**Ideas and Society**

**Friday June 7 2012, Athenaeum Theatre**

**Introduced by Adam Bandt MP, Member for Melbourne.**

**Q&A led by Professor Robert Manne, Vice-Chancellor's Fellow, La Trobe University.**

*This is not just about farmers, it’s not just about rural people, it’s about all Australians. What sort of Australia do we want?*

*Governments aren’t doing their job. If they did their job, this industry would be gone.*

*They talk about coal and gas as a major resource. Water is our most crucial resource by a long, long way and if we don’t protect our water, we’re doomed.*

*When it comes to protecting our communities, and our environment from mining, we know that up until now, the states have failed us.*

*We know that a small number of our federal MPs are making an effort to protect the places we love, our communities, our farmland, our bushland.*

*But to see real change, we know a lot more needs to be done. Best of all, we know a lot more can be done.*

*That’s why this year, we’re taking our message to the federal MPs. We’re making sure they can’t overlook what we’re asking them. We’re taking our call to the door of their electoral office. We’re meeting them in our communities right across the country.*

*It’s time for them to listen to us and to represent us.*

*Right around Australia, right now, the people are asking for real protection over our lands, our water and our air.*

*We need real action, not just talk.*

*To protect our water, to protect our income.*

*This is what we care about, for the future.*

*The whole of Australia is our backyard.*

*And that’s why we’ve got to work at it, because we just love where we live.*

*And this is why we’re working with our neighbours to declare our communities, coal mining, and gas field free.*

*And we’re preparing to defend our country, road by road, valley by valley. For so long our federal parliament has hidden behind the states. Well, enough is enough.*

*We know our federal parliament has the power to protect all our communities from reckless coal mining and gas drilling. That’s why we demand reform.*

**Adam Bandt**

Hi everyone. This is fantastic to look out at such a packed room. I'm Adam Bandt, I'm the Deputy Leader of the Greens and I'm the member for this electorate of Melbourne. I'd like to acknowledge the traditional owners of the land, the Wurundjeri, and pay my respects to their elders, past and present.

And I want to welcome Bill McKibben to Melbourne, this electorate that I feel extraordinarily lucky enough to represent. As many of us know, and as Bill has made clear to the rest of the country, throughout this week, Australia really does punch above its weight when it comes to contributing to global warming and we’re the highest per capita polluters on the planet. But I think it’s also fair to say that when it comes to fighting global warming within Australia, Melbourne punches above its weight, and we have an enormous number of really dedicated activists and community groups who have been working for so long, so hard, to ensure that Australia plays its fair share in stopping environmental and planetary catastrophe. And also we are lucky enough that at the last federal election, Melbourne was the only place in the country that went Green, and as a result, we now have thirteen billion dollars going into clean and renewable energy. We have a climate change authority. We have a price on pollution.

Now, as many of us here know, they’re only first steps, but they’re essential first steps, and Bill though joins us at a time when that first chapter is potentially going to be erased. He comes in an election year, where we will be fighting very very hard to make sure that we do not go backwards on climate change. And because I won’t have this opportunity too often I will say that one of the things that’s going to be absolutely essential in that, is making sure that Tony Abbott does not have total control of both Houses of Parliament and a key way of making that happen will be [applause], and key to making that happen will be making sure that we elect long-time climate activist Janet Rice, who’s here today, into the Senate so that we’re in a position when [applause], so that if they try to repeal the laws, we can say no.

But Bill also joins us at a time when, unfortunately, the task is becoming critical and we are in the critical decade, as the government climate commission has called it, but sadly it comes at a time when denialism is also on the rise, and that denialism takes many forms. There’s the denialism about the future of our energy sources, as we’ve seen from that video, the denialism of the need for the urgency for action, the denialism that means that when Bill goes on television on reputable national programs, sadly the first couple of questions often are still ‘is climate change real?’ rather than ‘how urgent is it?’ and ‘how quickly do we need to act to have this country powered by renewable energy?’

And that’s why I think for all of us it’s a very exciting time and an enlivening experience, to have Bill here. I am myself personally quite chuffed and honoured to have the privilege of introducing him. It was after reading people like Bill that a few years ago I decided to chuck in my job and start running in elections, because I felt that government was going to be an essential component to making sure that we transition to a zero pollution economy here in Australia as quickly as we possibly can. And I know that after this, is that I'm going to go back and re-read *Deep Economy* and some others as well. But also it’s important for all of us, whatever field that we’re in, to be reminded from time to time of the urgency and the need to act quickly.

It can be despairing to talk about climate change, but I also think that it’s one of those things that if we don’t talk about it, the problem is going to get worse, and I think we need to make sure, all of us, that we find ways of telling the rest of Australia what we know, and that is that we are facing a short period of time to turn this ship around if we want to leave the climate and the planet in good hands for our children and our grandchildren.

So I want to thank you very much, all of you, for coming along. I want to thank Bill for agreeing to put an S at the end of math, for this particular tour, we’re very honoured about that [applause]. And you’re going to see a very short cliff now and at the end of it I want you to join me in giving an extraordinarily warm Melbourne welcome to author, educator and environmentalist, Bill McKibben.

[applause]

*I'm Blair Palese with 350.org, and thanks for coming here tonight to hear Bill McKibben and the Do The Maths Tour for Australia. I first heard about 350 when they were organising out of the US a global day of action on climate change. The idea was to put the number 350 all over the world to get people talking about what it meant, and what we had to do to try and protect the planet against the increasing greenhouse gases. We did an event at the Sydney Opera House with more than 2,000 people on the steps, and it was one of those images that kicked off the day and made international media right around the world. There were more than 5,200 events happening everywhere from little small locations in Asia and Africa, to London, Paris and New York City. It was a great day and it really galvanised the public, to get thinking about what it meant and what we could all do. CNN called it the world’s biggest day of direct action, and we were really pleased to start off that way and now we’re taking it from there.*

*As time’s gone by, 350.org has hosted the largest work party the planet has ever seen. People of every nation but North Korea came together to put solar panels on their roofs and dig community gardens. We’ve also done the world’s biggest art exhibition in history, as people came together to form images so big that it could be viewed from space, including our own artwork here in Australia in the red earth of Broken Hill.*

*These mobilisations demonstrated something powerful. Looking through the thousands of pictures that poured in that day, and across the world for all these events, you saw people of almost every nationality, class and colour, transcending their differences to speak a common language and to call for action on climate change. Despite our supposed differences, we were really becoming a movement together.*

*In the past few years we’ve seen 350.org mature, especially in the US, where they’ve taken on the fight over the Keystone Pipeline. It’s a plan to extract oil from shale, and pipeline it from Canada, all the way to the south of the US. It’s incredibly energy-intensive and a really bad idea for the planet, if you’re concerned about climate change.*

*In the United States, 350.org has organised thousands of people to come out against the Keystone Pipeline. On one day alone, some 50,000 people turned out in Washington to call on President Obama not to support the plan, and 28 people were arrested on that day, showing a sign of civil disobedience and the time to step up and take action on climate.*

*That’s why we’re bringing Bill McKibben to Australia, because we’re the next country that really is posing one of the biggest problems to our planet. Australia's massive plans to extract and export coal around the world is really a threat to the planet, and something we need to take action against. That’s why we’re bringing Bill McKibben to Australia and why we’ve started the Do The Maths Tour here. Bill’s here to talk about what we can all do to try and stop this problem, namely, look at where our money is, look to divest it from fossil fuels, and look to move it to the clean energy economy.*

*Thanks for coming tonight and to hear Bill, and what we can all do to take action. We’re working here and around the world to see how we can take the fossil fuel industry on head-on. It’ll mean all of us will need to get much more active, so we’re hoping after tonight’s talk, you’ll do more than just sign petitions or make a phone call. You might actually join us in the effort to stop fossil fuel expansion. So we hope to see you after tonight, join us and thanks again for coming.*

[applause]

**Bill McKibben**

Thank you all so much for being here. What a pleasure, what a pleasure to be here and what a pleasure to be in here in this incredibly beautiful theatre. I had no idea where we were coming, but this is just grand. And it’s fun to think about all the things that must have happened here over all the years and I bet many of you have seen great things and it makes me feel a little bad that all you’re seeing tonight is me, you know. And especially since, I mean, you’ve been hearing nice things about me. Since you don’t really know me I thought I'd, you know, give you more of a sense of what the kind of ... a couple of weeks ago I guess when they found out I was coming, here’s what the Australian Coal Association had to say.

*On the 8th of April, the Sydney Morning Herald reported Bill McKibben of the 350.org out of the USA, saying that Australian coalmining has become a rogue industry. Now this simple image is widely promoted by the self-styled planetary saints and the authors of such views are rarely seriously questioned about how they arrived at the view or whether the facts upon which they rely are really facts at all.*

*Now twelve hours after Mr McKibben’s comments were reported, ABC TV referred to North Korea as a rogue state. And that made me think. Is it possible that the Australian coal industry really bears any comparison to a demented autocracy that is threatening the world with nuclear war?*

She asked, you know, okay, you’ve been introduced to me then, look, let me say as I start, that there is a sense in which we should not have to be here tonight, not on a rational planet. You know, the world found out about global warming 25 years ago now. I played my small role in that by writing the first book for a general audience about climate change, way back in 1989. And you know, if the world worked as it should, our leaders and our institutions would have long since heeded the alarm that science had raised. They would have paid some attention to the economists who told them what to do about it. If our leaders and our institutions had done their job, then we would not need to be here tonight. We would have started ... we wouldn’t have solved climate change yet, but we’d be down the path, on the right way. But that didn’t happen. Basically, as a planet, we’ve done next to nothing to deal with the biggest challenge that we’ve ever faced.

And hence, we’ve got to finally come together in a really global movement to deal with the first really global problem we have ever had. And so the nights along this tour seem truly important to me. First we went all across the US and now we’re here, and I keep having the sense that it feels for me like the start of the last campaign that I'm going to get to fight, not because I'm too tired to go on, but because the planet is getting tired, that the moment has come to make the stand, that we’re really reaching the limits, kind of running out of time.

In some ways I suppose that should be depressing but it doesn’t depress me. In certain ways I'm more excited than I've ever been because I think we know what we need to do in a way that we didn’t twenty-five and twenty and fifteen years ago when we sort of expecting that reason was going to carry the day, you know. I think we’ve peeled away the layers of the onion and got into the heart of things. As of now, we’re going to have to go after, head on, the fossil fuel industry. That’s it. Take them on. That industry is trying to wreck the future. We’re going to try and take away their money. That’s it.

Now, the work that we need to do to do that it’s not going to be entirely exciting. Some of it will be. Some of you are going to need to go to jail before all this is over, but long before that, you know, most of the labour will be drier and harder, you go to meetings and Facebook things and have petitions, and so on and so forth. And I can’t promise you that it will be victorious. I mean, we’re behind the curve, some. But I'm not discouraged. A reporter the other day was questioning me in the sceptical way that reporters should, and he said, it just seems impossible to me. This seems like one of those David and Goliath fights. You’re up against the richest industry on earth. And I was starting to ... yeah, yeah, you’re right. It’s terrible. But then I thought, no, you know, I'm no Methodist Sunday School teacher. I know how the story of David and Goliath comes out, actually, you know. [applause] If we fight hard enough, we’ve got a chance. No promises, but a chance, so let’s get to work.

We’re calling this the Do The Maths Tour. We really ... I'm still having to learn to call it the Do The Maths Tour, but I'm getting there. Don’t worry. It’s really very easy math. It’s not calculus. I know that this is a university town and I know you’re entirely capable of doing calculus if called upon to do so, but you’re not tonight. These numbers are pretty easy. I first wrote about them in *Rolling Stone* about a year ago, a little less than a year ago. For those of you who keep your back issues, it was the issue with Justin Bieber on the cover. Okay. My favourite headline of all time, you know.

But here’s the strange thing. I got a call from the editor a couple of days after the issue came out and he said, this is weird, but your piece has ten times as many likes on Facebook as Justin’s. You know. And it turned into the most shared piece apparently in the magazine’s history. Now part of that is obviously because of my soulful stare, you know. But some other part of it was because it laid out the math that we’re up against, sort of for the first time. There’s three numbers that I'm going to get to in a minute, but here’s the background, before we get to the three numbers that we need to know.

Here’s where we are right now. Here’s where we start from. So far, we’ve burned enough coal and gas and oil and hence put enough CO2 in the atmosphere to raise the temperature a single degree. And what’s that done? One day last September the headline in the newspaper was, ‘Half the polar ice cap is missing’. Literally. If Neil Armstrong were up on the moon today looking down, he’d see half as much ice by area and in fact since the ice is getting thinner and thinner, it’s about an 80% reduction in the volume of summer sea ice in the Arctic. That is to say, we’ve taken one of the six or seven great physical features on our home planet, and we have broken it, okay?

And it’s not the only one. The others are following close behind. The beautiful ocean near you is 30% more acidic than it was forty years ago. The chemistry of sea water changes quickly as it absorbs carbon from the atmosphere. And so the atmosphere itself is changing.

Warm air holds more water vapour than cold. That’s the brute physical, most important physical fact of this century probably. It means that because we’ve raised the temperature a degree, the atmosphere is about 5% wetter than it used to be. That’s the single best sign that we have left behind in the lifetime of everyone in this theatre, we’ve left behind the Holocene, that 10,000 year period of benign climatic stability that underwrote the rise of human civilisation, and now we have in this much wetter atmosphere, a set of loaded dice, loaded for drought and for flood and we’re seeing both of them in great abundance. Last summer in the US we had our hottest summer ever and we couldn’t grow food in the most fertile farmland on the face of the earth – the great plains of the United States. It was too hot. The temperature was too high for corn to fertilise successfully.

You came through your own hottest summer, just these last months so you have some sense of what I'm talking about, but of course it’s not just drought. Once that water has evaporated up into the atmosphere, it’s going to come down, and increasingly it comes down in buckets. You know, the hundred year flood every couple of years, in place after place after place. Last fall, where I live on the east coast of the United States, we had the largest windstorm that we’ve ever measured – Hurricane Sandy. Its storm force winds stretching out a thousand and forty miles from the eye, as it came up the east coast and then it ran smack into our continent’s great city and you know, the pictures were just almost impossible to look at. They were so weird and unsettling. Just like something out of a movie, you know. That’s ground zero. That’s the Atlantic Ocean pouring into the New York City subway system. Anybody who had any doubts about whether our technological civilisation was vulnerable to the forces that we’ve unleashed should have had those doubts ended then.

So, that’s where we are now, you know, that’s where we are already, with that kind of change and of course in this region, you’ve felt the sting of it more than many places. I know that those memories of those fires of some years ago are still fresh in people’s minds, as they should be, and we’re already way too hot. The long term goal has to be to get the CO2 level back below 350 parts per million, which will allow a planet like the one our civilisation grew up on. And I wish that’s what we were talking about tonight, about returning the world to exactly the way it should be, back. But we don’t have that luxury. At the moment the planet is sprinting in the other direction. The amount of CO2 in the atmosphere goes up and up and up each year and the temperature rises are all we’re talking about tonight and for the next years, and maybe the years of most people in this room, all we’re talking about is how and whether we can avoid complete calamity. All right.

So that brings us to the first of these three numbers. The first of them is two degrees. That’s the one thing the world ever agreed on, about climate change, that we shouldn’t raise the temperature more than two degrees. Now it’s not a very good target. If one degrees melts the Arctic, two degrees, we’re fools to find out what it will do, but we’re going to find out, even if we do everything at this point. We’re going to come very close to it. And since it’s the one thing that the world’s governments have agreed on, it’s the one line we can try to hold people to. Everybody. The G8, the G20. You know, you’ll remember that failed fiasco of a climate summit at Copenhagen in 2009, the place where we were supposed to come together. You know, if the movie had worked the way it should, that would have been the place where human beings came together. But nothing like that happened. It was a fiasco. A failure. A demonstration of our division and impotence.

The only thing ... there were no, one or two page accord scribbled together on the last day, there were no targets, no timetables, no enforcement – there was exactly one number. Two degrees. Everybody in the world agreed that we would do what we could to stabilise – everybody, the EU, Japan, Russia, South Africa, Brazil, Indonesia, Australia, even the most conservative. Even the United States agreed, okay? Two degrees. Reddest of red lines, okay?

Which brings us to the second number. All right. 565 gigatons. 565 billion tons of carbon. That’s how much the scientists tell us we can burn and have some hope of staying below two degrees. Not a perfect hope, but some hope. 565 gigatons sounds like a lot. It actually is a lot. A gigaton is a billion tons. A billion tons of anything is a lot. But we emit more than 30 gigatons a year already and that number’s increasing 3% in a year, which means we have roughly fourteen years before we cross that line, and have put enough carbon in the atmosphere. You know, that’s why things like the carbon price is so important. They help stretch that out, at least a little bit. Give us a little more room. This is a limit and a serious one. Here’s David Karoly:

*Scientists have been looking, studying, the relationship between global increases in carbon dioxide and temperature, and there is a clear relationship. But they’ve also now got a clear understanding that it is the cumulative emissions of carbon dioxide that set the level of temperature, because carbon dioxide variations are long term. Carbon dioxide has a long time before it gets removed from the atmosphere through natural processes.*

*What that means is, there’s a limit in terms of fossil fuels that can be burnt, if we want to stay below two degrees of global warming.*

So roughly, that limit is 565 gigatons. So that brings us to the third and last number, and the worst one okay? And the newest too. It came from a team of financial analysts in the UK originally, who did the important work that we should have done long ago, just sitting down and adding up how much carbon the fossil fuel industry already had in its reserves. They looked at all the filings with stock exchanges, and annual reports and things, and once they totted it all up, the number was 2,795 gigatons of carbon. Mapped, identified, ready to go. Down in those coal and gas and oil deposits, ie, five times as much as the most conservative governments and scientists on earth say would be safe to burn. Five times as much. That’s how much carbon was in the atmosphere before the Industrial Revolution. Okay? That was the Holocene. That’s how much we burn now. It’s taken us up to one degree. That’s how much more that red line we can burn and have some hope of staying below two degrees. Okay?

That’s how much they’ve already found. How much they’ve already identified, how much they have ready to go. It’s still physically below the ground, but economically it’s already at the surface. That’s what sets the share price for Shell, or Exon, or Billiton. It’s what those guys use as collateral when they borrow money. Once you know that number, then you know how this story ends, you know. There’s no longer any room for doubt or speculation or wishful thinking. Unless we quickly and dramatically revise this script, then the outcome is entirely clear. If these companies follow their business plan, then the planet tanks. Period. End of story.

And what that means, what it sort of demonstrates, if you think about it, is that these companies are not to be thought of any more as sort of normal companies. They’re a rogue industry now. They’re outlaw. Not only against the laws of the state, which they often get to write, but outlaw against the laws of physics, okay? The numbers are staggering.

Exon, one company, one board of directors, one CEO, Exon has in its reserves, 7% of the carbon necessary to take us past two degrees. One company. So, either Exon and its ilk have to give in, or physics has to give in. All right? Hard as it will be to change Exon’s mind, and it will take all of our work, I'm predicting it will be easier than getting physics to change its mind, okay? That’s where we are.

Just because she’s an old friend of mine and because I've talked for too long, let me just for a minute, turn on Naomi Klein, who I hope all of you know. The great author, and she’s really one of the co-conspirators that helped us launch this campaign.

*What the fossil fuel industry is doing, is locking us into a future that we can’t survive, that humanity cannot survive. And we know this because just at the end of 2012, we heard this from three different conservative sources simultaneously, the World Bank, the International Energy Agency, Price Waterhouse Cooper, hardly a hippie outfit, all told us that if we do nothing but more of the same, if we dig up those reserves, we are headed towards four to six degrees warming Celsius.*

I particularly like that because Price Waterhouse Cooper is also the guys who count the votes for the Academy Awards, the guys with the envelope. If they’re scared, I'm scared.

And here’s more locally.

*This here, if you want to look at Australia, this is one of the major arteries, if not the major artery, like the aorta, of CO2 pollution. It is the biggest, right? And when I see the coal laydowned areas and the ambition doubling, what we’re talking about is doubling what is already unsustainable, because we know that climate change is pushing us into a direction where if we ... we have identified so much fossil fuel in the ground, so much coal in the ground, that if we want to live on this planet, we cannot afford to burn it.*

It’s almost the end of the math, but let’s just think about Australia in this context, okay? It’s important to think about your domestic emissions and things, but they’re actually dwarfed by the emissions already that come from the coal that this country exports and now the move is on to dramatically increase, double or triple the level of those exports in just a very few years. So think about the math involved.

That’s the Galilee Valley, there. Okay? If that’s dug up and burned, it will produce between 6 and 7% of the carbon necessary to take us past two degrees. So one valley, in one country, in one or two decades, producing 6 or 7%, using up 6 or 7% of the available atmospheric space between humanity and the kind of broken planet. And of course that’s only one of many projects. If all the coal projects are carried forward in Australia over the next couple of decades, as people have announced they would be, they would use up altogether about a third of that available carbon budget. Okay? So, look, Australia is slightly less than a third of the world’s population, okay? It’s not okay to get to use up all that atmospheric space, you know, and it’s not okay for people in Australia, because you guys are already starting to feel the effects of what happens there.

*For Australia, it remains a dramatic increase in extreme weather, in major impacts including increases in drought, increases in heat waves. We’ve only had less than one degree of warming so far, so we’re talking about four times more, or even more than that, increases in extreme weather, in adverse impacts from climate change. Continued exports of coal from Australia push the world into the worst case scenario. The Great Barrier Reef will be doomed to extinction. Due to climate change, warming of the ocean temperatures, and acidification of the oceans due to more carbon dioxide. The Murray-Darling Basin is already being affected by reduced river flows in the Murray and the Darling. Increases in temperature are leading to increases in evaporation, and that means less water. The changes in the rainfall patterns due to climate change are also reducing the stream flow in many rivers, particularly in the Murray-Darling region. Investment in digging up coal is an investment in making climate change worse and making the impacts of more extreme weather, and sea level rise worse for Australia. It is not a good decision.*

Not a good decision for Australia, and really not a good decision for almost every place else too. One of the truly cruel parts about climate change is, the people who get hit first and worst are the people who have done the least to cause it. Last year at 350.org, right about this time of year, we asked people around the world to rally in places that had already felt the sting of climate change as it were. And we’re used to doing things on a big scale all over the world, but we were struck, I was struck, by how many ... thousands of places, people came together to kind of demonstrate what was going on. I mean, the day begins in the Pacific, so the very first picture was from people underwater, in the Marshall Islands, saying, our reef is disappearing. Your carbon emissions kill our coral.

You would think that in Afghanistan they had other things they have to worry about, but the fact that the Kabul River is drying up is high on the list. Across the border in Pakistan, those people live in the zone where in 2010, the greatest rainfall by far ever measured in Pakistan, the kind of rain we can only have now because we’ve changed the atmosphere, that rain caused the Indus River to flood to the point where it covered a quarter of the country, and twenty million people were out of their homes. Okay? Roughly the population of Australia out of their homes, from that flooding.

Just the same thing all over the world, you know. We see wild fire and sea level rise and on and on and on. It’s tough. And depressing. And I don’t want to depress you any more, so let me give you some good news, which is that we actually know now, we have a sense of how we can deal with this. When environmentalists talked about renewable energy twenty-five years ago, we did it with our fingers crossed, because it wasn’t quite ready yet, you know. Solar panels, that was something for something for ageing ex-hippies, down in the basement, fooling around with the lead acid batteries, you know, and because those ex-hippies were good at it, we figured out sort of how to do it over time and now, and now, it’s completely ready for prime time.

Look at the countries that have really taken this seriously. They’re not very many. In fact there’s really only one big, there’s only one non-Scandinavian country that’s taken seriously what ... and that’s Germany, okay? Germans got really serious about renewable energy, and it’s almost sort of ironic that the country that really caused a great deal of the world’s problems in the last century, are offering some of the real solutions in this one. They’ve put in so much renewable energy already, that there were days last summer when they generated more than half the power they used in Germany from solar panels within their borders, all right? And this is Germany. Okay? It’s Wagnerian, you know, it’s so foggy. Munich is north of Montreal. Think what you could do if you had a continent, oh, I don’t know, like Australia. You know. [applause] It’s not just rich nations. China, starting to do much the same. Not only did the Chinese announce a few weeks ago that they were going to put a price on carbon, I think sort of emulating the Australian experiment, but they also now lead the world in the installation of renewable energy, and lead it by a lot. I was talking with people earlier today ... I wrote a piece for the *National Geographic*, a year or two ago, about China and energy and I spent a lot of them there. I'm sure many of you have been to China. One of the first things you notice is how many homes have solar hot water panels on their roof. It turns out that a quarter of Chinese, 250 million people, when they take a shower at night, the hot water’s coming off solar panels on the roof. In my country, that number is less than 1%, okay? And even most of that is used for heating swimming pools. So the Chinese are showing some leadership and I was reminded in the course of doing that story, really that that leadership, that’s what it’s about. Political will, not technology. I spent a day with the guy who runs the biggest of these solar hot water companies, a guy named Huang Ming, and he took me at the end of this long day of talking about solar panels, he took me into his private museum and mostly it was, you know, pictures of him shaking hands with important world leaders, but the pride of place in this thing was this old, kind of rusting solar panel. Solar hot water panel. You know what that is? No. What’s that? Oh, that’s my favourite thing. That’s one of the solar hot water panels that Jimmy Carter put on the White House in 1979 and Ronald Reagan took down in 1985, okay? That’s the sort of proof if you ever wanted it, that what we face is a crisis of political will.

And the good news is, that political will is something that we can create if we set our minds to it and so, the rest of this evening, and it will be shorter than the stuff we’ve already done, the rest of the evening will be devoted to figuring out how to muster that political will. But before we get there, before we get there, one more attempt to just knock this math into your heads, so you can explain it to anybody. And I'm going to use, since I'm a writer, I'm going to use an analogy or a metaphor, to try and get this across.

Aaron, are you going to help me here with this ... all right, good. Aaron’s going to help and I think, who else, Nicola, and Cole and Pip and Sophia, and Pat and Lauren and Vicki and Cam. [applause] Who do lots of good work on these issues all the time, but tonight they’re going to serve as bartenders, and by the way, before I forget, some of them are helping co-ordinate in just about three weeks, or four weeks, this big youth climate summit, Power Shift Australia, which is coming, here in Melbourne [applause]. There’ll be at least two thousand young people here, the real leaders of this work. But tonight, here’s ... would you ... this is mostly just a way for me to get to drink a beer. Would somebody open me one of those good local ... you’re exactly right. I'm at the point, at this point where I need one.

And Robert, are you ... Robert Manne, who’s going to help us in a minute, and maybe Adam, you guys, if you’d like a beer, come on up here too. Come on up and help us. You guys deserve one too.

So, here’s the thing. What’s the drinking limit and driving limit in Australia? How much can you have in your blood? .05. Okay. So, that’s the two degree limit. Okay? That’s the equivalent. It’s what we’ve agreed. It’s not maybe perfect and it doesn’t ... but it’s what we’ve agreed would be the right limit. Okay? Two degrees or .5 blood alcohol. All right. And one could drink, were you, strapping males, we might be able to drink three or four of these in the course of an evening and sort of get through it all, but that’s not ... can you guys pass that? The trouble is, that the fossil fuel industry are party animals, okay? They have thirty beers open for each of us to guzzle tonight. Just keep bringing them on guys. Let’s see what thirty beers looks like, okay? That’s how much we’re each supposed to drink. And then the next night too. And on and on and on and on and on.

The two or three, maybe four beers that we could get away with – that’s the 565 gigatons, but this is the 28,000 gigatons that’s waiting for us.

Now, I am aware that there are a few hardy collegians among us, who might be willing to take on thirty beers, you know, in the evening, maybe somebody from the rugby team or something is here, okay? Think about, if they survived, how we would describe, you know, their condition, and then think about the planet, okay? I don’t know what terms you use in this country but in the US, we would say that person would be wasted, or wrecked, or polluted, or smashed, or ripped, or trashed, or toasted, or totalled. You know. Should he survive, and I'm guessing it’s a he, the hangover would last for several days. If we do this with carbon, if we pour that in the atmosphere, then the hangover lasts for geologic time, you know. That’s what we’re up against. Fear is a good thing, okay? But it’s the classic example of something where too much of a good thing becomes a very serious problem, and that’s precisely where we are, right now. Thank you guys, very, very much, for all your help, all your help. [applause] And Robert, Robert, just before we get to ... just to make sure we’ve got it all. Robert has agreed to ... people asked questions as they came in and he’s agreed to, since he’s a professional question-asker some of the time, and we had you write them down and things as you came in, just to make sure there were none that were too hard for me, okay? So, fire away. Thank you Charlie, very much.

**Robert Manne**

I just want to say what a great thing it is to have you in Melbourne. Am I allowed to say one thing before ...

**Bill McKibben**

Yes, you’re in charge. You have a microphone. There’s no stopping you.

**Robert Manne**

I was going to say that when people look back at this time, I think there are three people that they’ll remember, who tried. Lots more than three, but three will first come to their minds. I think in politics, as leadership, Al Gore. I think in science, James Hanson. And I have to say, and this is why I'm so proud to be on the stage, in intellectual work and activism, and in writing, Bill McKibben, so I'm really ...

[applause]

**Bill McKibben**

Thank you, very much.

**Robert Manne**

Now, I would have many questions. These are not my questions, democratically from the audience. But the first is actually one that I would have asked had I had the chance to write them, and it’s this. How, Bill, do you deal with deniers, who still give air space to the idea that climate change isn’t happening? And it has a PS written on it – sorry about Cory. I've no idea who they mean.

**Bill McKibben**

This is this man from the ... Senator Bernadi, from when we were on TV earlier in the week. It’s actually ... I mean I don’t mind at all, it’s actually fun, you know, to deal with them. I put him in his place a tiny bit.

I try not to worry endlessly about ... I think one takes it for granted that as long as you have the richest and most powerful industry on earth, there will be people who truckle, who do its bidding, do its work for it. There’s no possible way to convince people like that, because their opposition is not rooted in science, it’s rooted in ideology, you know. So there are people who you can convince, and more than us convincing them at this point, Mother Nature is doing a remarkably good job. I mean, in the United States the percentage of people worried about climate change has shot up sharply the last two or three years, precisely because 85% of our counties have had federally declared disasters, you know.

But I don’t spend an endless amount of time trying to convince unconvincable people. I think what we need to do is take the majority of people who actually do know what’s going on, and are concerned about it, and get them actually engaged and to work. So hence the purpose of this evening. But it’s ... in our country, I don’t know who the equivalent character is here, but in our country, you know, if you’ve just sort of marinated in Rush Limbaugh you know, for months on end, or years on end, the chance of changing your mind in that way is small, so you just don’t worry about it too much, and on to the next.

**Robert Manne**

How much clean energy do we need to ensure we avoid dangerous climate change?

**Bill McKibben**

We need as much as we can, as fast as we can. At this point, we have to ... we no longer have the luxury of a kind of slow and gradual and easy transition. One of the things that I have to remind myself not to say sometimes, since I first wrote about this twenty-five years ago, one of the things I have to remind myself to not say is, oh, if only you’d listened to me then. You know. Because twenty-five years ago we actually had some space for different trajectories. We could have done some relatively easy things and moved ourselves, but now, you know, now the Arctic’s melted so now we just have to go all out with energy conservation, which is the easiest of the technologies to employ and also with renewable power and the good news, as I said, is it’s clearly do-able but it will take enormous effort. It’ll take the kind of effort ... I mean, the great industrial example of that kind of change is what happened at the beginning of the Second World War, when the last time we faced a kind of really global enemy, in that case fascism, you know, and we put everything we had to it, and in the course of a couple of years, the world was ... you know, our industrial bases and things were entirely different. We were not making cars, we were making airplanes, and we did it fast enough. We’ll see.

**Robert Manne**

An important question. What can young people do to help solve the global warming challenge that we face?

**Bill McKibben**

Young people have been in the lead of this fight from the start, and particularly I think, here in Australia. When we were starting 350.org the best climate activists we saw over the entire world, were the kids from the Australia Youth Climate Coalition, doing [applause] astonishing stuff. They’re good organisers, and so 350, I'm virtually the only person at 350 over the age of thirty you know. Everybody else is ... which is great, because they have a visceral sense of connection, having grown up in the sort of world of Facebook and things the way we didn’t, they have a much stronger sense of exactly how ... and it’s that kind of connection, networking spread, you know, you can’t just use Facebook, you send email petitions back and forth or whatever, but that sense of connection, and organising ability that goes with it, is completely essential. It’s the only wildcard we’ve got. I was telling people earlier today – somebody asked this. We started 350.org, we had $20,000 I think to our name, that’s what we were able to raise and I think we spent it all building a website. Every last penny. And it was a really good website. It worked in fourteen languages. And I remember looking at it proudly and thinking, you know what? Exon can spend 20 million dollars and doubtless they do, on their website, and it stinks, you know. It’s just ... it’s like an annual report on the web. It’s just filled with pictures of penguins and all other things that they’re wiping out, you know. And that’s, you know, that kind of world that young people inhabit more fully than you or I will ever completely inhabit, is one of the things that gives us at least an outside chance here.

Thank you brother so much.

**Robert Manne**

It’s not on the sheet, it’s one from me. And it’s the one that I most want to ask you. You’re dealing every day, you’re leading the world every day on the most daunting problem I think humans have ever faced. And yet your spirit exudes hope. How come?

**Bill McKibben**

Well, that’s beer, you know. Because the one thing I know now, having been all over the world looking at, you know, this, is that there are people everywhere ready to take on the fight. And if they’re willing to do it in lots of places where they didn’t even cause this problem, you know. I mean, most of the people ... one of the first things, when we did that first day of action around the world, there was fifty two hundred demos, we were sitting in New York watching these pictures come in, flickered, by the thousands, ten, twenty a minute for the whole weekend. The thing that most ... that I most noticed ... I'd been told all my life that environmentalism was something that rich white people did, who had taken care of their other problems, and that if you were worried where your next meal was coming from, you wouldn’t be an environmentalist, and on and on and on. And it just turned out to be nonsense. Most of the people that we were working with around the world were poor, and black and brown and Asian and young, because that’s what most of the world is made up of, you know, and oddly enough, just as concerned about the future as anybody else. Maybe more so, because the future bears down hard on you if you’re in those places right now.

But the more of those people that I meet and know, and love, the easier it is to just say, okay, I don’t know how it’s going to come out, but we’re going to fight, and that’s what we can do. That’s what our time on this planet, what we’re called on to do. So, on we go.

[applause]

Thank you so much Rob, a great thinker on these questions.

Let’s talk about what we’re going to do. Those were a good setup to sort of talk about what we’re going to do. We do have to take on this industry, and we’ve got to take it on hard, and in all kinds of ways, and it’s possible to do it. They’re beginning to understand that they’re in trouble. The CEO of Exon, a guy named Rex Tillerson, okay. He makes a hundred thousand dollars a day, running Exon. But he did give a speech last summer, where he admitted for the first time as a CEO of Exon, any CEO, that global warming was real, and that they were helping cause it.

But since dealing with that impact would, you know, go straight to the bottom line, this is the richest company on earth. They made more money last year than any company in the history of money, okay? He quickly sort of changed subject.

So someone said, oh, what do you mean by engineering solution?

You know, that’s crazy. Crop production areas are what normal people call farms. And we already them wherever there’s soil and it’s true that Exon has melted the tundra and it’s true that last year they made it too hot to grow corn in Iowa, but that doesn’t mean you can just move the whole operation up to Siberia. There’s no soil. They’d just fall over you know. So we gotta take these guys on, seriously on.

And there are a lot of ways to do that. Okay? One thing this industry cares about is money and we can go after that. You want to take away our planet? We’re going to try and take away your money. We’re going to try and tarnish your brand. I was talking earlier about drunk driving. We need to make the case that the industry has behaved recklessly enough that they should lose their social licence, their veneer of respectability. We need to understand that they are no different from the tobacco industry, which for decades and for millions of lives, lied about the dangers of their product. These guys too should be stigmatised. One of the ways, one of the tools, let me just ... the list of companies, you know, is familiar to us. We know who they are. And it’s not just the companies, of course, it’s also those who make it possible, give them the capital, to do what they want to do.

When we’re up against guys like that, one of the tools that we can use is divestment. We can ask or demand that institutions and individuals sell their stock in these companies. The logic is brutally simple. Each of us can’t avoid using a certain amount of fossil fuel. That’s the way the world works at the moment. But we can avoid profiting from it. If it’s wrong to wreck the climate, then it is wrong to profit from that wreckage, okay? And by taking that step, we can begin to put financial and political pressure on this guy, on these guys. That strategy is a kind of extreme one. We don’t employ it most of the time because most of the time, the problems we have with corporations is smaller – they’re doing something wrong. Apple is building its iPhones with, you know, paying too little to its labourers in China, okay? That doesn’t mean we hate iPhones. That means we need to put pressure on them to change so there are shareholder resolutions and consumer boycotts and writing letters, and eventually they, you know, raise wages for people in China and an iPhone costs a dollar more and everybody’s cool, you know.

There’s a flaw in their business plan. It gets fixed. With the fossil fuel industry, the flaw is the business plan. All right? That’s what they’re planning to do, is just dig up all that carbon and burn it, and so we need to cut those ties. This strategy has worked in a big way in this world exactly once. It’s about a generation ago, when apartheid ruled in South Africa and around the world, especially in the United States, this huge divestment movement appeared. On 155 college campuses after four or five years of often intense struggle, they forced boards of trustees to divest. Twenty-six state governments, twenty-two counties, ninety cities – they took away their money from those banks that were doing business and the super funds, pension funds, shed their stock. And it worked. When Nelson Mandela got out of jail, in 1990, the first foreign trip he took was to the United States and he did not go first to the White House. He went first to California, to thank students at the University of California who had forced the divestiture of three billion dollars worth of stock and he said, you know what? We fought for our own liberation. We won our own liberation. But we could not have done it without you. That was one of the decisive turning points in this fight.

That’s history. It’s one of the reasons why it means a lot to me that a guy that we’ve worked with since we founded 350.org, Desmond Tutu, Mandela’s great accomplice, he put together last fall, just this little video for us, and it really, really ... well, just listen and listen carefully. He’s older now, so it’s a little harder ...

*The divestment movement played a key role in helping liberate South Africa. The corporations understood the logic of money even when they weren’t swayed by the dictates of morality. Climate change is a deeply moral issue too of course. Here in Africa we see the dreadful suffering of people from worsening drought, from climbing food prices, from floods, you know, we’ve done nothing to cause the situation. Once again, we can join together as a world and put pressure where it counts.*

You know, there are few people in the world, a very few, who have just earned the right to be absolutely listened to. They’re not ... and I'm not sure there’s a better man on the planet than Desmond Tutu, so if he says to do something, one should take it seriously, it seems to me, and the good news is, that people are taking it seriously. We’ve started this campaign in the States in November, and just said, we need you to go to work winding down your fossil fuel investments. We’ve now got 380 college campuses where that fight is under way. Big cities have divested, Seattle, San Francisco. Churches ... Just yesterday the Mayor of Portland demanded that the whole state of Oregon divest. It’s coming quickly to Australia too. In fact, in certain ways Australia is I think vaulting into the lead in this divestment thing. If you heard *Lateline* last night, you saw a really good discussion of just how fast a lot of super funds and things are starting to catch on. I was at ANU the other day, and there’s a really active divestment movement going on there. Monash University just launched a campaign to start calling attention to this kind of stuff, to rate the carbon risks there. In Melbourne, they’re starting a divestment campaign at La Trobe, trying to figure out where their university invests, which is at the ... you know, the core of starting these things. It’s exciting to see it happening.

One of, for me, the most beautiful things was to meet the other day in Sydney, with the leaders of the Uniting Church, who’ve already divested their coal stock in a really profound act of leadership and moral witness. The kind of thing we need from churches and other faith communities. I mean, it makes no sense to invest your money if you’re a church, in companies which are essentially running Genesis backward, you know. [applause]

And it makes no sense to put your retirement funds in companies that are guaranteeing you won’t have a planet worth retiring on, you know. So that’s why we really want you at Go Fossil Free, Go Fossil Free.org/Australia. There are a lot of things that one can do to help make this thing happen, and we need you doing all of them and quickly.

And I think it really will happen. I think that people are going to use this as one of the powerful tools to stand up to this industry. But it can’t be the only tool that we use. We also, well, we need to confront this industry at every turn, and every place that we can. And as we do it, and as we’re kind of reaching crunch time, here, we’re going to have to do things that are more difficult than some of the things that we’re used to doing.

I kind of want to end by talking about this work we’ve done in the States in the last year or two, to stand up to this huge Keystone Pipeline, down out of the tar sands of Canada. It’s been a really beautiful fight. Now, when we started two years ago, people said we had absolutely no chance. And we may still lose this fight. We may lose it in the next few months. The fossil fuel industry has poured hundreds of millions of dollars into making sure that we lose. But it’s been really compelling.

Let me just, I think we’ve got video here that I won’t be able to get running, that will give you some sense of just what it’s felt like a little bit.

*August was the beginning of the people’s veto of this whole proposal. We will never give up until the very idea of Keystone XL is dead and buried. Tar sands are the turning point in our fossil fuel addiction. The fundamental fact is that as long as fossil fuels are the cheapest energy, they will continue to be used. The solution is to begin to put a price on carbon emissions.*

*We the American people should not have to sacrifice our land and water to meet Trans Canada’s bottom line.*

*We stand here right now because we are at our most important moment for the twenty-first century. President Obama, do the right thing.*

*The tipping point in America’s history for this environmental movement. If you are going to be risking arrest, you’ll be lining up on this sidewalk.*

*When I saw the acts of civil disobedience in front of the White House, people saying, I want not let this Keystone Pipeline be built. I won’t let us be committed to an energy plan based on fossil fuels.*

*You know, the people that got arrested in front of the White House, those were not people who were identified environmentally. Those were farmers and ranchers, those were people from indigenous communities, those were business leaders, those were grandparents and mums and dads who are really starting to see the expansion of the group of people that are fighting this fight, but we’ve a lot further to go in that.*

*You know, I think civil disobedience arises when what we all know to be right and good is out of synch with the politicians who govern us, and those there was civil disobedience over the civil rights movement, the was civil disobedience over the Vietnam war, and now there will inevitably be civil disobedience about climate change, until politicians give us the policies that we need.*

*One of the major things I've learnt, is that we can all do something as individuals and we can work together to make change so that we have a positive future and we’re not looking at getting to something like 450 parts per million.*

*I think it’s impossible to read and think about this issue for any length of time without becoming radicalised. I think anybody realises that we are willingly sleepwalking to a destroyed planet and gets angry about that stuff and wants to change it. It’s a completely normal response.*

Let me just finish. Let me just sort of talk personally as I finish. At some level I feel uneasy about asking, you know, or even suggesting that anybody ... it certainly never occurred to me that I was going to go to jail for anything, you know, and it’s not a great deal of fun. I spent three days, the first time, three days in Central Cell Block in Washington DC which was, you know, about as pleasant as it sounds like it would be, but it wasn’t the end of the world. The end of the world is the end of the world, and that’s why we do what we do you know. And it took me a while to get there. When I started out, when I wrote *The End of Nature* back in 1989, I mean, my theory of change was people would read my book and then they’ll change, you know.

But in fact the book’s really important and the argument’s really important and science is really important. We won the argument a long time ago. We’ve just lost the fight. And so we have to figure out how to amp up that fight, and there’s lots and lots of ways to do it. But sometimes it does come down to being willing to put one’s body on the line I think. And maybe that will happen here, especially as plans go forward for some of these new expanded coal mines and things.

So I want to talk about that, just for a minute. I wrote the letter that asked people to come, get arrested in Washington and that’s a hard kind of letter to write. Much of my friends signed it, Naomi Klein, and the great writer Wendall Berry, and some others, you know. We sent it out, and one of the things that I was most worried about was that only young people would respond. It didn’t seem fair to me that they would be the cannon fodder for this, especially as this, you know, if you’re 22 right now, maybe an arrest record is not the best thing for your resumé, you know. One of the few unmixed blessings of growing older is, past a certain point, what the hell are they going to do to you? And so it was with pleasure that I saw a lot of people with hairlines like mine, you know, arriving in DC. We did not ask people as they got arrested, we did not say, how old are you? That would have been rude. But very cleverly, we said, who was president when you were born? And the two biggest cohorts came from the FDR and the Truman administrations. Okay? So that was good. It was really good. On the last day, the 1,253rd person arrested was wearing a sign around his neck that said, World War II Veteran, Handle with Care. He was so old that he’d been born in the Warren Harding administration. I was an American History Major in college, and I'd forgotten there was a Warren Harding administration. It was a long time ago.

But the good news, and what it really represented, I think, was something really beautiful, which was that elders were acting like elders, you know. Doing the kind of work that they should be, in our community. [applause] And we need that everywhere. You know, if students are working hard on divestment at the universities, we need professors, we need people with tenure in there helping them, you know, backing them up, in the lead, all over.

The other thing that was kind of odd about those arrests, which were the largest civil disobedience action about anything in thirty years in the United States, the other thing that was odd about them was, we said to people, and you could see that in the pictures, would you please, if you’re going to come to get arrested, would you please wear a necktie or a dress or something. It’s not because I have any great fondness for formal wear, you know, I don’t. And it’s not because that’s absolutely necessary. I mean, you know, there’s lots of other ways, but the point we were trying to make visually was, it’s the same point I've been trying to make all night, and it may be the right point to end on, there’s absolutely nothing radical about what we’re asking for here. Nothing. All that we’re asking for is a planet that works the way the planet we were born on to works. A planet that works the way that it worked for all the ten thousand years of which we have any knowledge of our history. That’s not a radical demand. That’s a conservative demand, a deeply conservative demand, you know.

Radicals work at coke companies. If you’re the guy that wants to dig up the Galilee Valley to finance your desire to build replica Titanics, you know, if you’re willing to alter the chemistry of the atmosphere, if you’re willing to alter the chemical composition of the atmosphere, then you’re engaged in an act far more radical than any human being before you has ever engaged in. It is our job to figure out how to check that radicalism in time, before it overwhelms every sweet and good thing on this planet, you know. That’s our job, and it’s a job that we have to do now, in the here and now, very quickly.

I've got no guarantee for you that we win this fight. We’ve waited a long time to get started and the physics of it is daunting and the fact that the Arctic melted is a bad sign. And we’re behind. But I can guarantee you, because I've been all over the world, as I was saying to Robert, all over the world. There are people everywhere now engaged in this fight and it’s not in the thousands or the tens of thousands or the hundreds of thousands, it’s in the millions now, and the tens of millions. And you are a really important part of that.

I don’t know if we’re going to win. But five years ago, I didn’t know if we were going to fight or not, and now I know we are going to fight, and it is the epic fight of our time – the most important thing that we could possibly be doing and I am just so grateful to get to do it shoulder to shoulder with you all. Thank you very much.

[applause]

Oh, I forgot something. I forgot something. I forgot something. We’re going to turn your house lights up. I want to thank the Athenaeum again. They did grand and thank all the volunteers, but I want you to stay standing up there, because we’re going to take ... movements or families, that’s part of what it’s about. Okay? And families take pictures. So we’re going to get a picture. I'm going to come down. Erin, who you can tell has been doing most of the actual work tonight, is going to take a picture before we go. And maybe we’ll say, one, two, 350, okay?

One, two, 350. All set. Thank you all, so, so much.