SIGA-HYDRO

Response to Consultation on DS3 System Services Enduring Tariffs

SIGA Hydro is developing a 360MW pumped storage plant at Silvermines, County Tipperary to serve the Irish electricity market.

Additional pumped storage capacity can be shown to have big economic and operational benefits, particularly in the context of the Irish market which is relatively small and isolated and which will have a large amount of variable wind and solar power connected. In order to achieve the benefits of additional pumped storage capacity in the Irish market, the new plant must be able to earn an adequate and reasonably certain return on investment.

Income from provision of DS3 services will be a vital component in securing investment. SIGA Hydro is very concerned that the proposed enduring tariff arrangements will not provide a basis for investment in pumped storage. The arrangements do not allow sufficient time for financing and construction of pumped storage plant. Also, the proposed capacity contract duration will make it very difficult for capital-intensive but worthwhile projects such as ours to be reasonably assured of recovering investment.

By eliminating long term financial predictability and signalling a short term view, the proposed tariff arrangements severely limit the competiveness of new entrants because;

- The small lock-in risks for the TSO under the DS3 contract arrangements outlined in regulatory decision SEM-14-108 will be translated into large revenue risks for individual new service providers.
- Large revenue risks at worst make financing impossible and at best increase the cost of finance. SIGA Hydro estimates that the cost of finance under the proposed 4 year tariffs would be 50% to 100% higher than the cost of finance under 15 or 20 year contracts. This makes capital intensive, otherwise highly competitive technologies, uncompetitive,
- While the proposed tariffs provide indications of spending caps, there is no detail on the minimum TSO spend for DS3 services. This adds to uncertainty.
- The lead time for new entrants appears to have been reduced to two years. This eliminates new service providers who plan to develop new highly effective plant with longer lead times in favour of “quick fix” plant.

We are further concerned that the arrangements may not be not sustainable but may be difficult to unwind if they continue in operation for a number of years. As wind and solar capacity increases after 2020, the number of trading periods with over 60% and over 70% system non-synchronous penetration (SNSP) will increase, leading to significant increases in total expenditure and increased income for service providers, without a corresponding increase in the value of the services. The TSOs should carry out analyses for the period beyond 2020 to examine the impact of their proposals on DS3 service spending and renewables curtailment, with particular reference the marginal cost of DS3 services compared with marginal reduction on curtailment.

There will be strong incentives for generators to trade in ways that will increase trading periods with high SNSP. For example, there seems to be an incentive for existing pumped storage to generate at minimum load rather than pump during periods of high wind penetration, which would increase the number of periods with greater than 60% SNSP.

Should the proposed tariff arrangements be established, there will be strong lobbying by existing providers to retain the arrangements, reducing the opportunity for new entrants such SIGA Hydro. Conventional thermal generators will claim that continuing DS3 income from the arrangements will be necessary to ensure their continuing operation.

The best way, in addition to DS3 services, to accommodate increasing non-synchronous generation is to increase dispatchable demand on the system. This would lead to reduced curtailment and price stabilisation, which would benefit both renewable generators and customers. SIGA Hydro can provide such dispatchable demand at relatively low cost. Furthermore, with the latest variable speed technology, SIGA Hydro will be to provide variable load and fast-acting dynamic response while both generating and pumping.

In order not to prejudice future new entry by worthwhile service providers, we suggest that the proposed tariff arrangements be put in place for the minimum possible period and that the Regulatory Authorities should bring forward their proposals for long-term procurement of DS3 services as soon as possible. We are surprised at the very short term view being taken by the TSO with very little evidence of planning beyond 2020 presented at the latest DS3 industry forum (Dundalk Aug 1st 2017). Prudent power system planning for the future requires a longer term strategy.

We suggest that overall long-term economic impact, including customer price impact, be taken into account when evaluating options for providing DS3 services. We are confident that addition of flexible pumped storage capacity will reduce electricity customer costs while maximising renewable energy capacity factor. Support of long-term contracts with reasonable revenue certainty will be required to realise the benefits of pumped storage and similar flexible demand and generation capacity.