Memo

To:	Members of the Investment Committee California Public Employees' Retirement System
From:	StepStone Group
Date:	February 16, 2016
Subject:	Semi-Annual Consultant Report – Infrastructure

StepStone has reviewed the performance of CalPERS' Infrastructure Program (the "Program") as of December 31, 2015 provided in Wilshire's Executive Summary. Based on our review, we offer the following comments with respect to the Program's performance:

- As of December 31, 2015, the Program outperformed the policy benchmark across all measured periods. For the quarter, the Program returned net 3.2%, exceeding the benchmark by 2.5%[1] Over the trailing one, three, and five-year periods, the program returned net 11.0%, 15.0%, and 19.1%, respectively. Program performance exceeded the benchmark by 7.0%, 10.0%, and 13.0% for the respective periods.

Infrastructure Performance	Quarter	One Year	Three Year	Five Year
Infrastructure Program Returns[1]	3.2%	11.0%	15.0%	19.1%
Policy Benchmark (CPI+400 BPS)	0.7%	4.0%	5.0%	6.1%
Difference	2.5%	7.0%	10.0%	13.0%

[1] Net of management fees and other costs

- As during prior periods, strong performance was driven by the Program's direct investments and commingled funds. Since the performance of more recent commitments to custom accounts and commingled funds is not yet meaningful, we expect performance to moderate over time. Further, as infrastructure is a long-term, private market investment strategy, quarterly results will be less significant than performance over longer periods.

- In the second half of 2015, the Real Assets Unit ("RAU") initiated the process of updating its Strategic Plan, and is scheduled to present a draft of the plan to the Investment Committee in the spring of 2016. The Infrastructure Strategic Plan was last approved in April 2011. For the first time, the RAU will have an integrated Strategic Plan incorporating Real Estate, Infrastructure, and Forestland, recognizing the similar roles that each asset class plays at CalPERS. The creation of an integrated Strategic Plan is also consistent with the Vision 2020 objective of reducing complexity across the organization.

- Infrastructure market conditions remained competitive through 2015, and StepStone expects this to continue into 2016. Competition continues to be driven by an increasing supply of capital targeting infrastructure from new and existing allocations to the asset class among institutional investors globally. In addition to infrastructure funds, a number of direct investors, particularly large sovereign wealth funds,

[1] CalPERS' Infrastructure policy benchmark is CPI + 400 BPS.

insurance companies and public pension plans have become increasingly active in the infrastructure market. And, similar to CalPERS, many larger institutional investors are still below their target allocations to the asset class. StepStone expects more capital to flow into the asset class from small and medium-sized institutional investors who are creating new allocations to the asset class.

- Capital flows into infrastructure were driven in part by the low interest environment, attracting investors seeking higher returns relative to sovereign or corporate debt. Other factors, such as concerns about rising inflation and an interest in diversification also contributed to the increasing demand for infrastructure investments globally. As we have discussed with the Investment Committee previously, these trends have led to increased demand particularly for mature, operational, and income generating assets in established infrastructure markets that are a focus of CalPERS' Program, including North America, the UK, and Australia.

- Fundraising activity and transaction levels in the second half of 2015 pointed towards a heated market for infrastructure. Despite record amounts of dry power, the number of funds in market and aggregate amount of capital targeting infrastructure increased through the year. Further, there was a trend toward shortened fundraising periods for many General Partners. The average size of funds also increased. In late 2015, two established infrastructure managers, Global Infrastructure Partners and Brookfield Asset Management, came to market targeting US$15 billion and US$12 billion, respectively. If successful at achieving their fundraising goals, these funds would represent two of the largest pools of capital ever raised by infrastructure-focused managers.

- Despite competitive conditions, several developments are generating new opportunities for infrastructure investment that are consistent with CalPERS' Program and strategy. In North America, falling oil and gas prices continue to weigh heavily on producers, and are serving as a catalyst for transaction activity in the energy infrastructure sector. As profitability among oil and gas producers has declined, there has been greater interest in the sale of embedded assets including pipelines, storage, and processing facilities. In addition to potentially attractive entry valuations, such assets are often high quality and strategically located, and may offer reduced exposure to commodity price risk through contracted availability or volume-based pricing. Low oil and gas prices in the US are also presenting attractive opportunities for the export of natural gas liquids and refined products, as well as investment in cross-border transportation facilities.

- Infrastructure investment opportunities have also been generated through the ongoing transition to a low-carbon economy, including the retirement of coal-fired power facilities and construction of new gas-fired replacement facilities, expansion of renewable generation capacity, and power transmission network upgrading and expansion. Over half of US states have a Renewable Portfolio Standard ("RPS") requiring utilities to procure a percentage of their electricity from renewable sources. In October, Governor Brown signed into law a bill increasing California's RPS from 33% in 2020 to 50% in 2030. In Europe, the European Union Renewable Energy Directive has set a target of 20% energy consumption, and 10% of transportation fuel, from renewable sources by 2020. The decline in stock prices of publicly traded yieldcos, among the most active investors in renewable power generation assets in recent years, has reduced competition for operational renewable assets, and some yieldcos have become sellers of high-quality, contracted renewable projects to meet liquidity needs.

- Deal flow for Public Private Partnerships ("P3s") has remained steady over the past few years, yet the number of projects and total equity requirements are still constrained and several announced transactions were cancelled. During 2015, five P3 transactions reached financial close in the US. Two significant P3s were recently announced in California. In November, UC Merced announced preliminary approval for its proposed US$1 billion campus expansion plan, which would double the physical capacity of the campus by 2020. And, in December the Long Beach city council approved a P3 model for the construction of a new civic center.

StepStone welcomes the opportunity to answer any questions of the Investment Committee.