JPMorgan Chase's Climate Strategy: Evolving our Approach to Energy, Scenarios, Targets and Emissions Disclosure

EVENT CALL TRANSCRIPT[1]

November 15, 2023

[1] Event transcript has been edited for clarity.

OVERVIEW

JPMorgan Chase's 2030 emission intensity-reduction targets help align the Firm's financing activities with global net zero ambitions, better engage with clients and support clients' decarbonization goals. The Firm's TCFD-aligned climate reporting details the Firm's progress towards its climate targets and evolved sustainability strategy. The Firm released its *2023 Climate Report* on November 15th and the subsequent climate-related event discussed the Firm's business and client strategy, newly articulated goals and enhanced disclosures in alignment with investor feedback.

Aaron Bertinetti, Head of ESG Investor Relations, moderated a panel discussion featuring **key executives in our Corporate Investment Bank, Center for Carbon Transition & Corporate Advisory and Sustainable Finance organizations**. JPMorgan Chase's Chief Risk Officer, **Ashley Bacon**, and the Firm's Global Head of Sustainability, **Heather Zichal**, also provided opening and closing remarks, respectively.

DISCUSSION TOPICS

- How the Firm balances financing that helps supply the world's energy needs, while accelerating the decarbonization of energy supplies and the financing of zero-carbon-based alternatives
- How the Firm employes a thoughtful and balanced approach to setting climate-related targets, including the use of science-based scenarios and feedback from clients, investors and other stakeholders
- How JPMorgan has enhanced disclosure on emissions, financing decisions, governance and energy supply
- How the Firm supports clients and partners with external stakeholders to help drive progress in carbon-intensive industry sectors, including addressing methane emissions and carbon flaring
- How JPMorgan continues to commit to help scale the financing of renewables, clean tech and the green economy

CORPORATE PARTICIPANTS

Speakers

Ashley Bacon

Chief Risk Officer, JPMorgan Chase & Co.

Heather Zichal

Global Head of Sustainability, JPMorgan Chase & Co.

Panel participants

Vamsi Alla

Executive Director, Center for Carbon Transition & Corporate Finance Advisory

Michael Johnson

Vice Chair – Investment Banking

Ben Ratner

Executive Director, Corporate Sustainability

Moderator

Aaron Bertinetti

Head of ESG Investor Relations

TRANSCRIPT

Ashley Bacon

Chief Risk Officer, JPMorgan Chase & Co.

Hello and thank you for joining us today. I'm Ashley Bacon, chief risk officer of JPMorgan Chase. I oversee the full spectrum of risks facing our company, including climate risk. I'm also a member of the Firm's Operating Committee and sponsor of our portfolio of environmental initiatives.

We know addressing climate change is complex. In order to achieve climate goals, there are key conditions related to energy security, technology, investment in innovation and appropriate climate policy that are required. Progress in these areas is not on track, which limits the world's ability to achieve its climate goals. It will take concerted focus and ingenuity to get things on a better path.

Despite the challenges, the economic opportunities of the Green Industrial Revolution are significant. In the U.S., several policies have been enacted that have been meaningful in providing financial incentives. One of them is the Inflation Reduction Act, which has mobilized private capital through tax credits, loans and grants for climate-friendly projects in the energy sector and beyond. We already see private capital engaging.

It's estimated the world will eventually need $4 trillion of annual investment to meet climate goals. This will need to be commercially motivated and is well beyond what is primed by policy. The level of investment has the potential to generate a wave of growth we haven't seen since the Industrial Revolution.

As a bank, we have an important role to play. We believe we can make the most impact by continuing to provide clients with the financing, advice and capital they need to advance their own carbon transitions.

While capital-allocation investments are crucial, they won't change economic realities on their own. Having the right conditions in the real economy is equally important. For instance, clients need to be able to secure permits to advance their transition agendas.

We also need technological advancements in energy production, infrastructure and consumption. Although some tremendous breakthroughs have been made, the promise of new technologies like direct air capture or long-duration energy storage have yet to scale. We need only look at once-nascent and costly technologies like solar and wind to be reminded that it would be foolish to bet against the engineer. The ingenuity, ambition and determination of the clients we support gives us great optimism and confidence.

JPMorgan Chase's *Climate Report*, which was published today, includes a number of updates. I want to highlight some of the key developments since last year.

First, we made important changes to our emission-intensity reduction targets. After engaging with our stakeholders, including shareholders and environmental NGOs, we chose to expand our Oil & Gas Scope 3 target. This is now called our Energy Mix target.

The IEA's Net-Zero Scenario makes it clear that a singular focus on fossil fuels won't successfully transform the energy system. We believe the incentives and targets we use to support the transition should reflect that reality.

Our expanded Energy Mix target considers financing provided to oil and gas, alternative fuels and zero-carbon-based electricity generation. This reflects the market actions needed to support the energy transition and more holistically represents the work we're doing. It also provides investors with more comprehensive views of how the energy system is evolving.

Importantly, while our financing of the Oil & Gas sector has trended down, our expanded target incentivizes further engagement with these clients on their Scope 3 decarbonization plans. It also accelerates our financing of zero-carbon power generation.

Secondly, we're calculating and disclosing absolute financed emissions for eight sectors within our financing portfolio that have emission-intensity reduction targets. We aligned our disclosure with fiscal year reporting, building on international standards and guidance to make our calculations. We intend to report emissions annually moving forward.

As a point of comparison, we also disclosed the differences between our own emissions reporting and the PCAF methodology used by some of our stakeholders. This also highlights some of the important reasons we chose not to use the PCAF methodology. For example, we include 100% of our capital markets activity in our facilitated emissions accounting on a three-year rolling average basis, as opposed to PCAF, which does not include this activity. We believe this provides a more transparent and complete picture of both our financed and facilitated emissions.

Third, we updated our Auto, Electric Power and Oil & Gas emission-intensity reduction targets to align with Net Zero by 2050, using the IEA's latest science-based scenario. This results in a greater reduction in emissions intensity for our Scope 1 and 2 Oil & Gas operational targets. We continue to work with clients to decrease their operational emissions, including through addressing methane emissions and carbon capture utilization and storage.

Fourth, we are setting Net Zero-aligned targets for two additional sectors — Shipping and Aluminum. We picked these sectors because they are high emitting. They also have opportunities to decarbonize — for example, by using alternative fuels in shipping and lower-carbon production methods for aluminum.

Including the two targets announced today, we have set 2030 portfolio-level emissions-intensity reduction targets for eight sectors that cover most global emissions across the supply and demand sides of the global energy economy and a high proportion of our financed emissions.

Our climate strategy is science-based and reliant on data-driven insights, and we will adapt and adjust as the data improves. We will also continue to update our Carbon Assessment Framework,(SM) which helps inform our financing decisions across these eight sectors.

At JPMorgan Chase, we aim to drive inclusive, sustainable economic growth because we believe our business thrives when the communities we serve do the same. We remain committed to playing our part, supporting today's energy needs, helping clients, engaging with policymakers and creating long-term shareholder value.

We appreciate your ongoing support and feedback. I encourage you to read our *Climate Report* to learn more about how we apply our capital and expertise. Thank you.

Aaron Bertinetti

Head of ESG Investor Relations

Welcome and thank you for joining us today. My name is Aaron Bertinetti. I’m Head of ESG Investor Relations at JPMorgan Chase. And it is my pleasure to host today's event on behalf of our investors from around the world.

Firstly, I'd like to thank our Chief Risk Officer, Ashley Bacon, there. As he made clear, whilst the world is not on track and the transition is not nearly as simple as some may hope, there is an abundance of commercial incentives, technological innovation and driven clients that inspire optimism and enthusiasm for us as a Firm to raise our ambitions today; in playing our part in supporting the world's goal of net zero.

As detailed in our *2023 Climate Report*, that means being intellectually honest about the complex problems that need to be solved, rather than avoiding that discussion by taking the easy road of providing comforting answers and relying on the status quo. Whether that's debuting a more comprehensive approach for the energy transition, with more challenging targets, or developing superior methods to calculate our absolute financed emissions, such that they reveal them to be many times larger than they would appear under PCAF. That is the hard thing about hard things.

It requires us to lead, innovate and adjust our approach, even when others may not, and to make our own independent business decisions that are informed by our unique vantage point across the global economy, the immense capabilities of our people and clients and our ongoing engagements with policymakers, NGOs and you, our investors.

With today's disclosures and event, we plan to clearly articulate the problem, explain the rationale for our approach, provide transparency on our progress, give direct access to you, to our top bankers, who are on the front lines with our clients and to continue to openly engage with you on our work that is both supporting the transition and positioning us to realize the tremendous commercial opportunities that the transition presents for our business clients and our shareholders.

As Head of ESG Investor Relations, I've been able to engage with many of you on these topics and then advise management, the Board and our lines of business on your views. On behalf of the Firm, I would like to thank you. Those engagements have been particularly helpful over the last year as an important input to the decisions we have announced today and the areas of disclosure we have sought to substantially enhance to give you greater transparency and comparability of information.

It is a point of pride to work at a Firm that has now comprehensively delivered on its commitments to shareholders at our Annual Meeting earlier this year to disclose our absolute emissions, add new sector targets and to align all of our targets with the IEA’s NZE scenario.

In advance of this event, we have also published an investor deck summarizing the key changes in this year's *Climate Report* and a paper on the near-term opportunities to reduce methane emissions. While we will not go through the deck during today's event, we hope it is a useful tool for you to quickly understand the scope of the enhancements we've announced today. At the conclusion of the panel, I will hand over to our Global Head of Sustainability, Heather Zichal, who will speak to specific examples of the work we are already doing and the opportunities the transition presents.

It is now my pleasure to introduce our panel. And I'm absolutely delighted to moderate them on your behalf. If you have not already submitted a question, please feel free to do so via Zoom and we will do our best to get to it.

Firstly, Michael Johnson joins us as a vice chairman of energy power and renewables investment banking. He's worked in investment banking for 32 years, focusing on M&A advisory and capital markets activity. Michael is a senior member of the JPMorgan Energy Transition team and is a member of the JPMorgan Investment Bank's ESG Control Forum, as well as the JPMorgan Environmental Forum. He previously served on the Paris Alignment Steering Committee. Before joining JPMorgan in 2018, Michael was a managing director and senior advisor at Morgan Stanley for eight years. Prior to this, he served as a group head at Deutsche Bank and Donaldson, Lufkin and Jenrette.

Vamsi Alla is an executive director at JPMorgan's Center for Carbon Transition, what we refer to as the CCT, and Corporate Finance Advisory teams that sit within the investment bank. He advises clients on a variety of corporate finance and ESG topics, such as low-carbon transition strategy, financing of green projects, ESG ratings, IPO positioning, capital allocation and structure, and shareholder value creation strategies. Vamsi also helps structure innovative financing solutions to bridge that gap between green companies and projects with pools of ESG capital. Vamsi is one of the lead architects of the Carbon Compass(SM) framework that outlines our approach to aligning our financing portfolio with the goals of the Paris Agreement, including the design and integration of our sector-based targets into our commercial and investment banking teams.

And lastly, we have Ben Ratner joining us from our corporate sustainability team, where he serves as an executive director. Ben leads external stakeholder engagement on climate and sustainability issues for the Firm across the spectrum of NGOs and think tanks, as well as select investors and corporates. Ben also advises on sustainability grantmaking and engages on climate and energy-related public policy. Previously, Ben served with the Environmental Defense Fund for a decade, where he led the organization's efforts to collaborate with energy companies, institutional investors and banks to advance climate action and the low-carbon energy transition. Ben is an environmental lawyer and management consultant by training and is one of the authors of the paper we released today, that is focused on the near-term opportunities to significantly reduce methane emissions in the oil and gas sector.

So, our panel today pulls back the curtain of how we actually operate as a business addressing climate and the transition. We have an energy banking leader, a climate banking expert and a sustainability policy specialist that we hope gives you the full spectrum from the client experience to the bankers in practice, and from our policy engagement to our strategy in action. On behalf of our audience, thank you to Michael, Vamsi and Ben for joining us today. And without further ado, I'm going to get straight to the investor questions.

So, Michael, first question is for you, and we have quite a few of these. Top of mind for many is how JPMorgan actually works with our clients to navigate the transition. Given today's announcement of the Firm's Energy Mix target, it might be helpful to understand the historical context you have had and received in terms of feedback from our oil and gas clients tied to the prior methodology. And while it's very early innings, we have a number of questions that would like to understand how the new target and methodology might actually impact our oil and gas clients, and whether there's any concerns about sourcing future capital, and if so, whether that framework addresses these concerns in our clients' eyes?

Michael Johnson

Vice Chair – Investment Banking

Thank you, Aaron. And thanks, everybody for taking the time to listen to this. So, Aaron, when we- we're a big bank and when we roll out any change in our climate targets, clients have questions. They want to know what's our intent? They want to know how it's going to impact them, and because we're seen as a leader, they want to know how that's going to impact the broader market.

So just by way of context, in May of 2021, when we rolled out the original Carbon Compass(SM) methodology, it was the first time, we were the first bank to set 2030 emissions-intensity targets for sectors, including the Oil & Gas sector. We had a lot of questions from clients then, and it was a very big deal. And what we did was we just engage with the clients. We had over 150 one-on-one conversations with clients to explain how we got to the targets. What do the targets mean and how we're going to implement those.

We were fully transparent. We built our targets really carefully and when we talked to the clients, we conveyed four goals and those goals are the same today. So what are we trying to do? We're trying to, one, continue to fund the energy that the world needs. Number two, support the clients in their own energy transition, whatever that is. Number three, align ourselves with companies who are producing energy with the lowest-possible emissions intensity.

And then number four, dramatically increase the funding and the financing that we do for renewables and low-carbon energy. Right? Those were true then, they are true today. The 2021 rollout actually created a lot of buzz and a lot of questions. We think, frankly, this adjustment to our metrics is not going to create the same amount of questions, and we think it's going to be more of a minor event for our oil and gas clients.

And then your last question was, can we source future capital? And what I would say is that clients generally are either transitioning their own business, or at a minimum, they're working very hard to reduce their operational emissions; we support both of those. And if they do one of those, we generally are able to find alignment with the clients. And I would add that when we look at these decisions, we also factor in other things, as we always have, like the relationship, like risk, including credit risk, and like returns to the bank.

Aaron Bertinetti

Head of ESG Investor Relations

That’s a fantastic comprehensive answer there. And perhaps that gives me an opportunity for quick follow-up to your comments about how you actually engage with your clients on this. Obviously, our investors have a range of views on what oil and gas majors should be doing and their level of progress to date.

If I was to summarize those questions that I have in front of me, it’s to ask you the following, If most clients seem to be receptive to the energy transition, why have we not seen large-scale oil and gas players invest in more traditional forms of renewable energy? And what is the Firm's opportunity in the context of that landscape?

Michael Johnson

Vice Chair – Investment Banking

So great question. And I would point out that the European majors have been investing in renewables for many, many years. We set our targets globally, as you know, and the U.S. companies, for the most part, have not gone into traditional renewables, for example, wind and solar. And that has to do with two things. One is they don't view it as an area of core competency. It's not something that they feel like they have an advantage in. And secondly, and this is partly because they didn't invest years ago, they can't find attractive returns in those sectors for them. It doesn't mean there won't be for others, but they don't see attractive returns in there for them.

What we do see energy companies doing is they look for adjacencies, they look for areas where their expertise can actually help. And we see them expanding into things like carbon capture, renewable fuels, lithium, geothermal, just places where their expertise gives them an edge. And we, we as a bank, have found many, many opportunities to engage with them on those endeavors.

Aaron Bertinetti

Head of ESG Investor Relations

So that might- that's super interesting. I'm sure we're going to come back to this because there's quite a few questions about how you operate as a banker with our clients. But I might use as a “natural transition”, pun fully intended there, to bring Vamsi into the conversation. Many of the investor questions are related to the decisions that drive that client-centric approach.

Vamsi, in your role, you worked to help define and refine these targets and methodologies with that kind of real economy lens of both the challenges and opportunities that Michael spoke a little bit there to. There is obviously a lot of interest in our new Energy Mix target, and our investors are asking if you could summarize, you know, those key changes from the Oil & Gas End-Use Scope 3 target that we previously had, and really the driving rationale and intended outcomes of that change?

Vamsi Alla

Executive Director, Center for Carbon Transition & Corporate Finance Advisor

Thank you, Aaron. So I want to start with a bit of context here. Our previous Oil & Gas End Use target was a 15% reduction from 2019 to 2030 baseline. And this was developed in alignment with the IEA Sustainable Development Scenario, which was broadly tracking in net zero by 2070 sort of scenario there.

When we were- and then the specific target relied on four levers within the oil and gas boundary. The first one is, as companies move from oil to gas, the intensity would reduce and then as they produce more biofuels, that's good. As they do more carbon capture, that's good. And then as they build out more renewables, that would reduce the intensity overall. And the 15% target, while challenging, within the realm of sort of like what was possible was, as Michael mentioned, the European majors working on becoming global energy majors. It was actually feasible, they were working towards it.

When we started working on updating it towards the IEA NZE scenario, the reliance of renewable energy in the change of the whole energy mix has materially increased in the NZE scenario, and for the reasons like Michael was explaining on, how oil and gas companies are playing in that particular sector, we felt that we had to expand the activity focus of that target to include areas where renewable energy is actually being developed.

And we were also very mindful of the reality of balancing the energy-security goals and the emission-reduction goals and making sure that the substitution of fossil fuels is happening at the rapid scale that is needed in the NZE scenario. Again, and what this change means is we've increased our ambition from a 15% intensity-reduction target to a 36% intensity-reduction target; and the target basically can be met through sort of three levers.

One, as we increase the amount of zero-carbon power generation, that should help substitute fossil fuel in the real world energy mix and that should reduce the intensity there.

Number two, we will continue to work with our oil and gas clients in reducing their Scope 3 carbon intensity, using the same levers that we've been talking to them about.

And the third thing, as more and more zero-carbon power comes into the mix, the need for external financing in the Oil & Gas sector is also going to going to decrease.

And in order to increase the transparency on this change, we’ve published how each of these levers are contributing to the progress we are making on this metric. We believe in today's environment where energy security and affordability are critical considerations, it's important for the broader energy mix to transition; and that is what our revised target is intended to do.

Aaron Bertinetti

Head of ESG Investor Relations

That's fantastic. Thank you for that very comprehensive overview there. I might pull at this point, Ben, into the conversation. So obviously, we've started off, unsurprisingly, talking a lot about oil and gas and energy. And, you know, another consequence of, you know, moving everything to the IEA NZE is that we obviously have a much more challenging target for operational efficiencies at Scope 1 and 2 for our oil and gas clients, including a significant opportunity that you've written about, Ben, in the paper released today around reducing methane emissions.

Now: Jamie has previously spoke about this opportunity, but as one of the lead authors of that paper, can you speak to why we've actually decided to really ramp up our focus on methane and take that public position on our efforts? And as a follow up, our investors are also asking, yeah, okay, you're focusing on it, but what's the actual size of the opportunity here?

Ben Ratner

Executive Director, Corporate Sustainability

Well, thank you, Aaron. And I'd like to start by recognizing my co-author, Gisselle Lopez, and Michael and Vamsi, who contributed significantly from the Center for Carbon Transition in the Corporate and Investment Bank. This was a team-of-teams effort that speaks to bringing the full force of the Firm to pursue climate-related opportunities in support of our clients' efforts.

In recent years, we have heard from shareholders and others an increasing appreciation, and Vamsi talked about this, of the need to balance energy security and climate considerations, contributing toward net zero with purpose, but also with pragmatism. And in particular, some shareholders have asked us to provide increasing transparency on how we engage oil and gas companies as they navigate the low-carbon transition, I think a theme of today's conversation already.

Our work on methane emission reduction and flaring is a great example of both balance and transparency. Although, as Michael talked about, oil and gas companies will make different choices about whether and how to evolve their businesses and product mixes, virtually all companies in the sector have an opportunity to reduce the operational emissions associated with the oil and gas in their product mix.

And so as was alluded to in our *Climate Report*, we strengthen the ambition of our oil and gas operational emissions intensity-reduction target to align with the net zero pathway and to achieve that, the methane- and flaring-related emissions we are seeking to reduce, they increase to 79% and 93% by 2030. So to be candid, those are large numbers in a relatively short time frame.

So this methane paper that was released this morning on the methane emissions opportunity, it explains why those emission reductions are important, how we see monitoring and measurement technology changing what is possible and what roles JPMorgan can play to accelerate progress. We also introduced a new framework with eight key elements that comprise our perspective of what companies should consider implementing in their methane management plans.

And last, Aaron, and you asked about contextualizing or sizing the opportunity, there are just three statistics that I would point to that I think really help put it in perspective. The first is that methane is more than 80 times more powerful than carbon dioxide at forcing climate change in the short term. That speaks to the climate value of near-term emission reductions.

The second is that scientific work, really a volume of it in recent years, has demonstrated that actual methane emissions in the U.S. oil and gas sector are on the order of 60% higher than desktop-based estimates and that indicates the need for direct measurement of emissions and increasing transparency by industry. That's something we talk a lot about and explore in our paper.

Third and lastly, BNF estimates a nearly $15 billion market size for methane mitigation, the technologies and the services associated with capturing this opportunity in the industry. So this isn't just the right thing to do. It's also a business opportunity.

Aaron Bertinetti

Head of ESG Investor Relations

That's a great, great piece of context at the end there, in particular, Ben. I mean, I can anticipate that we're going to get a lot of engagement requests around this from our investors. But just being conscious of time here a little bit, could you give us some very quick highlights for why now and what actually needs to happen in the near term?

Ben Ratner

Executive Director, Corporate Sustainability

So at the top line, methane is no longer a niche issue. It's a now issue. Policymakers are instituting both requirements and incentives for tackling emissions. Many are following the methane storyline in COP28. Insurers are starting to integrate methane and flaring controls into their underwriting requirements. Some institutional investors are incorporating methane into their engagements with corporates, and even the more market-oriented NGOs are engaged. So in short, methane has become a business issue.

Aaron, the second thing is good data is key. A lot of this is about getting incentives right for energy companies to gather, act and disclose higher-quality methane emissions data. We expect that as companies measure and report more real-world emissions, the numbers may go up in the near term. We need to recognize that as a sign of progress and encourage higher-quality data because what gets measured gets managed.

So to be clear, our view is that a company that reports high methane numbers, based on good measurement-based data, is actually farther along in continuous improvement than a company that reports lower methane emission numbers based on desktop estimates that we know from science often understate the problem.

Lastly, solutions will require more financing, not less. We see opportunities for JPMorgan to support both energy companies and also methane technology firms through our Corporate and Investment Bank, in our Commercial Bank and green economy businesses, and will continue to engage with a diverse group of stakeholders who are active on this issue. This includes leaning in with clients to support them on their methane and flaring-reduction efforts.

And lastly, I would just end by highlighting, we hope that the eight element framework, including best-in-class practices and positive actions at the end of our *Report*, is a useful resource for others.

Aaron Bertinetti

Head of ESG Investor Relations

Yeah, and I should point that the deck that we have provided those who are on this call this morning does cover those eight elements as well, if you have the deck in front of you and maybe not the report, so either source works. Thanks, Ben. That's great to sort of hear why we're going so strongly on methane. I think it's the first for a large bank, to my knowledge, to really send such a clear signal.

Vamsi, we've got a couple of questions here about obviously, we spent a lot of time on oil and gas, but we also announced some new sectors. As an Australian, it's- I always have to adjust from not saying “aluminium” and saying “aluminum.” And so I've been practicing but also, Shipping. You know, you're obviously deeply involved in setting the strategy and all the targets. Could you explain to our audience here who's interested in hearing about, you know, why did we pick these sectors?

Vamsi Alla

Executive Director, Center for Carbon Transition & Corporate Finance Advisor

Yeah, thank you, Aaron. So again, these sectors complement the work that we're doing across our existing demand and supply side targets, right? So as you might imagine, we have our Oil- and Gas-related targets. And then in entering this year, we had five targets in the demand side sectors, like Power, Auto, Steel, Cement, Aviation. And beginning this year, like we said, we're going to add Shipping and Aluminum to that mix. And shipping and aluminum represented 2% and 3% of global energy-related CO_2 emissions, respectively.

Our Shipping target focuses on the Scope 1 tank-to-wake emissions from global maritime freight transport, which is key to the global supply chains. So currently, we cover the international maritime freight portion of the shipping sector. In the short term, meaningful reduction can be made through efficiency measures, such as optimizing sailing speeds. In the long term, the sector will need to transition from its current reliance on oil-based fuels to alternatives such as biofuels, hydrogen, ammonia and electricity.

Aluminum focuses on the Scope 1 and 2 emissions from primary and secondary aluminum production, which play an integral role in auto, power, and aviation sectors as materials that go in to creation of the product. The two main levers aluminum companies have are switching to renewables from first, smelting, increasing the share of secondary mix in the production, and sort of making sure that, as aluminum is treated as one of infinitely recycled materials, making sure that the supply chain gets going on increasing the secondary share, is going to be key to reducing the intensity. Electrification of refining and switching to inert anodes will also play a key role in reducing CO_2 emissions in that sector.

Aaron Bertinetti

Head of ESG Investor Relations

Pretty powerful and sorry, if you see me looking down, it's because I'm looking at all the questions coming in. Thank you very much, Vamsi, on kind of describing those new targets. I'm going to have to switch back to Michael. This is probably no surprise — obviously, we've been very clear about the bank's role to provide capital and expertise to the energy sector and to drive that transition, as well as obviously energy security, which has been very topical over the last couple of years.

Top of mind for many of our investors and stakeholders today, particularly given the new Energy Mix target, is understanding the Firm's strategy around energy clients. Of particular focus is what is the decision-making process we use when banking these clients? And for a more blunt approach to that question, is JPMorgan able to finance any energy company that requires capital?

Michael Johnson

Vice Chair – Investment Banking

So Thanks, Aaron. That is the hard question. I'll answer the latter question first this way. In general, we have been able to finance clients that the bankers want to finance. And the way the process works is: Vamsi and his team have created a lot of data for us as bankers, and they have gone through all of our clients very rigorously with internal data and other sources of data, and they've created emissions-intensity buckets, right?

And we bucket those clients in from low-emissions intensity to high-emissions intensity, and it's created an internal loop, so that the coverage bankers come to people like Vamsi or people like me, who sits on some of the committees to say, “We have a client, you know, they're in the high-emissions-intensity bucket. What do we do?”

So I'll start with the easy ones. If they're in the low-emissions-intensity bucket, the client aspect of a lending or an underwriting, the climate, rather, aspect of the lending or the underwriting decision, is pretty easy. We want to do more, right? The low-emissions intensity, more, more, more. If it's on the high end of the buckets, high-emissions intensity, then we stop and we say, “Okay, what else do we need to know?” We care a lot about things like what's their path, what are their targets? Are they changing these things?

We also, remember, emissions intensity for the for the Energy Mix is talking about Scope 3. But we also made a decision early on to separate Scope 1 and Scope 2 because that's more within their control. That's where the methane comes in. So we also take a look at: What are they doing on those targets? And then, you know, we look holistically at the relationship. We look at credit risk, we look at returns on our capital, we look at the long-term relationship. And as I said, you know, we go through that, and in general, we've been able to accommodate clients that are good clients of the Firm, and we'll continue to do that.

Aaron Bertinetti

Head of ESG Investor Relations

Well, thanks, Michael. That's a great — both client and banker insight there of how you all work together. That probably provides a good opportunity also for Vamsi to address a number of questions related to that sort of portfolio-level approach of using intensity-based targets.

Vamsi, you have a unique perspective on this. You know in tandem with setting all the new intensity-based targets, we've also delivered on our commitment that I spoke to earlier to shareholders this year by disclosing absolute financed emissions. What drove that decision to disclose, and could you explain — or explain and expand on — Ashley's earlier point that some of our investors have noted, about why we decided not to use the PCAF methodology and developed our own?

Vamsi Alla

Executive Director, Center for Carbon Transition & Corporate Finance Advisor

Yep, thanks, Aaron. So we've reflected on several asks from our stakeholders and in a bid to improve transparency and provide an alternative view of our portfolio emissions, we're now disclosing absolute emissions. But we continue to maintain that there are inherent issues with absolute-based metrics, especially the market-based volatility that gets introduced into the computation here.

As Ashley mentioned, to address the volatility and align with our accounting of in-scope exposure for carbon-intensity targets, we've made a few adjustments to the PCAF methodology. The first thing is, we use a three-year average capital structure for the attribution factor instead of a point-in-time enterprise value, including cash. And what that means is when sort of in PCAF methodology, if you're using a point-in-time value of the company, it'll change year to year. And that introduces a lot of volatility into the reporting of that number. This averaging will help normalize and sort of provide a smooth reporting over the years.

And the second thing we've done is: we included a twelve-month average committed lending and tax-oriented investing exposure. We do so to capture the impact of short-term obligations, such as bridge loans, which frequently will have terms that are less than one year.

Then the third thing: we also account for our facilitated emissions by using a three-year average view of our capital markets activity and capital markets activity can be episodic, with a majority of clients typically accessing capital markets once every few years. And our share of capital markets activities accounted on a 100% attribution basis. Again, for example, if there's a $12 billion facility with two banks, we will account for 100% of our $6 billion share and the $6 billion is spread over a three-year period as $2 billion in each year.

So again, we've made this change to solve for this volatility problem, but you should also note that in the *Climate Report*, we report the PCAF-aligned number as well. Again, this is something investors have asked us to be more transparent about and provide that number for comparability purposes.

Aaron Bertinetti

Head of ESG Investor Relations

So this is a natural follow-up, and I know we've talked about this quite a bit, Vamsi. Our audience would like to hear about what we're doing in terms of addressing those data-quality matters across various sectors and the methodologies that we're using, not just obviously for reporting purposes, but also for client assessments. And perhaps I'll add this other question more holistically related to that. Could you also give us a brief overview of how the Firm then uses that data, whatever quality it may be, in part to drive the day-to-day business activities in the context of our Carbon Assessment Framework?

Vamsi Alla

Executive Director, Center for Carbon Transition & Corporate Finance Advisor

Yep. So in improving the quality, timeliness and availability of data is a key component to properly measuring emissions and monitoring progress over time, right? There's a famous saying if you can't measure it, you can’t track it. So we aim to mitigate three main data-quality issues. There are often data gaps in lot of emissions reporting. There is a huge data lag, emissions data and then there are often issues around measurement and estimation in these datasets.

Most of these are addressed through ongoing engagement with clients on improving the overall quality and availability of data. These data-collection efforts feed both into our target-setting activities and also how we make financing decisions. Carbon Assessment Framework is our internal carbon-rating framework that utilizes a large amount of data and helps us assess our clients’ carbon performances.

I know Michael had touched upon this earlier on how the client engagement works there, and our Carbon Assessment Framework is based on both a quantitative and a qualitative pillar. In the quantitative pillar, we basically look at three things. One, what is the client's historical carbon-intensity or emissions-intensity track record? Two, where does the client current carbon intensity rank in terms of the portfolio? And three, where is the client's future carbon index, or what targets have the client set? Then in the qualitative part of the equation, we also look at the management's intent, capital allocation plans and some things like that, so that we can have a more holistic view combining both quantitative and qualitative datasets.

The CAF process is integrated into our internal decision-making process. Again, if you're doing a lending product along with all the other ingredients, like profitability, relationship, you now have carbon as an additional ingredient, the same thing in the capital markets activity that we do for all the sectors where we have targets.

Aaron Bertinetti

Head of ESG Investor Relations

I mean, that's just great color. I can tell you just from an IR perspective, it's one of the areas that our investors are most focused on, is understanding how we make those decisions and understanding how that framework works with the data that we do have. I wanted to switch it a little bit, give Ben some time.

We've got a couple of questions here for you, Ben. You know, just kind of like at a macro level, looking at drivers of the carbon transition. We have some investors speaking to what Jamie said today in his letter, highlighting that the world, and I'm going to quote here, “Needs thoughtful, well-implemented public policy that incentivizes low-carbon investments, research and development.”

Given the remit of your job, Ben, can you speak to the Firm's approach to how we actually engage on climate-related public policy? And obviously it's been a topic, even in our Annual Meeting. So how does the Firm actually encourage decarbonization with advocacy?

Ben Ratner

Executive Director, Corporate Sustainability

Well, thanks, Aaron. This is an issue that I'm passionate about, coming from my background in environmental advocacy that you noted in the intro, and it's helpful to be based in Washington, D.C., as is our Global Head of Sustainability, Heather Zichal, who I think we'll hear from a little bit later. We strive for our approach to be thoughtful, balanced and selective.

On the one hand, climate has not been an issue that the Firm has lobbied on historically and our public policy-related engagements have generally emphasized core financial issues that most directly impact the banking sector. But on the other hand, as a Firm that supports real economy clients and invests in the low-carbon transition in a range of ways that we've heard about today, we recognize the need for thoughtful public policy that helps unlock capital to scale the deployment of decarbonization technologies and solutions.

So what I want to drill down on here is there's several ways that we engaged on climate-related public policies in 2023. First, we used our voice, including releasing a piece in the spring from two senior leaders, commenting on the tailwinds presented by the Inflation Reduction Act and identifying permitting reform and some other areas needed to achieve the stated policy goals. Another piece that was released by one of our business leaders during Climate Week this past fall, and that argued for expansion of a proven World Bank program, the Global Infrastructure Facility, to help mobilize capital for energy transition in emerging markets.

We also used our corporate philanthropy, providing the catalytic grants to help enable the launch of a new initiative, founded by former Secretary of Energy, Ernie Moniz, the Energy Futures Finance Forum. And I should recognize and thank Michael Johnson for serving on the advisory board to Secretary Moniz. That Center offers nonpartisan, fact-based policy recommendations to help attract more private capital for decarbonization, and they have released some detailed white papers on carbon capture and nuclear.

Lastly, we use our expertise and our convening power. In September, we were the sole bank, exclusive bank, to sponsor the Deploy23 conference, which took place with Department of Energy leadership in Washington, D.C., bringing together policymakers, investors and growth-stage companies in a discussion on deploying clean energy at scale.

Aaron Bertinetti

Head of ESG Investor Relations

Ben, that was a great answer. And also, Michael, gee, you're busy. I've got a follow up for Ben here. Could you tell us just very quickly, we've got about 10 minutes remaining before Heather is on, how your work with NGOs actually helps drive the Firm's insights about key climate-related issues? I know that was a key part of our outreach before we made a decision about which way we would go with the announcements today.

Ben Ratner

Executive Director, Corporate Sustainability

That's exactly right. The Firm's commitment to external engagement on climate, including with NGOs, is a real one, and it makes us better. As you mentioned, our work on the *Climate Report* benefited from constructive engagement with NGOs, really, over the course of the year, we held a series of dialogues with thoughtful NGOs, and we listened to their evolving perspectives on the low-carbon transition. It's valuable to have trusting relationships and open forums to discuss and sometimes debate the hard and the complex issues in the transition.

Of course, at the end of the day, we make our own business decisions, but hearing from a wide spectrum of stakeholders, including NGOs, is an important input to our process here at JPMorgan Chase. And I think the methane initiative that I had the chance to talk a little bit about earlier is another great example of NGO engagement. Groups like EDF, Ceres, Clean Air Task Force, worked with us on methane and flaring this year, and you'll see citations to a number of their publications in our paper.

And just lastly, Aaron, we do engage as appropriate with a subset of environmental activists who advocate different approaches than ours in some ways and may use certain tactics. Although conversations with activists may not lead to changes of hearts and minds, we have had success in creating open and respectful lines of communication, and this can be helpful for risk management, and we want to remain transparent with what we're doing, and why, and open to engagement.

Aaron Bertinetti

Head of ESG Investor Relations

Okay, great. Michael, I'm going to switch back to you. We have a number of questions for you, and then I'll try and fit a couple more for Vamsi, and then we will hand over to Heather. So Michael, we've unsurprisingly, we've got another question about the new Energy Mix target methodology.

What do you see as the most meaningful impact for our oil and gas clients? How will this affect the Firm's ability to build and maintain further relationships with traditional energy clients? And I'm going to add a little bit on top of that, which is like, have we seen more ambitious target setting by high-carbon intensity clients when we are having those discussions, and how do we actually demonstrate that to the market?

Michael Johnson

Vice Chair – Investment Banking

So, thanks, Aaron. The first thing to note about the new targets is just to remind people, we made a decision two years ago that we were going to set targets for oil and gas. I said this earlier. We separated Scope 1 and Scope 2, meaning operational emissions, in one bucket and then Scope 3 in another bucket. And we've retained that.

So the first line of conversation we have about with clients, which they love, by the way, is help us focus on what we can control, operational emissions, and the fact that we have this methane paper that has best practices, from our standpoint, listen, helps to inform clients, you know, where we hope things go, and that's how we, frankly, help to bend the curve. We don't we don't set rigorous — we don't set rigorous targets that they themselves have to hit individually.

We do it on a portfolio basis, but we do guide best practices. So the first conversation we have with them will be, “You’ve now sharpened the pencil on your operational-emissions intensity. What does that mean for me? How am I doing in that? You have new methane targets, you have new flaring targets that are embedded in your targets. Let’s talk about that.” And we, frankly, have great engagement with clients about that. How do we do more of that? And there, we learn a lot from clients on that.

A lot of what we roll out is informed by the dialogue that we've had with clients on, “How can you measure this, how can you set — how, how good can it be in the field?” Right? We really have that dialogue with clients and it informs us. So that's positive.

The energy mix, look, there will be some clients who don't love the fact that we have a separate Scope 3 target, because we have to talk about Scope 3, but we have to talk about Scope 3. We think the way we're doing it now is a better way to measure it, because it aligns with how we actually practice our business, which is what I said before. We want to fund the energy the world needs, we want to do it with people that are producing energy with the lowest-possible carbon-emission footprint. And, and this is what energy mix really does, we want to double or triple down on renewable financing.

Aaron Bertinetti

Head of ESG Investor Relations

Very helpful. And I don't know whether you want to add any more. We have got more questions about, just very quickly about that framework and how you use it, if there's any additional color you want to give. We do have some clients actually asking — sorry, not clients, investors asking whether we encourage our oil and gas and energy clients to actually disclose the targets and emissions that we obviously see when we're making those decisions?

Michael Johnson

Vice Chair – Investment Banking

We have chosen to be non-prescriptive on forcing them. That's the first question they asked us when we rolled out in 2021, “What do we have to do to abide by this?” What we do is we share what's behind our targets so they know if they're part of the portfolio, what their path needs to be, to be within those targets. And then we work with them on that. And it's a really positive “do loop,” is what I'd say.

We engage with clients, CEOs, boards; they want to know how we're setting our targets. They want to know what's important, and we do our best to accommodate them and to be — I said where we align before. Where we don’t align is, if clients, frankly, just don't have any ambition. If they say, I'm not going to spend the money, for example, to reduce operational emissions, then we just don't have alignment with them.

Aaron Bertinetti

Head of ESG Investor Relations

Thank you very much, Michael. Vamsi, I might give you the last question. We have a number of other questions that, you know, please, to this point, if we don’t get to them, please contact me directly or Investor Relations directly, and we will — I will look forward to engaging with you.

Vamsi, this one's kind of interesting because we haven't had it for a while, but obviously it's been a discussion for us internally, around the Basel III end game. The question from the audience member is basically, if adopted, as it's currently proposed by the Fed, what are the potential impacts on JPMorgan's climate change financing?

Vamsi Alla

Executive Director, Center for Carbon Transition & Corporate Finance Advisor

Yep, I know this is a bit of a technical issue, but I'll try to do my best to get to this in a simpler manner. Look, I think the extension of the comment period for this, like Basel III end game rules are to mid-January and the special data collection are constructive steps that the agencies are taking.

But don't think we can read too much into what it means for the potential changes that might be coming here. In terms of specific areas, you're probably aware of the issue on tax equity investments in renewable energy. The need to align retail risk weights with Basel, and also expand the use of 65% risk weight for investment-grade corporates beyond just companies with publicly traded securities. Under current capital rules, tax equity investments receive a 100% risk weighting if a bank’s total equity investments are less than 10% of the capital.

The proposed rule would increase the risk weighting for equity investments, including tax equity, to 400%. For the roughly three dozen banks covered by the rule, the proposal would quadruple the risk-weighted assets banks must allocate towards their tax equity. Banks and clean energy companies have argued that the rules would make projects uneconomical and the proposal is already taking its toll on new commitments.

Simply put, we in the industry are still very hopeful and fairly confident the regulatory authorities will fix the issue and keep tax equity RWA at 100%. From a fundamental risk perspective, and then an IRA policy perspective, this is the right answer. At this time, the market really is not adjusting pricing on its investment expectations for this risk, but that will change early to mid-next year if the regulatory authorities do not address the issue in a positive way, sooner than later. We're still assessing what we can mitigate and optimize and will adopt accordingly, once we have a final rule.

Aaron Bertinetti

Head of ESG Investor Relations

Super-helpful answer and a nice way to highlight that as a bank, we can do a lot to support the transition, but we do also rely on things beyond our control, including that very important one, around policy making.

Fantastic. I think that's the last question we have time for today. Thank you very much for our panel for providing an end-to-end perspective on how our climate strategy rubber hits the investment banking road. Thank you also to our audience for joining us today and your questions. Again, if we didn't get to them, my apologies, we are a very happy to engage, so please reach out to myself or the Investor Relations team. You can also find transcripts from all of our events on the Investor Relations website, and following our final speaker, we'll also have a QR code which will appear that you can use to send us feedback on today's event. It's been an absolute pleasure to moderate this panel.

I would now like to introduce you to Heather Zichal, our global head of sustainability. Heather leads our firmwide Sustainability strategy and partners with our lines of business and corporate colleagues to support sustainable business opportunities, collaborating with external stakeholders, and engaging with policymakers and regulators on sustainability issues around the world. On behalf of our audience today, Heather, thank you very much for joining us.

Heather Zichal

Global Head of Sustainability, JPMorgan Chase & Co.

Thank you to all of our panelists for today's discussion and thank you to our investors and stakeholders for actively participating with your questions today. At JPMorgan Chase, we believe that a successful transition is one that mitigates the worst impacts of climate change, generates economic growth and provides affordable and reliable access to energy. We believe working with our clients is where we can have the most influence on the transition.

We take the Firm's role seriously, not only because it's the right thing to do, but because it's good for business. I'm energized by the work we are doing today. Given our enterprise is global, diversified and at scale, we can help clients of all relative sizes and maturities reach their sustainability goals. This includes newer, innovative companies like Greenbacker and rPlus. In 2022, JPMorgan helped to provide syndicated project finance loans to support the construction of the Appaloosa solar project in Utah. That project is expected to generate zero-carbon energy to power more than 50,000 homes and create approximately 250 construction jobs.

The Firm's diverse client base also includes large, transitioning incumbents like Cemex, one of the world's largest construction materials companies, where we served as sole green structuring agent for the company's $1 billion Green Bond. This issuance is the first-ever green bond issuance from a major construction materials company and one of the largest by a Latin American corporate.

These client examples represent just some of the capabilities and capital we are deploying to innovative solutions that will support our clients through the transition and contribute to our progress on our $2.5 trillion Sustainable Development Target and our $1 trillion Green Financing Target. We continue to manage our business for the long term, including how we manage our business on climate-related issues. Our strong track record illustrates that managing for the long term is the best way for our Firm to deliver long-term impact, sustainable business results and increase shareholder value.

Even if it is not yet clear exactly how or at what speed the world will actually transition, it is clear that low-carbon energy will power the economy of the future, with the IEA estimating that fossil fuel demand will peak before 2030. Progress toward that future may not be linear as the world balances climate change, energy security and economic growth. However, the transition to a more sustainable future presents significant opportunities for our Firm. The transition will require massive investment — $4 trillion of additional investment annually, by some estimates.

We are positioning our business to compete for and capitalize on the opportunities that investment will create. We will also continue to serve as a thoughtful, intellectually honest and pragmatic leader on climate-related issues and aim to be the bank of choice today, through the transition and long into the low-carbon future. As higher-quality data and information becomes available and the path to a low-carbon economy becomes clearer, we will continue to adapt our approach to meet the needs of our clients.

You can see examples of this in the *Climate Report* we released today, where we've announced and explain our expanded energy mix target to reflect the reality of the IEA NZE scenario. Just as importantly, we have also delivered on commitments we've made to our investors over the last year, including in our *2023 Proxy Statement*. We've delivered on disclosing absolute emissions by sector, and after having considered continuing to use the IEA SDS scenario for sector targets we set prior to the existence of the NZE scenario, we've updated them to align with the IEA NZE scenario. We recognize that some changes may need additional transparency and have a long history of seeking to provide investors with transparent and decision-useful information.

For example, in 2021, we became the first large U.S. bank to set detailed targets for key sectors of our financing portfolio. We were transparent with our work and made our Carbon Compass(SM) methodology publicly available. We've continued to update Carbon Compass since, with new details as we've added additional sector targets. Our commitment to transparency is reflected again with the targets we updated and announced today. In 2022, we disclosed details about how we monitor progress against our targets.

Through our Carbon Assessment Framework, we aim to provide a consistent, comprehensive and data-driven approach to assess our clients’ emissions and decarbonization plans. We use this tool as one part of our decision-making process for balance sheet and capital markets transactions for in-scope clients. We also disclosed for the first time a heatmap of our credit exposure by sector, to indicate carbon intensity of our own lending portfolio and sector-level physical risk.

In 2023, we enhanced the comparability of our financed emissions disclosure by not only delivering on our commitment to shareholders that we would for the first time disclose absolute financed emissions for sectors where we set targets., but by building on international standards, we provided a transparent comparison and explanation for our enhanced approach to reporting on absolute emissions relative to other frameworks like PCAF. We also provided significant detail on how we expanded our Oil & Gas End-Use target to our new Energy Mix target, which is now aligned for the IEA NZE scenario, along with all our other sector-based targets, including our oil and gas operational targets.

Today we've delivered on what we told the market we would do, and we've also announced new ambitions. Going forward, our overarching goal and fundamental strategy remains the same. We want to compete to win in the transition to a low-carbon future. This means both supporting our clients in their transition objectives and helping to scale low-carbon technology. The carbon transition presents immense opportunity for our business, clients and shareholders, and we also recognize that the future presents risks that require resilience and good governance. We remain committed to continuing to engage with our investors, clients and other stakeholders as we seek to learn, grow and adapt into the future. Thank you all for tuning in today. I look forward to another year of progress and opportunity ahead.

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