



# Climate Co-Lab

## Meeting Notes

### Financing the Energy Transition

Chaired by Dame Susan Rice DBE FRSE

Provocations from Jonas Persson, Head of Sustainability & ESG Finance, Lloyds  
Banking Group

&

Lolita Jackson MBE FRSA, Executive Director of Communications & Sustainable  
Cities, Sustainable Development Capital LLP

With special thanks to the US Embassy London for supporting this event

Thursday 17 November 2022, 2.30—5.30pm. Bryce Hall, Bank of Scotland, The Mound,  
Edinburgh



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# Introduction

## Welcome from Dr Simon Gage OBE

I welcome you all to this Co-Lab, organised by Edinburgh Science. I hope it is for you a source of inspiration, new insights and a place where you find useful connections that make it easier for you do what you plan to do to take on the enormous task of tackling climate change. Thank you for energy, enthusiasm and giving your time today.

## Welcome from Dame Susan Rice DBE FRSE

Welcome to everybody here today. I want to begin by talking about Connections – I've known Simon for a long time and have been supportive of the Edinburgh Science Festivals over the years. I also have a connection to the US as a person from Rhode Island; I'm pleased the US Consulate is one of our sponsors today. Lolita spent 15 years in Manhattan, where I lived for ten years. Jonas, I've known for a long time, indeed since start of his career at Lloyds, and it's great to link back up with him in his new role there.

I also want to talk about my connection to this building on The Mound. In the 17th century, residents of Edinburgh lived uphill from here. Household waste was thrown out of their windows including all their oyster shells which were a cheap and abundant source of protein. It accumulated on this site which was the communal tip. Starting in the mid-1700s, when construction of the New Town began, 12 million cartloads of rubble were also dumped here, and the ground became higher and higher. This building, constructed at that time, became known as The Mound – as it's still known today.

In the 2000s, when the building was being upgraded, engineers discovered that it had been microscopically slipping downhill. All the rubbish in the ground had decomposed over the centuries except the millions of oyster shells that had compacted and become somewhat slippery. There are actually eight floors in this building, most of which are underground.

I say this because I want you to leave here today knowing something that you didn't know before and because today is about connecting – prompting new partnerships, sparking neural connections, it's about, new thinking, new ideas. We'll hear provocations from myself, Jonas Persson and Lolita Jackson, followed by Q&As and discussion.

As my provocation: most of us are here because we share a common ambition and interest in the topic today, but we know that not everyone does. All of us will have sat around committee tables where people from public bodies say that the private sector just wants to make money. Likewise, there's a perception in the private sector that the public sector doesn't account properly for risk and takes too long to do things. There are lots of biases – how do we change this?

And one final note from my Global Ethical Finance Initiative perspective. However much good we do in our common ambition, is it good enough if we're ignoring what happens elsewhere? We're here in the northern hemisphere, products of advanced economies, but we mustn't lose sight of the fact that the Global South is in a very different position.

# Provocations

## Jonas Persson, Head of Sustainability & ESG Finance, Lloyds Banking Group

I am excited to be here today. I was asked to talk about financing the energy transition and I want to give personal, and institutional view, focusing on last two years.

We've just got through COP27 and we feel a bit stronger about the outcome of this COP over last year's. But what did happen last year? Mark Carney brought finance. He talked about a figure of \$100 trillion dollars – the number needed to get to Net Zero. And if we don't get there now? It's a cost that will just keep going up, big numbers, around \$50billion a year for inaction. The IPCC report makes

you sit up and take it seriously. It's starting to resonate with public more and people are taking it more seriously. There is tangible evidence that things are changing.

Cost is one big challenge, but we also need to put the social element on top of it. We have to do this as a Just Transition. Currently there is a lack of jobs, there are challenges facing each household. We expect average energy bill to get to £3,000 by April 2023 – a significant amount of money. This does not mean that we should make cuts in terms of our commitments to transition and our support of Net Zero.

We are a big UK institution, just shy of 7,000 colleagues here in the UK. We live Net Zero every day, we have created a full Sustainability Finance Team and part of that team's remit is the re-wiring of everything that we do. We don't have time to take a bitty approach – we need capability and teams that do the right things at an institutional level. Sitting back and doing nothing is no longer an option.

The Net Zero Banking alliance is Mark Carney's gig and there are now around 120 banks signed up. All clients that we lend to we have now set targets. To get to Net Zero by 2050 we have to reduce by our emissions by 50% by 2030. Expectations from some senior managers, is this can for later, we can do less and see what happens. Of course, that is not an option either.

We have come up with strong statements. We don't fund any more coal/oil/gas fields. A big thing for us but small on the greater scheme. Agriculture, built environment, retrofitting are also huge areas, just because they're more difficult we shouldn't give up on them. Give financial institutions data that they can trust. We've put together lots of technology for this and explained why it is we need to invest in these earlier things.

We can find out, where's the need from a capital point of view? Where is it most impactful? What is the risk? We need to give institutions frameworks they can trust to use, and we have identified 85 different areas that can be used including:

- Technology readiness
- Indicative Capital requirements
- Decarbonisation impact
- Economic Impact Risk and range of uncertainty
- Interdependencies
- Regional Regeneration

Different regions will have different needs in order to build a just transition.

This is just one piece of evidence that we are doing things differently.

The Low Carbon Accelerator Report is out now which provides a blueprint on how Local Authorities and the Private Sector can work together – please do read it.

## Question & Answer

A few keynote speakers at recent events have noted that it is great it is for banks have been reducing the funding going to high emitting industries, but if others still funding 'bad stuff', you still don't get to Net Zero. What are your thoughts of regulation to prevent this sort of thing?

- We are engaging at an organisational level and have clear pathways on how we're reducing emissions. We can ensure that promises are clear, communicated and understood. It is more important to have policies that are supportive and clear about the need for transition.

- Credible transition plans are important. We need to be able to look at pathway and make sure companies can align. Are we leaning in where we can to support clients?

World Governments – what can they do to support what we’re talking about today?

- Certainty is important for financial institutions, we’re not here to take speculative risks. Promises of support for new tech alongside clear and trusted policies and we have a great track record of this in the UK. We don’t need to try to fix something that’s not broken. It’s important that Climate policies are out there and communicated clearly.

There is retrofit - potential there. What support do you see the banks giving in terms of green mortgages and similar schemes?

- We have some great frameworks for new buildings but retrofitting is still a problem. In the report yesterday there are some examples of how public and private sectors are working together. This is a big problem though as around 20% of carbon emissions come from our homes.

- Surveys of SMEs in the UK show that the majority of institutions have no idea where to start when it comes to reaching Net Zero. They need someone they can trust to press the button and start making changes.

Have you seen in assessment what was readiness of potential new clients? We had to allocate some ‘tech systems’ to help them come up to parr. How to marry this with internal assessment of risk and risk management

- We’re deep into this and talk to all of our clients, they’re advanced, they know what they’re talking about. But we’re talking to people who want to talk about it. The people who don’t are quiet and so we don’t know about them, so we have a skewed views. It is telling how many institutions don’t even know where to start. We need to get in early to help support the NetZero initiatives as they have proven that the technology works.

- A lot of tech is already viable, it just upscaling. Through Standardized frameworks that go from 1 – 11.

## **Lolita Jackson MBE FRSA, Executive Director of Communications & Sustainable Cities, Sustainable Development Capital LLP**

Even though I am an American, I have an affinity for Scotland as I visit two or three times a year. Looking back to COP26, many entities have signed up for Race to Zero – to be Net Zero by 2050. Many cities in the US are working towards Net Zero and much activity is funded by Private Sector involvement. However, there needs to be more.

Scotland has done some great work in the climate realm and there now needs to be a stronger commitment to using private funds in the public sector. A room like this is important, however, it is not just the people who provide funding – but also the entities that need it. The two aren’t always very good at connecting with each other. We need to hear people’s voices and allow people to come together. We also need to understand the pressures that the Public Sector is under – the business sector needs patience. Some of the main reforms needed on the Public Sector are these three Ps: Policy, Procurement and Permits [the planning process].

The principles of creativity and accountability are important and we need to engage more directly. SDCL only invests in low carbon solutions across the world through two major funds – we are a \$2+ billion company.

A great example of the work of SDCL is St Bartholomew’s Hospital in London. This is a refurb that has been designed to be efficient, re-using waste energy to provide heat and power, ensuring a continuous supply. There are carbon emissions reductions and the cost savings are reinvested into the hospital for cancer care.

Consider cities as economic powerhouses filled with new opportunities. There is ambition but my challenge is where do we go from here – how do we implement and affect change? How do we connect this in the real world to deliver tangible outcomes? National

policies are important and we need to know where we can make them impactful at a local level. It's important to have a local view. Am I reflecting challenges or opportunities that you see?

## Question & Answer

What is it about the procurement process that makes you see opportunity and how do you link that back to resources at a local level and exploit the potential that exists?

- In the US we have a federal initiative called Justice40, where 40% of spending on projects has to go to communities where environmental injustices have taken place. It is important to create local, living wage jobs for the people who live in those areas.
- An example of this is after Hurricane Sandy, we wanted to figure out how we could ensure that during the rebuilding process of those devastated communities, local residents could obtain jobs. In this case, people were brought in from elsewhere for the rebuilding and we're seeing other global examples of this. We must ensure local-level benefits.
- Permits [planning permissions] take too long. It took 10yrs for some of the projects after Hurricane Sandy to commence and we need to shorten procurement periods. A Private Sector company won't want to wait years for documentation and so on to be written.

The private sector notes that the public sector has the appetite but no mechanism to act.

- I agree, there is very little resource to do this. A private company may have 70 people on staff whilst the public sector might have 2 people thinking about climate part-time. Advisory groups working alongside the Public Sector can help with ideation and implementation and would include Private Sector entities.
- It's about facilitating and bringing capital but also about planning and dialogue, getting there early on
- People need to be in the room together throughout the process.

Over last few years we have seen evolution of specific KPIs, a few years before maturity of a bond. This is great because all companies and institutions don't have a 'green investment' they have a transition to make and it's forward looking. The investment is done, your job is done. Both very important sustainability bonds. No greenwashing, something that scares all of us.

## Open Discussion

*Each of the below paragraphs summarises a comment made by one or more members of the delegation.*

I think of three Ps: Performance, Permanence and Pace

In the race to NZ, we know that to achieve this we need to decrease/reduce emissions. You can't get emissions to 0 – positive and negative. A lot of people are buying offsets and there is a lot of scope for misleading selling. Trees last 50yrs but then there is the liability of dead trees so a long-term value of the carbon collection. The one you can be happy with is permanent storage. We need to give these things different values. We need to have more accurate conversation about what we're buying.

Also, to add on to the pace idea, we talk about products but we're going 100 times too slowly. Fiscal measures might help but obligation should be on oil gas and coal companies. They should have a carbon take-back obligation to make that Zero. We're taking advantage of the energy but we're not paying for that carbon storage. This needs to become an obligation.

One thing to keep in mind is that we need to be aware of what's causing problem. Growing timber has to be done properly. You can permanently lock carbon into the built environment. Build more houses with timber for that purpose. We are actually very short on

timber and need to up our investment. We need better processes that align with the Scottish Government's ambition. Timber cannot be a panacea but productive timber can play a big part

Great idea, on storage, I agree that fossil fuel companies should be obliged with regards to carbon capture and storage. But financing carbon capture tech is a different matter. If you have a supportive environment e.g., EU/UK you can make it work but this probably isn't the case in other areas e.g., global south. It is happening in Egypt. What thought has been given to the securing of energy supply after Russia? How do we finance decarbonisations of existing operations?

A person said to me recently: "You EU people are funny. You're trying to knock down your old house when you haven't built your new house." We need to invest in decarbonising the old house

- It is recognised in the US that there is a need to decarbonise projects. Issuing fines for failing to retrofit houses in New York has been very controversial policy and it took a long time to strike a deal. In New York 80% of the buildings will still be standing in 50 years.
- We have new policies, new greenfields, coal oil and gas. There is plenty of capacity for still financing all of the assets. We appreciate that it isn't a switch it is a transition. It is important for us to support new technologies and get them off the group ASAP. You have to make your own decisions, it's not straightforward and there are still dependencies. We need to be honest about where to place our capital to support the transition

This discussion on the speed of transition raises many fair points with regards to moving away from fossil fuels and there are many scenarios here on speed of transition. Does anyone have thoughts on speed of transition and how it unfolds?

- Some industries are facing a fast transition, some industries less so but shouldn't abandon them. We're talking about retrofitting, we need a house to live in. We need to listen a lot to our clients. Some are influenced by NGOs and working together.
- I agree there are some things we need to figure out at speed

Earlier today we heard a statement from the Chancellor, where is the UK in terms of attractiveness for investment?

- The UK's Investment Attractiveness Level: The UK is number 4 in terms of ease of investing. It still has its status as a very attractive place to invest status (US and China also). Germany has maybe just gone above the UK. We facing other challenges from supply chains and from not being part of the EU. So there are a few bits that make it harder and we cannot be complacent. Bigger companies might want to spend capital in the US.
- Over 50% of my UK company assets are in the US. There are more opportunities to go from the City to State level over there. The UK should start thinking in that way too.

Risk is very important to financial institutions. I find that with some projects there is a hesitancy because the risk level is higher than returns. How do we collaborate better with the Public Sector? I have worked on a recent project with an especially high propensity to accept risk and it was great. Do we need to do better at accepting higher risk levels?

- Big institutions can play a big part in bringing in private debt. If scaling-up you need that, you need to unlock big capital pools. It is high risk. We have to try. That's what we're trying to do with the technology readiness – make sure that we can do it quicker. Look at UK offshore wind market this has been a huge success, it's impressive. It took 12 years to get to 11GW, now we need to find 40gw in 8 years.
- When think of transition we end up talking about supply, there is a lot to be done on supply. We've spent £150trillion in energy transition that's grown by 1/3 and most on renewables. There are so many aspects around heat, transport and so 66% of primary energy is lost over the course of the generation of electricity.

The cheapest energy is energy we don't spend. Investing in smart systems is critical. When you rush it, will bring down overall cost. The Government should focus on facilitating demand e.g., storage. The Government should think about planning, planning permission. It holds a lot of things up.

This builds on communications point – interventions can be top-down but require the consent of communities and SMEs. Is there enough of a central narrative around simplifying these interventions and technology? How do we get people to welcome them?

- Financiers aren't always best. I saw a project which painted a power plant bright pink. Proceeds raised from events around this went to breast cancer. We need more of these outcomes. How do we enable people to see these things?
- De-jargonise!! If your financial organisation wants people to feel good about what you're doing you need them to understand.
- Communication across everything means a lot. Everyone in this room lives and breathes it but if we don't influence? We have a responsibility. I think through 3 lenses: performance, governance, socialite corporate and personal. Accountability. Authentic leadership and show by doing, not by telling.
- We need to think about equity a good example is charging infrastructure. There's no point pushing electric vehicles if we haven't thought about the people who just can't afford a charge point. That is to say, we need to think through policies from their perspectives.

When having conversations on government policy unlocking finance. We need to be more precise about investment for return versus Spend. There is a lot about 'it will cost x to decarbonise' but the decarbonisation journey involves a bit of both.

Involved policy instruments and thermodynamic fundamentals were there. That was an investment to unlock return. The same is true of energy efficiency and heating. When it comes to CCS, that's a cost. Extracting carbon dioxide resulting from extraction and pumping it underground, there's no value.

The only value is getting more oil and there are cheaper ways of doing it. That is a cost to society.

Look to things like renewables. The government IEA forecasts are a bit pessimistic but we need to be able to make CCS work at scale. The cost needs to be borne by society at large and that needs to be global, if not, we could drive energy demand to, for example China. What is a cost and what is an investment.

When we have new policies, it's not about de-risking but about creating new markets. What's going on out there? What's the gap we need to fill? It comes back round to how can we prove new policies, regulations and markets so that we can get people to come in. Bridging the gap between policy and new markets. We won't get anywhere on individual mortgage-by-mortgage level.

SMEs don't know where to go for advice and finance and they don't know where to take the technology that they've developed. How do they get into rooms? Do finance people know how to get to these people? Also we have got to keep our focus on consumption, there isn't enough talk about consumption. Everyone says we need/have to but not 'doing'. Will banking change risk aversions?

- It is a challenge to re-wire our thinking and the world is changing very fast. It is better to look forwards than to look back. If the Scottish National Investment Bank look at it, then it becomes attractive to high-street banks. We need to develop these structures.

## **Dame Susan Rice DME FRSA – Summing up and actions “Keepers”**

This meeting was filled with ideas and suggestions and so I will do what I call my 'keepers':

## KEEPERS:

- Dilemma – there are many dilemmas present in this discussion, but we can't walk away from them, we have to walk into them. For example, doing less vs doing more? E.g., Carbon Capture and Storage and I look back to the house analogy earlier
- Impact – we must carefully consider the impact of our actions on communities and the people that they affect
- Credibility – our transition plans must be credible to businesses and community

We need to keep our minds open. There is a lot of the technology that we need to get to Net Zero already in existence, but this technology needs to be scaled. The Public sector has a desire to change but they need a means. That includes money – but also knowledge and experience.

The energy transition is not just about supply but also demand.

We need to consider what is investment and what is cost.

Trust is important, as is storytelling. How do we tell people the story in way ensures that people welcome changes? I know school is one answer – children can harass!

## Delegate List

First Name	Surname	Job Title	Organisation
John	Alexander	Leader Dundee City Council	Dundee City Council
Adrian	Barnes	Head of Green Analytics	Green Investment Group
Paul	Bekkers	Associate Director Sustainability, Carbon, Climate	Arcadis
Heather	Bell	Department of Energy Attache in London	US Embassy
Eddie	Black	Managing Director	ECO Group
Gemma	Bone Dodds	Director of Insights & Policy	Scottish National Investment Bank
Julio	Bros-Williamson	Chancellor's Fellow in Net Zero Buildings	University of Edinburgh
Colin	Carmichael	Director (Technology, Data Analytics)	PWC
Jo	Freeman - Young	Sustainability Actuary	EY
Megan	Frost	Client Relationship Manager	Ecometrica
Simon	Gage	CEO Edinburgh Science	Edinburgh Science
John	Gillam	Senior Manager - Sustainable Finance, ESG Advisory	Deloitte
Tom	Gillingham	Partner	Charlotte St Partners
Ben	Hart	ESG Analyst	Baillie Gifford
Stuart	Haszeldine	Professor of Carbon Capture and Storage	University of Edinburgh
Kristen	Havrilla	Sustainability Analyst	Ecometrica
Jason	Higgs	Partner	PWC
Jack	Hillmeyer	US Consul General	US Consulate General Edinburgh
Patrick	Hogan	Programs Manager	US Embassy
Charlie	Hogg	Head of Policy Team FM Policy & Delivery Unit	Scottish Government
Lee	Hounsom	Managing Director	Scotia Capital Partners
Lolita	Jackson	Executive Director	Sustainable Development Capital Ltd
Valentina	Kretzschmar	Energy Transition Director	Capricorn Energy
Sefton	Laing	Senior Climate & Environment Specialist	Baillie Gifford
Adam	Liddle	Director of Sustainable Growth & Innovation	Jacobs
Claire	Mack	Chief Executive	Scottish Renewables
Sam	Mackilligin	Director - Zero Carbon Energy Systems at AECOM	Aecom
Nicola	McFarlane	Project Manager	Mott MacDonald
Erin	McGrail	Strategy & Ops Manager	Pawprint
Sharon	Moore	Global Tech Lead for Government	IBM
Robin	Parker	Senior Consultant - Energy Policy & Planning	Ramboll
Latina	Percheva-Lisnik	Senior Consultant Physical Climate Risk Adaptatati	Atkins
Jonas	Persson	Head of Sustainability and ESG Financing	Lloyds Banking Group
Stephen	Porter	Responsible Investment Lead	Scottish Widows
Susan	Rice	Chair	Scottish Water
David	Robertson	Director - Investment and Business Development	Scottish Woodlands
Kal	Sangha	Managing Director - Head of Sustainable Finance	Noble & Co
Hannah	Schlesinger	Director of Development and Marketing	Edinburgh Science
Tara	Schmidt	Sustainability and ESG Finance Director	Lloyds Banking Group
Francesca	Sharp	Lead Propositions & Partnerships Sust. & ESG	Lloyds Banking Group
Ruth	Shewan	External Affairs Manager	EDF Renewables
Paul	Steen	Head of Region Scotland and Northern England	Vattenfall
Claire	Treacy	Chief Finance Officer	Celtic Renewables
Christopher	Ward	Client Relationships Manager	First Sentier Investors
Amelia	Whitelaw	CEO	Interface

# Appendix

## (i) 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 also operates a large-scale commercial international programme of work under our Worldwide arm with any profit directed into our Foundation to enable charitable work. Edinburgh Science regularly presents events overseas and has been the Major Programming Partner of the annual Abu Dhabi Science Festival since 2011, helping to curate, produce and deliver the event. For international partners, the team at Edinburgh Science provide engaging content, curatorial advice on programming and business planning support, along with expert staff and training for local science communicators.

Edinburgh Science's UK and international projects reach a combined audience of over half a million people each year, in a normal year.

### The Climate Co-Lab

Edinburgh Science coordinates and runs the Climate Co-Lab, formerly the Climate Opportunity Ideas Factory - a series of round table meetings for senior Scottish leaders to discuss ideas for action to enable Scottish enterprises to respond to the climate emergency. It was initiated in April 2019 when Edinburgh Science Festival awarded the Edinburgh Medal to Christiana Figueres, the 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 Climate Opportunity that presented itself for positive change.

Christiana was coming back to Edinburgh in two months and asked to meet again for an update on what this group had decided to do. Two months later, Baillie Gifford hosted a larger group of senior leaders who presented a number of ideas for discussion in this forum, with Christina Figueres and Roseanna Cunningham, the then Cabinet Secretary for Environment, Climate Change and Land Reform. Many of the ideas have been picked up by attending businesses and organisations to make an impact, and the attendees have told us that this group is of immense value to them, due to the diverse invite list and the facilitated discussions.

The purpose of the meetings is to generate new ideas that are then acted upon by those present to achieve steps towards reduced carbon emissions and greater environmental sustainability.

Edinburgh Science is in an exceptional position to bring together cross-sectoral leaders to gather views to identify new ways to work collaboratively to unlock ideas and create opportunities. The Climate Co-Lab provides a unique safe space for collaboration, resulting in major ideas, for example a national carbon reserve for offsetting which we know excited many organisations. With connections across industries and many sectors, and no agenda other than to share the science and to see a solution to the climate emergency, Edinburgh Science strongly believes that the time is right to harness the collective power of organisations and minds and to put Scotland at the forefront of this Climate Opportunity.

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

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