

Abstract

City is complex urban system. In human society city is biggest energy dissipative structure. Therefore it is important to understand how energy flows in to city, what main energy carriers are and what total energy requirements are.

Prague was chosen as a model city for this case study. Prague is modern city, capital of the country housing, employing, accommodating and entertaining more than one and half million people daily. There are some significant differences between average country energy consumption and Prague energy consumption. Prague is touristic centre and destination of many travellers that come to country. Also Prague lack high concentration of heavy industry. There are very few electricity producers, most of time small entertainment or producers electricity from alternative fuels (e.g. central water treatment facility) and most of electricity is transported to Prague from other regions. Heat is produced from primary fuels centrally, but there is significant flow of heat through heat pipe from other regions.

This diploma thesis presents results of the case study on Prague energy metabolism. There were accounted primary energy fuels (coal, oil, gas) as well as their derivatives (e.g. fuel for cars driving in Prague) and final energy use.

To do proper analysis of particular component of the society one is always dependent on data sources that are available. In the paper we will also discuss what data is available and what transformations can be done to satisfy data needs of particular energy metabolism indicators.