Memo

To:	Members of the Investment Committee California Public Employees' Retirement System
From:	StepStone Group
Date:	July 31, 2017
Subject:	Semi-Annual Consultant Report - Infrastructure

StepStone has reviewed the performance of CalPERS' Infrastructure Program (the "Program") as of June 30, 2017 provided in Wilshire's Executive Summary. Based on our review, we make the following comments with respect to the Program:

- For the quarter ending June 30, 2017, the Program continued to outperform its benchmark, returning net 2.04% compared to the policy benchmark of 1.97%. Over the trailing one, three, and five-year periods, the program returned net 9.92%, 10.70%, and 11.98%, respectively. Returns for each of these periods exceeded the benchmark by 3.45%, 5.61%, and 6.71% in the respective periods.

Infrastructure Performance	Quarter	One Year	Three Year	Five Year
Infrastructure Program Returns[1]	2.04%	9.92%	10.70%	11.98%
Policy Benchmark (CPI+400bps)	1.97%	6.47%	5.09%	5.27%
Difference	0.07%	3.45%	5.61%	6.71%

- Alinda Infrastructure Fund I has delivered strong performance through all reporting periods, with a net return of 11.04% during the last quarter. Neptune Regional Transmission System and Ivy Investment Vehicle also performed well over the last quarter, generating a net return of 4.80% and 4.20%, respectively. Although Golden Reef Infrastructure Trust generated negative net return in the last quarter, its performance is not yet meaningful and will need to be assessed over a longer period of time. Further, as infrastructure is a long-term, private market investment strategy, quarterly results will be less significant than performance over longer periods.
- Competition for core infrastructure assets remained strong in the first half of 2017, particularly in developed markets, such as North America, the UK, Europe, and Australia. Robust capital flows into mature, operational infrastructure assets were supported by the low interest conditions. On a risk-adjusted basis, the stable and predictable cash flow profile of high-quality infrastructure appears attractive relative to the yields offered by sovereign or corporate debt securities. Other factors, such as concerns about rising inflation also contributed to the increasing demand for infrastructure investments globally.
- As of June 30, 2017, Preqin[2] reported a total of 764 infrastructure transactions for the six months period, with a total value of US$378 billion. This is 5% or US$21 billion less than the previous year's corresponding period. Average transaction size increased in the industry from US$336 million in the previous year to US$494 million. 40% of the transactions reported were in the Europe region followed by North America which made up 33% of all infrastructure deals. Most transactions took place in the renewables sector, with 60% of all transactions, particularly in the solar power and wind power sub-sectors.

[1] Net of management fees and other costs
[2] Source: Preqin data as of July 31, 2017; Figures are subject to revision as further information becomes available

- 42 unlisted infrastructure funds[2] reached first, second, third or financial close in the first half of 2017, raising a total of US$21.4 billion of capital. The largest contributors to the pool were EUR4 billion closing of EQT Infrastructure III Fund and the EUR1.9 billion first close of Copenhagen Infrastructure III. The demand for infrastructure as an asset class is evidenced by the speed of fundraising and the proportion of funds meeting or exceeding fundraising targets. Funds that closed in 1H2017 spent on average 17.5 months in market, down from 27 months in 2015. The percentage of funds exceeding the target size rose from 55% in 2016 to 58% in 1H2017. Successful managers such as EQT Funds Management saw substantial oversubscription for its fund and managed to complete a EUR4 billion fundraising within seven months.
- As the infrastructure plan of the US administration will not be released until 3Q17, the sector is still waiting for details. In an address to the Senate commission on Environment and Public Works, Transport Secretary Chao reiterated the importance of private sector involvement including PPPs. She also announced that the federal government intends to make US$200 billion in direct funding available in order to leverage private sector money. Most international attention and criticism was drawn by President Trump, who denounced the Paris climate accord. It is not expected that the federal pull-back will dramatically change policies of individual states, such as renewable portfolio standards that require utilities to deliver a certain portion of energy through renewable generation. California entered into a bilateral agreement with China to work together to reduction carbon emissions.
- Amidst numerous renewable energy transactions in North America, three deals stood out given the involvement of direct investors. John Hancock agreed to acquire a 49% interest in the 1,300MW wind and solar portfolio of Exelon. PGGM acquired a 275MW portfolio of residential and C&I rooftop solar assets from Tesla’s subsidiary SolarCity. In the meantime, PSP cut a deal with listed yieldco Pattern Energy and its sponsor Riverstone to commit an aggregate of US$1 billion to acquire approximately 10% in Pattern Energy and co-invest into further drop-downs from Pattern Development to the yieldco. A notable transaction that reached financial close in the transportation sector was the acquisition of a 40% interest in Puerto Rico based Luis Munoz Airport by PSP owned AviAlliance from Oaktree Capital Management, while Mexican operator ASUR increased its interest from 10% to 60%.
- The UK held another general election on June 8, 2017, whereby the Conservative party had sought to secure an increased majority to strengthen the Government’s position in the upcoming Brexit negotiations. Although the Conservatives won the largest proportion of the vote, they lost their majority and have formed a coalition government with the Democratic Unionist Party. Whilst the Conservatives’ manifesto has been watered down, infrastructure investment remains a key policy focus with the Government continuing to attract investment in infrastructure including a bill to deliver the next phase of a high-speed rail and continue to support action of the Paris Agreement. Brexit negotiations are expected to take at least two years and is unlikely to significantly affect direct investment in brownfield infrastructure in the UK, however uncertainty will continue to drive volatility in GBP exchange rates and keep pressure on inflation. The UK’s exit from the EU means that funding from European Investment Bank (“EIB”) funding will no longer be available and existing infrastructure assets will need to replace EIB funding as it matures.
- The largest transaction in the European region during 1H2017 was Atlantia’s EUR16 billion acquisition of Abertis, creating one of Europe’s biggest transport infrastructure operators with assets across 19 countries and 14,000 km of toll roads under management.
- In Australia, two major transactions drew attention. Firstly, the sale of a 35-year lease of the New South Wales Land and Property Information at a reported bid price of A$2.6 billion, representing an EBITDA multiple of c.20x. The winner, Australian Registry Investments (“ARI”) is a consortium made up of Hastings Funds Management, First State Super and Royal Bank of Scotland Pension Fund. The other transaction was the sale of Stockyard Hill Wind Farm to Chinese developer Goldwind for A$110 million. This sale is part of Origin Energy’s A$1 billion divestment plan.

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