

Claude Mandil Interview

2020



Claude Mandil

Former Executive Director, IEA

The following interview was conducted by Ms. Randa Takieddine with Mr. Claude Mandil on 3 November 2020, who sat down together to speak about the future of fossil fuels; the premise of peak oil, industrial waste management, a decarbonised energy industry, and the future and logistics of carbon storage?

Mr. Claude Mandil is a member of the Board of Directors of Total SA since 2008, and former executive director of the International Energy Agency. Mr. Mandil also has a rich lineage in civil service having worked as director-general for energy and raw materials at the French Ministry of Industry, Post and Telecommunications during the 1990s while also representing France at the Nuclear Safety Working Group of the G7 from 1991-98. Prior to this, Mr. Mandil spent the 1980s in high-management positions at the Institut de Développement Industriel

(Institute for Industrial Development) and Bureau de Recherches Géologiques et Minières (Geological and Mining Research Bureau).

Q. In 2008, you wrote about energy security, suggesting that "we need more energy efficiency, more liquefied natural gas, more renewable energy, more nuclear energy." Apart from adding solar and wind sources, which became more prominent later do you still stand by this statement?

A. Definitely, yes. But I would add two items: energy storage and carbon capture and storage (CCS), and I would stress that as a result, we will face new supply issues, particularly with rare metals. Now, we understand that there will be a significant share of seasonal and intermittent renewables in power production because costs have decreased dramatically. That is excellent news. However, it is still sporadic, so we need to store electricity to be sure we can use it when we want and not only when the sun shines, or the wind blows.

What was not understood 10 years ago becomes absolutely crucial now, of course, with batteries, the cost of which has to decrease although it is on its way. Another idea can be hydrogen. I am not very confident in hydrogen; less than many politicians or experts are. If we produce hydrogen with renewables it means that an electrolyser will only be in operation when the cost of electricity is low because renewables will be available.

In that case, the cost of capital expenditure would be too high and too costly. I favour hydrogen, but I think the best way is to produce it out of natural gas with CCS;

Claude Mandil Interview

2020

what is called 'blue' hydrogen. We need to have solutions that are not too costly because the less expensive, the more we can do.

I fear that hydrogen produced out of renewables, known as 'green' hydrogen, will be much more expensive than blue hydrogen for a long time. And while blue hydrogen is being created, much more could be produced. Qatar could become a substantial blue hydrogen producer in the world with CCS, of course. And I am sure there is plenty of storage for carbon available in the Middle East.

Q. Some major European oil companies believe that fossil fuel demand may be peaking, or already has peaked, is the age of oil over?

A. I agree with these European companies. That does not mean that the age of oil is over, but the age of continuous oil demand increases is over. We will need oil for a very long time, but we believed that oil would increase indefinitely to 90, 100 million b/d; now, this is over.

We'll need oil for a long time because we are not well prepared to replace oil by something else. We still need oil for airlines and transport. We will not have all-electric cars immediately; for ships, it will be difficult to replace oil. Electric cars, for example, are still a small share of the new vehicles.

Still, there are regulations and subsidies to encourage their development in many places globally, not only in Europe.

So, we will use less oil not because of its price but because of the need to reduce our

carbon footprint coming from the growing recognition that we must take action against global warming and CO₂ emissions. Most countries are already implementing regulations because of this growing understanding. Even in the US, where the government claims the opposite, they are also trying to reduce their carbon footprint.



Q. We have seen and read the recent IEA reports on climate change scenarios. Are you a firm believer that technology will do enough to avert a significant climate change disaster?

A. Technology can help and will help by reducing costs of renewables, of hydrogen, of CCS, and nuclear, but it will not be enough to avoid a disaster. We need regulation and a strong political will, and we need to make CO₂ emissions very costly through regulations that penalise; most jurisdictions understand this but implementing such regulations is another matter because of the political sensitivity.

While such regulations are being implemented, they're not being implemented to the degree they should be. Look at France; it is very strongly spouting rhetoric that it is combatting global warming and CO₂

Claude Mandil Interview

2020

emissions, but when France decided to implement a CO2 tax on transport, it was a nightmare. The law had to be withdrawn under the pressure of yellow vests demonstrators.

So, it is not easy, and I don't think we can say "don't worry the technology will solve the problem" because alone, it won't solve the problem. In Europe, the political will is there, but Poland has to be convinced to abandon coal, and that is not easy. In the US, if Mr. Biden wins, he will rejoin the Paris Agreement, and you would see a growing will for regulations. However, if Mr. Trump is re-elected, the hope will be in the states acting independently: some big ones like California are ready to take regulations against global warming.

Q. Many of the measures required to reduce fossil fuel consumption will require a carbon tax, as you've said. Whilst the EU has made significant progress, can all other nations follow?

A. I partly answered in the previous question. Even the EU has to make progress in the future because it has set an initial (training) trading scheme but has not managed it carefully. The CO2 allowance price is far too low, so the carbon market has to be much better managed than it has been. Increasing the price of CO2 should trigger investment in non-CO2 emitting technology. The idea is, if the price of CO2 is high, people will prefer to produce electricity with nuclear or renewables rather than with oil and gas.

Still, these investments are long-term focused, and for the long term, you not only need a high price in CO2 today but a high and predictable price in the future.

Again, it is presently not the case because the market is not managed. In the UK they have the same system, but with an addition that makes all the difference. They have a floor price; it means that whatever the market is, the cost of CO2 won't go below the floor price. This is very good for investors to invest in low carbon.



Q. Can you comment on the major global polluting and consuming nations of the US, China, India?

A. For the US, it all depends on the presidential election. Mr. Trump is a climate change denier; Mr. Biden will rejoin the Paris Agreement. China sees climate change policy as an opportunity to increase its economic strength. That is why China is very active on climate change because it will benefit from it.

Since the world is a less CO2 emitting economy, they will provide batteries for the world, electric cars; right now, the leading electric cars producers are the Chinese. They will provide rare earth minerals and metals for what is needed for renewables. They will produce nuclear units. They are confident that they will be the winners, which is why they are strongly pursuing carbon policies.

My concern is India, which has never succeeded in being managed as an economy. Its demography is growing drastically; they will be more populated than China soon and consume more and more energy; they cannot organise their economy in a manageable way. So, India is very concerning.

Q. Noting your Veolia interests; water management, waste management, and energy services. These seem to all be important to Qatar but particularly water management. Can you tell us more about Veolia's water management projects?

A. I cannot answer the question because I am just a non-executive director in a not-for-profit institute, financed by Veolia, and dedicated to research on public goods. It is my only link to Veolia. I am not an insider in Veolia nor in Total, the board of which I quit six years ago.

On the broader question of waste management and energy, when we think of CO2 emitters; a power plant, coal or gas or whatever, we have to think of emitters having to separate CO2 inside their facility, transport it by pipeline, then store the CO2. Transport and storing are not activities power facilities are accustomed to doing. Instead, they need a completely different business model similar to a sewage utility.

My opinion is that we will move from a model where each polluter is responsible for treating their waste, to another model where big utility companies will be paid to manage waste as is the case for sewage. CCS would be a significant achievement of this new business model, with a utility company collecting and storing CO2 from a cluster of extensive emitting facilities.

There are some experiments with these new business models: one in Oslo with three emitters and one company where Total is a member, which provides transport and storage. There is a project in Rotterdam with many emitters; one project in Teeside in the UK, and a recent one in northern France around Dunkirk. It is a business for a

company like a Veolia-kind utility. I also want to raise another point. The IEA, which was created because its founding members did not want to suffer from supply disruption after the oil embargo in 1973, proposed emergency stocks as a buffer to supply disruption, leading to better relations between IEA and OPEC countries. The understanding that strategic emergency stocks were beneficial and vital was not enough to justify the IEA's role, so it became a think tank, providing expertise and advice on energy policies.

My point is that I think OPEC, which was created to protect its member countries' oil revenues, now with peak oil demand and the game-changer of shale oil in the US, a major oil producer not an OPEC member, needs to change. OPEC has to find a new role, like a think tank, to advise its members on energy policies.

And what is most important for these countries, is to reduce their economies' dependence on oil revenues, a key challenge for all OPEC countries. What happens if their oil revenues decrease drastically? They have to change their economies; OPEC can help.

Additional Al-Attayah Foundation Interviews, Special Reports, and Research Papers can be downloaded from www.abhafoundation.org