

We are looking for opinions on preference characteristics and energy use behavior at the request of the Korea Energy Economics Institute (KEEI). There is no right or wrong answer in this survey, so please tell us your own opinions. The contents of your response will be kept strictly confidential following Article 33 (Protection of Secrets) ① and ② of the "Statistical Law". We promise that the result of the investigation will not be used for any purpose other than this research. We greatly appreciate your help if you take the time to respond.

Jul. 2016
Survey agency: Gallup Korea
Supervised by KEEI

SQ1. What is your gender? 1. Male

2. Female

SQ2. How old are you?

SQ3. Where is your home located?

- | | | | |
|---------------------------------|-------------|---------------|---------------|
| 1. Seoul | 2. Busan | 3. Daegu | 4. Incheon |
| 5. Gwangju | 6. Daejeon | 7. Ulsan | 8. Sejong |
| 9. Gyeonggi | 10. Gangwon | 11. Chungbuk | 12. Chungnam |
| 13. Jeonbuk | 14. Jeonnam | 15. Gyeongbuk | 16. Gyeongnam |
| 17. Jeju Island | | | |
| 18. Abroad → Discard the survey | | | |

SQ4. Are you...?

1. Householder
2. Householder's spouse
3. N/A → Discard the survey

SQ5. Which best describes your home(house) type?

1. Detached house
2. Multiple dwellings house (less than 3 floors, floor area under 330m²) → Discard the survey
3. Multiple dwellings house (less than 3 floors, floor area between 330m² and 660m²) → Discard the survey
4. Apartment building (more than 5 floors)
5. Townhouse (less than 4 floors, floor area over 660m²)
6. Townhouse (less than 4 floors, floor area under 660m²)
7. Dormitory → Discard the survey
8. Efficiency apartment → Discard the survey
9. Other housing type → Discard the survey

A. Time and risk preferences

Section A1. Discount rate for benefit of KRW 0.5 million in one year

Your decision

- Assume that you win the lottery that gives you KRW 0.5 million in one month or a higher amount B in one year and one month.
- Do you want to receive KRW 0.5 million in one month or a higher amount B in one year and one month?

A1-1. Do you want to receive KRW 0.5 million in one month or a higher amount in one year and one month? Please make your choice – option A (KRW 0.5 million in one month) or option B (higher amount in one year and one month) – for each decision number.

Decision number	Option A	Option B	Your choice	
1	KRW 0.5 million	KRW 0.52 million	A <input type="checkbox"/>	B <input type="checkbox"/>
2		KRW 0.54 million	A <input type="checkbox"/>	B <input type="checkbox"/>
3		KRW 0.56 million	A <input type="checkbox"/>	B <input type="checkbox"/>
4		KRW 0.58 million	A <input type="checkbox"/>	B <input type="checkbox"/>
5		KRW 0.6 million	A <input type="checkbox"/>	B <input type="checkbox"/>

A1-2-2. (Please answer this question only if you choose option B rather than option A at the Decision number 1 above.)

I will choose option A (KRW 0.5 million in one month) rather than option B (KRW 0.5 million in one year and one month).

A1-2-1. (Please answer this question only if you choose option A rather than option B at the Decision number 5 above.)

I will choose option B (KRW . million in one year and one month) rather than option A (KRW 0.5 million in one month).

Section A2. Discount rate for the benefit of KRW 5 million in one year

Your decision

- Assume that you win the lottery that gives you KRW 5 million in one month or a higher amount B in one year and one month.
- Do you want to receive KRW 5 million in one month or a higher amount B in one year and one month?

A2-1. Do you want to receive KRW 5 million in one month or a higher amount in one year and one month? Please make your choice – option A (KRW 5 million in one month) or option B (higher amount in one year and one month) – for each decision number.

Decision number	Option A	Option B	Your choice	
1	KRW 5 million	KRW 5.2 million	A <input type="checkbox"/>	B <input type="checkbox"/>

2		KRW 5.4 million	A <input type="checkbox"/>	B <input type="checkbox"/>
3		KRW 5.6 million	A <input type="checkbox"/>	B <input type="checkbox"/>
4		KRW 5.8 million	A <input type="checkbox"/>	B <input type="checkbox"/>
5		KRW 6.0 million	A <input type="checkbox"/>	B <input type="checkbox"/>

A2-2-1. (Please answer this question only if you choose option B rather than option A at the Decision number 1 above.)

I will choose option A (KRW 5 million in one month) rather than option B (KRW 5. million in one year and one month).

A2-2-2. (Please answer this question only if you choose option A rather than option B at the Decision number 5 above.)

I will choose option B (KRW . million in one year and one month) rather than option A (KRW 5 million in one month).

Section A3. Discount rate for the benefit of KRW 0.5 million in ten years

Your decision

- Assume that you win the lottery that gives you KRW 0.5 million in one month or a higher amount B in ten years and one month.
- Do you want to receive KRW 0.5 million in one month or a higher amount B in ten years and one month?

A3-1-1. Do you want to receive KRW 0.5 million in one month or a higher amount in ten years and one month? Please make your choice – option A (KRW 0.5 million in one month) or option B (higher amount in ten years and one month) – for each decision number.

Decision number	Option A	Option B	Your choice	
1	KRW 0.5 million	KRW 0.7 million	A <input type="checkbox"/>	B <input type="checkbox"/>
2		KRW 1.1 million	A <input type="checkbox"/>	B <input type="checkbox"/>
3		KRW 1.6 million	A <input type="checkbox"/>	B <input type="checkbox"/>
4		KRW 2.2 million	A <input type="checkbox"/>	B <input type="checkbox"/>
5		KRW 3.0 million	A <input type="checkbox"/>	B <input type="checkbox"/>

A3-2-1. (Please answer this question only if you choose option B rather than option A at the Decision number 1 above.)

I will choose option A (KRW 0.5 million in one month) rather than option B (KRW 0. million in ten years and one month).

A3-2-2. (Please answer this question only if you choose option A rather than option B at the Decision number 5 above.)

I will choose option B (KRW . million in ten years and one month) rather than option A (KRW 0.5 million in one month).

Section A4. Discount rate for loss of KRW 0.5 million in one year

Your decision

- Assume that you have to pay KRW 0.5 million by , and there are two options for the credit card payment.
- Option A is to pay KRW 0.5 million in one year, and option B is to pay a higher amount in one year and one month.
- Do you want to pay KRW 0.5 million in one month or a higher amount in one year and one month?

A4-1-1. Do you want to pay KRW 0.5 million in one month or a higher amount in one year and one month? Please make your choice – option A (KRW 0.5 million in one month) or option B (higher amount in one year and one month) – for each decision number.

Decision number	Option A	Option B	Your choice
1	KRW 0.5 million	KRW 0.6 million	A <input type="checkbox"/> B <input type="checkbox"/>
2		KRW 0.58 million	A <input type="checkbox"/> B <input type="checkbox"/>
3		KRW 0.56 million	A <input type="checkbox"/> B <input type="checkbox"/>
4		KRW 0.54 million	A <input type="checkbox"/> B <input type="checkbox"/>
5		KRW 0.52 million	A <input type="checkbox"/> B <input type="checkbox"/>

A4-2-1. (Please answer this question only if you choose option B rather than option A at the decision number 1 above.)

I will choose option A (KRW 0.5 million in one month) rather than option B (KRW 0. million in one year and one month).

A4-2-2. (Please answer this question only if you choose option A rather than option B at the decision number 5 above.)

I will choose option B (KRW 0.5 million in one year and one month) rather than option A (KRW 0.5 million in one month).

A2. When you plan your finances, how important do you consider the future?

1. Future income/expenditure is much more important than current income/expenditure.
2. Future income/expenditure is more important than current income/expenditure.
3. It is equally important to future income/expenditure and current income/expenditure.
4. Current income/expenditure is more important than future income/expenditure.
5. Current income/expenditure is much more important than future income/expenditure.

Section A5. Risk preference

Your decision

- Assume there is a gamble in which tossing a coin, a player is paid KRW 80 thousand if the head is upside, or KRW 40 thousand otherwise.
- How much are you willing to pay for playing the gamble?

A5-1. Are you willing to pay KRW 60 thousand to playing the gamble?

1. Yes → Go to A5-2. 2. No → Go to A5-3.

A5-2. (Please answer this question only if you answer 'yes' to A5-1.) Then, are you willing to pay KRW 60.5 thousand to playing the gamble?

1. Yes → Go to A5-2-1. 2. No → Go to A5-4.

A5-2-1. (Please answer this question only if you answer 'yes' to A5-2.) Then, are you willing to pay KRW 61.5 thousand to playing the gamble?

1. Yes → Go to A5-2-2. 2. No → Go to A5-4.

A5-2-2. (Please answer this question only if you answer 'yes' to A5-2-1.)

I am willing to pay up to KRW . thousand to play the gamble.

A5-3. (Please answer this question only if you answer 'no' to A5-1.) Are you willing to pay KRW 59.5 thousand to playing the gamble?

1. Yes → Go to A5-4. 2. No → Go to A5-3-1.

A5-3-1. (Please answer this question only if you answer 'no' to A5-3.) Are you willing to pay KRW 58.5 thousand to playing the gamble?

1. Yes → Go to A5-4. 2. No → Go to A5-3-2.

A5-3-2. (Please answer this question only if you answer 'no' to A5-3-1.)

I am willing to pay at least KRW . thousand to play the gamble.

A5-4. In financial decisions, are you a person willing to take risks or do you try to avoid risks? Please rate your willingness to take risks.

1. Very risk seeking 2. Risk seeking 3. Risk neutral
4. Risk averse 5. Very risk averse

B. Attitude to an environmental problem and social engagement

B1. The following questions ask your opinions on environmental and climate change issues. Please answer how much you agree with each statement.

Statement	Answer
B1-1. I am afraid when I think about environmental conditions for future generation.	<input type="checkbox"/> 1. Strongly disagree <input type="checkbox"/> 2. Disagree <input type="checkbox"/> 3. Neither agree nor disagree <input type="checkbox"/> 4. Agree <input type="checkbox"/> 5. Strongly agree
B1-2. If we continue our current style of living, we are approaching an environmental catastrophe.	<input type="checkbox"/> 1. Strongly disagree <input type="checkbox"/> 2. Disagree <input type="checkbox"/> 3. Neither agree nor disagree <input type="checkbox"/> 4. Agree <input type="checkbox"/> 5. Strongly agree
B1-3. Watching TV or reading in the newspaper about environmental problems, I am often embarrassed and angry.	<input type="checkbox"/> 1. Strongly disagree <input type="checkbox"/> 2. Disagree <input type="checkbox"/> 3. Neither agree nor disagree <input type="checkbox"/> 4. Agree <input type="checkbox"/> 5. Strongly agree
B1-4. The great majority of Korean people do not act in an environmentally responsible way.	<input type="checkbox"/> 1. Strongly disagree <input type="checkbox"/> 2. Disagree <input type="checkbox"/> 3. Neither agree nor disagree <input type="checkbox"/> 4. Agree <input type="checkbox"/> 5. Strongly agree
B1-5. There are limits of economic growth which the industrialized world has already reached or will reach very soon.	<input type="checkbox"/> 1. Strongly disagree <input type="checkbox"/> 2. Disagree <input type="checkbox"/> 3. Neither agree nor disagree <input type="checkbox"/> 4. Agree <input type="checkbox"/> 5. Strongly agree
B1-6. In my opinion, environmental problems are greatly exaggerated by proponents of the environmental movement.	<input type="checkbox"/> 1. Strongly disagree <input type="checkbox"/> 2. Disagree <input type="checkbox"/> 3. Neither agree nor disagree <input type="checkbox"/> 4. Agree <input type="checkbox"/> 5. Strongly agree
B1-7. It is still true that politicians do much too little to protect the environment.	<input type="checkbox"/> 1. Strongly disagree <input type="checkbox"/> 2. Disagree <input type="checkbox"/> 3. Neither agree nor disagree <input type="checkbox"/> 4. Agree <input type="checkbox"/> 5. Strongly agree
B1-8. To protect the environment, we all should be willing to reduce our current standard of living.	<input type="checkbox"/> 1. Strongly disagree <input type="checkbox"/> 2. Disagree <input type="checkbox"/> 3. Neither agree nor disagree <input type="checkbox"/> 4. Agree <input type="checkbox"/> 5. Strongly agree
B1-9. Environmental protection measures should be carried out, even if this reduces the number of jobs in the economy.	<input type="checkbox"/> 1. Strongly disagree <input type="checkbox"/> 2. Disagree <input type="checkbox"/> 3. Neither agree nor disagree <input type="checkbox"/> 4. Agree <input type="checkbox"/> 5. Strongly agree

B2. The following questions ask your opinions on the impact of individual efforts on addressing environmental and climate change issues. Please answer how much you agree with each statement.

Statement	Answer
B2-1. My behavior as an individual has no noteworthy effect on environmental quality.	<input type="checkbox"/> 1. Strongly disagree <input type="checkbox"/> 2. Disagree <input type="checkbox"/> 3. Neither agree nor disagree <input type="checkbox"/> 4. Agree <input type="checkbox"/> 5. Strongly agree
B2-2. If I individually do something for environmental protection, it achieves nothing at all.	<input type="checkbox"/> 1. Strongly disagree <input type="checkbox"/> 2. Disagree <input type="checkbox"/> 3. Neither agree nor disagree <input type="checkbox"/> 4. Agree <input type="checkbox"/> 5. Strongly agree
B2-3. Environmental behavior only makes sense if many people take part.	<input type="checkbox"/> 1. Strongly disagree <input type="checkbox"/> 2. Disagree <input type="checkbox"/> 3. Neither agree nor disagree <input type="checkbox"/> 4. Agree <input type="checkbox"/> 5. Strongly agree
B2-4. If others do not take part, I will not do anything for the environment or make a contribution to protect the environment.	<input type="checkbox"/> 1. Strongly disagree <input type="checkbox"/> 2. Disagree <input type="checkbox"/> 3. Neither agree nor disagree <input type="checkbox"/> 4. Agree <input type="checkbox"/> 5. Strongly agree
B2-5. If I protect the environment, I am a "sucker" because I suffer as a consequence of the environmentally damaging behavior of others.	<input type="checkbox"/> 1. Strongly disagree <input type="checkbox"/> 2. Disagree <input type="checkbox"/> 3. Neither agree nor disagree <input type="checkbox"/> 4. Agree <input type="checkbox"/> 5. Strongly agree

B3. In the last year, have you ever donated to the following organizations or individuals?

Statement	Answer
B3-1. Religious organization (church, temple, and etc.)	<input type="checkbox"/> 1. Yes <input type="checkbox"/> 2. No
B3-2. Politician or political party (ex. Congressmen)	<input type="checkbox"/> 1. Yes <input type="checkbox"/> 2. No
B2-3. Civic group (environmental assoc., social org., and etc.)	<input type="checkbox"/> 1. Yes <input type="checkbox"/> 2. No
B2-4. Relief organization	<input type="checkbox"/> 1. Yes <input type="checkbox"/> 2. No
B2-5. Other organization	<input type="checkbox"/> 1. Yes <input type="checkbox"/> 2. No

B4. In the last year, how actively are you engaged in the following unpaid volunteer activities?

Statement	Answer
B4-1. Fundraising	<input type="checkbox"/> 1. Not engaged at all <input type="checkbox"/> 2. Not engaged <input type="checkbox"/> 3. Neutral <input type="checkbox"/> 4. Engaged actively <input type="checkbox"/> 5. Engaged very actively
B3-2. Serving a committee	<input type="checkbox"/> 1. Not engaged at all <input type="checkbox"/> 2. Not engaged <input type="checkbox"/> 3. Neutral <input type="checkbox"/> 4. Engaged actively <input type="checkbox"/> 5. Engaged very actively
B2-3. Teaching or counselling	<input type="checkbox"/> 1. Not engaged at all <input type="checkbox"/> 2. Not engaged <input type="checkbox"/> 3. Neutral <input type="checkbox"/> 4. Engaged actively <input type="checkbox"/> 5. Engaged very actively
B2-4. Relief activities	<input type="checkbox"/> 1. Not engaged at all <input type="checkbox"/> 2. Not engaged <input type="checkbox"/> 3. Neutral <input type="checkbox"/> 4. Engaged actively <input type="checkbox"/> 5. Engaged very actively
B2-5. Other activities	<input type="checkbox"/> 1. Not engaged at all <input type="checkbox"/> 2. Not engaged <input type="checkbox"/> 3. Neutral <input type="checkbox"/> 4. Engaged actively <input type="checkbox"/> 5. Engaged very actively

C. Home energy retrofit decisions, housing conditions, and energy use

C1. Do you own or rent your home?

1. Own 2. Rent 3. Other (Please specify): _____

C2. What is the main type of heating system for your home?

1. Individual heating 2. District heating 3. Central heating

C3. Which of the following categories best describes your home size?

1. Below 33m² 2. Between 34m² and 66m² 3. Between 67m² and 99m²
 4. Between 100m² and 132m² 2. Between 133m² and 165m² 3. Over 166m²

C4. When was your house built?

1. Before 1980 2. Between 1981 and 1990 3. Between 1991 and 2000
 4. Between 2001 and 2010 5. After 2011

C5. How long have you lived in your home?

1. 1 year or less 2. 2 years or less 3. 3 years or less
 4. 4 years or less 5. 5 years or less 6. 6 years or less
 7. 7 years or less 8. 8 years or less 9. 9 years or less
 10. 10 years or less 11. 11 years or more

C6. Do you have any plan to move within the next two years?

1. Yes 2. No

C7. Do you have any plan to move within the next five years?

1. Yes 2. No

C8. Do you have any experiences of replacing, upgrading, or retrofitting facilities or equipment to improve energy efficiency of your current house? Please provide an answer for each item below.

Item	Answer
B8-1. Replace with a high efficiency boiler	<input type="checkbox"/> 1. Yes <input type="checkbox"/> 2. No
B8-2. Replace with a high efficiency air conditioner	<input type="checkbox"/> 1. Yes <input type="checkbox"/> 2. No
B8-3. Replace with a LED light	<input type="checkbox"/> 1. Yes <input type="checkbox"/> 2. No
B8-4. Improve the efficiency of ventilation system	<input type="checkbox"/> 1. Yes <input type="checkbox"/> 2. No
B8-5. Replace with a double glazed window	<input type="checkbox"/> 1. Yes <input type="checkbox"/> 2. No
B8-6. Improve the external wall insulation	<input type="checkbox"/> 1. Yes <input type="checkbox"/> 2. No
B8-7. Other activity (Please specify): _____	<input type="checkbox"/> 1. Yes <input type="checkbox"/> 2. No

C8-1-1. (Please answer this question only if you have experienced any of home energy retrofit activities above.)

Then why did you make investments in improving the energy efficiency of your home? Please select all that apply.

1. For reducing energy costs for LHVAC (lighting, heating, ventilation, and air-conditioning) system
2. For improving housing conditions
3. House deterioration
4. A service life of a component of LHVAC system was ended or was going to ended.
5. For addressing climate change or environmental pollution
6. The receipt of government subsidies on energy retrofit
7. Other reasons (Please specify): _____

C9. Do you have any plan of replacing, upgrading, or retrofitting facilities or equipment to improve energy efficiency of your current house in the next three years? Please provide an answer for each item below

Item	Answer
B9-1. Replace with a high efficiency boiler	<input type="checkbox"/> 1. Yes <input type="checkbox"/> 2. No
B9-2. Replace with a high efficiency air conditioner	<input type="checkbox"/> 1. Yes <input type="checkbox"/> 2. No
B9-3. Replace with a LED light	<input type="checkbox"/> 1. Yes <input type="checkbox"/> 2. No
B9-4. Improve the efficiency of ventilation system	<input type="checkbox"/> 1. Yes <input type="checkbox"/> 2. No
B9-5. Replace with a double glazed window	<input type="checkbox"/> 1. Yes <input type="checkbox"/> 2. No
B8-6. Improve the external wall insulation	<input type="checkbox"/> 1. Yes <input type="checkbox"/> 2. No
B8-7. Other activity (Please specify): _____	<input type="checkbox"/> 1. Yes <input type="checkbox"/> 2. No

C9-1-1. (Please answer this question only if you plan any of home energy retrofit activities above.)

Then, why do you plan to make investments in improving energy efficiency of your home? Please select all that apply.

1. For reducing energy costs for LHVAC (lighting, heating, ventilation and air-conditioning) system
2. For improving housing conditions
3. House deterioration
4. A service life of a component of LHVAC system is ended or is going to end.
5. For addressing climate change or environmental pollution
6. The receipt of government subsidies on energy retrofit
7. Other reasons (Please specify): _____

C10. How much is your average heating bill in winter?

- | | |
|---|---|
| 1. Below KRW 40 thousand | 2. Between KRW 50 thousand and 0.1 million |
| 3. Between KRW 0.1 million and 0.15 million | 4. Between KRW 0.15 million and 0.2 million |

5. Between KRW 0.2 million and 0.25 million

6. Between KRW 0.25 million and 0.3 million

7. Over KRW 0.3 million

C11. Compared to your similar neighbors, do you think that your heating bill in winter is higher?

1. Not at all. My bill is much lower.

2. No. My bill is lower.

3. My bill is similar.

4. Yes. My bill is higher.

5. Yes, indeed. My bill is much higher.

C12. How much is your average electric bill?

1. Below KRW 9 thousand

2. Between KRW 10 thousand and 20 thousand

3. Between KRW 20 thousand and 30 thousand

4. Between KRW 30 thousand and 40 thousand

5. Between KRW 40 thousand and 50 thousand

6. Between KRW 50 thousand and 60 thousand

7. Between KRW 60 thousand and 70 thousand

8. Over KRW 70 thousand

C13. Compared to your similar neighbors, do you think that you electric bill is higher?

1. Not at all. My bill is much lower.

2. No. My bill is lower.

3. My bill is similar.

4. Yes. My bill is higher.

5. Yes, indeed. My bill is much higher.

C14. How do you expect gasoline price to change in the next 10 years?

1. More than 50% increase

2. 25~50% increase

3. 0~25% increase

4. 0~25% decrease

5. 25~50% decrease

6. More than 50% decrease

7. I have no idea.

C15. How do you expect electricity price to change in the next 10 years?

1. More than 50% increase

2. 25~50% increase

3. 0~25% increase

4. 0~25% decrease

5. 25~50% decrease

6. More than 50% decrease

7. I have no idea.

D. Socioeconomic factors

D1. How many, including yourself, live in your household?

Classification	Answer
Number of family members	
Number of family members older than 60 years	
Number of family members attending elementary, middle, or high schools	
Number of family members younger than 7 years	

D2. What is your highest degree of education?

- 1. High school or less
- 2. College graduation or higher

D3. Job occupation of your household head

- 1. Salaried employee
- 2. Self-employed
- 3. Unemployed

D4. Which of the following categories best describes your average monthly household income?

- 1. Below KRW 0.99 million
- 2. Between KRW 1 million and 1.99 million
- 3. Between KRW 2 million and 2.99 million
- 4. Between KRW 3 million and 3.99 million
- 5. Between KRW 4 million and 4.99 million
- 6. Between KRW 5 million and 5.99 million
- 7. Between KRW 6 million and 6.99 million
- 8. Between KRW 7 million and 7.99 million
- 9. Between KRW 8 million and 8.99 million
- 10. Between KRW 9 million and 9.99 million
- 11. Over KRW 10 million

D5. If you reflect how you (and your spouse) managed on with your monthly income in last year: what describes the situation best

- 1. At the end of month the money was never enough.
- 2. At the end of the month it was often not enough.
- 3. There was only money left, if an additional non-recurring income occurred.
- 4. At the end of the month there was frequently some money left.
- 5. At the end of the month there was a lot of money left.

Thank you for participating in our study.