

MEMORANDUM

7 June 2018

From: John Hancock (IPAG Chairperson)

To: Members of the Innovation and Participation Advisory Group

IPAG input to Electricity Authority Board annual strategic planning process

Building on our conversation with the Board over lunch on May 3, I've been in touch with the Chair and Authority staff to shape a small project in which the IPAG could bring some independent thinking into the Board's annual strategic planning process.

We should focus on leading a discussion about the potential evolutions of the market prior to the Board's strategic planning session on 5 September.

My understanding is that the Board would like the IPAG to consider the capability of the current regulatory arrangements for the electricity sector to promote efficient adoption and operation of potential new technologies and business models, or whether new arrangements might be desirable. This will require the group to think not only about the distribution markets that it is considering in its work on Equal Access, but also about the implications of maturing and evolving competition in the downstream parts of the industry on the existing transmission, wholesale market and service provider arrangements.

In that regard, the specific features of the economics surrounding the New Zealand electricity market—its very high reliance on low marginal cost but site dependent renewable generation, sparse population in much of the country, unequal demand and demand growth in various regions etc.—will need to be considered. Also important may be the market and regulatory arrangements we currently have: a locational marginal pricing (LMP) market with some demand side participation and co-optimisation of reserves; markets for most ancillary services; widespread digital metering; no licensing arrangements or mandated tariffs; etc.

Approach

The Authority has engaged Dave Smith of Creative Energy Consulting to facilitate our investigation of these futures. Dave has carried out a project for the Australian Energy Market Commission (AEMC) on a scope that was very similar to ours.

The AEMC work developed a comprehensive framework that described current and prospective distributed energy technology and services, and how these could interact with energy markets at the retail, distribution and wholesale/transmission levels. The framework identified and defined lists of categories relating to market roles and entities, services, tariff structures and market design elements. These various elements were then used to construct and describe a range of plausible alternative market designs.

I've suggested that we use this work to develop frameworks for an IPAG workshop in our July meeting.

The subject might be summarised as “how bottom-up meets top-down”. Looking from the bottom-up, individual innovators seek to devise profitable new services, or lower-cost ways of providing existing services. But these innovators may face regulatory barriers or obstacles to achieving these aims.

From the top-down, market regulators establish regulations to protect and promote consumer interests, in the form of market efficiency and system reliability. The obstacles to innovation created by these regulations might be deliberate: for example, in outlawing new devices that adversely impact network reliability. Or they might be accidental: for example, in disallowing a service that had never previously been considered technically feasible. Or, finally, they might be part of a conscious trade-off: for example, uniformity in distribution tariffs might promote transparency and stability for customers, but at the same time could lead to demand management being undervalued in some locations.

Regulations can create obstacles by their presence or their absence: for example, an absence of restrictions on network businesses could allow them to participate in, and dominate, some contestable markets. So “missing” regulations must also be considered.

The project must consider not just regulatory obstacles to efficient innovation, but also the converse: regulations that could promote inefficient innovation. In this context, “inefficient” means new services that either give rise to negative externalities (eg, by compromising system reliability or security) or overly reward the user simply by allowing existing market “taxes” to be avoided.

New technologies have introduced an unprecedented rapidity of change to the market, for which the existing governance framework – for example, around rule change processes – was not designed. Thus, consideration needs to extend to the “meta-regulations” which define the market governance to assess whether these might also create obstacles to innovation.

Project Stages

Initial Tele/Videocall

Dave will join us by tele/videoconference on 14 June. On this call, he will present some initial ideas about how to structure the workshop. This would probably be at the level of setting out the scope of, and objectives for, each workshop session, and then introducing the proposed frameworks and categories. The call will provide an opportunity for members to provide suggestions about what they would like, or expect, to achieve at the workshop and what facilitation role I could best play.

Workshop

We will dedicate half of our meeting on 31 July to a workshop on this topic where we will:

1. discuss Dave's proposed frameworks and structures
2. gather group inputs and ideas around innovations and likely regulatory obstacles and barriers
3. incorporate these inputs within the frameworks and/or adapt my frameworks to accommodate them
4. identify the problematic regulations and assess where those fit within my framework: eg, by considering the "deliberate", "accidental" and "trade-off" categories.

Feedback

Share themes and frameworks with Authority Board in a workshop – potentially including Authority staff and other independents prior to 5 September.

A handwritten signature in cursive script, appearing to read 'John Hancock', with a long horizontal flourish underneath.

John Hancock
Chairperson