

STAKEHOLDER FEEDBACK ON THE PROPOSED SCENARIOS by MARTIN KAMENER

The scenarios are designed to be a part of AEMO's charter to develop an Optimal Developmental Path (ODP) for the transition to a Net-Zero Carbon economy, specifically to create plausible, distinctive and broad-based environments in which the future of energy production will need to contend and to help ensure the transition to a net zero economy occurs with a minimised risk of over investment.

To achieve AEMO's aims a fine balance between engineering and socioeconomic considerations needs to be achieved. The pressure on this balance comes from the transition's timelines and the competing demands of producers and consumers. For the following reasons, I believe that the current expression of the scenarios challenges rather than supports this intent.

1. Rather than focussing on the opportunity for economic growth that the transition enables, the three scenarios are differentiated by differing economic growth factors.

This underlying construction of the reasons for different scenarios is at odds to most perspectives on the value of the transition. From the Inflation Reduction Act in America, or the Future Made in Australia, it is clearly the transition that drives economic growth rather than economic growth that drive the transition. The scenarios need to reflect the determination of the transition to drive the economy.

2. There appears to be insufficient consideration of the risk to the basic charter of the transition, that is to attain the carbon reduction targets.

The three scenarios don't question whether the targets will be attained, rather they simply assume each of the methodologies will reach the targets. This is not plausible.

3. The scenarios desire is to be technology agnostic; however, to be truly so, any considered technology needs to be assessed for both its readiness for implementation and for its risk of implementation.

Without allowing for a factoring in of a technology's readiness and risk into a scenario, any certainty about attainment in that scenario cannot be justified.

4. Cheap and abundant zero carbon electricity is a desired outcome of the ISP's ODP, without structuring this as a central determining factor, the scenarios focus will inappropriately be weighted towards investment risk, rather than outcome risk.

An effective measure of a scenario's chance of achieving the desired outcome would be to measure the impact of its construct on the outcome of price, both wholesale and retail. Indeed, rather than use unpredictable economic factors to create the three scenarios, dividing them by supply price might be a much more effective mechanism.

Price of supply is a fundamental economic factor whose impact on an economy and to social license is well understood, and as consequence it can be considered directly proportional to the value the scenarios have placed on social license by the scenarios. A lack of focus on supply pricing reflects a lack of focus on social license.

The price of supply will define the transition and so for the scenarios to be a valid basis for the ODP, a balance between the investment risk and social license risk needs to be considered in the scenarios.

STAKEHOLDER FEEDBACK ON THE PROPOSED SCENARIOS by MARTIN KAMENER

Plausibility

To be a plausible path to achieving the carbon reduction targets, the scenarios need to incorporate the proposed timing and likelihood of a technology's implementation. The scenarios have no real recognition of this with their focus on promise rather than delivery.

Timing of implementation directly impacts achieving the carbon reduction goals and the social license for the implementation. The lack of timing as a measured factor, is being exploited by proponents of both carbon intensive energy production and proponents of nuclear energy to delay and impede the transition.

The dependence and focus on future fuels such as Hydrogen and Biomass gas, as well as engineering promises such as pumped hydro and the building of transmission lines doesn't reduce the current cost of electricity, and consequently diminishes the social license for the transition. To promote social license, it is vital that the consumer sees results rather than promises and the scenarios' focus on expensive large future technologies needs to be balanced by technologies that are ready to be implemented and their consequent feedback loops into the energy market. The importance of delivering change now as well as later needs to be considered by the scenarios as an essential part of plausibility.

Regulatory and planning acceptance is challenging many assumptions within the scenarios. This risk needs to be acknowledged in any scenario as a risk associated with a technology's deployment. What is the back up if a transmission line can't get planning approval or is delayed or if a developer can't deliver a technology on time. By not considering timing and probability within the scenarios their plausibility is diminished.

Each scenario calmly assumes that the carbon reduction requirements will be achieved. The challenges in attaining the carbon reduction are enormous and so attainment itself need to be addressed as a risk, rather than as a certainty. Ignoring the challenge to attainment is not a plausible position to take.

Including economic conditions as a base determiner of the path for the transition is not logical, nor plausible. As stated earlier, it is the transition that needs to drive the economy, not the economy that needs to drive the transition. Price is a much more plausible factor to delineate between the scenarios, rather than unpredictable economic factors.

Distinctive and broad based

To be distinctive and broad based a scenario should take the perspective of consumers as well as producers into consideration. Delivering on the cheaper energy for consumers promise is a key factor of the ODP and by not measuring for this in the scenarios, their validity is challenged. There is no evidence that price is being used as a measure in the scenarios.

Including the consideration of large industrial load closures without including consideration of the need to produce cheap energy for consumers, underlines that the scenario's focus is on investment risk for producers rather than the social license risk for consumers. Using a predicted electricity price for consumers as an important measure in the scenarios will have a material impact on many of the conclusions that the ISP makes as the scenarios feed up through the ISP's deliberations.

Little risk to over investment.

The focus on energy production to supply the transmission grid rather than a balanced focus on energy production both in the distribution grid and in the transmission grid, risks over investment. This is pointed out directly in the ISP but does not appear to be reflected in the construct of the scenarios. As a consequence the importance of the orchestration of CERs through VPPs and the role this needs to play needs more emphasis in the scenarios.

A distinction and then a probabilistic balance between the roles of the two grids is required by the scenarios in this regard. The ISP has acknowledged the large role that CER and VPP's will play in the transition and this needs to be written into the scenarios appropriately. The lack of consideration of the required balance, suggests that distributed energy production is not being adequately considered in the scenarios. As this differs markedly from the direction stated in the ISP, this incongruity needs to be resolved.

In Conclusion

The scenarios appear to view the transition question as an engineering question rather than as both a combined engineering question and socioeconomic question. The challenge for the scenarios is to find the correct balance between the two and to help AEMO design the ISP, they are required to achieve this. A more adequate use of price of supply as a measure throughout the scenarios would go a long way towards rebalancing this issue.

For the reasons that I have explored above, I believe that in order to achieve AEMO's aims, there needs to be further evolution of the scenarios to effectively support AEMO's function in planning the transition.