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Article

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A (re)municipalization trend among energy utilities: truth or myth?

By Astrid Cullmann, Maria Nieswand, Stefan Seifert, and Caroline Stiel

In the 1990s, a number of municipalities started privatizing their energy utilities; in recent years, there has been an intensive debate about whether a paradigm shift has taken place since then. Cities and municipalities have considered putting the energy, water, gas and heat supply back into the hands of public companies; Berlin and Hamburg are two prominent examples. But is there really an overarching trend toward (re)municipalization? According to the present study, which evaluates newly available microdata from official statistics, there is no evidence of a comprehensive (re)municipalization. The increase in public enterprises appears to have more to do with general restructuring in the energy sector, and has in fact been less pronounced than has growth in the private sector.

In recent years, the public discourse has increasingly centered on the government's economic activities at the federal, state, and municipal levels. This discussion has given way to the impression that cities and municipalities are once again starting to take charge of utilities, such as the energy and water supplies, instead of entrusting these tasks to private enterprises. The Monopolies Commission's latest biennial report also deals with the supposed increase in municipal economic activity, and critically debates its economic aspects.[1]

The extent of this (re)municipalization is usually measured by the number of companies and several sales figures. The fact is, the number of companies under municipal ownership—taking into account all economic sectors[2]—rose by roughly 23 percent between 2000 and 2011, and their nominal revenue in relation to GDP increased by 60 percent.[3]

The increase in the number of public utilities is usually explained by two developments. The first, broadly speaking, is that municipalities reacquired previously privatized shares in utilities and disposal companies ("remunicipalization"). The second is that they created municipal utilities and took over concessions in order to take charge of certain public service tasks for the first time ("municipalization"). Given this background, the increase in local economic activity is often interpreted as a "trend towards (re)municipalization," which can give the impression that private economic activity has been displaced from these areas.[4]

1 Monopolies Commission (2014): Hauptgutachten XX: Eine Wettbewerbsordnung für die Finanzmärkte. Kapitel 5. p. 439–511. Bonn.

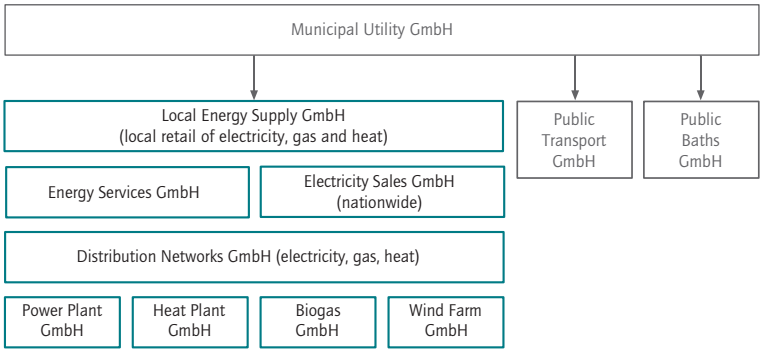
2 Municipalities are active in many economic sectors, including housing, health, local public transport, telecommunications, utilities, and the disposal industry.

3 Monopolies Commission (2014): supra, p. 439–440.

4 For more on the economic controversies surrounding public-vs.-private service providers in the energy sector, please see the second article in this issue of the *Economic Bulletin,* Cullmann et al. (2016): No differences in efficiency between public and private utilities, DIW Economic Bulletin no. 20.

Figure 1

Example of corporate structure of a public utility



Source: Illustration by DIW Berlin.

Debating the energy supply

Among others, the Monopolies Commission[5] and the Federal Cartel Office[6] have pointed out that the increase in municipal economic activity has taken place primarily in the energy sector. This growth is likely due to fact that concessions were reaching their expiration dates: between 2010 and 2015 alone, roughly 60 percent of the 14,000 concessions (which are typically valid for 20 years) were reissued.[7,8]

Several municipalities that had previously privatized their energy utilities used this as an opportunity to consider reversing their previous decisions. Berlin and Hamburg's recent efforts to take over the utilities companies had a major impact in the public eye: after acquiring 25.1 percent of the shares in local energy, gas, and district heating utilities in 2012, Hamburg took over the entire electricity distribution network in 2014 and negotiated a repurchase option with the previous owner, *Vattenfall*, for the district heating networks.[9] In Berlin, on the other hand, a 2013 referendum for the repurchase of the electricity distribution network did not gain the required majority approval; nevertheless, on March 14, 2016, the state-owned company *Berlin Energie* submitted a proposal for a complete buyback.[10] Similar actions have been observed elsewhere and in other energy sectors.[11]

New microdata enable detailed analysis of energy companies

Whether a "trend" is actually forming remains unclear, and an accurate assessment of the (re)municipalization in the energy sector requires a broader database than what is offered by anecdotal, high-profile cases. In addition, developments related to private companies in the energy sector need to be taken into account in order to differentiate which increases are due to a general restructuring of the energy sector (which could include, for instance, outsourcing by business units, or adaptations to new market conditions following liberalization and energy policy changes) and whether these developments really are due to new activity, which for the purpose of this report should be understood purely as (re) municipalization.

As part of the project *Municipal infrastructure companies against the background of energy policy and demographic change (KOMIED)*,[12] DIW Berlin created a comprehensive dataset on energy companies in Germany for the years 2003 to 2012.[13] This dataset is based on newly available energy statistics microdata from official statistics, as well as financial statements from public funds, institutions, and enterprises as well as the business register. For the first time, the alleged increase in municipal activity in the energy sector over the past decade can be empirically evaluated—both at the federal level as well as for individual states—and compared to the development of private energy companies. In addition, public companies can be viewed according to individual sections of energy supply[14] so that a detailed representation is possible.

5 Monopolies Commission (2014), supra, p. 442 ff.

6 Federal Cartel Office 2014): Der Staat als Unternehmer – (Re-)Kommunalisierung im wettbewerblichen Kontext. Hintergrundpapier. Bonn. p. 17.

7 Berlo, K. and Wagner, O. (2013): Stadtwerke-Neugründungen und Rekommunalisierung. Energieversorgung in kommunaler Verantwortung. Sondierungsstudie. Wuppertal Institut für Klima, Umwelt, Energie GmbH. Wuppertal. P.1.

8 A "reissuing" of a concession does not imply that the previous concession has been superceded by a new concession; concessions were also issued to former license holders.

9 Monopolies Commission, supra, p. 442.

10 http://www.berlinenergie.de/abgabe-indikatives-angebot-fuer-eine-vollstaendige-rekommunalisierung-des-berliner-stromnetzes/ (abgerufen am 18. April 2016).

11 See Berlo, K., Wagner, O. (2013). supra, p. 8.

12 The project homepage can be accessed through the following link: http://www.diw.de/de/diw_01.c.467702.de/forschung_beratung/projekte/projekt_homepages/komied/komied.html

13 Stiel, C. (2015): Official Data on German Utilities (Energiestatistiken der amtlichen Statistik) 2003–2012. DIW Data Documentation Series. Nr. 80.

14 The energy supply can be divided up horizontally into multiple sectors (electricity, gas, heat) as well as vertically into various steps of the value chain (generation, transmission, distribution, and sales).

Changes in municipal utilities' corporate structure

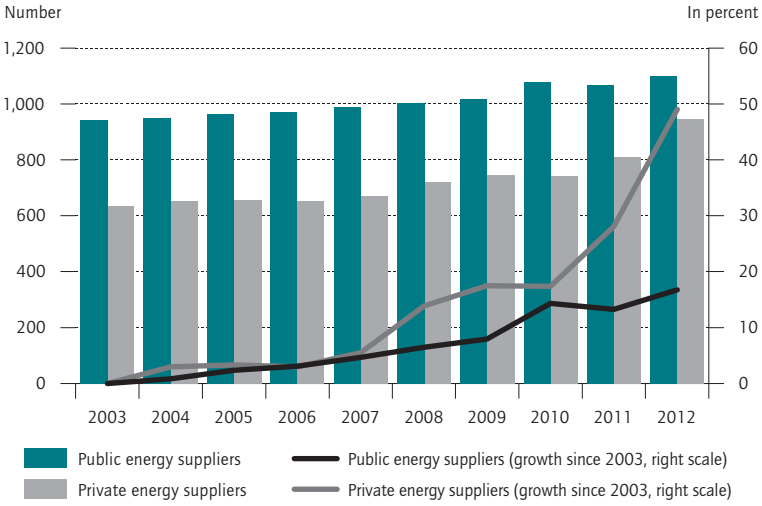
In 2012, there were 1,100 public energy utilities, the majority of which were entirely under public ownership. Only one-quarter of these companies had private companies as minority shareholders. *Energy utilities* in this case includes all companies active in the electricity, gas, and heating sectors, and includes the various stages of the value chain, from production to sales.[15]

The development of public activity in the utilities sector should not be measured by the sheer number of companies alone: the fact that the corporate structure of utility companies has changed over the past decade must be taken into account. Where activity was often concentrated in one company, there has been an increase in corporate spin-offs in recent years, which means that energy utilities may now be made up of several smaller entities (Figure 1). For instance as part of the network unbundling[16] many public utilities have chosen to set up network companies for pooling the power, gas, heating, and water networks and to establish specific sales companies specialized in targeting certain products (such as energy services or nationwide electricity sales). However, the legal spin-off of existing activities does not necessarily indicate an increase in public activity, and it must be distinguished from actual (re)municipalization. Else it is possible to overestimate the trend or see a trend where there is none at all.

Thus in order to avoid double counting, companies that belong to the same enterprise group must be grouped together. One way to identify these affiliated companies is through tax group relationships.[17] Information about such affiliations can be found in the business register and in the energy statistics from the statistical office. These data reveal that in 2012, one third of all public utilities were part of a tax group. In the private sector, this proportion is similarly high. Taking into account all public companies that, according to the business register, belong to a tax group, the number of public utilities rose by 17 percent between 2003 and 2012 (Figure 2).[18] Ignoring the tax group relationships, by contrast, would lead to an increase of 26 percent.

Figure 2

Number of public and private energy suppliers in Germany



Source: Energiestatistiken der amtlichen Statistik 2003–2012, Jahresabschlüsse öffentlicher Fonds, Einrichtungen und Unternehmen 2003–2012. Unternehmensregister 2003–2012.

The number of public firms increased by 17 percent, the number of private firms by 49 percent.

Restructuring in the energy sector: private sector showing even more growth

Up until now, the extent of the (re)municipalization has been judged solely on the number of public companies.[19] In order to assess the growth of cities' and municipalities' economic activity in the overall context, however, the entire sector must be taken into account, including companies that are mostly or entirely under private ownership.

The analysis shows that the number of private utilities rose by 49 percent between 2003 and 2012, or roughly

15 For a look at the water sector, see Zschille, M. (2016): Kaum Kostenvorteile durch Unternehmenszusammenschlüsse in der Trinkwasserversorgung, DIW Wochenbericht no. 20.

16 The second amendment to the Energy Act in 2005 stipulated that after July 1, 2007, all distribution system operators with more than 100,000 customers must be independent—in terms of legal structure, organization, and decision making—from energy suppliers that act on other steps of the value chain (for example, production or retail). This would ensure non-discriminatory access to electricity distribution networks. Several energy utilities with fewer than 100,000 customers also decided to outsource their networks to independent distribution companies as a result.

17 Under certain conditions, companies that are closely integrated in terms of economic, financial and organizational issues form a tax group. Tax groups may exist for corporate tax, trade tax, or sales tax. In the case of sales tax groups, businesses in the same tax group can avoid paying sales tax on transactions with one another. See Federal Ministry of Finance (2016): Umsatzsteuer-Anwendungserlass from October 1, 2010. Konsolidierte Fassung. As of March 2, 2016.

18 The business register primarily includes sales tax entities and to a lesser extent, corporate tax entities. However, since not all of the businesses of a public utility and/or a business group meet all the requirements of an "affiliation" and the data quality is somewhat limited, not all actual business networks could be included. The method does allow for a more accurate analysis than does the observation of individual companies, but the results must be still seen as an upper bound on the true number of utilities.

19 See Monopolies Commission, supra, 439ff., Lichter, J. (2015): Rekommunalisierung – Zwischen Wunsch und Wirklichkeit. Handelsblatt Research Institute.

three times as much as did the number of public utilities. The fact that there is now a higher number of public as well as private utilities in the energy sector is likely due to general restructuring. This includes, for instance, the establishment of enterprises to develop new business segments or technologies related to the energy transition. Not all new companies join tax groups, and so the number of companies also increases when taking into account tax group relationships. This is the case for new companies with multiple shareholders.

As part of the energy transition and the liberalization of the electricity and gas markets, the sector has seen major changes since 1998. Many public utilities participate in joint wind-farm projects or invest in their own renewable energy plants. Electricity is procured partly through specialized trading companies, which can also be a consortium of several public utilities (examples include *Trianel GmbH*, *Syneco Trading GmbH*, and *SüdWestStrom*). New business segments in the field of energy services (heat contracting[20], energy data management, energy efficiency consulting), technical services (IT, maintenance, external management of generating plants) or the bundling of networks in network companies can also lead to the creation of new enterprises—all without municipalities taking up any new activities.

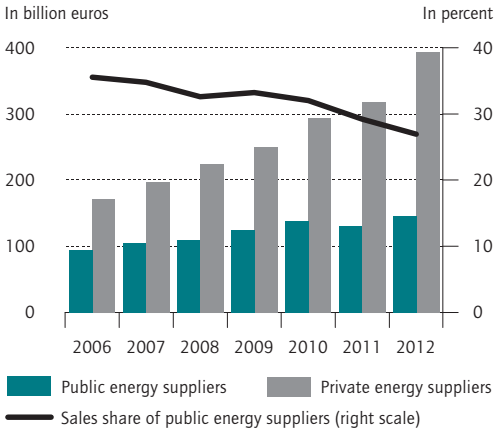
Sales shares of public utilities are in decline

A comparison of sales developments for the period between 2006[21] and 2012 shows that the price-adjusted proceeds of public utilities increased by 54 percent, while they have more than doubled among private utilities (Figure 3).

Accordingly, public utilities' share in total energy sector revenues has decreased by nine percent since 2006: in 2012, they generated only slightly more than a quarter of sales in the energy sector, even though they made up the majority of all companies. The low share of sales can be explained firstly by smaller-sized businesses, since the service area of most public utilities is geographically linked to the town or community. But the fact that private companies concentrate their efforts in lucrative sectors like electricity and gas supply could also play a role. The following is thus a closer examination of the relative developments of public and private companies within individual energy sectors and stages of the value chains of energy supply.

Figure 3

Sales figures in energy supply



Source: Energiestatistiken der amtlichen Statistik 2003–2012, Jahresabschlüsse öffentlicher Fonds, Einrichtungen und Unternehmen 2003–2012. Unternehmensregister 2003–2012. Price-adjusted, base year 2010.

Public energy suppliers lost shares.

Growth primarily in the electricity sector

Utilities are typically active in several sectors, simultaneously generating, distributing and selling electricity, heat, and gas to end customers. This raises the question of whether there are differences in the increase in activity among different types of energy. In 2012, 78 percent of public utilities were reportedly active in the electricity sector, 57 percent in the gas sector, and 63 percent in the heating sector. The number of public companies has seen the most increases in the electricity sector (Figure 4). A similar picture emerges in the case of private companies, except that growth rates are higher: the number of private electricity suppliers increased by 66 percent between 2003 and 2012.[22]

A look at the various steps of the value chain in the power sector reveals that the increase in the number of public companies was concentrated in electricity trade (plus 23 percent) and retail (plus 18 percent) (Figure 5).[23] This suggests that the growth of public companies is primarily attributable to the above-discussed restructuring, includ-

20 "Heat contracting" refers to the energy utilities supplying heating to end customers in regions where no district heating is available. For this purpose, a local production unit is installed in the consumer's house and operated by the energy supplier. The customer (usually) pays only for heat they have actually used.

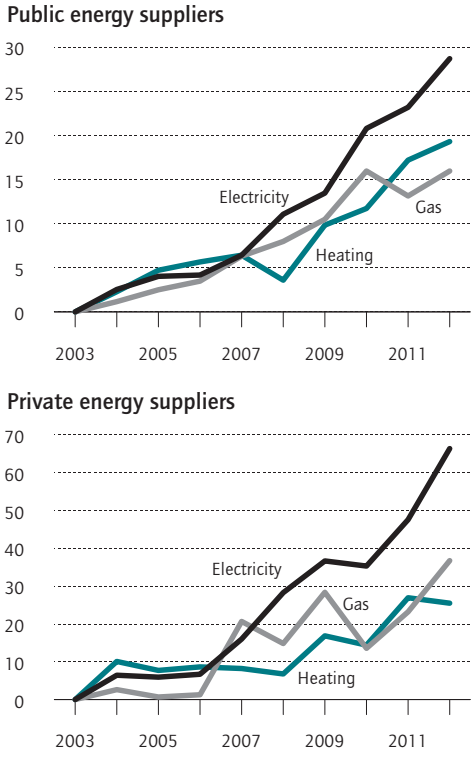
21 Due to flaws in the data, only calculations from 2006 onwards are possible.

22 An analog comparison of revenues was not possible due to a lack of available data.

23 It must be noted, however, that generating plants using renewable energy sources are insufficiently accounted for in the official energy statistics, and are therefore underrepresented.

Figure 4

Increase in numbers of public and private energy suppliers by branch
In percent

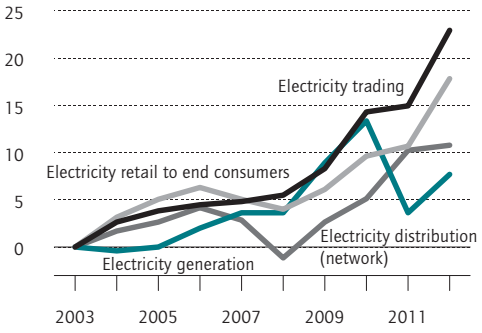


Source: Energiestatistiken der amtlichen Statistik 2003–2012, Jahresabschlüsse öffentlicher Fonds, Einrichtungen und Unternehmen 2003–2012. Unternehmensregister 2003–2012.

Growth rates were highest in the electricity sector, both for public and private firms.

Figure 5

Increase in number of public electricity firms by activity
In percent



Source: Energiestatistiken der amtlichen Statistik 2003–2012, Jahresabschlüsse öffentlicher Fonds, Einrichtungen und Unternehmen 2003–2012. Unternehmensregister 2003–2012.

Broken down to stages of the value chain, it is trade and retail which exhibit the greatest increases in the electricity sector.

ing the specialized spin-offs and the establishment of specialized trading companies. Although many towns and communities are using the (re)purchasing of networks as a starting point to increase economic activity, and thus (re)municipalization, the number of public electricity network operators only increased by eleven percent. It is unlikely that newly established sales companies were not combined with an existing stage of the value chain.

No regional pattern

A regional breakdown by state shows that there is no uniform pattern: between 2003 and 2012, some states experienced an increase in shares of public utilities while others experienced a decline (Figure 6). In 2003, Rhineland Palatinate recorded the highest share with 83 percent, closely followed by Mecklenburg-Western Pomerania with 79 percent. Saxony-Anhalt had the lowest share, with 49 percent. By 2012, there had been a decline in the shares of states where public utilities once made up a relatively high share, and an increase in the shares of states where public utilities once made up a low share. A prime example of this is Hesse, where the share of municipal companies increased by 17 percentage points, from 56 to 73 percent.

Considering public utilities in an isolated fashion when trying to determine the existence of a (re)municipalization trend can lead to false conclusions, as in the example of Saarland. According to official statistics, the number of public utilities in Saarland rose by 75 percent—but the number of private companies more than tripled (Figure 6).

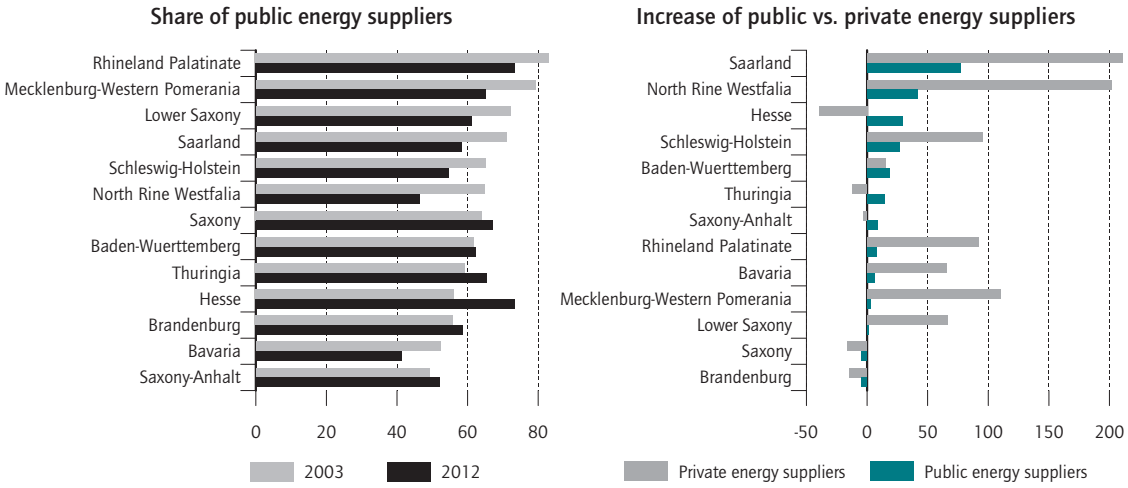
However, it should be noted that which companies belong to which states can only be determined through locating the corporate headquarters. Private utilities are often active transregionally—for example, as surface network operators or in nationwide electricity sales—but it can be assumed that public companies, in contrast, are more likely to carry out their main activity at the company headquarters or in the immediate vicinity.

Conclusion

When the growth in private utilities is taken into account, it is not possible to confirm the existence of a general (re) municipalization trend in the energy supply. Although

Figure 6

Public and private energy suppliers by federal state between 2003 and 2012
In percent



Source: Energiestatistiken der amtlichen Statistik 2003–2012, Jahresabschlüsse öffentlicher Fonds, Einrichtungen und Unternehmen 2003–2012. Unternehmensregister 2003–2012. Assignment by company domicile.

In many *Länder*, the number of private energy suppliers increased much faster than that of public energy suppliers.

there has been an increase in economic activity in the public energy sector from a numbers perspective, this change must be viewed in the context of fundamental restructuring within the industry. Examples include the outsourcing of certain activities to legally independent subsidiaries (e.g., in the case of network operation and in the field of technical services) and the development of new business areas (e.g., EEG systems and energy services) that are closely related to previous activities. There are no signs that public utilities are displacing private utilities. On the contrary, the number of private utilities has increased more than that of public utilities, which lost revenue shares between 2003 and 2012. A tangible (re) municipalization trend cannot be definitively proven—or at the very least, it appears to be less pronounced than commonly assumed.

Nevertheless, there are a number of individual (re)municipalization projects—particularly in the case of electricity distribution grids—that indicate that municipalities are definitely considering playing a bigger role in local energy supply since the privatization wave in the 1990s.

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