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Labour's 2030 Commitments

Commitment to 100% Clean Electricity

We have a (repeated) commitment from the new Secretary of State for Energy[1] that electricity will be zero carbon by 2030. The commitment is about electricity not heat. The question to be asked, less 'of' than 'about' the man who is now in charge of all things energy, is whether the commitment is plausible.

Well yes, says the Secretary of State, because in the Energy Department is an outfit dubbed 'Mission Control' which will work with, *inter alia*, National Grid and ESO to "speed up the connection of new power infrastructure".

Fine, but in May 2023 the ENA[2] agreed to implement **urgent** interim solutions to connect batteries. The first to connect will be in 2025, two years after that agreement and five years before the net zero commitment. With that sort of response, Mission Control does not offer the encouragement needed.

There isn't enough capacity on the networks. Batteries help create capacity, but they don't solve the problem. More infrastructure is needed.

Building wires takes time. The Electricity Networks Commissioner report (June 2023)[3] argued for reforms to reduce the time to develop network infrastructure from 14 to 7 years and said that by 2030 "around four times as much new transmission network will be needed in the next seven years as was built since 1990". In sum, infrastructure takes a long time and a great deal of it is needed by the government's target date. It will be five-to-seven years before the system

[1] Real title Secretary of State for Energy Security and Net Zero; quotations from government are from the first page of the Department's website entries
[2] Energy Networks Association
[3] https://es.catapult.org.uk/report/electricity-networks-commissioner-report/

has the capacity it needs, *provided* planning rules are changed. Ergo, the necessary capacity will not be in place before 2030.

There are, in theory, 'smart' alternatives (or additions) to network expansion – both technological management e.g., creating local networks or substantially increasing the scale of demand side response. For either to have real impact networks need advanced technology (none of them yet has an adequate IT system) or government intervention to transform the way we think about DSR.

In the absence of major, immediate, step-changes in the way networks are managed, the 2030 zero-carbon target won't be met.

Commitment to Lower Bills

Part of the commitment to the 2030 target is the commitment to lower bills. This involves a peculiar oversight - payment pay for the network upgrades.

Battery projects able to connect before the mid-to-late 2030s have been told their connections are interim and allow networks to stop them exporting/importing without compensation - permitted by the regulator in the absence of sufficient network infrastructure.

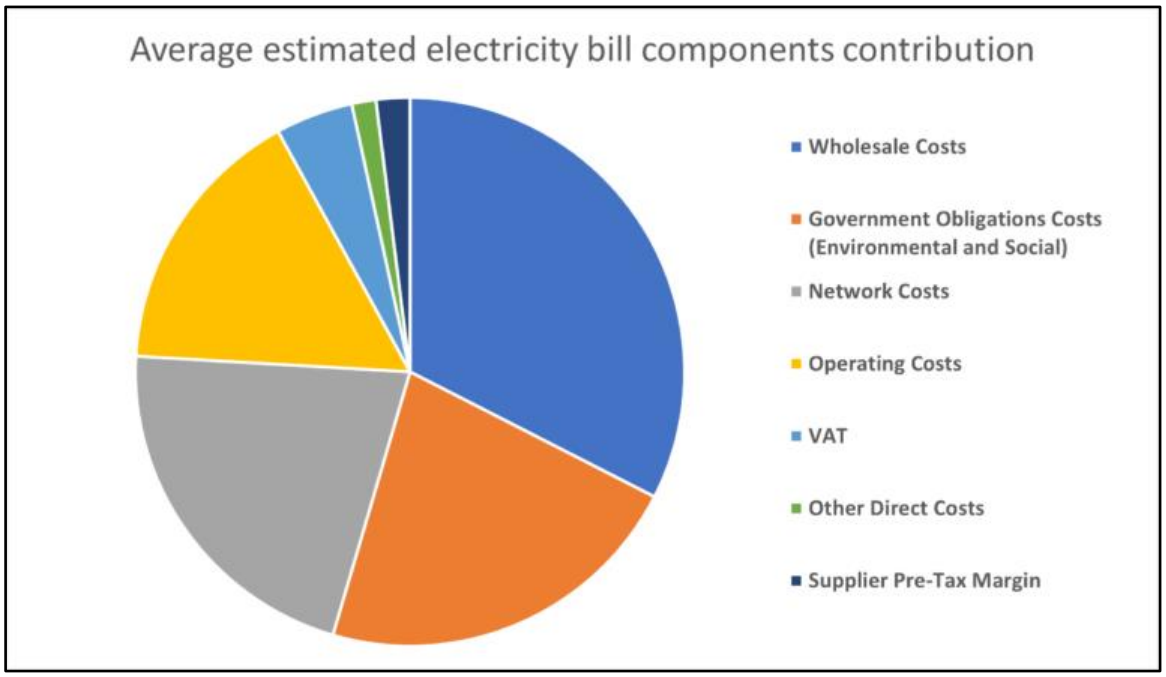
Infrastructure will be built (network contracts make that clear). At some unspecified time these 'interim' arrangements will suddenly be firm. Connectees will then have to pay 'their share' of the costs of the infrastructure. They don't know what the costs to them will be, how they will be charged or how much they will be charged. My guess is that National Grid hasn't yet worked it out, but it's only a guess: there is no clear information.

What that means for consumers is there will be a cost increase (of an unknown amount at an unknown time). Those who pay these costs will pass them on.

The Secretary of State says: "Years of underinvestment has left [us] suffering energy insecurity, [and]… paying the price through…energy bills…"

In the context of the net zero and low price commitments, this suggests that new network infrastructure is needed but either (a) won't be costly or (b) won't be paid by consumers. But it *is* costly and it *will* be paid by consumers.

See the Imperial College pie chart below:[4]



The pie chart shows the different elements of a standard electricity bill. In doing so it shows how electricity costs could, by fiat, be artificially reduced by removing the orange segment. But of course, the grey segment will (in the early 2030s) be greater, or even much greater, than at the date of the pie chart.

Imagine (for the sake of argument) that the net zero target is reached by 2030. It will not be at a real substantial lower cost than now if all that happens is government moves suppliers' obligations elsewhere. Not only is that an

[4] https://electricitycosts.org.uk/electricity-bill-charges/

artificial cost decrease, but a fair amount of that saving will be overtaken by network infrastructure costs. So (to revert to the pie chart) the orange will disappear and the grey will extend.

The outcome is that prices won't predictably go down substantially.

Will they go down *at all*?

An electricity system cannot run on intermittent plant alone. Some form of non-intermittent plant is needed.

If net zero rules out gas plant as the main non-intermittent support for the entire system (supported by some amount of lifetime-extended nuclear plant), what stands in its place? Although there are plans for a 'fleet' of small nuclear plants, they are, at best, nascent and the time the bigger new nuclear plants are to come online is continually being pushed back into the future, beyond 2030 in most cases. Plus, it may need saying, nuclear plant is unable to do what gas plant can, ramp up and down in response to varying demand.

If net zero means gas generation is ruled out (for electricity, not heat); if new nuclear is too far in the future and existing nuclear is insufficient to fill the space left by gas plant and neither are flexible to demand, on what basis do we know the lights will come on?

The Secretary of State *must* have an answer. It would be good to know what it is if we are to take Labour's plans and, importantly, the new Secretary of State, seriously. If not, the government's plans are a spiel rather than a well thought-out set of policies for the future. Until we have answers, we have to assume the plans are spiel rather than well-thought out policies.