

How to implement customer participation within distribution system operators (DSOs)

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Overview

Municipalities all over Germany have experienced a trend towards the de-privatization and democratization of electrical supply companies. Most recently, grassroots initiatives in Hamburg and Berlin attempted to de-privatize the Vattenfall-owned distribution system operators (DSOs) in both cities – the plebiscite was successful in Hamburg and fell through in Berlin. We investigated the Berlin case and conducted a representative survey among the electorate. It turned out that “greater customer participation in energy matters” was the decisive reason for most supporters of the initiative. The idea of “customer participation” is not entirely new for German utilities. In fact, many local suppliers have long-standing traditions of customer participation (customer advisory boards, financial participation, citizen-owned wind farms, etc.), but all of these companies are at least partially involved with generation and/or sales of electricity. For a fully unbundled DSO with only indirect customer relations, the situation is much more complex, and very little experience with successful customer participation exists. Together with *Stromnetz Berlin GmbH* (Vattenfall’s DSO in Berlin), we carried out an explorative empirical study to help us understand what kind of customer participation is in demand. The results are fruitful and surprising, and they will help DSOs, not only in Berlin, improve their customer relations significantly.

Methods

A series of qualitative and quantitative research has been conducted, investigating if and how customers wish to participate within their DSO:

- (1) On November 03, 2013, a referendum was held in Berlin. More than two million citizens were called to decide if the electricity grid, currently owned and operated by the 100 % Vattenfall subsidiary *Stromnetz Berlin GmbH*, should be brought back into municipal hands and if a municipal utility should be founded. The idea of “greater customer participation” was one of the initiators’ pivotal goals. We conducted a representative survey among more than 2,000 participants of the referendum and interviewed them about their motivations and expectations.
- (2) Established types of customer participation were researched from the literature and through the analysis of case studies. The suitability of these types of customer participation, particularly at grid operators (distribution system operators, DSOs), was tested in an explorative study: together with *Stromnetz Berlin GmbH*, we organized two comprehensive workshops – one with a random sample of 45 customers and one with ten selected energy system experts – to help us understand what kind of participation is in demand. Based on these findings, we are currently developing innovative offerings for enhanced customer participation at DSOs.
- (3) Finally, we tried to gain a broader understanding of the utilities’ perspective on “customer participation”. We invited representatives of roundabout 700 German utilities to participate in an online survey which focused on the *status quo*, the strategic assessment, and potential future development of customer participation. The broad majority of all interviewees represented companies which were, at least partially, DSOs.

Results

- (1) The Berlin referendum in November 2013 did not approve of the grid de-privatization because of the absence of a quorum. However, almost 600,000 citizens (that is only 155,000 less than the number of voters who legitimized the government of Berlin in the latest election) voted in favor of the de-privatization. Their major reason, besides some general critique of capitalism and a rather unspecific preference for state-owned utilities, was the strong desire for “greater participation” in the energy sector. Our survey among the active participants of

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the referendum has shown that the idea of “participation” has become significantly more important than environmental concerns (promoting renewables etc.) and about equally important as price reductions.

- (2) One key insight from the customer and expert focus groups was the perceived lack of transparency. Some participants also expressed their dislike for natural monopolies (such as electricity grids) in private hands. In general, customers mistrust their utilities and grid operators, and they find it extremely hard to comprehend the complexity within the energy sector. “Promoting transparency and retrieving trust” is not only a prerequisite but also the most important element of customer participation. A “customer and expert advisory board” is also very much sought after (it was explicitly preferred to a “customer-only advisory board”). Finally, customers and experts put forward the idea of “making electricity tangible”, i.e., offering any kind of hands-on training and practical experience (excursions, experiments, simulation games, etc.) which help customers understand and appreciate the complex connections within the energy sector. Quite surprisingly, there was very little demand for financial participation of individuals or the municipality. We are currently working on the next step – testing prototypical offerings for customer participation – and will soon be able to describe concrete solutions.
- (3) The online survey is currently being conducted. Final results will be available by the end of May 2014.

Conclusions

It has been often proposed that the classical energy policy triad – security of supply, competitiveness, environmental sustainability – should be complemented by “social acceptance” as a fourth dimension. Customer participation seems to be an essential element of what is referred to as “acceptance”. The urge for more participation may even lead to the de-privatization of utility companies. We have studied the phenomenon of “greater participation” in Berlin, but it is quite likely that utility companies in other municipalities within and beyond Germany are facing similar trends (our survey among utilities across Germany will be finished by the end of May). The issue is particularly challenging for fully unbundled grid operators which do not have direct customer relations and cannot offer financial participation in high-involvement projects such as citizen-owned wind farms. For those companies, we have identified “transparency and retrieving trust”, “customer and expert advisory boards”, and the idea of “making electricity tangible” as the most promising approaches which we are currently developing in more detail.