



GDFM – Potential impacts



Background

Why did we commission a review of the GDFM?

The gas demand methodology was developed in the 1980s. Weather patterns have changed since then and the proportion of renewable generation on the network has increased. We believe that it would be prudent to check and update the methodology now.

Why use a consultant?

They have the right capabilities, impartiality and capacity. All three are important but impartiality is key as the outputs may lead to changes in the gas industry

GDFM areas of change

- The findings of the Gas Demand Methodology Review identified two areas of potential improvement
 - Predictor
 - Error Modelling
- It is expected that these changes could see the Peak Day demand change of +/-5%. This percentage will change with time depending on the amount of gas fired power generation and weather dependent generation.
 - This is an estimate the actual materiality cannot be provided without modelling or testing.
- LDZ Demands were out of scope of the review and was focused on NTS directly connected demand, mainly gas demand for power
- NB This changes only impact Peak demand, annual demand will not be impacted

Assessment of the predictor

- The current predictor only has one demand driver in the Composite Weather Variable (CVW)
- Testing highlighted that CWV has limited explanatory power for NTS connected demand
- Testing identified residual electricity demand was a good indicator for NTS Gas fired electricity generation sites and the Irish interconnector
 - Residual Electricity Demand = Total electricity demand less renewable generation
- With no accurate predictor for NTS connected demands there is a risk that Peak day demand is understated

Error Modelling

- The current methodology simulates error terms at a site level
- This implies error terms are independent across sites
- Testing across a sample of sites has shown that they are not independent
- The recommendation is to move to system level error modelling but further analysis is required
- It is estimated that the current error term modelling risks understating total system demand on a peak day