DEBATES

André Caillé, Chancellor of the University of Montreal

Mr. Chairman, my name is André Caillé. I am Canadian. I was Chairman of the World Energy Council from 2004 to 2007. During that period, the WEC developed an understanding of the links between the environment and energy. Our conclusions were positive; they showed that there is a solution to the crisis relating to climate change. But, now, it must be said, the path we are on is not very promising. That is the least that can be said. Mr. Chairman, I take the floor to say that I support what I believe is your proposal, namely the setting up of a world organisation devoted exclusively to energy questions; if only to get the facts across. I think that, in everything we hear, there is a lot of inconsistency. For example, when we want economic growth at the same time as a reduction in energy demand, this is not consistent. This is not consistent because all forms of economic growth, that of developed countries as well as that of developing countries, will be translated necessarily by an increase in energy demand. Likewise, when we oppose, as in North America, the development of shale gas and at the same time want to replace coal in electricity generation, this is not consistent. This will not lead to solutions, no more than supporting energy efficiency while opposing any increase in energy prices. Energy efficiency is not prevalent because energy prices are not that high.

So, Mr. Chairman, if only to get the facts across, I believe in setting up an international body devoted to energy such as exists in other fields like health and education.

Anil Razdan, Former Power Secretary, Government of India

We have the IEA, but that is confined to the OECD countries. We have the World Energy Council, which has good intentions, but does not have the global governance clout. There is a petroleum body, a coal body, but there is no integrated body.

Narendra Taneja, Energy CEO and Convener, World Oil & Gas Assembly (WOGA)

When we look at the percentage of alternative energies in the global energy basket, it is less than 1%. Some of those I talk to in the oil and gas industry, and in other energy industries as well, say that there is no alternative to oil for the next 25 years. They say oil will remain king for the next 25 years, and gas for the next 60 years at least.

Anil Razdan, Former Power Secretary, Government of India

There are a few monopolies; that is the problem.

Narendra Taneja, Energy CEO and Convener, World Oil & Gas Assembly (WOGA)

The US were talking about green energy alternatives in the US until yesterday; today everybody seems to be talking about shale gas, and shale gas is hydrocarbon. Looking at some other countries, including India and China, they focus a lot on ideas for generating power and providing energy. You need oil for cars; they cannot run on water. Taking a realistic view, the oil industry in particular is dominated by some very powerful companies, such as Exxon Mobil and Chevron in the US. Do you think it is easy for the Obama administration to disagree with them every day? The answer is no. Look at India, with large companies such as Indian Oil contributing 20% of GDP; I am talking about total revenue. The moment you start talking about alternative energy, people start demanding subsidies, and the question is where the money will come from.

I like your idea of a global administrator, and the time has come for that. However, you might remember that a few years ago there was a move to create a United Nations Energy Council, focusing only on energy, but nothing came of it because of strong opposition from some OECD countries, and also some large oil and gas corporations. When you look at the realistic picture, we can come up with many ideas and theories, but the fact is that we are all struggling to find a workable solution. What do you do if oil remains the king for the next 25 years? China builds a coal-based power plant every week, and you need energy for that. You cannot blame India and China, at the same time. India spent roughly USD97 billion last year just for importing oil, in an economy of USD1.2 trillion; that is 8% of GDP.

These are the cold realities, and when you talk with climate change negotiators from countries such as Bangladesh and Nepal, they say it is very difficult to make their voices heard in Copenhagen; China had to fight very hard there. My personal view is that we must take a realistic view, and we need to have cooperation from the major players in the power sector, the oil and gas sector and the green energy sector; if we just impose a top-down solution, this will not happen. The important thing is to engage them, engage public opinion, engage the industrial consumer and the end consumer, both in developed and developing countries, or there will be no workable solution. There will be seminars, workshops and even global summits, but I do not really think we will be able to find a solution.

However, the G20 has started spending a substantial amount of time on energy issues, and this is a silver lining.

William Ramsay, Director of the Energy Programme, Ifri

So much has happened since I started to want to talk that I am not sure where to start. We have to be a little dispassionate about assessing what is going on in the world. We might need oil for the next 25 years, but that does not mean you do not start building alternatives, investing or working with technologies. It takes a while to break the pattern of dependency on oil for transportation, so it begins over time and will transpire over time. Nobody predicted shale gas would come in just now; it is a surprise for all of us, we do not know how to manage it yet, and we do not even know the full environmental consequences, so it may not even be as big as everyone says it is. Let us be a little more systematic in analysing that.

It will not be the bridge to the future; it will go into the power sector, and the power sector is where we can decarbonise first, faster and cheaper, so that is probably a good thing. However, we must bear in mind that ultimate objective is to transition from carbon fuels into non-carbon fuels in the power sector, which can be done over a number of decades,

and there are estimates that the power sector could be 50% carbon-free by 2050. We will see; it depends on whether we are serious about it.

We might talk about creating another international energy agency without everyone around the table. That strikes me as a bureaucratic response to a real problem. We do not need more agencies around the table. We cannot get the Copenhagen Accord to pass anything useful to the Cancun agreement, and we only have 192 countries around the table there. What will you do with all the countries around the table talking about energy? They all have different agendas, needs and endowments; it will not be possible to do anything useful in such a context, aside from creating committees and sub-committees and mobilising bureaucrats, and maybe that is a good thing. I do not know.

What is the point? What can you really hope to accomplish in yet another organisation? Why not use the ones you have and expand them? I am not part of the IEA anymore, so I can speak freely about it. They had a meeting the other day with 27 other countries, because there is a partnership between a lot of countries around the world where they come and basically cherry-pick what they can get out of the IEA, whether efficiency, energy security, or stockpile strategies. They are working together. There is another effort on conservation efficiency where 50 or 60 countries are working together. Some of that grew out of the Summit, some out of the Summit Plus, and others will grow out of the G20, because you are right that the G20 has a much better composition for talking about some of these issues, and we can do some useful work, everyone is around the table, and their equities are in the game.

However, there are no easy fixes here. All these forecasts say we will be in this terrible situation in 30 years because we have not done anything to bend the curves yet. We spend a lot of time talking about it, but we have not significantly bent these curves yet. 4.5 billion of the world's six billion people would like a bigger piece of the pie. Seeing that Ethiopia is producing 0.01 tonnes per year, there is a big gap to close. We need a dispassionate discussion, we need a lot of details, we need a lot of cooperation; but I think creating more fora with too many people around the table is not the right answer.

Anil Razdan, Former Power Secretary, Government of India

I think we need to cut down the T&D losses, particularly in developing countries, and metering and intelligent grids have to be made compulsory.

Craig Mundie, Chief Research and Strategy Officer, Microsoft Corp

Anil and I have had some conversations in India about this. A lot of technology is now forming around smart grids. One of the questions in terms of efficiency is whether or not we have to build an entirely separate second system. Most of the world today is connected by the Internet, and that will have to continue evolving anyway. However, many people are talking about building an energy control system that is a completely parallel architecture, yet the best you can hope for is that it will get you to the edge of the building where the consumption takes place, while all the control on the demand side has to take place inside the building. Even if you build two, they will have to be cross-connected from a control point of view, and I might argue that efficiencies could be gained with one control architecture in place, extending to both the generation, the control and consolidation side and to demand control.

One of the things I have been particularly involved in recently has been issues around managing charge for electric vehicles. The auto companies have spent a huge amount of time developing the cars, and a lot of work is going into the batteries, but it turns out that virtually nobody spent any time thinking about what happens to the grid when you plug them all in at the same time. A single electric vehicle on a full charge rate, even in a rich country like the US, consumes about the energy equivalent of the rest of your house. Driving one up and plugging one in to everyone's garage creates an instantaneous doubling of the peak load, so from a peak generation viewpoint that is not a good thing.

That is another place where there needs to be some kind of consolidation from a control point of view. We should start today, if EVs are going to be a significant part of managing this carbon problem, creating not just a control system but an economic model around the management of charge. The cars represent a unique opportunity to do that, because there is no existing infrastructure in place for that. It all has to be put in now; there is no plug in place to charge your car, so you will have to put it in the garage. There will also have to be new infrastructure for charge management when you are in motion.

Therefore, this seems like a place where we could pursue one of these technological changes. It could create an architecture that could then be extended to all forms of load, and demand side management could be really critical in terms of getting active load control down and cutting the peaks off. Peak management will be a big issue; base load could become extremely efficient, but peaking will always have a higher carbon footprint than the base load, so if we could find a way to we could bring computers and Internet to bear on these problems, starting with EVs and then into the rest of demand-side management. There is an interesting opportunity here, but very few companies are focused on it.

Anil Razdan, Former Power Secretary, Government of India

Technology really needs to be brought into play, and that is what I expected Craig to bring out.

Participant

Je suis journaliste. Je souhaiterais vous faire remarquer que l'idée de la création d'une organisation mondiale de l'énergie a été émise, il y a une dizaine d'années, notamment par l'ex Président français Jacques Chirac et qu'il était question à ce moment-là que le Maroc abrite cette organisation. C'est l'idée qui avait été lancée. L'idée n'a pas tenu. La preuve, c'est qu'elle n'a pas été rappelée par vos hôtes et elle a été aussitôt abandonnée. Mais, je pense que si elle avait été appliquée à ce moment-là, ça aurait été une idée géniale. Maintenant, peut-être que c'est un petit peu trop tard.

William Ramsay, Director of the Energy Programme, Ifri

I want to go back to this grid issue, because we have an awful lot going on in grids in terms of renewables, and a lot of political focus in Europe in terms of wind. It is probably a good thing in terms of educating the population, but it is leading to some instability in different places, such as Germany and Spain, where we are seeing kilowatt hours shed at negative costs, and it is crazy, so we need the grids to keep up with this. Electric vehicles are a great concept; if you think of the continuum of the carbon cost, the most expensive carbon tonnes are in transportation, and if you can take that transportation bloc and plug it into the power sector, it will cost USD25-50 a tonne. This is a tremendous overall

saving in terms of decarbonising our fuel mix, but you need to think about the grid at the same time, because there is no way to do it without electricity.

The five boroughs in London have five different connecting cables for electric vehicles; that will not work, so we need standardisation. We in Europe have a multiplication of technologies going forward. The Chinese have just united 16 national companies to do one strategy, with one set of infrastructure and one national vehicle; if we do not look out, the Chinese manufacturers will eat our lunch. We need to pay attention to that as we go forward.

Regarding the earlier comment about the cabal in petroleum, 70% or more of the world's petroleum is controlled by national oil companies, not by the Seven Sisters, their derivatives or anybody else. They are in the same business of trying to get at that oil as anybody else, so I think it is time to do away with that old saw, and move on with a new structure in the oil market, how it is composed, what the difficulties are in gaining access to producible oil. Why do you think we are drilling below the salt in places around the world? It is because we are saving the best for last. We have all kinds of oil around the world, in Saudi Arabia, Iraq, Iran and elsewhere, but we cannot get at it, so we get oil where we can.

There are some issues to be dealt with in the oil market, but it is not about a consortium of a few Western companies controlling the market.

Kim Sae-Won, Chairman/CEO of National Research Council for Economics, humanities and Social Sciences, Korea

Some people were talking about global governance. Can I just make a suggestion on the introduction of global governance? My suggestion relates to the environment and growth at the same time; this represents the Korean perspective. It is more important than ever before to achieve sustainable development, and it has become our greatest concern. However, international cooperation has not exactly moved forward. Environmental and sustainable development has been discussed around the world, but it has been shunned by many companies, which fear that environmental production will negatively affect economic growth.

Therefore, without viable alternatives for trade-offs between growth and the environment, it is obvious that sustainable development is little more than a gesture. The green growth strategy aims to establish a comprehensive and integrated plan which facilitates a mutually beneficial relationship between growth and the environment. The concept behind green growth, of course, is nothing new, but I believe it is a new paradigm in the sense that it calls for a determined effort on the part of governments to modify their economic policies; creating a national consensus on this involves a change in our lifestyles.

I propose green global governance for establishing joint action plans. Dispelling the mistrust about environmental development in emerging economies must come first. They always assume that environmental production entails a reduction of economic growth, and they also view the relationship between the two as a zero-sum game, meaning that they think the discussions of developed countries over environmental issues are opposed to their interests. Green growth strategies, on the contrary, are very convincing to developing countries that really need environmental protection as well as poverty eradication and economic growth. The green technology innovation strategy can act as a developmental engine. We need to develop green global governance in order to respond to climate change effectively,

and to systematically support the development of low-carbon green growth in developing countries. Such global governance will be able to offer consultation, accommodation and assistance schemes for developing countries.

Jawad Kerdoudi, President of the Moroccan Institute of International Relations

Je suis consultant économiste. Pour moi, le problème de l'énergie se pose d'une façon très simple. Il faut de l'efficacité économique. C'est-à-dire, il faut diminuer la consommation de l'énergie et notamment de l'énergie fossile et il faut développer les énergies renouvelables. Il n'y a pas d'autre solution. C'est-à-dire, l'énergie éolienne et l'énergie solaire. Seulement, pour ces deux technologies, il faut de l'argent et il faut beaucoup d'argent. Parce que pour l'efficacité économique, il faut de l'argent et pour développer également les énergies renouvelables, il faut aussi de l'argent parce qu'il y a un différentiel entre le coût de revient de l'énergie éolienne et de l'énergie solaire par rapport à l'énergie provenant du pétrole ou du charbon. La question, et je la pose aux intervenants, est : comment trouver les moyens financiers pour pouvoir rendre efficaces ces deux mesures ? Merci.

Anil Razdan, Former Power Secretary, Government of India

We have tried to enforce a renewable purchase obligation in India, where solar is mixed with coal based power so that it is affordable. The point is perfectly well taken that it is expensive; but it is only when we create the demand that economies of scale and the need to generate cheaper solar power will the cost come down. It is about 15-20 rupees per unit at the moment, and it needs to come down below 10 rupees.

Bruno Lafont, Chairman and CEO of Lafarge

It is easy to thank you, but much more complex to wrap up. I will just confirm that it is a huge and very complex subject. It is true that we could find solutions among a few countries, but there are enormous numbers of people we have to educate. For example, 40% of CO_2 emissions come from the construction of buildings, and probably 80% of the buildings that will exist in 2050 have not been built yet. There are solutions and technologies for making them almost zero-energy, or at least so that they consume 50-60% less, because 80% of CO_2 emissions happen during the life of the building, in the form of heating, cooling etc, and way they are built and managed can change those things.

Therefore, there are solutions and technologies, and they seem to be financially efficient. However, this will involve a great deal of effort in terms of education for people, governments, industries, and to train people who will do that. How we learn together and manage, this is a real question of governance, and it is not just one top-down solution which will achieve this. Nevertheless, it is interesting to gather everyone's experiences, and I will try to be as extensive as possible in my summary tomorrow.