

ELECTRICITY MARKET REFORM – AN IMPROVED MODEL

1. The Consultation Paper recognises the failure of the present electricity market system to provide both a proper balance of different types of generation and adequate capacity margins on the system. It proposes to rectify this by offering financial inducements so as to manipulate the individual elements of the market in what would amount to a very considerable and complex series of interventions in the present market system. The Royal Academy of Engineering jointly with the IET has warned about the danger of unintended consequences with such complexity. Whilst the Consultation Paper examines different methods and levels of financial inducements it fails to consider any alternative method of achieving the desired results. This paper proposes a simpler and more effective system and takes into account a working lifetime's experience, much of it at Board level, of the electricity supply industries in North America and the UK.

2. In proposing Feed-In-Tariffs and/or Capacity Payments for particular types of generating plant, the paper implicitly acknowledges that some authority has to take an overall view of the optimum mix of the different types of generating plant and capacity margins. In other words it is essential to look at the system as a system; there are no grounds for thinking that the generators, making a series of independent and unrelated investment decisions, will collectively achieve the desired result. But that is what the existing market assumes.

3. With the model proposed in the Consultation Paper it would be the Government (or a Government Agency) which would have the responsibility for exercising this overall control , effectively determining in considerable detail the principal investment decisions for the Industry- and attracting the blame when they get it wrong. For example the 8-12% plant margin recommended in the Consultative Paper would carry an unacceptable risk of power cuts even with stable load growth and established types of generating plant. With the added uncertainty today as regards future demand growth and the lack of experience of the hazards with a high proportion of intermittent wind generators on the system, it would be guaranteed to lead to widespread and prolonged power cuts.

4. The proposal that a Government Agency achieve the required system by offering financial inducements in the hope of achieving the required individual investment decisions (and the best deal for consumers), in effect tinkering with the market, is unduly optimistic. What experience there is of such inducements suggests there can be no certainty that they will deliver the objectives and that at the very least they will require frequent and continuing adjustments. There is no way of knowing whether a set carbon price will achieve a desired outcome in terms of a particular type of generation or whether it will result in excessive profits for some generators? Furthermore the implications of the proposals to influence investment decisions by offering Feed-in Tariffs and Capacity Payments for selected types of generation have not been fully evaluated, whether as regards their effects on generators who may well be reluctant to commit to particular investments unless or until they qualify for such safeguards, or in respect of our industrial and engineering resources.

5. For example, in the competitive market proposed for Feed-In-Tariffs and Capacity, generators would be under extreme pressure to stretch claimed output by cutting margins so reducing lifetime operating reliability and output. To assess this implies a level of technical competence that it would be impossible for the Assessor to achieve while the actual outcomes would not be known for many years. Nor can there be any confidence that a particular level of Feed-In-Tariff, for say new build nuclear, would attract bids for the required capacity. For the additional capacity required it would then be necessary to offer a higher tariff in a further round of bidding and presumably then to offer the higher tariff retrospectively to earlier bidders- to the disadvantage of the consumer. To do otherwise would be manifestly unfair to the bidders in the earlier round and would hardly be calculated to encourage investors to accept the significantly greater risks of building 'first of a kind'. Indeed it is to be expected that some generators will prefer to concentrate on low risk investments such as highly subsidised wind power with a short pay back period beginning in two years rather than the six years of 'first of a kind' nuclear plant, so boosting their profitability and share price at the expense of those generators who are prepared to take the longer term view in the national interest.

6 One has to ask whether it is appropriate, as proposed in the Consultative Paper, for Government to get so involved in the investment decisions of the industry- more intrusively even than when the industry was nationalised. There surely has to be a better model in which the Government would pursue its proper role, closer to hands-off monitoring of the industry's performance..

7. What is clear is that if the Industry is to have the proper incentives to take the correct decisions, as it should, then each generator has to be responsible for a 'system'. Rather than each generator being free to take a series of independent and unrelated investment decisions, as in the present market, the aim should be a structure for the Industry in which each generator will, as a condition of his license, be required to comply with specified guideline investment patterns. Under this 'system' regime Generators would have a statutory obligation to supply and be liable to heavy compensation payments for failure to meet their contracted demand. It envisages a maximum of say five 'Central Generators', each large enough to provide the required plant mix having regard to the economic unit size of different types of generating plant. Generators could provide the required capacities directly or by purchasing output from other generators including independent commercial developers. It would then be for the Government Agency to provide only the guidelines as to the appropriate mix of plant (a task delegated to a new Agency or possibly to the existing regulator Ofgem) with which each Generator would be required to comply, except only to the extent they were able to justify to the Agency any departures from the approved model. This concentrates the obligations and responsibilities on the generators where they should be rather than on the Government/ Agency. New entrants could be encouraged by requiring Central Generators to invite tenders for output at the same time as contracting for new plant. Just as now, it would be open to the Government via the Agency to offer inducements to encourage early applications of promising new technologies- or if considered appropriate, to require all Central Generators to participate financially in high risk prototypes for new technologies.

8. With this model, achieving the required plant mix and capacity margins is guaranteed and at the lowest costs to the consumer. One has to ask, if as the Consultative Paper implies, the outcomes required are known where is the merit in the Government/Agency attempting to second guess what financial inducements are required as an encouragement to the various generators to collectively provide the required mix of plant types and capacity margins. This is difficult (impossible?) enough but equally demanding would be the need for the Government/ Agency to adjudicate on tenders for new capacity in response to auctions under Feed-In-Tariffs and Capacity regimes. As the Paper says, all this will involve difficult (impossible?) judgments and introduces an unacceptable level of uncertainty along with a much greater Government/ Agency level of intrusion than is necessary or justified.

9. The main principles of the model proposed here are not new - it builds on experience with the many regulated private sector utilities through out the world (but without the difficult and contentious requirement to set a return on capital) and combines this with the advantages of the present UK competitive market. Generators would have a clear incentive to deliver what is required. While it is more usual for regulated utilities to have a defined area of supply, this is not essential and would be incompatible with the present competitive regime in the UK. Generators would be free, as now, to compete for sales but would be required to adjust their generating capacity accordingly (either by construction of new plant or by purchasing output) - having due regard to the continuing requirement to maintain an appropriate portfolio of plant and capacity margin.

12. In this model it would be for National Grid as the system operator to maintain day to day records of plant availability and output as a discipline on the central generators and as a basis for any penalties which became due from a failure to perform.

13. In brief this proposal combines the best elements of the Regulated Utility system (but without the need to set returns on capital) with the disciplines of the competitive UK market. It minimises the need for Government/Agency intervention. Because it does not break entirely new ground as do the Consultative Paper proposals, there can be confidence that it will achieve all the objectives required but in a more straightforward manner and without detracting from the responsibility of the generators who would all contribute fairly to achieve the desired objectives. It would also be relatively simple to introduce requiring minimum changes from the present UK Electricity Market structure.

14. Finally it avoids the need for Government / Agency to stray into areas in which they will find it difficult to match the expertise of the generators and leaves the Government free to exercise its proper role of independent monitoring of the industry.

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