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# Survey on the Acquisition of Villagers Under the Implementation of Coal to Electricity (Gas) Policy in Rural Areas: Based on Rural Areas in Baoding

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**Keywords:** Coal to Electricity; Coal to Gas; Sense of Gain; Suggestions.

**Abstract.** To solve the problem of smog, China has successively introduced a series of coal-to-gas reform policies, which are being implemented in many parts of the country. In the implementation of polices, the degree of people's sense of acquisition is not high, especially the people in the rural areas are dissatisfied with the two policies of coal-to-gas and coal-to-electricity. Based on the phenomenon of dissatisfaction among farmers, this study separately investigated the implementation of coal-to-gas conversion in economic and ecological life. It explains the survey of farmers' sense of acquisition and proposes corresponding countermeasures to better promote the implementation of these two policies.

#### 1. Introduction

In recent years, haze in winter has been severe in most parts of China. In particular, air pollution has become more serious in northern regions. Hazy weather has seriously affected people's production and life. Solving haze problems is imminent. In winter, coal-fired heating is an important cause of hazy weather. In order to solve the increasingly serious problem of atmospheric pollution, the project of retrofitting coal-fired boilers into natural-gas-fired has been put into practice, which is one of the clean energy actions for the main districts of China.

The implementation of the policy, the degree of people's sense of acquisition is not high, especially the people in the rural areas are dissatisfied with the two policies of coal-to-gas and coal-to-electricity.

The "sense of gain" has great practical significance for the development of contemporary society. In terms of individuals, a sense of acquisition is conducive to promoting people's all-round development and self-transcendence. At the same time, it is conducive to solving real problems and improving individual happiness index. In terms of society, the "feeling of gain" is beneficial to avoiding the phenomenon of materialization in society and forming a correct view of justice and benefit in terms of the state, the proposal of "a sense of acquisition" is conducive to enhancing the self-confidence and cohesion of the nation, and promoting social harmony and stability.

The evaluation of employees' sense of achievement covers five dimensions: economic life, political life, cultural life, social life, and ecological life. But the sense of environmental access generally involves only economic life and environmental life.

## 2. Methodology

## 2.1 Dependent variable settings

In the variable setting, we simply divide it into the dependent variable and the independent variable. In the relevant variable setting, the dependent variable of this study is the measurement of the sense of acquisition, and the evaluation of the employee's sense of acquisition covers five dimensions economic life, political life, cultural life, social life and ecological life. Among them, the weight of economic life influencing factors accounted for 33.06%, the weight of political life influencing factors accounted for 18.18%, the weight of cultural life influencing factors accounted for 10.68%, the weight of social life influencing factors was 26.44%, and the weight of ecological life influencing factors accounted for 11.64%. Among them, the economic factor account for the



largest proportion, one-third of the factors affecting the month, and the cultural influence factors are the lowest.

Economic Annual growth rate of GDP per capita 0.3333 development 0.2641 GDP Per capita 0.6667 Economic life Per capita disposable Salary increase rate Wages 0.4045 income 0.3333 0.6667 Sense Built-up of gain Environmental area green Forest cover rate 0.2134 coverage 0.4123 Ecological resources 0.4231

Excellent air

days 0.5123

quality

**Table 1.** Workers' sense of achievement index system (Numbers represent weights)

The change in coal-to-electricity (gas) policy is mainly based on the choice of economic life and ecological life as independent variables. The economic life is mainly determined by the economic development, the wage level. The weights they decide on economic life are 0.2641, 0.4045 respectively, as shown in Table 1.

It can be found that wage levels and economic development have a decisive effect on economic life. Therefore, economic development and wage levels are taken as a basis for measuring economic life.

Ecological life is taken as the second independent variable, which is determined by the joint measurement of environmental resources and environmental governance. Among them, environmental governance accounts for absolute influence factors, so this study takes environmental governance as a measure of ecological life. Environmental management is determined by the number of days with good air quality, the harmless treatment rate of domestic garbage, and the average annual concentration of PM2.5, as shown in Table 1. However, in this study, environmental governance was mainly measured by the number of days with good air quality and the average annual concentration of PM2.5.

### 2.2 Research hypothesis

life

Environmental

governance 0.5769

Hypothesis A: Economic life has an impact on the change of coal to electricity and coal gas conversion policy.

Corollary A-1: The level of economic development is positively related to relationship between coal and electricity and the significance of coal and gas reform.

Corollary B-1: Environmental governance is positively related to the relationship between coal -to-electricity and coal-to-gas reform.

**Table 2.** Gender and household registration

Variable	Sample size	Average value	Std.	Min	Max
Household registration	498	0.00000	3.390002	0	1
Gender	498	0.43333	3.499117	0	1

The total number of data is 498, non-agricultural accounts for 0, agricultural population accounts for 100% of the total data, and all respondents are rural agricultural population; males account for about 43%, females account for about 57%; the sample size distribution is reasonable.

**Table 3.** Overall understanding

variable	Sample size	average value	Standard deviation	Min	max
overall evaluation	498	3.416667	.8885651	1	5
Help level	498	2.183333	.6241378	1	3
Get policy subsidies	498	.3166667	.4691018	0	1
Affordable	498	.3833333	.4903014	0	1
High sense of offers	498	.6666667	.4753827	0	1

PM2.5 average annual

concentration 0.1755



As shown in Table 3, the average value of the overall evaluation of coal-to-gas and coal-to-electricity conversion policies by farmers is about 3.42, with the highest value being 5 and the minimum value being 1 point. There are still some farmers dissatisfied with the coal-to-gas conversion policy; most farmers believe that the coal conversion gas policy has helped them and both deserve to be divided into 2.18 points with a maximum of 3 points and a minimum of 1 point. This shows that some farmers think that the coal-to-coal gas conversion policy has not helped them well. About 32% think they have received a policy subsidy, and quite a few have received a policy subsidy; about 38% believe that the coal conversion gas policy has not benefited from the initial stage; about 67% believe that Satisfaction with policy related economic subsidies is higher than that without policy subsidies.

Do you think that the main reason that affects Cumulative Frequency Percentage your perception of coal reform (gas) is percentage 91 18.33 18.33 Other reasons 36.67 55.00 183 Economic benefits Improvement of the environment 45.00 100.00 224 498 100.00 Total

**Table 4.** The main reason for affecting the sense of acquisition

As shown in Table 4, in the sample, 45% of farmers and 224 people think that the main reason for their influence on coal reform (gas) is environmental improvement; 36.67% of farmers, and 183 people think it affects them. The main reason for the acquisition of coal (gas) is the level of economic incentives; 18.33% of farmers and 91 people think that the main reason for their influence on coal reform (gas) acquisition is due to other reasons, such as high expectations for policies.

From the data analysis, it can be seen that the main factor affecting the villagers' sense of acquisition is the improvement of the environment, and the secondary factor is the economic factor. It can be seen that the environmental factors are increasingly important in the hearts of rural villagers.

#### 2.3 Match correlation analysis

Overall Degree of Get Have Household Sense of help subsidies benefits evaluation registration preference Overall evaluation 1.0000 Degree of help 0.4406\* 1.0000 0.3287\* Get subsidies 0.1457 1.0000 0.2739\* Policy benefits 0.2885\* 0.4865\* 1.0000 0.2076 Household registration 0.0204 -0.0448-0.01921.0000 0.0134 0.1523 0.2533 0.2666\* -0.0305 1.0000 High sense of gain

**Table 5.** Correlation of variables

According to Table 5 the degree of help has a significant impact on the overall evaluation and has a positive correlation. Whether or not a policy subsidy has a significant impact on the overall evaluation is positively correlated; whether to enjoy the benefits of the policy is significant for the overall evaluation and has a positive correlation. The degree of assistance has a significant impact on obtaining a policy subsidy is positively correlated whether or not a policy subsidy has a significant impact on whether or not to enjoy the benefits of the policy is positively related to the issue.

From Table 6, it can be seen that environmental governance has a significant impact on the sense of acquisition and has a positive correlation; the economic level has a significant influence on the sense of acquisition and has a positive correlation; wage levels have a significant impact on the sense of acquisition and have a positive correlation. The wage level has a significant impact on the economic level and there is a positive correlation. There is a significant influence on the economic



level and environmental governance, and there is a positive correlation.

**Table 6.** The correlation between variables and acquired feelings

	Sense of gain	Environmental	Economic level	Wages
		governance		
Influence reason	1.0000			
Environmental governance	0.1166*	1.0000		
Economic level	0.0850*	0.3664*	1.0000	
Wages	0.1347*	0.1311	0.3737*	1.0000

#### 3. Results

According to Table 3, it can be seen that the main factor affecting the sense of obtaining the villagers is the improvement of the environment, and the secondary factor is the economic factor. The economic life has an impact on the change of coal to electricity and coal to gas conversion policies. At the same time, environmental factors have become increasingly important in the hearts of rural villagers. From the data analysis in Table 3, it can be seen that the main factor affecting the villagers' sense of acquisition is the improvement of the environment, which shows that the ecological life has an impact on the change of coal into electricity (gas) policies. From Table 1-6, it can be seen that environmental governance has a significant influence on the sense of acquisition and has a positive correlation.

#### 4. Conclusion

The environmental factors that affect farmers' choice of coal to gas are greater than the economic incentives. Therefore, we must pay more attention to the environment. On the one hand, we must use coal to change the electricity (gas) policy to carry out extensive publicity and in-depth implementation of rural areas. On the other hand, during the implementation of the policy, efforts are made to reduce the annual PM2.5 concentration and improve the number of days with good air quality. Environmental quality assessment must be carried out in areas where the coal-to-electricity (gas) policy has been implemented, and the results are publicized. Promote coal to electricity (gas) injection power in northern regions.

In the implementation process of coal to electricity (gas) policy, we must pay attention to the factors of economic level and wage level. It is necessary not only to subsidize the cost of equipment, but also to focus on the development of the local economy. The development of wind power photovoltaic resources in rural areas where conditions permit can not only stimulate the development of the local economy, but also better implement the coal electricity (gas) policy.

The current coal-to-electricity (gas) policy still has many problems. Most people think that the main problem in the implementation of coal reform (gas) policy is the high cost of equipment, the secondary problem is that the average annual concentration of PM2.5 has not declined; there is also a considerable proportion of after-sales service quality, room temperature issues and policy advocacy. Therefore, the implementation of policies must focus on improving the quality of after-sales service, increasing policy publicity, and upgrading equipment to solve the problem of good room temperature.

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