Energy, crisis, and world-wide production relations

By Kolya Abramsky

Changes within the energy sector are speeding up dramatically. A combination of ecological, political, economic and financial factors are converging to ensure that energy production and consumption are set to become central to global political, economic and financial dynamics. This is true of energy in general and the globally expanding renewable energy sector in particular. The way in which the world's energy system evolves in the years ahead will be intimately intertwined with different possible ways out of the world-financial-economic crisis (which is also increasingly becoming a political crisis).

The multiple intersecting and mutually reinforcing crises starkly pose the need to construct new world-wide relations of production and exchange that are substantially more decentralized, participatory and egalitarian than the relations which currently exist. However, climate change and peak oil require a massive and rapid reduction in CO2 emissions and energy use, and hence fundamental change in how humans interact with nature.

The process of building a new energy system, based around a greatly expanded use of renewable energies, has the potential to make an important contribution to the process of constructing new relations of production, exchange and livelihood that are based on solidarity, diversity and autonomy and are substantially more democratic and egalitarian than those that currently exist. Furthermore, the construction of new social relations along the above lines is also likely to be crucial in order to avoid disastrous "solutions" to the financial-economic and political crises.

Some kind of transition to post-petrol energy sources is virtually inevitable. However, the outcome is not a technical given. It is no longer a question of whether a transition to a new energy system will occur, but rather what form it will take. Will it involve a dramatic and rapid collapse, or will it be a smoother and more gradual process? Which technologies will a transition include and on whose terms and priorities? Who will be able harness the necessary global flows of capital, raw materials, knowledge and labour? Indeed, will people even let their resources, knowledge, skills and labour be "harnessed" from above and outside, or will they strongly assert the possibility of using their skills and energy to their own benefit and on their own terms? And, above all, will the process be chaotic, reinforcing already existing hierarchies, or will it be part of wider process of world-wide emancipatory social change based in the construction of new social relations?

Energy: key to both production and sustaining life

As the world's energy system is on the verge of far reaching change, it becomes up for grabs. In other words, a struggle for who controls the sector and for what purposes is intensifying. It is increasingly becoming clear, both to capitalist planners and anti-capitalist struggles alike, that some form of "green capitalism" is on the agenda. We are told from all sides that it is finally time to "save the planet" *in order* to "save the economy". In effect, this means that the transition process to a new energy system is the next round of global class struggle over control of key means of production and subsistence, since energy is essential to both production and sustaining life.

However, class struggle is inherently uncertain, and this is the central uncertainty of the transition process itself. Who will bring it about, and for what purposes, whose benefits, and at whose expense? Importantly, given that energy is relevant to class relations in general (since energy both replaces and enhances human labour), energy "crisis" and "transition" are also relevant to class struggles in general and not just those that exist within the energy sector itself.

It will take many years before it is clear whether capital can harness new combinations of energy that are capable of imposing and maintaining a certain stable (and profitable) organization of work in similar ways that fossil fuels allowed, or whether in fact a new energy system will not allow such possibilities, and could actually strengthen the material basis for anticapitalist struggles. We are in the early stages of what is likely to be a lengthy and complex struggle as to whether capital will be successful in its efforts to force labour (ie people throughout the world, as well as the very environment itself which green capitalism proclaims to save) to bear the costs of building a new energy system, or whether labour (ie social and ecological struggles throughout the world) is able to force capital to bear the costs. This struggle is already becoming central in shaping social relationships, and is likely to become ever more so in the coming years.

A Question of Relations of Production, Reproduction and Consumption, Not Regulation and Policy

The kind of massive and rapid reductions in CO2 emissions (and the corresponding changes in the system of energy production and consumption which are necessary for this to occur) will not be possible without very far reaching changes in production and consumption relations at a more general level. However, dominant approaches on climate change focus on promoting regulatory reforms. This is true for governments, multilateral institutions and also large sectors of so-called "civil society", especially the major national and international trade unions and their federations, and NGOs).

The stark reality is that the only two recent periods which have seen a major reduction in global CO2 emissions have occurred in periods of very sudden, rapid, socially disruptive and painful periods of forced economic *degrowth*: namely the breakdown of the Soviet bloc and during the current financial-economic crisis. In May 2009, the International Energy Agency reported that, for the first time since 1945, global demand for electricity

was expected to fall. Experience has shown that a lot of time and political energy have been virtually wasted on developing a highly ineffective regulatory framework. Years of COPs and MOPs, the international basis for regulatory efforts, have simply proven to be hot air. Unsurprisingly, hot air has resulted in global warming. Only *unintended* degrowth has had the effect that years of intentional regulations sought to achieve. Regulatory efforts will certainly be pursued, and furthermore, they may well contribute to shoring up legitimacy, at least for a time, and in certain, predominantly northern, countries where the effects of climate changes are less immediately visible and impacting. Nonetheless, it is becoming increasingly clear that solutions will not be found at this level.

The problem is one of production. The current world-wide system of production is based on endless growth and expansion. This is simply incompatible with a long term reduction in emissions and energy consumption. Despite the fact that localized and punctual moments of reduction may well still occur, the energy consumption and emissions of the system as a whole can only increase. All the energy efficiency technologies in the world, though undoubtedly crucial to any long term solution, cannot, *on their own,* square the circle by reducing total emissions from a system whose survival is based on continual expansion. This is not to say regulation is not important. It is completely essential. However, the regulatory process is very unlikely to be the driving force behind the changes, but rather a necessary facilitation process that enables wider changes.

The Need to Construct New Relations of Production

Substantial changes in the system of energy production and consumption will require substantial changes in production and consumption relations at a more general level. However, leaving the process to the logic of accumulation of profit in the world-market is likely to both be far too slow, in terms of the urgency of climate change, and also immensely socially disruptive.

Faced with the fact that forced and chaotic degrowth have seemingly had a far greater effect in terms of emissions reductions than years of regulation, it seems that an urgent question facing emancipatory social and ecological struggles is how to collectively and democratically construct a process of planned rapid and broad degrowth, based around collective political control and democratic and participatory decision making over production, consumption and exchange.

The question of peak oil starkly poses the question of how to collectively manage scarcity in a fair manner which avoids very destructive power struggles and exacerbating already existing growing inequalities (especially in relation to class, race, gender and age) and a forced imposition of austerity measures on people. Solutions that do not actively strive to avoid pitting different workers, both waged and unwaged, in different regions of the world, against one another, are almost certain to result in a transition being carried out on the back of these workers and their communities. If emancipatory movements are unable to force capital to pay the burden, it is likely to prove immensely divisive and destructive.

Of particular importance in relation to building a new energy system are the key means for generating society's wealth and human subsistence. These include: land, seeds, water,

energy, factories, universities, schools, communication infrastructures etc. Especially significant in this context are the major energy intensive industries, such as transport, steel, automobiles, petrochemicals, mining, construction, the export sector in general, industrialized agriculture.

However, it is very difficult to imagine that it will be possible to bring about a rapid and far reaching process of collectively planned emancipatory change, at the pace and scale which is necessary, unless these key means of generating and distributing wealth and subsistence are under some form of common, collective, participatory and democratic control, decision making and ownership. Furthermore, it is crucial to make sure that they are used to meet the basic needs of all the world's population, rather than the profit needs of the (currently existing) world-market and the select few workers and communities who are able to reap the benefits of this. In other words, there is an urgent need to decommodify these sources of wealth as much and as fast as possible.

However, following years of market led reforms, and unprecedented concentrations of wealth and power, we are still very far from this reality. This is true both in concrete terms and also in terms of our collective aspirations and strategic approaches. Dominant political strategies for achieving change are firmly rooted in discussions of how to achieve minor regulatory reforms (at best including state ownership) rather than a more fundamental shift in power relations pertaining to structures of ownership and control. This is currently true even in progressive and radical circles.

Consequently, an urgent task for the years ahead is to discuss what kind of short term interventions might help make such a political agenda more realistic to achieve in the near and medium term future. It is not a new discussion. In the past, collective ownership, management and control of key means of production (either in the form of worker, community, cooperative or state) has been at the heart of radical proposals for social struggle. Furthermore, radical critiques of state communism, socialism, social democracy and their respective bureaucracies does not lie in a rejection of collective ownership of key means of production. Instead, their critique was based on a strong critique of the fundamentally limited nature of state ownership as being a model for democratic, participatory and self-organized social change from below, based in an understanding that state control is simply a modified form of private ownership and capitalist class relations.

Within the energy sector itself, the picture is one of intense struggle. Important struggles over the ownership and control of energy production and extraction processes, as well as over access and price are underway throughout much of the world. This has involved developing a range of different forms of ownership, including community, user, worker, cooperative, municipal and state ownership, that to differing degrees challenge private ownership and commodification. This has involved broad social sectors: energy users, effected communities, peasants, indigenous peoples and workers both in the energy sectors and more generally. Frequently they have faced harsh repression from state and military forces. In many areas, they have literally become life and death struggles. Struggles over energy ownership have been at both the heart of both foreign military occupations, such as in Iraq, as well as providing a key material resource basis for wider

emancipatory or even revolutionary social processes, such as in Venezuela or Bolivia. These are the struggles which currently define the world-wide energy sector. They are at the heart of the so-called "energy crisis", which is, in no small way, partly a crisis of capitalist control over the sector. Importantly, these struggles are likely to intensify in the future. Furthermore, they have by no means already been lost by emancipatory movements.

This is true for fossil fuel reserves, such as oil in Nigeria, Iraq, Ecuador, Venezuela or Colombia and Bolivia (to name but a few examples). It is also true in relation to electricity generation and distribution infrastructure and pricing, such as in South Africa, France, Germany, Dominican Republic, India, South Korea or Thailand (again, to name just a small tip of the iceberg of world-wide struggles in the sector). Similarly, there is a worldwide process of resistance to the privatization of forests, one of the main sources of non-commercial biomass fuels, which meet the domestic energy sources for approximately 2 billion people worldwide. Women, who are the ones who mainly collect and process these fuels, are at the heart of such resistance, especially in Africa, Asia and Latin America.

Importantly, such struggles are also intensifying in relation to the globally expanding "new renewable energy" sector. Since the 1970s, many pioneering initiatives in renewable energy had a strong emphasis on cooperative and local control. This has included farmers' wind energy cooperatives in Denmark, citizen energy projects in Germany (including cooperatives, buying local grids, and all womens' initiatives); a worker owned cooperative in Spain which was successful in becoming one of the important producers of wind turbines for the world-market, and was a member of the Mondragon industrial cooperative group. These local and democratic ownership structures mainly emerged in northern countries, the major pioneers of the new renewable energy technologies in this period. However, there have also been some interesting examples in southern countries, such as in Nepal in relation to micro-hydro, Argentina in relation to wind, and India in relation to household and village level biogas digestors. Collective and locally controlled renewable energy infrastructure played a significant part in China's rural energy development, during the early years of the Chinese revolution, but this is a very different story, which there is not time to go into here.

However, such processes which emphasized a democratic and participatory community controlled development of renewable energies, which contributed in an important way to the inhabitants of the territories rich in these energy resources being able to build a somewhat autonomous and empowering development path, are now frequently being undermined. This is occurring due to the threats posed by private investors, companies, and free trade agreements, all with the full support of national policies aimed at undermining previous forms of democratic and participatory control.

The question of ownership and control over the territories rich in renewable energy resources is becoming key. In Mexico, indigenous communities are being deceived and displaced so that the country's wind resources (amongst the best in the world) can supply electricity to major multinational companies, such as Walmart. In China, peasants have

been killed by police as they protested inadequate compensation for wind turbines installed in their land. In Denmark, rural wind energy cooperatives are finding it increasingly hard to compete with private investors and are being taken over.

Importantly, important labour struggles are also emerging in the sector, especially in relation to the production of the raw materials for agrofuels. This includes sugar in Brazil or Colombia, palm in Colombia, Indonesia and Malaysia, and soya in Argentina and Paraguay (amongst others). In Germany, a leading country in the production of wind and solar energy infrastructure, the major trade union IG-Metall is organizing workers in the face of poor working conditions in the plants where the infrastructure is produced. In the UK, the country's only wind turbine assembly plant (owned by Vestas) currently faces closure, and the sacking of 600 workers, in the face of the economic crisis. So far, these struggles are more centred in working conditions, rather than worker ownership.

Finally, it is also worth mentioning the importance of patents, and the ownership of the knowledge and technologies. Despite some very initial murmurings of an open source technology and non-commercial technology transfer movement arising in the renewable energy sector, inspired by the open source computer software movement, such a process is still virtually non-existent.

On a more general level, it is worth looking at contemporary struggles over land and energy intensive industries.

Land is one of the most basic elements of subsistence for humans throughout the world, and is also essential for capital accumulation. It is both a key means of production and also of reproduction of human life. Collective ownership and decommodification of land is still at the heart of many, if not most, rural and indigenous struggles throughout the world today. It is in these struggles that there is perhaps the clearest political discourse in this respect.

However, the outlook for struggles in the energy intensive industries, such as cars, aviation, transport or tourism, is much more pessimistic in terms of struggles over ownership and decommodification. Importantly, the dominant strategic discourse from major organizations in these sectors is equally pessimistic in this regard. Ownership struggles have by and large already been lost. For the last many years, most struggles in these sectors revolve around demanding certain reforms in the production and work process, as well as improved user access. However, little space remains open for serious struggle (or even discussion) for major changes to patterns of ownership and control.

At the more radical end of ecological critique, there is frequently discussion about the need for a profound change in production relations. However, the organizations and collectives with such perspectives frequently lack the social base necessary for such a process of change to actually happen. In particular, they have little capacity (and sometimes lack even the will) to contribute to serious debate within trade union and other worker organizations themselves within these sectors, so their more sophisticated critique amounts to just that, a critique without a process of change accompanying it. On the other

hand, the dominant "green" discourse, though often well connected to trade union organizations working on sustainability from a worker perspective, hardly talks about ownership of key means of production. Most campaigns from this broad group of organizations, is pushing for change within the existing framework of social relations. Finally, the dominant trade union discourse of workers in these sectors favours tripartite bargaining, "decent work", and social peace, based around regulating production for private profit in an expanding world-market.

However, the economic-financial crisis also offers an opportunity to reopen this old discussion, since the old model of Keynesian class compromise and stabilization of struggles aimed at changing ownership patterns of key means of production is dead, and in all probability is unlikely to be resurrected. Furthermore, *unless* the discussion on production is reopened up, it is very likely that the "solutions" found to the economic-financial crisis will be extremely authoritarian.

Starting with the economic and financial collapse of Argentina in 2001, factory occupations and self-managed industrial production and exchange returned to the radical landscape in an important way. In the wake of the current worldwide financial and economic crisis, a wave of factory struggles including worker occupations have spread around the world, including in the US, the UK, and numerous countries in Eastern Europe. Such struggles are largely defensive, related to redundancy conditions, rather than proposing a new model of ownership, production and control, and are still on a very small scale. Notably, the Detroit car factories have virtually been left to go under, rather than being taken over by workers and communities and converted into renewable energy production plants. Yet, even the head of the United Autoworkers Union made a fleeting and cautious reference to worker occupation of the plants, albeit way too little, way too late. Yet, this is a rhetoric that has not been used in such places for many decades. These are small processes, but nonetheless of great importance. Importantly, the industries in crisis are some of the key energy-intensive industries, such as cars and steel, which are especially relevant to the issue of energy transition and worker-community led conversion processes.

The stark reality is that we are very far from bringing about the kind of change in production and consumption relations which is needed to solve the climate/energy crisis. It may in fact never happen that we are in a position to do so. However, if we are even to imagine avoiding a socially and ecologically disastrous process of climate change and enforced change, it will be important to at least pose the question as to how this might come about. Until we face up to this, efforts on climate change will go nowhere. The task of collectively taking over the key means of production and decommodifying the major productive processes are immense. We are certainly not ready for the task in the current moment. However, what is both possible and long overdue is to at least take some initial steps to deepening a long term strategic debate about how, and for what purposes, wealth is produced and distributed in society, and how people's subsistence needs are met, as part of a shift to a new energy system. Through a process of debate, we will hopefully be able to slowly develop collective interventions which contribute to these goals, so that in the medium term, as the economic-financial and ecological crisis deepen, we might then

be able to do what is not possible now, and collectively plan the process of production and consumption, based on a clear process of class struggle that bring together workers (both waged and unwaged), communities and users of energy and energy intensive sectors, across the hierarchically divided world-wide division of labour. This will already be an important step towards bringing about a profound democratization of how wealth is produced and distributed throughout society.

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