Review of the Energy Policy in the Labour Draft Manifesto

Chris MacMackin

The recently published Labour manifesto devotes 3 pages to energy policy and many have viewed it as making radical proposals. It has been widely reported that Labour has committed to renationalise electricity. However, despite such an action being urgently required, the manifesto promises no such thing and instead consists of half-measures.

Historical Energy Ownership

To understand why this is, it is helpful to understand the history of the ownership of energy in the UK. The exact structure of the nationalised British electrical sector changed somewhat under different post-war governments, but it was broadly as follows. The Central Electricity Generating Board (CEGB) owned all power plants and the national grid. The distribution infrastructure (wires leading into people's homes) was owned by 14 area electricity boards. The CEGB was responsible for ensuring that there was always sufficient electricity supply for the country, which was bought by the area electricity boards and then sold on to customers. Scotland had a somewhat different structure to this which was vertically integrated.

Upon privatisation, the CEGB was split up into the national grid and three generating companies. These were sold off over a few years, along with the area electricity boards. Today, there are four components to the sector. National Grid plc owns the high-voltage transmission lines (except in Scotland) and is the UK's "system operator" (turning power plants on and off to match supply and demand). Similarly, in each region there will be a single company owning and maintaining the distribution network. Generation consists of various companies, ranging from giants like EDF to small renewable energy co-ops. Finally, there are the supply companies that we all actually buy our electricity from. The supply companies purchase electricity on a wholesale market from various generating companies. Even if a supply company also owns a generating company, there is no guarantee they will buy their electricity from that generator.

Initially upon nationalisation, gas was the responsibility of 12 area gas boards, with a central Gas Council acting a a coordinator and liaison with the government. In the 1970s these boards were merged in to the single British Gas Corporation. Prior to privatisation, the Thatcher government required British Gas to carry natural gas for other suppliers. Unlike electricity, gas was privatised as a single unit, becoming British Gas plc. A series of restructurings and demergers followed, with the gas mains now owned by National Grid plc. Exploration, production, storage, and sale of gas is now performed by various companies.

Evaluating the Manifesto

Ownership

Although the Labour manifesto pledges to "take energy back into public ownership", the policies proposed to actually do this are limited and certainly would not result in public ownership on the post-war scale. These pledges consist of exerting government control over the supply network; creating regional public and cooperative energy suppliers; and gradually bringing national and regional grid infrastructure into public ownership, with local public companies potentially owning the regional infrastructure.

The first pledge appears to border on being meaningless, promising to alter the terms of grid operator licenses, but not saying in what way. As the manifesto does nothing to spell out the

problems of the existing arrangement of grid ownership, we have nothing to go on. It must also be noted that this pledge does nothing to bring energy into public ownership. Why the grid is meant to be brought back into public ownership “over time” rather than within a short time-frame is unclear.

The meaning of the promised “publicly owned, locally accountable energy companies and co-operatives” is ambiguous. What is an “energy company”? It could be a generator, grid company, supplier, gas producer, etc. The Big 6 are only the largest (residential) suppliers and it is purely coincidence that they have subsidiaries which also operate power plants. The way this and other pledges are worded suggests that no nationalisation will occur at all. Instead, new supply companies will be created and would, presumably, compete against the Big 6. Given that the manifesto states “Labour understands that many people don’t have time to shop around”, it is odd that their solution is to simply add a 7th choice to the market. This would not address the wastefulness of competition in the supply sector. The idea that these supply companies should be regional is also rather strange, given that in a liberalised electricity market, such as exists in the UK and which Labour mentions nothing about changing, there is no reason why a company can’t sell to anywhere in the country. This is because supply companies don’t need to own any infrastructure, simply purchasing the necessary amount of electricity on the (national) wholesale market and then passing on the costs to customers.

If the energy co-ops are meant to be producers of electricity, on the model of those which already exist, then it can not be stressed enough what a *terrible* idea this is. In most sectors, a co-operative is owned by its employees or its customers, but for energy this is not the case. Instead, locals become members of the co-operative by paying to finance new energy projects. Given the way the energy market is structured in the UK, it is impossible for them to then buy their power from the co-op. Instead, the co-op sells its power to one of the energy supply companies and returns the profits to its investors as dividends. These are generous dividends at that: Brighton Energy Co-operative aims to make a 5% return on investment each year, which is substantially higher than the cost of servicing public-sector borrowing. Despite all their talk of “community ownership”, energy co-ops would appear to have far more in common with Margaret Thatcher’s “share-owning democracy” than with a socialist vision of society. We should be seeking to sell energy at cost, rather than use energy bills as a way to pay a low-risk, high rate of return to middle class people looking for a feel-good investment. The fact that, other than this and a vague commitment to “[invest] in new publicly owned energy”, nothing is said about the generation portion of the sector is shocking.

There is no obvious reason why the local energy companies are the correct vehicle to own the regional transmission infrastructure. In a liberalised energy market, production of electricity, its sale to consumers, and the maintenance of the grid are each operated as completely separate businesses. Some supply companies (such as SSE) do currently have subsidiaries owning regional distribution grids, but this is an accident of history and is the exception rather than the rule. Distribution is currently arranged into large regional companies, meaning that local government would be an odd choice to own it. Unless devolved administrations are created which can take over this infrastructure, the best option would be national ownership. The option to break the grid up into local authority-sized units might also be possible, but would require technical consultation to determine feasibility.

It is unclear if the new public suppliers will be able to deliver energy much more cheaply than the private ones. Profit margins in supply are not all that large . Public ownership of the grid can probably lower the cost of its use, but this will apply to all supply companies. Keeping generation in the private sector means the profit margins of these companies will remain intact. It must be said that keeping a liberalised energy market will make it far more difficult to limit gouging of customers, given the number of opportunities to do it and that wholesale energy prices are set by the market. It will also maintain the wastefulness of running the market, with the complex bidding system involved, and of keeping the sector split up into so many different parts.

There is a vague commitment to retain “access” to the European energy market. The ability to buy and sell energy to other European countries should certainly be kept. What is unclear is whether Labour equates “access” to “membership”. Membership would commit Britain to continuing the liberalised energy market and make proper renationalisation into a vertically integrated utility impossible. It is, in principle, possible to sell into a liberalised energy market from a vertically integrated public monopoly, so this option should be pursued.

Energy Sources

On the bright side, the draft manifesto's endorsement of nuclear power is pleasing. It wasn't endorsing a roll-out on the scale some would argue for, and is clearly seen as secondary to renewable energy, but it's a start. Committing to remain a part of Euratom is also welcome. However, the manifesto did not address the question of ownership. Hinkley C shows how expensive nuclear can be when built in the private sector. We need a commitment that all new nuclear be built in the public sector to a standardised design—preferably one other than the EPR which is meant to be built at Hinkley and is proving to be a white elephant.

The reasoning behind commitment to ban fracking is also laudable. Labour is quite right to point out that the use of gas in the UK must be curtailed to meet climate change targets. It is therefore unfortunate that so little is said about heating. The commitment to insulating homes will help to reduce gas use, although a similar commitment is also needed for commercial and industrial buildings. Furthermore, measures are urgently needed to electrify heating or build district heating using clean energy sources. Unfortunately, no such proposals were put forward.

The commitment that 60% of energy should come from clean sources by 2030 is extremely ambitious and matches the scale of action needed to combat climate change. However, non-electric forms of energy (mainly petrol and gas) make up about 80% of current use yet receive almost no mention. Commitments to insulate homes and electrify the rail network are welcome, but insufficient. As such, this target does not come across as credible. It seems distinctly possible that this commitment only applies to electricity, in which case it is extremely unambitious. To put this into perspective, currently about 45% of electricity comes from clean (nuclear or renewable) sources. The imminent retirement of many nuclear reactors does make this goal somewhat more difficult, but a goal of expanding our clean electricity capacity by only 15% points over *13 years* is disappointing and would almost certainly prevent Britain from meeting its goals on climate change.

Overall, this manifesto shows either a lack of understanding of then energy industry in this country or the desire to make radical sounding promises without actually intending to change much at all. Whichever of these it is, we should be deeply concerned that this is the level of discussion in the Labour party. Similarly, pledges on climate change express noble sentiment but don't suggest more than a token effort will be made. This is simply not good enough.

An Alternative

Give the above criticism of Labour's energy policy, what should take it's place? Drawing on previously submitted work, a possible replacement is presented below.

The three over-riding requirements for a 21st century electricity sector are to produce energy cleanly, reliably, and as cheaply as possible. A Labour government will act to ensure rapid decarbonisation of the electricity supply, while at the same time increasing electricity production and ensuring that the lights remain on. The existing private electricity market has proven wholly unfit for this purpose. The introduction of four different layers of profit-seeking firms has led to increased energy bills. Meanwhile, state-sponsored bribery in the form of fixed wholesale prices has been required to get new capacity built, showing that a market was never an effective way to structure this industry. Day-to-day operations of the network have been transformed from a technical exercise to something more like the financial markets. It is time for Britain's 27 year experiment in private, liberalised electricity to be brought to a close.

To this end, a publicly owned Power Generation Board (PGB) will be created, initially out of the transmission grid, distribution grids, and existing nuclear and renewable power plants. Nationalising these assets will have the effect of concentrating expertise in the state, allowing for better planning of new infrastructure. As fossil-fuel power plants should be shut down as soon as practicable, these will be left in private hands. After a transitional period, the PGB will assume the role of monopoly supplier of electricity to customers, contracting to purchase fossil-fuel electricity from the private generators when its own generating capacity is insufficient to meet demand. Should the cost of purchasing electricity from a given producer be deemed more than the cost incurred by nationalising it, then those assets will also be folded into the PGB. The PGB will

consult with jurisdictions which have re-integrated their electricity industry and moved away from a liberalised market, such as the Canadian province of New Brunswick. In broad terms, the following steps will need to be taken:

1. Have the PGB take over ownership of the transmission and distribution grids, as well as take on the role of Transmission System Operator.
2. Create in the PGB a generating division out of existing nuclear and renewable capacity. This initially will compete with remaining private generators.
3. Create a supply arm of the PGB from which customers can buy electricity. Initially it will compete against existing private suppliers and purchase electricity on the open market.
4. Set a date at which point the PGB will become a statutory monopoly in the wholesale market. Supply companies may purchase electricity only from the PGB after that date.
5. Negotiate contracts with the private generators under which the PGB will purchase whatever remaining electricity is needed to meet demand. If necessary, the terms of the contracts will be set unilaterally via legislation. Nationalisation will also remain an option.
6. Initiate a process by which all energy customers will transfer their accounts to the PGB by a certain date. After this date, the PGB will be granted a statutory monopoly on supply.
7. Introduce greater integration of PGB divisions so that they no longer act like separate companies.
8. Dismantle any remaining structures within the PGB which are legacies of the old market and are no longer needed, such as having an independent Transmission System Operator.

Such a policy is in radical violation of European energy liberalisation directives. As such, the UK will withdraw from membership of the European Energy Community. However, there is value in being able to buy and sell electricity with other European countries. There is no technical reason why a vertically integrated utility such as the PGB can not sell into and buy from liberalised markets—this is done by many Canadian provinces with the United States—and every effort will be made to ensure this continues to be possible for the UK.

The PGB will be given a strict and aggressive time-table to build new infrastructure with which to decarbonise Britain's electricity supply and begin replacing non-electric energy sources. The exact details of how this will be achieved are a technical matter which will be left to PGB planners and engineers, charged with drawing up workable plans to present to parliament. All new capacity will be owned by the PGB, as it will be able to borrow at cheap government rates and can offer the best economies of scale. Nuclear power will necessarily play a major role in decarbonisation. Initially a single proven design will be used for all new reactors, but a new public company will also be created to develop innovative Generation IV designs for deployment in the medium-term.

Despite the praised heaped upon them, Labour does not view energy co-ops as a suitable model of ownership. They expect higher rates of returns on investment than would the PGB, leading to higher energy costs. These profits are then passed to those well-off enough to afford to invest in them. Furthermore, the local and uncoordinated nature of these co-ops is not conducive the national planning required to effectively decarbonise electricity. As such, all co-ops will be nationalised during the creation of the PGB, with sufficient compensation given to ensure all co-op members have their capital returned to them.

Feed-in tariffs are an expensive way to incentivise the installation of renewable energy capacity, in part because of the unsuitability of the technologies available to individual consumers. Photovoltaics are a poor choice for a cloudy, high-latitude country whose energy use peaks at the darkest times of the day and year, while small wind turbines are inherently uneconomical compared to large ones. Feed-in tariffs have the effect of increasing electricity bills in order to subsidise largely ineffective purchases of those rich enough to afford them. As such, feed-in tariffs will be replaced by net-metering for all new installations. Feed-in tariffs will be grandfathered for existing installations until the purchasing cost has been covered, at which point the costumer will be switched to a net-metering plan.

Electricity represents only 1/5 of energy consumption in the UK, with the rest made up mostly by gas and petrol. As these two fuels can not be decarbonised, they will have to be replaced by electricity. To this end, the PGB will work with Network Rail and newly-created public bus companies to electrify these modes of transport. It will also build a network of charge-points for electric vehicles, with billing integrated into household accounts. Additionally, the PGB will finance or lease heat pumps to households, as well as work with local authorities to build district heating systems, so as to ween the country off of gas. At the same time there will be a program of mass insulation of residential, commercial, and industrial buildings and the building code will be updated to ensure all new construction is done to the highest efficiency standards.

Taken together, these measures will deliver action on climate change in the most effective and equitable way possible, providing an example with which to show the rest of the world what can be achieved.