The effect of energy demand on energy citizenship in The Netherlands

To what extent does energy demand affect energy citizenship for households in The Netherlands?

Abstract

This thesis explored the impact of energy demand on energy citizenship among households in the Netherlands. It examined the willingness of households to engage in energy citizenship and how energy demand and economic attractiveness play a role in driving it. The aim of this research is to find whether energy demand affects the degree of households participation in the energy transition in The Netherlands. The study drew upon energy democracy and energy citizenship concepts, as well as reports on the sustainable energy transition. A quantitative analysis combined with statistical tests was conducted. The WoON2021 dataset, collected by the Dutch Ministry of Domestic Affairs and Kingdom Relations (BZK), serves as the foundation for this quantitative research. The dataset focuses on housing quality and needs to support government housing policies. With over 46,000 surveyed households, the dataset combines information on household situations, housing conditions, costs, and incomes. Data enrichment from various sources, including the basic registration of persons and tax administration, enhances its comprehensiveness. Results indicated that financial incentives, like subsidies, and the potential for energy cost savings motivated energy citizenship. The results suggest a positive relation between absolute energy demand and energy citizenship. However, there was no strong evidence linking relative energy demand to energy citizenship. The findings contribute to understanding motivations and barriers, promoting an inclusive energy transition.

Promoting an Inclusive Energy Transition

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Introduction

Background

After graduating from my bachelors program and possible master, I aspire to decrease the gap in (perceived) wealth in The Netherlands. I want to do this through spatial planning, therefore I picked the theme: Promoting an Inclusive Energy Transition as one of my preferences. After reading in the newspaper NRC that mainly the wealthy people profit from the energy transition (Kulkens and Van der Wel, 2022), I realized that in this area of planning, a lot can be done to decrease the perceived wealth gap. This newspaper article in combination with the concept of energy citizenship, defined by Wahlund and Palm (2022) as the notion that citizens will play a significant role in the energy transition, made me search for what motivates citizens to participate in the energy transition. One important motivation for participating in the energy transition is the financial aspect; saving money after investing in sustainability through savings (Visser 2022).

Research on energy citizenship is of significant theoretical and societal importance, particularly when examining energy-saving measures in households. Energy citizenship sheds light on the roles, responsibilities, and rights of individuals and communities in shaping and participating in the energy transition, with a specific focus on promoting energy efficiency.

From a theoretical standpoint, studying energy citizenship in the context of energy-saving measures allows for a deeper understanding of the factors influencing individual and household behaviors. It offers insights into the social, economic, and psychological drivers that motivate individuals to adopt energy-saving practices, as well as the barriers they may encounter. This knowledge can inform the development of theoretical frameworks that facilitate the adoption of energy-saving behaviors and contribute to more effective policy interventions.

On a societal level, investigating energy citizenship with regard to energy-saving measures is crucial for promoting sustainable and responsible energy consumption. By understanding the motivations and barriers associated with energy-saving behaviors, policymakers can design targeted initiatives and incentives that encourage households to adopt energy saving and efficient technologies, such as insulation, smart thermostats, and efficient appliances. Promoting energy citizenship in this context empowers individuals and communities to actively contribute to reducing energy consumption, lowering carbon emissions, and mitigating climate change.

Furthermore, research on energy citizenship highlights the social disparities and inequalities in accessing and implementing energy-saving measures. It helps identify vulnerable groups, such as low-income households, who may face barriers to adopting energy-efficient technologies due to financial constraints or lack of information. Addressing these disparities through inclusive policies and targeted support programs can ensure that energy-saving measures are accessible and beneficial to all segments of society.

This thesis addresses a notable research gap in the existing literature by examining the intersection of energy demand and household energy-saving behaviors. While previous studies have explored energy citizenship and its relation to broader energy transition dynamics, there is a limited understanding of how energy citizenship manifests in the context of household-level energy-saving measures. This research aims to fill this gap by investigating the motivations, barriers, and drivers of energy-saving behaviors within households, with a specific focus on the role of energy demand.

Research Problem

The goal of this research is to find whether energy demand affects energy citizenship and if so whether there is a difference in absolute and relative energy demands effect on energy citizenship. To research the willingness for energy citizenship for households with different energy demands, the research will be formed around the central question: To what extent does energy demand affect energy citizenship for households in The Netherlands? In the research energy demand is described in two forms, absolute and relative energy demand. This leads to similar secondary questions. These secondary questions will be the base of the results section; 'To what extent does absolute energy demand affect energy citizenship?' and 'To what extent does relative energy demand affect energy citizenship?.' Based on these questions this research will work towards an answer to the central question.

To answer these questions this study takes the form of a quantitative research project and will be structured as follows: The first section will explain test results on absolute energy demand with additional information on the statistics for how energy demand is determined in this research, the second section will explain the results on relative energy demand and explain the tests in more detail.

Theoretical Framework

A growing body of research is engaged with finding ways to promote an inclusive energy transition, emphasizing the importance of citizen participation. In the article by Wahlund and Palm (2022) on energy citizenship, the authors state that the ‘Clean Energy Package’ (CEP) is a facilitator of the energy transition in European Union member states. The CEP is initiated by the European Commission with the goal to help citizens in these member states to push the energy transition. This initiative is based on the vision of the EU to create a more democratic and decentralized system that would increase the generation of renewable energy and shift the relation from one of passive consumers to one of active energy citizens who are engaged and take responsibility for energy production and use. Important concepts intertwined in this vision are Energy democracy and Energy citizenship. In their review article on the role of energy democracy and energy citizenship for participatory energy transitions, Wahlund and Palm (2022) state that these concepts are part of citizen participation in energy transition and review the relation between these concepts and energy technologies, energy communities, energy transition movements and energy policy.

Another article that fits in the theme of promoting an inclusive energy transition is written by Steg et al. (2018). The authors state that beside technological innovation and an engaging engineering community, changes in policies and behavior go hand in hand with a sustainable energy transition. *“A successful transition to a more sustainable energy system will require a wide range of sustainable actions by diverse people across the globe.”* (Steg et al., 2018, p. 21). The article explains how to promote the participation of people in the transition to sustainable energy. Components of the research are the behavior that can promote the energy transition and factors; values, identity, beliefs, and norms, and policies like pricing policies that influence the likelihood of sustainable energy behavior. To conclude the article, the authors explain how the transition affects quality of life.

Promoting an inclusive energy transition is a theme which resonates to both the articles. As a result, the concepts used in both articles to explore the theme are often similar or related to each other. Energy citizenship, defined as the notion that citizens will play a significant role in the energy transition by Wahlund and Palm (2022), is also acknowledged by Steg et al. (2018). The main vision, however, is stretched more widely by Steg et al. than by Wahlund and Palm. This difference is the result of the research scopes used by both the research teams. Wahlund and Palm focus on the active participation of citizens in the energy transition, while Steg et al. focus on the entire promotion of the energy transition, including more general policies and the quality of life. Energy democracy; who controls the means of energy production and consumption (Wahlund and Palm 2022), is also part of Steg et al. 's research. The research frame that Wahlund and Palm use, citizen participation in energy transition, is more closely connected to these two concepts than the research frame used by Steg et al.

One of the main reasons behind making sustainable energy investments for households is the idea of making a ‘profit’ as a result of the saved money (Visser 2022). To achieve this, the household needs to consume a significant amount of energy. Households invest a certain amount of money in energy saving measures, the amount of energy that is then saved causes the energy bill to decrease. Therefore it can be expected that households with a high energy demand save more money with energy saving measures. *“Another common external incentive* *is pricing policy, including subsidies, rebates, and taxes. The common understanding is that such pricing policies are rather effective to promote sustainable energy behavior because people are strongly motivated to save money"* (Steg et al., 2018, p. 26).

Energy citizenship is a relevant concept for this research. If citizens will indeed play an important role in the energy transition, to make it inclusive for all citizens, the interests of small energy consumers also needs to be taken into account. The concepts used by Steg et al. can be used to define the contextual factors, especially the economic factor, applicable to small energy demanding households. These factors influence the probability that people and households will adopt sustainable energy practices. The economic factor in this context refers to the financial situation of the household. Furthermore the concepts can be used to determine what factors individuals take into consideration before deciding on sustainable energy innovations through the individual factors.

Conceptual Model

The image is a visual representation of the theories underpinning the research (image 1). Expected is that the independent variable will substantially explain the dependent variable. Meaning that the relation between low energy demand in households, based on total costs of electricity and gas per month, will show how these variables affect the dependent variable; willingness of energy citizenship.

Low total costs are expected to be inherent to low energy demand. The variable of total costs is expected to correlate with the variable of willingness to invest. With the addition of the energy label variable, the research aspires to clarify whether the household already is sustainable, meaning that further increasing sustainability might not be feasible or create substantial energy savings.

Image 1: Conceptual model

Hypotheses

Expected is, based on articles, that the possibility for financial gains is frequently the driving force behind the choice to install energy-saving technologies in homes. This idea is supported by research by Visser (2022), which emphasizes the idea that households hope to turn a profit through long-term energy savings as a result of their sustainable energy investments. Households must initially consume a large amount of energy in order to see these cost benefits.

Households that invest in energy-saving technologies, such as insulation, energy-efficient appliances, or renewable energy systems, consume relatively less energy, which lowers their relative energy costs. Therefore, because they have a larger chance of making significant long-term cost savings, households with higher energy demands may be more likely to employ energy-saving solutions.

Energy demand often correlates with energy costs, potential absolute savings through green energy investments are thus larger for high energy demanding households. Because of this, the more expensive investments that are part of the energy transition will likely be installed more often for high energy consuming households because the duration of return on investment is met in a nearer future than for low energy demanding households. The findings on the sub questions are expected to show a negative correlation between both relative and absolute low energy demanding households and willingness of energy citizenship.

Methodology

For this quantitative research the WoON2021 data set will be used. WoON2021 is collected by The Ministry of Domestic Affairs and Kingdom Relations [Binnenlandse Zaken en Koninkrijksrelaties] (BZK). The research is done on housing quality and housing needs to support government policy on housing. The WoON dataset brings together information on household situation, current and desired housing situation, housing costs and incomes. More than 46,000 households were surveyed, after which these data were enriched with data from, among others, the basic registration of persons and the tax administration. BZK developed the WoON2021 in cooperation with the Central bureau of statistics (CBS).

The research is on the whole of The Netherlands, therefore all the cases will be used. The variables that are of use in the research are on the forms of economic attractiveness; 'why participate in the energy transition? Did it lower the rent?', energy citizenship; 'what type of energy saving measures are installed?' and energy usage; 'usage of electricity and gas'. Since the research question is applicable to a significant group of people in The Netherlands, it is important to use the most representative data. The WoON2021 dataset is collected from 46658 households throughout The Netherlands. Variables in this dataset will be run through applicable tests in the program 'SPSS' to show possible correlation between these variables. Based on the data and research goal, a binary logistic regression test would be the most suitable. This test uses multiple independent variables (gas and electricity use) and a dependent binary (energy saving measure implemented) variable to show the probability of a relation between these variables and thus fits with the variables used in this research. The test results will show the probability of a correlation between energy demand and energy citizenship (Fritz & Berger, 2015).

This research is on the influence of energy demand in both the relative and the absolute form. Distincting these concepts is relevant since the main reason for implementing energy saving measures is saving on energy costs.

Now follows a short insight in the economic context; The Dutch government provides subsidies through the "Rijksdienst voor Ondernemend Nederland" (Agency for the Enterprising Netherlands) to stimulate citizen participation in the energy transition. This research focuses on subsidies for homeowners. Eligible homeowners can receive subsidies for implementing energy-saving measures such as insulation, heat pumps, solar boilers, etc. In the WoON data set used for this research, respondents were asked about their motivation and willingness to invest in energy-saving measures. Economic attractiveness, particularly the potential savings on energy bills, emerged from the articles as a primary driver for energy citizenship. The majority of respondents expressed a willingness to pay more for a more energy-efficient home if they could recover the costs through lower energy bills. Based on the survey results and the articles, it is evident that a lower energy bill probably is the main motivator for energy citizenship. These results raise the question whether this relation is there for both relative and absolute energy demand.

The previous part highlights the significance of economic attractiveness as the primary driver for energy citizenship, particularly in terms of expenditure savings. This raises the question of how energy demand relates to energy citizenship in general, and whether households with lower energy demand participate less in the energy transition compared to similar households. This part of the research focuses on defining what constitutes relatively low energy demand.

In this research, a relatively low energy demand for a household refers to a situation where the household's energy consumption is comparatively lower than similar households or a reference group. It indicates a modest or restrained level of energy usage within a given context. The identification and promotion of relative low energy demand align with sustainability goals, environmental considerations, and energy efficiency objectives. Achieving a relatively low energy demand can contribute to reduced greenhouse gas emissions, decreased reliance on non-renewable energy sources, and improved energy conservation. However, as emphasized above, economic reasons primarily drive low energy demand.

The Central Bureau of Statistics in the Netherlands (CBS, 2021) published a report in 2021 analyzing the gas and electricity consumption of households. The report includes ten different household profiles, representing 64% of total households in the Netherlands. These profiles, along with their average gas and electricity usage for the year 2019, are presented below:

	Electricity use (kWh)	Gas use (M^3)
1. One occupant in new, small apartment	1610	620
2. One occupant in old, small apartment	1550	810
3. One occupant in old, small terraced house	1690	1060
4. One occupant in old, medium terraced house	2000	1260
5. Two or more occupants in old, small apartment	2220	1010
6. Two or more occupants in old, small terraced house	2780	1230
7. Two or more occupants in new, medium terraced house	3260	1080
8. Two or more occupants in old, medium terraced house	3190	1390
9. Two or more residents in old, large terraced house	3860	1940
10. Two or more occupants in old, large detached house	4450	2400

The results show a clear pattern: larger houses or households consume more energy. Older houses tend to use more gas due to poorer insulation, and newer houses use more electricity due to increased household luxury demands.

Energy consumption is often associated with energy labels, which were introduced as a result of legislation implemented in 2008 in the Netherlands. Energy labels are required when selling or renting a property to demonstrate its energy efficiency. However, energy labels do not directly reflect energy demand. Factors such as insulation, sunlight exposure, and neighboring structures determine the energy label and can help explain the energy demand of a household. Other reasons for low energy demand may include occupants consciously saving energy for economic or environmental reasons, such as wearing warmer clothing instead of using the heating system.

To answer the main research question, the CBS household groups will be separately tested to assess the impact of energy demand on energy citizenship. The next section will explain the testing methodology and explore the relation between absolute energy demand and energy citizenship, followed by an analysis of the relation between relative energy demand and energy citizenship in the subsequent section.

Results

In this section of the research, findings on the sub questions are presented and, in combination with findings directly related to the main question, will support the findings on the main research question.

Absolute energy demand affecting energy citizenship

For the main research question the sections of economic attractiveness of energy citizenship and low energy demanding households are brought together, partially through statistical analysis. This section will use the same statistical tests to show the effect of absolute energy demand on energy citizenship to explain these tests and for later referencing in the conclusion.

In this research, energy demand is defined as the use of electricity in kWh and gas in m^3 of a household. For these two variables to be put together to determine the energy demand of a household, it is necessary to test the degree of correlation between the two variables. The Pearson correlation coefficient is a statistical measure used to determine the strength and direction of the linear relation between two continuous variables. The coefficient ranges from -1 to +1, where -1 indicates a perfect negative linear relation, +1 indicates a perfect positive linear relation, and 0 indicates no linear relation. The number of cases with data suitable for the test is 39134. Both are interval variables. When the data for electricity and gas use was put into the Pearson correlation test the coefficient came out to be 0,445 with a significance smaller than 0,001, it can be said with a high level of confidence that there is a moderate positive association between electricity and gas use in households within The Netherlands. Figure 2 shows a scatter plot of electricity and gas use in the dataset. With this correlation established, electricity and gas use can be applied as the definition for energy demand in this research.

To test to what extent absolute energy demand affects energy citizenship, multiple binary logistic regression tests are executed. Energy saving measures are binary variables in the data set; 'selected' or 'not selected.' With both the interval variables for energy as independent variables and the binary variable as dependent variable, 6 binary logistic regressions were executed for all the 6 different energy saving measures named in the data set (tables 2-7 in the appendix). For the tests data was used on 38891 cases. The 6 tests all show a significance of maximum 0,015 and most even near 0,001. Therefore the decision is to reject the null hypothesis of the total of regression coefficients being 0 and conclude that the data implies that with an increase in energy consumption the likelihood of implementation of energy saving measures increases as well.

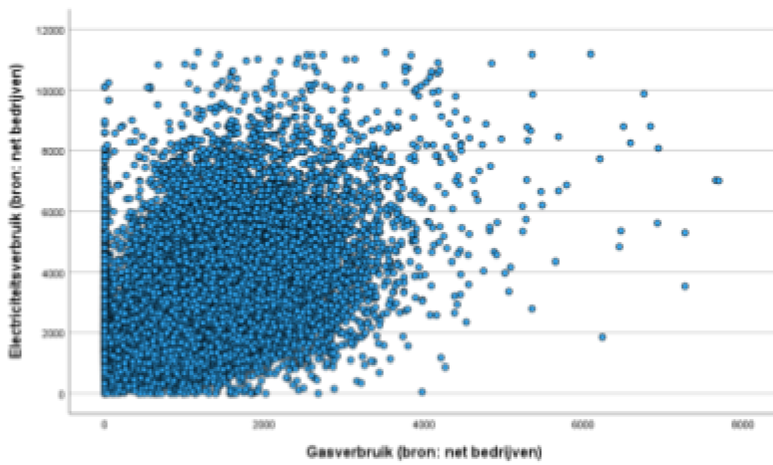

Figure 2: Scatterplot of electricity and gas use

These results are presumably related to the prior addressed economic attractiveness of energy saving measures. Households that consume an absolute larger amount of energy will likely have a larger absolute decrease in energy consumption and thus in the energy bill, making the period of time needed to return the investment for the installation shorter.

In her chapter about energy policies in The Netherlands in a book on energy demand challenges in Europe, Backhaus states that Dutch households are less interested in energy-related home renovations than other countries *"due to concerns regarding investment costs"* (Backhaus, 2019). This statement is in line with the economic motivation mentioned in the methodology and the results from the binary logistic regression tests performed for the absolute energy demand of households in The Netherlands.

Relative energy demand affecting energy citizenship

The methodology that discusses the main forms of economic attractiveness as the main driver for energy citizenship and results on absolute energy demand affecting energy citizenship suggest a positive correlation between energy demand and energy citizenship. These results came from test and descriptive statistics of the whole dataset. In this section, the tests will be performed with more comparison between similar cases, making energy demand relative instead of absolute, inherently making it possible to make distinctions in relative energy demand.

The methods of testing will not differ from the previous section, only there will be an additional explanatory variable, type of household. Again used is the research by the CBS, mentioned in the part on low energy demand, that created 10 groups of common types of households and gave an average use of energy demand for these groups. With the data available in the WoON21 dataset, it is possible to recreate these groups and analyze their energy demand for 2021. Because of some factors that are not available in the WoON21 dataset, 3 groups had to be merged into 1 and 2 other groups had to be merged into 1 as well, making the 10 groups into 7 groups. According to the CBS, the groups are representative for 64% of the total of the Dutch households. The 7 groups created for this research exist of:

1. One occupant in a new apartment.
2. One occupant in an old apartment.
3. One occupant in an old terraced house.
4. Two or more occupants in an old apartment.
5. Two or more occupants in an old terraced house.
6. Two or more occupants in a new terraced house.
7. Two or more occupants in an old detached house.

In the tests houses built before 2000 are considered old since it is only after 2000 that for almost all of the new built houses are properly insulated (Regionaal energieloket). Within these 7 groups again the binary logistic regression tests like in the previous section are performed, to find if energy demand also affects energy citizenship if this is tested to similar cases. For the group of one occupant in a new apartment, there are 32 cases. With this amount of cases, it is safe to use parametric tests since the confidence interval of the population data is set enough to warrant assertions against the findings.

To select this group in SPSS, the amount of occupants is set to 1, building year of the house to 2000 or later and the type of housing that is selected is apartment. A reason for the number of cases being low in this group could be related to the low number of respondents from single person households, being 2618 of the total 46658. Different from the tests for the whole dataset and the other groups, the binary logistic regression test was performed for 5 energy saving measures for this group. This is the result of 100% of this group responding not to have implemented a heat pump, because of this there is no comparison possible and the test cannot be run. Table 1 shows the results of one of the 5 binary logistic regression tests for this group. This test is run on the energy saving measure of having double glass. The B value in the table represents the estimated coefficient (beta) for each predictor variable. It indicates the magnitude and direction of the relation between the predictor variable and the log odds of the outcome variable. The S.E. column displays the standard error associated with the estimated coefficient. It measures the variability or uncertainty in the estimated coefficient. The Wald column shows the Wald statistic, which is the ratio of the square of the estimated coefficient to the square of its standard error. It is used to test the null hypothesis that the coefficient is equal to zero. The df column represents the difference between the number of observations and the number of estimated parameters in the model. The Sig. (Significance) column displays the p-value associated with the Wald statistic. It indicates the statistical significance of each predictor variable. A p-value less than the predetermined significance level, 0,05, suggests a significant relation between the predictor variable and the outcome variable. The odds ratio (Exp (B)) represents the ratio of the odds of the outcome variable (implementation of the energy-saving measure) for a one-unit increase in the predictor variable (energy demand), compared to the reference category or baseline level (Burt et al., 2009).

Because for all variables the significance level is greater than 0,05, the test indicates that there is not enough evidence that for the implementation of double glass the demand for electricity or gas has a significant effect in this group.

The results for this group regarding the other energy saving measures are shown in the appendix (tables 8-11), for insulation, for solar panels, a new central heating system and the results for ‘other’ energy saving measures. The results presented in these tables are similar to the results in table 1, all significance levels are greater than 0,05 leading to the same conclusion as that can be made from the test results for the energy saving measure in table 1.

For the second group, 1 occupant in an old apartment, there are 174 cases. The tables 12-17 in the appendix show the results of the binary logistic regression tests for these energy saving measures. The results show that for insulation, the installation of a heat pump, a new central heating system, and ‘other’ measures, the value for the constant is below the predetermined significance level.

Table 1: Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Electricity use	,004	,003	1,837	1	,175	1,004
	Gas use	-,005	,003	1,878	1	,171	,995
	Constant	-2,763	3,891	,504	1	,478	,063

The constant term is the predicatory value when the test does not consider gas and electricity use. With a significance level of below 0,05 it can be said with a high amount of confidence that there are other variables that influence the outcome value; is the energy saving measure installed or not. Since this research focuses on the effect of energy demand on energy citizenship, the constant is less relevant than the two other variables.

If we then look at the values in the significance columns for electricity and gas use, all tables show a value larger than 0,05. With these results the conclusion is that for this group there is not enough evidence to claim that there is a relation between relative energy demand and energy citizenship.

The first results indicating a possible relation between energy demand and energy citizenship in a comparable group, in this case one person living in an old terraced house (group 3), are shown in appendix table 22. This table shows a significance of 0,005 for gas use and installing a new central heating system. A negative B value and Exp (B) smaller than 1 indicates a negative relation. This means that an increase in gas demand decreases the probability of the household having installed a new central heating system. This could be the result of new central heating systems being more efficient and thus using less gas.

For the fourth group, two or more persons living in an old apartment, the results show no relation between energy demand and energy citizenship. The fifth group, two or more persons living in an old terraced house, is the first group showing a positive relation between energy demand and energy citizenship. Table 31 shows a small value for significance for electricity use influencing the outcome value, 'does the household have insulation?.' This indicates that an increase in electricity demand increases the chance of a household having implemented insulation. Different from the results of group 3, the results of group 5 shows a possible positive relation between gas use and implementation of a new central heating system (table 34). Remarkable is that the sixth group, two or more persons living in a new terraced house, shows a possible negative relation between these variables, equivalent to group 3 (table 40). For the last group, two or more persons living in an old detached house, there were no results indicating relations between relative energy demand and energy citizenship.

Conclusion

This thesis aimed to address the research problem of understanding the impact of energy demand on energy citizenship for households in the Netherlands. Through the theoretical framework, the concepts of energy democracy and energy citizenship were explored, highlighting their importance in citizen participation in the energy transition. The research also drew upon the article by Steg et al. (2018), which emphasized the role of policies, behavior, and values in promoting sustainable energy transition and enhancing quality of life.

The conceptual model presented in the thesis illustrated the expected relation between energy demand, total use of electricity and gas, and the willingness for energy citizenship. It was hypothesized that both low relative and absolute energy demand would negatively correlate with the willingness to participate in the energy transition.

The methodology employed a quantitative approach using the WoON2021 dataset, which provided comprehensive information on housing quality, needs, costs, and incomes of households in the Netherlands. Various variables related to economic attractiveness, energy citizenship, and energy usage were analyzed using statistical tests, primarily the binary logistic regression.

In the thesis, it is discussed that financial incentives, such as subsidies, played an important role in motivating energy citizenship, literature and the database strengthened each other in this claim. The most significant form of economic attractiveness is the potential for savings on energy expenditure. The low energy demand of households could be the result of either a good energy label or the occupant(s) being more sparing when it comes to energy use. The statistical tests show a positive relation between absolute energy demand and energy citizenship. Focussing on the relative energy demand, the statistical tests do not, beside some weak negative relations between gas demand and implementing a new central heating system, imply energy demand affecting energy citizenship. The theories used in this piece, including energy citizenship, energy democracy, energy transition dynamics, sustainable energy behavior, economic attractiveness, social disparities in accessing energy-saving measures, and the relation between energy demand and energy-saving behaviors in households, form the explanation for this implied difference in absolute and relative energy demand's effect on energy citizenship.

In conclusion, this research shed light on the relation between low energy demand and energy citizenship for households in the Netherlands. The results highlighted the importance of economic attractiveness, particularly the potential for cost savings, in motivating households to participate in the energy transition and imply that larger households, often consuming more energy, are more likely to implement energy saving measures. This is the result of the win back period for the investment being shorter. The findings contribute to a better understanding of the motivations and barriers for energy citizenship, ultimately aiming to promote an inclusive energy transition that considers the interests of small energy consumers. It must be noted that because of the analysis being done on 7 groups, the results are not representative for the whole of The Netherlands. Furthermore the data that is used is mainly binary so either a yes or a no, leaving no space for nuance or further argumentation for decisions the respondents made.

In the future, research based on the findings of this thesis could play into the latter point of critique and create a qualitative study on low energy demand and its relation to energy citizenship.

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Appendix

Tables 2-7: Algemeen

Table 2: Results double glass

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Electriciteitsverbruik (bron: net bedrijven)	,000	,000	6,752	1	,009	1,000
	Gasverbruik (bron: net bedrijven)	,000	,000	95,526	1	<,001	1,000
	Constant	1,729	,031	3163,048	1	<,001	5,634

a. Variable(s) entered on step 1: Electriciteitsverbruik (bron: net bedrijven), Gasverbruik (bron: net bedrijven).

Table 3: Results insulation

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Electriciteitsverbruik (bron: net bedrijven)	,000	,000	7,338	1	,007	1,000
	Gasverbruik (bron: net bedrijven)	,000	,000	318,409	1	<,001	1,000
	Constant	2,177	,033	4257,102	1	<,001	8,819

a. Variable(s) entered on step 1: Electriciteitsverbruik (bron: net bedrijven), Gasverbruik (bron: net bedrijven).

Table 4: Results solar panels

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Electriciteitsverbruik (bron: net bedrijven)	,000	,000	5,935	1	,015	1,000
	Gasverbruik (bron: net bedrijven)	,000	,000	129,360	1	<,001	1,000
	Constant	1,927	,032	3565,792	1	<,001	6,871

a. Variable(s) entered on step 1: Electriciteitsverbruik (bron: net bedrijven), Gasverbruik (bron: net bedrijven).

Table 5: Results heat pump

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Electriciteitsverbruik (bron: net bedrijven)	,000	,000	253,031	1	<,001	1,000
	Gasverbruik (bron: net bedrijven)	,000	,000	33,582	1	<,001	1,000
	Constant	5,343	,109	2384,555	1	<,001	209,109

a. Variable(s) entered on step 1: Electriciteitsverbruik (bron: net bedrijven), Gasverbruik (bron: net bedrijven).

Table 6: Results new central heating system

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Electriciteitsverbruik (bron: net bedrijven)	,000	,000	17,514	1	<,001	1,000
	Gasverbruik (bron: net bedrijven)	,000	,000	365,447	1	<,001	1,000
	Constant	1,199	,026	2137,048	1	<,001	3,316

a. Variable(s) entered on step 1: Electriciteitsverbruik (bron: net bedrijven), Gasverbruik (bron: net bedrijven).

Table 7: Results ‘other’ energy saving measures

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Electriciteitsverbruik (bron: net bedrijven)	,000	,000	41,453	1	<,001	1,000
	Gasverbruik (bron: net bedrijven)	,000	,000	12,003	1	<,001	1,000
	Constant	2,701	,041	4336,577	1	<,001	14,887

a. Variable(s) entered on step 1: Electriciteitsverbruik (bron: net bedrijven), Gasverbruik (bron: net bedrijven).

Tables 8-11: One occupant in a new apartment

Table 8: Results insulation

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Electriciteitsverbruik (bron: net bedrijven)	,004	,004	1,214	1	,271	1,004
	Gasverbruik (bron: net bedrijven)	-,005	,005	1,004	1	,316	,995
	Constant	-2,343	4,711	,247	1	,619	,096

a. Variable(s) entered on step 1: Electriciteitsverbruik (bron: net bedrijven), Gasverbruik (bron: net bedrijven).

Table 9: Results solar panels

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Electriciteitsverbruik (bron: net bedrijven)	,003	,004	,668	1	,414	1,003
	Gasverbruik (bron: net bedrijven)	-,004	,004	,811	1	,368	,996
	Constant	-,490	4,854	,010	1	,920	,612

a. Variable(s) entered on step 1: Electriciteitsverbruik (bron: net bedrijven), Gasverbruik (bron: net bedrijven).

Table 10: Results new central heating system

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Electriciteitsverbruik (bron: net bedrijven)	,002	,002	1,285	1	,257	1,002
	Gasverbruik (bron: net bedrijven)	-,002	,002	,603	1	,437	,998
	Constant	-1,507	2,935	,263	1	,608	,222

a. Variable(s) entered on step 1: Electriciteitsverbruik (bron: net bedrijven), Gasverbruik (bron: net bedrijven).

Table 11: Results ‘other’ energy saving measures

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Electriciteitsverbruik (bron: net bedrijven)	-,054	5,135	,000	1	,992	,947
	Gasverbruik (bron: net bedrijven)	-,150	13,319	,000	1	,991	,861
	Constant	361,611	32276,822	,000	1	,991	1,111E+157

a. Variable(s) entered on step 1: Electriciteitsverbruik (bron: net bedrijven), Gasverbruik (bron: net bedrijven).

Tables 12-17: One occupant in an old apartment

Table 12: Results double glass

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Electriciteitsverbruik (bron: net bedrijven)	,001	,000	3,361	1	,067	1,001
	Gasverbruik (bron: net bedrijven)	,000	,001	,018	1	,893	1,000
	Constant	,948	,613	2,392	1	,122	2,581

a. Variable(s) entered on step 1: Electriciteitsverbruik (bron: net bedrijven), Gasverbruik (bron: net bedrijven).

Table 13: Results insulation

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Electriciteitsverbruik (bron: net bedrijven)	,000	,000	,433	1	,510	1,000
	Gasverbruik (bron: net bedrijven)	,000	,001	,367	1	,545	1,000
	Constant	1,886	,784	5,792	1	,016	6,596

a. Variable(s) entered on step 1: Electriciteitsverbruik (bron: net bedrijven), Gasverbruik (bron: net bedrijven).

Table 14: Results solar panels

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Electriciteitsverbruik (bron: net bedrijven)	,003	,002	2,489	1	,115	1,003
	Gasverbruik (bron: net bedrijven)	,001	,002	,202	1	,653	1,001
	Constant	,075	1,532	,002	1	,961	1,078

a. Variable(s) entered on step 1: Electriciteitsverbruik (bron: net bedrijven), Gasverbruik (bron: net bedrijven).

Table 15: Results heat pump

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Electriciteitsverbruik (bron: net bedrijven)	,000	,001	,060	1	,806	1,000
	Gasverbruik (bron: net bedrijven)	,001	,002	,300	1	,584	1,001
	Constant	3,401	1,730	3,864	1	,049	29,997

a. Variable(s) entered on step 1: Electriciteitsverbruik (bron: net bedrijven), Gasverbruik (bron: net bedrijven).

Table 16: Results new central heating system

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Electriciteitsverbruik (bron: net bedrijven)	,000	,000	,196	1	,658	1,000
	Gasverbruik (bron: net bedrijven)	,000	,000	,025	1	,875	1,000
	Constant	1,117	,457	5,968	1	,015	3,055

a. Variable(s) entered on step 1: Electriciteitsverbruik (bron: net bedrijven), Gasverbruik (bron: net bedrijven).

Table 17: Results ‘other’ energy saving measures

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Electriciteitsverbruik (bron: net bedrijven)	,000	,000	,343	1	,558	1,000
	Gasverbruik (bron: net bedrijven)	,000	,001	,093	1	,761	1,000
	Constant	2,037	,755	7,278	1	,007	7,671

a. Variable(s) entered on step 1: Electriciteitsverbruik (bron: net bedrijven), Gasverbruik (bron: net bedrijven).

Tables 18-23: One occupant in an old terraced house

Table 18: Results double glass

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Electriciteitsverbruik (bron: net bedrijven)	,000	,000	,350	1	,554	1,000
	Gasverbruik (bron: net bedrijven)	-,001	,000	2,575	1	,109	,999
	Constant	2,586	,556	21,640	1	<,001	13,270

a. Variable(s) entered on step 1: Electriciteitsverbruik (bron: net bedrijven), Gasverbruik (bron: net bedrijven).

Table 19: Results insulation

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Electriciteitsverbruik (bron: net bedrijven)	,000	,000	,110	1	,741	1,000
	Gasverbruik (bron: net bedrijven)	,000	,000	,333	1	,564	1,000
	Constant	1,329	,575	5,344	1	,021	3,778

a. Variable(s) entered on step 1: Electriciteitsverbruik (bron: net bedrijven), Gasverbruik (bron: net bedrijven).

Table 20: Results solar panels

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Electriciteitsverbruik (bron: net bedrijven)	,000	,000	2,572	1	,109	1,000
	Gasverbruik (bron: net bedrijven)	,001	,001	2,350	1	,125	1,001
	Constant	,281	,737	,145	1	,703	1,324

a. Variable(s) entered on step 1: Electriciteitsverbruik (bron: net bedrijven), Gasverbruik (bron: net bedrijven).

Table 21: Results heat pump

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Electriciteitsverbruik (bron: net bedrijven)	,003	,003	1,250	1	,264	1,003
	Gasverbruik (bron: net bedrijven)	-,002	,002	1,046	1	,306	,998
	Constant	2,050	3,665	,313	1	,576	7,766

a. Variable(s) entered on step 1: Electriciteitsverbruik (bron: net bedrijven), Gasverbruik (bron: net bedrijven).

Table 22: Results new central heating system

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Electriciteitsverbruik (bron: net bedrijven)	,000	,000	,689	1	,406	1,000
	Gasverbruik (bron: net bedrijven)	-,001	,000	7,895	1	,005	,999
	Constant	1,416	,452	9,802	1	,002	4,120

a. Variable(s) entered on step 1: Electriciteitsverbruik (bron: net bedrijven), Gasverbruik (bron: net bedrijven).

Table 23: Results ‘other’ energy saving measures

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Electriciteitsverbruik (bron: net bedrijven)	,000	,000	1,262	1	,261	1,000
	Gasverbruik (bron: net bedrijven)	,000	,001	,353	1	,553	1,000
	Constant	1,523	1,145	1,770	1	,183	4,587

a. Variable(s) entered on step 1: Electriciteitsverbruik (bron: net bedrijven), Gasverbruik (bron: net bedrijven).

Tables 24-29: Two or more occupants in an old apartment

Table 24: Results double glass

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Electriciteitsverbruik (bron: net bedrijven)	,000	,000	1,008	1	,315	1,000
	Gasverbruik (bron: net bedrijven)	,000	,000	,064	1	,800	1,000
	Constant	1,864	,234	63,427	1	<,001	6,449

a. Variable(s) entered on step 1: Electriciteitsverbruik (bron: net bedrijven), Gasverbruik (bron: net bedrijven).

Table 25: Results insulation

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Electriciteitsverbruik (bron: net bedrijven)	,000	,000	1,056	1	,304	1,000
	Gasverbruik (bron: net bedrijven)	,000	,000	,433	1	,510	1,000
	Constant	2,449	,298	67,439	1	<,001	11,573

a. Variable(s) entered on step 1: Electriciteitsverbruik (bron: net bedrijven), Gasverbruik (bron: net bedrijven).

Table 26: Results solar panels

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Electriciteitsverbruik (bron: net bedrijven)	,000	,000	,000	1	,988	1,000
	Gasverbruik (bron: net bedrijven)	,001	,001	2,612	1	,106	1,001
	Constant	2,904	,512	32,161	1	<,001	18,254

a. Variable(s) entered on step 1: Electriciteitsverbruik (bron: net bedrijven), Gasverbruik (bron: net bedrijven).

Table 27: Results heat pump

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Electriciteitsverbruik (bron: net bedrijven)	,000	,000	,000	1	,993	1,000
	Gasverbruik (bron: net bedrijven)	,001	,001	,638	1	,424	1,001
	Constant	4,399	1,059	17,256	1	<,001	81,378

a. Variable(s) entered on step 1: Electriciteitsverbruik (bron: net bedrijven), Gasverbruik (bron: net bedrijven).

Table 28: Results new central heating system

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Electriciteitsverbruik (bron: net bedrijven)	,000	,000	,381	1	,537	1,000
	Gasverbruik (bron: net bedrijven)	,000	,000	,045	1	,831	1,000
	Constant	1,203	,196	37,472	1	<,001	3,329

a. Variable(s) entered on step 1: Electriciteitsverbruik (bron: net bedrijven), Gasverbruik (bron: net bedrijven).

Table 29: Results ‘other’ energy saving measures

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Electriciteitsverbruik (bron: net bedrijven)	,000	,000	1,372	1	,241	1,000
	Gasverbruik (bron: net bedrijven)	,000	,000	,855	1	,355	1,000
	Constant	3,131	,329	90,456	1	<,001	22,901

a. Variable(s) entered on step 1: Electriciteitsverbruik (bron: net bedrijven), Gasverbruik (bron: net bedrijven).

Tables 30-35: Two or more occupants in an old terraced house

Table 30: Results double glass

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Electriciteitsverbruik (bron: net bedrijven)	,000	,000	2,197	1	,138	1,000
	Gasverbruik (bron: net bedrijven)	,000	,000	1,258	1	,262	1,000
	Constant	1,640	,250	43,100	1	<,001	5,153

a. Variable(s) entered on step 1: Electriciteitsverbruik (bron: net bedrijven), Gasverbruik (bron: net bedrijven).

Table 31: Results insulation

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Electriciteitsverbruik (bron: net bedrijven)	,000	,000	12,637	1	<,001	1,000
	Gasverbruik (bron: net bedrijven)	,000	,000	,908	1	,341	1,000
	Constant	,962	,255	14,202	1	<,001	2,617

a. Variable(s) entered on step 1: Electriciteitsverbruik (bron: net bedrijven), Gasverbruik (bron: net bedrijven).

Table 32: Results solar panels

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Electriciteitsverbruik (bron: net bedrijven)	,000	,000	1,516	1	,218	1,000
	Gasverbruik (bron: net bedrijven)	,000	,000	,619	1	,432	1,000
	Constant	1,425	,283	25,342	1	<,001	4,156

a. Variable(s) entered on step 1: Electriciteitsverbruik (bron: net bedrijven), Gasverbruik (bron: net bedrijven).

Table 33: Results heat pump

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Electriciteitsverbruik (bron: net bedrijven)	,000	,000	,203	1	,652	1,000
	Gasverbruik (bron: net bedrijven)	,002	,001	1,646	1	,200	1,002
	Constant	4,995	1,789	7,793	1	,005	147,627

a. Variable(s) entered on step 1: Electriciteitsverbruik (bron: net bedrijven), Gasverbruik (bron: net bedrijven).

Table 34: Results new central heating system

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Electriciteitsverbruik (bron: net bedrijven)	,000	,000	3,011	1	,083	1,000
	Gasverbruik (bron: net bedrijven)	,000	,000	9,843	1	,002	1,000
	Constant	1,001	,205	23,807	1	<,001	2,721

a. Variable(s) entered on step 1: Electriciteitsverbruik (bron: net bedrijven), Gasverbruik (bron: net bedrijven).

Table 35: Results 'other' energy saving measures

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Electriciteitsverbruik (bron: net bedrijven)	,000	,000	,816	1	,366	1,000
	Gasverbruik (bron: net bedrijven)	,000	,000	,266	1	,606	1,000
	Constant	2,156	,324	44,193	1	<,001	8,637

a. Variable(s) entered on step 1: Electriciteitsverbruik (bron: net bedrijven), Gasverbruik (bron: net bedrijven).

Tables 36-41: Two or more occupants in a new terraced house

Table 36: Results double glass

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Electriciteitsverbruik (bron: net bedrijven)	-,001	,001	1,041	1	,308	,999
	Gasverbruik (bron: net bedrijven)	,002	,002	1,106	1	,293	1,002
	Constant	5,079	1,964	6,687	1	,010	160,577

a. Variable(s) entered on step 1: Electriciteitsverbruik (bron: net bedrijven), Gasverbruik (bron: net bedrijven).

Table 37: Results insulation

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Electriciteitsverbruik (bron: net bedrijven)	,000	,001	,005	1	,943	1,000
	Gasverbruik (bron: net bedrijven)	,000	,002	,005	1	,944	1,000
	Constant	5,065	2,736	3,427	1	,064	158,433

a. Variable(s) entered on step 1: Electriciteitsverbruik (bron: net bedrijven), Gasverbruik (bron: net bedrijven).

Table 38: Results solar panels

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Electriciteitsverbruik (bron: net bedrijven)	,000	,000	,183	1	,669	1,000
	Gasverbruik (bron: net bedrijven)	,000	,001	,447	1	,504	1,000
	Constant	1,997	,688	8,431	1	,004	7,365

a. Variable(s) entered on step 1: Electriciteitsverbruik (bron: net bedrijven), Gasverbruik (bron: net bedrijven).

Table 39: Results heat pump

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Electriciteitsverbruik (bron: net bedrijven)	-,001	,001	1,265	1	,261	,999
	Gasverbruik (bron: net bedrijven)	,000	,002	,030	1	,863	1,000
	Constant	7,673	3,020	6,454	1	,011	2150,585

a. Variable(s) entered on step 1: Electriciteitsverbruik (bron: net bedrijven), Gasverbruik (bron: net bedrijven).

Table 40: Results new central heating system

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Electriciteitsverbruik (bron: net bedrijven)	,000	,000	,154	1	,695	1,000
	Gasverbruik (bron: net bedrijven)	-,001	,001	7,149	1	,008	,999
	Constant	3,140	,682	21,183	1	<,001	23,106

a. Variable(s) entered on step 1: Electriciteitsverbruik (bron: net bedrijven), Gasverbruik (bron: net bedrijven).

Table 41: Results 'other' energy saving measures

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Electriciteitsverbruik (bron: net bedrijven)	,000	,000	,876	1	,349	1,000
	Gasverbruik (bron: net bedrijven)	,000	,001	,123	1	,726	1,000
	Constant	4,061	1,067	14,479	1	<,001	58,043

a. Variable(s) entered on step 1: Electriciteitsverbruik (bron: net bedrijven), Gasverbruik (bron: net bedrijven).

Tables 42-47: Two or more occupants in an old detached house

Table 42: Results double glass

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Electriciteitsverbruik (bron: net bedrijven)	,000	,000	2,932	1	,087	1,000
	Gasverbruik (bron: net bedrijven)	,000	,000	1,376	1	,241	1,000
	Constant	1,233	,626	3,871	1	,049	3,430

a. Variable(s) entered on step 1: Electriciteitsverbruik (bron: net bedrijven), Gasverbruik (bron: net bedrijven).

Table 43: Results insulation

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Electriciteitsverbruik (bron: net bedrijven)	,000	,000	,113	1	,737	1,000
	Gasverbruik (bron: net bedrijven)	,000	,000	1,775	1	,183	1,000
	Constant	2,162	,617	12,290	1	<,001	8,691

a. Variable(s) entered on step 1: Electriciteitsverbruik (bron: net bedrijven), Gasverbruik (bron: net bedrijven).

Table 44: Results solar panels

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Electriciteitsverbruik (bron: net bedrijven)	,000	,000	2,567	1	,109	1,000
	Gasverbruik (bron: net bedrijven)	,000	,000	1,368	1	,242	1,000
	Constant	,951	,556	2,927	1	,087	2,589

a. Variable(s) entered on step 1: Electriciteitsverbruik (bron: net bedrijven), Gasverbruik (bron: net bedrijven).

Table 45: Results heat pump

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Electriciteitsverbruik (bron: net bedrijven)	,002	,001	3,325	1	,068	1,002
	Gasverbruik (bron: net bedrijven)	-,001	,002	,662	1	,416	,999
	Constant	3,208	3,262	,967	1	,325	24,727

a. Variable(s) entered on step 1: Electriciteitsverbruik (bron: net bedrijven), Gasverbruik (bron: net bedrijven).

Table 46: Results new central heating system

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Electriciteitsverbruik (bron: net bedrijven)	,000	,000	,011	1	,917	1,000
	Gasverbruik (bron: net bedrijven)	,000	,000	,186	1	,666	1,000
	Constant	,616	,520	1,403	1	,236	1,851

a. Variable(s) entered on step 1: Electriciteitsverbruik (bron: net bedrijven), Gasverbruik (bron: net bedrijven).

Table 47: Results ‘other’ energy saving measures

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Electriciteitsverbruik (bron: net bedrijven)	,000	,000	1,051	1	,305	1,000
	Gasverbruik (bron: net bedrijven)	,000	,000	,003	1	,955	1,000
	Constant	3,240	,875	13,717	1	<,001	25,540

a. Variable(s) entered on step 1: Electriciteitsverbruik (bron: net bedrijven), Gasverbruik (bron: net bedrijven).