

# Fixed Cost of a New Entrant Peaking Plant for the Capacity Payment Mechanism

AIP/SEM/07/14

## Response by Airtricity

### Scope of response

The paper invites comments on two issues, capex costs and energy and ancillary services rents. Within the text the paper also asked for views on the liquidity of the secondary gas capacity market and the proposed changes to BGE's capacity booking arrangements. Based on our review of the proposed changes to the BGE capacity booking arrangements we have also included comments on these areas.

### Capex costs and energy rents

The paper suggests that a peaking plant will have an availability of 95% (13 days planned, 2% FOR). However, each start of a plant incurs the equivalent of a certain number of operating hours, e.g. 8-16 hours for each start. If peak plants are started frequently, eg twice per day, then this assumption of availability may be unduly optimistic. We believe that additional Plexos modeling is essential before an informed decision can be reached on the value of this fundamental parameter.

The paper proposes two methods for calculating energy rents;

- one based on a hypothetical unit commitment based on "as is" SMP/SPh forecasts and one based on inclusion of a new peaking unit in a Plexos run. We are concerned that the hypothetical schedule could potentially be infeasible/impractical due to a high number of start/stops, though periods when SRMC is greater than SPh are excluded. However, we note that periods when FULL costs are greater than SMP are also excluded, which will not necessarily occur in real outturn MSQs. Such periods will reduce energy rents.
- The second option is a Plexos analysis, using either a 1MW proxy or full sized (180MW) unit. With the full sized unit analysis unit commitment is derived from adding the unit to the existing plant database, but the prices derived are based on another run that assumes that the new plant does not exist. The logic of this approach is not immediately apparent, as this scenario could never exist in practice (i.e. the unit exists but does not affect prices).

We prefer the approach based on the hypothetical schedule, as it has the benefit of being transparent, although it could be improved by including a further optimisation to limit the number of annual starts.

If the alternative Plexos option is chosen, logic would suggest that a run using both the unit commitment *and* prices resulting from addition of a notional 180 MW unit is the only internally consistent option.

### Gas market and transportation issues

In considering operation of peaking capacity, it must be assumed that, if it is economic for lower efficiency peak plant to run on gas, then available higher efficiency CCGTs will be already making full use of their capacity. On the basis of this reasonable assumption, any daily liquidity in capacity that exists from bilateral trades will largely be sourced from;

- CCGTs on planned outage - this is likely to be scheduled for summer periods, or
- Gas suppliers with excess annual booking due to temperature sensitive demand (again focused in summer).

It is not therefore clear that any significant bilateral liquidity can be expected in winter, when gas would be most needed by peaking plant.

The BGE principles state that transportation revenue will not be adversely affected by new short-term services. Based on the bilateral market above, demand from BGE short-term services may well be concentrated in winter. This suggests a need for premium pricing, compared with annual pro-rata daily charges, if gross income is not to be affected. Furthermore, booking priority is given to annual and then monthly services. As daily services can only be booked up to 8 days in advance, there is therefore no guarantee that any daily peak capacity service will actually be available from BGE in winter. The proposed day ahead interruptible service is therefore unlikely to be useful to peaking generators as they cannot offer dual fuel bid prices, to allow for within-day interruption.

Airtricity therefore believes that, taking account of both likely both bilateral market circumstances and BGE's proposed capacity booking arrangements, energy rents should be calculated on the assumption of gas fuel usage in summer and distillate in winter.