portfolio**, where projects are linked up with one another at a city and regional scale with interaction between cities and regions to ensure that the solutions designed at a regional level are compatible with one another and to see what can be scaled to other areas.
- We forget the risk of inaction!

Delegate List

John	Alexander	Council Leader	Dundee City Council
Paul	Bekkers	Associate Director Sustainability, Carbon, Climate	Arcadis
Siobhan	Cleary	ESG Analyst	Baillie Gifford
Caroline	Cook	Head of Climate	Baillie Gifford
Aidan	Dent	Business Development Manager – Scotland	BP Pulse
Brendan	Dick	Chair of the Board	Edinburgh Science
Mhairidh	Evans	Head of CCUS Research	Wood Mackenzie Ltd
Barry	Fisher	Chief Executive	Keep Scotland Beautiful
Simon	Gage	CEO Edinburgh Science	Edinburgh Science
John	Gillam	Senior Manager - Sustainable Finance, ESG Advisory	Deloitte
Tim	Gooding	Analyst	Baillie Gifford
Sara	Grainger	Head of Accelerator Unit, Low Carbon Economy Directorate	Transport Scotland
Kara	Hazelgrave	Innovation Engagement Manager	PNDC
Alan	Hendry	Director of Sustainability	Mott MacDonald
Charlie	Hogg	Head of Policy Team FM Policy & Delivery Unit	Scottish Government
Stuart	Jones	Commercial & Revenue Director	First Rail
Valentina	Kretschmar	Energy Transition Director	Capricorn Energy
Sefton	Laing	Senior Climate & Environment Specialist	Baillie Gifford
Sharanya	Maheswaran	Practice Group Lead - Business Cases & Economics	Jacobs
Ross	McClory	Head Of Business Development, Distributed Energy	SSE Group
Rebecca	McLean	Head of Sustainability, Advisory & Planning	Sweco UK Limited
Ailsa	Nicol	Head of Public Affairs, Scotland	Orsted

Stefanie	O'Gorman	Director Sustainable Economics	Ramboll
Gareth	Owen	Environmental Officer	Baillie Gifford
Gordon	Robertson	Director of Communications and Sustainability	Edinburgh Airport
Keith	Robertson	Associate - Climate Change and Sustainability	Arup
Hannah	Schlesinger	Director of Development and Marketing	Edinburgh Science
Tara	Schmidt	Sustainability and ESG Finance Director	Lloyds Banking Group
Stephen	Sheal	Special Advisor	Net Zero Technology Centre
Paul	Steen	Head of Region Scotland and Northern England	Vattenfall
Emily	Stone	Climate Business Development Manager	Edinburgh Science
Kate	Studd	Secretariat	Climate Emergency Response Group
Sara	Thiam	Chief Executive	SCDI

Appendix

(i) Links

* <https://en.ramboll.com/lets-close-the-gap>

**INFRASTRUCTURE COMMISSION FOR SCOTLAND – Clean growth leadership group.

<https://infrastructurecommission.scot>

***<https://www.politico.eu/article/exxon-sues-european-council-over-eu-fossil-fuel-windfall-tax/>

****<https://carbonneutralcities.org/>

(ii) About Edinburgh Science

Edinburgh Science Foundation is an educational charity, founded in 1989, which operates Edinburgh Science's Education and Festival programmes. We are best known for organising Edinburgh's annual Science Festival – the world's first public celebration of science and technology and still one of Europe's largest – our science education outreach programmes, Generation Science and Careers Hive and our community engagement work.

Our mission is to inspire, encourage and challenge people of all ages and backgrounds to explore and understand the world around them. As leaders in our field of Science Communication, we work year-round to create and deliver dynamic hands-on workshops and exhibitions and inspirational shows, discussions, debates and performances that continually push the boundaries of public engagement with science. Communication and engagement are at the core of all our work and we strive to ensure that this is embedded in all aspects of our organisation.

Edinburgh Science Climate Co-Lab Series

Edinburgh Science's Climate Co-Lab is a series of round table events which bring together senior leaders from various business sectors; government; charity; academia and beyond to foster ideas and inspiration to help them grasp the opportunities presented by the climate emergency. Many of the leaders that we convene might not usually find themselves in the same room as one another and as such the round tables prove invaluable for making new connections and seeding new partnerships.

Following two or three powerful provocations from subject-matter experts, participants are all invited to have their input into a round-table discussion. Each event is chaired by an inspiring leader who ensures that delegates

put their ideas on the table, and dynamically steers the conversation toward a beneficial conclusion rounding off with a few possible action points. The Co-Lab also provides ample networking opportunities, helping to catalyse the net zero transition through inspiring and connecting the people who can deliver it.

Edinburgh Science began delivering these events in April 2019 after awarding the prestigious Edinburgh Medal to Ms Christiana Figueres - the acclaimed Costa Rican Diplomat who was instrumental in bringing about the Paris Climate Agreement. We organised a round table on that day, with leaders of business, public sector, third sector and higher education present. They were challenged by Christiana to collaborate, to act, to not wait for anyone to give them permission, and to use the opportunity that presented itself for positive change.

This optimistic ethos is what has driven these events ever since with delegates finding immense value in them, due to the diverse invite list and facilitated discussion format.

With thanks to our supporters who allow us to deliver this project

PROGRAMME SUPPORTERS



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The logos shown belong to the organisations whose support Edinburgh Science Climate relied upon at the time of this Climate Co-Lab. If you are interested in helping us to keep these events going, please contact Hannah.schlesinger@scifest.co.uk.