

Appendix K

CEG Review – Regulatory Cost of Supply Methodology



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Dear Mike

Review of Integral Energy's test for cross subsidy

Under section 6.18.5(a) of the National Electricity Rules (the Rules), Integral Energy must ensure that the revenue that it expects to recover from each tariff class is less than the standalone costs of serving those customers, but greater than the costs that may be avoided by not serving those customers.

Integral Energy has provided CEG with a *Regulatory Cost of Supply Model*, in which it concludes that its proposed pricing will satisfy these bounds. CEG has reviewed this model and concludes that, on the basis of the model, Integral's proposed pricing will comply with the Rules in this respect.

The remainder of this letter briefly outlines definitions for standalone cost and avoidable cost and states why we believe that Integral's model provides a basis on which to conclude that its expected revenue lies between these for each tariff class.

Methodologies for estimating avoidable and standalone costs

In our opinion, there are two broad methodological approaches to estimating avoidable and standalone costs. The first of these is to hypothesise different costs associated with building anew a network with and without the relevant customer classes. This approach ignores the sunk nature of the existing network and calculates costs as follows:

Standalone cost for tariff class A	total cost of building and operating the network that Integral would design to serve only the customers in tariff class A
Avoidable cost for tariff class A	total cost of building and operating the network that Integral would design to serve all customers less total cost of building and operating the network that Integral would design to serve all customers <i>except</i> those in tariff class A

The second is to acknowledge the existence of the network as it presently stands today and to calculate standalone/avoidable taking the existing network design as a given. Under this approach costs are calculated as follows:

Standalone cost for tariff class A	total cost to Integral of using the existing network to serve only the customers in tariff class A
Avoidable cost for tariff class A	total cost to Integral of using the existing network to serve all customers less total cost to Integral of using the existing network to serve all customers <i>except</i> those in tariff class A

We note that the second definition involves a more 'real world' definition of avoidable costs. Namely, it is the costs that would actually be avoided if a set of customers did not need to be served (rather than the hypothetical costs that would have been avoided if that set of customers had never existed).

The Rules are not prescriptive about the methodology used to calculate avoidable and standalone cost. However, given a regulatory framework which recognises the existence and value of sunk costs and does not, in general, seek to conduct ex-post optimisation on the structure of providers networks, one may reasonably conclude that the second method is consistent with the general approach set out in the Rules. This is the definition that we proceed with in reviewing Integral's *Regulatory Cost of Supply Model*. We note that the first approach would require the design of a hypothetically new network for each customer class for which avoidable costs were to be estimated.

Methodology applied by Integral

The approach used by Integral to estimate standalone and avoidable costs is an *allocation of total costs*, rather than an estimate of *avoidable costs*. Nonetheless, we believe it is possible to make conclusions about the relative magnitude of standalone and avoidable costs from Integral's model.

To estimate standalone costs, Integral's model makes an allocation of all costs (network and overhead costs) to each tariff class. Through this allocation, the standalone cost of serving each separate tariff class must sum to the standalone cost of serving all customers. The implicit assumption underlying this calculation is that there are no economies of scale or scope in the provision of electricity networks. Since it is clear that there are economies of scale and scope and that they are material, we can conclude that Integral's standalone costs will be materially higher than those estimated in its model.

Similarly, Integral's model makes an allocation of all 'direct' (or causative) costs to estimate the level avoidable costs for each tariff class. These do not include overheads such as motor vehicles and information technology systems but do include a full allocation of all network assets and network operating and maintenance costs. Again, this assumes that there are no economies of scale or scope in relation to network assets (since each tariff class must bear a proportional share of direct costs with the proportions summing to unity). In effect, the only costs that are not treated as avoidable are overheads. Taking into account the existence of such economies of scale, Integral's avoidable costs will be materially lower than those estimated in its model.

Given that Integral's proposed revenues fall between the bounds of avoidable and standalone cost as estimated in its *Regulatory Cost of Supply Model*, and that any



amendments to Integral Energy's estimates would cause these bounds to widen, rather than to narrow, CEG is satisfied that Integral's pricing meets the requirements of section 6.18.5(a) of the Rules.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Tom Hird', with a long horizontal flourish extending to the right.

Tom Hird
Director