Exchanges at Goldman Sachs

The Road to 2050: Balancing Climate Goals with Energy Security

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Allison Nathan: The road to reducing greenhouse gas emissions to zero by 2050 has never been more urgent.

I'm Allison Nathan and this is *Exchanges at Goldman Sachs*.

Right now, we're at a tipping point. In order to reach the climate goals set out by the Paris Agreement, the world needs to reduce greenhouse gas emissions by 40% and cut methane emissions by over a third. But at the same time, geopolitical tensions, supply chain disruptions and rising inflation have led to a renewed focus on energy security. How governments, companies and investors balance the need for this security while navigating the transition to a sustainable and more equitable future is one of the most pressing questions facing the world today.

To help us understand the path to achieving this balance, I'm sitting down with **Kara Mangone**, global head of climate strategy, and **John Goldstein**, head of Goldman Sachs's Sustainable Finance Group, which recently released its 2021 sustainability report that takes a deep dive into these topics.

John, Kara, welcome back to the program.

Kara Mangone: Thanks, Allison. It's great to be here.

John Goldstein: Thanks for having us.

Allison Nathan: Since we last spoke on this program in the fall, the major development has been Russia's invasion of Ukraine, which seems to have led to a sharp shift in focus from the need for clean energy to the need for secure energy. Governments are looking to replace the energy they receive from Russia — it seems in any which way. We are even hearing calls to bring back more coal.

So what does the Ukraine War mean for the future of climate change and the speed of the energy transition?

Kara Mangone: The tragic situation that is unfolding in Ukraine at the moment is absolutely underscoring what you just referenced, which is it's going to be a really complex energy transition. And, most folks who spend a lot of time on this issue have known for a long time that this would not be an easy ride.

I think this situation is absolutely bringing to the forefront I think a very important dialogue around how do we, in the context of energy transition, optimize for an integrated energy mix that is able to direct capital into sources that are going to optimize for clean, affordable, reliable energy, right?

And I think the good news is there's a tremendous amount of momentum in the system, right? We know that almost 90% of GDP is now represented by net-zero commitments, so a really significant amount of capital that's been put on the table to say, okay, this is the direction in where we need to go.

But at the same time, we know that we're nowhere near the $3 to $5 trillion in capital a year that needs to be invested to deliver on global climate goals, and we're now seeing, as you said, an added complexity of how do we actually think about the potential shocks in the system? And how do we balance security-related objectives?

John Goldstein: It's been really interesting to see. I think that first question— I mean, we both have gotten questions of, “Oh, my gosh. This is hard and it's complicated. Is this the death of ESG? Is this the end of energy transition?” And this is actually what ESG growing up looks like, right? And I think we've talked about this idea, as this goes from once upon a time the fringe to the periphery to the core. Once something is a core investment issue, central to the real economy, tied to what effectively is the next Industrial Revolution, of course, it's hard. It's messy. It's complicated. There are interdependencies.

The same thing with ESG. Once something becomes central to the point of in the last 12 months, 35% of equity fund flows run to ESG. You know, it's very hard to raise money without an ESG sort of answer, right?
Whether you're a company or an asset manager.

And I think getting to that reality, rolling up the sleeves, and doing the work, I think for us that's not a barrier. It's not a setback. It's important. We saw a little bit of the same thing, you know, we've had conversations post COVID. Similarly, as we were going through March of 2020, is ESG over, right? And what we saw is actually resilience, thoughtfulness, care, all of these things that turned out to have really good business cases. I think that's number one.

Number two, there are some accelerants that are natural just to the underlying economics of the situation. When natural gas is expensive and volatile, a lot of substitutes start looking pretty interesting, right? We see this with sort of fundamentally the ultimate driver of high prices has real impacts on demand and alternatives. And the other thing I think Michele Della Vigna, our colleague, had pointed out is that this is a time when you do have robust cash flows going to large energy companies, which they can then reinvest in accelerating their own transition. So that second point of I think dollars are there and the business case actually in some ways is a lot better.

I think the third point we've seen is, I mean, to use a metaphor that is sadly appropriate, we've seen what the world can do when it gets on a wartime footing and the ability to mobilize. I mean, Japan, after Fukushima, increased its deployment of solar by 70 times between 2011 and 2017. I was talking to colleagues who reminded me of that yesterday. 38 gigawatts. And we've already seen some policy responses where policymakers can lean and kind of push on that lever.

I mean, the EU has already increased its commitment around hydrogen by 3.5x. The UK has done it by 2x, right? And so policymakers, to some degree, are kind of leaning into that breach. But kind of, at the end of the day, these commitments are locked in, right?

Allison Nathan: What do you mean by that?

John Goldstein: Number one, when I talk to pension funds, sovereigns and others that have made these commitments, the conversation is not, “Should I reconsider?” The conversation is not, “Should I lower my target?” I sat down with a very large pension fund yesterday, and they have a 2040 net-zero target. They were working on setting the 2030 goals. Like, how do we do it? There was no, “Should we step back and reexamine this?” So I think those commitments from these particularly asset owners and companies are real.

But the other point about lock-in I think is subtler but actually important, which is with the growth in ESG assets, with the growth of these commitments, systems change, processes change. If you look at an RFP showing up for almost any asset management mandate, the requirements, the questions, the focus, the due diligence questions, all of the systems that drive how many moves in the world have really been augmented to add ESG questions, add climate questions, add that to the process.

Kara Mangone: The point that John is also touching on, which I would just underscore I think as crucial is this -- despite all of the momentum, this really still, we are in pretty early stages still in this. If you look at some of the markets that are going to be really critical to transition, look at the voluntary carbon markets, for example, right?

I mean, $50 billion in annual trading volumes last year relative to the compliance markets, which are $800 billion, right? And we know that offsets can play a really important role in funding a lot of these technologies that we talked about at the beginning that are going to be critical to transition, right? Things like carbon capture, SAF, sequestration, direct air capture, etc. So I think there are just parts of the market, and there are a lot of folks focused on this, right? As John mentioned.

It's policymakers, it's the private sector rolling up sleeves, getting to the table. But we know there are a lot of things that need to be improved around quality and tracking, etc. And I think there are lots of other things you can say around disclosure in other parts of the market as well. And I think there is so much kind of firepower and focus on this, but we just need to acknowledge that it is going to take some time. Like, there are some inner workings of the system that do need to be ironed out. And I think the most important thing given that backdrop is that we understand that the more we can actually appreciate the nuance and treat this as an investing discipline versus a side area, I think the more you're going to get stewardship teams working with portfolio managers and credit analysts.

And they may not even call it ESG anymore. That might be a good thing. This just may be how we invest in energy.

Allison Nathan: When we talk about investing themes and having ESG be an investing theme if you look at where returns are being made today, they're being made in conventional energy because of the very high energy prices as a result of the supply shortages that have evolved from the focus on ESG. And of course, we're having these major disruptions that have exacerbated that.

So do you have that conversation with clients? I mean, if you're really looking to make returns in the market today, you'd actually want to be investing in conventional oil. And that might not be a bad thing because we can't ultimately starve companies of that conventional oil base before we're ready to transition. So I'm just curious as to the conversations you're having to that extent.

John Goldstein: Yeah, no, no. I think a couple of main things on that. I think, number one, I think there's a little bit of I think a misunderstanding of some of what has happened with the access to capital for the sector, right?

Ultimately, somebody did a survey recently and they asked CEOs of energy companies in terms of capital access. And actually, the overwhelming answer was not ESG investors or fossil fuel divestment. The overwhelming answer was just a push for capital discipline, right?

Because of the ebbs and flows of energy prices, I think about how to be wise and prudent about when, where, and how to invest. So I think there's a little bit of kind of the ESG field that gets blamed for something that actually has just been a core investing phenomenon and based on experience over the decades. And our colleagues have done a great job at documenting that, number one.

I think number two, this is part of ESG growing up, right? It's not about a good, bad company, or a good, bad sector. It's having a little bit of nuance, right? And I think what I like to say, it's going from kind of ESG beta to ESG alpha, right? Once upon a time, you could paint with a broad brush and try to navigate in the early days of the market. But now you've got to figure out who's going to take those profits and invest in a way that's going to help them be resilient and successful over the long term, right?

And I think this gets to take a finer grain view company by company, sector by sector, business model by business model. And I think one of the things that the Russia-Ukraine War has done is it has led people who thought all of this could be done easily by just drawing some bright lines, maybe not so easy, right? At the end of the day, you got to look a little deeper, you got to do the work.

So to your point about where your returns are being generated, absolutely there's cash flow in that sector. Now, the question is, going forward, what is the strategy that's going to leverage the cash flow of the day to build a great business tomorrow?

Allison Nathan: And if we think about the capital gaps that we talk about that are so imperative to achieving the climate transition we all want, what do you think are the most effective means from here to fill those gaps? Where do we go?

Kara Mangone: I think even before you get there -- and this is, I would say, a couple of follow-up points too, on your last question, Allison. I think at the macro level, so much of our strategy as a firm has been around how we engage all parts of the economy across industries, across client bases to actually deliver on their sustainability objectives, right?

Because we've taken a view -- and this was in David Solomon's op-ed when we first came out with our $750 billion sustainable finance target at the end of 2019. He was really clear in saying, look, this transition is only going to be an inclusive effective transition, right, if we actually engage our clients in these sectors and support them on transition. Because guess what? That $3 to $5 trillion in capital a year, half of it needs to go into technologies that are not yet economically viable, right?

And I think another really important consideration is supply/demand dynamics. We know that, take the IEA net-zero scenario, for example. The big headline on that was no new oil field development, right? However, also in that, that was assuming that there were significant changes to consumer demand preferences effectively immediately. We would drive at different speeds. We would heat and cool our homes at a different pace. And it also assumed that we would have tripled our renewables capacity, which we haven't been able to do, right, for supply chain and other reasons, intermittency issues, etc.

So I think that demand piece is so important, and we haven't really gotten there. So I think when you -- your question on capital access and how do we fill those gaps, I think it's a couple of things. One is how do we address the demand piece? How do we actually start to shift and change consumer behavior?

I think the second is how do we ensure that this is not a divestment movement but that we're actually engaging the sectors of the economy that are going to be critical to transition? I think that's two.

And then I think three is how do we leverage other tools that we have in the toolkit? And I think public-private partnership is an incredible example of the way that you can drive innovation through procurement, mass procurement programs that things like the DOE are looking at how you can develop the ability to bring together different pools of blended capital.

So a great example is what we're doing alongside the Asian Development Bank and Bloomberg Philanthropies, particularly looking at ways we can address the climate finance gap in South and Southeast Asia. So we're actually piloting projects where we're bringing together the expertise of the Asian Development Bank down on the ground in the region as well as the philanthropic capital of Goldman Sachs and Bloomberg Philanthropies to be able to actually model to private sector investors here's projects that actually can achieve a market rate of return, be able to crowd in that additional interest, and then start to get more capital flowing. So I think there are a lot of examples of ways that we actually can be doing more in the private sector and then more that would absolutely be an accelerant through these kinds of partnership models. And of course the policy provisions as well.

Allison Nathan: And for those organizations that have success in their climate goals, does that go hand in hand with overall success? Overall success of the company?

John Goldstein: I'd say a couple of things on that front, and I know Kara has some thoughts as well. So, number one, I mean, a quip I made to someone who actually is real

is with what we're seeing with the energy price spikes in Russia-Ukraine, and this question of is this going to accelerate company progress or slow it down? I said, well, the happiest people are the folks that did this five years ago.
Right? That ultimately green their operations so they don't have some of those dependencies. Right? They created some of that resilience. They created some of that leanness in terms of their need for natural gas, in terms of other inputs.

And so honestly, folks that have been ahead of the game have had some real resilience relative to what we're seeing in the energy markets now. And so I think that's one specific lens where this works.

But what we generally have found is a couple of things. Number one, investing in being more efficient with human and physical capital tends to be good for business.
Tends to be good for margins. It tends to make your product or service more appealing to consumers who actually care about that. To supply chain partners who have made their own commitments, right? So there's

underlying economics, but what it also does for people in your supply chain.

And then I think frankly I had one of the more impressive conversations I had recently, I was sitting next to the CEO of a large industrial company at dinner. And for 45 minutes, they talked in granular detail about exactly what they were doing to basically create more circular economy models for their factories and their plants. This was something -- at dinner, I thought are you an engineer by training by chance? It was sort of very methodological, very thoughtful.

That approach from a governance perspective, from leadership, from management, the engagement in strategic issues at the top of the house to set the priority but also to set a course and the ability to execute that well is an awfully good sign of the prospects for a company.

Kara Mangone: And look, Allison, I would just add something that we hear a lot from our own shareholders and clients as well, which is not only is it critically important for you to be thinking about the potential impact of climate risk on your business, right? Not only thinking about it but actually modeling it and managing it and then disclosing it. So not only is that a core part of what is going to make you successful and effective as a business and no pun intended, in a sustainable way, right? For sustainable long-lasting returning. But in turn, investors are really looking to see if your sustainability strategy is commercially viable as well. So is this something that you're just kind of doing on the side and talking about a lot? Some philanthropic investment, perhaps? Some community engagement? Or actually, are you really thinking about how this does represent a driver of risk and opportunity? And are you actually disclosing it that way? Are you having integrated conversations on your business strategy when management presents? And this is a core component.

So I actually think there's not only do we see our clients being successful when this is an integrated part of what they do, but we actually see their stakeholders, whether that's shareholders, their own customers, suppliers, etc., a lot of resonance when that is not a sort of side thing but that's actually really a core, critical part. And not only is it core and critical but there are metrics to support it.

And on that point, I do think so central to the conversation we're having today is around where are we? Where do we need to go? And one area that actually we haven't talked a lot about but I do think John and I spend a tremendous amount of time on this with clients and partners is what are the right metrics that we actually need to be measuring all of this? Because I think it's completely fair to say there's been a tremendous amount of work around voluntary standards and disclosures, SAS, TCFD.

But I think it's also fair to be a little bit critical and to say if so much of what we're talking about today is how do you do this in an integrated way where we're thinking about a set of different factors we're optimizing for which have to do with, again, energy access, affordability, energy security, renewables, clean energy. Then we arguably need probably to have a really focused set of metrics that actually allow us to measure financial impact performance across those different areas.

And John Waldron, our president and COO, has a great phrase he said what is the EBITDA of decarbonization, for example? Do we need 200 different metrics? Or do we actually need to just be really precise within a sector, within a company, within an industry? How are we measuring transition? And let's reward that behavior as well, right?

Allison Nathan: So how should we measure it? What do you think? And how far away are we from that?

Kara Mangone: Well, I think so much of it needs to not be about just good/bad, right? Green/brown. But actually needs to be progressive over time. I think you're going to start to see more and more about how we measure transition, not just measure the spot where we are today or where we need to be in 2050. But actually, what are you doing in your business to be able to advance on this objective? So I think a lot of it actually will be more dollars and cents through the transition lens.

John Goldstein: And this is one of the most common conversations we have with clients. I had it with three different clients yesterday, right? This is all the time. There's this history of looking at climate and sort of step one was very blunt. What do you do as a business? Step two is let's look at emissions. That's a metric. It's about 18-month lagged. Then there's the realization, okay, we need to be forward-looking, right? Let's have our crystal balls out.

And so then people start saying, okay, let's look at targets. Then people realize that's helpful but, at the end of the day, a deeply quantitative analysis effectively of everybody's weight loss goals doesn't tell us if we're going to lose weight, right? And so we need these things that really show where are we tracking, right?

And so this progress from using lagged historical metrics then forward-looking commitments but what are the things that actually show you're on track? I think that's back to this EBITDA decarbonization.

And similarly how ESG data has been used has evolved. Once upon a time, it was screens. Then people largely outsourced it, right? They'd buy external scores from an MSCI or Sustainalytics or one of the many other vendors out there. Increasingly, what we see now is people are insourcing it, right? They're coming up with their own views of, number one, how to use material data. Think of it as insight into the company's performance. You know, Kara talked about SASB, things kind of in that general vein.

And then often they realize, wait, I got a lot of smart analysts that really know these companies, really know these sectors.
How do I get the benefit of their knowledge, right? So getting to, this is all back to that theme of ESG growing up. Getting more sophisticated, getting more nuanced.

Allison Nathan: So do you think the future then of metrics is not some standardization but actually going to these experts in-house and that developing these metrics individually as your expertise allows is really where we're headed? We don't see standardization ahead?

John Goldstein: I think it's going to look a whole lot like other investing questions, right? Which is as it grows up, as it matures, number one, the baseline of common practice will be rising for everybody, right? There's a certain baseline as you navigate markets that everyone's going to need to have, number one.

Number two, that baseline will need to get fueled by good data that come from companies. And I think this is where the work of SASB, IFRS, the Sustainable Standards Board, to try to sort of come up with a template so that hopefully there's a good baseline of these material metrics.

Similarly, the workaround TCFD has become a useful format to share this. We use this. It's widely used. I think arming people with those data.

On top of that, people will augment that with insight analysis research from other folks and with their own people. They'll do it in different mixes. They'll do it in different proportions. Some folks will really lean into this. This is going to be their edge. I'm going to be better at this. I'm going to have better insight on human capital analysis. I'm going to have better insight into consumer purchasing trends and sustainability. I'm going to have better insight on transition.

And others will just try to keep pace, right? That's what kind of normalizing really looks like, right? Is it becoming a more widely understood and appreciated tool that everyone's got to have a version of it? It'll have different flavors and different approaches. That baseline of data. We're going to continue to see innovation with great research providers, really trying to add value and support people in that process. But I think it's going to look a lot like investing.

Allison Nathan: We spent a lot of time talking about the E in ESG during this conversation, but your Sustainability Report also focuses on the S. Social issues and inclusive growth. So where are companies on advancing social goals?

John Goldstein: Yeah. A couple of things. I was talking to our colleague Jonny Fine the other day, and his lens on this, as he described it, and I love this phrase and so I'm stealing it but with credit, is E is the net present value of S. Right?

At the end of the day, if we think about climate transition, fundamentally it's about people. Because the human cost of the worst impacts of climate change, particularly on the most vulnerable, is tremendous. And so that ultimately is the huge motivating force. That said, there are human costs if we don't navigate that well, right?

Energy is I think about 23% of the after-tax income of low-income households, right? And that's before some of the recent energy price spikes. Food, which is actually very tied to this and is also being disrupted, is 34%, right? So at the end of the day, price spikes have a real human cost, and this is why navigating this effectively and efficiently, touching demand, you can't separate these two items. I think that's number one.

I think number two is people are getting clearer on these huge unmet needs, also these huge addressable markets, and better business models. I think people have figured out how to invest thematically in serving those needs.

And then finally, people are realizing ultimately what it means for a business in terms of how effective it runs, how well it's managed. Having the right workforce, the right governance, the right management, having the right relationship with their workers, having the right relationship with their supply chain partners, that that matters in a dollar-and-cents kind of way.

Two very different parts of our investing organization came to the same conclusion around worker engagement, right? Our quantitative investment team found there's an alpha signal tied to really worker engagement, worker satisfaction that's in just their core quant model because it's an additional source of insight.

Separately, our private equity business has really worked with a great group called Ownership Works to figure out how does widespread employee ownership and engagement actually drive productivity, not just wealth creation for a much wider base of people in a company, but ultimately how does it drive performance? And so I think investors are getting a better sense of how to take what was maybe a broad priority to a business case to execute.

Kara Mangone: This is about looking at this as an integrated inclusive transition, which means we're looking at the affordability of energy, reliability of energy and how clean energy is for the environment. And all of those, those are social components, right? Those are not just environmental components. So I think that is where we are going I think now, understanding that we can't just have one at the expense of the other two.

And Allison, I'll just add one last point, which is we put our Sustainability Report out last Friday. And I think this is just such a great example because there may be people listening saying, okay, that sounds great, but how do you actually do this in practice? And of course, there's always more progress that can be made for any organization, including ours. But I do think that gives you an example of how you actually can start with what is your purpose as a company to advance sustainable economic growth and financial opportunity? Then how do you actually, okay, that's your purpose. How does this, and how does sustainability connect to that? Well, here are the two ways we define it. It includes climate transition and inclusive growth.

These are drivers of risk and opportunity across markets and geographies. We have data that supports that from our colleagues in research. And then, okay, how do you actually execute upon it? Well, it starts with our clients. That's our business. It then goes into how we manage our firm, our operations, our people, and our diversity inclusion goals. And then lastly, it's around what else can we do in the broader ecosystem?

So I do think there is a lot of power in telling your story as well because we have a lot of clients who are doing incredible work in this space.

John Goldstein: The other thing I would say about our Sustainability Report, for us it's frankly a good -- you could call it to excuse, you could call it catalyst -- to step back and say, “What are we hearing? What are we thinking? What are we learning, right? What have we seen actually work?” And kind of walk through these sort of five innovations.

One is technology. Technology allows you to extend reach without a whole lot of marginal cost and sometimes leverage that to drive better outcomes. So we looked at examples like our work with a company called Propel, a whole host of examples of where technology really is that lever to change that algebra.

Number two is business model innovation. If you're trying to do that, particularly for low-income communities who may not have the purchasing power to pay for it, how do you find some other revenue source? And we walk through some examples in the report. We talk about EverFi. We look at different models there. Or a great company called Block Power, which takes the fact that building owners need to do energy retrofits. And basically says an alternative to paying a fine, pay less money, retrofit the building, lower energy costs, lower emissions. So these business model innovations.

The third is to partner with the public sector. At the end of the day, there are great ways, whether it's social bonds where you can leverage a multilateral bank to basically lower the cost of capital for things like social housing. We've seen that even in the U.S., right? We leverage programs in the state of California. We could buy market-rate housing and convert it to affordable in a public-private partnership.

Fourth is the power of data. Big data actually can allow you to generate insights that can open up doors, open up new product services. We go through some examples in the report of that.

And then finally, sometimes it's just rolling up your sleeves and making a commitment, right? Thinking about from David's commitment in terms of companies will take public and the expectations around diversity and see that cascade out. And sometimes just leaders put a stake in the ground and everyone else figures out how to mobilize.

And so the Sustainability Report has been a great sort of motivation, excuse, catalyst, for us to figure out how do we distill what we're learning, share it with others, and then figure out what's next on the agenda?

Allison Nathan: John, Kara, so much food for thought here. Thank you so much for joining us again.

Kara Mangone: Thank you, Allison. Great to be here.

John Goldstein: Thanks for having us.

Allison Nathan: Thanks so much for joining us this Thursday, April 28th, 2022, for another episode of *Exchanges at Goldman Sachs.*

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