

Studies with Estimates of Tracking Error for Fossil Fuel Free Portfolios

Name	Date	Estimate of Tracking Error
California Teachers' Retirement Board Investment Committee Report on ACWI ex-Fossil Fuels	July, 2016	1% vs. ACWI* (11/30/10-5/31/16) *All Country World Index
MSCI ACWI ex Fossil Fuels Information	June, 2016	1.05% vs. ACWI (11/30/10 - 6/30/16)
Aperio Group, "Do the Investment Math: Building a Carbon-Free Portfolio"	2016	.75% vs. Russell 3000 (1/1/88 –12/31/15) .72% vs. ACWI (1/1/97 – 12/31/15)
Parametric, "Fossil Free Investing"	February, 2015	1.39% vs. S&P 500 .93% vs. EAFE** (1/1/04 – 12/31/14) ** Large and Mid-Cap Developed Market Equities, ex-US and Canada
Perella Weinberg ESG Review and Investment Strategy	October, 2014	.71% vs. S&P 500 .77% vs. ACWI (Dates not provided)
MSCI ESG Research, "Responding to the Call for Fossil-Fuel Free Portfolios (ACWI Ex CALSTERS Fossil Fuel List)"	December, 2013	.99% vs ACWI (6/03 – 5/13)
IMPAX Asset Management, "Beyond Fossil Fuels: Investment Case for Fossil Fuel Divestment"	April 2013	1.6% vs. ACWI (3/08-4/13)
Advisory Partners, "Fossil Fuel Divestment: Risks and Opportunities"	2012	1.57% vs. S&P 500 (1/1/90-8/31/12)

Prepared by Church Investment Group, July 19, 2016