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CaSTRS Net Zero Strategy Update

August 31, 2022

Net Zero Strategy Highlights: 'Total Fund' Approach

- 2016  ➤ **Low-Carbon Index Introduced**
- 2019  ➤ **Low-Carbon Transition Workplan**
- 2020  ➤ **Low-Carbon Investment Belief**
- 2021  ➤ **Net Zero Pledge**
➤ **SISS Private Portfolio to Increase Investments in Solutions**
➤ **Exxon AGM Success**
- 2022  ➤ **Focus on Emissions Measurement**
➤ **Emissions Reductions Recommendations**
- 2023  ➤ **January: Net Zero Stewardship Update**
➤ **May: Annual Net Zero Progress Update**

Net Zero Action Item 3a

Staff is making four recommendations:

- 1) Set a 2030 Science-Based Reduction Goal of 50% for Total CalSTRS Fund
- 2) Adopt a Net Zero Investment Decision Making Process
- 3) Reduce Emissions in Public Equity by Adopting a Target Allocation of 20% to MSCI ACWI Low Carbon Target Index
- 4) Integrate Climate Scenarios into CalSTRS Asset-Liability Management (ALM) Framework

Net Zero Information Item 3b

Staff is providing updates on:

- 1) Emissions reductions in Fixed Income
- 2) Development of low carbon framework to guide investments in climate solutions
- 3) Enhancements to CalSTRS net zero-related engagement and proxy voting strategies

Recommendation 1: Set Interim Science-Based Goal to Guide Activities

Without immediate and deep emissions reductions across all sectors, limiting global warming to 1.5 degrees Celsius is beyond reach. The evidence is clear: the time for action is now. We can halve emissions by 2030.

- IPCC Sixth Assessment Report

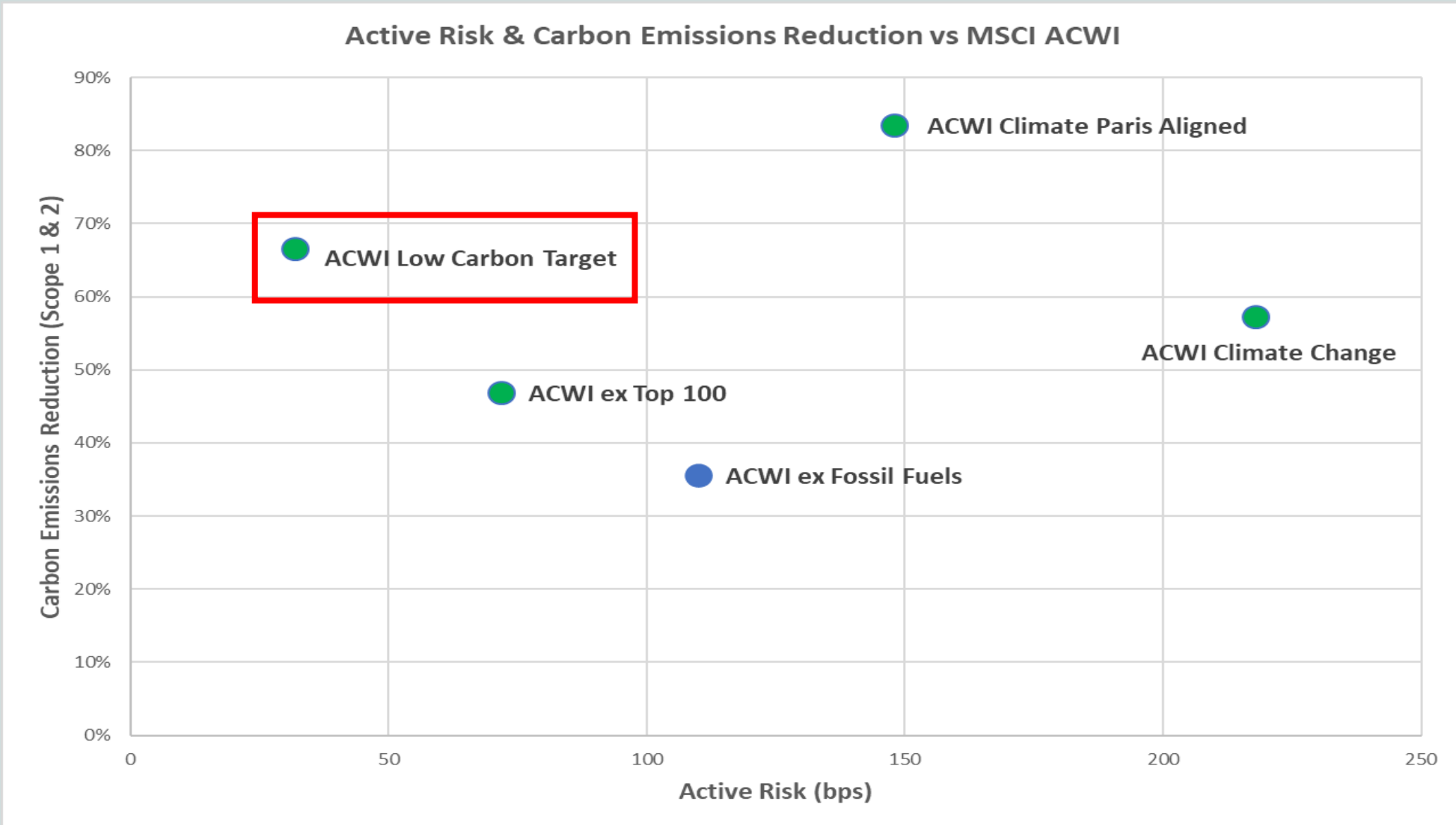
The decisions we make now can secure a liveable future. We have the tools and knowledge required to limit warming. There are policies, regulations and market instruments that are proving effective.

- Hoesung Lee, Chair IPCC

Recommendation 2: Adopt a Net Zero Decision-Making Process

Annual Review	Scope	Determine investment strategies and scenarios for consideration	Develop Transition Tracker
	Risk	Assess risks including qualitative factors, tracking error and volatility	
	Emissions	Estimate impact on carbon emissions to maximize emissions reduction per unit of risk	
	Return	Incorporate climate scenario analysis, develop expected long-term returns	
	Funding	Judge effects on funding status and contribution rates	
	Net Zero Goals	Evaluate alignment with CalSTRS Net Zero goals	

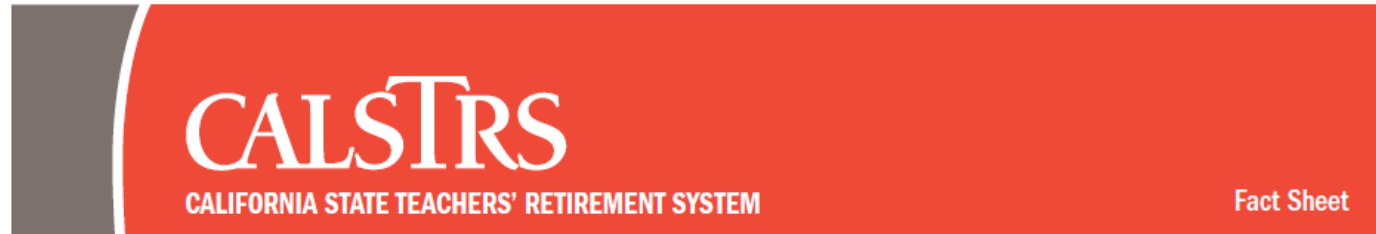
Recommendation 3: Reduce Emissions Through Target Allocation to MSCI ACWI Low Carbon Target Index



Recommendation 3: Risk Analysis Summary for Target Allocation

Liability Metric	Key Findings for a 20% Allocation
Assumed Rate of Return	No material changes to the assumed rate of return
Portfolio Growth Rates	Marginal increase in the risk for portfolio growth rates, especially for disorderly transitions and hot-house scenarios
Funding Levels	<p>Marginal risk to both the ability of reaching full funding by 2046 and the likelihood of seeing low funding levels</p> <ul style="list-style-type: none"> * A more orderly transition, that takes place sooner, tends to be positive for funding risks with lower risk of low funding and lower risk of reaching full funding * Delayed or disorderly transitions and hot-house scenarios tend to be more negative for funding risks with higher risk of low funding and some risk to full funding under certain scenarios
Contribution Rates	<p>No anticipated impact to the contribution rate for teachers</p> <p>None to minimal impact to the contribution rate for school districts</p> <p>Marginal risk to contribution rate levels for the State</p> <ul style="list-style-type: none"> * A more orderly transition, that takes place sooner, tends to have less risk of changed contribution rate for the State * A delayed or disorderly transition tends to have more risk for increasing the State contribution rate with more near-term risk in a disorderly scenario and more long-term risk in hot-house scenarios

Recommendation 4: Integrate Climate Scenarios into ALM



CalSTRS 2022-23 Asset Liability Management Study

Overview of Six NGFS Climate Scenarios

<u>Category</u>	<u>Scenario</u>		
Orderly	<ul style="list-style-type: none">• Net Zero 2050• Below 2 Degrees Celsius	Physical Risk	Transition Risk
Disorderly	<ul style="list-style-type: none">• Divergent Net Zero• Delayed Transition		
Hot House World	<ul style="list-style-type: none">• Nationally Determined Contributions (NDCs)• Current Policies		

What's Next?

- Emissions reductions strategies
 - Update on Public Equity implementation plan
 - Recommend Fixed Income emissions reduction strategy
- Investments in climate solutions
 - Apply 'Green/Olive/Gray' framework to selected private market investments
 - Update on SISS Private Portfolio buildout
- Enhanced net zero engagement strategies
 - Stewardship priorities update in January 2023
- Annual cycle of net zero board updates in May



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HOW WILL YOU SPEND YOUR FUTURE ?