MEETING

STATE OF CALIFORNIA

PUBLIC EMPLOYEES' RETIREMENT SYSTEM

BOARD OF ADMINISTRATION

INVESTMENT COMMITTEE

OPEN SESSION

CALPERS AUDITORIUM

LINCOLN PLAZA NORTH

400 P STREET

SACRAMENTO, CALIFORNIA

MONDAY, NOVEMBER 14, 2022

9:56 A.M.

JAMES F. PETERS, CSR
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APPEARANCES

COMMITTEE MEMBERS:

David Miller, Chairperson

Rob Feckner, Vice Chairperson

Fiona Ma, represented by Frank Ruffino

Lisa Middleton

Eraina Ortega

Jose Luis Pacheco

Ramon Rubalcava

Theresa Taylor

Mullissa Willette

Gail Willis, PhD

Betty Yee

STAFF:

Marcie Frost, Chief Executive Officer

Michael Cohen, Interim Chief Operating Investment Officer

Matt Jacobs, General Counsel

Nicole Musicco, Chief Investment Officer

James Andrus, Interim Managing Investment Director

Travis Antoniono, Investment Manager

Dan Bienvenue, Deputy Chief Investment Officer

Amy Deming, Investment Director

Michael Krimm, Investment Director

APPEARANCES CONTINUED

STAFF:

Irene Rodriguez, Investment Manager

Tamara Sells, Associate Investment Manager

ALSO PRESENT:

Tim Behrens, California State Retirees

Greg Camphire

Al Darby, Retired Public Employees Association

Steve Foresti, Wilshire Advisors

Jennifer O'Dell, Laborers International Union of North America

Vivian Price

Michael Ring, Service Employees International Union

Sara Theiss, Fossil Free California

Doug Thompson

Sheila Thorne, Fossil Free California

INDEX

INDEX CONTINUED

PROCEEDINGS

CHAIRPERSON MILLER: Okay. Good morning. I'd like to call to order the Investment Committee. And so we'll start with a roll call.

COMMITTEE SECRETARY: David Miller?

CHAIRPERSON MILLER: Here.

COMMITTEE SECRETARY: Rob Feckner?

VICE CHAIRPERSON FECKNER: Good morning.

COMMITTEE SECRETARY: Frank Ruffino for Fiona Ma?

ACTING COMMITTEE MEMBER RUFFINO: Present.

COMMITTEE SECRETARY: Lisa Middleton?

COMMITTEE MEMBER MIDDLETON: Present.

COMMITTEE SECRETARY: Eraina Ortega?

COMMITTEE MEMBER ORTEGA: Here.

COMMITTEE SECRETARY: Jose Luis Pacheco?

COMMITTEE MEMBER PACHECO: Present.

COMMITTEE SECRETARY: Ramon Rubalcava?

COMMITTEE MEMBER RUBALCAVA: Present.

COMMITTEE SECRETARY: Theresa Taylor?

COMMITTEE MEMBER TAYLOR: Here.

COMMITTEE SECRETARY: Mullissa Willette?

COMMITTEE MEMBER WILLETTE: Here.

COMMITTEE SECRETARY: Dr. Gail Willis?

COMMITTEE MEMBER WILLIS: Here.

COMMITTEE SECRETARY: Controller Betty Yee?

COMMITTEE MEMBER YEE: Here.

CHAIRPERSON MILLER: Okay. Thank you.

So we'll move on to Item 2, our Executive Report from our Chief Investment Officer.

CHIEF INVESTMENT OFFICER MUSICCO: Thank you very much. Good morning everyone Nicole Musicco, Chief Investment Officer. I'm delighted to be here today and thought we would kick off our agenda today really with just a high level comment on market conditions and as that relates to our strategic asset allocation. I'll do highlights of today's agenda and then some, you know, exciting changes to our team, which we'll discuss.

First up, I think it's always important that we just level set and context set for why we're here. We -- we look at our strategic asset allocation through the -- through a 20-year lens. We set that strategic asset allocation every four years using capital market assumptions that are 20 years in the future. And so it really behooves us to make sure that we're set up as a very agile nimble team to be reviewing those assumptions along the way. And so part of what we'll talk about in the agenda today with some policy suggestions, for example, helps us with that.

But I thought we -- given the market conditions that we're seeing today, which really, I think, it would be hard for us to say anything different than what the world is telling us, which is it looks like we are in for some continued rocky roads through the next 12 to 18 months. Market conditions continue to show weaker growth, coupled with higher prices. We've got a tight labor market. And definitely presenting more difficult times for both -- through both the economic and business lens, as well as trading conditions for the next 12 to 18 months.

And so as we sit here today with our strategic asset allocation which we started to execute on as of July 1, that doesn't mean that the team isn't constantly looking at what assumptions are -- have gone into that strategic asset allocation, making sure we have the right governance approach in place to be making decisions along the way to make tweaks as necessary and to make sure we're collating and collaborating on the research we do internally as well as with our extensive set of partners globally.

So with that, I will just briefly touch on some of our agenda items today. Today, you're -- we are going to be digging into some of the really important workstreams that I introduced back in our June meeting, the nine business initiatives, many of which are really tied to some of the important action items, if you will, that we're reviewing today.

First up is around our changes to Investment Policy. Again, this is a second reading. And really the idea here is to make sure we are set up to be agile, the ability to be responsive to market conditions and really make sure that we have the appropriate tools in place to execute on the strategic asset allocation that we endeavored starting in July.

The second piece, again a very important initiative to us, is when -- in all the efforts that went into preparing for and capitalizing on the challenges and opportunities of climate change. And so you'll hear, through our task force on climate-related financial disclosure, you'll hear about many of the activities that are ongoing within our -- within our organization.

Finally, we're continuing to support the integration of diversity, both within our investment management practices, but also within our own team. We'll touch on, through a report that James will come up and discuss, some of our initiatives along those lines.

We'll also give you a preview into liquidity management. I'm very proud of what the team has done really starting well before I arrived, but wanted to use this as one of our education pieces. We're hoping to come in front of the Board on a regular basis now. We'll just give you kind of an inside look in our kitchen of what's going on. And one of the first topics we are going to be presenting to you today is on liquidity management.

We have our regular review of our active policy level divestments and we will give you an update on our Responsible Contractor Program.

And finally, the next piece that I'll just touch on is some of our personnel changes. I'm very excited and pleased to announce that we have a couple new appointments. First off, I would like to introduce Anton Orlich as a Managing Investment Director for Growth and Innovation. Anton is hopefully a familiar face to some of you. He did spend some time at CalPERS. So he returns to us from a stint when he was here with a role of absolute strategies and private equity programs from 2013 to 2016. And so now, he joins us from Kaiser Permanente where he served as the head of the alternative investments team, where he grew that allocation from 15 percent to over 50 percent managing a portfolio of over 100 billion. Anton also served as an Intelligence Officer in the U.S. Navy, and held roles as the head of private equity at Pivotal Group and head of equities at the Arizona Public Safety Personnel Retirement System, and a consultant at McKinsey.

We're really delighted to be having the opportunity to continue to add what I've been referring to as real athletes to our bench to make sure that we can execute and deliver the promise that we've made to our members. This is a newly created position of innovation and growth. As you know, the Board approved an allocation to what is referred to as opportunistic. Today, much of that when we think of our opportunistic part of our strategy, I think it aligns -- in our minds today, has been aligned directly with what Jean Hsu's team is doing within private debt. But it's a large allocation and we have the -- within that policy the ability to look at opportunities outside of asset classes, for example. And so having the opportunity to bring someone in like Anton with such deep direct deal experience in addition to fund experience will really help us utilize that allocation that already exists within opportunistic.

You'll start to see a bit of a nomenclature change as well. Jean's title will -- will reflect the fact that she is focused solely in our private credit program. And so we'll start to delineate between opportunistic and private debt or private credit in and our ongoing reporting from this point forward.

I'm also very excited after, you know, tremendous work from across the equities team to announce Drew Hambly as joining as the new Investment Director and Head of Corporate Governance for our CalPERS global equity team.

Simiso and team have done an excellent job at really scoping the globe, if you will, to find the right talent to fill this role, given its real importance to us strategically. Drew has over 24 years in corporate governance and sustainability. He joins us from Morgan Stanley Investment Management where he'd been the Executive Director of Global Stewardship since 2011. And he's also work at State Street Global Advisors, Moody's Investor Service, and the Investor Responsibility Research Center. So we're really delighted to be welcoming both of those great talents to CalPERS. And each of them has already started and we're already seeing some great traction.

On that, I'll pivot to we have announced that Greg Ruiz who's been our Managing Investment Director for private equity will be leaving CalPERS. We've been delighted with the effort that he has given us and the contributions he's given us over the last three years. We're excited for his next phase of his career. He's left behind us a much more organized, much more stable reinvigorated Private Equity Program, if you will, and he had a tremendous impact on bringing in some excellent talent within that team. And so with that, we wish him very well in his future endeavors. We're going to make sure we are very focused on creating a really strong alumni network for CalPERS. I think it's important culturally and for our own team to know that when you come to CalPERS you give us your all and we'll make sure we're supportive of you as you leave. And so with that, I'd really just like to thank Greg for all the contributions he made well before I arrived, but even just during the short period of time that we had to work together.

And so with that, I believe we are ready to turn it back over to the Chair. Thank you.

CHAIRPERSON MILLER: Okay. Thank you for that. And I'd also reiterate my appreciation for Greg and his time here and wish you the very best in your future endeavors. And just a general comment, I'm -- I'm really encouraged and pleased with this more kind of a strategic overall approach to talent and workflow workforce talent management. It's something that strategic talent management has been kind of a recurring theme for me ever since I've been on this Board. And seeing over the last few years the approach really come together and be much more coherent and much more focused on talent flow, pipeline, development of our capabilities and capacity within, and looking forward and looking out at that kind of you say alumni, but kind of -- and also the potential for, you know, kind of the homing pigeon club. As people go out and, you know, take, you know, good thoughts of their time at CalPERS out into the world and sometimes return to us and bring those talents back, you know, at a another level and kind of continue that cycle. So it's a very encouraging message and I look forward to more of that kind of message as we go forward.

So I'll open it. I have a question from Director Taylor.

COMMITTEE MEMBER TAYLOR: Hi. Thank you.

CHAIRPERSON MILLER: There we go. Okay. No. Still --

COMMITTEE MEMBER TAYLOR: There we go.

CHAIRPERSON MILLER: There you go, President Taylor.

COMMITTEE MEMBER TAYLOR: Sure. I just -- can we go back to the second person, because I missed the name.

CHIEF INVESTMENT OFFICER MUSICCO: We sure can. I don't want him to go unnoticed. Drew Hambly.

(Laughter).

COMMITTEE MEMBER TAYLOR: Drew?

CHIEF INVESTMENT OFFICER MUSICCO: Drew, correct.

COMMITTEE MEMBER TAYLOR: Okay.

CHIEF INVESTMENT OFFICER MUSICCO: And this is for that corporate governance role that -- Simiso wears many hats ever day, but he's been wearing multiple hats for a period of time. And it's such an important strategic role for us and so we're just delighted to have Drew join us with the -- you know, the depth of experience that he has in this area.

COMMITTEE MEMBER TAYLOR: Okay.

CHIEF INVESTMENT OFFICER MUSICCO: And he's already hit the ground running.

CHAIRPERSON MILLER: I think we have Drew here in the second here. Is that Drew?

CHIEF INVESTMENT OFFICER MUSICCO: Drew can raise his hand. Sorry to embarrass you, Drew. I didn't give you the heads up that you might be spotlighted.

COMMITTEE MEMBER TAYLOR: We should probably introduce Anton too. It looks like he's also here.

CHAIRPERSON MILLER: Yeah, perhaps even have them stand up, so we can all see them.

CHIEF INVESTMENT OFFICER MUSICCO: Yes, Anton.

(Laughter).

CHIEF INVESTMENT OFFICER MUSICCO: And Anton will be joining us later on as well, but thank you for giving us the opportunity, so you could start putting names to faces.

COMMITTEE MEMBER TAYLOR: I appreciate it. Thank you. Go ahead.

CHAIRPERSON MILLER: Okay. I'm not seeing any other questions from the Board, so I will thank you, and we'll move on.

So next we have our action consent items. So what's the pleasure of the Committee?

VICE CHAIRPERSON FECKNER: Move approval.

COMMITTEE MEMBER PACHECO: Second.

CHAIRPERSON MILLER: Moved and seconded.

Any discussion?

I'll call for the question.

All those in favor?

(Ayes.)

COMMITTEE SECRETARY: Any opposed?

COMMITTEE MEMBER TAYLOR: Oh.

VICE CHAIRPERSON FECKNER: Oh, you somebody on the line.

COMMITTEE MEMBER TAYLOR: We have to do roll call.

VICE CHAIRPERSON FECKNER: Roll Call.

CHAIRPERSON MILLER: Okay. Do the roll call then.

COMMITTEE SECRETARY: Rob Feckner?

VICE CHAIRPERSON FECKNER: Aye.

COMMITTEE SECRETARY: Frank Ruffino for Fiona Ma?

ACTING COMMITTEE MEMBER RUFFINO: Aye.

COMMITTEE SECRETARY: Lisa Middleton?

COMMITTEE MEMBER MIDDLETON: Aye.

COMMITTEE SECRETARY: Eraina Ortega?

COMMITTEE MEMBER ORTEGA: Aye.

COMMITTEE SECRETARY: Jose Luis Pacheco?

COMMITTEE MEMBER PACHECO: Aye.

COMMITTEE SECRETARY: Ramon Rubalcava?

COMMITTEE MEMBER RUBALCAVA: I abstain on part B, the minutes.

COMMITTEE SECRETARY: Theresa Taylor?

COMMITTEE MEMBER TAYLOR: Aye.

COMMITTEE SECRETARY: Mullissa Willette?

COMMITTEE MEMBER WILLETTE: Aye.

COMMITTEE SECRETARY: Dr. Gail Willis?

COMMITTEE MEMBER WILLIS: Aye.

COMMITTEE SECRETARY: Controller Betty Yee?

COMMITTEE MEMBER YEE: Aye.

CHAIRPERSON MILLER: Okay. The ayes have it. The motion carries.

That moves us to information consent items. I haven't seen any request to pull any of those items.

So we will move on to information -- let's see, what do we move on to -- to action agenda items. And so we'll start with 5a, Revisions to the Total Fund Policies. And for that, I believe we have Ms. Deming

(Thereupon a slide presentation.)

CHIEF INVESTMENT OFFICER MUSICCO: Yes, please.

If I could ask Amy Deming to come up. As a reminder, this is a second reading following the Committee's first reading at the September meeting. And as I mentioned in my opening comments, this is really the opportunity for us to be thinking through the lens of what do we need to get to where we want to go with respect to our strategic asset allocation. Today's item provided a bit more additional information as requested by the Committee specifically regarding the cost of missed opportunities associated with the existing authority limits, for example, and it seeks action from the Committee.

So with that, I'd like to hand it over to Amy, please.

INVESTMENT DIRECTOR DEMING: Thank you. Amy Deming, CalPERS team member.

Today we're seeking approval from the Investment Committee regarding the proposed changes to the private asset class policies that we think we are needed to carry out the new strategic asset allocation that the Board approved last November.

This is a second read of the proposed changes. The first round we reviewed in last September's meeting. In the materials, you would have received a clean and red-lined version of the policy and that policy is unchanged from September. We received Board direction as

Nicole was alluding to to provide more information about the cost of having today's lower delegation limits. Detailed information is provided in the cover memo of this agenda item, but we will also summarize that today with you.

Skip to slide 3, please.

Oh, you have it.

--o0o--

INVESTMENT DIRECTOR DEMING: Perfect. Okay. So Nicole spent some time in September talking about our enhanced governance framework. People, portfolio, processes, and performance within ovation at the center has culminated in three new CIO chaired committees. One of the committees, the Investment Underwriting Committee, is responsible for dealing -- for reviewing all private asset classes above a certain size. It's important to consider the role of this Committee as we think about the policy changes today.

As an example, while we have our staff delegation limits and in -- and today are asking to increase those limits, the IUC, or the Underwriting Committee, reviews all deals below that amount. The point of the IUC is really to look at all deals that are of a material size and importance -- strategic importance for CalPERS.

In addition to the enhanced governance framework, there are many sets of eyes looking at pre -- deals pre and post. In the middle there, you'll see the six teams, individual teams, including our Board consultant -- your Board consultants that are also reviewing deals. Last but not least, with any additional policy and flexibility that you are willing to give us today, we would -- we will be as transparent as possible as we continue to provide deal pipeline information as well as post-closing information.

Slide 4. How do I --

--o0o--

INVESTMENT DIRECTOR DEMING: Oops. Okay. Okay. So we spoke in detail about the proposed policy changes in September. To reiterate, the strategic asset allocation requires a significant deployment in private assets. And we are asking for the policy changes that we think that we need to achieve the new strategic asset allocation. In some cases we're asking for more flexibility, more tools in our toolkit, a wider filter, if you will, to do more different -- you know, more different types of deals to capture attractive opportunities, and in another cases, we're just looking to refresh historical amounts, historical AUM, and policy that was put in place with a lower allocation to private assets. With that, I think we can skip to the area of Board direction.

--o0o--

INVESTMENT DIRECTOR DEMING: Okay. So the question that was asked back in September was a good one. What is the opportunity cost for having lower delegation limits? Unfortunately, the answer is not all that straightforward. The reason it's difficult to provide you with an actual cost -- opportunity cost is because our general partners are typically not showing us deals of that size. That being said, a number of our GPs have asked if we could participate in deals of a larger size.

While it's difficult to quantify the specific opportunity cost above our current delegated authority threshold, since we've not sought opportunities of that size, we believe it is substantial. That being -- that being said, we can estimate the cost savings of our co-investment program. There is a clear cost savings for us. When you think about the opportunity cost of doing a co-investment versus a fund investment, the same one billion invested via co-investment, which is typically fee free and carry free, saves an estimated 335 million over 10 years related to investing that same billion in fund commitments.

When we think about costs, we also have to think about resources. Small co-investment deals lead to heavy monitoring burden. It will be challenging to ramp up a co-investment program and achieve targeted level of cost savings on the current trajectory. Based on the expected deal sizes for both private equity and for infrastructure, it will be difficult to achieve scale with our low -- our lower delegated authority limits.

With that, those were my prepared comments. I'd like to open it up for any questions you might have.

CHAIRPERSON MILLER: Thank you for your comments. And we have several questions. First, I'll go to Director Pacheco.

COMMITTEE MEMBER PACHECO: Thank you. Thank you very much. Thank you, Amy, for your presentation and thank you. So my first question is about the governance framework regarding this -- the Investment Underwriting Committee. And specifically, what is the -- you know, what's going to be the composition of this Investment Underwriting Committee? What's going to be the roles and responsibilities. I know that we've emphasized a lot of the chairs, but are there going to be vice chairs as well? I mean, what are going to be the roles and responsibilities in more detail, if that could be elaborated.

CHIEF INVESTMENT OFFICER MUSICCO: Sure. I'm happy to do that.

COMMITTEE MEMBER PACHECO: Thank you

CHIEF INVESTMENT OFFICER MUSICCO: First and foremost, when I -- when I arrived, I thought that there was an opportunity just for us to have more diversity of thought in general and better oversight, better governance of how decisions were being made. It was -- historically, it's been quite a siloed approach. That's not to say bad decisions were being made, but I just think better decisions are made when you have the right eyeballs around the table.

The right eyeballs around the table though is, you know, an interesting thing that we need to think through, because what does that really mean, especially in an organization where we are still kind of in the early innings, if you will, of developing the muscle of being able to do direct investments. And so there's a few -- from my perspective, a few objectives to having an Investments Underwriting Committee. It's as much of a convening, and collaborating, and not having siloed decision-making, as it is about learning and leveraging knowledge around the table.

And so while I Chair the Investment Underwriting Committee, really the real secret sauce or the real benefit of having each of my heads of the asset classes, in addition to having appropriate individuals like an Amy who's overseeing the investment compliance bit, as well as other individuals is to make sure that we have a very diverse number of lenses to look at.

While the actual delegated authority that -- the technical policy to make decisions for the most part still would technically reside within the asset class head, it's more about surfacing these deals, talking about them, making sure -- if we're looking an opportunity in private equity, but we happen to have real bench strength on this sector sitting in Arnie's world in fixed income, or sitting in Jean's world in credit, why wouldn't we bring that knowledge and insight to bear in the debate.

And so right now, it really is a sharing, debating, and kind of mis -- working through problems, asking a bunch -- a bunch of questions, and making sure we have real constructive dialogue around each and every one of those investments that are above a certain threshold, whether or not technically the individual asset class can move forward with that investment.

So far to date, I'd say we've been -- it's been a tremendous experiment to watch, because we really are encouraging and enabling individuals to come forward with their lens and make sure that we are looking at investments from multiple angles. And I think that the conversation, the dialogue has been very constructive. And I think we're all learning something each and every week that we sit around the table and wrestle with some of these investment decisions.

The intent is that over time we build more muscle in direct investing across the asset classes, but that's going to take time. And so I wouldn't say that we're ready to be at a point where we would ever give all investment decision-making to be allocated to this committee. Again, this is more about convening. It's like a double check, triple chick. And frankly, from my perspective, I just want to know what each and every one of the needle moving investment decisions, what's going on in the program, as we continue to learn and build that muscle of direct investing.

COMMITTEE MEMBER PACHECO: So just to be clear, it's more of a collaborative process, where we're collaborating, bringing different thoughts and knowledge from different -- the different sectors all together to help

CHIEF INVESTMENT OFFICER MUSICCO: Yeah, I thin of it as three steps really. First off is should we even be spending time on the opportunity. It's a resource. It's a total fund opportunity to look at every opportunity and say is this the next best place to allocate people, resources, as well as capital resources. So that's kind of step one. And we do that in the form of what we call a heads up memo, where the deal team brings forward the idea, what they're thinking about, the -- you know, what you need to believe in order for it to be interesting, the partners that we'd be working with, the resources we have.

If that passes the smell test and we all agree through the risk lens, the portfolio condition lens, do we have the right skill set to opine on the type of deal, it moves to the next phase. And then the next phase can be a combination of weeks or months depending on the complexity of the deal, where we're getting regular updates from the deal team, where they come forward and tell us about the progress that's being made in the diligence.

And again, in that context, we have multiple lenses looking at it. We have every thinking from James's lens, through our responsible investing, through to sector experts or market experts. Is this the next best place? Are we getting the right risk-adjusted reward? Are we thinking about liquidity, et cetera.

And then finally, if the -- if through all of that interaction the opportunity remains one that we're interested in, it finally comes to an Investment Committee recommendation, where the team again collaborates and opines on. We've set it up as of right now that I just have a veto, per se. It's not a normal vote at this point. I think we're not yet equipped to -- it's not really a fair ask to have somebody voting on direct deal if that's not their background, but I highly value the expertise that is being brought forward from those individuals.

And so right now, again, it's more of a collaborative brainstorming, a recommendation is made. And if in the -- in the instance where it's not something that I deem is something that I want to be held accountable for, only in that instance would there be a veto per se. And that's how we've said we would approach this Committee for the next six to 12 months, until we really get a feel for where our own in-house expertise resides in making decisions on direct deals.

COMMITTEE MEMBER PACHECO: And Nicole, with respect to the veto, has that -- has that worked? I mean, have you -- have you applied it in a couple of instances during this process?

CHIEF INVESTMENT OFFICER MUSICCO: I haven't had to use a veto per se. I think what I'm finding with this collaborative approach is that we're all coming to a consensus decision on what we think is best for the program overall. Sometimes that takes one conversation and other times it takes more than one conversation, but I think the benefit is the conversations are happening and we're getting multiple insights and tremendous constructive pushback where -- you know, where relevant and a ton of learning is going on around the table.

And I just think that energy and the oversight of through that total fund perspective where you've got portfolio construction, risk, as well as the investment individuals in the room, I think it just leads to better decision-making and we're all learning a ton from one another.

COMMITTEE MEMBER PACHECO: Thank you. Thank you very much, Chair. Thank you, Nicole.

CHAIRPERSON MILLER: Okay. President Taylor.

COMMITTEE MEMBER TAYLOR: Thank you, Chair Miller.

I was going to kind of ask the same questions that Mr. Pacheco was asking, but I think what I'll do is drill down a little bit. So in that -- in that Committee makeup, it's pretty much all the asset classes, correct, together? And then you're including risk and then could you go into who else you're including.

CHIEF INVESTMENT OFFICER MUSICCO: Yeah. Depending on -- so of the -- there's the Underwriting Committee, there's the Total Fund Management Committee, and there's the Administration Committee. So every single one of them -- the consistent membership is myself and my direct reports --

COMMITTEE MEMBER TAYLOR: Okay

CHIEF INVESTMENT OFFICER MUSICCO: -- asset class heads as well as risk. For the Underwriting Committee, we would add, you know, the important talents of having an Amy in the room, for example, because of the compliance piece, as an example. In the Total Fund Management Committee, we would involve someone like a Michael Krimm who is overseeing, you know, important aspects of our risk and portfolio construction as an example.

In our Administration meeting, we would involve additional membership to stakeholder engagement for example, so that we make sure that again the contributors to the important items on the agenda are all in the room and all have a seat at the table.

COMMITTEE MEMBER TAYLOR: Excellent. So then that brings me to in your Investment Underwriting Committee, as you're looking at new deals and you're looking to underwrite these new deals, are we taking into account and listening to our sustainable investment folks to make sure, you know, that this particular, you know, management -- manager is meeting all of our Investment Beliefs?

CHIEF INVESTMENT OFFICER MUSICCO: Absolutely. And as of right now, we have James as our Interim MID of Sustainable Investing. He's doing an excellent job at flagging and highlighting considerations for us. The membership doesn't have to just be limited to the MIDs, if you will. And so I could certainly see a scenario where you would have other members of said teams that are involved in conversations as needed so that we are getting the right perspective.

And so I could see a scenario where we will want to have Drew in the room, for example, with corporate governance --

COMMITTEE MEMBER TAYLOR: Right.

CHIEF INVESTMENT OFFICER MUSICCO: -- opining on things. I think we're flexible. The point is getting the right eyeballs around the table to make sure that we have the diversity and the decision-making across the different talents that we have. And so we will keep a consistent core group of myself and my direct reports, but we'll make sure that we're bringing in other individuals. It's also a real opportunity for the actual deal teams to be coming in and presenting the actual opportunities. So they come in on the agenda, and depending again on the topic, we will invite others to join in that meeting. And so it's about collaborating, leveraging the knowledge around the table, et cetera.

COMMITTEE MEMBER TAYLOR: Okay. That's really good. I appreciate that. I think it's important that we do listen to everybody. And I really appreciate that you are looking at that, because I look at like some of these deals might be for some sort of energy firm and you want to bring in, you know, Travis maybe or --

CHIEF INVESTMENT OFFICER MUSICCO: Correct.

COMMITTEE MEMBER TAYLOR: -- something like that. So I think it's a really good idea that we do that. I want make sure that the Board is updated, so that we can monitor this increase, because I think as returns aren't great, right, and -- but we want to really invest and really move the needle on our private investments, I think it's important that the Board be kept abreast of these higher, you know, rates. That's not what I'm looking for. I can't think of the word right now. The higher delegated limits, so that we can also -- you know, I don't want to be in a situation -- and I don't know who remembers, but we were -- we had lot of investments that people have now left and we've been stuck with those investments. And I think you had to do some of the review on that, right, and decide whether or not we were going to keep those.

CHIEF INVESTMENT OFFICER MUSICCO: Yeah.

COMMITTEE MEMBER TAYLOR: So I just want to make sure as we give the higher authority for these deals that we -- these are things that are really a good idea. And I think that governance part that you've put in place really helps that, but I think the Board should be kept abreast if we could.

CHIEF INVESTMENT OFFICER MUSICCO: Yeah. We -- as we said with our -- you know, within those nine strategic objectives, one of them being better stakeholder engagement. You know, prime example is better engagement with the Board and keeping you on top of the proprietary opportunities that we're looking at. And we're very excited about some of the things that are in our pipeline, that in, you know, closed session, because they're proprietary and they're go forward, we can discuss and intend to keep the Board up to speed on some of the really exciting initiatives that we have -- that we have in the pipeline.

COMMITTEE MEMBER TAYLOR: Great. Yeah, and I see --

CHIEF INVESTMENT OFFICER MUSICCO: And to get your feedback. I mean, we don't want anyone to be surprised on anything that we're doing. And we need the Board's full support on some of these needle-moving transactions that we're looking at.

COMMITTEE MEMBER TAYLOR: I appreciate it. We are absolutely here to make sure that we can do the best for our members. So in no way do we want to stand in the way. I just want to make sure that we are hearing about this. So I do appreciate that. Thank you.

CHAIRPERSON MILLER: Okay. Next, we have Mr. Ruffino.

ACTING COMMITTEE MEMBER RUFFINO: Thank you, Mr. Chair. So the question is regarding the global infrastructure market. You know, the majority of global infrastructure transactions are outside of the United States. So scaling the program will require obviously investing outside of the United States. So expanding the allowable range of this infrastructure outside the U.S., would that change the nature of risk in the infrastructure portfolio?

CHIEF INVESTMENT OFFICER MUSICCO: I mean, every opportunity -- every investment opportunity that we look at, we're looking both through the risk and reward lens. And so anything that we're looking at in infrastructure takes both of those things into consideration, including jurisdiction or where in the world we're investing, the partner with which we're investing, the expected return for the given investment that we're expecting.

And so the risk will change, the expected return will change, the partner will change. And our whole focus is making sure that we have the right partner and that we are getting paid for the risk that we're taking. And so I wouldn't -- I would articulate it as we need to grow that program. We need to be aware of the risks that we're taking and we need to ensure that we're getting paid for those risks.

And to do that, we've aligned ourselves to date with a handful of core partners. We'll look to add a few more core partners, but this isn't going to be a broad deploy capital across multiple partners and hope and pray that we're all aligned. This is much more of a focused program. It will be a global program. And it will be with a pretty limited set of partners that are going to allow us to learn alongside them as we deploy capital into more direct co-investments over time. But the key piece is to establish who those partners are in the beginning and make sure the terms along so the -- alongside those partners make sense and make sure that we really understand that we're getting paid for the risk that we're taking.

ACTING COMMITTEE MEMBER RUFFINO: Sounds good. Thank you. Thank you, Mr. Chair.

CHAIRPERSON MILLER: Okay. Thank you.

I don't see any more requests to discuss or questions. So this is an action item, so we -- I would entertain a motion.

COMMITTEE MEMBER PACHECO: I'll make the motion.

CHAIRPERSON MILLER: Okay.

COMMITTEE MEMBER TAYLOR: Second.

CHAIRPERSON MILLER: So I've got a motion from Director Pacheco, seconded by Director Taylor to revise the Total Fund Policies for private assets classes accordingly with second reading that's been presented by staff.

Any further discussion?

Seeing none, I'll call for the question and we'll do a roll call vote.

COMMITTEE SECRETARY: Rob Feckner?

VICE CHAIRPERSON FECKNER: Aye.

COMMITTEE SECRETARY: Frank Ruffino for Fiona Ma?

ACTING COMMITTEE MEMBER RUFFINO: Aye.

COMMITTEE SECRETARY: Lisa Middleton?

COMMITTEE MEMBER MIDDLETON: Aye.

COMMITTEE SECRETARY: Eraina Ortega?

COMMITTEE MEMBER ORTEGA: Aye.

COMMITTEE SECRETARY: Jose Luis Pacheco?

COMMITTEE MEMBER PACHECO: Aye.

COMMITTEE SECRETARY: Ramon Rubalcava?

COMMITTEE MEMBER RUBALCAVA: Aye.

COMMITTEE SECRETARY: Theresa Taylor?

COMMITTEE MEMBER TAYLOR: Aye.

COMMITTEE SECRETARY: Mullissa Willette?

COMMITTEE MEMBER WILLETTE: Aye.

COMMITTEE SECRETARY: Dr. Gail Willis?

Controller Betty Yee?

COMMITTEE MEMBER YEE: Aye.

COMMITTEE SECRETARY: Dr. Gail Willis?

CHAIRPERSON MILLER: Well, did we -- did we lose Dr. Willis or is --

COMMITTEE MEMBER TAYLOR: She's on.

Somebody want to text her --

CHAIRPERSON MILLER: Yeah, let's --

COMMITTEE MEMBER TAYLOR: -- just in case she's not paying attention.

CHAIRPERSON MILLER: Yeah. Okay. But in any case, the ayes have it, so the motion passes.

And hopefully we'll get Dr. Willis back on the line at some point in the near future.

Meanwhile, I guess we'll move on to 5b, another action item to talk about the diversity in the management of investments for the fiscal year.

(Thereupon a slide presentation.)

CHIEF INVESTMENT OFFICER MUSICCO: Thank you very much. I'd like to ask that James join us. Hi, James. Thank you.

So this item follows action Item 8c that was presented at the September Board meeting, wherein the Board defined the objective of CalPERS Emerging Manager Program and adopted definitions for emerging managers and diverse managers. So this item seeks approval from the Committee to submit CalPERS first Diversity in the Management of Investments Report to the California Legislature. So with that, I'd like to turn it over to James.

INTERIM MANAGING INVESTMENT DIRECTOR ANDRUS:

Good morning, I'm James Andrus, CalPERS staff, Sustainable Investing.

I'd like to thank the Board for the opportunity to present on AB 890. AB 890 requires CalPERS staff to submit an annual report on the status of achieving appropriate objectives and initiatives regarding the participation of emerging or diverse managers within CalPERS investment portfolio. The Legislature is requiring the report after determining that CalPERS and CalSTRS may have room to improve.

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INTERIM MANAGING INVESTMENT DIRECTOR ANDRUS: The contents of the presentation are above.

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INTERIM MANAGING INVESTMENT DIRECTOR ANDRUS: The Legislature is interested in our work in this area. Specifically, the report must include any new allocations to either emerging or diverse managers during each of the next five fiscal years. AB 890 is intended to ensure transparency and promote the inclusion of women and racially diverse managers in the -- in the asset management industry. This presentation identifies the notable items included in the report that will be delivered to the Legislature and includes the substantive report as an attachment.

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INTERIM MANAGING INVESTMENT DIRECTOR ANDRUS: The first year report is based on contracts entered into on and after January 1, 2022 and up through June 30, 2022, and must include the following elements.

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INTERIM MANAGING INVESTMENT DIRECTOR ANDRUS: We believe that organizational cultures promoting diversity are vital to improving the long-term performance of our organization, as well as the businesses and markets in which we invest. Our Investment Beliefs state that strong processes, teamwork, and deep resources are needed to achieve CalPERS' goals and objectives and highlight the importance of diversity of talent in this process. The Legislature is providing an opportunity for us to report on our operations in line with those beliefs.

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INTERIM MANAGING INVESTMENT DIRECTOR ANDRUS: In September, you approved our Emerging Managers Program objective. It is as shown.

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INTERIM MANAGING INVESTMENT DIRECTOR ANDRUS: You also approved our Emerging Managing definition.

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INTERIM MANAGING INVESTMENT DIRECTOR ANDRUS: Our Diverse Manager definition was also approved by this Board in September.

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INTERIM MANAGING INVESTMENT DIRECTOR ANDRUS: As outlined in the year one annual report, CalPERS allocated to seven emerging managers either directly or through fund of funds across the portfolio for a total allocation of $480.5 million through three asset classes from January 1 through June 30th, 2022. During that same period, CalPERS allocated to 12 managers that met the definition of diverse for an allocation of approximately $3.2 billion. Please note that some emerging managers are also diverse managers.

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INTERIM MANAGING INVESTMENT DIRECTOR ANDRUS:

This slide outlines our allocations to emerging managers, diverse managers, and all external managers as required by the Legislature. In private equity, there are two managers via directly for a total of $175 million;

real assets, three managers through Canyon Capital; and global equity, two managers through Legato for our emerging managers.

In diverse managers, seven managers directly for a total of $2.9 billion. Global equity, two managers through Legato 140.6 million and in this real assets, thre managers through Canyon Capital for $164.8 million.

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INTERIM MANAGING INVESTMENT DIRECTOR ANDRUS: Our next steps, with your approval, is to work with the Office of Public Affairs to ensure the report is configured and presented in a manner that meets CalPERS external reporting standards. The report is due to the Legislature March 1st, 2023. And we will work with Legislative Affairs Division to ensure it is properly delivered.

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INTERIM MANAGING INVESTMENT DIRECTOR ANDRUS: Are there any questions?

CHAIRPERSON MILLER: Yes. Thank you for your presentation. There are questions. And we'll start with President Taylor.

COMMITTEE MEMBER TAYLOR: Yes. Thank you, Chair Miller. James, thanks for the report. I really appreciate.

It's very clear -- it helps us see that it looks like we have kind of a lot of work to do in this area. And after 30 years it's apparent that while we used to be in the forefront in our Emerging Manager Program, I don't think we're there any more. So I think I have -- I don't speak for the Board, but in my opinion, I have an expectation that we up that back to being, you know, in the forefront of -- emerging manager programs. And I just want to be clear, you know, emerging diverse managers that we have data that shows that diversity improves outcomes, right? And with this low percentage, we're losing out on that opportunity and I think that's a miss for us.

And I know that there was a decision made some time ago where we got rid of some of the emerging managers and it was because they weren't performing well. So let's make sure as we move forward we are looking at these investments, so that we are doing the right thing while still increasing our Emerging Manager Program.

So I do appreciate it, about I also was wondering -- and maybe this is a Nicole question. It's not a James question, so -- but I do again appreciate your report. Can we get a report from each asset class at the end of maybe next -- first quarter of 2023 how you're incorporating the DE&I lens to your choices of investment partnerships and making plans to improve our exposure? That gives us a little more opportunity, I hope, to improve performance.

CHIEF INVESTMENT OFFICER MUSICCO: You got it.

COMMITTEE MEMBER TAYLOR: Thank you.

CHAIRPERSON MILLER: Okay. Next, we have Director Pacheco.

COMMITTEE MEMBER PACHECO: Yeah. Thank you -- thank you Chair -- Chairman Miller. And thank you, James, for your presentation. So my question is more regarding the program and the best -- like, the best practices in the industry on how we could -- you know, how we could execute this -- the diverse and emerging managers. You know, I think this is great. It's a great start, but, you know, how do we -- how can -- how can we scale it, you know, to make it, you know, a robust -- to make us be the model for everyone else. Can you help me.

INTERIM MANAGING INVESTMENT DIRECTOR ANDRUS: So I applaud the question. I think when we look at best practices, the first thing we need is consistency. And those that perform well are, in fact, consistent and we have not been. The next -- the next thing you need is a focus on allocations. It's not enough to focus on objectives and intentions, but focus on allocations. And finally, there's a need for leadership. And then I am incredibly proud to say though that I think right now currently, we have all of those in place. And I think it's exhibited in terms of what private equity has done directly in investing with emerging and diverse managers of scale and with the current plans led by Nicole, in which we do have plans where those three elements are, in fact, met, where it will, in fact, be consistent, focused on allocations, and led from the top by Nicole. So I think we know where we are and I think we're -- we have plans to go in the right direction and we'll be focused on the right elements.

COMMITTEE MEMBER PACHECO: Excellent. Just a follow-up question on that. Thank you for that question, James. What about the partnerships, like for instance the New American Alliance, I think the National Investment Association of Companies, will we be reaching out them more perhaps to get more collaboration on this? I'm just kind of -- I want to understand more of this.

INTERIM MANAGING INVESTMENT DIRECTOR ANDRUS: We have been engaged with them. And the direct answer to your question will we be reaching out to them more, the answer is yes. And I think one of the issues that we found is that it's not enough just from like sustainable investing lens, but to get an overall asset class lens in networking with them as well.

And with you say partnerships, I think we found great benefits in a number of areas through partnerships.

And again, our plans will include partnerships focused on those that have a track record of delivering good results. And so through that lens as well, I think the plans -- the plans are set.

COMMITTEE MEMBER PACHECO: Excellent. Thank you very much.

CHAIRPERSON MILLER: Okay. Next, Controller Yee.

Third time is a charm. There we go.

COMMITTEE MEMBER YEE: Okay. Thank you, Mr. Chair. Thank you, Mr. Andrus, for the report. I guess I'm surprised I haven't heard anything discussed with respect to fees and cost. And my understanding was that in terms of where we've been with emerging and diverse managers was that a couple of issues. One, well, you just mentioned relative to track record. And then secondly, you know, the layered fees that drag returns, you know, below to what we could have done with internal management.

So do you see -- well, let me start my questions here. So it seems like the opportunities with respect to utilizing emerging and diverse managers in global equity is -- that's where our focus is now, but do you see more opportunities in private equity just because of the amount of capital that we have deployed there? And is there a strategy with private and real assets to elevate our utilization of emerging and diverse managers?

INTERIM MANAGING INVESTMENT DIRECTOR ANDRUS: The answer is definitely yes. And I may have failed to emphasize how significant the work in private equity in their direct investments with seven managers has been. So basically, there are a couple of routes in which we can invest in emerging and diverse managers, and that's the direct route, which private equity has done, and the issue with regard to the fees is not there. So basically you're judging managers based upon the expected -- the expected returns and private equity has a network with managers and has found great managers that are emerging and are, in fact, diverse, and I expect that to continue.

With regard to working with partnerships, yes, that is -- that is an issue, but I think we're fortunate in that we have experienced leadership within the industry that has found a way to basically be able to negotiate and craft an arrangement where the fee strain becomes less of -- becomes less of an issue.

So again, we are confident through working with partners that have a great track record of producing the results that our beneficiaries expect of us. And so -- and so the direct question is I do believe it can be -- it can, in fact, be done.

COMMITTEE MEMBER YEE: Okay. And thank you for the elaboration on the -- on the private equity space. I think there are opportunities and more opportunities there.

So on this issue of kind of the fee drag, are you seeing more attractive proposals in the global equity and fixed income space relative to our expansion of more emerging and diverse managers in those asset classes, because that typically has been kind of the wall we hit.

INTERIM MANAGING INVESTMENT DIRECTOR ANDRUS: I think -- I think if you notice from the over -- the overall report, we manage most of our assets internally --

COMMITTEE MEMBER YEE: Um-hmm.

INTERIM MANAGING INVESTMENT DIRECTOR ANDRUS:

-- especially on the fix -- on the fixed income side. And so basically, we haven't seen anything within this space as of yet, but we are involved in discussions where the hope is that when there is expanding -- if -- to the extent that we expand and use external managers, there are, in fact, opportunities within the space, and the expectation is that those, in fact, would be direct. And so the fee issue of having multi-layered fees would not -- would not, in fact, be -- would not be -- in fact, be present.

In global equity as well, mostly internally managed. We -- and then to the extent we do use external managers, we -- we do have an -- we do have an arrangement with those external managers where from a return perspective, we focus on providing the best returns for our beneficiaries.

COMMITTEE MEMBER YEE: Sure.

INTERIM MANAGING INVESTMENT DIRECTOR ANDRUS: I think our expectation is that we are able to allocate and meet those expectations.

COMMITTEE MEMBER YEE: Okay.

DEPUTY CHIEF INVESTMENT OFFICER BIENVENUE:

Controller Yee, I'll just add one quick thing. You know, James talked about fixed income being substantially internally managed. One of the new sleeves is that emerging market sovereign sleeve of fixed income. We would expect to see that be significantly, at least -- you know, material portioned more externally managed than sort of the rest of fixed income. And we've already started talking about emerging managers in that space.

COMMITTEE MEMBER YEE: Okay. All right. Thank you. I just wanted to kind of get clear about, you know, just how we're factoring, you know, the whole fee drag experience we've had in the past.

Okay. Thank you.

CHAIRPERSON MILLER: Thank you.

Director Rubalcava.

COMMITTEE MEMBER RUBALCAVA: Thank you, Mr. Chair

Miller. Thank you, James. Appreciate that report.

Two questions. The first one is more technical -- or more process, I guess. I know the report is due in -- will be submitted in March to the State Legislature. Do we expect a response from them or what's the next step after it's submitted?

INTERIM MANAGING INVESTMENT DIRECTOR ANDRUS: I think once it's -- ones it's submitted, it will be publicized. An once publicized, I do expect many market participants to comments on what the report happens to be and what their expectations of us might be going forward. And so we will have to react to those communications.

COMMITTEE MEMBER RUBALCAVA: Thank you.

In your PowerPoint, you cited the CalPERS Investment Beliefs, Investment Belief number 10, about strong processes, and teamwork, and deep resources - I want to focus on that - to get our goals and objectives. And this is an area where I want CalPERS to be seen as a leader. And I think in responding to somebody's question, you talked about that there's -- that it's in place, at least the leadership part. I'm not sure if you spoke to the resources.

But I want to make sure that CalPERS gives it -- it's a priority. And I just want to conclude by saying I appreciate -- appreciating support the comments and requests that were made by President Theresa Taylor and the Trustees Betty Yee and Mr. Pacheco. He asked one of the questions I was going to ask about the partners relationship and appreciate that. Thank you very much.

CHAIRPERSON MILLER: Thank you.

Next, we have Mr. Ruffino.

ACTING COMMITTEE MEMBER RUFFINO: Thank you, Mr. Chair and thank you, Mr. Andrus, for the report, and for this very important work in this space.

I have a quick question and sort of a follow-up. And we talked quickly about best practices, Director Pacheco asked you. But I want to ask are there industry best practices in this space?

INTERIM MANAGING INVESTMENT DIRECTOR ANDRUS: I think there are industry good practices, and some of those practices are not available to everyone. For example, there are some who operate within the space who actually have minority women business enterprise programs, in which you can set targets and the like. And so basically, that's one element. There's another element as well in that some funds actually externally manage almost everything. And so we actually sit in California, and I think we have legislation that requires certain things of us, which constrain, you know, certain activity. And the other thing, we internally manage much of our assets.

And so basically, you're kind of in a different realm. Now, within that, we have on occasion, as Chair Taylor pointed out, we've been leaders, but we have not, in fact, been consistent. I mean, some have been on the Board long enough to remember when we had an emerging and transition plan in place with that expectation. And you're also on the Board long enough to know that that never materialized.

And so that's where I was getting at being more consistent in what -- in what we do. So there are industry best practices. And interestingly enough, during the Board off-site, we had an opportunity to hear from someone who lead one of those -- one of those organizations. And that was a part of the process especially geared toward our focus on emerging and diverse -- and diverse managers as well to make you aware that we are, in fact, engaging with those who are, in fact, industry leaders to help us inform what we are doing.

ACTING COMMITTEE MEMBER RUFFINO: And if I may, Mr. Chair, just a quick follow-up. So how do we -- how CalPERS can elevate, you know, the productive views of the emerging and diverse manager? What else can we do, especially in view of, as you just said, that in the past that we have failed?

INTERIM MANAGING INVESTMENT DIRECTOR ANDRUS: I think -- I think I've been -- I think I've been answer -- I think I've been answering the question, but I think it's even more important when I say that leadership is incredibly important to let's hear from Nicole, so she can basically more firmly, you know, make you aware that leadership is, in fact, on top of this.

CHIEF INVESTMENT OFFICER MUSICCO: Thank you, James. During our closed session today, I'm excited to present to the Board a platform that is specifically focused on everything we've been talking about, but it is proprietary and it is a strategy that we're going to explain and walk through during my comments in closed session today.

ACTING COMMITTEE MEMBER RUFFINO: Excellent. Look forward to it. Thank you, Mr. Chair.

CHAIRPERSON MILLER: Okay. Thank you.

We have a question from Dr. Gail Willis.

COMMITTEE MEMBER WILLIS: Yes. Good morning. And thank you for that excellent report. My question is can you specifically elaborate on how you plan to ensure that the beneficiaries will have a best return on their investment? And forgive me, if you went over that earlier, I had -- my line was dead, so I just wanted you to kind of elaborate on that.

INTERIM MANAGING INVESTMENT DIRECTOR ANDRUS:

Yes. I think when we talk about Investment Beliefs and what we think of going forward, the first thing is like the focus is on the long term. And we believe that when focused on the long term it's the use of all talent within the market. And it's best to, from an emerging mark -- manager perspective to develop broader talents, so that talent is productively available over the long term. And so we intend on doing that and to make certain that we have access to the best talent available. I think we have excellent convening power. And to the extent we're allocating more broadly, we will get the opportunities to talk to and evaluate the top managers that are, in fact, available. And we would like to make use of those managers within our portfolios. And that's -- and that's the way we will serve our beneficiaries. And think any it's also working with partners that have a track record of success as well and so making use and leveraging those in what we are doing.

COMMITTEE MEMBER WILLIS: Thank you very much. Appreciate it.

CHAIRPERSON MILLER: Okay. Thank you.

Next, we'll be back to Controller Yee.

COMMITTEE MEMBER YEE: Thank you, Mr. Chairman.

This discussion is prompting me to think about how to structure this report to the Legislature. I think it's going to be, to your point Mr. Andrus, there will be a lot of interest in this report. I think different people, different constituencies will draw different conclusions about what we include in the report. And I would just ask that we provide kind of a broader context around how we think about diverse and emerging managers.

You know, we're not setting, you know, percentage allocation. We're not -- I mean, at the end of the day, we have to earn a return. And all of the attributes that you talked about relative to emerging and diverse managers, I think are exactly on point. And I think, Nicole, what I would say is your opening presentation to this Committee today around, you know, just the workstreams, the business incentives -- or initiatives, you know, all the things that we're trying to achieve, I think we can be a leader, but I think we have to be a leader in terms of how we think about broadening the utilization of diverse and emerging managers and kind of get away from the old school of thought about how we expand our allocation to them, because we'll hurt ourselves.

This is -- I think there are a lot of opportunities there. And I like the fact that CalPERS is a leader in terms of cultivating that talent. But this is not going to happen overnight. And frankly, nobody sits in the fiduciary role except the group here on this dais, and so the accountability is here. And I don't want -- and part of why I kind of expressed concern around the fee drag is that I think there still is going to be some of that. I think cost is still going to continue to be an issue. Track record will continue to be an issue.

But that's not say we don't cultivate talent because I do think there are new opportunities out there for bringing in these managers. But when someone sees a report like that, especially the Legislature, their inclination will be we're not doing enough. And I don't think they're in a role to actually speak about how much more we should be doing without understanding what our business is.

So just a word of caution about how to really frame this report that talks about our leadership, but really also about the business that we're in and what we're trying to achieve.

CHAIRPERSON MILLER: Great. Thank you.

I don't see anymore requests to speak. And I really appreciated the insightful questions, and answers, and the thoughtful dialogue on this. It's such an important issue for us. And so, at this point, I will entertain a motion to approve.

COMMITTEE MEMBER PACHECO: (Hand raised).

CHAIRPERSON MILLER: Made by Director Pacheco.

COMMITTEE MEMBER TAYLOR: Second.

CHAIRPERSON MILLER: Seconded by President Taylor.

Any further discussion?

Seeing none, I'll call for the question. And a roll call vote, please.

COMMITTEE SECRETARY: Rob Feckner?

VICE CHAIRPERSON FECKNER: Aye.

COMMITTEE SECRETARY: Frank Ruffino for Fiona Ma?

ACTING COMMITTEE MEMBER RUFFINO: Aye.

COMMITTEE SECRETARY: Lisa Middleton?

COMMITTEE MEMBER MIDDLETON: Aye.

COMMITTEE SECRETARY: Eraina Ortega?

COMMITTEE MEMBER ORTEGA: Aye.

COMMITTEE SECRETARY: Jose Luis Pacheco?

COMMITTEE MEMBER PACHECO: Aye.

COMMITTEE SECRETARY: Ramon Rubalcava?

COMMITTEE MEMBER RUBALCAVA: Aye.

COMMITTEE SECRETARY: Theresa Taylor?

COMMITTEE MEMBER TAYLOR: Aye.

COMMITTEE SECRETARY: Mullissa Willette?

COMMITTEE MEMBER WILLETTE: Aye.

COMMITTEE SECRETARY: Dr. Gail Willis?

COMMITTEE MEMBER WILLIS: Aye.
COMMITTEE SECRETARY: Controller Betty Yee?
COMMITTEE MEMBER YEE: Aye.
CHAIRPERSON MILLER: Okay. The ayes have it. The motion passes.
So that we'll -- with great thanks to James and the whole team and everyone for these fine presentations. We will move on to our information agenda items starting with 6a, CalPERS Response to the Taskforce on Climate-Related Financial Disclosure and Senate Bill 964.
(Thereupon a slide presentation.)
CHIEF INVESTMENT OFFICER MUSICCO: Excellent. Thank you. I'm going to ask that Travis Antoniono join James up at the podium, please.
So as a reminder, this is a second report following the first Taskforce on Climate-Related Financial Disclosure that we provided back in June of 2020. This report is required every three years until 2035. It explains CalPERS investment approach on climate change, an approach that focuses on addressing both the risks and the opportunities for climate change.
So with that, I'd like to turn it over to James and Travis, please.
INTERIM MANAGING INVESTMENT DIRECTOR ANDRUS:
Thank you, Nicole. It is an honor to introduce

you to Travis. Travis joined us a bit over a year now, having spent the previous decade helping manage sustainable investments across the river. He hit the ground running here working with our United Nations Asset Owner Net-Zero Alliance and Climate Action 100+ partnerships. He's taken an active approach to instilling more cross-asset collaboration on sustainability and climate-related issues.

Travis has spearheaded this report. He merged the disclosures from two previous CalPERS reports into one by working with each asset class at the staff and leadership level. He also worked with CalPERS Public Affairs to enhance the design and structure of the report.

The report amplifies the climate-related disclosure that we provide to our stakeholders, the climate-related impact of our portfolio, and the influence that we have on the financial markets. The report will serve as a tool for the organization, other investors, and for our stakeholders. The report is already garnered a positive review from an important practitioner calling it comprehensive and illuminating.

With this, I turn it over to Travis.

INVESTMENT MANAGER ANTONIONO: Hi. Good to be here today. Travis Antoniono, Investment Manager for Sustainable Investing.

First thing, I want to thank James for those kind words as well as just acknowledge all the staff, not only the ones sitting beside me today, the ones in this room, but also all those staff that cross the different asset classes, the program areas, as well as Public Affairs, Communications, and the design team, as well as the Legislative Affairs type of team that really backed me to be able to have this report actually happen, and really pull it together. It was most definitely a team effort. So once again, thank you all.

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INVESTMENT MANAGER ANTONIONO: Okay. All right. To start off, we're going to be highlighting a bit of an evolution of the report. We're going to transition more into our sustainable investing approach, then we'll transition over to talking about -- more about the strategy, the risk management, metrics and targets, and finally close it out by talking about summary and some of the next steps.

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INVESTMENT MANAGER ANTONIONO: For the reporting evolution, I think it's important to first take a step back to understand that previously CalPERS responded to two different reports. One was the SB 964 report, which you see on the top left and another one was the TCFD report, Taskforce on Climate-Related Financial Disclosure.

So on the SB 964 report, this was first reported back in the fall of 2019. Some of you might recall that. The few different components that were really stressed within that type of report were on the financial risk of the public markets. It was also on our alignment within the public markets for the Paris Climate Agreement, and finally how our activities align with California climate policy goals.

Overall, on the CalPERS TCFD report, there were four different types of components to this type of report. And this is based upon a TCFD type of framework. And those encompass governance, climate-related strategy, risk management and metrics and targets. Over time, as we spoke to different stakeholders, we found it was a little bit difficult to be able to have conductive type of meetings where we guided them over to one report and then back over to another report. This is a little bit confusing and a little bit even confusing just for myself. So it was bit -- a good effort to be able to take more of a foundational approach and build the report back up from the ground up understanding what really is being asked for, not only from each of the requirements from the report and the legislation, but also what are the common aspects, common questions that different stakeholders are requesting over time, because that's really who we want to serve. We want to make sure that this report is ultimately educational not only towards staff, but also to our stakeholders and to the greater financial markets.

And so we took this type of foundational approach to be able to say let's tart over again, let's build it back up, let's join these two reports together. And this is ultimately the report that you see of before you today.

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INVESTMENT MANAGER ANTONIONO: Over on the top section you're going to be seeing four different components. These pillars, advocacy, engagement, integration, and partnerships. Some of these might be familiar to you, because we have used these before in different components of our market material, as their disclosure as well. But over the time when we spoke to stakeholders, there's one thing that came about. It was a request, more information. What exactly do you mean by advocacy? What do you mean by engagement. What are the partnerships and why do we care about these things?

Now, those are all relevant questions and stuff that we should be able to provide, you know, at the forefront. So ultimately, what we developed was an objective statement for reach one, which serves as more of the goal of what we want to accomplish, but then also State very clearly some of the examples of the tools and levers that we have at hand to be able to actually execute on those objectives, on those goals. And the report itself dives in far deeper into each of these type of components.

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INVESTMENT MANAGER ANTONIONO: There we go. Moving over to the strategy and advocacy section of the report in this presentation. The advocacy -- when you think about advocacy. I want you to be able to think about all the policy regulation components that not only staff do, but also those components and how they affect CalPERS and all of our investments.

One aspect that is just a monumental piece of legislation that occurred is Inflation Reduction Act. Now, this Act will specifically provide about $370 billion of investments that are going to be serving, you know, climb-related type of activities, but then also environmental justice components as well.

As far as to be able to measure just how monumental this type of act is, we looked at the REPEAT Project, which is out of Princeton, and they evaluated this to be able to determine that ultimately this type of action is going to be driving about a 42 percent reduction in U.S. greenhouse gas emissions compared to the 2005 type of baseline. And this is very important, because not only is this a 42 percent closer -- moves us closer to ultimately the U.S. goal of 50 percent reduction, but it also provides an incremental, about 15 percent, reduction compared to where we would have been as a nation if we hadn't actually invested this $370 billion.

As far as what this means specifically to CalPERS -- and this is once again extremely important, because it provides the next 10 years of underwriting certainty. Unfortunately in the past, there's different aspects of tax law that had to be reestablished and reapproved on an annual type of basis. And much of the different tax laws, especially certain tax credits, didn't actually even benefit us as a nonprofit type of organization.

Now, this ruling though, this Act, is very beneficial to non-profit organizations such as ours, because this is the first time that it actually provides tax exempt organizations with the ability to receive credits in an amount equal to the tax benefits that we would have received. And then when -- what we could do with these tax credits is actually sell them on the market as well.

Ultimately, what this means is that the

investment universe, especially towards renewables and everything, could dramatically increase over time, if everything, you know, plays out accordingly. So it's quite exciting and we'll be able to continue to update you over time on the impact that this Inflation Reduction Act serves to CalPERS as an organization.

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INVESTMENT MANAGER ANTONIONO: On the engagement side, I wanted to highlight one company specifically. And this is a company that next NextEra Energy. And it's one of the largest utilities in the United States based our of Florida. And it's an important engagement the corporate governance team has been participating in and really leading over the last handful of years.

NextEra Energy has made a pretty exciting announcement earlier this career, not only was it a net zero type of announcement, but it was a real zero announcement. What does real zero mean? It really looks at what net zero is and the limitations of net zero. So traditionally when companies provide a net zero type of commitment, they look at what can they actually do from an operational perspective to bring down emissions and do that over time.

Once that's actually realized and operational emissions are lowered, there tends to be some type of residual emissions. Residual emissions means what's left over after you do everything that's physically, or chemically, or biologically possible. Now, the interesting thing from the utility, and specifically for NextEra Energy is that its real zero commitments is actually looking at the operational aspects that can be done to bring the emissions all the way down to zero. So not only are you hitting that net zero, but you're actually eliminating the residual emissions as well.

This is profound, because this isn't commonly done by most companies. And ultimately, most companies finish off those residual emissions, those remaining emissions by buying carbon credits, offsets basically, to get rid of these. Now, NextEra is in a favorable location, you know, Florida, and it tends to be able to take advantage of certain things that perhaps not only -- not all utilities can, but nonetheless it does show leadership to be able to have this type of conviction of this generating mix.

Over on the right side of the chart, you do see certain types of generating assets that the company will be able to move towards over time. The top part -- you know, the bulk of it is going to be renewables and storage. And storage so often we typically think about batteries, you know, which are going to have a profound effect, but the other component of storage is actually green hydrogen. So the generating component is going to be renewables, wind and solar. And then that will be able to be used to be able to ultimately produce hydrogen. Green hydrogen means that it's hydrogen production coming from renewables.

So that's by far the big bulk. They're still going to have a presence within nuclear, which is a zero-emissions emitting type of generating asset. And then they'll find a small little segment of renewable natural gas. When we say renewable natural, one of those components typically means from, you know, methane that's captured from agricultural type of fields.

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INVESTMENT MANAGER ANTONIONO: On the strategy integration and investment side, over the last year, staff have been working on being able to better assess our exposure to climate solutions, climate -- and also low carbon investments. What you see before you is some mapping that has been conducted across these different segments of the organization. Overall on the public markets, we have utilized the MSCI low carbon transition framework, which is being able to allow staff to identify those assets that do serve climate -- low carbon or climate-related solutions.

Overall, on the private market side, you do see a different -- more of thematic type of approach of certain investments that you would typically think of when you think about green related investments. To provide some examples of what would be encompassed within both the public markets and private markets, over on the public markets is companies such as Tesla, Schneider Electric, certain railway systems, certain independent power producers such as Vestas wind, Orsted, and even certain renewable -- and even certain renewable related component managers, as Enphase.

Overall in the private markets, you're going to see different components that are once again a little bit more on a thematic type of basis. These could be more sustainable power, sustainability mobility, water and waste. So on power, you're going to see anything from exposure to smart meter systems, certain green hydrogen type of projects, HVAC storage, solar. Overall on the mobility side, it's going to be exposure to certain electric buses, charging stations. And in all waterways there's biogas and also recycling investments that we do have exposure to as well.

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INVESTMENT MANAGER ANTONIONO: And altogether, across those different components, we're looking at about

40 billion -- $42 billion of assets that would be fitting the definitions that we set forward on low carbon or climate solutions.

On the partnership side, we laid out three different partnerships that are very key towards our climate strategy. The Climate Action 100+, which has been highlighted many times beforehand has continued to grow. Over 700 different investors, organizations are now members of Climate Action 100+. And this represents close to $70 trillion in assets, altogether engaging over 166 different public companies.

There has been some significant progress has been announced just more recently within the -- that progress report that the organization has provided. That includes about 75 percent of companies of those 166 have now set a net zero type of target. Additionally, about 90 percent of those companies have also provided some degree of climate board oversight. This is very encouraging to be able to actually have those conversations take place at the top of the organization, because I can say that going back five years ago, that was not the case. This was a very foreign subject to many individuals that are actually steering the ship of these organization.

So not only having those org -- those individuals now being provided education, but having them actually having some type of governance framework within the organize to make sure that these risk and opportunities actually arise to -- to the top and are regularly exported is extremely important. And lastly, there's over 90 percent of companies that now have some type of TCFD disclosure as well.

Overall on the ESG data convergence initiative, this is something that private equity and really all of CalPERS should be very proudful of, because over 215 different GPs and LPs, general partners and limited partners, such as ourselves has now joined together and being able to commit to this type of initiative. And all of this represents about 2,000 different portfolio companies. Over time, as we do be able to get more information from the metrics and more and more of these portfolio companies actually report out on the underlying data, we'll be able to -- be able to have a under -- better understanding of the correlation of what this means, these ESG related metrics, to performance, and whether or not these aspects are correlated to actually driving value creation within the organization as well.

Move over to the next slide.

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INVESTMENT MANAGER ANTONIONO: This comes on the risk management side going back to the SB 964, one of the requirements was to be able to disclose our alignment with the Paris Agreement. We have different components. We have actually several different components that we use as an organization to be able to assess how we are transitioning, how the world is transitioning as well towards meeting the Paris Agreement and also towards decarbon -- decarbonizing.

It's exciting to say that, you know, CalPERS global equity implied temperature rise, the warming effect basically, is projected to be about 2.6 degrees, where a broad market index, such as MSCI, ACWI, All Country World Index is closer to about 2.9 degrees. So we're a little bit -- little bit ahead, which is definitely positive, but at the same time based upon our past exposure, we do replicate really what's happening in the real economy.

And over on the right side, MSCI has a great chart to be able to break down the -- this type of alignment based upon the underlying sector. And the blue lines are going to be basically companies or percentages of companies within that sector that actually align to one and a half degrees. In the yellow, more of the one and a half to two degrees. When you look at the blue line, if you add up those type of companies, you're really looking at about 11 percent of companies are currently aligned to one and a half degree warming, and then if you look at the yellow line, and that's about 35 percent.

So altogether between those two, you're looking at a little bit less than half of the companies within a broad market index that are aligned to less than two degrees. When we do this same type of analysis for CalPERS specific portfolio, we see slightly better results, but still these generally follow our exposure as well.

Now, there are other components that we also track to be able to assess the transit -- transition and where not only we are, but also where the broad world or the real economy is as well. And some of those components are mentioned in the report. The IEA, International Energy Agency, is one with of those. Now, this thing is pretty insightful in that the IEA looks at 55 different sectors, the MAD-X, technologies that are going to be very -- really vital for the world to actually transition to a low carbon economy.

Unfortunately, of the 55 different sectors and technologies, only two right now are actually progressed enough to be able to be in alignment with a one and a half degree type of scenario. And those two are electric vehicles and lighting. Now, lighting has obviously, you know, been -- I think we can even bring that all the way to your residential home to be able to understand that type of value and that payback period which happens. But unfortunately, a lot of these other technologies still need additional R&D, still need additional policy, still need additional scalability to be able to be more in alignment wit that one and a half degree. Hopefully, that will change over time.

And lastly, I'll say that there are certain things more for the greater global alignment with the Paris Agreement that unfortunately a lot of investors just don't necessarily have as much influence. And that comes more from the aspects that are currently underway at COP27 right now as we speak. And from the -- from more of a country perspective. In fact, actually, many countries have now increased their exposure to coal.

And Shell's CEO actually even mentioned more recently that one of the quarters in this year, China brought on more coal production in one quarter than all of Shell's natural gas and oil production. So in one quarter, China increased its coal production by more than the entire Shell oil and gas production. It's a staggering amount to really even to really even try to comprehend just how significant that is and unfortunate that is. And unfortunately, those are things that are much more difficult for us, as an organization, to have influence in. But nonetheless, the consequences of those are shared by all companies, all organizations across the world.

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INVESTMENT MANAGER ANTONIONO: Overall metrics and targets, including our carbon footprints, we divided this out to a left side and right side, because there's really two different ways, amongst many ways, to calculate carbon footprinting.

Over on the left-hand side, we utilize a financed emissions approach. To be able to get an idea of what this actually means, let's say we own one percent of a company. Well, based upon this calculation, we take about or attribute one percent of the company's emissions to us. Pretty simple approach when you look at it in that type of way. And the results show that CalPERS global equity portfolio has a Scope 1 and 2 emissions profile or footprint that's actually 11 percent lower than the MSCI ACWI, IMI. And that's for Scope 1 and 2 emissions. So that's very positive and once again shows that we're slightly above where broad market indexes are.

Overall on the right-hand side, we want to be able to also provide some type of historical evaluation of what type of progress this organization is actually doing. So we looked at the weighted average carbon intensity. And a way to understand what the weighted average carbon intensity is is to assess just how dirty or clean the average company is within our portfolio. And when you look at this, we looked at both the global equity portfolio as well as the fixed income corporate portfolio.

On the global equity portfolio, we found that the weighted average carbon intensity actually decreased about 30 percent since we first established this carbon footprint back in 2015. And then overall in the corporate fixed income portfolio, there's actually been a decrease of 51 percent. Pretty astonishing.

And when we look at this attribution type of analysis or really what's actually the reasoning behind this. And there's two real components. One, there has been significant shifts, you know, on the public equity side, as far as the number of companies that were exposed to and also the geographical regions that we have exposure to. So as we brought down the emerging market exposure as and -- and also as we decrease our small cap exposure while increasing or large cap exposure, those all attributed to actually decrease in emissions within our public equity.

Overall, in the corporate fixed income side, it was found that our exposure to more carbon intensive type of companies was decreased over time and those could be utilities and oil and gas as well.

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INVESTMENT MANAGER ANTONIONO: So moving over to the summary and next steps, I think that it's important to highlight that everything that we spoke about today, whether it be the IRA passage, including all the work that CalPERS does through the advocacy meeting with regulators, meeting with government bodies, and also sending letters and pressing the companies that we invest in to also do the same, has been pretty substantial. That also goes with the companies -- 500 plus companies, in fact, in our portfolio that now have net zero type of targets.

And then the tens of billions of dollars that our investment teams have actually allocated towards low carbon and climate solutions. These are all having a profound effect to be able to help decarbonize our portfolio, as well as have a real effect in the real economy.

But at the same time, once again, I want to make sure this is clear that the world is not on a one and a half degree pathway. You know, it saddens me to say that, but I think it's also important to be able to understand as investors, not only where we want to go, but also in reality where the world is headed.

One other piece, as an indicator, as the United Nations report that juts came out about month ago, which did say that there is no current credible pathway towards one and a half degrees. And then they also found that based upon the current policies in place, that we have about a two and half -- 2.8 degree temperature rise that could be expected at the end of the century 2,100.

And then likewise, if all countries came on board and actually executed on the targets and goals in which they have, that 2.8 degrees would be lowered over time to something a little bit more beneficial, something in the ballpark of 2.4 to 2.6 degrees. So still well, well above the Paris Accord -- Paris Agreement, you know, well under two degrees, with ultimately the goal of one and a half degrees.

So moving to next steps that we're going to be focusing on is the SEC climate disclosure final ruling. This was a large piece of work that both James and myself worked on in coordination with many of the different asset classes as well. We expect that ruling to be public and finalized in the coming months. As I mentioned before, COP27 is currently underway right now. The last week there's been some announcements that have been made. But then this week is the second week where we're going to be able to hopefully get some more announcements from the government bodies too.

The climate -- our California net energy metering

3.0, this is something that's been going a little bit under the radar for the last several months, but I expect it to be able to get a little bit more media attention. The organization, including myself, actually engaged the California Public Utility Commission on this. This is something that most investors do not actually do engaging regulatory bodies, such as California Public Utility Commission. But we thought it was extremely important to be able to take that type of more proactive approach because of the consequences that this ruling could actually have, not only on the individual, such as our members, those that do want to be able to have exposure to renewable rooftop solar, but then also to our portfolio companies as well.

Ultimately, the last week, the ruling was a little bit more favorable than what was originally ruled. More details can come out once the final ruling and the vote is actually cast in the coming months.

And then over time, we'll continue to bring progress and provide more disclosure on the Climate Action 100, as well as other activities that we're doing on the engagement side throughout the corporate governance team.

We'll continue to be able to provide updates, including some internal business initiatives that we're working on on the integration investment side, and then also continuing to provide updates over time on some of our partnership -- partnerships, especially on the ESG data convergence initiative, which I mentioned beforehand, really tying those metrics and the impact of those metrics more towards the finances and value creation aspect.

That really sums it up for me. Happy to answer any questions

CHAIRPERSON MILLER: Great. Thank you for that. I have several questions and I also have some public comments after the questions.

So first President Taylor.

COMMITTEE MEMBER TAYLOR: Thank you, Travis. Really like the clarity of the report. I hit my button when we got to the part where it said 2.6, because I was like -- I know that we're a leader in this space and I really appreciate all the hard work you guys do for that. So I want to -- I want to tell you first that the report is really good. The results of the report we don't -- especially worldwide, we don't have control over. I just want to know, there's a couple of things that I was a little curious at.

I'll start from where we ended, which was at the next steps. "Advocacy, the SEC Climate Disclosure Final Ruling". I understood, because of the Supreme Court ruling, that they weren't going to get real down and dirty with that rule. Has that changed? You said that was actually looking pretty favorable.

INVESTMENT MANAGER ANTONIONO: Overall, it's, you know, encouraging as far as what we expect to happen. There's a bare minimum of expectations that we have, which are not exactly what we would like to happen, but that we're at least confident that that could, you know, take place.

COMMITTEE MEMBER TAYLOR: Okay.

INVESTMENT MANAGER ANTONIONO: I'll pause there and actually see if James wants to expand at all on that. I want to be careful to not be able to mention what, you know, could happen, because those -- it's still a live aspect that --

COMMITTEE MEMBER TAYLOR: Right.

INVESTMENT MANAGER ANTONIONO: -- that Chair Gensler Against is actively working on and finalizing. So I don't want to be --

COMMITTEE MEMBER TAYLOR: Okay.

INVESTMENT MANAGER ANTONIONO: -- you know talking about hypotheticals, but I'll pass it over to James.

INTERIM MANAGING INVESTMENT DIRECTOR ANDRUS: We remain very hopeful. Investors have spoken loudly and consistently on the issue and we believe that what the SEC has proposed is totally -- it's totally within the remit, because it only focuses on disclosure. A substantial difference with the Supreme court case in question is that it actively required certain parties to do something. In this case, the SEC is focused on disclosure, and they're the captain of disclosure. So we're -- we remain hopeful that we will have a good ruling.

COMMITTEE MEMBER TAYLOR: Okay. Okay. So that is good news. So then at the same time, I know you talked about the markets and how we get to this 2. -- or back to 1.5. Are we looking at stakeholder engage -- other stakeholders to engage with? I'm just kind of in this quandary at this point where we're sort of swimming upstream.

INVESTMENT MANAGER ANTONIONO: Um-hmm.

COMMITTEE MEMBER TAYLOR: So how do we expand our efforts? How do we make sure that we -- because fiduciarily, 2.6, we're going to lose the coasts. So I mean that's going to cost us a lot of money. So if we're -- how do we approach this? Do we look at collaborative efforts with other stakeholders? Can we meet our fiduciary responsibility to our beneficiaries, if these scenarios play out? Are we looking at investment decisions that perhaps we have to make with some of our portfolio, because they're not playing ball.

INVESTMENT MANAGER ANTONIONO: Sure. So I'll speak to a few different things. So one, we won't lose the coast, so -- for that. And I'm very, very optimistic that the world will continue to progress, that policymakers will continue to become more aggressive to at least bring, you know, it down over time. What that will actually be, you know, time will -- time will tell. But nonetheless, you know, the losing the coast any time soon should not be expected.

At the same time, you said costing us a bunch of money or on the returns. There was an aspect within the report that we evaluate, the climate value at risk. And so what that does is project over the next 15 years -- and I'm eventually going to be more direct on answering your question, but --

COMMITTEE MEMBER TAYLOR: That's fine.

INVESTMENT MANAGER ANTONIONO: Over the next 15 years it does an evaluation of really what financially we have at risk based upon different -- different pathways. And perhaps a lot of people might think that okay, the higher the degree of warming, it actually might be more -- more costly. But based upon the next 15 years, if you actually evaluate the transition that would take place -- take place, it does show that more aggressive transition, you know, specifically because of transition type of risk, which could be policy and risk, you know, could actually be more costly in the short-term than something like a 2.6 degree type of pathway.

Eventually though over time, that flips and those 2.6 degrees actually translate into physical risk. And those physical risks eventually have some type of ramifications throughout the entire portfolio. So based upon the timeline, there's different aspects of how certain things affect and the degree of certain things affect the portfolio. So I just wanted to mention that aspect.

COMMITTEE MEMBER TAYLOR: Well, Travis, and I'll say we're a long-term investor, right, so --

INVESTMENT MANAGER ANTONIONO: Absolutely.

COMMITTEE MEMBER TAYLOR: -- we're not a short-term investor. We can't look at the immediate return and not think about -- yeah, no, I don't think the coasts are going to go tomorrow. No, no, no, I just want to be clear, but in -- by 2100, the sea level rise -- I've read a ton of --

INVESTMENT DIRECTOR ANTONIONO: Yeah.

COMMITTEE MEMBER TAYLOR: -- articles about this, right. So we're not even on path to meet -- I mean, by 2030, we're not even on path to meet anything at this point. So how do we move forward as long-term investors, understanding that a kid that just started working for the State of California isn't going to retire for 40 years, right? So that's a long time.

INVESTMENT MANAGER ANTONIONO: Yeah. No, as far as partnerships go, and continuing to work not only with the partners that we mentioned, the ESG Data Convergent Project, the Climate Action 100+, other investors as well, but also our investment partners to continue to be able to escalate the expectations that we have as owners and stewards of this type of capital, and the expectations that we have with not only those that we deal with in the financial markets, but those that we actually allocate capital to.

That's, I think, the base -- a baseline to be able to actually escalate those expectations, then will translate to further decarbonization within our own portfolio. At the same time, you know, the impact that it will have on the real econ -- real economy will be based upon the actual exposure or allo -- or dollars in the ground compared to the broader market. So it will have an incremental effect on it, but, you know, it will still be relatively small compared to the entire global econ -- global economy.

Some of the other aspects that I would just add related to that, you know, when we do look at certain opportunities and risks, I think going back to just really where we want to go, which is one and a half degrees and really where we're headed, that differential, that delta, that exists is basically certain tracking error or potential active risk, you know, for those investors that want to be --

COMMITTEE MEMBER TAYLOR: Right.

INVESTMENT DIRECTOR ANTONIONO: -- more aggressive in head towards that. That risk has to be compensated for. And that risk is also putting investors in a position that if certain policy, if certain technological advancements don't actually become realized, then that risk might not actually compensate investors for -- for the decisions that they made.

COMMITTEE MEMBER TAYLOR: Right.

INVESTMENT MANAGER ANTONIONO: So that's something that I think unfortunately is just a painful to realize. But over time, you know, those policy type of changes will be fulfilled or at least to a certain degree and then technological advances will continue to happen. And then investments will be, at that point of time, more, you know, feasible. So the investments that we currently can do right now are all feasible investments that pencil out are not necessarily dependent on expected policy or expected technological advancements. That's basically icing on the cake.

COMMITTEE MEMBER TAYLOR: Okay. I do appreciate it. Thank you.

DEPUTY CHIEF INVESTMENT OFFICER BIENVENUE: Maybe I'll use this opportunity to quickly jump in, President Taylor. You complimented the report, which we appreciate the compliment, while we don't like the contents necessarily. I'll use this as an opportunity actually to be responsive to direction that we had from Director Willette last month regarding our GRESB reporting. We think makes sense to keep the reporting separate. And that though item will be -- will be back with our report on GRESB in March. And the reason we're waiting till March is that if we did it this month, we wouldn't have 2022 data yet. We would be doing much more latent data. We thought it made sense to wait a few months to give, you know, an entire year more up-to-date data. So that will be back in March.

COMMITTEE MEMBER TAYLOR: Great.

CHAIRPERSON MILLER: Okay. Next, we have Director Middleton.

COMMITTEE MEMBER MIDDLETON: All right. Thank you. And thank you for what is truly a really strong report and one that I greatly appreciate. I'd like to go back to page 24 of your report, which has a chart regarding NextEra and some of the projections that they're making. So is this a chart that is indicating what they believe is going to happen for generation from their firm or are they taking -- is this something that is broader in terms of these percentages, because they're very remarkable numbers.

INVESTMENT MANAGER ANTONIONO: They are. And once again, this goes back to just their firm. This is not all utilities-wide. This is their firm, NextEra, and that's going to be slide 6, I believe.

So going back also just to the renewables and storage, I think it's important to be able to understand the limitations that certain utilities might have based upon the geographical regions and the markets that they operate under -- or in.

NextEra though does have generating assets across the United States. The bulk of the ratepayers in which they have are going to be more in that southeast type of corridor, specifically more in Florida. And obviously Florida the sun shines, so that's a benefit. And they will be able to invest money and serve as a catalyst hopefully to be able to continue to bring down the cost curves, not only for renewables but also for green hydrogen. And green hydrogen is going to be extremely important, not only --

COMMITTEE MEMBER MIDDLETON: Right.

INVESTMENT MANAGER ANTONIONO: -- for the U.S., but also for the greater Asia regions as well to be able to expand on. So this is something that should be, you know, acknowledged.

The nuclear aspect, you know, that could be anything from the current fleet, but then also potentially small modular type of nuclear, which is much safer and perhaps we'll be able to first see some of these in the U.S. maybe in the 2030s. China has already rolled out with some.

COMMITTEE MEMBER MIDDLETON: So describe to me who NextEra is? Do they provide electricity directly to customers as a public utility? What's their -- who are they? And what scale -- is the scale of their operation in comparison to some of the utilities we may be familiar with here in California.

INVESTMENT MANAGER ANTONIONO: Yeah, so think about PG&E, think about, you know, SMUD on a much, much larger type of scale for those that live in Sacramento. But, you know, PG&E for the north, San Diego, Sempra, you know, Dominion Energy, these are all utilities that have broad generation, electric generation type of assets that serve ratepayers, that are regulated as well. I think that's the key component that perhaps differentiates it from other independent power producers, whether or not it's regulated.

COMMITTEE MEMBER MIDDLETON: All right.

INVESTMENT MANAGER ANTONIONO: And then obviously one component of this is, as well as others, is that each of these utilities will ultimately go towards their own public utility commissions to be able to get approval of their -- of expectations of how they want to see and invest in generating assets over time.

COMMITTEE MEMBER MIDDLETON: So what business decisions are they making that makes them believe they can achieve these kinds of goals which is essentially in 23 years, producing all of their electricity through renewables and nuclear.

INVESTMENT MANAGER ANTONIONO: Well, it's ambitious, that's most definitely true. So, as far as how they versus other, I would go back to the fact that -- that where they operate is probably the biggest differentiation. If you take this same type of application and you move it to the Nordic regions, or Canada, or the northeast, this would probably not be feasible.

COMMITTEE MEMBER MIDDLETON: Okay.

INVESTMENT MANAGER ANTONIONO: So based upon the wind, and the renewable exposure, and the overcapacity that you would have to have per unit of gen -- realized generation.

COMMITTEE MEMBER MIDDLETON: So you bring up whether, which causes me to believe that we're talking significantly solar.

INVESTMENT MANAGER ANTONIONO: Significantly solar and then --

COMMITTEE MEMBER MIDDLETON: And the expansion of solar tremendously over what we have today.

INVESTMENT MANAGER ANTONIONO: Most definitely, which is also important to be able to have expanded transmission lines as well to be under -- to understand that the intermittent -- intermittency of solar and renewables is very much true, which means that the overcapacity needs to be developed, and then therefore NextEra could take advantage of that when it needs to and then likewise it could sell off or use those type of excess solar generation to be used for green hydrogen production.

COMMITTEE MEMBER MIDDLETON: Okay. So some of that is going to require some significant changes, not only in terms of the business goals of various organizations, but regulatory requirements to ease the transition from the current sources to -- to particularly more solar. I'm not sure it's our province here to talk about it, but we have a Public Utilities Commission here in California that seems to be dead set against local governments creating opportunities for rooftop solar and doing everything it can to disinvest -- incentivize rooftop solar.

INVESTMENT MANAGER ANTONIONO: Well

COMMITTEE MEMBER MIDDLETON: You'll forgive me for getting that bump in, but --

(Laughter)

COMMITTEE MEMBER MIDDLETON: -- I am an elected official and we're waging that fight.

INVESTMENT MANAGER ANTONIONO: Well, you're hitting on some of the aspects that staff is aware of and myself and others have spoke about internally and related to Net Energy Metering 3.0. And one of the reasons why we thought it was very important for us an organization to communicate with the California Public Utilities Commission on some the risks that we saw on the previous version that existed, as well as they're still, you know, potential risk as well in the current -- in the current version that just came out last week.

COMMITTEE MEMBER MIDDLETON: So it certainly seems that as we take on these kinds of goals, that we do have an opportunity to identify what are the road blocks, what are the areas that need change in order for us to be able to maximize the investment opportunities that exist in transitioning to renewables and that that is an appropriate roll for CalPERS to play.

INVESTMENT MANAGER ANTONIONO: A hundred percent agree with you. The identification of the road blocks and what's limiting the decarbonization aspects to actually happen are extremely important. And that's also one of the aspects in the page on the summary, where we did identify the differentiation between oil and gas transmission approval process in the United States compared to renewables. Unfortunately, renewables, especially on electric transmission across state boundaries, do not necessarily have the same regulations that are -- that aren't as favorable.

So this is something more on the federal energy transmission bill or whatever type of bill that might be similar to that, that would have the same type of effect on being able to more easily allow electric and transmission to go across State boundaries and to be developed on a more expedited basis I think would be very beneficial towards decarbonizing the U.S.

COMMITTEE MEMBER MIDDLETON: So lastly and to transition, I want to pick up on the theme that President Taylor made. If we are going to have the kind of transition from fossil fuel-based energy resources to renewable resources over the course of the next 20, 25 years that are being discussed here, in terms of infrastructure, there would seem to be some incredible long-term investment opportunities. And one of the things I think we need to be doing at CalPERS is being very focused on what those opportunities are going to be and how we can define as a entity in the public sector the level of investment we're making and the kind of long-term rewards that we're receiving from those investments.

CHIEF INVESTMENT OFFICER MUSICCO: I'd just like to add as a core focus of bringing on an MID of Sustainable Investing in addition to the focus of the private markets Deputy CIO specifically on our infrastructure forward -- go forward program has that precisely in mind.

COMMITTEE MEMBER MIDDLETON: Thank you.

CHAIRPERSON MILLER: Thank you.

Next, we have Controller Yee.

COMMITTEE MEMBER YEE: Thank you, Mr. Chairman.

Really appreciate the report, Travis. It's -- I particularly appreciate the blending of the two that really tell a fuller story about CalPERS leadership on this front, which dates back quite a ways. And I hope that we do elaborate on some of that, just because I think our voice and presence in this space will continue to be important.

I had a couple of questions and -- because the reports are blended in some ways, the SB 964 report, again just kind of the way that that audience would look at this report going forward. And I'm particularly focused on the goal of the report relative to alignment to California's policy goals. And I think there is -- there's a lot that our Legislature can do to actually also exhibit leadership relative to policy changes to facilitate the transition, aside from divestment. So I hope that there is some opening to kind of -- not recommendations, but just, you know, to -- at least just kind of set the table, if you will, relative to just some of those policies that need to be in place, whether it's how we look at the investments that are going to be flowing down from the IRA to, you know, other incentives that we may want to create here, whether it's looking at, you know, workforce preparation for the just transition. I mean, there's just a lot. And I just always feel like we shoot ourselves in the foot when divestment is the only kind of policy goal that the Legislature is focused on. So I'm just going to put that on the table.

And part of the leadership that I think CalPERS has really provided is everything that Travis talked about, Climate Action 100+ emanated out of our own carbon footprinting of our global equities portfolio. And when we saw the high carbon concentration in that portfolio was really what gave rise to others doing the same thing. And I had a question on page 55 and 56 of the report, you showed that -- how that public equity portfolio has reduced our carbon emissions by 30 percent since it was first measured in 2015. Can you elaborate on what you attribute that to? Was it actually because of the companies Decreasing carbon emissions or was it more that we were making active decisions about investing in companies with lower, you know, carbon emission or a combination of both?

INVESTMENT MANAGER ANTONIONO: Yeah. So I spoke about two --

COMMITTEE MEMBER YEE: Yeah.

INVESTMENT MANAGER ANTONIONO: -- the two different reasons. And so, you know, perhaps one reason, which I mentioned, would be actually on the carbon intensity of the actual underlying portfolio companies having improved in certain cases.

COMMITTEE MEMBER YEE: Yeah.

INVESTMENT MANAGER ANTONIONO: But a great aspect would also be just the allocation changes that have existed are changed over the last few years --

COMMITTEE MEMBER YEE: Right.

INVESTMENT MANAGER ANTONIONO: -- you know, within the public equities. So those could be, you know, the factor tilt component. Those could also be, you know, changes in the passive type of strategy. And once again, if you really kind of dive a level deeper and kind of say, well, okay, within that, what's actually driving these type of emissions reductions. And there are different components. There's actually a chart that we provided in the report itself that shows the average emissions intensity --

COMMITTEE MEMBER YEE: Yeah.

INVESTMENT MANAGER ANTONIONO: -- based upon the regions that exist. And the fact is that emerging markets tends to have -- you know, be -- you know, having a higher carbon emissions profile than developed nations.

COMMITTEE MEMBER YEE: Sure.

INVESTMENT MANAGER ANTONIONO: And likewise, large cap companies tends to have a lower emissions profile than small -- than a small cap as well.

COMMITTEE MEMBER YEE: Okay. Good. Good. So what's your confidence around Scope 3 reporting at this point? I mean, are we able to adequately measure it with the current tools and frame works or is still more to go?

INVESTMENT MANAGER ANTONIONO: More to go.

COMMITTEE MEMBER YEE. There's always more to go, but -- yeah.

INVESTMENT MANAGER ANTONIONO: There's always more to go when it comes to disclosure. And I think that's something, you know, when we talk about like the bare minimum aspect of what our expectations to come about from the SEC, Scope 1 and 2 would be included in that bare minimum. It would be ideal to also have Scope 3 included as well. We'll see whether or not that's going to be, you know, realized and -- but nonetheless, there are a number of companies that are being more proactive in reporting on the Scope 3 and actually doing their own work to be able to evaluate this. You know, Scope 3 emissions, you know, as of right now, it's a little bit more estimations on assumptions.

COMMITTEE MEMBER YEE: Right.

INVESTMENT MANAGER ANTONIONO: So you're kind of getting, you know, twofold of that where they could be certain inaccuracies. But as companies dedicate more resources internally and also have higher expectations within their entire supply chain, and have those supply chain aspects --

COMMITTEE MEMBER YEE: Right.

INVESTMENT MANAGER ANTONIONO: -- actually do their own homework as well and put in the work, the underlying things will then compound on itself and become more and more accurate over time, but we're still in the early stages of that.

COMMITTEE MEMBER YEE: Yeah. Okay. So when you talked about carbon intensity of companies, when we look at Scope 3, it pretty much is still kind of looking at it kind of case by case, right, because there is no standard -- standardization around Scope 3 reporting.

INVESTMENT MANAGER ANTONIONO: There is greenhouse gas protocol that exist, which provides a foundation of calculating different Scope emissions 1, 2 and 3. But the SEC, you know, or any type of other regulatory body from financial markets could provide some type of ruling that steers Scope 3 or any type of Scope emissions to certain parameters.

COMMITTEE MEMBER YEE: Good. Okay. I also want to applaud CalPERS for being just really a steady voice with respect to providing comment on SEC rule. They love hearing from us and I like it when we actually weigh in in terms of what's going to help facilitate the work that we need to do. So very, very much appreciate that.

COP27 is happening as we're sitting here.

INVESTMENT MANAGER ANTONIONO: It is.

COMMITTEE MEMBER YEE: Any thoughts from any of you about what to expect that might help facilitate what we're kind of embracing here?

INVESTMENT MANAGER ANTONIONO: There are a few. Nicole, do you want me to.

CHIEF INVESTMENT OFFICER MUSICCO: (Nods head).

INVESTMENT MANAGER ANTONIONO: Sure. Okay. The last week, there has been a few potential announcements. And I say potential, because it's you know, we're really -- we need to wait until that's completely done. But if you look going into COP27, what some of the expectations were, what some of the focal points were -- are, it's really around a couple of different aspects. One, this $100 billion figure from developing -- developed nations contributing towards climate financing of developing nations.

This was in the ballpark of the 80 plus billion dollars in the past. The U.S. has continued to increase its allocation over time, but nonetheless that $100 billion was not met. And that's just something that was previously agreed upon at prior COP. Whether or not that's going to be realized I think those conversations are taking place, you know, really right now.

The other aspect beyond climate finance is something called loss and damage funding. And this has become pretty sensitive for a lot of different island nations, as well as developing nations that have been, you know, dealing with the aspects of climate and the full effect of it. And these tend to be the nations that didn't necessarily produce the emissions -- the global emissions which are actually causing, you know, more severe climate change type of aspects.

So with that said, there are a number of -- a few different companies -- or countries -- a few different developed countries that have committed some funding. Time will tell whether or not that increases and also whether or not negotiations actually require, you know, a broad type of adoption towards allocating towards loss and damage. We'll see if that happens.

Outside of that, there has been a couple other components more towards coal. Beforehand, back in COP26 a year ago, there was announcements more on methane emissions and specifically methane emissions not only being derived from the EPA type of ruling on new emission sites or new oil and gas, but also on current oil and gas. So that was a year ago bringing that forward. That was monumental.

The next step that Biden has recently announced has been not only going for new and current, but also going downscale even further towards smaller oil sites. So beforehand that -- that current sites was only isolated to comp -- to large facilities. So now this is going to be brought down to much smaller facilities as well, so the

EPA will provide guidance on this over time.

And then also related more towards coal, you have two announcements that, you know, aren't completely locked in stone right now, but from Indonesia as well as South Africa. So there are a number of different countries including the U.S., which are working together to be able to provide climate financing towards each of these countries with the understanding that the finance will be used to be able to help transition these count -- these countries over time away from coal or coal electric generations.

So that would be Indonesia with about $20 billion of funding as well as South Africa with about eight and a half billion dollars. So one of those is still alive in negotiation right now.

COMMITTEE MEMBER YEE: Got it. Great. Thank you. And then one last question and that is we haven't heard a lot -- and I'm sure this is because of what's happening politically, but what's the outlook for meaningful carbon pricing in the United States? And we just got through an election, so I have no way to portend what that looks like, but this seems like the conversation has been put on hold, but any progress you think.

INVESTMENT MANAGER ANTONIONO: It's bleak to be frank.

COMMITTEE MEMBER YEE: Yeah.

INVESTMENT MANAGER ANTONIONO: It's unfortunate. It's something that this organization, as well as the financial community, would look at. And I would say also essentially almost any economist out there, a nobel laureate has signed on beforehand --

COMMITTEE MEMBER YEE: Yeah.

INVESTMENT MANAGER ANTONIONO: -- to have Congress enact some type of price on carbon. It does not seem realistic in the next few years to be able to actually see that. Perhaps a decade from now we'll be, you know, having a different conversation on a price on carbon, but, you know, California is the leader still having a price on carbon through the Cap-and-Trade. A number of companies within Cap-and-Trade also fall within the Climate Action 100+ as well. So that's having progress and actually represents a significant percentage of the -- of the state's emission. But unfortunately, the rest of the nation does not have a federal type of price on carbon.

I will say that the IRA Act, Inflation Reduction Act, probably has made it a little bit easier to swallow this idea of subsidies and incentives, more of the carrot instead of the stick component.

COMMITTEE MEMBER YEE: Um-hmm, right.

INVESTMENT MANAGER ANTONIONO: So I would say that's probably going to be, you know, the more regular component of driving decarbonization in the future.

COMMITTEE MEMBER YEE: Right. Okay. And then just want to just say thanks for all the leadership and the really focused attention in this arena. And Nicole, thank you for including it as a major, you know, kind of line of your workstreams and business initiatives. I just want to continue to se CalPERS, you know, lead here. And I hope that this Board will continue to get updated climate strategies presentations as we move forward, but, you know, there's a -- the good thing is that there's a lot on the table. So I think we have a lot of tools to work with and hopefully can make some accelerated progress.

Thank you.

CHIEF INVESTMENT OFFICER MUSICCO: Thank you. And I would just like to add, I mean, the -- our whole goal of being a world class thought leader in this area starts with tone from the top, from the Board, which the Board has done -- the Board has done a fantastic job at articulating. It comes to Marcie and I to make sure that we push that through. But really our success really relies upon the world class team that we have here at CalPERS in James, and Travis, and the rest of the team.

So, you know, kudos should go to where kudos is due. They've done a phenomenal job and are really instrumental in putting us on the Board as being a thought leader here. We have a lot of work to do though and we're very focused on it, which is why we elevated it into one of our nine business objectives this year, but, you know, it's -- it wouldn't be without the efforts and the work of the team sitting up here. So thank you to the team for that.

COMMITTEE MEMBER YEE: Thank you. Thank you, Mr. Chairman.

CHAIRPERSON MILLER: And thank you.

Next, we have Director Pacheco.

COMMITTEE MEMBER PACHECO: Thank you. Thank you, Chairman Miller. And thank you, Travis for your report and everything.

So my question is actually going back to the next steps regarding how do we -- how do we engage our partners to continue to drive the adoption of the ESG Data Initiative -- Convergence Initiative? You know, it's -- I think it's really great that we've got 215 LPs and GPs. We've got 2,000 portfolio companies, but, you know, again trying to scaling that -- scaling it up. And how do we get more LPs and more GPs involved and on board on this, and -- in order to create value creation -- value-added creation and how do you vision -- your vision, how do you see the new hiring of the sustainable investment MI -- MID play a role in this? I'm just kind of curious of those integrations. So if you can elaborate, either Nicole or you would be great.

INVESTMENT MANAGER ANTONIONO: Yeah, it's going to be more appropriate for Nicole to speak to you about the MID position and then -- Nicole, did you want to tackle that first or do you a me to tackle the other onE first?

CHIEF INVESTMENT OFFICER MUSICCO: Why don't you tackle the secund and then I'll round it out with the comment on the MID, if you can tackle the LP engagement.

INVESTMENT MANAGER ANTONIONO: All right. For the ESG Data Convergence Initiative, I think whenever we look at any type Of initiative, it's always important to understand what the baseline is. The baseline in private equity across the -- as an asset class and the initiatives or the progress that has been made is pretty monumental.

COMMITTEE MEMBER PACHECO: Um-hmm.

INVESTMENT MANAGER ANTONIONO: Because the baseline of really what metrics were being looked at, what ESG, you know, data was being provided was very, very little beforehand. There was progress that was being made through differing relationships that we had through PRI as well as our own -- our own due diligence and Request for

Information. But transforming that -- you know, some -- we spoke beforehand about you know, the road blocks that exist. And the road block that perhaps existed in that type of component was that there wasn't necessarily buy-in by all parties at the table.

You have to have the GP and you have to have the LP working together. And having this ESG Data Convergence Initiative is something that actually shows that. And it shows just how quickly there could be adoption through the 2,000 different portfolio companies, 200 plus GPs and LPs that have now signed on within about a year-long period for this.

So I think it was pretty -- pretty astonishing and also perhaps even a bit surprising just how much pent of demand there was to be able to come together. It wasn't us ramming down information requests amongst a thousand different LPs requesting their own information. It was us coming together, consolidating around just the foundation that we actually think could be material to the investment and that we believe could be more insightful over time as information to be able to showcase and document whether or not value creation is being deprive -- derived from these type of metrics.

As far as the next stage is forward, it's continuing to be able to provide broad market education of this initiative. And this is something that myself, Julia from the Private Equity team, Yup from the Private Equity team, Greg as well have all been very much a part of to be able to highlight this and the value that it provides to LPs such as ourselves and then also provide that education to our GPs and encouragement for our GPs to be able to sign up. I think over time we'll able to assess what -- what percentage of our GPs have signed up to this and then really what's preventing other GPs from signing up.

COMMITTEE MEMBER PACHECO: Excellent.

CHIEF INVESTMENT OFFICER MUSICCO: I think I'd just add, maybe said differently, I think over time it is going to become very apparent and we are going to be very vocal on what your core values are around this topic and in order to be deemed a strategic partner to CalPERS. Those core values are going to need to align with us. So for projects like the ESG data convergence where we've had a number of GPs sign up, big and small, complex, less complex is going to become more and more difficult to understand why a GP would not be signing up for the project, and therefore how can they be deemed strategic to us, if we don't share in the same common core values.

And so it is an eduction piece. We can't just flips a switch. There are complexities. But I think coming together with a group of LPs and establishing a baseline, then working with our GPs to get where we need to get to is the first -- is the first step, but we're making it pretty loud and clear that this is a core part of our values to become sustainable investors and it's going to require our strategic partners to get on board.

COMMITTEE MEMBER PACHECO: Thank you, Nicole. And is it -- and this new individual -- or this new MID would be part of that process, you know, to advocate that process.

CHIEF INVESTMENT OFFICER MUSICCO: Part of bringing -- establishing the MID of Sustainable Investing as a member -- as senior member of the investments' team is to help weave together not only the strategy across the asset classes, but to, you know, reach into the asset classes and try to help with this collaborative approach that we're seeing our private equity team again, you know, best in class really --

COMMITTEE MEMBER PACHECO: Um-hmm.

CHIEF INVESTMENT OFFICER MUSICCO:

-- demonstrating to the world we're serious. This MID of Sustainable Investing will make sure that that same approach is being used across other asset classes.

COMMITTEE MEMBER PACHECO: Thank you Nicole. Thank you.

CHAIRPERSON MILLER: Okay. Next, we have

Director Willette.

COMMITTEE MEMBER WILLETTE: Thank you so much. I also just want to echo thank you so much to CalPERS team, and staff, and everyone involved in this report and in this presentation. I find it really, really helpful. Someone new to learn a lot more of CalPERS leadership in this space.

And I do want to echo President Taylor's observations on needing partnerships. As you noted, we're not operating in a vacuum, right? We know that. We see that over and over again. And I think collaboration with stakeholders is essential.

That comment aside, I'm also -- like Mr. Pacheco, I'd be interested in just kind of seeing the plan to dial up the risk management opportunity capture work on climate. And then I just want to kind of memorialize, as Controller Yee said, and as noted in the next -- the summary and next steps that we'll be -- some of these things will be reported on in the future. I would like to ask more definitively if we can receive regular reports on the progress to track this more closely?

INVESTMENT MANAGER ANTONIONO: I'm sure we'll be able to provide that. As far as guidance on timelines or to the scope of that, I think that I'll defer over to Nicole.

CHIEF INVESTMENT OFFICER MUSICCO: We'll work with you to get more clarity on specifically what it is -- what aspects with you. And I'll have to work with the team to see what we're able to do in a timely regular basis. But we're on board completely to make sure our stakeholders are coming along for this journey with us.

COMMITTEE MEMBER WILLETTE: Thank you.

CHAIRPERSON MILLER: Great. Thanks very much. Really appreciate it. Just -- you know, there's not too much more important in the long term for a long-term investor than having a functional, viable, sustainable planet earth. And so in some respects this is job one for long-term fiduciaries.

So with that, I don't see anymore requests to speak from the Board, but I've got a pub -- couple public commenters that I'd like to call up and get through before we break for lunch. So if Sheila Thorne and Sara Theiss could come down, you'll be our first two commenters. And you'll each have a clock to watch. We'll start the clock as soon as you start speaking. And whoever can make their way down, we'll have some seats for you here. And then following the first two, we also have Doug Thompson and then a phone caller on this item 6A.

Okay. And we'll get you a live mic. And if you would introduce yourself for the record and then the clock will start and you'll be able to see it up here.

MS. THORNE: Okay. My name is Sheila Thorne. And I'm a CalPERS retiree and a member of CFA, and a member of Fossil Free California.

An evaluation of the impact of CalPERS climate engagements authored by Dr. Clair Brown, Professor of Economics at UC Berkeley, student Sindre Carlsen, and Sandy Emerson of Fossil Free California profiles 10 major oil companies in which CalPERS has large equity investments, such as including Exxon, Chevron, Shell, ConocoPhillips, Occidental, BP, and TotalEnergies. This study carefully documented and with detailed graphs demonstrates that CalPERS engagement strategy has not put these 10 companies on track to meet CalPERS stated goals of net zero by 2050.

For example, the net zero benchmark report of 2022 shows that only five out of the 10 companies have set net zero emission targets. None of the companies have set the short-term or medium-term emission reduction goals needed to achieve net zero by 2050 and there have been no consequences. None of the 10 companies has fully aligned with net zero benchmark criteria in 2022 and there have been no consequences.

According to Climate Action 100+, none of the companies is adequately planning and restructuring to decarb -- decarbonize their capital expenditure and there have been no consequences. In 2022, CalPERS voted to elect all the nominated board members of six companies ConocoPhillips, Shell, TotalEnergies, Equinor, and BP suggesting approval of work accomplished in their previous term, but examination of the net-zero benchmark report of 2021 showed no such improvement.

In short, CalPERS engagement is a failed policy with empty net zero pledges or lack of them altogether, the failure of companies to plan and restructure to decarbonize and never any consequences. Yet, all 10 of these companies that CalPERS engages with are actively developing reserves and have both short- and long-term expansion plans, even though the IEA has pointed out that global fossil fuel reserves already provide more energy than can be burned on a path to net zero by 2050.

It would appear that all engagement provides is a greenwash cover for companies to continue business as usual putting retirees' future benefits in doubt with a portfolio full of potential stranded assets and putting the lives of everyone on earth in doubt. The solution is to divest.

CHAIRPERSON MILLER: Thank you.

MS. THEISS: Hi. I'm Sara Theiss, CalPERS retiree and member of Fossil Free California. I also really appreciated the report and the honesty of the report. And I'm sorry to be Debbie Downer, but I also have issues with CalPERS engagement policy.

As the report, which is called *Promises, Promises: Evaluating CalPERS Climate Engagements*, as it shows or states that even when CalPERS has acted as an engagement lead, as it has with Exxon, Chevron, and Occidental, emissions have not decreased at the speed and scale required. Also, proxy voting guidelines are focused on disclosure and not implementations, and proxy votes have not resulted in observable progress towards reducing emissions.

And when the companies don't Meet engagement goals, the repercussions are minimal. Replacing a few directors or voting for non-binding resolutions also hasn't reduced carbon emissions or change business strategies. So, as Sheila said, when companies fail to change after years of engagement, divestment must be the consequence. And I was sorry to not see that word and that possibility mentioned as an option in the TCFD report.

The other comment is that unlike the last year's TCFD report, which projected needed emission reductions over time by CalPERS largest owned emitters, this report uses a carbon intensity metric. And I -- this is alluded in the report. And Scope 3 was discussed, but the carbon intensity report only measures Scope 1 and 2 emissions. But Scope 3 emissions account for about 88 percent of oil and gas sector omissions. So I'm sorry that I'm not as happy as you all are about the carbon emission, carbon intensity decreases.

So basically, the declining emissions intensity does not show that a company is reducing its total greenhouse gas emissions. And most of the emissions decline that -- declined in 2020 and that was due, of course, to the pandemic. So like Sheila, we urge you to begin the process of divestment now.

Thank you.

CHAIRPERSON MILLER: Thank you.

We have Mr. Thompson.

MR. THOMPSON: Good morning. I appreciate the opportunity to address you. Definitely appreciated the staff presentation and the deep dive they took into the question of the carbon impacts of our investments. I would still like to see a clearer commitment, a clearer path toward fossil fuel divestment with clearer milestones. That the world is not on a path to 1.5 decrease has -- does not provide us an excuse for our own actions. Rather, it lends urgency to making the right investment decisions that will get us there, that will send a market signal to get the world there.

As Board Member Taylor mentioned, 2.6 is going to cost a lot of money. The economic dislocation that will be caused by climate change becomes clearer each year. Extreme weather events become more frequent and we haven't yet seen the mass migrations that will occur as we march towards 2.6. So there are -- there are moral dimensions to this, which I understand you're considering, as well as the economic dimensions.

We really can't go toward 2.6. We shouldn't be satisfied with going to 2.6. We should move away from a path that takes us there and send the market signal that going there is not acceptable. And that means acceding to the idea that some fossil fuels remain in the ground, reserves remain in the ground. The choice of divestment avoids not only the extreme volatility that we've seen in fossil fuel markets over the last few years, it avoids the inevitable losses to be suffered from stranded assets.

So our choice is -- it seems to me is to stay the course and be satisfied with 2.6 and be prepared for the tremendous economic dislocation that our investments will suffer as a result of that or renew a commitment to make changes to get toward 1.5 and enable the economic stability that will benefit our investments and all of -- all of us who are CalPERS retirees, as well as all of us who are grandparents and want to be able to look our grandchildren in the eye and say we made decisions for your future.

Again, thank you for your time this morning.

CHAIRPERSON MILLER: Thank you.

I understand we have a caller or more on the phone for Item 6a.

STAKEHOLDER STRATEGY MANAGER TEYKAERTS: Yes, Mr. Chair. We have two callers on the phone. First up we have Greg Camphire. Greg, go --

MR. CAMPHIRE: Yes. Hello my name is Greg Camphire -- hello?

CHAIRPERSON MILLER: Yes, we can hear you, Mr. Camphire. Go ahead.

MR. CAMPHIRE: Thank you very much. Yes, as I said Greg Camphire. I'm in Long Beach, California. I'm a CalPERS member. I'll be retiring maybe in about 20 years if I'm lucky. So I have a very much vested interest in the outcome of these Conversations. I do really appreciate the presentations today. It's very informative and I appreciate that CalPERS is trying to be a leader in finding talent for future opportunities.

The phrase of diverse and emerging opportunities was thrown out and I'm glad that we're way ahead of other organizations on the same topic, but we have to be clear fossil fuels are neither diverse nor emerging. In fact, they're in economic decline that's necessitated by the world's future energy needs. Fossil fuels are a poor choice for investment financially and morally. And so CalPERS engagement process seems more responsive to what the fossil fuel industry determines is realistic rather than what the science is saying.

Engagement might be appropriate in a non-emergency situation when there's time to negotiate. But one, we've already run out of time and the climate crisis is happening all around us, and two, the parties you're advocating for engagement with, companies like Exxon, Chevron, Shell, and many others, they have a proven track record of being completely disingenuous and dishonest. It's well documented that they've long waged a deliberate disinformation campaign against the scientific consensus on climate crisis for many decades. So why would we pursue a based on trust with them that they'd be worth engaging with any longer? Why would we continue to give them a chances to deceive us while continuing to pollute our air, land, and water.

We wouldn't advocate for engagement with a fascist government. And fossil fuel companies and their PR machines are literally killing all life on earth as we speak. I know this sound dramatic, but the facts cannot be overstated. Fossil fuel companies have made billions from the intertwined crises of climate, COVID, and fossil fuel warfare in Ukraine elsewhere. Meanwhile, they're greenwashing their crimes and people are suffering from the rapid destruction of the planet.

So if we want responsible risk management, we need to completely divest immediately from all fossil fuel interests. The time for engagement is long past. As one of the gentlemen mentioned earlier, this is a foreign subject to many individuals steering the ship of these organizations. And I understand the need to educate these folks but they are far behind. So it's like trying to educate someone in a burning building about how the fire started.

I understand the need for CalPERS to make smart well-considered decisions about how to manage members' investments, but we know now for sure there is no future in fossil fuels. CalPERS job to identify roadblocks from the past to successful decarbonization, one of those roadblocks is the engagement policy itself, I believe. So if CalPERS is going to lead this effort and show fossil fuel companies that they're not only obsolete financially, but should be resisted morally, then they will be doing right by members such as myself.

CHAIRPERSON MILLER: Great. Thank you.

MR. CAMPHIRE: So I thank you very much for your time. I strongly urge CalPERS to immediately divest from fossil fuels.

Thank you.

CHAIRPERSON MILLER: Thank you for your comments.

Our next caller.

STAKEHOLDER STRATEGY MANAGER TEYKAERTS: Mr. Chair, we have Vivian Price. Go ahead, Vivian.

MS. PRICE: Hello. Yes, I'm very happy to follow in my esteemed colleagues' points of perspective regarding, on the one hand, the high quality of your presentation, the research that you've done, the compassion and concerns that you have shown both for the planet and also for taking care of your members, your share -- stakeholders such as myself. I'm also (inaudible) right now.

But I wanted to, rather than reiterate the excellent points that have been made by my colleagues, I'll just say that there's a few things that I wanted to touch on. One is that Cap-and-Trade is not good policy. Cap-and-Trade has been compromise that has allowed fossil fuel companies to continue spewing deadly emissions. And many of the communities that are in close contact to those facilities have cried out and our students are aware of these environmental justice impacts of the continuation of the fossil fuel emissions.

In my own campus, Cal State Dominguez Hills, we see Watts, and Compton, and Wilmington in the shadow of refineries with people getting asthma and cancer. So our youth, our -- the communities that we serve are asking us to play a more decisive role, as again the prior speaker mentioned, that we can be a leader in reducing emissions.

I agree that the carbon intensity report is something that -- something that's used, that I think also is greenwashing, rather than looking at emission reductions. We do need a carbon tax. We need it sooner than later. The way we need to -- we can use the power that we have in CalPERS to be responsible to our stakeholders, but also responsible to the people we serve, and that's inhabitants of the planet.

Right now, we're hearing about the floods and the droughts. We see people in Pakistan an Nigeria. Maybe we won't lose the coast of California for -- but people all over the world are losing their homes, their communities. And we have to look ourselves in the mirror and say we need to take more aggressive steps and divest.

CHAIRPERSON MILLER: Thank you for your comments. Your time is up. And we appreciate you sharing your comments with us.

Okay. That -- does that conclude our public comments on the phone?

STAKEHOLDER STRATEGY MANAGER TEYKAERTS: No further comments, Mr. Chair.

CHAIRPERSON MILLER: Okay. Thank you.

Well, at this point, we will recess for lunch and we will be back at what 1:30

VICE CHAIRPERSON FECKNER: 1:15.

CHAIRPERSON MILLER: Yeah, 1:15 we'll be back. Okay. We're in recess.

(Off record: 12:23 p.m.)

(Thereupon a lunch break was taken.)

AFTERNOON SESSION

(On record: 1:16 p.m.)

CHAIRPERSON MILLER: Okay. Hello, everybody. It's 1:16. We will reconvene. I hope everyone enjoyed our little recess there. And we'll jump right back in.

And so we're on our information agenda items. SO we'll jump in with 6b, our consultant review of CalPERS divestments.

MR. FORESTI: Thank you. Good afternoon. Mr. Chair, Committee members, Steve Foresti from Wilshire Advisors. I'll be really brief today, but I just wanted to take a minute just to provide context and background on the report. There were two -- as it relates to the divestment activities, there were two things that are set in policy. One is on a at least five-year cycle the -- it comes back to the Board for reaffirmation. You went through that process March of 2021. There's currently four active programs. And then in between those reaffirmations, the policy calls for an annual review. This is just a forensic impact analysis of the financial impacts. So that's what's summarized in the letter that's attachment 1 of this agenda item.

The process is we receive data from your index vendors. There's a -- basically an index that has the divestment -- the divestment securities removed and then we do comparisons to a simulated portfolio had those securities not been removed. So think about it as a pre-divestment set of investments and then a post-divestment. And we get that data from the index providers for each one of the active divestment programs. We run that through a process to essentially estimate the financial impact of the difference in those two return streams. And then we accumulate that through time and those are the numbers that are summarized.

Again, since part of policy is to keep an eye on this on an annual basis, the summary table in the letter focuses on those four active programs, so it's tobacco, Iran, firearms, and thermal coal. Three of the four, since that last affirmation -- so this is five quarters of data, when you went through the affirmation process, there was no need to do a separate impact analysis that year, because that was indeed part of the affirmation process. So this is the first one subsequently. So it does include five quarters. It would be that second quarter of 2021 and the four fis -- quarters of this past 2022 fiscal year.

Again three of the four programs we estimate to have contributed positively to market values. One was negative. When you accumulate those, it turned out to be a less than one basis point impact on the total fund of

$32 million.

But I'll pause there. Happy to take any questions you might have on those numbers.

CHAIRPERSON MILLER: Okay. I'm not seeing any questions from the Committee, so thank you.

Okay. Pretty straightforward report. Thanks for your presentation and thanks for a nice clear report.

MR. FORESTI: Thank you.

CHAIRPERSON MILLER: Our next order of business is 6c, liquidity management.

(Thereupon a slide presentation).

CHIEF INVESTMENT OFFICER MUSICCO: Great. Thank you. And this item highlights the role of liquidity management in the investment process, the evolution of our liquidity management framework and how we manage liquidity today. And again, the spirit of this report is just to start introducing on a very regular basis, you know, kind of in our kitchen as we call it just to let you see and get a feel for some of the important elements of our oversight or our management framework.

So with that, I'd like to invite up Michael Krimm Irene Rodriguez to come up and present to us today the liquidity management framework.

INVESTMENT MANAGER RODRIGUEZ: Good morning. Irene Rodriguez, CalPERS Investment staff.

Today, we will be speaking to you about the process of liquidity management at CalPERS. Allow me to provide a quick introduction to this topic. Liquidity management is an important tool that helps us meet the cash flows and allows us to maintain a consistent allocation and take advantage of opportunities. In other words, liquidity is an enabler to the investment activities.

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INVESTMENT MANAGER RODRIGUEZ: Thank you.

Let me review the objectives for the next 20 minutes or so. First, we will review the goal of liquidity management at CalPERS and the tradeoffs we have to balance. Next, after reviewing our principles, we will seek to illustrate the liquidity available with our -- within our existing portfolio. And finally, we will end up by providing an overview of our management process.

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INVESTMENT MANAGER RODRIGUEZ: Liquidity is a broad concept that has several meanings, depending on the type of institution and its goals. Therefore, it is important that we review what it means at CalPERS. The meaning that the Fed applies to the bank focuses on the capacity to meet the obligations, while at CalPERS we care about a larger scope. Here in the pyramid, you can see that meeting an obligation is our baseline and most necessary.

So let me provide some examples. The most important goal is to meet our obligations and in -- and in advance we can -- we cab plan the assets that we need to sell to meet them. However, on a crisis, asset values can go down and we might need more cash. By having a liquidity management plan, we have an organized process to measure our needs under stress and plan ahead, instead of breaking our allocations when the crisis arise.

Another example is let's say we are increasing our plan to deploy private equity. We think some opportunities might arise on the way in times of crisis. With the liquidity process, we can benefit -- we can be confident that we can continue the course of action to capture these opportunities. One of our goals for the future is to avoid underallocating due to liquidity concerns. Therefore, liquidity management is about being prepared to act both under normal conditions and also when we have crisis or stress situations.

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INVESTMENT MANAGER RODRIGUEZ: Liquidity manage -- liquidity management is a delicate balance between holding cash and investing. Historically in our portfolio, we maintain a one percent allocation to cash.

This allocation increase liquidity, but meant less investments in return-seeking assets. Today, the new allocation has -- the new asset allocation doesn't have a specific allocation to cash. Leverage allows us to maintain a deliberate choice how much cash we want to hold. With this tool, we can balance the cash needs with our long-term investment goals. With this model, we have to constantly assess the avenues to convert assets to cash.

So let me illustrate the tradeoffs we have to balance. This may sound familiar to the choice that we all have in deciding how much cash to put in our checking account. For example, how much cash do I want to have on a daily basis to operate or cost versus maturity. Do we fund our cash needs with long-term -- with long-term funds and pay higher costs or do we fund with short-term funds, or the instruments and the financing makes of these instruments? Do we use equity futures, or treasury futures, or a combination of both?

As you can imagine, this is a process that requires many decisions and it's best if we can systematize it. We have done a lot of work on understanding the liquidity of our existing assets. And let me illustrate on the next page.

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INVESTMENT MANAGER RODRIGUEZ: When we look at the portfolio with the liquidity lens, we can categorize that asset allocation with different levels of liquidity. Liquidity is not a simple concept, so we look at four characteristics of the assets and we rank them. We look at the use of trading, at the income they generate, the future capital costs, the ability to use them as collateral also.

At the top of this table, you can see that cash, treasury, and equity have the highest rating liquidity. They provide income generation and are a good source of funding. These three levers provide CalPERS with access to cash on demand. That means that they can be sold or they can provide funding to meet cash needs. While other assets, such as private debt, real estate, and private equity might have higher returns, they provide less venues to generate cash on demand.

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INVESTMENT MANAGER RODRIGUEZ: We will now review the liquidity available in our -- in our asset allocation in our portfolio.

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INVESTMENT MANAGER RODRIGUEZ: This slide provides a comparison between the strategic asset allocation in the last three cycles. You can see that we intend to hold less liquid assets than before. Those are the ones highlighted with the green box. The primary benefit of a solid liquidity management process is our capacity to increase returns and seize opportunities. The second benefit of the framework is that it allows us to maintain course.

Let me provide an example. Imagine that we have an invitation to invest in a specific distressed asset and that we believe that it could appreciate in value. We can sell some of our equity, use the cash to purchase the asset, and enter into an equity future to maintain the equity exposure. Today, we can do these because our teams have created channels with several counterparties to be able to implement these seamlessly. And we have a clear understanding on the avail -- availability of the funds.

The resort -- the result of our liquidity process is a concise frequent view of the portfolio and the needs. And on the next page, we will show you how -- how our portfolio looks on a specific 30-day period.

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INVESTMENT MANAGER RODRIGUEZ: So this slide is a snapshot of a particular 30-day period back in September. As you see, we maintain more than two times sources than uses. So let me focus on the uses first.

The column is on blue on the left-hand side. We have the known uses and those are -- include the pension benefits and the contractual payments. These are the smaller portion of our forecast uses. Then we have two larger boxes, the contingent forecasted uses. Capital calls that come from our private asset commitments and the potential margins for our derivatives, which will depend on market movements and volatility. We forecast these contingent uses using internal models with 99 percent confidence and based on the history, as well as the information that we receive from our private asset partners.

We maintain the capacity to cover uses with various sources. And the sources are on the right in green. We have operating cash that we hold. We have pension contributions from our members. We sell some of our liquid assets to meet those goals and in addition, we have funding capacity with assets that can be posted as collateral. Our sources -- our sources are diversified and we forecast what they might be under a stress scenario.

In this 30-day period here that we illustrate, they cover more than two times our forecasted needs. We update our forecast for 7, 30, and 90 days. We view it internally during our liquidity management process, which I will review with you in the next slide.

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INVESTMENT MANAGER RODRIGUEZ: This chart provides an example of the functions that inform our liquidity upcoming needs. Our Investment Office makes plans according to the current state and a stress scenario. The plans are to maintain enough liquidity to invest and search for upcoming opportunities. Overall, the process includes participation from the total fund. Informally, close to 16 Investment staff actively participate in the liquidity process and about 24 investment officers have liquidity as part of -- as a core part of their job.

From the top to the bottom some of the activities include: We gathered the known payment obligations in conjunction with FINO. We forecast our upcoming rebalancing needs and our operating cash; we coordinate with our private asset classes of commingles and distributions. Then our financing desk either identifies funding makes and ways to tap the market. Our public asset classes manager's synthetic portfolios and our cash management team invest our short-term funds in appropriate ways given the relevant market conditions. Our economics group identifies market trends, while or risk group performs stress test on our existing portfolios.

With all this information, our senior management sets priorities and decides on new investments. Our current framework has evolved through the years and we have built a robust process through a series of important enhancements.

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INVESTMENT MANAGER RODRIGUEZ: So this page provides a comparison of the models for -- from 10 years ago to today. I will focus on the enhancements that we have included in our process. CalPERS has improved both on liquidity access and liquidity risk management. Let me provide you some examples.

Our access is broader now. Back in 2017, we implemented a centralized team that manages all the financing. This is important, because the team maintains relationships with over 20 dealers and they keep a pulse on the overall market. The centralization allows us to choose different funding sources and maturities to optimize cost and composition.

In 2017, we also improved risk management process that allows us to forecast with more accuracy the consolidated non-cash flows. In 2019, we implemented a coherent centralized leverage policy that allows us confidently to direct the cash where it is needed in time. In 2020, we formalized the sale of public assets to fund each private program, which provides a consistent access to funding. And as you know, since 2010, we have improved the way that we use securities lending. This has been separated from the financing activities. Today's one fund culture and governance framework addresses the challenges of managing a complex portfolio.

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INVESTMENT MANAGER RODRIGUEZ: To determine our cash investments and funding, our staff maintains a constant pulse on the markets and identifies periods of stress and higher risk scenarios. This graph is an example of how we monitor the stress in the markets. These helps us guide how we manage the cash portfolio. Our cash portfolio may be managed to lower risk depending on the reading of the market. This provides discipline and organizations to have liquidity available when needed.

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INVESTMENT MANAGER RODRIGUEZ: Thank you for your attention to this presentation. Today, I hope to have illustrated the process of our liquidity management at CalPERS. I want to leave you with three closing comments. CalPERS goal is larger than to meet the cash flows and it is to maintain the allocation and capture the opportunities. This is a tool that we use to be ready to meet our obligations. And the framework has evolved with the learnings from previous crises, which we continue to fine-tune.

Thank you very much.

CHAIRPERSON MILLER: It looks like we'll have a few questions and I'll start off. I'm just wondering just in a broad sense with the big changes in the market and the much higher interest environment we're in, how has that impacted the way you look at, you know, leverage and with regard to some of this -- you know, the whole liquidity situation and the whole management of the complexity of these various asset classes, including things like private debt?

INVESTMENT DIRECTOR KRIMM: Yes. So I say the first order, the overall piping and machinery doesn't change. And what really changes is obviously some of the inputs and assumptions that go in there. So as pertains to the increase in interest rates, the level of interest rates per se doesn't really change liquidity conditions. So you could have good or bad liquidity with high or low interests rates.

What is kind of unique and notable about the current environment is the rapidity with which the interest rates have increased. And that has been, you know, related to the central banks fighting inflation and also the uncertainty around that policy. And that has led to increased market volatility and that impacts liquidity.

I will say it hasn't been -- it hasn't been as big as, you know, one might think, given the overall losses in the markets, but that does change liquidity. And basically what it -- what it amounts to is sort of the machinery that Irene was discussing. It leads us to be more conservative and maintain larger buffers and, you know, to make sure we can kind of get through that.

CHAIRPERSON MILLER: Great. Thank you.

Next, we have Controller Yee.

COMMITTEE MEMBER YEE: Thank you, Mr. Chair.

I think really tied to your question and really not knowing kind of the length of inflation, but if it does persist kind of how the outlook for liquidity may change as you have investment strategies that are evolving to meet the market conditions.

INVESTMENT DIRECTOR KRIMM: So let me take that in two parts. There's what could happen in the market, which, of course, I wish I knew. And then there's how we might anticipate our portfolio to respond. In terms of the markets, like I mentioned I think -- right now, I think our trading teams would describe the liquidity as a little lower than, you know, before the beginning of this calendar year, but not -- not at the levels of kind of that we saw in COVID and certainly not in the level of the financial crisis, levels of stress.

So could that get worse, yes? You know, you could have -- and that would probably unfortunately be a result of a big -- another big lag down in the markets. But it's entirely possible that it could also stay similar or stabilize. Now, the important thing in terms of our portfolio, I think the processes we have in place are sort of designed to provide sort of liquidity kind of on demand. And, you know, when you think about -- we do have a naturally liquid position. We sit on a huge pool of very liquid assets in our public markets that are highly desirable collateral for counterparties. They're very salable. Even in conditions that our trading teams would consider distressed, they're still salable assets.

So it's really up to the liquidity management process to make sure we can -- we can access those. And I'm pretty confident we have the channels in place to be able to use those and adapt.

COMMITTEE MEMBER YEE: Good. Okay. Really appreciate the presentation and really orientation to this whole total fund process, and just consistently kind of staying on top of it. So appreciate it. Thank you.

CHAIRPERSON MILLER: Okay. Director Pacheco.

COMMITTEE MEMBER PACHECO: Thank you. Thank you, Chairman Miller. And thank you, Michael and Irene for this presentation.

My question is is how does the five percent strategic leverage that we approved last year would impact CalPERS approach to the liquidity management?

INVESTMENT DIRECTOR KRIMM: I'll take that too. So one -- I almost want to turn the question around in a sense, that we tend to think of it more that some of the changes that Irene was describing are the foundation of what I think gave us the confidence to start legging into leverage. So when we started transitioning into the new strategic allocation on July 1st, really on that day nothing changed. You know, the changes had been built previously.

Now, to more again the mechanics of the actual process, you know, as we increase leverage or as we increase allocations to private markets, we then have a natural sort of systematic mechanism to increase the liquidity buffers to, for example, hold more cash, to change the term structure of our financing. So they kind of adapt as our needs increase.

Did you have something?

DEPUTY CHIEF INVESTMENT OFFICER BIENVENUE: Yeah. Maybe the only thing that I would -- I completely agree with Michael that actually nicely the work that we've done in liquidity management actually really allowed us to, you know, suggest that we could add leverage to the allocation.

It is definitely that case that as you add leverage to the allocation and as you add more private assets, we talked about it, the liquidity -- sort of the threshold for liquidity management goes up. That's one of the reasons we wanted to bring it here, because we know that there's a sensitivity to that topic, especially, you know, knowing that the last real liquidity event that all of us could think of was the financial crisis and -- and we had some stress in that period.

The work that we've done in those, you know, call it intervening 15 years has caused the portfolio not only to be much more liquid, but also, and they talked about it on the slide that has sources and uses, that there's just so many different avenues to liquidity. Like the needs of liquidity are diversified, but then also the sources are diversified and that gives us great comfort. Almost like if, you know, as an individual you had three lines of credit, you know, in place, you also had a mortgage on your house and then you had -- you know, a balance of cash. And we kind of have all those in place at all times.

COMMITTEE MEMBER PACHECO: And that -- and thank you. Thank you for that. It just -- I'm just -- I was just curious. I also was also curious about the private asset slide that requires more careful liquidity management. I noticed -- I notice -- I like that bar how it shows the liquidity score. I think it's called the overall liquidity score. And I also saw the private equity. The real estate in the private debt. And I noted -- but I also -- if I've -- if my memory serves correctly, we do have another tool that we could utilize, I guess, the secondaries, right, if we needed to -- to use those to generate liquidity. Is that another avenue? I know that -- I'm just curious if that's a --

DEPUTY CHIEF INVESTMENT OFFICER BIENVENUE: It could be, but we would very much rather it not be, right? If we're in a place where we feel like we have to go to the secondary market --

COMMITTEE MEMBER PACHECO: Right.

DEPUTY CHIEF INVESTMENT OFFICER BIENVENUE:

-- it's changing our allocation. And so much of what Irene and Michael are describing is the goal is to have -- you know, meeting the obligations --

COMMITTEE MEMBER PACHECO: Right.

DEPUTY CHIEF INVESTMENT OFFICER BIENVENUE: -- that's a very bottom of the -- of the pyramid you know must do. Our critical part is to be able to maintain the desired asset allocation despite liquidity. And then even importantly lean-in opportunities. And actually very gratifyingly we found that in the -- you know, right in kind of the early 2020 when we had the real COVID drawdown, you know, and Michael alluded to it that some of the treasury markets actually experienced some real liquidity challenges --

COMMITTEE MEMBER PACHECO: Yes, it did.

DEPUTY CHIEF INVESTMENT OFFICER BIENVENUE:

-- our portfolio stayed highly, highly liquid. And we were able -- even able to lean into a couple of private asset opportunities because of the fact that we had such liquidity, when others seem to be kind of backing away.

COMMITTEE MEMBER PACHECO: Wow. That's --

CHIEF INVESTMENT OFFICER MUSICCO: I would just add. I think of secondaries in the context that you just described as more of a portfolio construction tool as opposed to a liquidity tool. It's not an overnight trade. It's a fully negotiated long process that often even results in the case of our most recent secondary with kind of legged in, if you will, liquidity over time. And so I wouldn't think of it in this context of liquidity per se. I think of that as more of a portfolio construction tool.

COMMITTEE MEMBER PACHECO: Thank you. Thank you for that clarification. That's what I had figured. Thank you. Bye-bye. Thanks.

CHAIRPERSON MILLER: Let's see. There you go, Director Middleton.

COMMITTEE MEMBER MIDDLETON: All right. Thank you. And thank you for this presentation. A very good one as always, but a couple of questions. The first one, just in broad strokes, what has been the impact of inflation in terms of how we're approaching our liquidity management?

INVESTMENT DIRECTOR KRIMM: So the way I would describe it is inflation causes the Central Bank to want to stop inflation, which causes the interest rate increase. And the markets anticipated that by pricing in forward interest rates to increase as well. So that's the mechanism, the pathway, so we have higher interest rates. And I think that question kind of already addressing it in another form. So that's kind of how that flows I think, unless somebody -- any uncertainty -- I think the uncertainty is a big part of it. The uncertainty leads to the volatility. That's a -- that's a big channel.

DEPUTY CHIEF INVESTMENT OFFICER BIENVENUE: Yeah. And I would say the only thing I would add specific to inflation is that in an inflationary environment, and we've seen this, both stocks and bonds don't do well. Correlations between those two assets tend to go up and they tend to go up in a not good way. And then that --

again, that's just one of the reasons to have this real strong liquidity management framework, such that we have various avenues to liquidity.

COMMITTEE MEMBER MIDDLETON: All right. So in my time being on the Board, one of the things that was very reassuring was that when the market turned around 2000, and the -- we were in a position to use the liquidity that we had to purchase some assets that were at relatively bargain prices, which is different than what happened in 2008 and 2009 during the recession. So my question is -- and I -- I can think of few thing that are more important that we are prepared when the market turns down to be a buyer as opposed to having to be a seller.

So first part, what are we doing differently today from what we did 12, 14 years ago? And secondly, what are benchmarks that we as a Board can be looking at to help us assess where we're at and have firm confidence that if the market does take another turn down, we are in a solid position?

CHIEF INVESTMENT OFFICER MUSICCO: Maybe I'll start with the first bit and then you guys can lean into the liquidity management aspect of it. I think we'll hear a lot more about the proof in the pudding, I guess you'd say, of what we've been up to in the private equity program as one example. I think what you've seen -- we've positioned ourselves quite well. And some of this is, you know, just timing and luck, if you will, i.e., we were out of private markets for some time, as you know, and over the last few years, the team has taken a very thoughtful approach to not only funding partners, so we have some unfunded commitments that have been put in place over the last couple of years, which is really dry powder now for those partners, but thoughtfully the team also created special managed accounts, SMAs, if you will, which are really geared towards our co-investing activities where we'll get favorable terms, favorable economics. And again, these are pools of dry powder, if you want to think about it that way.

And so what I'm encouraged by when I think about how can we be agile, how can we be opportunistic, tied in with some of the policy changes we saw today, we have the opportunity to now deploy alongside those very hand picked strategic partners, alongside some of those already ready-to-go co-investment vehicles into market dislocation. So I think that would be a very different approach than what you would have seen even prior to say three years ago.

COMMITTEE MEMBER MIDDLETON: All right.

DEPUTY CHIEF INVESTMENT OFFICER BIENVENUE: Yeah, 100 percent agree with that in terms of our ability to capture opportunities. In terms of our liquidity management framework, I mean, they're really night and day. As someone who was here during the crisis time, we didn't know what our liquidity was. We -- although liquidity was managed out in the asset classes in a very disparate way, and Irene alluded to that, we had a very large securities lending book that was in place and was actually lent out for cash, which meant that we lost control of our own funding.

We were -- to, you know, Nicole's point, we knew that there was capital committed through funds, but we didn't know how much. We didn't know where. We were concerned that there was going to be massive capital calls. They're wound up not being. So when you look at the way that we -- that we manage liquidity now, now our securities lending book is much smaller. It's almost all equity for equity, which means that the -- that the collateral isn't changing at the pace that the -- you know, the collateral should be moving at the same pace as the markets and not like a cash where they're constantly demanding money back.

And then we just got a really strong central, you know, management framework. Irene and team meet with the private asset folks like basically weekly to -- and I'll let them dig into the details, but it's very frequently to make sue that we know what our commitments are, we know, like Nicole said, what are all those SMAs are, everything that's in place, and we have a series of sort of assumptions and models based on if the calls happened at this pace, or at this pace, or at this pace. And then like Nicole said all of that is about being able to actually capture the opportunities to your question, Ms. Middleton.

Do you guys have anything to -- anything to add?

INVESTMENT MANAGER RODRIGUEZ: Just two more things to add. Today, we have one is a centralized funding. So basically all of the funding needs for the plan come to a centralized team. So they can organize and put order to how its -- the plan is going to be funded. And second, we have implemented the proxies, which I believe you are all familiar with that was put in 2020. And those proxies give us a systematic view of what assets will need to be sold depending on what capital calls could come through in place.

INVESTMENT DIRECTOR KRIMM: All right. Thanks. That gave me time to think about the benchmarks part of the question, which is a -- which is a really interesting one. So I think sort of operationally, you know, you receive reporting on liquidity coverage. You have access to that in the Insight Tool, as well as our regular reporting. We report on our leverage position regularly. But I think maybe more -- maybe more to your point, the real scorecard is are we able to do the things we want to do that are -- do we have to think about liquidity? And the answer should be no, we should be doing our investing. And are we taking advantage of opportunities? Are we able to maintain the pacing that we desire that is appropriate to the opportunities in our private assets? So I think that's ultimately the benchmark.

COMMITTEE MEMBER MIDDLETON: All right. Well, thank you. I think that's a very good start. It's -- it's an area I personally would like to spend more time digging into. I consistently come back to part of what hurt us so much during the recession was that we had to sell at the worst possible time. And with my limited investing expertise, I have figured out that what goes up does come down frequently, exactly when you didn't want it to.

DEPUTY CHIEF INVESTMENT OFFICER BIENVENUE: Yeah, and I'll add to that again as one who was here. We not only had to sell at the time we didn't want to sell, we also had to sell the things that we didn't want to sell, because what was actually liquid was the high quality stuff, which meant we wound up not only having to sell assets we didn't want to sell, but we actually wound up overweight asset that we actually could have -- could have stood to sold -- sell. We couldn't, because we were -- I mean, I remember you Eric Baggesen, that some of you remember, Eric and I looking at each other and just going we're just looking into the abyss trying to find a bid for these things. So we are in a much, much, much better place than we were. And that again is the reason to bring this here, is because a lot of work has been done. It's really been great work by Irene, and Michael, and others that have -- it's gratifying to meet to see.

COMMITTEE MEMBER MIDDLETON: All right. Thank you.

CHAIRPERSON MILLER: Okay. I'm not seeing any more requests for comment or questions from the Board, so I thank you for this very impressive presentation. And thanks to you and the whole team that was behind it. And it's -- again continues to be, you know, enlightening and encouraging going forward.

So that brings us now to 6d, Responsible Contractor Policy.

CHIEF INVESTMENT OFFICER MUSICCO: Great. Thank you. This is an annual review required by policy and I'm going to ask that Tamara Sells comes up to present for us as well as James. Thank you.

(Thereupon a slide presentation).

INTERIM MANAGING INVESTMENT DIRECTOR ANDRUS: Good afternoon, CalPERS staff. I'm James Andrus, Sustainable Investing.

It gives me great pleasure to introduce Tamara Sells to discuss our work on the Responsible Contractor Policy. This is her second time reporting. She reported last year during COVID. Since becoming responsible for this reporting, Tamara has instituted several enhancements and is poised to move the policy and reporting function forward

As the co-chair of the Human Capital Management Committee and the head of our stakeholder engagement work, She uniquely remains on top of human capital related issues. I thank the Board for providing an opportunity to report in this forum.

Without further stealing the moment, I turn it over to Tamara for the presentation.

CHAIRPERSON MILLER: Let's turn the mic on. There you go.

ASSOCIATE INVESTMENT MANAGER SELLS: There we go. Okay. Thank you so much, Chair Miller, and the Investment Committee for having me today. I'd also like to extend my gratitude to Marcie, Nicole, Dan, James, Sarah Corr, and the Real Assets team for their support in this work. I'm Tamara Sells, Associate Investment Manager for the

Sustainable Investing Program. It's my pleasure to present the Responsible Contractor Policy annual report for the 2021-22 fiscal year.

Today, I will provide a brief overview of the Responsible Contractor Policy and its history. I would also provide a summary of our 2021-22 compliance results. I will touch on our communication and engagement flow as well as the bidding and notification process. And lastly, I will provide a snapshot of the total compliance in contracting over the past seven years.

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ASSOCIATE INVESTMENT MANAGER SELLS: The Responsible Contractor Policy exists to ensure prudent and careful action while managing the Responsible Contractor Program demonstrating our fiduciary principles to support and encourage fair wages and benefits for workers employed by our contractors and subcontractors, and further contributes to competitive returns on our real estate and infrastructure investments. The Responsible Contractor Policy applies to domestic real estate and infrastructure assets, where CalPERS holds a greater than 50 percent interest on contracts equal or greater to $100,000.

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ASSOCIATE INVESTMENT MANAGER SELLS: In 1998, you, our CalPERS Investment Committee, approved and established the program. The Responsible Contractor Policy was carefully crafted by CalPERS external investment managers, labor stakeholders, fiduciary counsel, Pension Consultant Associates, and staff. The Responsible Contractor Policy seeks to secure the conditions of workers without adverse effect on our investment returns, access to investment opportunities, or significant costs. The Responsible Contractor Policy provides an important risk management function in the identification and mitigation of labor risks across the real estate and infrastructure portfolios.

Since then, the policy has been reviewed and enhanced three times with extensive input and engagement from our labor organization and investment managers. Application of the Responsible Contractor Policy continues to result in positive outcomes for CalPERS, labor stakeholders, and CalPERS investments.

Lastly, this past August, we conducted our first ever Responsible Contractor Program Q&A session, whereby all our CP managers were invited to voluntarily participate. The purpose of the session was to provide managers that would be reporting for the first time the opportunity to hear from some of our long-standing RCP managers about their experience and best practices in implementing the RCP Policy, as well as success stories that others would benefit from.

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ASSOCIATE INVESTMENT MANAGER SELLS: As for the 2021-22 summary results, I am happy to report 100 percent compliance by our CalPERS RCP managers. All managers have certified that they and their contractors and subcontractors have complied with the policy. Certified responsible contractors received over $981 million last fiscal year and over six billion over the last seven fiscal years under the policy.

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ASSOCIATE INVESTMENT MANAGER SELLS: The policy continues to provide an avenue for communication and engagement between our external managers, their contractors, labor stakeholders, and CalPERS staff. The CalPERS Investment staff communicates regularly with our labor stakeholders and our real asset and infrastructure managers regarding implementation of the policy. We work to address labor issues in a timely manner and in accordance with the Responsible Contractor Policy.

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ASSOCIATE INVESTMENT MANAGER SELLS: The Responsible Contractor Policy establishes communication channels and responsibilities between managers, unions, and contractors, with respect to bidding and notification.

The RCP Policy is a part of each applicable contract requiring information on wages and benefits from contractors during the bidding process and an annual certification.

Unions may ask to be put on a manager's distribution list for information on RCP bidding opportunities. In addition, unions may provide managers with list of signatory contractors. Some managers employ an automatic notification method, while other managers send email notifications or post the information on their website or through a web portal. In any event, the policy requires communication.

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ASSOCIATE INVESTMENT MANAGER SELLS: For the fiscal year ending June 30th, 2022, managers reported 100 percent compliance with the Policy. And as I previously mentioned, certified responsible contractors received over six billion over the last seven fiscal years under the Policy. Last fiscal year, the decrease in the total amount paid to certifying responsible contractors was attributed to several factors, including pandemic-related delays and disposition of non-strategic assets.

For the 2021-22 fiscal year, the increase in the total amount paid to certified responsible contractors was attributed to several factors, including new managers reporting, delays lifted on contracts that had been previously on hold due to COVID supply chain issues, and the purchase of new assets that require capital work.

Overall, the policy continues to serve us well. And that concludes the fiscal year 2021-22 annual responsible contractor update and I'm happy to address any questions.

CHAIRPERSON MILLER: Okay. Thank you very much.

I'm not seeing any requests to speak. And so I'll thank you for that very comprehensive and clear report -- oh, somebody -- no -- there we go now. Okay. Now, I've got several all of a sudden. So we'll start with President Taylor.

COMMITTEE MEMBER TAYLOR: So I wanted to thank you, Tamara. It was a really good report.

So we -- and I really enjoy hearing this report. I just wanted to let you guys know from stakeholders regarding human capital management, we definitely hear a lot of kudos for you guys, so thank you very much, because we get a lot of that coming to us first and then we bring it to you guys. So we want to let you know that thank you very much for that.

So I was wondering if -- given our strength of our team and that you're on the human capital management coalition, I'm wondering if after the pandemic we see a new appreciation for the essential roll of workers. I mean, that's something that the State of California is working on right now with unions across the supply chain. And sustaining the values -- the value in company industry performance. It's been, I think, eight years, maybe longer, since we've updated the Policy. And I wondered if it -- we could update our RCP Policy in 2023. I know that's -- we don't have that as a -- as a going forward, but I was wondering if maybe we could have you guys do that. I know there's new language out there. I think we heard about it at one of the events we were at. So if we could update that policy, I'd like to suggest that you guys work on that and maybe put it in our workplan for 2023.

ASSOCIATE INVESTMENT MANAGER SELLS: Thank you for the feedback. Noted.

COMMITTEE MEMBER TAYLOR: All right. Thank you.

CHAIRPERSON MILLER: Okay. Next, we have Frank Ruffino.

ACTING COMMITTEE MEMBER RUFFINO: Thank you, Mr. Chair. And just in line with the question of President Taylor, you know, it sounds like the policy, you know, we report every year, which is great. I'm not sure if we've done an in-depth review or when -- if we have done a comprehensive review later. I'm not sure if we have done that, but as the President mentioned, I think it would be a good idea to do a review in the future.

Thank you, Mr. Chair.

CHAIRPERSON MILLER: Thank you.

Director Willette.

COMMITTEE MEMBER WILLETTE: All right. Thank you so much. Also, thank you for the report and thank you for the presentation. I'm still, as a newer member of the Board here, I'm still learning, but I think what I've seen is that the Responsible Contractor Policy has worked really well for us in real assets. And although it's not directly applicable to private equity, given the way we relate to GPs and the marketplace, I think human capital management is something we have to, you know, broaden and strengthen. And health workforce practices are critical to our long-term success as a long-term, you know, investor.

So I think we should endeavor on a project with ILPA and other LPs with GPs and other stakeholders to establish a workforce management framework and principles for private equity as well that we can adopt. So I would like to request that the staff come back with plans on how to approach both of those things, one being a process to update, as President Taylor said, the RCP for real assets, and then the second ask from me is a process to consider how we apply our RCP experience in real assets and our sustainability principles in public equities to the private equity space.

Thank you.

ASSOCIATE INVESTMENT MANAGER SELLS: Thank you for the feedback. Noted.

CHAIRPERSON MILLER: Okay. Thank you.

I have no more questions or -- oh, I do.

Director Pacheco.

COMMITTEE MEMBER PACHECO: Sorry. Sorry about that. Thank you. Thank you. Thank you for the presentation Tamara, Thank you, James, and thank you Chairman Miller for the -- for the question.

So my question is is what are the consequences to the CalPERS invest managers if they are not compliant with the Responsible Contract Policy? Are there any penalties or anything like that and is that spelled out in the policy?

ASSOCIATE INVESTMENT MANAGER SELLS: Thank you for the question. It is spelled out within the Policy that first off it requires staff to diligently monitor managers for compliance with the Policy, just as it expects our managers to diligently monitor delegates and their subdelegates for compliance with the policy as well. If staff determines a material violation of the policy, we do have a probationary list that managers can be placed on. And there's also a six-step process outlined for formal complaints within appendix 2 of the policy.

If there's a pattern of violation of the policy, staff can make recommendations around the renewal discussions of the manager, whether to renew with the manager, and also whether they should cancel the contract as long as it's consistent with our fiduciary duty.

COMMITTEE MEMBER PACHECO: And this is six-step process, it's well spelled out and...

ASSOCIATE INVESTMENT MANAGER SELLS: It is. It is. And under appendix 2 of the policy.

COMMITTEE MEMBER PACHECO: And has it ever been utilized or...

ASSOCIATE INVESTMENT MANAGER SELLS: For the two years that I have been managing the reporting process, we have not had any formal complaints under the policy.

COMMITTEE MEMBER PACHECO: Thank you.

ASSOCIATE INVESTMENT MANAGER SELLS: Thank you.

CHAIRPERSON MILLER: Okay. Thank you. Any further questions, comments from the Board?

I do have someone in the queue on the phone with a question or comment on this item. So we'll go to the phone. Okay. Do we have a caller for...

STAKEHOLDER STRATEGY MANAGER TEYKAERTS: Yes, Mr.

Chair. We have one caller. We have Michael Ring. Go ahead, Michael.

CHAIRPERSON MILLER: Okay. Thank you. Go ahead, Michael.

MR. RING: Hi. This is -- Chair Miller, members of the Board, this is Michael Ring, Service Employees International Union. As most of you know SEIU represents tens of thousand sof members who participate in CalPERS, as well as thousands of workers and (inaudible) companies in which CalPERS holds significant investments. Thank you for the report on the Responsible Contractor Policy. Thank you for the opportunity to address the Committee today on this item.

First, I want to thank CalPERS for its leadership and understanding the importance of valuing workers as part of the fund's fiduciary responsibility to invest in long-term investment success. CalPERS fiduciary leadership in this area is reflected both historically and currently. Historically, through the fund being one of the first to adopt a Responsible Contractor Policy and the adoption of three forms of capital including human capital in their Investment Beliefs.

These ideas, which CalPERS helped to introduce to the institutional Investment World are now considered best practice by many leading investors. And currently, CalPERS team members -- excuse me. Sorry, CalPERS team members working on workforce issues, led by James Andrus and Tamara Sells, are recognized among many key stakeholders in the institutional investment world as leaders in addressing this issues effectively. Both as individuals -- with regard to individual cases that relate to the RCP and other workforce issues that may arise through active portfolios, but also, and equally importantly, in helping to establish a broader market standard that understands the value of workers in the investment chain.

It's critical to generate long-term value for investors, and in particular in your case, beneficiaries of CalPERS, including SEIU members. So we thank you for your work in this area. We encourage CalPERS to continue this leadership and we support the fund engaging in a process to update and fortify the RCP, and to continue to integrate workforce strategies like the RCP in an appropriate fashion in other asset classes, including private equity.

Thank you for your time and consideration.

CHAIRPERSON MILLER: Thank you for your comments, Mr. Ring.

I think that concludes this item, which brings us -- oh. Okay. Did you want to comment on this particular item. Come on up.

Okay. Yeah. Next time, if you fill out the form, we'll have you on my list. So if you'll identify yourself. You'll have three minutes. The time will come up here and so the floor is yours.

MS. O'DELL: Thank you. Thank you, Mr. Chairman. My name is Jennifer O'Dell from the Laborer's International Union of North America.

We represent thousands of members who are plan participants of CalPERS. And I just wanted to briefly comment on three points with the Responsible Contractor Policy, some ideas that perhaps the Board and staff could take into consideration.

First, I wanted to, like my colleague, Brother Ring, that the staff has always been responsive to us. Tamara and James are wonderful assets to CalPERS and are always willing to have a dialogue with us about any concerns that we have.

However, we would make three recommendations to the Board to consider. First, the notification process. This is pretty simple. If we don't know about work, we can't bid on the work. And in the case of several of your managers, we have not received any notification this year, period, for work. And those managers, for bids that would be under the Responsible Contractor Policy, would be CIM, Divco, GIP, Harbert, Hines Green, Meadow Partners, and QIC. I'll provide this list to staff as well. We have not received a single notification about any bid opportunities for work that would fall under the Responsible Contractor Policy.

Now, that could be that if they don't have work that falls under the Responsible Contractor Policy, that could be an explanation. But if -- you know, we don't know what we don't know. So it would be great if we could check back on those managers to see if there was actual Responsible Contractor Policy work available.

One way also, which ws mentioned earlier by one of the trustees is that in order to be best in class, it would be good if CalPERS would consider adopting some of the language that would include co-investments and commingled funds in real estate and infrastructure. New York Common Retirement System, Washington State, New York City Retirement System, and Illinois State Board of Investment all have language that also includes those commingled investments for investments that are under 50 percent plus one.

So we would like it if the Board would also consider that. And finally, self certification. I just told you a number of managers that have failed to give us notification under the Responsible Contractor Policy let you -- yet, they have all reported 100 percent compliance with the RCP. Notification is an essential point and central issue for the Responsible Contractor Policy. So it's easy to ask people if they've -- are you 100 percent compliant? Yes, I am 100 percent compliant. We would like that also to be looked into.

And finally, to the private equity, we would also encourage the Board to consider how a Responsible Contractor Policy should also apply to those private equity assets. Thank you so much for your time and we look forward to working you with you further.

CHAIRPERSON MILLER: Great. Thank you for your comments.

Okay. I think that wraps up Item 6d. Just looking. Okay. So on to summary of Committee direction.

DEPUTY CHIEF INVESTMENT OFFICER BIENVENUE: Okay. I'll take Committee direction. We actually didn't have any specific Committee direction, but we did receive a significant amount of feedback that we will take as figuring out how we can work it into the workplan, you know, in the upcoming -- and, you know, Nicole talked about the MID of Sustainable Investment that's being hired. And certainly that weighs into this too, because we'll want to get that person's feedback on this.

But it was first of all from Chair Taylor -- I'm sorry, from President Taylor, a report from each asset class on how incorporating the DE&I lens fits into manager selection. From Controller Yee, providing better context in the report on the TCFD report, knowing that there's going to be a lot of interest in it -- I'm sorry, on the AB 890 -- because speaking specifically through the fiduciary lens.

Also, from Director Willette, getting periodic reports on how we navigate the Sustainable Investment transition. And then finally, get -- looking into when we can update the Responsible Contractor Policy. This came from both Director Taylor as well as Director Ruffino, and then also Director Willette as part of the 2023 workplan, and specifically looking at how we would incorporate private equity into the thinking here. That is similar analogous thinking.

And I think that's what I took as feedback.

CHAIRPERSON MILLER: Okay. Excellent. I think that about covers it.

So that brings us to 6f, public comment. And I have at least two requests for public comment. I have Al Darby and Tim Behrens. If you could make your way down to the microphone and you'll have up to three minutes to make your comments. If you'll identify yourselves when the mic comes on. And I think both of you gentlemen know the drill.

Okay. Looks like your first, Mr. Behrens.

MR. BEHRENS: Thank you, Chairman Miller, members of the Board. Tim Behrens, California State Retirees. I'm going to give an equal plug like Lisa Middleton did. My daughter-in-law sells solar panels, so if you're interested in investments, it's really good company, Sunrun.

I've been running or I ran for the -- a seat, the retiree Board seat for about the last eight or ten months, and had a lot of interesting phone calls, hundreds actually. And one of the things I had run on was bringing private equity back in-house. And I got comments on both sides of that. And today, I saw this article that I wanted to share some of it with you, the Board, and thank the Investment staff for great presentations all day long. And I think this is the direction you're going, but this came from CalSTRS.

A reporter named Arleen Jacobius says that CalSTRS has been chipping away at the cost of running its 288.6 billion portfolio, even as its exposure to some of the priciest investments, private markets, and the size of the plan have both climbed. So what's their secret? Their secret they say is the collaborative model that has saved CalSTRS an estimated average of 195 million annually over the past four years. And this again is according to its latest collaborative model savings report.

Well, it seems to me if CalSTRS can do it, CalPERS can do it better and I think can save even more money. So I would urge you -- I think I heard you talk about collaborative efforts today with our new Chief Investment Officer and team, and I hope you'll keep going that direction. I appreciate the great debate that you had today. It's been a long time since I've seen this kind of debate in this forum. And I hope and urge you to continue that debate in the future.

Thank you.

CHAIRPERSON MILLER: Thanks you very much. Next, we have Mr. Darby.

MR. DARBY: Am I on? Yeah.

Good afternoon, Mr. Chair, and Committee. Al Darby, Vice President of Retired Public Employees Association.

On climate change, 6a, in your agenda, I believe it was Lisa Middleton that asked how CalPERS might assist in bringing forward the -- some of the issues and some of the solutions to the climate change situation. And one thing I suggest is you might want to look at reviving an earlier PE proposal from a few years back called Pillar 3 or 4. I forget which one it was, but it was venture capital. And venture capital is investing heavily in renewable energy and battery, and solid State hydrogen projects, batteries of all sorts, graphite, sodium, and many more. And hydrogen is also being brought to the fore in the form of solid state hydrogen making it much easier to, you know, use in everyday cars and other activities where hydrogen might be appropriate. And all of this is from renewable energy sources.

I want to also comment on 5a. It sounds as if there might be potentially too many eyes on these investments in -- that you're talking about making investment decisions. I'm not sure they can be as nimble as they need to be in order to take full advantage of opportunities that pop up. Just my own observation.

There are some serious questions about private equity. And valuations, of course, is always a question. It's up to the GPs really to tell you what the value is and that might not be as reliable -- nearly as reliable as what the equities market would be for valuation.

Also, there's poorer return on investment in PE. It seems to -- in recent years, it seems to be -- continuing to be a problem of diminution of the return on investment. And then there's also the Ponzi nature of some recent transactions where general partners were selling to other general partners. So these all raise questions about -- about private equity.

Also, risk adjustment, since it's illiquid is going to make it more important to have a better stronger risk adjustment system or calculation. If you're going to do international transactions, you better have a derivative in place to take care of the currency valuations.

And finally, I -- I don't add -- I don't suggest adding to the repertoire of private equity crystal -- cryptocurrency. Thank you.

(Laughter).

CHAIRPERSON MILLER: Thank you for your comments, Mr. Darby.

Okay. I think that pretty much wraps it up. We'll recess now into closed session for items 1 to 7 from the closed session agenda. The open session Investment Committee will reconvene following closed session. So thank you. We'll take a few minutes and recess and clear room.

(Off record: 2:20 p.m.)

(Thereupon the Committee recessed into closed session.)

(Thereupon the Committee reconvened open session.)

(On record: 4:35 p.m.)

CHAIRPERSON MILLER: Okay. I will reconvene our open session. There -- do the doors need to be open for us to --

VICE CHAIRPERSON FECKNER: In case anybody wants to come in.

COMMITTEE MEMBER TAYLOR: Are we reconvening?

CHAIRPERSON MILLER: Yeah.

COMMITTEE MEMBER TAYLOR: So then go open the doors then.

CHAIRPERSON MILLER: So absent any objection, I will adjourn this open session.

No objection. We're adjourn.

(Thereupon, the California Public Employees' Retirement System, Investment Committee meeting open session adjourned at 4:35 p.m.)

CERTIFICATE OF REPORTER

I, JAMES F. PETERS, a Certified Shorthand Reporter of the State of California, do hereby certify:

That I am a disinterested person herein; that the foregoing California Public Employees' Retirement System, Board of Administration, Investment Committee open session meeting was reported in shorthand by me, James F. Peters, a Certified Shorthand Reporter of the State of California, and was thereafter transcribed, under my direction, by computer-assisted transcription;

I further certify that I am not of counsel or attorney for any of the parties to said meeting nor in any way interested in the outcome of said meeting.

IN WITNESS WHEREOF, I have hereunto set my hand this 20th day of November, 2022.

James F. Peters

JAMES F. PETERS, CSR
Certified Shorthand Reporter
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