

Unbundling of District Heating Co-operations in Stockholm?

Dick Magnusson

Linköping University, Department of Thematic Studies: Technology and Social Change

Sweden

Introduction

The Swedish energy sector, and especially the district heating sector, has gone through rapid changes over the last 15 years. The neoliberalisation and privatisations that has been evident in Great Britain, as well as in other countries, (e.g. Graham and Marvin 1994; 2001), since the 80's has been evident even in Sweden. Many of the previous monopoly systems has been opened up for competition, for example telephone, television and in 1996, the electricity market was deregulated. The prerequisites for district heating changed as well, as the heat was to be sold at market price rather than self cost price, and the energy companies should be run on corporate-terms. This has led to major changes. The pricing obviously changed, but planning and system aspects also changed since the municipalities, who at the time owned most of the energy companies, considered energy to be a risky business. Many of the energy companies were thus sold to either larger municipal companies or private/state owned companies. (Högselius & Kaijser 2007)

The situation in the Stockholm region has changed rapidly as well, were there in the early 90s were approximately 15 energy companies in the 26 municipalities and there are eight left, were Fortum (owned by the Finish state to 91 % and 9 % by the municipality of Stockholm) is the dominant actor. (STOSEB 1992) The changed prerequisites have made the district heating business largely debated as the price has increased rapidly in some systems in Stockholm. It has started debate about possibilities to open the systems up for competition. (SOU 2005)

The above stated factors are examples of the changed district heating market in Sweden and Stockholm. Guy et al (2001) and Graham & Marvin (2001), argues that other factors are changing as well. The previous supply orientation has focused on building services that are secure and affordable to all, to build supply capacity and extend the networks to meet increased demand. There have been a territorial monopoly, little social and spatial differentiation in treatments of customers. All this is changing. These are all examples of *unbundling* processes.

The fact that this has changed is also possible to see in the district heating systems in the Stockholm region. I will in this paper show that the changed infrastructure ideals are visible in the development of the district heating systems. As they have previously been developed in cooperation between all the energy companies and municipalities, through an organisation

called STOSEB, this have all changed gradually after the deregulation. The aim of this paper is thus to explore the unbundling processes in the context of the Stockholm district heating systems, and see in which ways the development and management of the systems has changed following external changed factors.

Methodology

This paper describes work in progress, and the methodologies are interviews with representatives from the organisation STOSEB, the energy companies and regional authorities. I have also studied the regional energy plans and protocols from meetings in STOSEB, where most of the decisions were previously taken.

Large Technical Systems and Splintering Urbanism

In the study I am using a combination of Large Technical Systems (LTS) and Splintering Urbanism. The theory of LTS is useful to describe the development of the systems, as the processes can be described as *interconnections*, with physical interconnections of the systems as well as organisational. (e.g. Hughes 1983) This development, as I am going to show, is useful for explain the development of the systems until the deregulation of the electricity market. After that, another form of logic set in. As the LTS-theory explains the development in monopolised, supply-oriented systems well, it fails to explain the development under the new logic with neoliberalisation and privatisations. In this case, the concept of Splintering Urbanism is more relevant. It was developed by Stephen Graham and Simon Marvin (e.g. Graham & Marvin 1994; 2001) and describes the emerging transition from integrated to unbundling infrastructures. Planning and management of the technical systems has changed following new logics, the foremost reasons being economic liberalisation and the emergence of new technologies. The new technologies have lead to new ways of managing and supervision of the systems, making it possible to create opportunities for competition in systems. An important part of the development is the segmentation of the systems, from integrated systems into segmented units. The electricity sector has for example been segmented vertically, as production, transmission and distribution has been divided into different units, with different possibilities for competition. The unbundling process have also lead to differentiation of the customers, as high-valued users, so called premium network user, have the possibility to negotiate better prices and services. At the same time, lower-valued users are being bypassed, as the service provider/company might decide to never connect the area, withdraw the service or require prepayment. (Graham & Marvin 2001)

The development might not be as evident in Sweden, as the neoliberalisation has not gone as far here, but Rutherford (2008) found in a study that some of the unbundling processes are existing. His study focused on the energy company in Stockholm municipality, and found that the affordability of the services had decreased for some social groups, that the selling off of the energy company meant that the planning processes were separated and finally that premium eco friendly urban areas were built for affluent households.

I will in my study, and in forthcoming studies, continue to study the Splintering concept in Sweden, as there are very few studies performed with this focus, and to evaluate if there is such thing as a “Swedish Splintering”.

“The good old days”

I will in the following part present some of the results of the study. What is evident is the importance of the organisation STOSEB, where all the energy companies were a part and owners of the organisation. It was here that discussions regarding the future of the district heating systems were held, and all interviewees state that the cooperations were important and well functioning in the organisation. The organisation was started in 1978 and they conducted and released four regional energy plans, conducted several investigations, acted as consultative body and performed joint procurements until the organisation was resigned in 2003. The focus was always on co-operations and regional matters and within the organisations, the interconnections of the district heating systems were discussed and modelled. The development of the district heating systems to a large extent follows the Large Technical Systems theory, with small isolated systems in the municipalities that later grew and became interconnected (see figure 1).

Reasons for why it seems to have worked well, at least until the deregulation, was the fact that energy was at the time considered as an unproblematic, and practical, question. The aim was to use the systems and resources as efficient as possible, and by interconnecting the systems, there was also a supply security. The representatives from the energy companies and municipalities were high level politics and officials which gave the organisation high legitimacy.

The Development of the District Heating Systems in Stockholm County - Networks of Heating

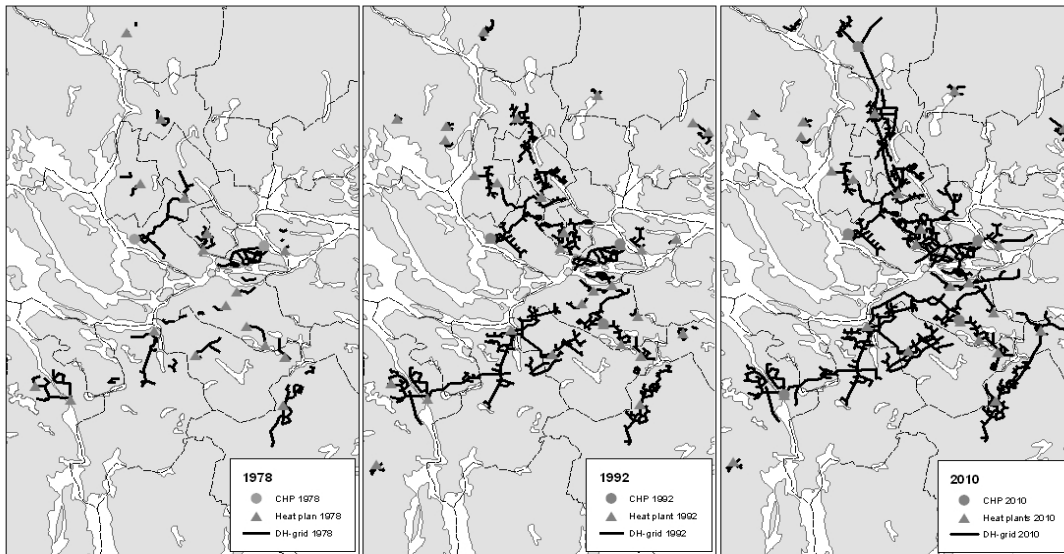


Figure 1: The development of Stockholm district heating systems from 1978 to 2010

The cooperation's in the organisation was to a large extent non-political despite the fact that different municipalities with different political backgrounds were represented. The reason for this was the same as above; energy, and especially district heating, was a practical question and only in relation to nuclear power there were some arguments. The regional questions was rather most important.

“The big shift”

The deregulation was started to be discussed in 1992 at a national level, and already then there were some traces of a different attitude towards STOSEB in different documents, and also expressed in interviews. One of the interviewed representatives expressed that he felt a bit ambivalent towards STOSEB around the deregulation, since there was a risk it would look like the energy companies were meeting to discuss prices rather than planning. STOSEB was discontinued in 2003, and one of the reasons was because the deregulation changed the way the energy companies looked at cooperation's, and it became much more difficult to find the right people for the border of the organisation. When the energy companies was to be run as a stock corporation rather than municipal company with self-cost price, and many was sold from the municipalities, it became much more difficult for the energy companies to cooperate on the same terms as earlier.

Today, there is no regional institution that focuses on energy. There also seems to be lacking communication between the municipalities and the energy companies. It is fair to say that there has been an unbundling, at least on an organisational level.

Conclusion

The organisation for energy and district heating has changed over the last decades, and this has changed the ways energy companies cooperate. In Stockholm, the organisation STOSEB was responsible for regional energy planning, where the energy companies met and planned the future development of the systems. It is one of the reasons why we today have regional systems in Stockholm, they were interconnected. However, the deregulation started unbundling processes; The energy companies were sold, thus becoming unbundled from the municipalities, STOSEB was discontinued and thus the energy companies and municipalities became unbundled, and prices increased thus unbundling processes affected affordability of the service. The planning and organisation of the district heating, and energy, in Stockholm has gone from being a tight centralised “monolith” to being unbundled and separated into units that are drifting apart.

References

Graham, Stephen, & Marvin, Simon (1994), Cherry picking and social dumping - Utilities in the 1990s. *Utilities Policy*, 4 (2), 113-119

Graham, Stephen & Marvin, Simon (2001), *Splintering Urbanism - networked infrastructures, technological mobilities and the urban condition*, Cornwall: Routledge.

Guy, Simon, Marvin, Simon, & Moss, Timothy (2001), *Infrastructure in Transition*, London: Earthscan Publications Ltd.

Hughes, Thomas P. (1983), *Networks of Power: Electrification in Western Society 1880 – 1930*, Baltimore: John Hopkins University Press

Högselius, Per & Kaijser, Arne (2007). *När folkhemselen blev internationell - Elavregleringen i ett historiskt perspektiv*, Stockholm: SNS Förlag.

SOU. (2005). *Fjärrvärme och kraftvärme i framtiden*, SOU 2005:33, Stockholm: Statens Offentliga Utredningar.

STOSEB (1992), *STOSEB 1992*, Stockholm: STOSEB

Rutherford, Jonathan (2008), Unbundling Stockholm: The networks, planning and social welfare nexus beyond the unitary city, *Geoforum*, 39, 1871-1883.