Resource Sovereignty: Beautiful contested vision(s)

ENERGY AND CLIMATE CRISIS: DEFENDING THE PUBLIC GOOD

An interview with Bruce Baigrie

Bruce Baigrie is an associate researcher at the Alternative Information and Development Centre (AIDC) and is currently undertaking a PhD at Syracuse University.

Hibist Kassa: What is meant by the concept of energy sovereignty and why is this important?

Bruce Baigrie: I think if we were to unpack energy sovereignty from the perspective of the sovereignty of the nation and we're talking about a reliable local supply, obviously disregarding the load-shedding since 2007, then in that sense I don't think South Africa has ever really had that problem. If anything we have primarily been a net exporter of energy supporting some surrounding nations. If we take energy sovereignty to mean sovreignty for the people themselves then I think we are going to need to look at it from the perspective of access and affordability. Many South Africans can't afford energy or at least can't afford what they need. The phrase used at the AIDC is energy as a public good. We do not see energy as some sort of commodity for sale for profit, but as something which every human needs, and that should be provided regardless of one's means. Energy is seen as a basic necessity of life alongside things like water, food, housing, and I would add data to that.

HK: You have been a proponent of nuclear energy despite this being an unpopular position on the Left. Can you tell us why you think nuclear is a viable option to explore?

BB: It is only half-true that nuclear energy isn't popular on the left. You are right in that the majority of the environmental movement and environmentalists are anti-nuclear energy. Yet if we were to incorporate trade unions in the energy sector, workers and the working class who have jobs around nuclear energy or live in communities around nuclear energy then nuclear energy remains incredibly popular within these spaces. I would say it's largely the environmental part of the left rather than the left as a whole that oppose nuclear. I would go further to say that many of the opponents of nuclear energy have come out of academia and is quite generational, i.e. younger people are much more open to it This isn't to say that this opposition is baseless or comes from a position of privilege but it's certainly not as widespread as some maintain.

I think the most important thing to point out about nuclear energy is that it's clean power. It is emission free and in the context of the climate crisis, there's nothing more important than that. The other advantage of nuclear energy is it's baseload power and thatis has the highest capacity

factor of any energy source Capacity factor is measured by how much energy a source produces over its theoretical potential of producing 100%, orall the. If you look at solar and wind which only produce energy when the wind blows and the sun shines,those capacity factors are much lower between 20-35%, offshore wind does better though. Nuclear energy has 90% capacity factors compared with coal which can range between 70-80% so it's a very effective means of generating power, generating electricity.

From that standpoint, it's an incredible use for powerful technology and if you look at countries with large nuclear penetrations in their power mix, you are going to see very low emissions per capita. So it's so incredibly powerful technology from a climate perspective. There are various supposed drawbacks which I would dispute. One is that nuclear is dangerous. The data clearly shows that it isn't, in terms of how many people have died per kilowatt-hour of nuclear energy produced, tt ranks alongside wind and solar. A lot of these big events like Chernobyl or Fukushima are very misunderstood. Then there is the waste. Nuclear energy produces very little waste, much of the waste is recyclable and increasing amounts are as the technology develops. The waste that cannot be recycled, is incredibly dangerous, and there are means of storing it safely. So again you can't just say that because it produces some bad waste that we need to abandon this technology that is so effective in reducing emissions.

There are other pros with nuclear energy, but probably the biggest disadvantage of nuclear energy is that it has very high upfront capital costs, takes a long time to build and initially is very expensive. It takes a long time to pay off those costs. So, if you are a private investor, it is much riskier as the project has a longer build time, there is more risk if something goes wrong and the project is delayed. That is a primary reason why nuclear energy is falling out of favour. The most successful nuclear energy power mix requires public sector support because the public sector is generally going to invest beyond the need for returns, beyond the need for profitability. If you have a a relatively strong public sector like France had in the 70s and 80s, you can do a very successful nuclear build-out. France now intends to build 14 new reactors by 2050.

That brings us to the South African situation and why some serious caution is needed. Our public sector is in crisis, the government struggles to do any sort of infrastructure rollout without problems, without corruption, so it is understandable that people would be nervous about the current government embarking on a nuclear build programme. Until the state is in a much better position, South Africa should hold off on building nuclear energy but we should not write off the technology especially if the goal is to reach net-zero by 2050.

HK: I would like to find out more about the disposal of nuclear waste.

BB: You can generally bury it underground, the best example to look at now is what Finland is doing. Finland has a relatively high amount of nuclear power plants and you take the worst of the waste and seal it underground in concrete, it is completely safe. You need to make sure that geologically it's a solid environment. You don't want to store your waste somewhere where there are earthquakes.

There is a philosophical problem which is that this waste is going to be radioactive for tens of thousands of years. What happens if society collapses and rebuilds then people stumble across this waste site and they don't recognise the signs, the language might have changed and they

keep digging and then find the radioactive waste so the people who manage these waste storage facilities are trying to think of signage that would never be misinterpreted. I think this issue pales in comparison to the climate crisis and who is to say that in 50 to 100 years that we don't have nuclear technology in which can we reuse this waste or we have even safer disposable methods. I think just some statistics, it's about 4% of nuclear waste that cannot be reused and of that 4%, 1% is radioactive beyond 300 years. So we are not talking about a vast amount of waste.

HK: How do you also respond to the challenge that we would be reduced to importing technologies from the Global North if we pursue an energy strategy that is centred around nuclear energy? We, in the Global South, would not be in a position to exert our sovereignty over technological and knowledge systems in nuclear technology.

BB: The North vs South debate is often quite unhelpful. China is about to embark on a massive nuclear build-out. Argentina is going to build their own three new nuclear reactors , butperhaps Argentina is not considered part of the South. If we look at renewable energy, the overwhelming majority of parts for the technology are produced overseas. We imported 100% of our solar panels from China in the last round of Renewable Independent Power Producers for Energy.[1] The countries that are best at building nuclear energy are generally in the Global North but it is the same for renewable energy. If we wanted to do these things, we are going to have to start building the industry here and one difference between nuclear and renewables is that nuclear energy requires far more skilled labour to both build and run. But this is not an argument against renewables, just one in favour of nuclear energy. The two should not be pitted against each other.

In terms of skills , South Africa, as I understand it, has had some brilliant and top nuclear scientists and we of course still have Koeberg which is overwhelmingly run incredibly smoothly. I suspect that it is just not true that we don't have nuclear skills and capacity, I believe there are departments in some of our universities that specialise in nuclear energy. I think we've lost a lot of people and I did hear an anecdote that some people who were nuclear specialists left the country but what's to say they can't come back? I would not write off nuclear energy for any of those reasons. Whatever kind of path we go down this is going to be a challenge of local industrialisation, building skills and capacity locally and we have to do that.

Another issue is this pushing for technology sharing. South Africa is in a far better position than so many other countries which are all going to need to undergo these low-carbon transitions. Many of these countries have to build their energy sectors from scratch. I think it's really important that these technologies that go into the production of clean energy need to be shared with the rest of the world.

HK: There are currently plans to remap South Africa's energy system. Yet you argue that current reform plans are stealth privatisation. Can you elaborate on what you mean by this?

BB: Some people, when they talk about unbundling, will say it is about privatising Eskom. It is not about privatising Eskom, no one is going to want to buy Eskom generation, it is not profitable, it is in disarray, its coal fleets break down so no one wants to buy that. Then in terms of the transmission grid, it is not to say that that would not be appealing to some private player but it's not on the cards as no one is talking about Eskom's grid being sold.

The process of unbundling is to separate Eskom in three separate entities. And by doing so the aim is to to progressively privatise energy generation in this country and to do that, they need Eskom to get out of the way. The less energy that Eskom is generating, the more energy needs to be generated by the private sector and that's really what the name of the game is now. By separating the generation and transmission entities, the goal is to make sure that the transmission side of Eskom doesn't discriminate against the private actors who are generating energy. This is what we mean by 'stealth' privatisation.

You will hear people talking about something called an independent transmission operator. The private sector wants to know that when they produce that power, Eskom transmission is not going to favour Eskom generation and what they likely want is for them to be favoured instead. What they want is the transmission operator when that is accessible when there was a surplus of power on the grid which there will be with renewable energy because it's variable. Transmission is what is going to buy the energy from the generator then sell it to the users. These two areas of energy are being bought and sold. From the side of transmission buying from generation, Eskom is going to eventually lose out as things stand where transmission is going to buy less and less energy from Eskom. It is going to favour the new private entities that are coming in and this will be a slow death of Eskom's generating capacity in favour of a private generation landscape. This death seemingly won't include Eskom's significant gas plans, but again, this is likely just to back up private renewables.

Eskom needs to embark on its own renewable energy build-out to replace the energy from its coal power plants. These plants need to be shut down because they're killing the planet, they're killing thousands of people who live near them. These coal plants need to go but Eskom needs to be replacing them, not the private sector.

HK: AIDC has some proposals as to what form that the Eskom reform could take. What is your view on how Eskom be reformed?

BB: We probably need to start with Eskom's perilous financial situation. It is in a severe financial crisis so the government would need to come up with a plan to deal with that debt and there are various ways of doing it. The debt needs to be relooked at because some of it is odious, as it was of no benefit to Eskom or the South African public so that debt should just not be paid. There is other debt which Eskom is doing quite well to recuperate. The current CEO has managed to cancel some bad contracts, he's just renegotiated some others and is trying to renegotiate some of the private renewable energy contracts. They are clawing back money from Eskom that was stolen. However, it is also trying to claw back funds from indebted municipalities and raising tariffs which has a range of awful implications. But none of these is going to deal with the debt completely and now some of that debt is going to need to be taken on by the government.

The AIDC, throughout its economic justice work, says that we need to use public funding that is available and that is overwhelmingly held at the government employees' pension fund and is managed by the PIC. The AIDC's analysis shows that the pension fund is massively oversaturated, you can take vast amounts of funds out of the pension fund without coming close to endangering those pensions. A lot of people would get their backs up and say you know you can't possibly take workers' pension money to save Eskom, but the AIDC's analysis shows that a lot of the money in

that pension fund is not just from worker contributions and money can be taken out of that fund very safely.

Funds are available to solve Eskom financial situation and the sooner that happens the better. Once Eskom is on a sound financial footing, then it needs to start investing, it needs to start building our renewable energy. I'm not an expert on how to do that but clearly, it's going to need to borrow money and once it is on sound financial footing, it should be able to access much cheaper financing than other entities. It needs to start building serious capacity here which it likely doesn't havebut I don't see why they can't source help from overseas. There are other public utilities like the one in Denmark, various others could come over and Eskom could draw on them to build its capacity. We have a growing photovoltaic industry here and that industry can be supported by Eskom. I think once the financial situation is sorted it just needs serious political will and then Eskom can start building its renewable energy and I would say somewhere down the line start looking at nuclear energy and deal with the variability of renewables.

HK: In thinking about the privatisation process, can you also explain to our readers the impact this has had on energy poverty and inequality at the provincial levels, and between households and communities?

BB: It would not be true to say that this current privatisation process has had a big impact on the working class and poor. Overwhelmingly the problems of Eskom with respect to its finances and operations are Eskom's problems, although we can't strictly divorce its history of corporatisation from this. Also, Eskom was completely ripped off in the opening rounds of renewable energy. It overpaid massively for these power purchases agreements with private renewable energy companies. They were charging, in some instances, five times the cost of Eskom producing its own power. Those costs have come down significantly to the point where new power purchased from these entities is going to be cheaper than Eskom building a new coal power plant but initially, Eskom was ripped off and that's what the CEO now is renegotiating. These private producers account for a small amount of energy bought by Eskom but account for significant amount of Eskom's costs. But while significant, the costs were overblown, and I think deliberately. Figures related to this are widely misunderstood because of how Eskom reported them. Eskom factored in too much of the costs of the renewable energy and not enough of Eskom's existing fleet.

But it's looking like the job conditions at these private renewable plants are not good. There have been reports of workers being unable to unionize. [I would suspect] that they are being paid far less than their counterparts in Eskom so that's something which needs closer attention as well as how many jobs in operations vs unskilled jobs in construction. If we look elsewhere in the world this is a trend as the private sector comes in builds renewable energy. They are not getting the same kind of employment as they traditionally got around other sources of energy.

HK: Thinking about the proposal from AIDC about using pension funds managed by the PIC, how can you develop connections between communities, labour, the rural, urban and women's organisations? How should the left and socialists and progressives in the country be thinking about the crisis facing Eskom?

BB: There are numerous connections that can be made. Maybe the first one to start with is jobs. If you are going to build a low-carbon economy you have to electrify everything, all these things which have traditionally run on fossil fuels. These are not just our power plants but our cars, industrial processes, these are now going to need clean energy to run on. We are going to completely reconfigure transport, we are going have to build electric vehicles but more importantly we going have to build public transport networks with relying on electric trains and electric buses. There is a massive role for green hydrogen as well, but its development is going to be far more difficult that government and business are portraying. All of this is going to be a kind of unprecedented project and if done correctly and on the scale required it will produce unprecedented numbers of jobs.

South Africa has many crises but I would posit that unemployment sits at the top of that, so it's a huge opportunity. For Eskom to lead the way around this, is going to produce the most jobs in any of these scenarios. I maintain that Eskom is the best entity to do it and that brings us back to the question we were talking about nuclear and the importance of public-sector investment which is not constrained by concerns of profitability. Whatever we build for the public sector is going to be less hamstrung by profit motives so there should be more jobs accompanying that increased investment.

Something we haven't talked about, something I haven't expanded on, is this idea of energy as a public good. This is another thing that Eskom is in the best position to do. It is to say Eskom is a public utility and the public sector, the government, we are going to use public resources to subsidise Eskom's production and sale of electricity so that everyone can have access to affordable electricity. If you continue to privatise this process, to keep with the full-cost recovery model, you can kiss that goodbye. So if we want energy as a public good, then workers, unemployed people, communities all have a huge stake in this so there is a potenial alliance here.

The same principles of saving Eskom, around public spending and breaking with austerity, are principles that we need to apply to other sections of the economy. So again there is overlap in working-class interests in terms of saving Eskom. Then there is the climate crisis which is the overwhelming effect of working-class people and poor people. Rural communities are going to bear the brunt of this. So turning Eskom around, transforming it from what it is towards one that produces clean energy and is actively driving the transition towards a low carbon economy in the interests of the working class and poor. I think it's important for the environmental left and environmentalists to also understand where workers are coming from. Workers have fought hard to get good jobs, good wages and benefits. Saving Eskom must be at the centre of South Africa's energy politics. It's something which the left should get behind so that we don't alienate workers and organised labour, in my opinion our most powerful, and thus most important constituency .

HK: What about industrial policy? This is another sore issue on the Left where some have openly called for a degrowth agenda. Do you think the latter is misguided for developing and emerging economies?

BB: Yes absolutely. I am against degrowth. I think a lot of the motivations for degrowth come from a good place, but I think they generally living in a fantasy land. The overwhelming majority of the world is going to need to grow. People do not have access to energy throughout much of the world. People need housing, public transport, we need to grow. A lot of degrowthers will say they agree about the imperative for growth in the South and that degrowth just needs to come from

the Global North. But this is also wrong-headed in my opinion because the Global North is still capitalistic and produces societies of class hierarchy where the majority of working people do not have access to enough. You cannot go to poor people where I am in the United States and say to them "You need to 'degrow'" and you have too much. It is politically unviable. Also there is more evidence to show that one can decouple one's effect on the environment, particular one contribution to climate change, from economic growth. Certainly, no policymaker in the Global South is considering degrowth. The focus is on decarbonising economies and and making sure that that growth is distributed to the people that need it. As we know, a lot of countries have experienced growth but this hasn't translated into serious benefits for working-class and poor people. This is really where our focus needs to be.

HK: Do you think that the principle of 'Common but Differentiated Responsibility' is doomed to become irrelevant? Is this a principle that the Global South should continue to deploy in multilateral processes to have practical outcomes?

BB: I think every country in the world needs to decarbonise, it does not matter if you are a country in the Global South that was once colonised. I think the argument that this country should be allowed to burn fossil fuels is complicated. Fossil fuels emitted anywhere affect everyone so no one should build an economy dependant on fossil fuels. That said, certain countries, with no energy infrastructure, may requiresome intermediary fossil fuels but these should be fairly negligibale in the grand scheme things.

There is this element of Eurocentrism that exists. People still think that the real question is around these Global North countries, that the onus is on them to decarbonise. The reality is they are decarbonising, they are not decarbonising fast enough but they are decarbonising. It is in parts of the Global South that the remaining carbon budget is likely to be blown. So the question is what's going to happen in countries like India, China, Indonesia. These countries are the ones that will need to decarbonise the fastest. Should those countries receive support from the Global North? Absolutely.

To come back to the original principles that guide this, yes, the Global North needs to pay for a lot of this. Countries in Africa, all others that have been colonised, that have struggled under economic imperialism, need to be supported. They need concessional finance. Any concession refinancing, which allow them to build a low carbon economy also comes back to something that I talk about earlier technology transfers. These are the kind of measures that are required. No country should be allowed to build out a massfossil fuel economy just because it might be easier, we don't have time for that anymore.

HK: In practice, we also know that the Global North has not been forthcoming in terms of transfer of appropriate technology or in terms of development financing, even though it is a campaign that has been building up. There is also the matter of the ecological debt owed to the Global South. With this in mind, what is the way forward for countries in the Global South, especially those that are fossil fuel dependent? What does this mean in terms of their development strategies? Some countries would suffer an economic downturn and might not even be in a position to turn away from fossil fuels.

BB: I would be cautious of a government in the Global South saying we can't transition and that we need these fossil fuels. It is a nice excuse for them with respect to certain projects they want. I think if we concede entirely to that argument, we disempower activists and left-wing social forces within those countries because there is almost always something that those countries can do. This is not to say that it won't be difficult for them, they will be economically disadvantaged and it might be difficult for them. Like I said, many may well need some fossil fuels, natural gas in particular. I think these countries need to form a more unified block, to perhaps have a stronger message so that they can negotiate with a bit more strength when it comes to climate talks.

Now to an extent, they are doing that and so the question would have been also how can one build more pressure and I would say this concept of internationalism is important here. Activists from these countries should be building alliances with activists and social forces in the Global North who can pressure the governments to do more. To say, look, we have a responsibility to support these countries, to help finance the transitions and to say you know if we don't, then we're all going to fail. Coming back to what I said, the Global North can decarbonise but if the rest of the world does not, it is not going to matter. Climate change is going to hit everyone.

HK: What are your thoughts on civil society engagement at multilateral processes, particularly the COP process? What would you say needs to be done differently?

BB: We need to have a focus on workers. Around the world much of civil society and the environmental left have disconnected themselves from organised labour. This has been a historical process and when you look at the organisations going to the COP, if you look at the demands around the COP from environmentalists and the sections of the left, labour is not really there, or if it is, it's very rare. Demands need to focus on making sure that workers are protected and not left behind, but that also mean that their job conditions are going to be good. Also, parts of the left have aversions technologies like nuclear, but also to carbon-capture storage. This is misplaced, and labour are for these technologies that should be roled out at utility scale. It is just about really taking on this narrative that the private sector and the market are going be our saviours when it comes to building clean energy. We need the public sector, public sector investment and public sector jobs that are also conducive to helping build organised labour, although of course, we especially need unions in the private sector. I think that is something that activists who are involved in this need to grapple with more.

NOTES

REFERENCES

1 Republic of South Africa, Renewable Independent Power Producer Programme, https://www.gov.za/about-government/government-programmes/renewable-independent-power-producer-programme