CEER Feasibility of a pan-European gas TSO benchmarking

PE2GAS project – interim results from SUMICSID W3

REN view and comments

General

Following PE2GAS project sponsored by CEER as a feasibility study of a pan-European gas TSO benchmarking, in response to the 1st of December Workshop and the documentation obtained at the workshop, REN welcomes the opportunity to comment the interim results presented by SUMICSID over the feasibility analysis, and to openly discuss its concerns over the global approach, heterogeneity identification and management, and result gauging pitfalls especially regarding its possible use as an instrument for natural gas TSO performance evaluation, in particular for regulatory purposes.

Benchmarking has for long been in use by the industry at different levels. REN would like to emphasize that, since its inception in the early days of the Natural Gas Project for Portugal in 1993, REN engineering design construction and operational practice has been founded in robust decision making regarding costs and specifications, derived from sound technical standards, risk evaluation and industry best practices that have translated into a track record of flawless operation and reliable service from its network.

Benchmarking, is a common practice in exchanging industry best practices and therefore is always welcomed, provided the results reflect properly the situations it tries to evaluate.

In the Feasibility Study over the benchmark, the reasoning for the recommendations and approach to the establishment of its statistical significance seems to be very much in line with electricity transmission practice. Gas networks have major contributions for heterogeneity that may affect the conclusions, as the resulting number of standard cases available is significantly reduced.

Once or if the benchmark is agreed, it is of extreme importance how it will be performed and in particular if used for regulatory purposes, to ensure that the reports shall show the range of validity and applicability of the results in detail, in order to avoid misunderstandings from both regulators and regulated companies. In particular, it should provide a specific chapter on exceptions and limitations of the data and results and how they influence the different results taking into consideration the range of uncertainties identified.

The comments presented herewith have a necessarily reduced scope due to the short time allowed for responding together with REN not having been formally involved. Nevertheless depending on ERSE, the Portuguese regulator, REN will willingly provide on request, further feedback on these issues and if necessary on a quantitative basis.

A cost/benefit analysis should be foreseen, taken into consideration, in particular for cases like those of Portugal, where the usefulness of the effort and the applicability of such a benchmark seem to be difficult to grasp under so many heterogeneities.

Main specific concerns

The required comparability of participants may induce distortions and poor results

Engineering estimates and heterogeneity mitigation methodologies may not accommodate for specific sources of cost distortions and probably will translate into unfair results for the affected TSOs.

Infrastructures TOTEX

As a participant in GTBI benchmarking REN underwrites the conclusions from Prof. Tom Weyman-Jones report – "Commentary on An approach for benchmarking European gas transmission system operators", presented by National Grid at the 1st of December Workshop. According to our own experience, proper cost evaluation and allocation is a major issue when trying to consider the real interfaces to each company in its enterprise group environment

Historically, investments in the Portuguese gas network involve sparse single projects of high concentrated value, the statistical value of this is being highly arguable.

The Portuguese natural gas network was mostly built over a three year period from a greenfield situation without a proper ecosystem of suppliers in place. The construction and operation reflect these limitations both on cost and the level of subcontracting.

Development of a proper supplier expertise base and ecosystem, was an extra cost for the Portuguese system that may reveal necessary again in the future because most have been lost due to the lack of orders in the last years derived from the low investment levels.

Portugal is a peripheral small country with a network that bears higher costs for equipment and servicing than other similar companies closer to its suppliers. This affects even the maintenance and spares philosophy and management options, therefore OPEX cost is affected as well as its operations.

For network development, the small volume of the Portuguese system increments requires procurement that may reveal inefficient due to the low volumes that may be uninteresting to suppliers making also the procurement results more expensive (large diameter pipelines in reduced lengths, large ball valves in very small numbers, etc.).

These issues were less significant for electricity transmission because in the case of Portugal the purchasing volumes are still significant enough to justify cable manufacturing in Portugal as well as transformers, in a trade that has been present in Portugal for many years.

Design

Special attention should be taken while comparing systems that were developed in a specific market environment and had to comply with national requirements that are specific to each country.

For instance, the Portuguese system was designed to minimize future implementation of compressor stations, this was due to the fact that a quick buildup was expected due to the power plants, and gas was already becoming an expensive commodity. Other systems planned before, have certainly been based in different criteria according to their decision date. Network architecture depends much on the inputs and decisions that where set at the time they were designed and the available technologies (for instance MAOP of networks is much dependent on the type of steel available at competitive prices).

Also to be noted, as an example of specific technical regulations, the Portuguese system has to provide electrical actuators to valves with at least 8 hours autonomy and this affects directly the design and as a consequence the investment and operation cost of the electrical supply systems locally. Other time dependent variable is related with the environmental restrictions and mitigation issues. (Portugal had one of the longest HDD (Horizontal directional drilling) works ever in Europe, due to these restrictions).

Data and statistical significance

When it is suggested to use US data in the methodology, our concerns are even higher, because all the previous remarks become even more important, in the US all the arguments work even worse against the Portuguese standard practice, for exactly the same basic reasons, in particular a totally different approach to the technical and operational issues, and these will apply to any other country in the same situation.

Using the network as the output should be carefully evaluated because this is not the view of consumers and therefore the benchmark does not focus on the actual outputs users and consumers are directly interested in. We would also like to stress that again, the Portuguese pipelines and some other in Europe are built more like “distribution” pipelines than transmission pipelines due to the high number of stations involved per Km. This generates specific issues regarding TOTEX that should also be taken into consideration. (Portugal has more than double those of other countries).

Demand

At each country, the energy mix resulting from the different energy policies in place, explain gas demand, both present and future, therefore reflecting the infrastructure use rate.

The Portuguese system has a unique situation by having a major terminal and an historical connection to the Spanish system that provides a significant amount of the natural gas consumed in Portugal (70% in 2014). In fact, the LNG availability is exposed to world market prices and may be replaced by piped gas. This is not the situation on most of the European countries where LNG contributes to a limited amount of the global consumption.

In particular, the utilization regime was profoundly influenced by the regulatory criteria used in Portugal to allocate capacity. For many years users could get the capacity they used without

prior commitment to its payment. Only recently (from 2011 onwards) a capacity obligation came into play forcing agents to identify their requirements by contracting the capacity they plan to use. Long term network contracts prior to the regulatory obligations where all terminated in Portugal in 2006 and since then, contracts are issued on an annual basis.

Portugal is also particular in the power plant use. Portugal was the second country in the world in window generation share of energy consumption in 2012. The weight of CCGTs in the Portugal's gas demand peaked to about 45% of the total consumption in 2000 and at present is only 7%. This change was very much induced by an aggressive renewables program, particularly wind power, similar to what Germany is now starting to experience the consequences. Domestic gas consumption now around 8% only.

The Portuguese system is, as explained above, changing from a volume delivery system to a capacity delivery system.

Outputs and models

The demand volatility, the options between GNL/GN supply, the exposure to the markets and diverse national energy policies, the network heterogeneities and the specific issues affecting statistical significance of input and related output data, demand for a much more careful and diverse first approach. Multiple methodologies and further study must follow, to understand better the specificities of gas networks, its environment and outputs, and only then, after a proper discussion of the findings with the industry it will be possible to understand fully the applicability of a consistent and useful benchmarking approach.

REN

January 12, 2015

Pedro Furtado