



# Irish Academy of Engineering

## Energy – Information Bulletin No. 2 24<sup>th</sup> July 2014

### Electricity Demand and Supply in the Republic

#### Demand

- Between 2008 and 2014 electricity consumption declined by 8%.
- The peak demand on the system dropped from over 5000MW in 2008 to circa 4700MW in 2014.
- The decline in demand is due to the economic downturn but also reflects the fact that demand for electricity in developed countries is either static or increasing at a slow rate. In the UK demand in 2013 was at the same level as in 1998. The reasons for this change in electricity demand include energy efficiency, the changing nature of industry, relocation of manufacturing industries and country specific changing weather patterns.

#### Supply

- In the period 2007 – 2014 generating capacity in the Republic rose by over 33% from 7465MW in 2007 to 10000MW in 2014. The additional capacity includes windpower, gas fired plants and new interconnection to the U.K. Allowing for normal operating margins, there is now 2000MW of surplus generating capacity in the Republic of Ireland.
- The estimated cost of adding this additional capacity and the associated networks since 2007 is of the order of €5 billion. Investment on this scale, as demand reduced raises serious economic issues.
- The Eirgrid median 10 year forecast for the period to 2023 is for growth in demand of 13% from current levels with growth in peak demand of approximately 500MW. Demand in 2023 is forecast to be approximately 6% higher than in 2008.
- On this basis there is no need for any new capacity to meet demand for least the next 10 years. Existing capacity can comfortably cover any increased demand until 2023.

- Based on current Irish energy policies another 3000MW+ of generating capacity (mainly windpower) will be added to the system. The investment requirement for this new capacity and associated major networks constructed to facilitate its connection to the grid over the next 10 years is in the range of €5 billion to €7 billion. This will lead to redundancy of existing plant at a high cost, (i.e. stranded assets).
- The only basis on which this capacity can be financed and developed is a set of guarantees approved by the Government and Regulator which in effect underpin the commercial risk of the developers. These include customer-subsidised guaranteed tariffs, priority access to the grid and capacity payments.
- Given the absence of corresponding increased demand and additional revenue streams the remuneration of the bulk of the capital investment and associated subsidies will have to be carried by the electricity customers in the Republic, i.e., householders and business. Owners of conventional generating assets (e.g.the State) will face major devaluation of assets, for example, Bord Gáis lost €300 million on the recent sale of its new gas fired power plant in Cork.
- **The amount of capital investment (circa €10 bn) that is not demand related raises issues for energy prices, competitiveness and employment growth in the Republic. This is a major policy issue/question.**