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District heating business needs customer-centred development

Title of the dissertation	Customer-centred development paths for district heating industry Kaukolämpötoimialan asiakaslähtöiset kehityssuunnat
Contents of the dissertation	<p>District heating systems are seen as feasible energy technologies as part of sustainable energy systems and the market share is predicted to grow in the future. However, the literature underlines that current district heating systems should evolve towards lower temperature levels of networks as well as more versatile production mix. One of the challenges that district heating systems are facing is the technological development of other heating options which arouse intense competition with other heating systems. District heating research have concentrated on production and network while customers are often neglected part of the research and seen as consumption points in district heating network. District heating business needs customer-centred development.</p> <p>Real estate owners seek lower heating costs as well as smaller risk towards increasing energy prices. The aim of this dissertation is to examine how district heating industry and its business models should be developed to involve customers. This study concentrates on demand side management and heat pumps from perspectives of both customers and district heating system.</p> <p>The results of this dissertation show that from the customers' perspective it is profitable to change over from district heating to on-site heating system either partly or completely and implement demand side management. Understanding customers' perspective sheds light for upcoming changes in district heating industry. According to the results district heating industry should renew its business models, such as renewing pricing models, offer hybrid heating systems for customers and allow prosumers' waste heat into the district heating network, while adding value for the customers.</p>
Field of the dissertation	District heating, energy systems, real estate economics
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