

Bill McKibben: I know that everybody has one ear cocked toward the debate. Uh, I just was looking at Twitter and Michael Moore of all people said that Dan's boss build the plazio had one the first half hours. So there you are. That's the update from, in fact, I, it's good to be here with you tonight. The place I wish I really was tonight was on the steps of the Democratic National Committee in Washington, the sunrise movement, that kids who started the green new deal thing or been occupying the steps of the DNC for the last two days to demand a debate on climate change. And they're, they're having a big debate watch party tonight with everybody's got their cell phones out and listening carefully and things. And that's really the place that's, you know, shaping the future right now or one of them and all, I'll talk about that, about this sort of remarkable climate moment that we're in and the real possibilities of it.

Bill McKibben: Um, but let's start with the hard stuff and get through it. And, and on. The reason that we're in a climate moment above all is because we've done so little to head off the greatest crisis that we've ever been faced with. Um, we're in a climate moment now talking about the green new deal, having climate debates. Wow. All of that because we paid no attention when scientists gave us the warning they gave us 30 years ago, I wrote the first book about all this back then in 1989, 30 years ago this year. And at the time we were offering warnings about what was going to happen if we didn't do what scientists had told us we needed to do videos. All right. Um, and now we're at the point of offering bulletins about all the things that are happening around the world. So, you know, last week in India, 180 people in Bihar state died, uh, because it just got too hot.

Bill McKibben: It was 124, 25 degrees day after day. Uh, last week, Chennai, a city of about 8 million, uh, used to be called Mudras. Uh, Chennai ran out of water. Their reservoirs dried up. There's no more drinking water. Uh, they've closed the hotels and the restaurants. Most businesses have shut down. They're hoping that the monsoon comes sometime in the next little while and it gives them at least a little drinking water. But that's, you know, the year before that it was Cape Town that came within a week of losing its water supply. And the year before that, it was San Paulo. Today, tomorrow in France, they're probably gonna set the all time high temperature record for France. It's supposed to go to about 112 degrees, um, in parts of France. Um, um, really the more horrible heat at the moment is what's happening in the far north. Uh, the heat up along the Arctic Ocean has been 80 degrees day after day after day in much of Siberia.

Bill McKibben: Uh, Arctic CIS is at a record low and you probably saw pictures no week ago of Greenland melting at a pace we've never seen before for this time of year. In fact, let me show you a couple of pictures from Greenland just to kind of try and make this point to did a picture show up just then. Good. Uh, I was in Greenland last summer organizing a art project at, I'll show you here in a minute. Uh, but Greenland is a stunning place. It's the biggest storehouse of ice. Obviously in our hemisphere. If all that ice melts, the sea level would go up about 20 feet from Greenland alone and it is spectacular to look at and it's also incredibly sobering

to see it melting and melting fast. I don't know if you can quite make that out. That's if you look out the front of that ship there and the weight of this ice sheet that we were going to, you can see clear open water, but if you look at the chart above the captain's wheel, the icon for our boat is clearly about a mile inland over solid land.

Bill McKibben: And I pointed this out to the captain with some trepidation and the captain said, no, no, don't worry. The chart's five years old. Five years ago. It was ice frozen as far as you could see, but it's all melted now. We were going out there because I wanted these two young women to have the kind of right platform. They're both poets. The one on the left is from the Marshall Islands. Her name is Cathy Jett. Milken shiner on the right as a young woman named [inaudible], a Greenlandic native. And, and they performed a poem that was now been seen by millions of people on Youtube. Um, I, I Cathy's an old friend and I'd wanted to get her up there cause she's a spectacular poet and she's standing on the ice that when it melts will drown her home. The highest point in the Marshall Islands is about a meter above sea level.

Bill McKibben: They're already having high tides that just burst through people's living rooms. The cemeteries are, you know, coming undone, on and on and on. And so it was an amazing poem, full of are kind of fury but also full of a fair amount of generosity. Um, um, a willingness to fight and fight. We obviously need to do this. We'll take a minute. This picture I shot with my cell phone from the front of the helicopter. We'd been changing some instruments in one of these changing the batteries and some of these instruments that scientists use to monitor the rescission of the glaciers. And, and so then we were taking off to go back to base and, and you'll see in a minute why I'm showing you this. Oh, suffice it to say that the world is now in violent and chaotic flux. This is by far the biggest thing that human beings have ever done.

Bill McKibben: It's now so obvious climate change that it is in the you someplace around the world, in the headlines every day. Sometimes it's in places with so many cameras that we can't avoid seeing it. So everybody got to watch last autumn when a California city literally called Paradise, literally turned into hell inside half an hour. And especially for those of us who live in rural places, those pictures really stuck because everybody could imagine trying to flee down a two lane road while the trees on either side burned. Colorado has had enough experience with forest fires to be sensitive to that. Sometimes they're in places with very few cameras. Mozambique this year had the two biggest cyclones in history back to back. The second one dropped six and a half feet of water. Watch that chunk of ice out at the furthest part. It's 120 feet high. So a 12 story building.

Bill McKibben: So bigger than anything in Aspen. Um, and we just happen to be going over at the moment that it let loose. Those waves are 50, 60 feet high. The pilot was a little wary because you could feel the updraft of air, but I convinced him to circle it because it had such a magnificent savage beauty. And also because it's a

reminder that that's what's happening now every second of every minute of every hour of every day. Uh, every time it does, you know, the ocean goes up, some fraction of a millimeter. Our candidates in Miami tonight are debating. And the fact that they're debating anything else in a sense in Miami is, is, seems almost crazy. Um, given the surroundings. Um, but that sticks with me. And, and, and I hope with you the scariest part of where we are with climate change is that we're still very much near the beginning of this story, not the end.

Bill McKibben: We've raised the temperature of the earth about one degree Celsius, 1.8 degrees Fahrenheit, something like that. Even if all the countries in the world kept the promises that they'd made at the Paris climate accords, the temperature, the earth would still go up three, three and a half degrees Celsius, seven degrees Fahrenheit, something like that. Um, if that happens, we can't have a world anything like the ones we're used to having a civilizations can't have the size and scale that we have won't work on that kind of planet. And of course not all the countries in the world are keeping, even those mom Maurice promises they made in Paris, our country, the country that put more carbon into the atmosphere than any other has decided it's not even going to participate in the only international effort to do anything about climate change. Something that should be a source of abiding shame to us.

Bill McKibben: The glimmer of real hope is that the one part of our society that did its job over the last 30 years was the engineers and they have managed with real success to bring down the price of solar panel and wind turbine to the point where this is the cheapest way to generate power now around the world. The price of a solar panel dropped 90% in the last decade. That's the thing that gives us an opening if we really wanted to, if we really pushed, if we really made it the priority of our civilization, then we have the means that we need now to move not fast enough to stop global warming. That's no longer one of the possibilities, but fast enough perhaps to limit it to the point where we still could have civilization, something like the ones we're used to having. We're not moving anything like that at the moment.

Bill McKibben: We're moving much, much, much too slowly. Emissions around the world are continuing to rise. In fact, the most important scientific instrument on the planet beyond any doubt, is the CEO to register on the side of the volcano at monologue that American scientists installed in 19 and 59 from Scripps Institute of Oceanography and uh, Charles Keeling. And, and that's been recording the CO2 every year since 1959. You've seen that picture of the keeling curve, so-called going up. It always reaches its maximum for the year and about the 30th 31st of May because that's right about the point when there's enough vegetation growing in the northern hemisphere to temporarily suck up some of that carbon. This year on May 31st it stood at 414.87 parts per million, call it 415 parts per million, up three and a half parts per million from the year before the second largest increase on record a, it's spiraling out of control. It seems to indicate that continuing rise, not only that we're burning more coal and gas and oil, but also that some of the earth's physical systems, forests and oceans are

becoming less efficient at sucking up excess carbon. In the atmosphere, we've begun to undermine the coping ability of the planet. This is the highest that it's been, we think 15 million years, something like that, I e. Long before the beginning of primate evolution. This is the, we're on a completely

Bill McKibben: unprecedented voyage. All of us into this future, into a world a that every signal it sends now is more dire than the one before. If you read the scientific literature, the most common phrase one hears is faster than expected and indeed that's the case. When I was writing the end of nature 30 years ago, we thought that the things we're seeing now, 70% of this summer, cis gone in the Arctic or the oceans, 30% more acidic or the coral reefs dead across from vast swabs of the planet. That that would happen in 2080 or 2150 year. Some point farther into the future. But it's happening now and it means that the time that we have to exert any real leverage over the outcome is enormously small. The thing never to forget about climate change is that it is a time to test. The first time test really that humans have run up against.

Bill McKibben: We're used to political problems that we can work on and if we don't make progress on, we can come back to a while later. So we do everything we can to try and build a decent health care system and then Trump comes along and knocks it down and that's bad. A lot of people will suffer, are suffering, are going bankrupt or not able to pay for their insulin, whatever it is. And that's terrible. But it doesn't mean that when common sense reasserts itself, at some point we won't be able to pick up this promise and and, and go forward. Sooner or later, one imagines that America will do whatever you either industrialized country did and have a decent healthcare system that takes care of pupil. Climate. Change isn't like that. If we don't solve it soon, we don't solve it. Cause we'd go past a series of tipping points beyond which we will no longer have any control.

Bill McKibben: No one has a plan for refreezing the Arctic. Once it's melted. Dr. King. My particular hero used to end talks by quoting from the Massachusetts abolitionists, Theodore Parker. He'd say the arc of the moral universe is long, but it bends toward justice. This may take awhile, but we're going to win. The arc of the physical universe is short and it bends toward heat. If we don't win soon, then we don't win at all and that's why for me, these questions become so urgent and apply. I've spent, well why my life sort of changed those 30 years from being a writer into being the best approximation of an activist. I can be. You can tell that I'm not an orator by nature, uh, or anything like it, but with the planet well outside its comfort zone. I've come to figure out how to get someone outside mine and I hope that I can convince some of you to do likewise in the course of the evening.

Bill McKibben: I'm going to do that first by just telling the truth as I see it and and in this place. One of the reasons that I was willing to come to aspen this year after not having come for quite awhile was when I found out that Exxon was one of the sponsors of this gathering. And so I thought it was important to at the very least tell the story of how we got where we are so that we don't repeat the same set

of mistakes that we've been making for those decades. Well, at the beginning in 1989 say or 1988 when Jim Hansen first testified before Congress, it looked like we might be ready to make some real progress as a society. The Republican president at the time, George h w Bush said forthrightly we will fight the greenhouse effect with the White House effect. So a pretty good line.

Bill McKibben: And, and there your, we're um, we've gone over 30 years to the point where the current Republican occupant of the White House believes that climate change was a hoax manufactured by the Chinese. A point of view. So odd that if you were sitting on a public bus and the person next to you was muttering it, you would get up and change seats. But the question of how we got from one of those places to the other is a really important story. And it's incredibly odd story because over that 30 years, the science had become incredibly firm. We understood pretty early on by 1995 or so, everything that we needed to know there was a robust scientific consensus. So what happened? What happened? And we know now from terrific investigative reporting over the last four or five years from places like, uh, the Pulitzer Prize winning website, uh, inside climate news or from the La Times.

Bill McKibben: What these guys did with really painstaking investigation and archives with whistle blowers, so on and so forth, was demonstrate that the fossil fuel industry knew everything there was to know about climate change in the early 1980s. If you think about it now, it makes great sense. I mean, Exxon for instance, was then the largest company in the world. It had terrific scientists on staff. It's product was carbon. Of course, they were going to understand how it worked and they set out to do so and they did so incredibly well. The graphs that their scientists were producing for their executives showed with, now we understand uncanny accuracy how much the temperature was going to go up and put the level of carbon in the atmosphere it was going to be. They were told in no sir, no uncertain terms what would happen, and the executives were smart enough to believe the scientists that they employed.

Bill McKibben: I mean, companies began doing things like building all the drill rigs that they built to compensate for the rise in sea level that they knew was in the offing. What they didn't do, of course, was tell any of the rest of us. They published a few papers in scientific journals, but then they spent billions of dollars building the architecture of deceit and denial and disinformation that kept us locked for 30 years in an utterly sterile debate about whether or not global warming was real. A debate that both sides knew the answer to at the beginning. It's just that one of them was willing to lie and that lie turns out to have been the most consequential lie perhaps in human history because it cost us those crucial 30 years when we should have been absolutely hard at work instead engaged in this charade. And, and it's been a very intense charade.

Bill McKibben: I mean at the highest levels of corporate life, the CEO of Exxon in 1997 right at the moment when the world was trying to reach the first agreement in Kyoto, uh, gave a incredibly memorable speech to the World Petroleum Congress in

Beijing at a time when China was deciding sort of what path it would follow and what he told them was the planet was cooling. And that in any event, it would make no difference whether we started now or in 25 years to try and deal with climate change, the precise opposite of what we know to be the truth. Those 25 years turn out to have been incredibly precious and that we squandered them is one of the great sadnesses. It may not surprise you that that CEO of Exxon having retired from Exxon is now the lead director on the board of directors at JP Morgan Chase, which in turn is the single biggest source of funds for the fossil fuel industry around the world, pouring hundred and some billion dollars every year into the expansion of the fossil fuel industry.

Bill McKibben: When I, I will continue to confess my biases here, just so you're clear. Okay. Where I stand, when I read those first stories inside climate news and the La Times, I reacted strongly to them. I knew that they were incredibly important part of this history that was being taught. Part of the reason I reacted to them, I think so much was because I knew it was sort of part of my history being told that, that one of the reasons I'd had to spend 25 years of my life engaged in this fruitless debate was what we were now understanding had been the role of these companies. So, but I also knew as a journalist that we live in an age when the most incredible stories in the world, uh, pop up. And, you know, eight hours later are replaced by something else and we just go on. And so the fact that somebody has credibly accused the president, United States of raping them, uh, two days later has passed by and we're onto the next thing.

Bill McKibben: I very much did not want this to be passed over in this way, and I couldn't think at all what to do, um, um, beyond, you know, the usual tweeting and things. But I finally decided that I would, I live in the woods in Vermont. Um, so I went up to our big city in Vermont, Burlington, which only has 50,000 people, so it's not that big, but it's what we got. And, um, and, and made a sign and, uh, sat down in front of the Exxon station. Um, um, and, and there just enough reporters in Vermont that they, you know, within a few minutes knew I was there. And a few minutes later, the police knew I was there and led me away. Um, and, and it wasn't a big deal. Uh, my hope was that it would draw a little attention. And in fact, I had a call from a friend at Facebook that afternoon.

Bill McKibben: He said, you know, for for half an hour it was the top trending until it was until it was replaced by a video of a Corgi barking at a miniature pumpkin. But, um, uh, it and other efforts like it may have played some role in just raising the profile of this enough that, you know, by now the New York attorney general and the Massachusetts Attorney General are, uh, taken Exxon to court. As Dan pointed out, cities like New York and San Francisco are suing now the oil majors. Uh, it's become enough of a story that at the very least we understand what happened and understanding what happened seems to me incredibly important if only for our kind of self-respect, uh, and also for figuring out going forward, who to pay attention to, who to trust and who not in these sagas. It's not just a moral question. It's an eminently practical one 25 or 30 years ago, there were all sorts of things we could have done that would not have been very hard to deal with.

Bill McKibben: Climate Change. 25 or 30 years ago, a modest price on carbon would have been enough to steer the ocean liner. That is the global economy. Three or four degrees to starboard and 30 years later we would have sailed into a different ocean instead at the urging of the fossil fuel industry, we went absolutely straight ahead. In fact, increased the speed at which we were going. We've emitted more carbon dioxide since 1989 than in all of history before it. Okay, so that's been the price of that spin. The fossil fuels willing, the industry's willingness to break the planet in order to maintain its business model has been the dominant part of this story for the last 30 years. There have been other parts, but that's been key and abhorrent as it is. It's equally important that the industry continues to insist, even now, even now, that it acknowledges the existence from reality of climate change continues to exist, to insist on doing what it's always been doing. That is, it continues to insist on spending billions of dollars exploring for new sources of oil around the world even though we already have in our reserves five times more fossil fuel than any scientists thinks we could safely burn and stay below the targets that we've set at Paris.

Bill McKibben: Um,

Bill McKibben: uh, my colleague George Monbiot at the Guardian today wrote a great column about Shell, uh, which he referred to it, I believe as a planetary death machine. Um, um, for precisely that reason, pointing out that it's, uh, you know, investments now in renewable energy are tiny compared to the amount of money it continues to pour into the task of going around the world. Trying to find yet more carbon to Bern viewed in any moral or practical lens. It's great. It's a great deep and abiding shame and it really should cause us at gatherings like this one to think pretty hard about where it is that we're looking for our ideas about the future, uh, whose ideas count and, and whether or not people have earned the right to have their ideas count based on their actions in the past. Um, I think that that's actually, well, I leave it there for you all to think about it and I will had that this problem is by no means confined to the oil companies.

Bill McKibben: I was making reference to, uh, chase earlier. Uh, they spend more money on the fossil fuel industry than the fossil fuel industry does. Their loans are enormous. Uh, the head of blackrock was here earlier, uh, to help launch the ideas festival. Blackrock owns more larger share of the world's coal and gas in oil than any other institution on earth. They're the absolute biggest, the insurance industry, the industry, the part of our economy that we ask to analyze risk for us has done a good job of analyzing risk. One company after another has pointed out in great detail the danger that we're headed to with climate change, but they continue to pour huge amounts of money into it and they continue to underwrite for money, the exact projects that now get us deeper and deeper and deeper into trouble with each passing year. You can't build a new pipeline unless you can get an insurance company to underwrite it, but they do it knowing full well precisely what they're involved in. So it is a deep, deep conundrum. And the only answer to that conundrum that I've been able to come up with over time is to try and build some sort of power big enough to

counterbalance the incredible power of the fossil fuel industry and the financial industry that packs it.

Bill McKibben: In the course of history, human history, there are enough moments when people have decided that they will band together to give us some hope that it is possible to do. In fact, for my money, the great invention of the 20th century was not the nuclear bomb or the genome. The great invention was probably the nonviolent social movement. Uh, the work that the suffragettes and that Gandhi and that Dr. King and that a million others did around the world to try and figure out how we could build structures that allowed this small and many to challenge the mighty. And the few is, well that's the one thing we have perhaps going for us. And, and so we've spent the last decade or two trying to build a foundation for that movement. There was none when we started. Three fifty.org is group that I helped began, started a decade ago. And at the start it was myself and seven undergraduates at Middlebury College in Vermont where I teach.

Bill McKibben: So there were seven students. There are seven continents. Each one took one. That was our, the guy who took the Antarctic had to take the internet. We set out around the world to find people like ourselves. There is not everywhere someone called an environmentalist, but there's everywhere. Someone interested in public health or hunger or women's rights or warranties or all the things you're not going to have in a degrading planet. And they were our allies, man. They stepped up 10 years ago in autumn of 2009 we did our first big global day of action. We just asked people all around the world to rally. And they did often for the first time in wherever they were, there were 5,200 demonstrations in 181 countries. CNN called it the most widespread day of political protest in the planet's history. And the pictures were beautiful. And one of the things that the pictures showed me, cause people were uploading these images from these 5,200 demonstrations, they were coming in at the rate of 10 a minute, sometimes all weekend.

Bill McKibben: One of the first things that I saw in them was the, you know, I'd always been told that environmentalism was something that rich white people did. That it was a kind of aspen ish kind of enterprise, you know, um, and that if you were poor and you didn't know where your next meal was coming from, you wouldn't be an environmentalist. And it took 20 minutes. So looking at these pictures to realize what nonsense that was, that almost everyone we were working with around the world was poor and black and Brown and Asian and young because that's what almost everybody around the world is, you know? And what do you know they're exactly as interested in the future. Maybe more so because the future bears down really hard on you in a lot of these places. One of the iron laws of climate changes, the less you did to cause it the earlier and the harder you suffer.

Bill McKibben: So it was beautiful to see. Beautiful to see people, I mean that's a poignant picture now cause Chennai is out of water as of tonight. Okay. I mean those guys are spending tonight trying to figure out how to get enough water to so

they can cook or wash or whatever it is. But people brought wit to the uh, enterprise and they brought the first big involvement of religious communities all around the world and they brought their most existential problems. That's the student government association to the Maldives. They're meeting in the lagoon because the highest point in the Maldives is a couple of meters above sea level. People have lived there for 5,000 years. They're probably not going to make it through the century, but they're going to try. They're part of this fight. I don't know, I could show you pictures all day and night. Some of them ended up that first day in a file marked three 50 adorable and they were adorable and they were also super hard to look at.

Bill McKibben: I mean those girls are going to be refugees and not from something they did from something we did and something Exxon did, you know. And, and so we've gone on, we think we've organized about 20,000 demonstrations around the world, every country except North Korea. And it's been a great educational effort and we would love to keep at it. And if we had 40 or 50 years to solve this problem, this kind of ongoing mass education would be the best way to do it. Cause that's, you know, humans change best when they changed gradually and slowly. It's easier for us, for our societies, for our economies. But of course, our problem is we don't have 50 years anymore. We should have started 30 years ago and since we didn't, we're mile behind. I'll just tell you about that one because I like it. That's one of those, uh, now dry river beds in the southwest and we'd borrowed a satellite and when it came over two or 3000 pupil from the Santa Fe Art Institute, put blue blankets up overhead just for a second to bring the river back to life. So poignant, powerful, but without the necessary time for this kind of educational work alone. We've gone onto confrontational work and these are pictures from the start of the fight against the keystone pipeline.

Bill McKibben: When we started, people said there was no chance. Big World never lost a fight like this. Really never even had a fight, you know, of any kind. When National Journal pulled its 300 energy insiders in August of 2011, a 93% said that a trans Canada would have its permit for the pipeline. By the end of 2011 instead, more people went to jail than had gone to jail about anything in this country in a very long time. And it became the kind of signal environmental issue for, uh, four or five years. And eventually President Obama said, no, we won't build it. A president Trump immediately the first day on taking office, signed the papers to say, we'll build it again. He apparently believes, um, that it in fact has been built because he keeps describing his pipeline that he's built. Um, but as it turns out, it actually hasn't, uh, uh, Trans Canada held a press conference again this year, few weeks ago to say two things.

Bill McKibben: One that they were changing their name to TC energy, which always strikes me as a good sign, Phillip Morris becoming whatever they became, you know, um, um, and to say that they were delaying again for yet another year building this pipeline because there were just too many people in the way. Now, the good news about that is that it kept 800,000 barrels a day of the dirtiest oil on earth

underground. But the really good news about it is that it caused people all over the country and all over the world to see that they could stand up to these kinds of things. And now no one builds a pipeline for free. No one puts up a coal mine or a frack. Well, without serious opposition, we don't win all of them. That we win a surprising number of them, even when we merely delay them for a little while.

Bill McKibben: It's a huge help because each month that passes, the engineer's bring down the price of a solar panel and another percent or two and that makes the spreadsheet that much worse and puts the pressure on that much harder. They know the fossil fuel industry that they have to lock in as much infrastructure as they can now and if can get it in the ground, then they'll use it for the next 40 or 50 years long past the kind of point of no return. So our job is to try and keep it out. Whether we can do this in time, who knows? I mean already we see the most incredible impacts and people rallying around them around the world. Some places they're truly horrible drought in places like Kenya. Some places they're a little less, which, you know, even for those of us who love the passage of the seasons, uh, it's traumatic to watch winter begin to kind of waver at our latitude.

Bill McKibben: It is, for me anyway. Um, um, the, the resistance is beautiful to see and it takes so many forms and in so many places, I'm always strongest among those who have been mean. Look at those people. They live in the part of Pakistan that in 2010 had the biggest floods since Noah. Uh, the in swelled to the point they had the kind of rain you can only have on a globally warmed planets and warm air holds more water vapor than cold. 25% of the country was covered by water. Uh, 20 million people were out of their homes. I mean, that's like everybody between Boston and Baltimore out of their homes. You know, and if you look at them, you know that they did not cause the problem from which they're suffering. In fact, in fact, one of the things that's been most important and significant as you try and help people always understand who does cause the problem.

Bill McKibben: This picture is from a town in Haiti called Lake k on the southwestern peninsula. And I show it to you for two reasons. I mean it's about the smallest demonstration we had. I think we ever did. Uh, uh, but les k the year after that was basically wiped off the map by the strongest hurricane ever to hit that part of the world. It destroyed 80% of the buildings in that city. I have no idea if those kids are still alive. There's signed. The other reason I show to you is just kind of what those signs said and that kids are holding those signs and say, your actions affect me, which is absolutely right and just not the other way round. There's nothing anybody in Haiti can do to solve this problem. They don't use any fossil fuel now, so they can't use less. That can't come to the White House and demonstrate because we don't let Haitians into the country for much of anything. Certainly not that they can't divest their, uh, stock portfolios of Exxon, Chevron and Shell and BP. I guarantee you absolutely guarantee you that there's more stock portfolios. We in the size of the stock portfolio in the 400 yards

around this hotel exceeds the entire, uh, holdings of everybody in Haiti. Um, so that's, I mean, our job having caused the problem is to be in the lead of trying to fix it. And we are

Bill McKibben: [inaudible] we're seeing, we're seeing that

Bill McKibben: start to happen. The divestment fight has become the largest anti corporate campaign in history. We're now closing in on \$9 trillion worth of endowments in portfolios that have sold their stock in part or in whole, in the fossil fuel industry. And it's having a huge effect. Shell described it in their annual report last year as a material risk to their business. The coal industry executives were complaining and a long article in politico two weeks ago that they can no longer find capital to expand. There's just too many funds that have now put them off limits. So it's beginning to make real progress and the resistance of all kinds is making real progress. It's beautiful to see. It's been particularly beautiful this year because we've watched the rise of the fight for the green new deal to young people entirely in this group. The sunrise movement, they all worked on fossil fuel divestment when they were in college.

Bill McKibben: When they got out of college, they wanted to keep fighting, so they formed this sunrise movement and they drew up this legislation and they found Alexandria Kazuyo Cortez and got her on the side and it's now changing the way that we think about these problems in a huge way. It's the first piece of legislation that's on a scaled commensurate with the problem it's trying to solve. It's the thing that's driving the debate in Miami tonight when it gets to climate change. You know, we've watched extinction rebellion in London closed down the city for for a week, and in the end of that, a remarkable protest. The Tory government in the UK passed a law saying that we are declaring the first national climate emergency, uh, how we've seen most beautifully perhaps create a Thornburg, uh, 10 months ago in Sweden, uh, sit down on the steps of the parliament and say, I'm not going to go to school if you can't prepare the future for me. I too much to ask me to spend all my life preparing myself for that future and that spread with enormous speed around Europe. Um, um, and around, uh, now around the world when they did their big last big school strike, 1.4 million kids were out of school. It was probably the biggest day of climate action in history.

Bill McKibben: And we need to,

Bill McKibben: we need to top it and top it by a lot. On September 20th, Gretta and her crew asked if adults would now join in the strikes. And so on September 20th, a bunch of us are trying to organize that and we can just need everybody to pitch in. If you have a, you need to close it, you need to organize with your fellow employees to walk out for the day and go join in some one of these rallies or in some project it's going to be a big day and there'll be more of them in the next few years because we need very badly to keep building this resistance as fast as we can. It's the motor that allows us to imagine things like a green new deal, like a price on carbon, like any of the things that we might possibly achieve

legislatively. They depend entirely on managing to shift the Zeitgeists enough and we have moments that make us incredibly optimistic.

Bill McKibben: We had one today, our crew at three 50 Africa rope this morning to say that after three or four years of fighting and the uh, city of Lamu and Kenya, the plans for a giant coal fired power plant had been beaten down. That was a miracle. No one thought that this would happen, but people fought with incredible vigor and something like that happens now every day. It's not yet enough, but it is showing what's possible. Let me give you just a couple of images to stay in your mind as I stop and we go to questions and things. These, these are our friends, best climate organizers. I know three fifty.org in the South Pacific. They call themselves the Pacific climate warriors. They're on those islands, Vanuatu, Tuvalu, the marshals, Micronesia, the Solomons, all of which are way too low to the water and in desperate trouble. But their slogan is we're not drowning.

Bill McKibben: We're fighting. And two or three summers ago, the way they fought was to build a traditional canoe on each island and then take them to new castle in Australia, which is the biggest coal port in the world. And for a day, they managed to block the biggest or ships on the planet, uh, kept them in the harbor, um, um, with these canoes and things. And it was beautiful and effective. Uh, Chaim the Australian, some, in fact, within a month, the city council of that city, new castle, biggest coal port in the world voted to divest their pension fund from fossil fuels. So it was good sign. But the reason I show it to you is because I'm a writer. And so I know that there are a few tropes that exist in the human imagination. A few kind of archetypical things, and one of those stories that we tell over and over is precisely these stories about the, the small but many up against the big but few.

Bill McKibben: That's the death star and the rebel alliance. Okay. And once you start looking for it, you see it everywhere. That was the same summer in Seattle, that 40 story drilling rig in the back belongs to shell oil shell. It announced that they wanted to go up into the Arctic and pioneer oil drilling in the Arctic. Think about that for a minute. The scientists had told us that if we kept burning oil, the Arctic would melt. We kept burning oil. The Arctic melted. Did Shell look at that and think, Huh, maybe we should go into some other business like solar panels. No. Shell looked at that and said, now that it's melted, it'll be easier to drill for more oil in the Arctic. That calls into question whether the big brain was a good evolutionary adaptation or not, you know, but happily there were enough people with good brains and better hearts attached to them that conspired to get in the way you see them. They're in their small craft. We of course called them Chai activists. Um, and they did such damage to shell's brand that by the end of the summer show had called the whole thing off. So we've spent \$9 billion on this, but we cannot take these pictures more or less. Um, um, and I, I confess my small attempt tonight is to do just a tiny bit of brand damage to the people who continue to do this kind of work. Um, because it's an important part.

Bill McKibben: What were we sorry to do

Bill McKibben: and I know that makes me a bad guest. And for that, I apologize. Um, so this fight is where we're at now and it's going to be over the next four or five years. What determines whether we make change in the time we have or not? Can we built that new zeitgeisty, that new sense of what's normal and natural and obvious when it happens. It's an enormous moment, an enormous shift. We saw it happen in this country, say around gay marriage. Um, there are people like me in this room, old enough to remember when we didn't even talk about gay marriage cause it obviously was never going to happen. It wasn't going to be a thing. And it was only six or seven years ago that people like Barack Obama and Hillary Clinton were still against it cause it didn't pour well on off. But then activists did the amazing work of changing people's hearts and minds.

Bill McKibben: And now, I mean with the possible exception of Mike Pants, no one even bothers to, you know, contest it because it's incredibly obvious that if you love someone, you should be allowed to marry them. And that was a perfect example of the zeitgeists shifting fast. This is obviously harder. Nobody made trillions of dollars a year being a bigot. And people do make trillions of dollars a year pedaling hydrocarbons to each other. But the principal's the same because it's a time test. I cannot guarantee you that we're going to win. In fact, can guarantee you that there are going to be large losses are already have been. Um, but I can guarantee you that there's going to be a fight and you need to take as much of a role in that fight as you can. It's not the first time that human beings have ever had to fight something, you know, for our parents and grandparents.

Bill McKibben: The existential question in the last century was fascism in Europe and people had to go across the ocean and kill people and get killed in order to deal with that existential crisis, no one's asking us to do that. You don't have to go kill anyone. Do you have to in just the opposite, go and try and figure out how to help unit. But it demands, we move outside our comfort zone. And that'll mean something different for everyone. As I say, for me it's meant this odd thing of becoming more of an activist. And then I was temperamentally suited to be, I'm a writer. All writers are in essence, introverts. You know, I like being here with you. But I'd rather be home typing. You know? That's what I like to do, but I've, I mean I did not expect that I was going to routinely end up in handcuffs.

Bill McKibben: I'm not telling you you need to, but you might. I remember writing the letter asking people to come to Washington for that first civil disobedience around the keystone pipeline. It's a hard letter to write to ask people to come get arrested. And one of the things I said in it and looking out at the demographics of this room, I'm going to repeat it. One of the things I said and it was, I didn't think that young people in that case should have to be the cannon fodder. Young people are leading this fight all over the world. As you've seen and as you can see tonight looking at the steps of the DNC and whatever else, but if you're 22 in

arrest, record might not be the absolute best thing in the world for your future past a certain point.

Bill McKibben: What the hell are they going to do to you? It was pleasure actually to watch people with hairlines like mine are arriving to, we didn't ask people how old are you as they were getting arrested, cause that would be rude. But we did cleverly I think say on who was president when you were born. And the two biggest cohorts were from the FDR and the Truman administration. The last day there was a guy arrested with a sign around his neck that said World War II vet handle with care. He was old enough that he'd been born in the Warren Harding administration, which was long ago enough that I'd forgotten. There was a Warren Harding administration. Um, it was great because the young people who were there saw their elders acting the way we need elders to act in civilizations. Okay. And so

Bill McKibben: whatever, whatever

Bill McKibben: that means to you, take it on board as best you can and figure out how to act. Figure out how to do something on September 20th and on the days that we'll follow, figure out how to use what financial cloud, what institutional cloud, what political cloud you have to make a difference. And the only thing I would just end by saying is do it fast. This is a, you mean solutions to the problem of climate change that occur in 2040 or 2060 or 2080 aren't solutions to the problem. We have a few years left to make big transformative difference and it has to be on a scale that we haven't seen yet. So a, I don't even know if that's an idea here to contribute to the ideas festival, but I, I know it at the just a, it's a, it's the deepest intuition I have after spending most of my life on this question. We need to act, we need to act hard and we need to act fast above all else. So thank you all for being

Bill McKibben: Thank y'all. Thank y'all.

Bill McKibben: Now I've talked on longer than I should have, which I'm afraid is, I have what I, I told you I wasn't in order, so I, um, but I left just enough time for a few questions and I think there's people with microphones perhaps to, am I correct about that? Yes, there is some, I microphone there. So let's, uh, start uh, right here. I see one.

Speaker 4: Greg Hammer from Miami. Skip the debates to come and see you bill. Thank you. We met back in 2011. Um, I represent the organization that Jim Hansen is a part of in promoting a up a price on carbon and it's legislation that was introduced in this congress in January. Um, I agree with you and I quote you frequently. We have to go big. We have to go fast because winning slowly is the same as losing every expert agrees with Jim Hansen. You've agreed at times as well that we are never going to see the exodus of capital away from dirty energy without what, while dirty energy gets remained the cheapest. Yes. And so everybody agrees that that is the tipping point, the spark that gets us to the

other goals that we want, whether it's Paris, g, and d, The stuff I'm working with, with my, my XR friends and it's extinction rebellion down in Miami. Um, the goals are there. That's why we get out of bed. But if we don't get legislation, then we're

Bill McKibben: not gonna move the needle. And so I want to know, why don't you spend more time telling people to support this particular legislation? So I really like thanks for the question. And I really like citizens' climate lobby who's worked hard on this and I've done my best to help over the years. And I do think it's important to put a price on carbon. I think there is no, at this point, intellectual justification for not doing it. There's nothing else like it that we're just, I mean you can't just go, I mean if you have a restaurant in aspen, you know, the cheapest way to deal with your trash at the end of the night would just be to go toss it out onto monarch street or whatever. But we don't do that because then we'd have rats and leptospirosis and everyone would go to Vail instead and it would be sad, you know?

Bill McKibben: Um, um, um, um, I mean civilization is people cleaning up after themselves unless you're an oil company and then you're just allowed to use the atmosphere as an open sewer. The only thing I would say about a price on carbon is that we're no longer at a point where it can be the only strategy that we do. It could have been 25 or 30 years ago, might well have sufficed and it won't any longer. And the only thing that worries me a little bit about the negotiations if they ever happen in our congress is that the price that may be required asked to for this may be too high a at various times the oil industry has set up. Perhaps we'll take a modest price on carbon in return, no liability for us about anything and no regulation from the EPA of carbon and so on and so forth.

Bill McKibben: And these things are probably to higher priced to ask because we desperately need, we basically need three tools at this point. You know, price on carbon would be an important one, at least as important, maybe more important, probably more important as an all out effort to to underwrite and deploy renewable energy at a kind of world war two scale pace. And the third one that we're finally beginning to see some real traction on is a, a real commitment to keeping the carbon in the ground to making it impossible to help all those things. No question but it won't do it by itself. And, and so it's very good to see things like the best climate plan that we've seen so far. For instance, out of the presidential candidates came this week from Jay Inslee and it does talk about a price on carbon, but it also talks about a whole suite of other things that happily a president could do without our dysfunctional congress even getting in the way.

Bill McKibben: So no more permits for drilling on public land in the United States for instance, on and on and on. So that's a good part of what needs to happen. Just don't get fixated on it to the idea that it's the only thing because we need a lot of things good here and I have a little hard trouble seeing so I am to go close here cause I

can actually see Somerset waters. Could you talk a little bit about geoengineering? Yes. Geoengineering, I mean, it has many different permutations, but the most common people talk about it. Most commonly what they talk about is some, uh, industrial process of changing the atmosphere. Probably in such a way that you could artificially cool the planet having put a ton of carbon in the atmosphere. We'd now put a ton of sulfur in the atmosphere to block some of, and it's a bad idea. It's a, um, it may turn out to be the kind of break the glass idea that some desperate if we, if we just completely fail at the job that someone will have to do, but it's a terrible idea for a few reasons.

Bill McKibben: One, well one is just embarrassing. I mean, it's just, it's the kind of idea that junkies hit on, you know, like, I know I'm not going to deal with my actual problem. I'm going to figure out some way of doing it too. It's a, um, um, it's probably not going to work, at least not very well. The computer modeling demonstrates, for instance, that, I mean, what you're basically doing is simulating a volcano. And in the past when we've had really big volcanic eruptions, one of the things that, that big infusion of a sulfur into the atmosphere has done is tended to move the monsoon off the Asian subcontinent. Um, so think about those people in Shanai with no water now. And then it's, you know, sort of try to figure out how you're going to get the nations of the world doing Cree on this Geo engineering plan.

Bill McKibben: The third reason is that it would do nothing at all about the sort of evil twin sister of global warming, which is ocean acidification. Um, um, even if carbon had no effect on the temperature whatsoever, we should be working incredibly hard to get off it because it's screwing up the chemistry of the oceans, which covers 70% of the planet and are the root of the biggest biological system on earth. The fact that we've, the ocean is 30% more acidic than it was a generation ago should be about as scary a thing is we have to fixate on. So for all those reasons, I think it'd be a lot smarter to build a lot of solar panels really fast. That would be my, my advice. Is there any, I mean women in this group? Yes. Right down here that might want to ask a question. Here comes the,

Speaker 5: thank you so much for our presentation. I find it very instructive. Um, my question is, um, I was curious about your perspective, especially having interacted with people from developing countries. You know, when we look at developing countries, there is that impetus for greater economic development and how do we balance the need to literally people lifted

Bill McKibben: out of abject poverty, which requires affordable, reliable energy with, you know, this particular issue. It's so nice to, I know that I'm standing over here, I can actually see the, it's very nice, very, very, very important question. And, uh, and in some ways this was the hard moral question around climate change. I think 10 or 15 years ago, what happened was that, um, well the engineers did their job and now the price of the solar panel has reached the point where it allows people in the developing world to really realistically leapfrog over the fossil fuel age in a lot of places. Large part of this new book of mine was based on some

reporting I did from the New Yorker in the most remote parts of Africa. Uh, there's a more than a billion people on the planet as you know, without electricity right now. That is to say they're more pupil on planet earth without electricity than there were the day that Edison invented the first light bulb.

Bill McKibben: That tells you something about demography and about equity. Both, um, most of them are in Africa and the world, you know, the, the World Bank estimated that the estimates that there'll be more of them in 2050 than there are now. That in essence there's no hope of building the grid out to most of that part of the world because it's too expensive. But that's not what's going to happen in the last two or three years. There's been a just explosion of people putting up solar power in particular and doing it. And when you see it happening, then you get a sense of what a miracle this is. So for us, not so much. The solar panel replaces some other thing. You know, we don't even really like looking at them all that. It's just, you know, whatever it's we like them but we don't, they're not that big a deal if you're, I mean, I was sitting in, uh, the bunch of elders in a town, little tiny town in the north of Ghana near the equator, 95 degrees every day, hot all the time.

Bill McKibben: So we're sitting there, we're talking about this solar micro grid they'd put in the week before for their community. And um, they kept what we were talking, they kept handing me bottles of cold water to drink for which I was very grateful cause it was very hot. But it took me 15 minutes of sitting there in my clueless western way to figure out why they were so proud to be until the week before. They really never been anything cold in that place and you know, and now there was that you can take a sheet of glass and pointed at the sun and out the back comes cold and light and information and sort of modernity is a pretty remarkable thing and that you can do it in ways that don't destroy the world around you. That's why the Chinese and the Indians in particular the fastest adopters of renewable energy because they have understanding that among other things, the fossil fuel boom is undermining their economies at this point.

Bill McKibben: Their cities have become so close to unlivable on breathable Deli. I don't know if anybody's been to India in the last few years. India is one of my favorite places in the world, but urban India as of the last three or four years is almost impossible much of the time to just even be in, I mean there's 5 million children in Delhi. We think two and a half million have irreversible lung damage just from breathing the smog every day. So the thought, the long answer to that question, short answer to that question is we're at a happy moment for that. There's a real possibility of allowing people to do the same thing that happened with telecommunications when we leapfrogged, uh, uh, landline systems and went straight to cell phones. So let's hope on a rational world, this is what we'd be doing. This is what we'd spend the next 20 years doing.

Bill McKibben: The only task for the planet would be how many solar panels and how many wind turbines can we put up, how fast in order to bring necessary development to people and in order to ward off the worst parallel we've ever wandered into.

And that at bottom is what all these fights are about. To the extent that we can stop the fossil fuel industry called then the pace at which we build out renewable energy will automatically increase dramatically. That's why it's such a battle, cause they know that too. And that's why they work so hard to stop it. So we shall see. But that's a very good question. And I, I have a feeling I've talked now laundry then I'm supposed to, and I should stop and let you all go. I don't know what the, what we're supposed to be out of here. No, my, what's the word you're in charge to take one more question. Okay. I can take one more question. Who has the microphone? There's question over there. We'll do it. One more question. Did I know you all want to know, go find out who won the debate, you know?

Speaker 6: Hello. Thanks for your time. Yes. My name is page dansinger. Founding director of Better World Museum where a climate museum in which we create indoor edible gardens as well as draw in virtual and augmented reality with our visitors of virtual reality garden. And we've been finding that by drawing together with people that people are drawing together to create communities for better world. Right. It creates more inclusive, empathetic human centered spaces in which we're able to better recognize each other as well as through sort of deriving out drying out inertia and fear that's held in our bodies that we're um, trying to create data in which we're finding evidence of transformation, of action and thoughts and something good. Right. Um, the question is how can we transform people, um, into creating more action when there's such a emotional, um, feeling of helplessness and dissidents and action listness and refusal to listen to smart people?

Bill McKibben: I got it. Oh, such a good and important question and it really allows us to end on a, uh, on a important place. First thing to be said is individual action by human beings is a very good thing and it's very helpful to each of us to take actions in our own lives that, that work in the right direction. Even though at this point there's no way to make the math of climate change work. One individual action at a time, one Prius at a time, one vegan dinner at a time, one, whatever it is. They're all good things. My house is covered with solar panels. I'm proud of them, but I don't try to fool myself that that's how we're stopping climate change because we don't have time to do it that way. We have to take what people we can get. If we can get four or 5% of the population deeply engaged in movement building, then that's enough to, because apathy cuts both ways.

Bill McKibben: You know, um, it was hard to organize 400,000 people to show up in New York for big climate march, but we didn't worry that the next day 400,000 people were gonna show up for a pro global warming march, you know? Um, um, so if we can get four or 5%. So the deeper question, the one you're asking is how do you get people to not feel helpless? And that's always been the problem with climate change. It's so big and we feel so small that as individuals it seems unlikely that we can make a difference. And as I say, as individuals, we sort of can't make a real difference that we all should do those individual things. But movements are about assembling enough people to let all those people feel

that they're making a plausible difference and therefore more people will be attracted to this fight. There's a kind of, uh, you know, uh, ah, I don't even know what it is.

Bill McKibben: Just sort of smoke and mirrors at first as the first people band together, you know, seven undergraduates at some college, pathetically hopelessly trying to organize the world. But then they make a little bit of difference and more people see it and begin to feel that's what movements are and it's why they desperately need people engaging in them, not being cynical about them. And once that engagement has started, then over and over, I find people feeling that suddenly they can actually emotionally cope better with the situation that they're in now. That's why September 20th say it's really important for people to do this because it's not okay in any way to have seventh graders be responsible in the end for this crisis. It's wonderful that they're standing up, that they're taking the lead. But think about, among other things, the kind of emotional, it's hard enough being in junior high or high school to begin with.

Bill McKibben: You know, and trying to feel at the same time like you have to save the world by yourself is, is impossible and wrong. And so it is if for no other reason than that, incumbent on the rest of us to join in as best we can. So that's why I go to threesifty.org go to [global climate strike.net](http://globalclimatestrike.net). Figure out with your local, whoever you are, your local, how to get involved and how to get involved on as high a scale as you can. This is an audience and the conference of people with influence and power. If you have influence and power, use it. Now. There's no point in keeping your powder dry any longer cause we're at the real hard spot. So thank you for your work and thank everyone for your work on we go.