It is a great privilege to testify today—it is always a thrill for any Vermonter to be in this home of our citizen legislature, and to be able to say thanks to all of you for your service.

I have been asked not to talk about climate change itself today, on the theory that everyone believes in it. I am happy to oblige—given that I wrote the first book for a general audience on the subject, way back in 1989, I've spent too much of my life talking about climate change. But permit me to say one thing: the pertinent question is not whether one 'believes in' climate change, but whether one understands the astonishing speed with which it is remaking our world. The pace and scale of the change dictates the pace and scale of our necessary solutions, so it is I think germane to note that yesterday NASA published the list of hottest months dating back to 1880. Of the 1620 months on that list, January 2016 was the record-holder, followed by December, October, and November of 2015. As the New York Times noted yesterday in an extensive article, the planet's record warmth is helping spur a wave of diseases around the planet, of which the zika virus is only the latest. As of today, the National Snow and Ice Data Center reports that Arctic sea ice is at its lowest extent for this date ever measured; as the well-known earth scientist Rafe Pomerance, of the National Academy of Sciences Arctic research panel put it—again, yesterday—"it's unraveling, every piece of it is unraveling, they're all in lockstep." In January, much of the Arctic averaged 23 degrees Fahrenheit above normal. So you will excuse me, perhaps, if I speak with what may seem to some of you undue urgency.

The fossil fuel divestment campaign, which people are asking that Vermont join with the same commitment that your predecessors like Jim Douglas and Madeleine Kunin brought to the fights over tobacco and South Africa, began several years ago. It started with the publication of an obscure report by a group of UK-based financial analysts called the Carbon Tracker Initiative, or CTI. What CTI did was something others of us should have done long ago: they counted. That is, they looked at all the reserves of coal and oil and gas held by the 200-biggest fossil fuel companies on earth, and the countries that act essentially as fossil fuel companies—think Venezuela. It turns out that if you add up all the reserves of those companies—the stuff they've told regulators and banks and investors that they plan to dig up and sell—those reserves roughly 5000 gigatons of carbon. The problem is, the world's scientists are clear that if we're to hold the planet's temperature increase below 2 degrees Celsius—the target reiterated at December's Paris talks—then we can only burn at most 900 gigatons more carbon. That is to say that if we allow the business plans of these companies to play out, there's no drama or mystery to the climate story. The math is impossible.

Once you know that math, you understand these companies differently. They take on a rogue aspect. They are driving precisely the changes that you must deal with every day. If it's expensive to fill the budget hole when a record warm winter drives down the rooms-and-meals tax receipts, if it's expensive to rebuild the state's bridges and roads in the wake of Irene, if it's expensive to deal with the spread of Lyme disease—well, there's something deeply ironic about investing in the very companies that are driving these expenditures. The very first public official to endorse divestment, on the very first day of the campaign, was Seattle mayor Mike McGinn; if his city was being forced to build seawalls to deal with climate change, he said, he thought it made no sense to pay for them by investing in the very companies making them necessary.

You can call this a moral argument if you wish. It is immoral to wreck the planet, and in my volunteer work as founder of 350.org I've gotten to meet an awful lot of the people paying the price. You can call it a pragmatic argument to save the state future financial and ecological distress. Or, interestingly, you can call it a financial argument. Because if you think about it, the logic of our predicament as a planet dictates that we will try to do *something* about climate change. We see the beginnings of those rumblings in places like the Paris climate conference. And as we begin to restrict the amount of carbon we can burn, well, those 5000 gigatons of reserves are likely to become, in the words of financial analysts, "stranded." If they *can't* be burned, then there will be pressure *not* to burn them: a price on carbon which other jurisdictions have begun to adopt and which you hopefully will someday decide to do as well; restrictions like president Obama's Clean Power Plan; initiatives like China's all-out drive renewable power that has now cut coal consumption two years running; and so on. The result is that the value of those reserves begins to shrink, and it is precisely those reserves that give those fossil fuel companies their value. That value, as it turns out, has been destroyed in the coal industry in the last few years; it has been the worst-performing of all economic sectors, with many companies losing 95% or more of their value. When we pointed out this possibility three years ago to the state treasurer we were ignored, and as a result Vermonters have suffered significant losses; she and her team have devoted considerable effort to saying those losses can't be precisely quantified, but obviously they are real and large, and they could have been avoided with the expertise Vermont had on hand.

The same value destruction is well underway in other sectors of the fossil fuel industry, which have underperformed broader markets for the last five years and are currently tanking. No one can predict the movement of equities from day to day, and indeed all we've asked is that the state announce plans to sell its stock over the next five years in order to avoid unloading at the bottom, but it's easy to predict the general movement of these industries. Trend lines are very clear. That's why one financial institution after another has endorsed the basic math I laid out for you earlier, and its implications. This notion of stranded assets and carbon bubbles was, four years ago, me writing in Rolling Stone. Now it's the IMF and the World Bank and Deutsche Bank. Last fall it was the governor of the Bank of England addressing the world's insurance industries at the venerable Lloyds of London, and explaining to them that they were riskily overexposed to a fossil fuel industry—riding a carbon bubble much bigger even than the housing bubble which did so much damage to the world's economy.

I am not suggesting to you that you divest from fossil fuels for financial reasons. That would be crass.

I am suggesting to you that you can exercise the moral instincts of Vermonters without suffering a financial penalty. That is crass too, but a certain crassness is unavoidable in political affairs. And you have been granted one of the rare easy cases where you can do both good and well at the same time. If you do so, you will be in good company. The sweep of institutions that have decided to divest from coal, from coal and extreme oil like tarsands extraction, or from all fossil fuels is truly remarkable. May I single out a few Vermont-based early adopters? Sterling, Green Mountain and Goddard Colleges come to mind. They join peers like Stanford, Oxford, Edinburgh, the Universities of California, Washington, and Hawaii; Georgetown; just this week the University of Stockholm. Dozens of cities across the world have joined in, as has the state of California, whose two pension funds (one covering teachers, the other public employees) are two of the 20 largest on earth. Religious denominations, from the Episcopalians, Unitarians, and United Church of Christ; the biggest insurance companies in France and Germany; the sovereign wealth fund of Norway, which is the largest pool of investable capital on earth. Together these portfolios and endowments control at least $3.4 trillion worth of capital. Even the Rockefeller family—the first family of fossil fuel—decided to divest its charities, arguing that it was neither morally sound or financially prudent to remain in the family business.

I have heard two arguments against Vermont joining in this statement. The first is that it will put the state on a slippery slope, where legislators are constantly called on to make investment decisions. History makes it clear that this is an unwarranted fear, and that such calls seem to arise only a few times in a generation. That's because, though many companies do bad things, those bad things are generally not central to the company's operations. Apple may pay its Chinese workers abysmally low wages; in that case we can, and do, organize to demand better conduct, pressuring through all the usual tools of shareholder engagement or consumer boycott. They then raise those wages, the price of an iPhone rises by a dollar or two, and the world goes on. Tobacco and fossil fuel are among the few industries where the problem is not a flaw in the business plan but the business plan itself.

This leads to the second argument against divestment, which is that we'd be better off 'engaging' with the industry to get it to change. It is likely to be folly, for the reasons I've described above—the problem is precisely the center of their business plan, so changes around the edge will be cosmetic at best. And in the event, we have plenty of empirical proof it will not work. Earlier this week, for instance, Neva Rockefeller Goodwin, an economist who was heir to the Exxon fortune, announced that she had sold all her shares, donating the proceeds to the fight against climate change. She'd taken the step, she said, because 15 years of supporting shareholder resolutions and privately lobbying company executives had been completely ineffective—and this was her family business. Vermont's treasurer Beth Pearce deserves credit for traveling to Exxon's annual meeting last year to try this engagement tactic herself. But her sound argument there had no effect—the resolution she supported failed overwhelmingly as it has for a quarter century, and the company continued abut its business, spending millions of dollars every day looking for new hydrocarbons even though the science is clear that we already have five times too much.

There's a final argument one could make—that it's not really the fault of these companies, but rather our own desire for fossil fuel that keeps warming the planet. And it's here that you realize why the most important step Vermont should take is to back the governor's call to divest from Exxon. That's because we've learned in the last six months what many had long suspected: that the biggest oil company had in fact known all about climate change 30 years ago. Its own scientists had laid out precisely what would happen, and the company used that data to bid on leases in the melting Arctic and climate-proof its own installations against rising seas. But in public they insisted the science was unsound, and invested huge sums in building thinktanks to spread disinformation and deceit. In other words they never gave our societies a chance for a reasonable reaction to climate change. Had they merely said what they knew—that global warming was very real and very dangerous—we would have avoided a quarter century of phony debate and gotten to work on solutions. We would not have licked climate change yet, but we'd be well on the way. This has been described as the greatest corporate scandal of all time, and in some ways it continues to this day. Exxon, for instance, bankrolls the political campaigns of the most vociferous climate deniers, making sure Congress never takes coherent action.

Were Vermont to divest it would play a serious role in helping spread the message that we must leave most carbon in the ground, and that companies should no longer play deceitful political games. On Exxon in particular it can still provide meaningful leadership, as the attorney generals of California and Vermont have done in launching investigations of the company.

What it cannot do, at least in good conscience, is delay. Sending a 'recommendation' to the VPIC and the treasurer is nothing but delay—they've made it clear already that it will fall on deaf ears. So it's time for our political leaders to do the job of leading. In this case that clearly means taking this modest but useful step of mandating divestment from coal and from Exxon, and doing it now, while there's still time for it to have real effect .