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The Honorable Peter Shumlin
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Dear Governor Shumlin:

First, I would like to state clearly that global climate change is a very serious environmental problem. It is an example of what economists refer to as a market failure. By that I mean that participants in market transactions (consumers and firms) have no incentive to consider the effect of their decisions on emissions of greenhouse gases or other climate forcers. In particular, when people and companies use or make goods that embody such pollutants, there are extra costs (aside from production costs and price signals) that are at play. These external costs are the adverse effects from subsequent climate change. This market failure necessitates government intervention in markets through regulation, emission taxes, or a cap-and-trade system. Such policies compel market participants to face the full cost of their decisions.

Despite the fact that the majority of market participants do not consider the effect of their actions on emissions, some do. Individuals, firms, or other institutions may alter their behavior to mitigate the impact on the environment. Further, some may behave in a way that expresses their position with respect to certain environmental issues. One way that this occurs is through financial markets. That is, investors may elect to allocate their capital in a way that exemplifies their values, beliefs, or principles. A current example of this is divestment.

As a matter of principle, if an individual or institution wishes to divest from their direct investments in firms that extract fossil fuels, that is their business. They may wish to do so to make a statement: to express their values. One important constraint on the right to divest occurs when funds in question are managed under a fiduciary responsibility to maximize returns for shareholders or beneficiaries. In certain contexts, such an obligation may be paramount to an expression of values that fund managers may wish to make through their investment decisions and portfolio allocations. Careful consideration of the risk and return implications of divestment on managed portfolios is essential.

Further, if divestment is carried out, there is no evidence that doing so will have any appreciable effect on emissions of greenhouse gases or global climate. Equity prices for a particular firm are the market's estimate of the present value of future cash flows for that firm. Divestment is unlikely to affect educated investors' sense of future cash flows. Therefore, divested shares are likely to be purchased by others without an appreciable price effect, let alone any subsequent effect on emissions. In contrast, energy and environmental policies *are* likely to affect emissions, and, in turn, cash flows of certain companies. These are far more effective tools to address global climate change.

I would like to make one additional point. The United States Bureau of Economic Analysis produces economy-wide Input-Output (I-O) tables, which show the flow of resources throughout the economy. If one examines the I-O tables for the U.S. economy, it is clear that *many* sectors use the output produced by firms that extract fossil fuels. For example, firms that manufacture steel use oil, natural gas, and coal. Power generators, as well as firms in the transportation and construction sectors also consume fossil fuels. As such, investments in these other sectors *indirectly* support firms that are the target of divestment by facilitating intermediate demand for fossil fuels. Supporting demand for fossil fuels through investments in other sectors will, *all else equal*, bolster cash flows (and share prices) for firms that extract fossil fuels.

This line of argument raises a critical question facing an investor contemplating a divestment position: if one divests from fossil fuel extraction, where do those funds go? If the goal of divestment is really to cause emission reductions by adversely affecting the market capitalization of firms that extract fossil fuels, such a strategy must also consider the impacts discussed above. As such, investing in any sector that uses fossil fuels will counteract or attenuate any price effect from divestment.

From this position, it seems that, to be given any chance to actually affect firm behavior, divestment also requires the sale of any position in any firm that *uses fossil fuels in its production process*. Otherwise, an investor is simply substituting indirect support of fossil fuel extraction for direct support. As such, I find the focus of divestment on just the fossil fuel extraction sector to be arbitrary. Going one step further, if divestment does call for selling all direct and indirect positions in the fossil fuel extraction sector, then I wonder: what is left in the portfolio?

In summary, I would like to reiterate my position that global climate change is a serious environmental problem facing Vermonters and other people around the world. Addressing this issue requires intervention of governments in markets to force firms and people to face the full environmental cost of their decisions. Divestment may be a way for investors to express their values, but it is not likely to affect emissions or to stabilize global climate.

Sincerely,

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