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## Energy Transition in Existing Districts in the Hague, a Bottom Up Approach

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## **Abstract**

The 2015 Paris agreements [1], the depletion of fossil fuels, and the variety of damages caused by the production and consumption of fossil fuels necessitate a transition in energy systems. The Netherlands prioritised a transition in residential heating. This transition will not occur by itself, i.e. by a superior technology replacing an outdated predecessor; it takes policy measures to successfully introduce renewable technologies. Moreover, technological, political and economic issues intermingle. Citizens organise themselves in order to influence/define their heating system. This paper will analyse a project in action that aims at facilitating citizens in the city of The Hague to play a role in this transition process.

Energy producers, energy network companies, housing corporations, resident associations and the municipality of The Hague have reached an agreement on renewable energy. Their aim for the coming 5 years is to upgrade 30.000 dwellings in 10 districts to the level of climate neutrality. Besides the Paris agreement, The Hague follows the announced governmental policies to terminate exploitation of natural gas reserves and to stop the use of natural gas in dwellings.

In The Hague and other cities there are many examples of bottom up energy cooperatives that have successfully initiated concrete steps in this energy transition. On the other hand, the organizational abilities of different groups are not equal and we must acknowledge the fact that in any major transition there are winners and losers [2]. For this reason, a lot of attention has to be given to a comprehensive guidance of the transition process.

The objective of this paper is to analyse our attempts to find a suitable method for supporting the energy transition process in existing districts in major cities, with participation of all major stakeholders. The interests of the residents are most important in this perspective. The research question is:

"Under what conditions can resident groups create a widely supported plan that is in line with the local/regional energy transition policy."

This paper will report on the work in progress. The actual challenge of replacing natural gas is undisputed. District wide support for a strategy is conditional for any successful transition. This research will seek the conditions that have to be met