

Liberalization and Regulation in the Netherlands

Benchmarking and Efficiency Analysis

One of the most important changes across the European energy industry has been the liberalization and deregulation following European legislation. In 1997, the European Electricity Directive came into force and set a binding timetable for the liberalization of electricity generation, distribution, and supply across Europe. In the Netherlands, the Directive was soon adopted and an independent regulator, the DTe, was established. In comparison to the approach adopted by its European counterparts, the Dutch program of liberalization is one of the most ambitious and far reaching.



The tariffs that the transmission and distribution network companies charge are subject to a price cap. The tariffs for 2000 were based on tariffs set in 1996 and are allowed to rise in line with inflation, but are simultaneously required to decrease by a factor X. This X factor varies between companies and reflects the level of economic inefficiency in that company. This form of tariff regulation is known as CPI-X (where CPI is the consumer price index) and is applied to a tariff basket to cover the efficient operating expenditure, rate of return, depreciation, and tax.

The goal is to set a target price reduction (the X factor) for companies that will force them to eliminate existing inefficiencies and pass the benefits on to consumers in the form of lower retail prices. If a company manages to reduce its costs by more than the X factor, it is allowed to keep the excess. The incentive structure, therefore, remains balanced and the gains from efficiency improvements are shared between customers and shareholders.

To determine the possible cost savings, the independent Dutch regulator has benchmarked companies on the basis

of operating expenditure and total cost, and established the relative economic efficiency of the companies in delivering a specified set of outputs for a unit of input. Regulatory benchmarking and efficiency analyses, using the techniques described below, are applied at a general level examining the production functions of firms.

These techniques have been applied in the telecommunications, banking, environmental, and retail industries. Analysis allows a firm to determine its relative position against its competitors and, potentially, use this information to optimize its production process to extract the most profit from its operations. The studies also indicate which efficient companies the firms should be using for comparison. For example, for a major Dutch client, ICF Consulting determined that the comparison firms were Southern California Edison (USA) and Power NZ (New Zealand). The next phase would be to examine our client's operations in more detail and compare them to those of Southern California Edison and Power NZ to identify possible efficiency savings.

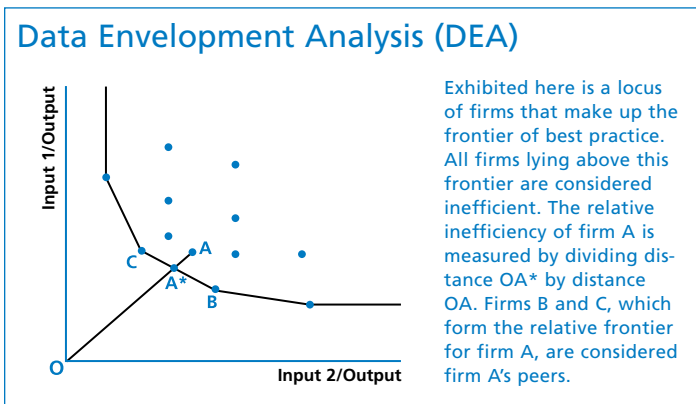
Target price reductions for companies will force them to eliminate inefficiencies and pass the benefits on to consumers.

These benchmarking and efficiency analyses are potentially invaluable tools in identifying target companies for takeover or mergers within a converging market and have been relatively under-utilized thus far. The efficiency scores can be used to calculate possible efficiency gains and translated into company valuations. Further, combining data and re-running the analyses can help assess the relative position of a hypothetically merged or acquired entity, allowing the purchaser to assess the potential cost savings.

Two techniques are commonly used when benchmarking companies: statistical and data envelopment analysis (DEA).

Statistical techniques attempt to find a best-fit relationship between the inputs a company uses and the outputs it produces. This statistical relationship can then be used to determine the relative positions of the companies in the sample group.

DEA—a multi-input multi-output analysis—divides the inputs by the outputs. DEA traces out a locus of most efficient companies, producing a best-practice frontier. Any company lying above this frontier is considered inefficient.



The Dutch regulator will use DEA to generate relative efficiency scores. These scores factor into the price control review by informing the DTe of the potential efficiency gains in costs. Recently, the DTe announced the final X factors for the Dutch electricity sector and the weighted average was 5.9 percent. On average, Dutch companies will have to reduce their tariffs by 5.9 percent per annum in real terms over the three-year regulatory period, resulting in an overall savings in excess of 1.3 billion Dutch Guilders (US \$550 million).

The broader strategic implications of CPI-X regulation are wide ranging. By basing variable X factors on the relative economic efficiency of firms, the regulator implicitly encourages price homogeneity within the market. As a result, many companies have found the need to merge or acquire in order to gain and exploit both economies of scale and scope and to satisfy return requirements. In the Netherlands, this trend is likely to accelerate during the next few years and many expect that only three to four electricity distributors will exist after the first, three-year regulatory period. The opportunities for merger and acquisition (M&A) activity are enormous for both Dutch and foreign entities. Recent examples of such M&A activity in the Netherlands have included the acquisition of Nutsbedrijf Haarlemmermeer by RWE and, similarly, Endesa's acquisition of Nutsbedrijf Regio Eindhoven.

The implications of M&A activity are much more significant on a European scale. The consolidation of the number of players as a result of liberalization will lead to substantial benefits for consumers but will also require tough regulation to ensure that the market remains a level playing field for incumbents and new entrants alike.

ICF Consulting has assisted the major players in the Dutch market in understanding and assessing the strategic implications of price cap regulation and benchmarking. Together with our associate, Dr. Michael Pollitt of Cambridge University, we have assisted our clients in understanding the techniques and implications of benchmarking analyses. We also have provided appraisals and counter-analyses of the DTe's own studies and reports. Our clients have included Eneco NetBeheer, TenneT, REMU, NUON Group, and EnergieNed.