

INDIVIDUAL PROFILE

SIMON PIRANI

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IS THE FUTURE NOW?

This interview is based on an original recording for the Energy and Innovation podcast focusing on changes within the energy system. Each expert demonstrates both an in-depth understanding of their core area and also a broader vision of how the energy system changes. The material is useful for both teaching and research. It was created as part of a case study project of the Jean Monnet Chair in Energy and Innovation Strategy at Central European University.



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BY PROFESSOR MICHAEL LABELLE

Simon Pirani is a senior visiting fellow at the Oxford Institute for Energy Studies. Simon is author of many studies and books on energy and history, notably an excellent report on the Russia-Ukraine 2009 gas dispute that came out soon after the conflict was resolved.

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Why do you have so much interest in fossil fuels and how society and the government interact?

I came to the Institute for Energy studies to work on questions about the natural gas markets in the former Soviet Union after having traveled in Russia and Ukraine during the 1990s as a journalist, so I was interested in the way that society was changing. My very first trip to Russia, I made in 1992 go to a coalfield. At that time, I was working for the mineworkers' trade union here in the UK, writing about coal, and of course, in 1989 in the course of the breakup of the Soviet Union, the mineworkers there went on strike had a big national strike for the first time since the 1920s. And that was a central moment in the revival of the independent labor movement in the Soviet Union.

I've always had those interests. One thing led to another; the institute very kindly invited me to go and work focusing on the energy questions. And I think, from the institute's point of view, it was useful to have somebody who understood how Russia and Ukraine work, how the Soviet Union used to work, how things have changed in the course of the transition to a market system. And the issue with colleagues, I spent a lot of time researching the dispute between Russia and Ukraine over gas, of course, has all these elements. It's not just about politics. It's not just about economics. It's not just about gas. It's about all three and a lot of the discussions and disputes about what has happened concern how the three interact with each other.

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In my research, I would say a similar angle as well, the interaction of society, politics, and economics on this. But with Russia and Ukraine with the history there, how does that inform what's going on now? And how does that tie into the current tensions we have?

Well, I think, a turning point in the relationship between Russia and Ukraine, was the removal of the government of President Yanukovich in February 2014. And the subsequent Russian annexation of the Korean Peninsula and the military conflict in the eastern part of Ukraine, where Russia has given support to the separatist forces that are that have established these two so-called Republic's in the eastern part of Ukraine, and that conflict as well. It has been an absolute tragedy in the life of Ukrainian people. And a tragedy also, I would say that was unexpected. Even those who are most pessimistic about the way that the Russian Ukrainian relationship would change would scarcely have believed the conflict would have evolved on that scale. I think that's a moment which changed a lot. Before that there were these tensions between Russia and Ukraine and the 2009 gas war, which was a supply interruption, the flow of gas through Ukraine, to European destinations from Russia, was stopped for two weeks. I think there were a lot of commercial elements in that dispute. That was much more about economic difficulties caused in the post-Soviet transition. It was about the economic tensions between Russia and Ukraine.

Ukraine entered the post-Soviet period with a very large gas demand. Of course, everybody had thought before 1991 that that demand would forever be met by Siberian gas provided under Soviet economic conditions. So as part of a series of internal transfers, where there was merely a nominal price attached to it, and of course, with the collapse of the Soviet Union. Suddenly, Ukraine found itself in a position of having to pay for that gas and pay in dollars. And of course, we can discuss how Ukraine might have addressed that situation by addressing the extremely inefficient consumption of gas but that didn't happen. That's not the way Post-Soviet economies developed. So Ukraine continued to use very large volumes of gas and had great difficulty paying for them and didn't pay for them. A large volume of debt built up between Ukraine and Russia, in that period. Moreover, it was not a trade in the way that your listeners might usually think of one company selling goods to another company. This was an arrangement which was, first of all, backed up by all sorts of political agreements. Until 2009 there was an intergovernmental agreement which underpinned the actual trade contracts between Russia and Ukraine, for gas so this was part of a political relationship. And very often, in fact, the arguments about the price of gas to be imported into Ukraine.

The transit fees charged by Ukraine for the transit of gas through to Europe were then connected to political arguments. So there would be perhaps cheaper gas in return for a concession in a political field that has nothing to do with gas and so on. The roots of the 2009 crisis delay, in the transition from the Soviet period, Ukraine had become used to using very large volumes of gas for its economy. Of course, it had been the first part of the Soviet Union to have a considerable gas production. So that was fine and the 1970s but as its gas went down, and it became reliant on Siberian gas, and then the Soviet Union collapsed, and they had to pay for it. It was set up for a problem. The governments of Ukraine in the 1990s did not deal with that problem, typical post-Soviet stage of development, and that increased the tensions with Russia and led to the 2009 dispute, but I do think it was okay those commercial and economic elements. It's true that they'd been the so-called Orange Revolution in Ukraine in 2004. And certainly, that was something that worried. The Kremlin, it worried the Russian government worried President Putin. And I think that certainly colored their attitude to Ukraine in the 2009 dispute. But I think at that stage, it was the economics that was the driving force.

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And my next question draws on this. could you describe more of the history of what would the assumption was into the Soviet Union about the price of gas for consumers and also for the industry?

The Soviet Union had these enormous, both oil and gas resources, and clearly, that was essential to the late Soviet economy. And to put in a nutshell, we could say that the Soviet Union exported the oil. And of course, among its mounting economic problems from the mid-80s, was the fact that the price of oil fell quite sharply. And the use of oil revenues to pay for other imports suddenly became very problematic for the Soviet Union. But the gas historically, really from the 1960s was used to supply the Soviet Union's population and its industry with a cheap fuel source. And looking from economic management at that time. That seems an absolutely logical thing to do. So we can, if we think about the great cities that were built in the late Soviet period.

The happiest period of the Soviet Union obviously not for some people, but a relatively stable period, the 1970s the early 1980s. Certainly, the period that that former Soviet citizens of my generation looked back on with some fondness the cheap energy that was provided by gas helped to make it Soviet existence certainly in the cities, a relatively good existence. There were blocks of flats that went up supplied by district heating systems. The combined heat and power plants supplying district heating systems. This was the fabric of Russian, Soviet sorry, energy supply to its citizens, and very effective. It was two in the post-Soviet period, what you see in Russia, in Ukraine, in Belarus, actually in all the former Soviet republics is that there's an immense reluctance to increase the tariffs for household gas, along with household electricity along with household water, and all the other municipal services that are supplied to citizens. There's an immense reluctance to raise those so-called market levels.

Somebody could write another history book about the history of the various international financial institutions who started to interact with the former Soviet republics in the 90s. And their efforts to try to persuade the authorities to raise these tariffs to market levels and still in Russia in Ukraine, to a lesser extent, these tariffs have not been raised to the market levels. To the extent that that phrase means something because there's not an international price for gas in the way that there is for oil.



There's a European price to which those international institutions looked. And this was also a lot of the background of the gas disputes between Russia and Ukraine was Russia's effort to get Ukraine in the international transactions to pay this market price. But neither the Russian government nor the Ukrainian government wanted to charge their citizens or their industrial gas users that market price. The industrial users in Ukraine now do pay a market price and have done for several years. Those in Russia pay a price which is not that far removed from the Ukrainian or European in price, but residents right across Russia, Belarus and most of the other republics, very, very far from paying European prices. Those in Ukraine are nearer. But there's still some way behind.

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And how did all these—the conflict over gas and the constant tension and arguments between Ukraine and Russia about how to pay for this the transit of gas the EU—come to play into Russia annex in the Crimea, and also the conflict in eastern Ukraine?

I do not see that there's a connection if you like, of the Russian annexation of Crimea, or Russian support for the separatists in eastern Ukraine, I think it's important actually to separate Write out those issues. I think as I said to you that the 2009 disputes and also the 2006 dispute that you mentioned, and some of the other. There were disputes almost every year at one point between Russia and Ukraine, but those were really about gas prices. They were about the prices of transit and the arrangements for transit through Ukraine, of Russian gas to Europe. And they were commercial and economic disputes. There was that political element, as I mentioned because the commercial arrangements were underpinned by these intergovernmental agreements. But I think if we were to think that the military conflict and the deterioration of political relationships between Russia and Ukraine in 2014 had an economic or commercial roots route, I think we would be reading back history wrongly from what we now know, has happened. I think the annexation of Crimea was a reaction by Russia to what it saw as a political event that it could not tolerate in a neighboring state, which was the removal of the Yanukovich government, as I'd mentioned to you before, I think Russia was unhappy with the Orange Revolution of 2004. And that colored its attitude to events in the first decade of the century in Ukraine. I think the removal of Yanukovich and the so-called Maidan Demonstrations on Maidan Nezalezhnosti in Kiev worried the Russian authorities, they felt compelled from their point of view, to react and the reaction came with the annexation of Crimea.

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Looking forward, then we have Nord Stream One. We have Nord Stream Two being built. How does that come out of the split—the strong split between Ukraine and Russia, dissolution of the Soviet Union—and what's the role of Nord Stream? One and two are meant to play in the future.

Russia and its gas company, Gazprom adopted a policy of diversifying the transit of gas to Europe, away from Ukraine. And this was as a result of the commercial and economic disputes that I mentioned, really through the 1990s and into the 2000s, which culminated with the dispute in 2006. In 2009, throughout those disputes, which are long and complicated and the institute, we follow the history of them and wrote about them. Many times and throughout those disputes, Russia's bottom line was that if Ukraine did not pay for the gas in dollars, it was prepared to cut off supply to Ukrainian gas customers. Ukraine's bottom line was that if its supply was cut off, particularly during the winter, that it would divert some of the gas that was on its way to Europe, for its own use to have to do so rather than leave its customers without energy supply in the cold. So Russia's decision after that, though, that series of disputes was clearly to diversify transit away from Ukraine and Nord Stream one clearly illustrates this. Don't forget In 2009, the world economy, Russia's included, was hit by a very, very serious financial and economic crisis. There was a recession. Then there was from 2009, falling oil prices, which were an oil-producing nation like Russia simply exacerbated the problem. And the final investment decision for Nord Stream one was taken in 2010 decision was not put on hold because of the priority to which Russia and its gas company go from attached.

The importance of having routes to export its gas to Europe without relying on Ukraine, Nord Stream Two is a continuation of that strategy. And, as I'm sure you're aware, and your listeners are aware of the following These energy issues, if and when Nord Stream two is built, which I assume that eventually, it will be. The demand for transit services from Ukraine, for the Russian gas going to Europe, will not disappear. But it will be quite drastically reduced. And what we've seen since Nord Stream one was commissioned is that Russia uses that capacity in the first place, and only sends whatever gas it cannot fit through that pipeline and the other pipelines going through Belarus and Poland into the Ukrainian system. This means that Ukraine will lose some transit revenues. But I see that really as a pretty much inevitable consequence of this long economic breakup between the two countries.

I'm aware, of course, that at present, Ukrainians are lobbying very hard to try to persuade the countries in Europe, the European Commission to make life difficult for the Nord Stream to project through sanctions and so on. They're also lobbying in the United States, where foreign policy is much more erratic under the Trump presidency. But I think that, and so I mean, I don't want to comment on those immediate conflicts. I think Russia is certainly Gazprom is proceeding with the construction of the pipeline anyway. So my expectation was that it will be completed and the most that the lobbying efforts can achieve is to delay it if Ukraine feels that that makes it more vulnerable, and I do think that's a very widespread feeling. In Kiev, and that's very, very understandable given the conflict that's going on in the eastern part of the country.

Ukraine has other ways of avoiding dependence on Russia, and in fact, has very, very successfully diversified its own gas supply. So while Russia is building these pipelines to reduce its dependence on Ukraine for transit, Ukraine has adopted a strategy of importing gas from the western direction, so-called reverse flow deliveries via Slovakia, Hungary, and Poland, to reduce its dependence on in one direct imports of gas from Russia. And in fact, there's been no direct imports of gas from Russia to Ukraine for the last three years. So the economic breakup continues. And I think that's just a historical process that we're witnessing and ministering to as part of it.

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When it comes to the US policy towards Russia and also towards Ukraine, it's the tensions really building now, with new sanctions against Russia. How do these financial sanctions against Russia impact building Nord Stream Two?

They do not directly. And in fact, the sanctions as originally the for the first round of financial sanctions as originally drafted, but drafted specifically to avoid including finance for Nord Stream tune similar projects. There's been a lot of discussion in the United States about extending those sanctions. And that discussion continues. But the construction of the pipeline also continues as I ended. It The main thing that's holding up the completion of Nord Stream two is the holdup with the parliament in Denmark about giving permission for the pipeline to go through Denmark's territorial waters as for American sanctions policy, I mean, certainly, colleagues who follow American policy remain constantly baffled by it. And I think, as you may know, we've seen in recent days the the watering down of sanctions against the big Aluminum Holding Company, which seems to be a result of some political lobbying in Washington, by that company. So I think we have an inconsistent sanctions policy. It has hit the Russian financial system, and the banks very hard. And clearly, the oil and gas companies have suffered as a result of that. I don't think the US sanctions We'll stop Nord Stream two from being completed.



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I wanted to turn to your book now. It's called *Burning Up a Global History of Fossil Fuel Consumption*. I read the book, I really enjoyed it. In fact, how did you know what kind of book you wanted to write? And then maybe, how did you end up writing it?

The thing that motivated me to write the book was the public discussion of and concerned with climate change and the role of fossil fuel consumption in producing greenhouse gases, which is the main principle it's not the only driver of global warming, but it's the main one. Clearly, To me, this says, and it says to all of us once we've read the science and understood what its implications are, that a transition away from fossil fuels is necessary. Also, that's a huge challenge for all of us. And it struck me in reading the reports that come out and the following the public discussion, that people often talk about how we're going to get away from fossil fuels in ways that don't fully take account of just how central fossil fuels are to the society and the economy we live in. So I suppose my motivation was because I have a background as a historian and have worked as a historian as well as at the institute. Working on energy issues. I thought I had the relevant combination of abilities to try to talk about how the economy has reached the position that it's reached.

Because if you look at the graphs, as I'm sure you and your listeners have done, showing the total of fossil fuel consumption rising year after year, right through the process started at Rio in 1992. With the summit on climate change in the international climate talks, it's striking, right? The government's talking about reducing fossil fuel consumption. And it continues to rise year after year interrupted, actually only by the financial crisis of 2008-2009. I think that needs explaining and I think history is part of the explanation because the history of the development of the world economy since the mid 20th century has been very much a history of the intensification of the use of fossil fuels. And that's what I tried to look at in the book.

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Could you give an example of how they'd work together to kind of show how we as people and as citizens and consumers structure our lives?

So, one very good and very easy to understand example is the motorcar. So like most fossil fuel consumption, today, consumption by motorcars is basically consumption by a technology which emerged in the so-called second industrial revolution of the late 19th century, in this case, the internal combustion engine, so, internal combustion engines and steam turbines and power stations other and electricity networks, and other technologies which developed at that time, or they're sort of Descendants and derivatives still account for most fossil fuel consumption today, the internal combustion engines in cars is somewhere around one-fifth of the global total of fossil fuel consumption. And if you think about the car It's a fantastic way of getting from place to place the internal combustion engine is just an amazing technical innovation. The way that the car industry has developed, the way that urban transport systems based on cars have developed is not a story of this very useful piece of equipment being used in a rational, energy-efficient way. That's not the history of the motorcar.

The history of the motorcar is that from being basically an elite possession when it was first invented, just before the First World War, it's turned into perhaps one of the first mass consumer products in the United States. I'm sure your listeners know that history, Henry Ford, automated production lines and planned obsolescence, which was an invention of the motorcar industry enormous enormous quantities of motorcars being produced far more than necessary for getting people from place to place. The motorization of American cities followed after the Second World War by the suburbanization of American cities. So American cities, people living in this very spread out way, in cities where it's impossible to live without a car, in anything but a kind of miserable and difficult way. And then there was the spread of that model of car heavy fuel-inefficient city transport, spreading not uniformly across the world, but to many parts of the rich world, in the postwar boom, and really from the 1980s to small parts of the developing world. So that's a story of motors corporations. So, in decades gone past in the post-war boom, accounted for a huge chunk of America's economy. It's a story of governments allowing those corporations to have their way. So I learned much while writing the book about the battle between car companies and regulators over fuel efficiency in the states in the 1980s, and 90s, which is amazing when you think about it.

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I like how you take that apart. You talk about the Reagan administration, and then later on the Bush administration as well, setting the bar extremely low or trying to get rid of the regulations that Nixon really was the founder and put in place the Environmental Protection Agency.

And yes, and of course, that story ends with another engine. This innovation by the car companies horrific from a from the point of view of greenhouse gas emissions but ingenious obviously for their shareholders, which was that when these regulations finally were imposed, as you said in quite a gentle form, the marketing folks in the car companies decided to sell to consumers in the United States, the sports utility vehicles, which are were regulated on a different unit with a different set of fuel efficiency requirements. And now, a considerable proportion of drivers in the United States drive those big heavy vehicles and of course, in some parts of this country and other parts of the rich world which again, I mean, This is not to do with an efficient way of getting people from place to place and the people who work on urban planning issues and city development geographers love to quote the example of Atlanta in the southern United States and Barcelona, in Spain, which have a similar population similar kind of standard of living. And Atlanta has 10 times the greenhouse gas emissions per person, as does Barcelona and I think I can be bold enough to venture a guess that the citizens of Atlanta are not 10 times happier or better off as a result.

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No, but I love that story because it's from my personal experience living in Budapest where I don't own a car, I take public transport or walk or I run or bike between places and then when I go back to America and I visit my family in different Michigan cities and literally you have to drive everywhere and my parents live on the edge of a city. So it shouldn't be that bad. But just nobody is out walking. So when I went back at Christmas time, I just went out for a walk. And it was just so different, you know, like, no one else is walking outside. They're all driving from point A to B or even, taking the car to drive somewhere to walk somewhere. It is a completely different mentality and how everything is designed, like strip malls with no sidewalks. It's just dramatically different from Europe.

Absolutely. And I think the problem with regards to the future transition away from fossil fuels, which this book, this history book. So the future transition is not what it's about, but obviously, people want to know that. What I think about that, and it's relevant. I have a final chapter, where I've looked at some of those issues, and I suppose, but one of the key points I've made in that last chapter is that that transition is not merely a technological issue. It, we will need to find technologies which enable us all to get around cities with far, far fewer car journeys, if any. But it's also a question of changing social and economic systems, a lot of the literature you read talks about changing behavior, I think that's a bit narrow. I don't think people are going to change their behavior, unless the whole circumstances in which they're living and the whole way we live in terms of the economy and of society changes, and I think those sound like that sounds very big. I think that's the sort of a big response. That's the level on which we need to think when we think about global warming, which is, which is a big challenge.



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But I mean, here, it kind of goes to the heart of your book of how part of it one of the themes of your book is how companies and corporations and governments work together in certain ways. And in a sense, we have to change that relationship to have them motivated and building more environmentally friendly or sustainable infrastructure so that people can be healthier and the environment can be better protected.

I don't have all these answers. And in fact, I'm given the huge, very detailed public discussion that there is on climate change issues and the transition away from fossil fuels. What I've done in the book, which is a useful input to that discussion, is to emphasize the extent to which the technological and economic relationships need to be considered together and changed together. So we've talked about motor cars. But to give another very important example because it's a very big area of fossil fuel consumption is housing and building regulations. It's been clear to the architects and urban planners and to people who understand construction to construction workers for 20 to 30 years, that while zero energy buildings were quite hard to build, it's quite standard now with the current technologies and materials. It's quite honestly just about zoning then building out is easy. I don't know, I've never done it. But it's quite within the reach of all those people in the building industry to provide housing that is nearly zero emissions nearly energy neutral. And it is possible to make zero-energy houses. I think that can sometimes just depending on the circumstance and the location, be a little harder. But building regulations are nowhere near this. Nowhere near this. And I live in London, and as in a lot of big cities, we see huge property development, which is completely driven by the profit motive and the regulation is light. Certainly, in terms of what sort of houses we need, knowing what we know about global warming. It's hopelessly light. So that's a plan. Legal statement. That is not a sustainable approach.

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I liked the comparison between what the car companies were doing and their efforts to have fewer regulations on fuel efficiencies or lower standards. And then even the housing standards that could be in place, but that are not in place. Simon, I just want to thank you then, for taking the time out to talk with me today. Anyone interested in your writings and all the things that you have, is there a website that they can go to?

All the material on natural gas from Russia and the Russia Ukraine, dynamics are all on the website of the Oxford Institute for Energy Studies. I've also got a website of my own, it's just simonpirani.com where the material related to my book *Burning Up* can be found.





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