

Manitoba Hydro Undertaking #67

In response to MIPUG's counsel, ICF implied that it would be reasonable to advance construction and accept the possibility of book losses in the early years of service. Is this more or less your view? Would your opinion change if the advancement of the build for domestic need was a decade or so? And let us say that the level of potential early year losses was not assured.

ICF Response:

First, the criterion typically used for making utility investment is minimizing expected net revenue requirements on a present value basis, subject to the requirement that service is provided reliably and prudently. The present value means that costs and benefits of future years are discounted more than near term costs and benefits. Under this approach, the preferred program of activities can be one that has initial losses, but that on a net present value basis is the best one available. Almost all capital investments have cash outflows concentrated up front, and hence, discounting is ubiquitous to account for the effects of deferral and the risk increases over time. Thus, the period per se is not critical (e.g., a decade) as long as the cash flows are discounted, and the one with the least present value is chosen.

The calculation of costs (in minimizing expected net revenue requirements) should be done carefully. First, it should include net revenues from off-system sales. Thus, waiting until there is a domestic need is not an overriding criterion if it permits power purchasers to contribute heavily to bringing the capacity online and avoiding rate shocks. Second, it should include transmission costs, including the avoidance of transmission costs. Third, it should also include unserved energy costs (i.e., the cost to customers of blackouts) or the avoidance of unserved energy costs. In MH's case, failure to secure transmission could require it to build its own transmission or build a back-up fleet of power plants to avoid unserved energy costs during a drought worse than the worst on record, or incur high cost blackouts.

In addition to the above considerations, the analysis should account for the fact that capacity expansion options may be lumpy, in that it may not be possible to adjust capacity expansion and contracts one year at a time. Furthermore, there might be a discrete window of opportunity that precludes changes in schedule.

Qualitative and risk considerations can also be factored in to the analysis. However, as noted above, the utility business ultimately has risks that cannot be avoided. The existence of all uncertainty cannot be eliminated. Rather, the uncertainty of early year losses from the construction program should be considered in light of and are considerably outweighed by the benefits discussed above (avoiding rate shocks and significantly lowering the probability of costly blackouts).