WILLINGNESS TO PAY FOR SECURITY OF SUPPLY OF NATURAL GAS IN SWITZERLAND

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Overview

Incentive regulation is a wide spread method to regulate network operators in liberalised energy markets. In this regulatory design authorities are increasingly concerned about quality and long term reliability of networks. Since quality of networks and security of supply are closely related, there are some regulatory efforts to introduce incentives for operators to invest in network quality. Typically a certain level of quality of supply is defined ex ante and operators are rewarded if they achieve the goal and/or punished if they fail. Since network quality is a costly good, there should be clarity about the customers' benefits of a certain level of security of supply. Marginal costs should not outweigh the customers' willingness to pay for quality of service. If network quality does not match customer preferences, there is the risk of under (or over) investment which means a loss of social welfare. Therefore, it is useful to find out more about the optimal level of network quality. To find out how much Swiss customers are willing to pay for different levels of security of supply of natural gas we applied the discrete choice method of market experiments.

The paper is organised as follows: After the introduction the second section gives a brief overview about the regulatory settings that are necessary to provide investment incentives. The third section addresses the regulatory mechanisms that have to be introduced to match quality of supply with the customers' willingness to pay from a theoretical point of view. In section four we describe the conducted market experiments and the results. In the final section policy implications are derived.

Methods

Discrete choice experiments.

Results

First, discrete-choice based experiments are presented as a method to empirically measure willingness to pay for security of supply.

Second, the results of a choice experiment with Swiss domestic and commercial natural gas customers suggest that the willingness to pay for security of supply is generally rather high.

Third, we found differences between different customer groups (e.g. domestic and commercial, interruptible and non-interruptible).

Conclusions

Customers willingness to pay for security of supply is high. The introduction of incentive regulation for natural gas might result in lower quality incentives for gas suppliers. Therefore, incentive regulation has to be accompanied by measures to secure security of supply. These measures should be flexible and take into account differences in the willingness to pay of different customer groups.

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