

THE IMPACTS OF RECENT AMENDMENTS OF ELECTRICITY MARKET LEGISLATION ON ELECTRICITY DISTRIBUTION BUSINESS – CASE FINLAND

Satu VILJAINEN

Lappeenranta University of Technology
Finland
satu.viljainen@lut.fi

Kaisa TAHVANAINEN

kaisa.tahvanainen@lut.fi

Jarmo PARTANEN

jarmo.partanen@lut.fi

ABSTRACT

In the Finnish electricity market, the legislative changes issued in 2005 to comply with the European Union Directive 2003/54/EU mainly concerned the supervision of the reasonableness of electricity distribution pricing. According to the adopted ex ante principles, the regulatory authority determines the guidelines for reasonable pricing prior the start of a pre-defined regulatory period. So far, the price development under the new regulatory system has been positive since, on average, the customers have experienced price decreases over the past two years. Final conclusions on the overall price development are, however, not yet possible.

INTRODUCTION

The first Finnish Electricity Market Act (386/1995) to deregulate the electricity market was issued in 1995, [1]. It was given as a response to the requirements of the European Union Directive (96/92/EU), [2]. Competition was first introduced in electricity production and wholesale. By the end of 1998, also all the retail customers were able to choose their electricity supplier. Electricity networks, that is the transmission and distribution networks, remained regulated natural monopolies.

Electricity network companies are generally characterized by having a so called universal service obligation, that is the network services have to be both available and affordable to all citizens. In Finland, the universal service obligation is taken into account in electricity market legislation by assigning the network companies with an obligation to connect: the network companies are required to provide any third party with an access to the networks on non-discriminatory and reasonable terms. In addition, the network companies have an obligation to develop their networks, exercise reasonable pricing policies, and provide the customers with adequate service quality.

In exchange to the legislative obligations, the network companies are given franchised monopoly positions in their operating areas on conditions that are specified in network licences. The national regulator supervises that these positions are not misused, and that the electricity networks form a well-functioning and non-discriminatory market place for competitive electricity businesses. In doing this, the regulator is to assess the reasonableness of pricing and network access conditions, and to create incentives for efficiency and service quality improvements. Finally, the

regulator itself is expected to utilize its resources efficiently, and to create a regulatory framework that enables and encourages the electricity network companies to carry out necessary investments.

Under the first Finnish Electricity Market Act, the regulation principles were categorized as light-handed ex post rate-of-return regulation. The first regulatory decision on the reasonableness of electricity distribution pricing was issued in 1999, and it became legally binding in 2000. Regulatory interventions were case-specific, and they focused on network companies that were suspected of overcharging their customers. Hence, most of the network companies experienced merely a so called threat of regulation since their pricing behaviour was not formally assessed.

In 2005, the Finnish electricity legislation was amended to comply with the Directive 2003/54/EU, in particular with the requirement of the ex ante regulation of natural monopolies, [3]. This paper discusses the impacts that the recent amendments of Finnish electricity market legislation have caused to the regulatory framework of electricity distribution business.

LEGISLATIVE AMENDMENTS

The legislative amendments of 2005 to the Finnish electricity market legislation were mainly concerned with the practices applied in economic regulation of the distribution business because the previously applied light-handed ex post regulation did not fully comply with requirements set in the Directive 2003/54/EU.

The amended Electricity Market Act introduced a more ex ante approach towards economic regulation with incentive schemes implemented in the regulatory system. The national regulator, that is the Finnish Energy Market Authority, was assigned with the task of determining the guidelines for reasonable pricing prior the start of a pre-defined regulatory period. The final decision on the reasonableness of distribution pricing are, however, still to be made ex post after the regulatory period ends.

Along with other amendments, also the appeal system concerning the regulatory rulings was modified. Instead of having just one appellate level as in the old system, the new appeal system consists of two steps; appeals are first made to market court and then, if necessary, to supreme administrative court. Appeals are possible on both ex ante and ex post regulatory decisions.

The development process

In Finland, an important pre-condition for the development of regulation is the rather large number of electricity network companies. At present, there are approximately 90 electricity distribution companies and the regulatory agency employs approximately 30 people who supervise both the electricity and gas markets as well as the emissions trading. Hence, the possibilities of case-specific ex ante assessment of the reasonableness of distribution pricing are limited, unless it is accepted that the regulatory costs notably increase from their present level.

In the particular case of the amendments of 2005, another issue of essence was the time limit; the preparation work was started in 2003, and the final guidelines for the reasonableness of pricing were expected to be given to the network companies in June 2004; that is, six months prior the start of the first regulatory period at the beginning of 2005.

In 2003, the Ministry of Trade and Industry's working group suggested that the previously applied regulatory model should essentially form the basis of the new regulatory framework with ex ante features added into it, [4]. In 2004, the guidelines given by the regulator were derived based on the working group's suggestion, [5]. In addition, the working group's suggestions also formed the basis of the government's proposal to amend the regulation related part of the electricity market legislation [6]. Finally, the regulation related decrees of the Electricity Market Act that came into force at the start of 2005 were based on the regulatory developments that had taken place during the previous year and a half. As a result, the principles of the regulatory framework are written in legislation in great detail

Having the regulatory framework described in detail in legislation is not without risks. Notwithstanding the possibility of obtaining a well-functioning regulatory framework for a given moment or purpose, it may put regulation into stagnant course and impede its further development. This conflicts with an essential planning principle of economic regulation; that is, regulation is about reacting and finding solutions to practical problems.

New regulatory framework

According to the new regulatory framework, the guidelines for reasonableness of electricity distribution pricing are determined ex ante prior the start of a pre-defined regulatory period. The first regulatory period covers the years 2005-2007, after which the length of the regulatory period will be four years. The ex ante given guidelines define the method by which the reasonableness of pricing is determined, and also the parameters that used in regulatory calculations. For detailed description of the content of the guidelines, see Ref. [5].

In principle, the reasonable return is calculated by adjusting the capital invested in the network business to its present worth, and multiplying the obtained value by a reasonable rate that takes into account the risks of network business.

The reasonable return is then compared to the adjusted profit of network business that is calculated based on the profit and loss account. The general efficiency improvement requirement of 1.3 % per annum is taken into account in calculating the adjusted profit.

The final decisions concerning whether distribution pricing has been reasonable will be given ex post after the regulatory period ends. Distribution pricing is concluded to be reasonable if the accumulated adjusted profits over the regulatory period do not exceed the accumulated reasonable returns. The observed profit deficits can be collected from customers during the next regulatory period. Similarly, pricing is unreasonable if the accumulated adjusted profits exceed the accumulated reasonable returns, and the excess profits have to be returned to customers during the next regulatory period.

As for quality of services, the electricity market legislation refers to the standard EN 50160 as the definition of sufficient level of power quality, [7]. Economic regulation of power quality is under consideration but not yet applied in practice except for the standard compensations to customers for interruptions lasting for 12 hours or more.

Industry's reactions to regulatory changes

During the spring and summer of 2006, extensive surveys and stakeholder interviews were carried out to find out the impacts of amendments made to the electricity market legislation. For instance, a questionnaire was sent to all the directors of the Finnish electricity network companies, out of which approximately 40 per cent replied.

Based on the surveys and interviews, the new regulatory system is mainly believed to guarantee both reasonable pricing and adequate quality of the electricity network services. The respondents also felt that the implementation of the three-year approach in assessing the reasonableness of pricing has improved the predictability of regulation. The new appeal system was considered to improve the legal protection of the network companies. Despite of the positive attitude, however, the delays of the hearing processes in market court were considered to threaten the credibility of the appeal system.

The necessity of specifically defined incentive schemes that are typical for ex ante regulation induced arguments both for and against. The general efficiency requirement in particular was criticized for failing to take into account any previous efficiency improvements. One concern was also that regulation is already becoming more and more complicated as it is, without any new incentive schemes. In overly complicated regulatory framework, the power of even the best incentive schemes is easily lost.

DISCUSSION

In general, the short-term impacts of the legislative amendments have been mainly positive. For instance, from the customers' perspective, a clearly positive sign has been the average decrease of the electricity distribution prices.

The industry, on the other hand, has been pleased with the improved predictability of regulation. Criticism as well as the formal appeals have mainly focused on certain parameters that are applied in ex ante regulation.

Price development

As the new regulatory framework came into force, some companies were obliged to reduce their distribution prices, and it appears that they have actually done so. On the other hand, some companies were entitled to price increases but so far they have not acted accordingly. On national level, an average increase of distribution prices by few per cents would have been possible under the new regulatory framework. Having said this, the conclusion is that the observed price development is caused by both the network companies' self-regulation and the formal regulation. Hence, the new regulatory framework alone does not entirely explain the recent customer benefits. The development of average distribution prices in Finland in years 1997-2006 is illustrated in Figure 1 below.

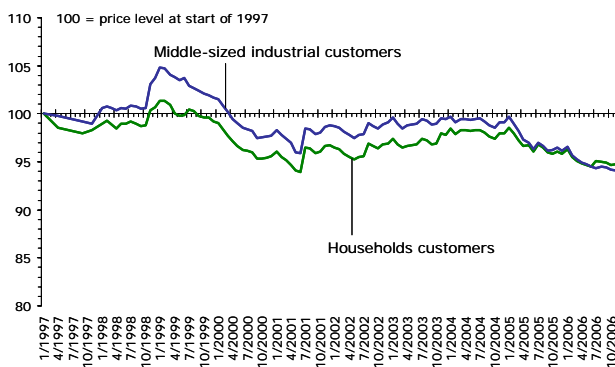


Figure 1. The development of average distribution prices (excluding taxes, adjusted for changes in consumer price index) in 1997-2006 for household and middle-sized industrial customers. (Source: The Finnish Energy Market Authority, available online at www.emvi.fi)

When considering the price development of the ongoing regulatory period, one also needs to bear in mind that the possibility to collect any deficit profits from customers as well as the obligation to return excess profits to customers will transfer to the next regulatory period. Hence, the final conclusion on the efficiency of the new regulatory framework is possible only after the second regulatory period ends in 2011.

Living with the regulator

The regulatory method itself is apparently acceptable to the regulated companies since no appeals were made against it. Instead, complaints focused on the parameters that are used in regulatory calculations. Nearly all network companies appealed to market court to change the parameters set in the guidelines for reasonable distribution pricing. This kind of behaviour is typical for ex ante regulation because the parameters have such a significant impact on the business

results of the regulated companies. From the regulators perspective, on the other hand, the parameters are the essential means to ensure a fair distribution of welfare between the companies (owners) and the customers.

In December 2006, the market court issued its first rulings regarding the new regulatory framework [8]. Some of the parameters were changed in favour of the network companies. The actual changes were minor, amounting to little less than 0.4 percentage unit increases in the reasonable returns of the network companies [9]. Although the result was not exactly what the industry had demanded, the process itself was proven important as such: after thorough assessment of the content of regulatory guidelines, the market court saw it necessary to change some of the parameters of the guidelines [10]. This signals that is of market court's concern how the regulator actually exercises its administrative power. Consequently, the new appeal system manages to overcome one of the biggest problems of the previous appeal system; the old system was often criticized because the court rulings failed to consider the contents of the regulatory decisions.

In its recent rulings, the market court did not consider whether the regulatory framework as a whole is just and reasonable since no appeals were made against the regulation principles themselves. However, in many other occasions, the need for further regulatory developments has been high on the agenda. Nevertheless, based on the results of the appeal process, the applied regulatory framework may be concluded as acceptable. In addition, the correctness of certain parameters is now verified in court, which makes them easy to apply in the future. The potential threat is that the presumed acceptability of the applied regulatory framework and its parameters puts regulation into stagnant course.

Future concerns

Despite of the certain positive short-term impacts, the new regulatory framework possesses certain risks that need to be addressed when further developing the regulatory framework. For instance, the low level of regulated returns does not make the electricity distribution sector a particularly attractive business in the eyes of investors. In addition, the practically non-existent incentives for power quality improvements and preventative maintenance may jeopardize the reliability of the electricity distribution networks in the long-term. For instance, from early 1970s until mid 1990s, the average interruption time per customer per year declined gradually, but similar development cannot be seen recent years, as shown in Figure 2. Although the development of network reliability may be better explained by, for instance, weather conditions than by the content of the regulatory framework, it does not change the fact that there has not been particularly powerful incentives for power quality improvements.

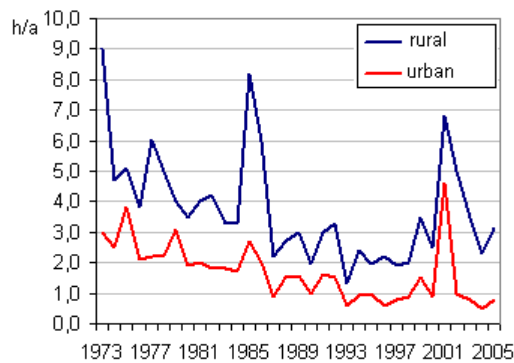


Figure 2. Average interruption time per customer per year in 1973-2005 [11]. The annual peaks of 1985 and 2002 are explained by severe weather conditions.

CONCLUSIONS

The Finnish Electricity Market Act of 1995 did not fully comply with the Directive 2003/54/EU. Amendments were required in particular to implement ex ante features in the economic regulation of electricity network companies. The accordingly amended new regulatory framework came into force at the start of 2005. This paper discussed the development process and features of the new regulatory framework, and presented some preliminary results of its impacts on the network industry's development.

The short-term impacts of the new regulatory framework appear to be slightly positive from both the customers' and the industry's perspective. However, drawing final conclusions on the efficiency of the new regulatory framework at this stage would be premature for two reasons: 1) the first regulatory period is not completed yet; and 2) the profit deficits and surpluses transfer to the second regulatory period of 2008-2011. Although many companies have not acted as profit-maximizers so far, this can hardly be considered a permanent state: a change in the owner's strategy is all that it takes to change the modest pricing behaviour into a more aggressive one. This, in turn, would automatically reduce the power of self-regulation, and result in price increases during the second regulatory period.

After the introduction of ex ante guidelines for reasonable distribution pricing, the first step of the new appeal system was put into test. Quite expectedly, the contents of the guidelines induced complaints concerned with parameters that had been used in regulatory calculations. At some point, the delays of the hearing processes threatened the credibility of the appeal system, but the first step of the appeal process is now seen through. The results of the first step seem to have met the stakeholders' primary expectations. However, the final conclusions on the functioning of the whole appeal system will have to wait until later date since the appeal processes will no doubt be continued in higher instances. In addition, it is still an open question whether the market court will be able to resolve the regulation related cases in due time in the future.

Despite of the slightly positive short-term experiences, the

long-term impacts of the new regulatory framework still require further analysis. For instance, the low level of regulated returns, and the lack of incentives for power quality improvements and preventative maintenance of the electricity distribution networks can be seen as potential threat to the viability of the electricity distribution business.

REFERENCES

- [1] Electricity Market Act 386/1995. (The Finnish Electricity Market Act, 386/1995; amendments up to 1172/2004 included, unofficial translation).
- [2] European Commission, 1996. Directive 96/92/EC. Official Journal of the European Union, No L 027. Brussels.
- [3] European Commission, 2003. Directive 2003/54/EC. Official Journal of the European Union, No L 176. Brussels.
- [4] Ministry of Trade and Industry, 2003. *Report by the Working Group Renewing the Reasonableness Control over the Energy Market*. Ad hoc committee reports 13/2003, Helsinki. (in Finnish)
- [5] Energy Market Authority, 2004. *Guidelines for assessing reasonableness in pricing of electricity distribution network operations for 2005–2007*. The Finnish Energy Market Authority's publication.
- [6] HE 127/2004. Hallituksen esitys Eduskunnalle laeiksi sähkömarkkinalain ja markkinaoikeuslain muuttamisesta, (The Finnish Government's proposal to the Parliament to change the Electricity Market Act and the Market Court Act). (in Finnish)
- [7] European Standard. EN 50160, Voltage characteristics of electricity supplied by public distribution systems.
- [8] MAO:271-344/06. Markkinaoikeuden päätös 271-344/06, (Market Court's Decisions 271-344/06). (in Finnish)
- [9] Energy Market Authority, 2006. Markkinaoikeudelta vain vähäisiä muutoksia Energiamarkkinaviraston päätöksiin, (The Market Court makes only minor changes to the regulatory guidelines). Press release ,21.12.2006. [Available at www.emvi.fi] (in Finnish)
- [10] Finnish Energy Industries, 2006. Markkinaoikeus samoilla linjoilla sähköyhtiöiden kanssa, (The Market Court sees eye to eye with electricity companies). Press release, 21.12.2006. [Available at www.energia.fi] (in Finnish)
- [11] Finnish Energy Industries, 2006. Keskeytystilasto 2005, (Interruption statistics 2005). (in Finnish)