الهيئة العامة للإحصاء
General Authority for Statistics

Bulletin of Household Energy Survey 2019

Surveys

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Introduction:

The General Authority for Statistics (GASTAT) has determined its mission that is represented in providing updated statistical products and services which have added value and are accurate, comprehensive, and reliable in accordance with the best international standards and practices. However, GASTAT mission is not only restricted to this but also to be a leading entity in developing the statistical sector in order to support decision making. GASTAT has also specified its vion to be the most distinct and innovative statistical reference that supports economic and social development in Saudi Arabia.

It is a pleasure for GASTAT to publish its third release of the Household Energy Survey' Bulletin in Saudi Arabia , 2019. This survey is one of the household field surveys conducted under the Knowledge and Natural Resources Statistics which is included within GASTAT surveys' plan.

The Household Energy Survey' Bulletin provides statistics on the dwelling and its components that can be cooled and heated, in addition to the elecricity sources, fuel uses, consumption of the different forms of energy and how they are used in the different home activities. It also provides statistics on power-consuming devices at home. In this survey, methods of rationalization , use photoelectric energy, solar energy, biomass, and thermal insulation are all identified.

The data of this bulletin would help deceision makers and researchers in making the policies of the Househld Energy Survey. They would also contribute in developing a statistical database for the energy statistics of the domestic sector. The data also can be used in preparing and planning the future developmental programs in Saudi Arabia, and in supporting the efforts exerted by all governmental and private entities.

GASTAT also thanks all partners and clients from the entities concerned with the Household Energy Survey and the heads of households. It is worth mentioning that their cooperation, after the guidance of Allah, had a great impact on issuing such bulletin. At the same time, it is hoped that everyone will provide us with proposals via the e-mail (info@stats.gov.sa) Such proposals will improve the content of this bulletin and further develop future bulletins.

Allah is the Arbiter of Success,

General Authority for Statistics

1. Data Sources of Household Energy Survey' Bulletin:

The Bulletin's data is derived from the field household survey (Household Energy Survey) conducted by GASTAT in 2019 .

It is a field household survey, categorized under (the Knowledge and Natural Resources Statistics). And conducted by GASTAT on an annual basis since 2017. Data is collected through visiting a sample of households representing all KSA regions. An e-questionnaire is filled out by answering it questions. Once data from those questionnaires are collected, a database on the energy consumption in the Kingdom's domestic sector is built up, showing the key indicators of the Household Energy Survey, as well as the patterns and forms of energy consumption.

2. Objectives:

2.1. To provide data on dwelling characteristics, such as type, components and areas air-conditioned or air-heated.

2.2. To obtain realistic estimates on consumption of the various forms of energy in the domestic sector.

2.3. To identify the impact of economic, social and geographical variables on energy consumption.

2.4. To provide data on household consumption of various fuel types.

2.5. To provide data on energy consumption in the domestic sector to complete statistics on the primary consumption coverage of various energy forms, which contributes to the preparation of energy balance.

2.6. To identify patterns of energy consumption and the forms of energy used in the domestic sector.

2.7. To identify the community behavior in energy consumption by type and source.

2.8. To create a statistical database with indicators on energy consumption in the domestic sector across the Kingdom's provinces, including:

- Data on household consumption of various petroleum products,
- Data on household consumption of electricity,
- Data on household consumption of biomass (firewood, coal, agricultural waste),
- Energy consumption by type (fuel, electricity, firewood, coal, etc), and
- Usage of fuel and other forms of energy by activity (cooking, air-conditioning, lighting, heating, food preservation).

2.9. To measure the extent households across the Kingdom are willing to use photovoltaic energy at home.

2.10. To measure the percentage of households using thermal isolation.

2.11. To identify key instructional media in electric energy consumption.

3. Terminologies and Concepts related to Energy Statistics:

3.1. Survey sample: a group of selected household members who share the same dwelling, including domestic workers and the like

3.2. Household: A person or a group of persons - with or without kinship binding them to one another - who share a dwelling at the time of counting. A household includes:

1. Saudi nationals who are habitually residing with the same family but were not available for temporarily traveling abroad when the study was underway. For example: businessmen, tourists, patients and students abroad for medication and study.
2. Family members who were absent during the data collection process to attend night-shifts. For example: guards, physicians, nurses, airport staff and fishers.
3. Domestic helpers (such as servants, drivers and the like) who live with the same household.
4. Individuals on travel inside the Kingdom.

3.3. Household energy consumption: the energy consumed by the population for domestic purposes only (water heating, warming, air-conditioning, lighting, cooking, etc.)

3.4. Fuel: It refers to any type of material used to produce energy through a thermo-chemical or nuclear reaction.

3.5. Gasoline: The gasoline used for running engines or vehicles is a blend of light hydrocarbons distilled between 35 - 215 °C.

3.6. Diesel (fuel oil): A liquid hydrocarbon fuel produced by distilling crude oil. It is heavy oil that is distilled between 200 - 380 °C. Its flash point is permanently higher than 50 °C, and its specific weight is higher than 82 °C.

3.7. Kerosene: A medium-viscosity oil distilled between 150 - 300 °C. Its specific weight is approximately 8.0, and its flash point is higher than 38 °C.

3.8. Liquefied petroleum gas (LPG): LPG consists of a mixture of gases, and is extracted from natural gas or from crude oil fractionation. It mainly consists of Propane and Butane or a mixture thereof. It is used as a fuel for heating and household cooking, and as a fuel for some types of engines. It is additionally used as a raw material in some chemical industries. LPG is often available in the form of metal cylindrical canisters, or in the form of surface or underground tanks.

3.9. Electric energy: The work required to move an electric charge via a connector. Its measuring unit is kilowatt/hour.

Electricity consumption = power (kilowatt) x time (hours)

3.10. Photovoltaic energy: Photovoltaic cells are made up of solar panels designed to convert the Global Horizontal Irradiance (GHI) directly into electric energy. These panels can be combined into fields that are directly connected to the national grid using inverters that convert the solar power into a grid-compatible alternating current. The foremost aim is to have installed sufficient photovoltaic capacity to be able to generate power.

3.11. Thermal insulation: The use of materials that reduce the leakage of heat through the walls into the building during summer, and the other way around during winter.

3.12. Firewood: All types of firewood used as a fuel.

3.13. Charcoal: A solid material the main component of which is carbon. It is produced through destructive distillation of firewood while being secluded from air.

3.14. Agricultural residues: Solid residues from trees and fruits, such as residues squeezed olives. The benefits of such residues are many: they can be used for generating energy for bread-baking in traditional (tabun ovens). They may also be used as fertilizers for trees or fodder for animals.

3.15. Indicators:

Indicator	Description & Calculation Method
Air-conditioned components of dwellings	Number and area (m^2) of the air-conditioned (warmed or air-cooled) components of the surveyed dwellings, upon which the relative weights are applied (by region), and then the collected data are expanded.
Percentage of the dwelling's source of electricity	Calculated by collecting data on the type of electricity source of the dwelling (public grid, private grid, or private generator) throughout the Kingdom; upon which the relative weights are applied (by region), and then the collected data are expanded.
Percentage of the dwellings using solar energy	The surveyed households are asked about their use of solar energy. Percentage of the dwellings using solar energy is hence calculated (number of the households using solar energy relative to the total surveyed households). Finally, the relative weights are applied (by region), and then the collected data are expanded.
Percentage of the fuel used for household cooking	Calculated by collecting data on the type of fuel used for household cooking (electricity, LPG, firewood, etc) throughout the Kingdom; upon which the relative weights are applied (by region), and then the collected data are expanded.
Percentage of the dwellings using biomass products	The surveyed households are asked about their use of biomass products (firewood, coal, agricultural residues). Percentage of the dwellings using biomass products is hence calculated (number of the households using biomass products relative to the total surveyed households). Finally, the relative weights are applied (by region), and then the collected data are expanded.
Percentage of the dwellings using diesel (fuel oil)	The surveyed households are asked about their use of diesel (fuel oil). Percentage of the dwellings using diesel is hence calculated (number of the households using diesel relative to the total surveyed households). Finally, the relative weights

	are applied (by region), and then the collected data are expanded.
Average household consumption of diesel (fuel oil)	By calculating the average quantity of diesel (in liters) consumed by a household during winter, and the rest of the year. Then, the relative weights are applied (by region), and then the collected data are expanded.
Percentage of the dwellings using (kerosene)	The surveyed households are asked about their use of kerosene. Percentage of the dwellings using kerosene is hence calculated (number of the households using kerosene relative to the total surveyed households). Finally, the relative weights are applied (by region), and then the collected data are expanded.
Average household consumption of kerosene	By calculating the average quantity of kerosene (in liters) consumed by a household during winter, and the rest of the year. Then, the relative weights are applied (by region), and then the collected data are expanded.
Percentage of the dwellings using LPG	The surveyed households are asked about their use of LPG. Percentage of the dwellings using LPG is hence calculated (number of the households using LPG relative to the total surveyed households). Finally, the relative weights are applied (by region), and then the collected data are expanded.
Average household consumption of LPG	By calculating the average quantity of LPG (in liters) consumed by a household by type (cylinder/ tank). Then, the relative weights are applied (by region), and then the collected data are expanded.
Average hours of household fuel usage	Calculated by measuring the weekly average operation hours of fuel-consuming appliances owned by the surveyed households during winter and the rest of the year. Then, the relative weights are applied (by region), and then the collected data are expanded.
Percentage of the dwellings using electricity	Calculated by collecting data on the percentage of dwellings using public electricity throughout the Kingdom; upon which the relative weights are applied (by region), and then the collected data are expanded.

Percentage of dwellings by the type of electricity meter	The surveyed households are asked about the type of their electricity meters (independent/ common). Percentages of the dwellings using independent and common meters are hence calculated (relative to the total surveyed households). Finally, the relative weights are applied (by region), and then the collected data are expanded.
Percentage of the dwellings using power stabilizers	The surveyed households are asked whether they use power stabilizers. Percentage of the dwellings using power stabilizers is hence calculated (number of the households using such stabilizers relative to the total surveyed households). Finally, the relative weights are applied (by region), and then the collected data are expanded.
Amount of electricity consumed by households	Average amount of electricity (kilowatt/hour) consumed by households during winter and the rest of the year, by the type of electricity meter (independent/ common). Then, the relative weights are applied (by region), and then the collected data are expanded.
Household uses of electricity by the type of use	This indicator is meant to identify the household uses of electricity (warming, water heating, lighting, cooking, food preservation, other electric devices). Then, the relative weights are applied (by region), and then the collected data are expanded.
Average hours of household electricity usage	Calculated by measuring the weekly average operation hours of electricity-consuming appliances owned by the surveyed households during winter and the rest of the year. Then, the relative weights are applied (by region), and then the collected data are expanded.
Check the Publishing Tables to take a closer look at the wide range of indicators and datasets provided by the survey.	

4.Coverage:

4.1 Spatial coverage:

Household energy survey covers household's data on energy consumption in the thirteen administrative regions in Saudi Arabia: (Riyadh, Makkah, Madinah, Qassim, Eastern Region, Asir, Tabuk, Hail, Northern

Borders, Jazan, Najran, Al-Baha, and Al-Jouf). This is done by visiting a sample of households in each region selected scientifically as a representative sample of the whole region's households.

4.2 Temporal coverage:

The data of the Household Energy Survey are based as follows:

1. Data of the Household Energy Survey regarding the dwelling and household and their characteristics are based on the date of visiting the household.
2. Data of the Household Energy Survey regarding the usage of fuel, electricity, and biomass fuel (firewood, coal and agricultural residues) are based on the year 2018.

5.Used statistical classifications:

Bulletin's data are based on:

- National Classification for Countries and Nationalities
- Educational Levels Classification

6.Sample Selection:

The sample of the survey was chosen by selecting (22,000) households, as a representative sample of the survey's community distributed by administrative regions at the level of Saudi Arabia, as follows:

Administrative region	Number of households	Administrative region	Number of Households	Administrative region	Number of households
Riyadh	3400	Asir	1500	Najran	1080
Makkah	3980	Tabuk	1200	Al-Bahah	980
Madinah	1520	Hail	1060	Al-Jouf	1100
Qassim	1080	Northern Borders	1160		
Eastern Region	2780	Jazan	1160		

Sampling Units of the Household Energy Survey:

The primary sampling units (PSUs) refer to the counting area; they are sampling units withdrawn during the first stage. The secondary sampling units (SSUs) refer to the households; they are sampling units withdrawn during the second stage. Each secondary sampling unit is part of the primary sampling units.

7. Data collection tools:

- **Field data collection questionnaire**: the survey questionnaire was prepared and designed by the Household Energy Survey specialists in GASTAT. When designing the questionnaire, the relevant international recommendations and standards in the field of household energy surveys were taken into consideration. The form was also presented to an expert in energy surveys, during his visit to the Authority, as well as to the relevant entities to take into account their feedback and observations. The questions were outlined in a scientific, precise manner, with a view to standardizing the questions asked by researchers.

The survey questionnaire was divided into seven sections by topic, aiming to increase the efficiency of the form, in a manner that fulfills the fieldwork technical requirements.		
Geographic details of the counting area	Dwelling data	Basic household data
Fuel consumption	Electricity consumption	Consumption of firewood, coal and agricultural residues
Final results of the household visit		
View and download the complete form from the GASTAT's official website: https://www.stats.gov.sa/ar/897		

Once the survey questionnaire is approved, it is converted into an electronic version, so that it can be used through the tablet-based developed data collection system, which offers a variety of features, including:

1. Viewing the field researcher's respective work area (of the survey sample).
2. Locating the sample (household) by using a map installed on the tablet.

3. Using highly accurate databases for completing, reviewing and browsing data (to instantly detect typos, errors, and illogical entries).
4. Communicating between the field researcher and the various supervisory levels, by sending and receiving comments and feedback.

8. Data collection method:

Data collection of the Household Energey Survey:

- **The field researchers who paid field visits to the households for collecting the data** (required for the Household Energy Survey) were selected from candidates based on a set of practical and objective criteria according to the job roles.
- **All candidates (GASTAT staff as well as collaborators from some government agencies)** were trained and qualified by means of a package of specific training programs.
- **Direct contact with households** was adopted as a method for questionnaire filling and data collection. The researchers visited households selected for the survey, after locating them by using the details available on the tablet devices and guiding maps, introduced themselves, showed proof that they are GASTAT staff, clarified the reason for the visit, briefed households on the survey and its objectives, and completed the e-questionnaire based on the head of the household's oral answers. In case the head of the household is unavailable, data shall be collected from any household member who is knowledgeable about its affairs.
- **All field researchers used tablets** for completion of the survey questionnaire, during the specified reference period, according to the number of household members, as well as the demographic, social and economic traits.
- **Field researchers throughout the Kingdom used the 'synchronization'** feature available on tablets in order to upload and transfer the completed data directly to the relevant database in GASTAT headquarters, to be stored for reviewing and processing.
- **E-review rules** were applied to ensure consistency, accuracy and plausibility of the provided data. They were designed to 'detect contradiction of answers', by creating logical relations among the answers and variables of the questionnaire. Those rules are meant to help the field researcher to instantly detect errors when filling out questionnaires with the data provided by the head of the household. By applying those programmed rules, an answer shall not be accepted if it contradicts with another previously provided answer in the questionnaire.
- **The collected data were validated** by reviewing them through the researcher himself, inspector overseeing him, and supervisor of the survey in the supervision area. Further, the entire

work cycle was monitored and reviewed by the Data Quality Room in the GASTAT headquarters. The room also oversees and monitors the performance of all filed crews on the ground directly as they proceed with data collection from the first day to the last day.

9. Results preperation and revision

After reviewing the collected data of the Household Energy Survey, GASTAT calculated the collected data and extracted the results. Then, specialists in energy statistics conducted a final review, using advanced technology and software designed for the purposes of review and auditing.

10. Data dissemination

First: Preparing and Processing Results Designed for Publishing

During this stage, GASTAT downloaded data results from the database of Household Energy Survey. Then, publishing tables and graphs of the data and indicators were prepared and processed. Metadata were then added, and the methods were explained, in Arabic and English.

Second: Media Kit Preparation and Announcing the Bulletin

Having announced at its website at the beginning of this year the date of publishing of the Household Energy Survey Bulletin, GASTAT prepares - during this stage - the media materials necessary for publishing the bulletin at all media outlets, as well as the GASTAT social media platforms. The bulletin is announced on the date assigned for publishing, whereupon the bulleting goes public in different formats (including an Excel open format), starting with the GASTAT official website .

By doing so, GASTAT seeks to reach out to all beneficiaries and those interested in household energy consumption. Finally, the bulletin is added to the statistical library on the GASTAT website.

Third: Communicating with clients and providing them with the bulletin:

GASTAT believes in the importance of communicating with the clients, therefore, once the bulletin of the Household Energey Survey is released, it immediately communicates with the clients and provide them with the bulletin. It also receives questions and queries from clients about the bulletin and its results through various communication channels where clients can request data. Requests and enquiries are received through:

- GASTAT's official website www.stats.gov.sa
- GASTAT's official e-mail info@stats.gov.sa
- Client support's email cs@stats.gov.sa
- Official visits toGASTAT head office in Riyadh or to one of its branches in Saudi Arabia.
- Official letters.
- Statistical help line (920020081).

11. Applied quality procedures:

Energy statistics are subject to many technical quality procedures to ensure the quality of the data resulting from this survey. These include:

1. Use of assessments of previous surveys conducted by GASTAT to monitor strengths and weaknesses in the survey implementation and improve statistical data collection procedures.
2. Training and testing of researchers to ensure that the researcher can obtain data in an appropriate manner consistent with the objectives of the survey.
3. Testing the electronic means used in data collection to ensure the safety and protection of data at all the stages of the enumeration implementation.
4. Reduce the burden of the respondent by using appropriate statistical methods.
5. The obligation in publishing the results according to the predetermined publication dates.

Data Quality Room

An operations room that synchronously works with the field works of surveys. It is equipped with electronic monitoring tools and tracking screens used by observers and quality specialists to review the consistency of data and to detect errors and extreme values during the data collection process in the field. his is done by immediately following up what is being filled out by the field researcher. However, this Room is responsible for checking the researchers' commitment to the survey's instructions during the visit, and the correctness and logicality of the data. It also ensures implementation of the visitation plan of households or establishments, and reviews some important indicators of the survey to ensure the data accuracy. The main tasks of the Data Quality Room are:

- Reviewing the collected data and sending notes to the field operating teams of different levels through an automated desktop system that is linked with the tablets of the researchers, so they can access the feedback quickly at their working locations.
- Making phone calls with the households in order to ask some questions of the questionnaire to check the accuracy of data completed by the researcher, and his commitment to the instructions during the visit. Also, to obtain the missing data that have not been received yet, and to thank the households' heads for their cooperation.
- Answering field inquiries received from field researchers or households' heads.
- Checking the questionnaire completion location by matching its coordinates with the registered ones in the sample file.

12. Beneficiaries of the Bulletin and its benefits

The Household Energy Survey will benefit all relevant governmental and private sectors and plan future social and economic development programs in Saudi Arabia. The most prominent of these entities are:

- Ministry of Energey, Industry and Mineral Resources.
- Electricity & Cogeneration Regulatory Authority
- King Abdullah City for Atomic and Renewable Energy
- Saudi Electricity Company
- Saudi Aramco

The results of the bulletin are used to determine the patterns of energy consumption and its forms used in the household sector in Saudi Arabia, the amount of used fuel of

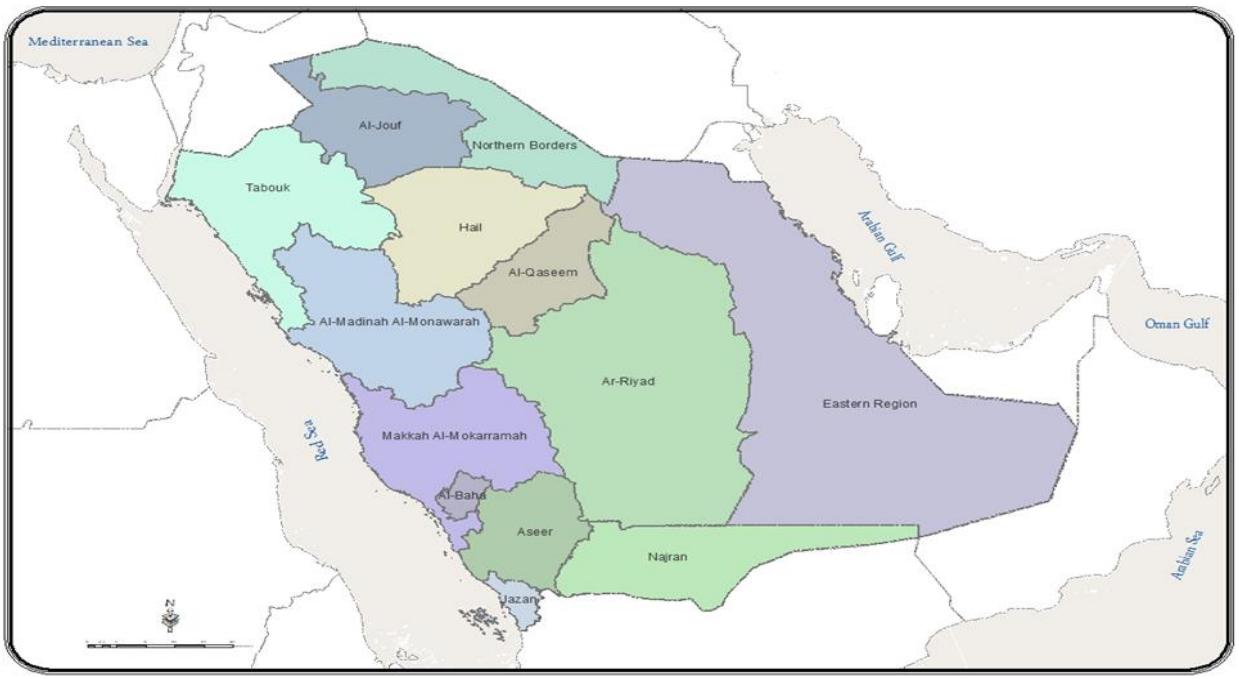
all kinds by the household, and to get knowledge about the society's behavior in energy consumption by type and source. The data provided by the Household Energy Survey also contribute to the preparation of energy balance, and the effect of Social, economic and geographical consumption of energy used in the household sector.

The details of the Household Energey Srvey can be viewed through GASTAT's officils website

https://www.stats.gov.sa/ar/897

Some statistical indicators from the Household Energy Survey (2019)

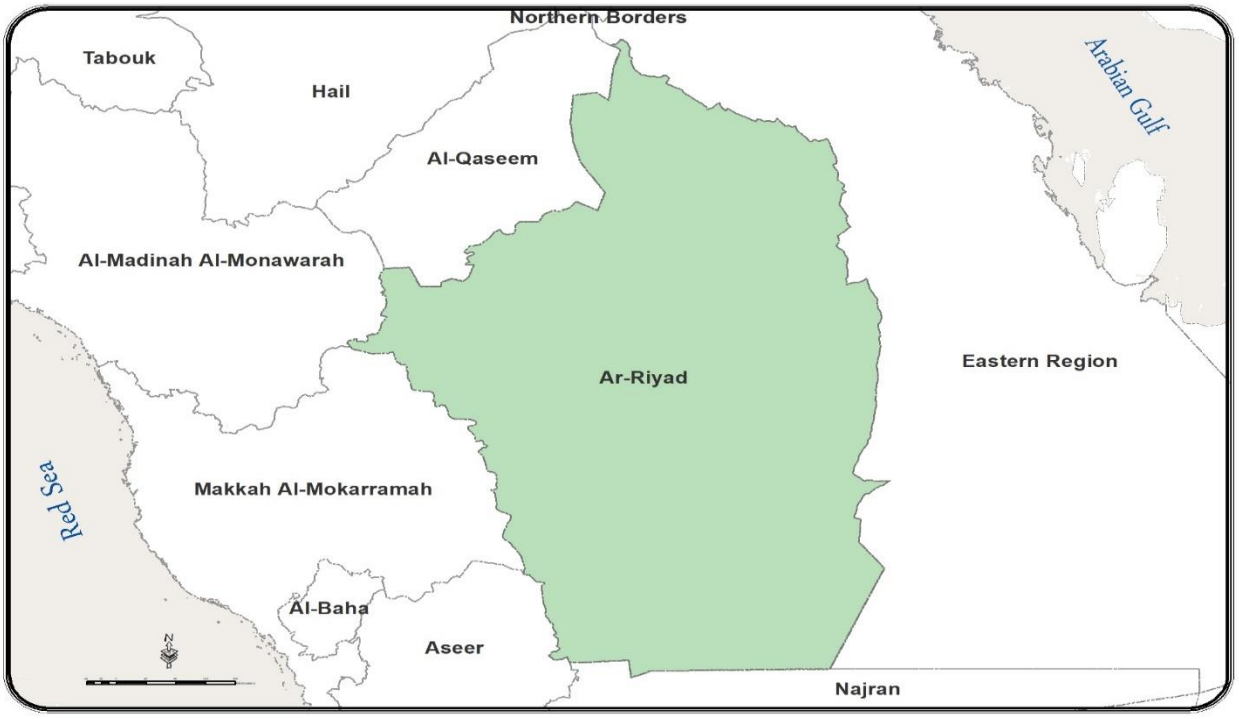
First: General information at the level of the Kingdom and administrative regions:



- **Some indicators at the level of The Kingdom: -**

SN	Indicator	%
1	Percentage of households connected to the public electricity network	99.50
2	Percentage of households using solar energy at home	1.60
3	Percentage of households using gas at home	89.34
4	Percentage of households using electricity in cooking process	10.18
5	Percentage of households using biomass products (fuelwood, coal and agricultural waste)	8.64
6	Percentage of households using an independent electric meter at the home	85.29
7	Percentage of households using an electric meter shared with several houses	14.71
8	Percentage of households that have power regulator at home	18.01
9	Percentage of households using electrical power saving devices at home	36.30
10	Percentage of households using an thermal insulations at the home	22.70
11	Percentage of households willing to use photovoltaic (solar) power in the house	52.26

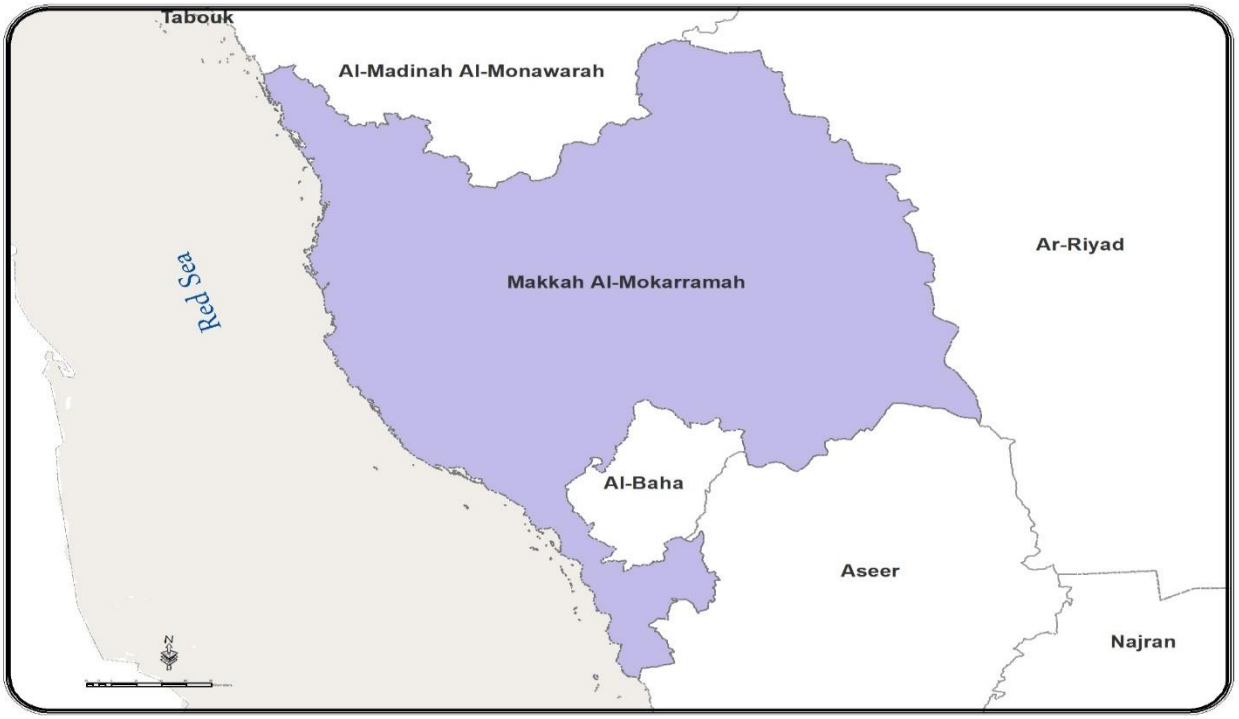
Riyadh Region



- **Some indicators at the level of Riyadh Region: -**

SN	Indicator	%
1	Percentage of households connected to the public electricity network	99.82
2	Percentage of households using solar energy at home	1.82
3	Percentage of households using gas at home	89.89
4	Percentage of households using electricity in cooking process	9.63
5	Percentage of households using biomass products (fuelwood, coal and agricultural	9.99
6	Percentage of households using an independent electric meter at the home	82.97
7	Percentage of households using an electric meter shared with several houses	17.03
8	Percentage of households that have power regulator at home	13.46
9	Percentage of households using electrical power saving devices at home	37.72
10	Percentage of households using an thermal insulations at the home	24.55
11	Percentage of households willing to use photovoltaic (solar) power in the house	49.14

Makkah Region



- **Some indicators at the level of Makkah Region: -**

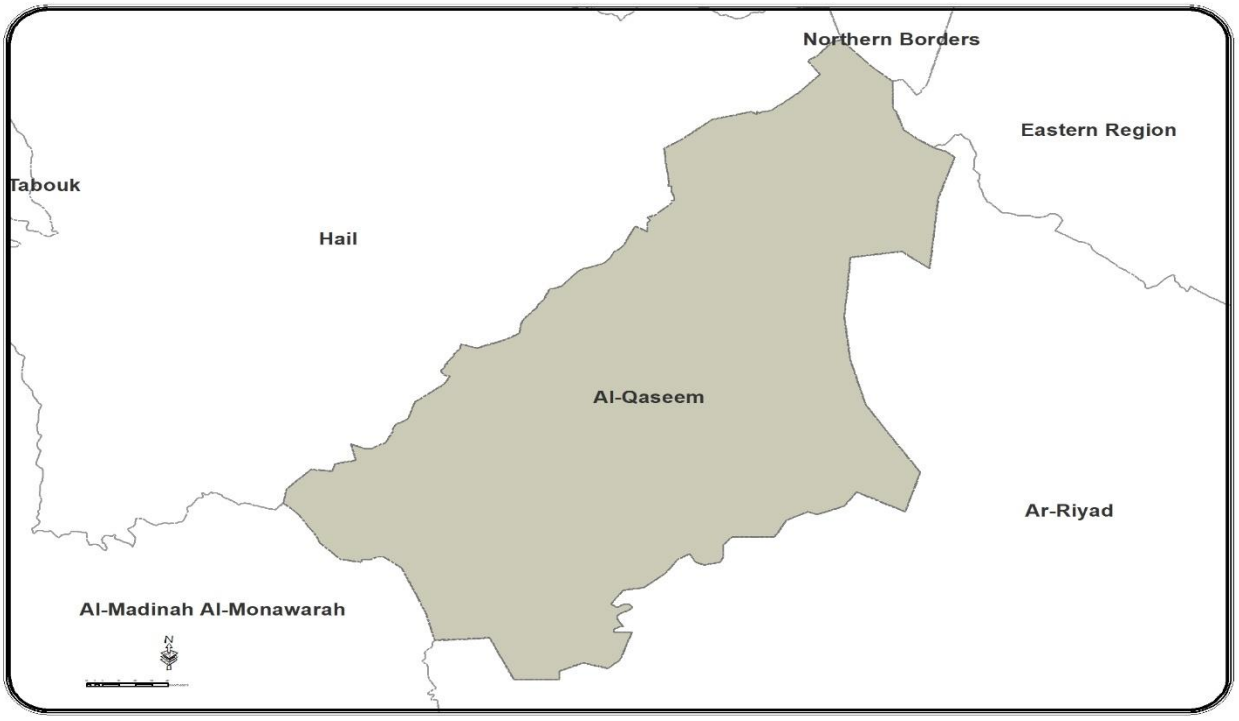
SN	Indicator	%
1	Percentage of households connected to the public electricity network	98.77
2	Percentage of households using solar energy at home	1.50
3	Percentage of households using gas at home	91.20
4	Percentage of households using electricity in cooking process	8.67
5	Percentage of households using biomass products (fuelwood, coal and agricultural	5.56
6	Percentage of households using an independent electric meter at the home	85.50
7	Percentage of households using an electric meter shared with several houses	14.50
8	Percentage of households that have power regulator at home	31.06
9	Percentage of households using electrical power saving devices at home	41.52
10	Percentage of households using an thermal insulations at the home	25.46
11	Percentage of households willing to use photovoltaic (solar) power in the house	49.09

Madinah Region

- **Some indicators at the level of Madinah: -**

SN	Indicator	%
1	Percentage of households connected to the public electricity network	99.93
2	Percentage of households using solar energy at home	1.36
3	Percentage of households using gas at home	92.02
4	Percentage of households using electricity in cooking process	7.26
5	Percentage of households using biomass products (fuelwood, coal and agricultural	6.68
6	Percentage of households using an independent electric meter at the home	82.18
7	Percentage of households using an electric meter shared with several houses	17.82
8	Percentage of households that have power regulator at home	8.20
9	Percentage of households using electrical power saving devices at home	28.49
10	Percentage of households using an thermal insulations at the home	13.01
11	Percentage of households willing to use photovoltaic (solar) power in the house	67.00

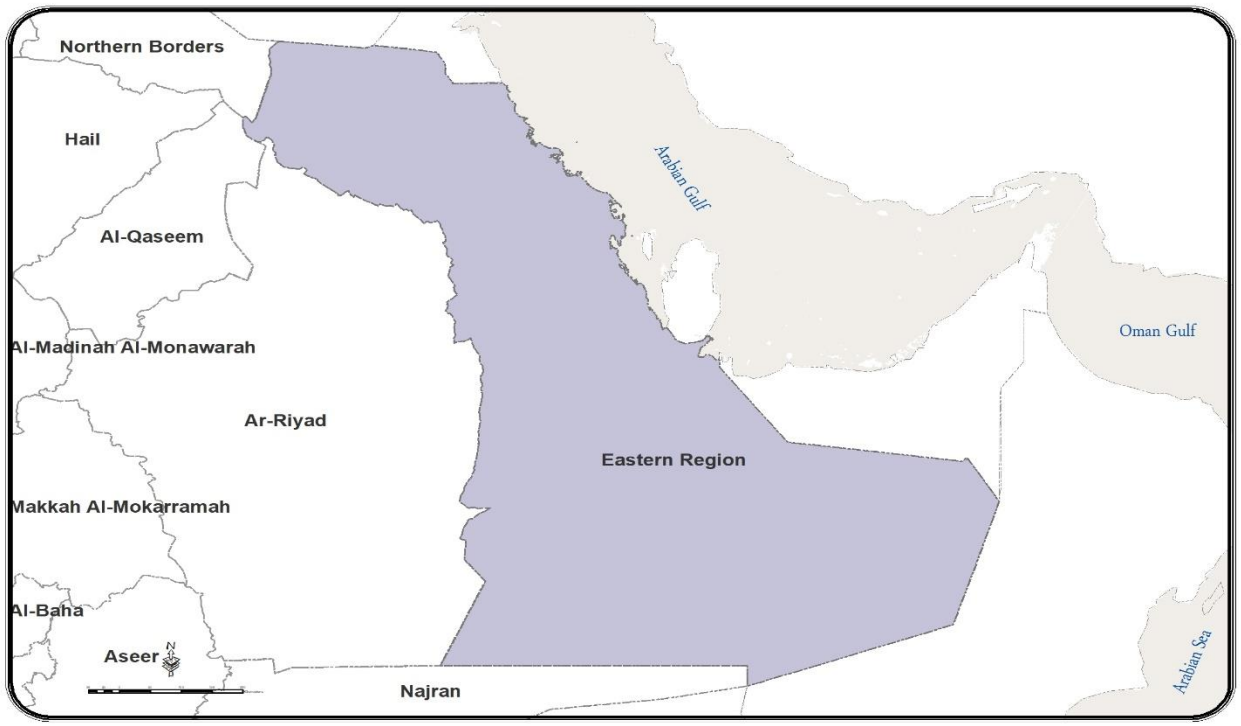
Al-Qassim Region



- **Some indicators at the level of Al-Qassim:-**

SN	Indicator	%
1	Percentage of households connected to the public electricity network	99.09
2	Percentage of households using solar energy at home	1.27
3	Percentage of households using gas at home	94.24
4	Percentage of households using electricity in cooking process	5.69
5	Percentage of households using biomass products (fuelwood, coal and agricultural	10.82
6	Percentage of households using an independent electric meter at the home	80.48
7	Percentage of households using an electric meter shared with several houses	19.52
8	Percentage of households that have power regulator at home	14.29
9	Percentage of households using electrical power saving devices at home	35.27
10	Percentage of households using an thermal insulations at the home	23.68
11	Percentage of households willing to use photovoltaic (solar) power in the house	35.91

Eastern Region



- **Some indicators at the level of Eastern: -**

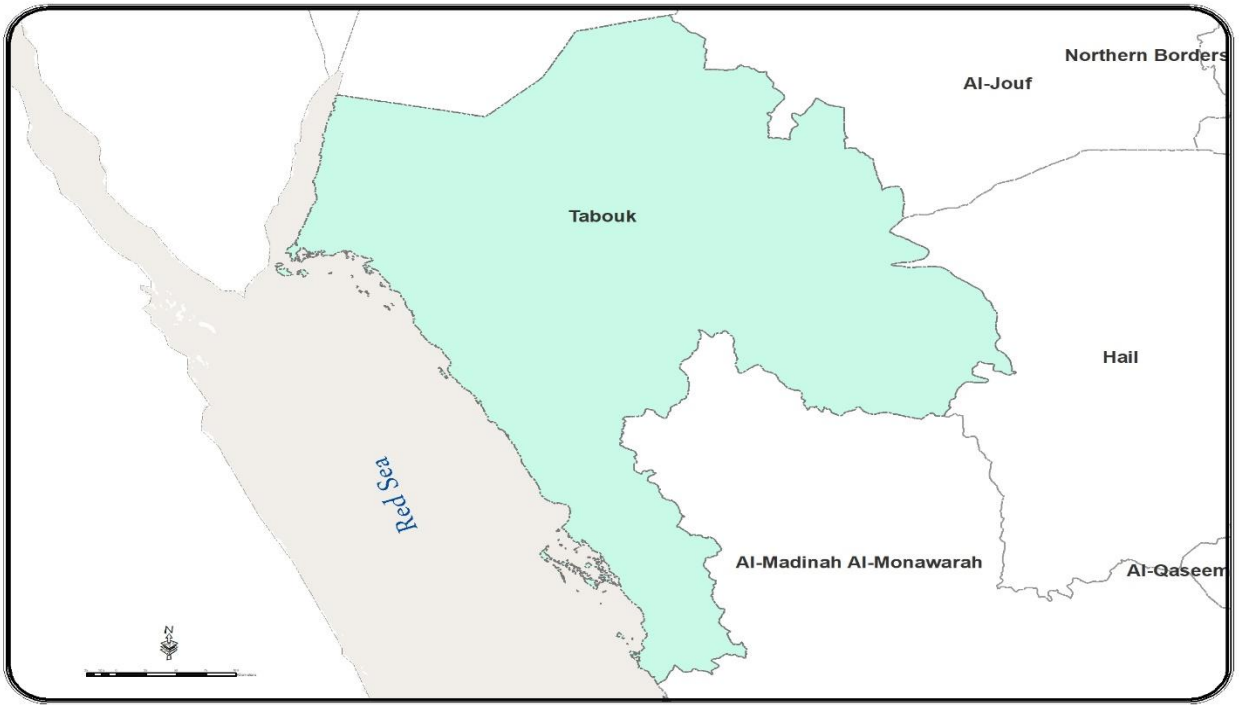
SN	Indicator	%
1	Percentage of households connected to the public electricity network	99.72
2	Percentage of households using solar energy at home	2.07
3	Percentage of households using gas at home	75.85
4	Percentage of households using electricity in cooking process	23.80
5	Percentage of households using biomass products (fuelwood, coal and agricultural	6.80
6	Percentage of households using an independent electric meter at the home	87.78
7	Percentage of households using an electric meter shared with several houses	12.22
8	Percentage of households that have power regulator at home	9.82
9	Percentage of households using electrical power saving devices at home	49.70
10	Percentage of households using an thermal insulations at the home	34.48
11	Percentage of households willing to use photovoltaic (solar) power in the house	57.04

Asir Region

- **Some indicators at the level of Asir:-**

SN	Indicator	%
1	Percentage of households connected to the public electricity network	99.99
2	Percentage of households using solar energy at home	1.14
3	Percentage of households using gas at home	91.71
4	Percentage of households using electricity in cooking process	6.93
5	Percentage of households using biomass products (fuelwood, coal and agricultural	13.02
6	Percentage of households using an independent electric meter at the home	84.80
7	Percentage of households using an electric meter shared with several houses	15.20
8	Percentage of households that have power regulator at home	14.43
9	Percentage of households using electrical power saving devices at home	18.01
10	Percentage of households using an thermal insulations at the home	4.80
11	Percentage of households willing to use photovoltaic (solar) power in the house	53.86

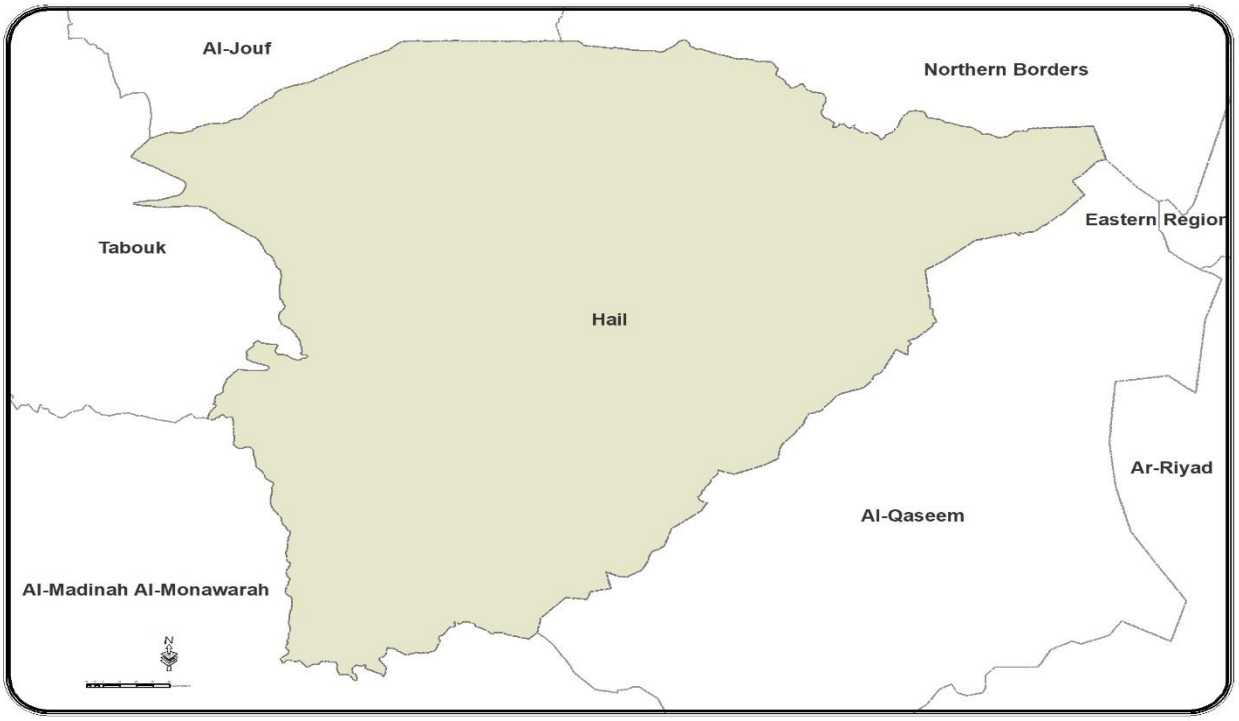
Tabuk Region



- **Some indicators at the level of Tabuk: -**

SN	Indicator	%
1	Percentage of households connected to the public electricity network	99.98
2	Percentage of households using solar energy at home	1.27
3	Percentage of households using gas at home	95.13
4	Percentage of households using electricity in cooking process	4.62
5	Percentage of households using biomass products (fuelwood, coal and agricultural	6.28
6	Percentage of households using an independent electric meter at the home	93.56
7	Percentage of households using an electric meter shared with several houses	6.44
8	Percentage of households that have power regulator at home	10.15
9	Percentage of households using electrical power saving devices at home	20.01
10	Percentage of households using an thermal insulations at the home	18.01
11	Percentage of households willing to use photovoltaic (solar) power in the house	59.68

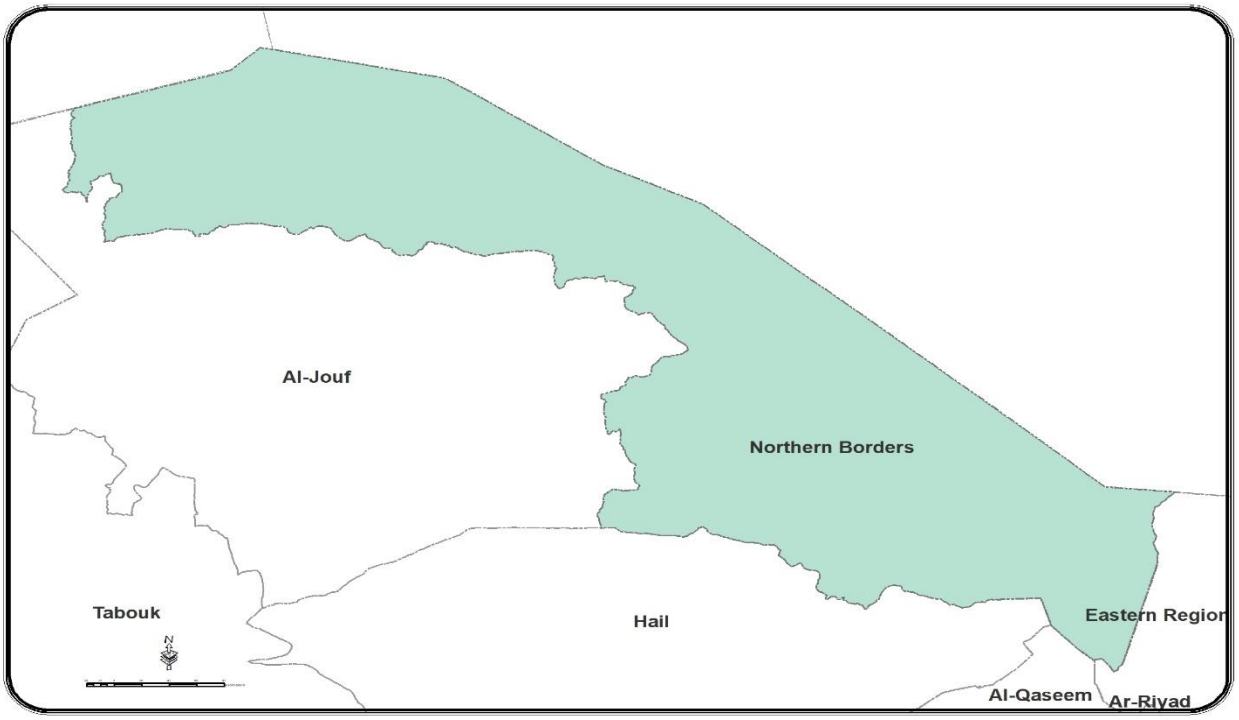
Hail Region



- **Some indicators at the level of Hail: -**

SN	Indicator	%
1	Percentage of households connected to the public electricity network	99.99
2	Percentage of households using solar energy at home	2.30
3	Percentage of households using gas at home	92.96
4	Percentage of households using electricity in cooking process	6.08
5	Percentage of households using biomass products (fuelwood, coal and agricultural waste)	15.61
6	Percentage of households using an independent electric meter at the home	94.19
7	Percentage of households using an electric meter shared with several houses	5.81
8	Percentage of households that have power regulator at home	22.76
9	Percentage of households using electrical power saving devices at home	37.66
10	Percentage of households using an thermal insulations at the home	18.75
11	Percentage of households willing to use photovoltaic (solar) power in the house	43.21

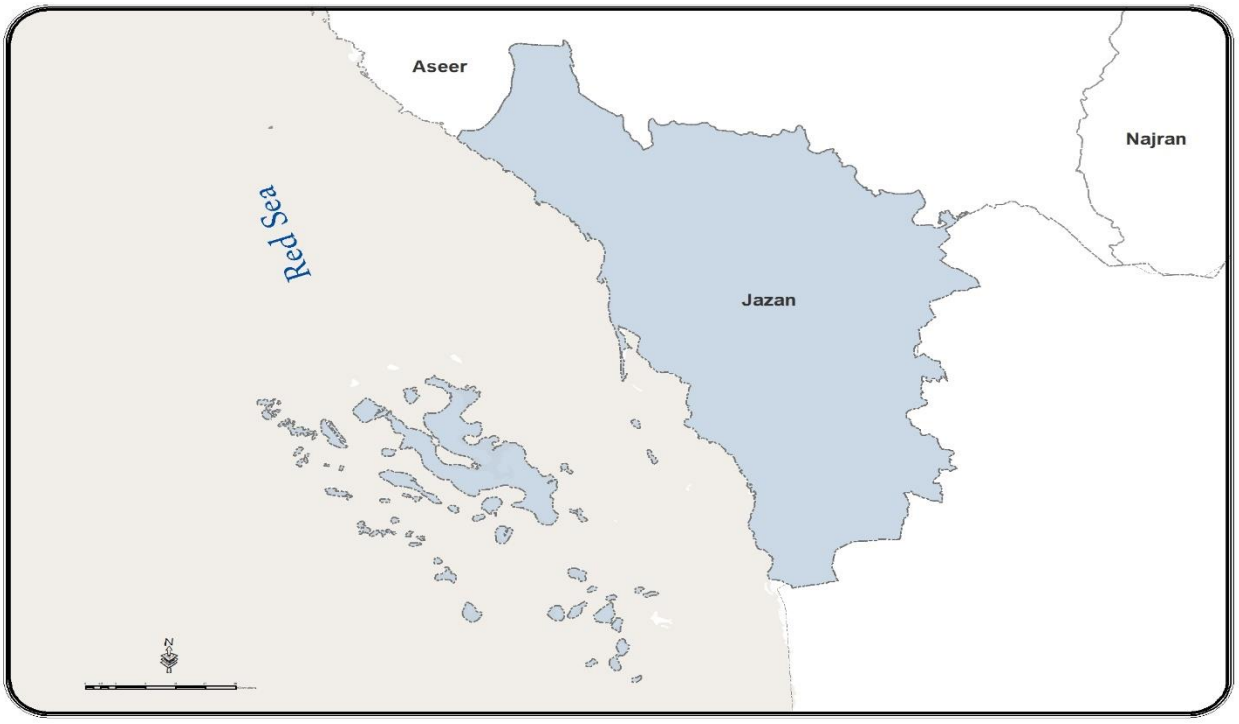
Northern Borders Region



- **Some indicators at the level of Northern Borders: -**

SN	Indicator	%
1	Percentage of households connected to the public electricity network	98.96
2	Percentage of households using solar energy at home	1.57
3	Percentage of households using gas at home	95.35
4	Percentage of households using electricity in cooking process	4.22
5	Percentage of households using biomass products (fuelwood, coal and agricultural	10.72
6	Percentage of households using an independent electric meter at the home	92.76
7	Percentage of households using an electric meter shared with several houses	7.24
8	Percentage of households that have power regulator at home	19.05
9	Percentage of households using electrical power saving devices at home	11.74
10	Percentage of households using an thermal insulations at the home	22.33
11	Percentage of households willing to use photovoltaic (solar) power in the house	33.69

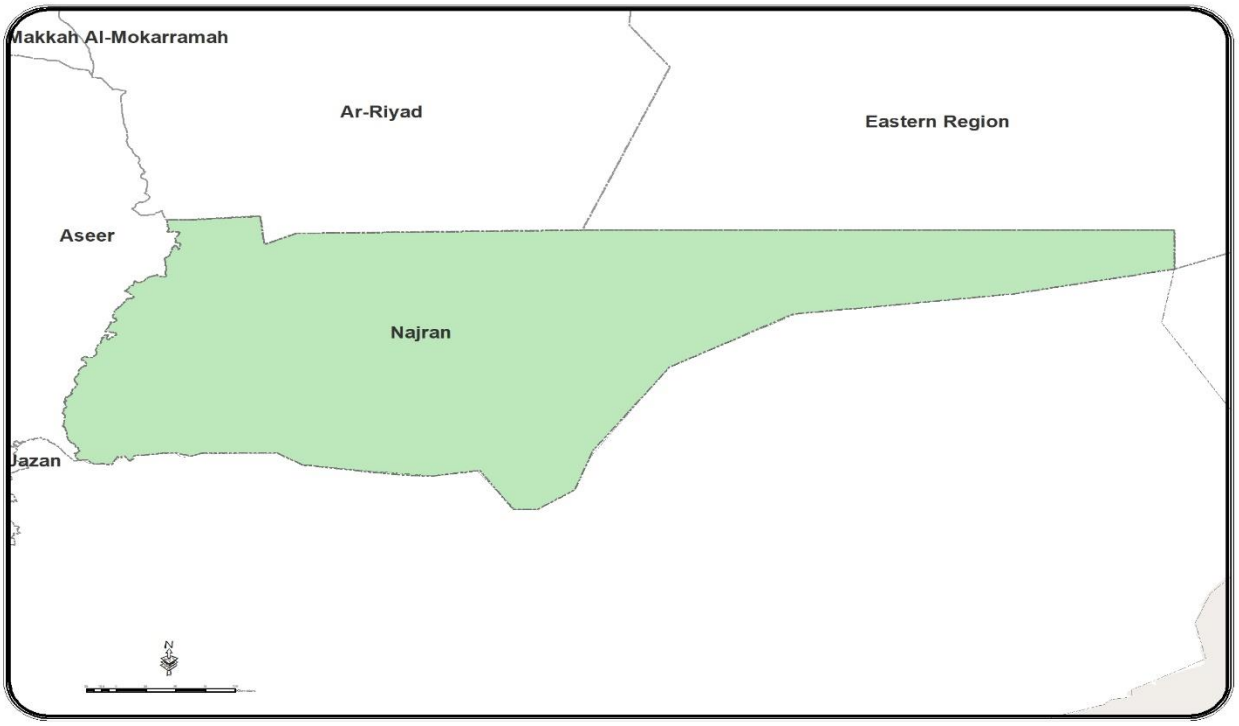
Jazan Region



- **Some indicators at the level of Jazan: -**

SN	Indicator	%
1	Percentage of households connected to the public electricity network	99.77
2	Percentage of households using solar energy at home	1.45
3	Percentage of households using gas at home	91.21
4	Percentage of households using electricity in cooking process	7.21
5	Percentage of households using biomass products (fuelwood, coal and agricultural waste)	13.63
6	Percentage of households using an independent electric meter at the home	87.78
7	Percentage of households using an electric meter shared with several houses	12.22
8	Percentage of households that have power regulator at home	19.54
9	Percentage of households using electrical power saving devices at home	21.47
1	Percentage of households using an thermal insulations at the home	17.12
1	Percentage of households willing to use photovoltaic (solar) power in the house	61.38

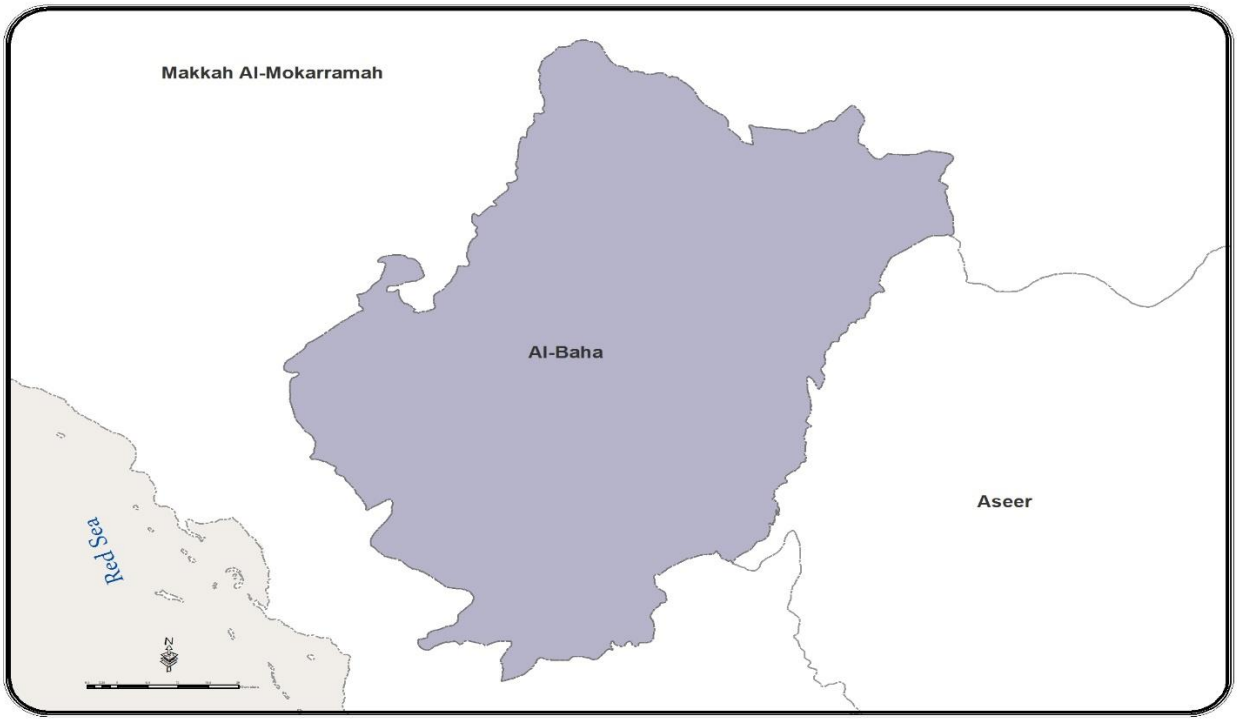
Najran Region



- **Some indicators at the level of Najran: -**

SN	Indicator	%
1	Percentage of households connected to the public electricity network	99.96
2	Percentage of households using solar energy at home	1.85
3	Percentage of households using gas at home	94.16
4	Percentage of households using electricity in cooking process	4.71
5	Percentage of households using biomass products (fuelwood, coal and agricultural	20.08
6	Percentage of households using an independent electric meter at the home	82.33
7	Percentage of households using an electric meter shared with several houses	17.67
8	Percentage of households that have power regulator at home	10.03
9	Percentage of households using electrical power saving devices at home	19.44
10	Percentage of households using an thermal insulations at the home	10.99
11	Percentage of households willing to use photovoltaic (solar) power in the house	53.23

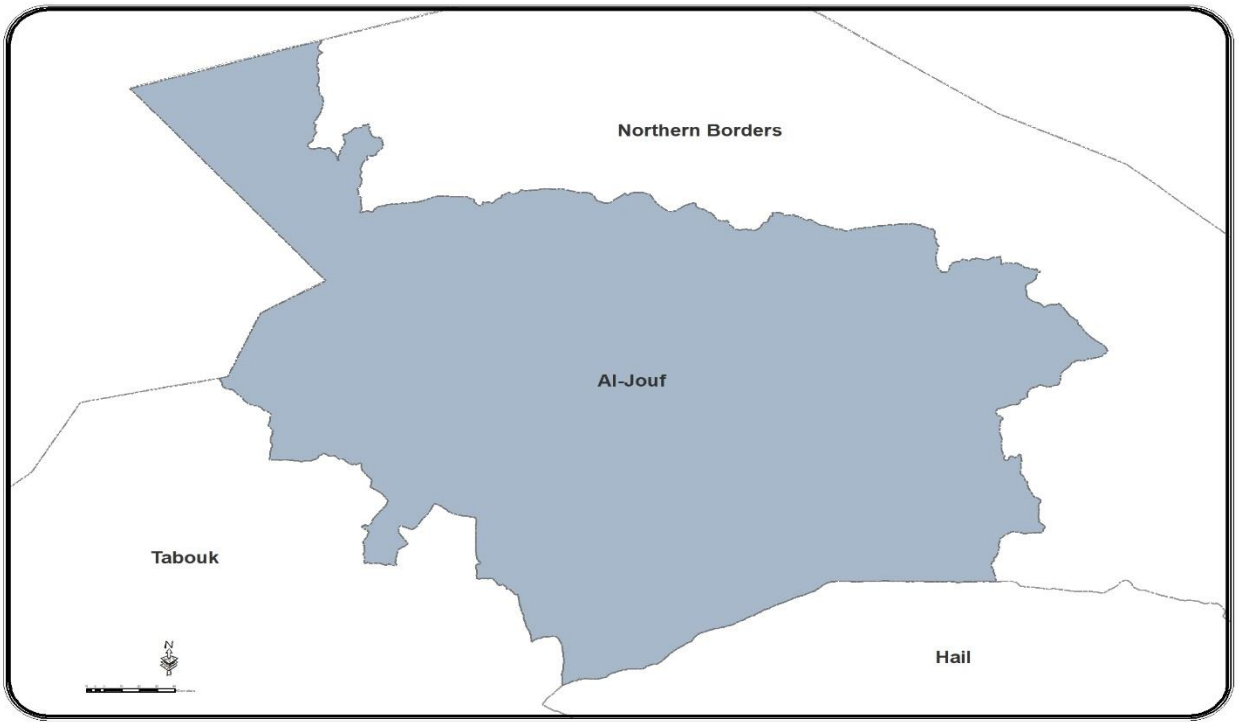
Al-Bahah Region



- **Some indicators at the level of Al-Bahah:-**

SN	Indicator	%
1	Percentage of households connected to the public electricity network	99.98
2	Percentage of households using solar energy at home	0.79
3	Percentage of households using gas at home	95.28
4	Percentage of households using electricity in cooking process	4.40
5	Percentage of households using biomass products (fuelwood, coal and agricultural	7.42
6	Percentage of households using an independent electric meter at the home	86.61
7	Percentage of households using an electric meter shared with several houses	13.39
8	Percentage of households that have power regulator at home	8.92
9	Percentage of households using electrical power saving devices at home	28.47
10	Percentage of households using an thermal insulations at the home	13.10
11	Percentage of households willing to use photovoltaic (solar) power in the house	62.98

Al-Jouf Region



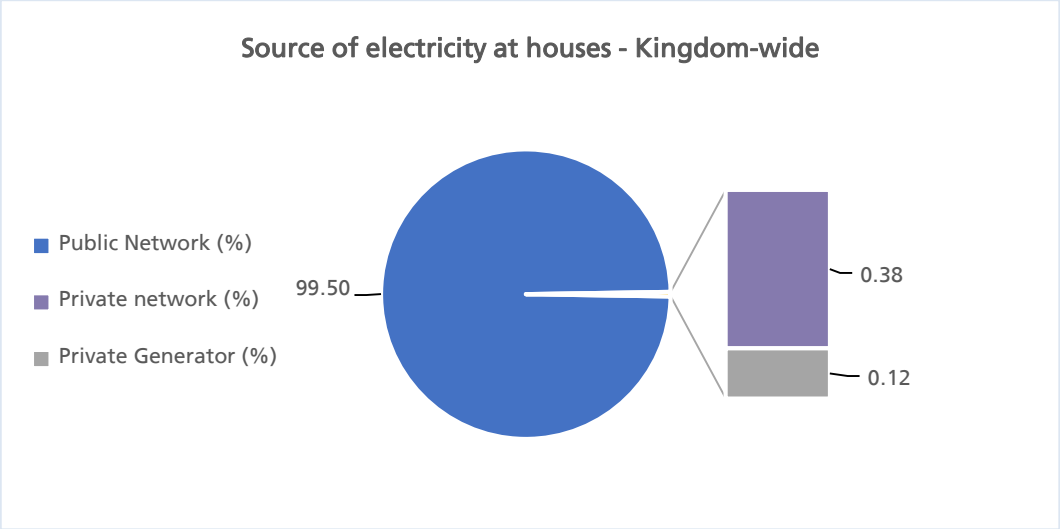
- Some indicators at the level of Al-Jouf:-

SN	Indicator	%
1	Percentage of households connected to the public electricity network	99.56
2	Percentage of households using solar energy at home	0.93
3	Percentage of households using gas at home	96.18
4	Percentage of households using electricity in cooking process	3.68
5	Percentage of households using biomass products (fuelwood, coal and agricultural waste)	10.72
6	Percentage of households using an independent electric meter at the home	92.14
7	Percentage of households using an electric meter shared with several houses	7.86
8	Percentage of households that have power regulator at home	19.17
9	Percentage of households using electrical power saving devices at home	28.61
10	Percentage of households using an thermal insulations at the home	11.57
11	Percentage of households willing to use photovoltaic (solar) power in the house	61.92

Second: Key results about some forms of energy

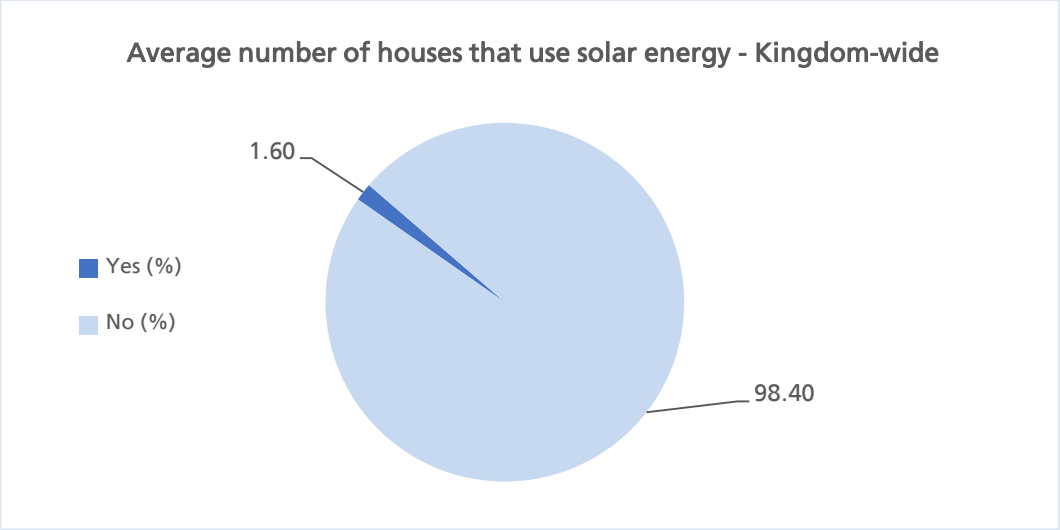
1. The survey results showed that many households in Saudi Arabia use electricity at their houses. About (99.50%) of households have houses connected to the public grid. Only (0.38%) of households dependently use their private source of power while (0.12%) of the households use generators as a source of electricity.

Chart (1)



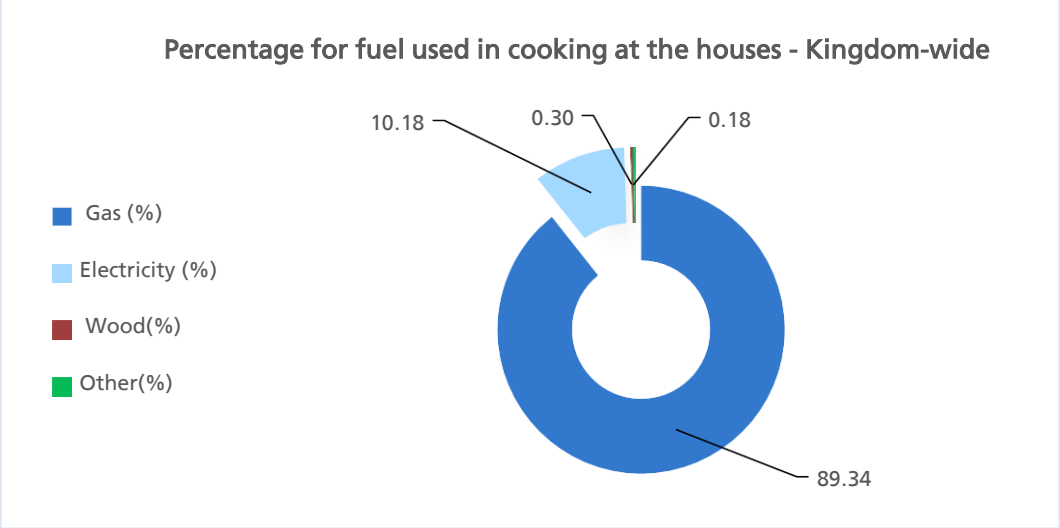
2. The results also showed that about (1.60%) of households all over Saudi Arabia use solar energy at their houses.

Chart(2)



3. It is clear as well that up to (89.34%) of the households use natural gas for cooking while only (10.18%) of households depend on electricity for cooking. Less than one percent (0.30%) of households use firewood for cooking.

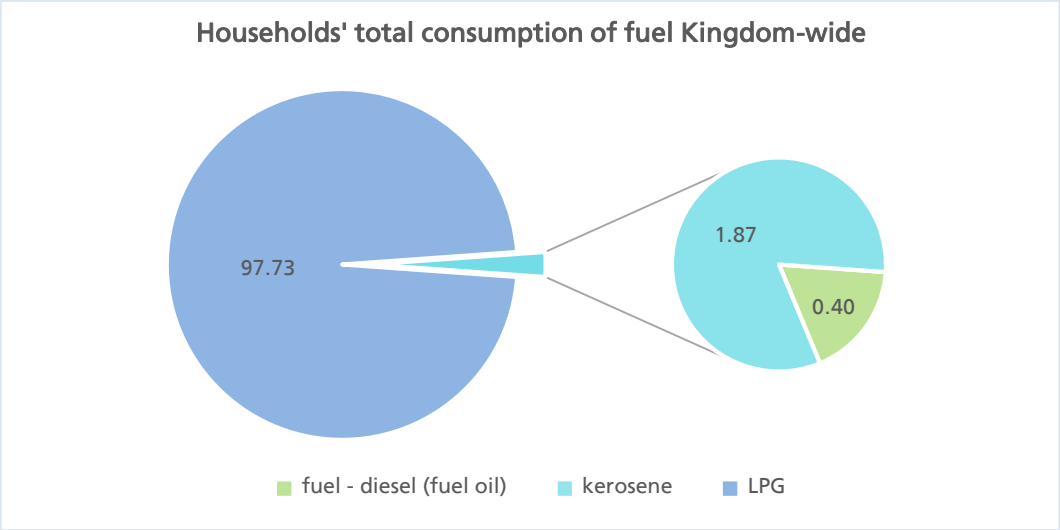
Chart (3)



Third: Key results on consumption:

1. The household's total consumption of fuel - diesel (fuel oil), kerosene and LPG - in all Saudi regions hit more than billion liters (1,049,620,514) in 2018.
2. The consumption of diesel (fuel oil) was (4,246,564) representing only (0.40%) of the total consumption of fuel in 2018.
3. The consumption of kerosene hit more than nineteen million liters (19,539,976) representing about (1.87%) of the total consumption of fuel in 2018.
4. Meanwhile, the consumption of LPG reached (1,025,833,974) liters representing about (97.73%) of the total consumption of fuel in 2018.
5. The household sector's consumption of electricity in Saudi Arabia reached (187,491.39) Gigawatt/hour.

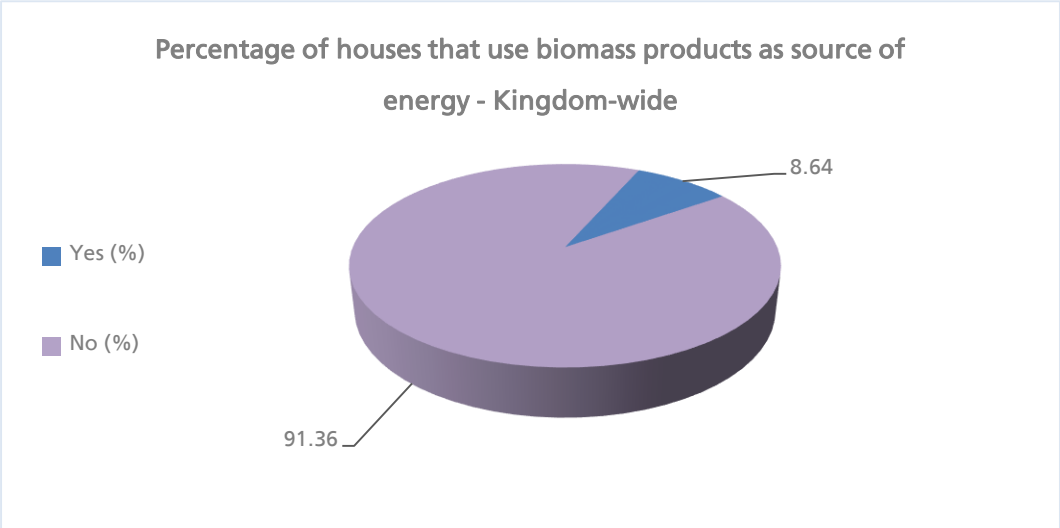
Chart (4)



Fourth: Key results on the percentages of the different types of energy:

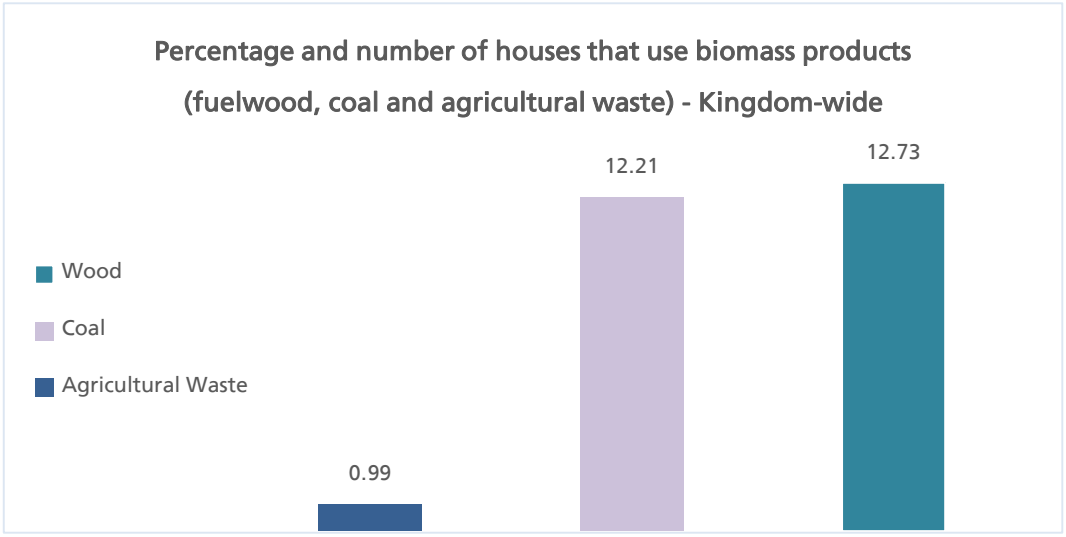
1. According to the study, about (8.64%) of households in the Kingdom use biomasses (fuelwood, coal and agricultural wastes) at their houses.

Chart (5)



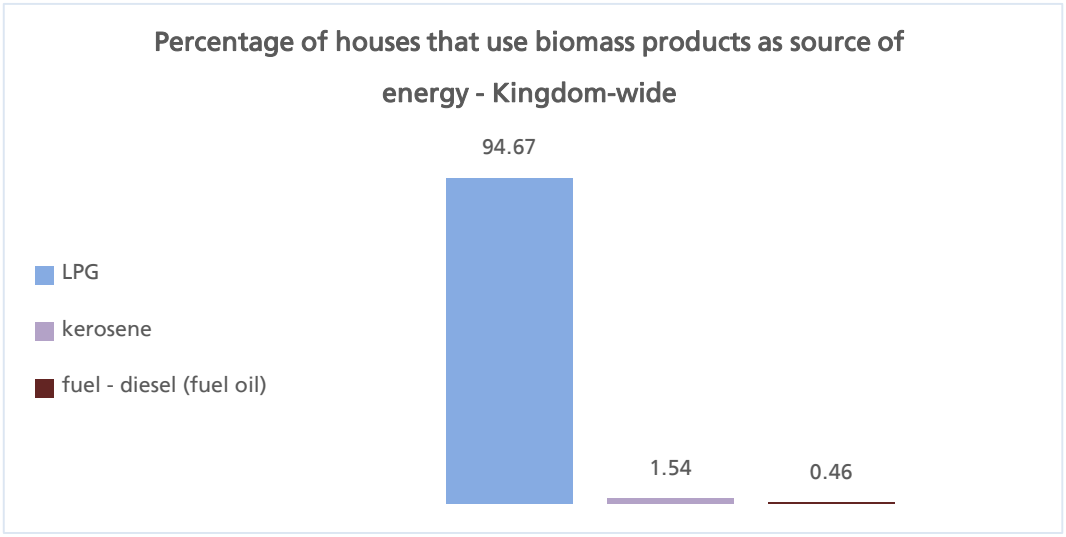
2. Results of the study on the biomass as a source of energy for heating or cooking in the Kingdom revealed that (12.73%) of households use firewood while (12.21%) use coal, and (0.99%) of households use agricultural residues.

Chart (6)



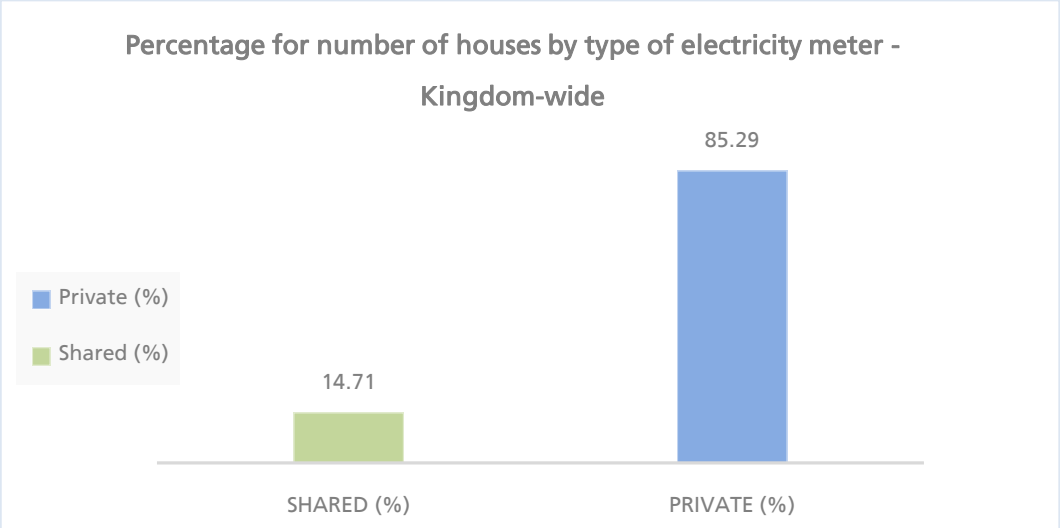
3. With regard to the fuel consumption at houses all over Saudi Arabia, the results revealed that: -
   - Only (0.46%) of households use diesel (fuel oil).
   - About (1.54%) of households use kerosene.
   - Also, about (94.67%) of households use LPG.

Chart (7)



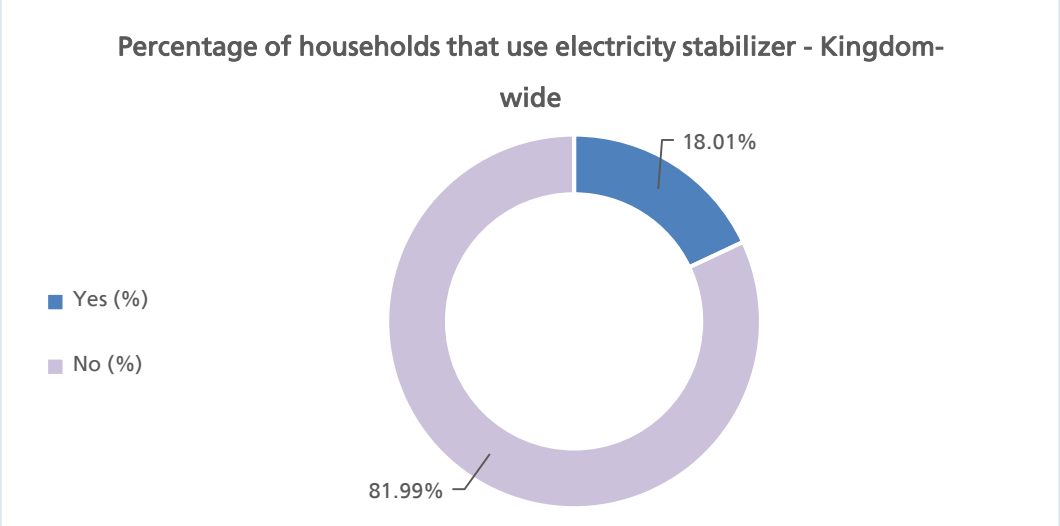
4. According to the results, about (85.29%) of houses have their own electric meters while (14.71%) of houses share electric meters.

Chart (8)



5. The results showed that about (18.01%) of households all over Saudi Arabia depend on power stabilizers at their houses.

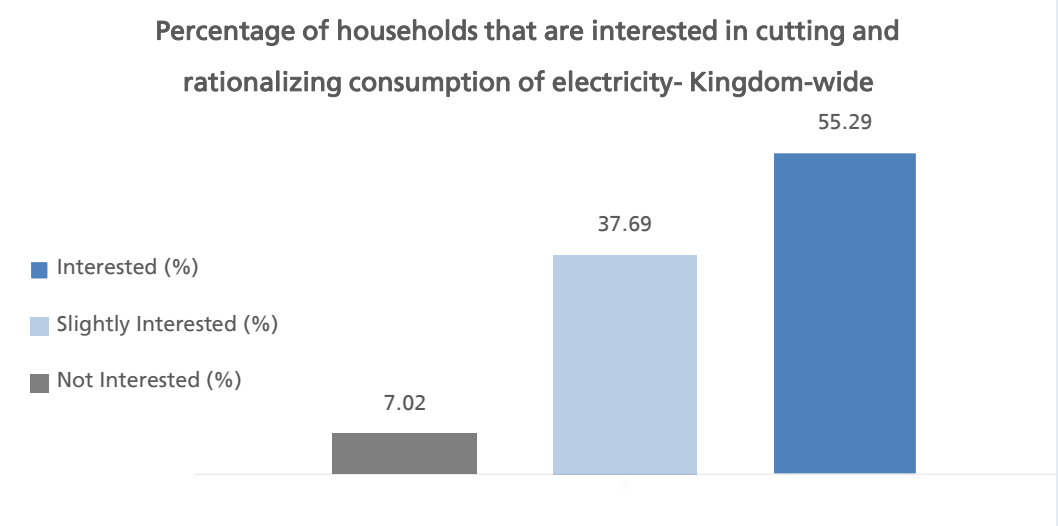
Chart (9)



Fifth: - Key results on rationalization of power consumption

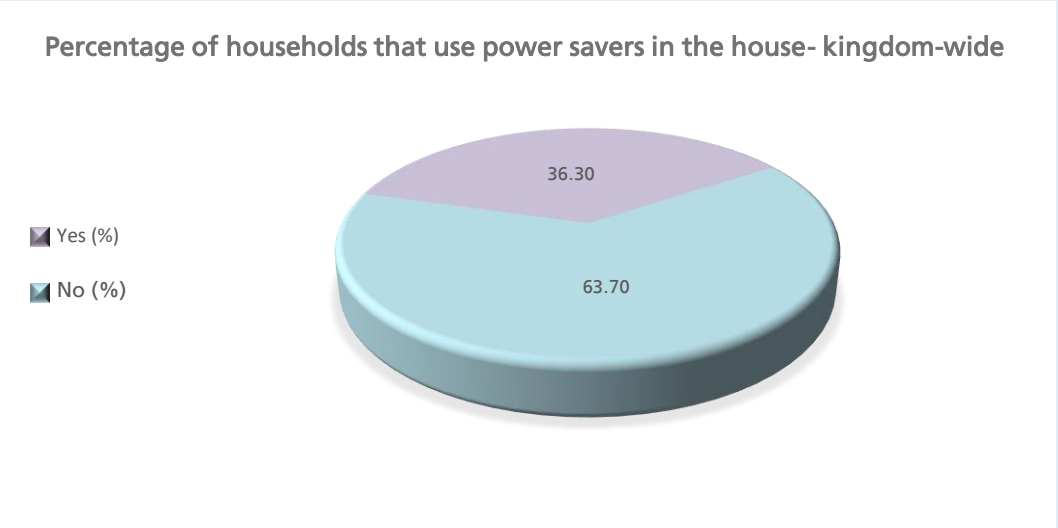
1. The results showed that (55.29%) of households are interested in cutting expenses or rationalization of power consumption. They also showed that (37.69%) of the households are likely interested in power consumption rationalization while only (7.02%) of the households are not interested at all in cutting expenses or rationalizing power consumption.

Chart (10)



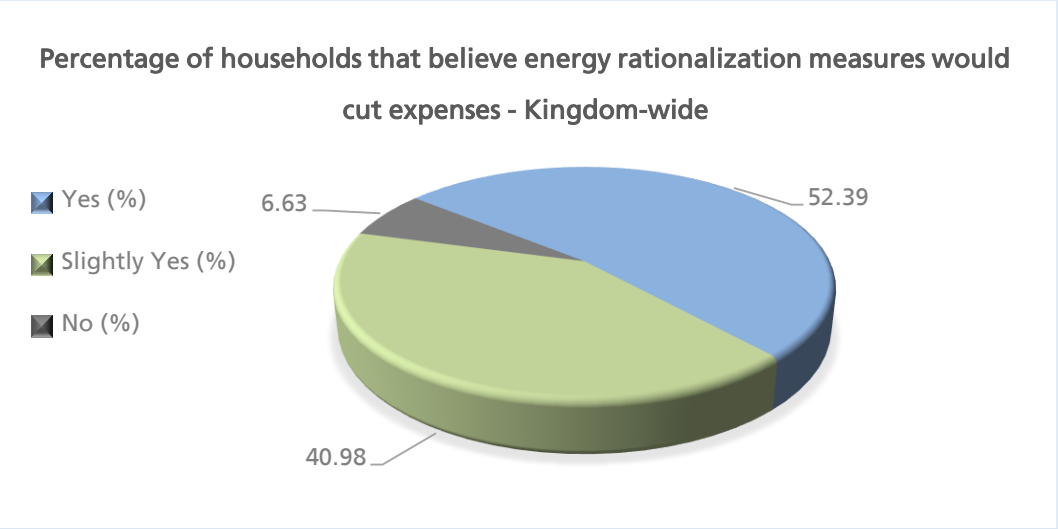
2. The results showed that (36.30%) of the households have power savers at their houses while the majority (63.70%) of households doesn't have power savers to rationalize consumption.

Chart (11)



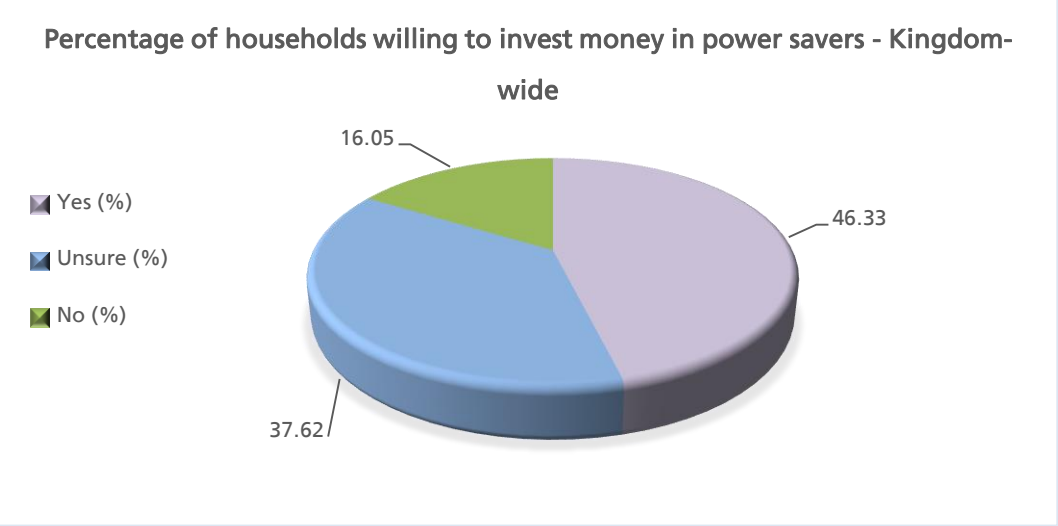
3. According to the census results, about (52.39%) of households in the kingdom have strong belief that the rationalization measures would lead to definite cut in costs. About (40.98%) of the households see that a rationalization plan is somehow cost effective. In the meantime, only (6.63%) of the households think the rationalization measures would save no money.

Chart (12)



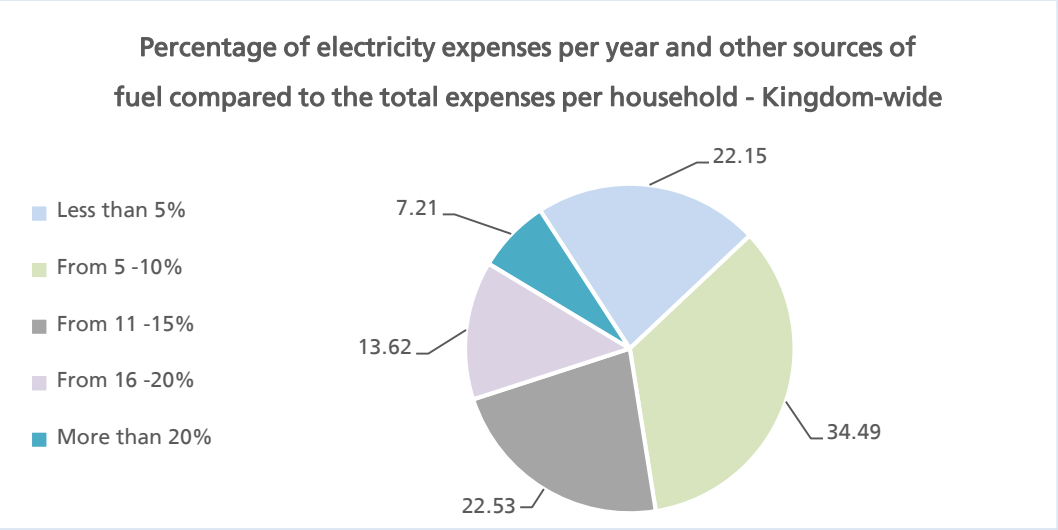
4. The results showed that (46.33%) of the households in Saudi Arabia are willing to invest in power savers while about (37.62%) of the households are not sure about such investments. But, there about (16.05%) of households oppose spending money to buy power savers.

Chart (13)



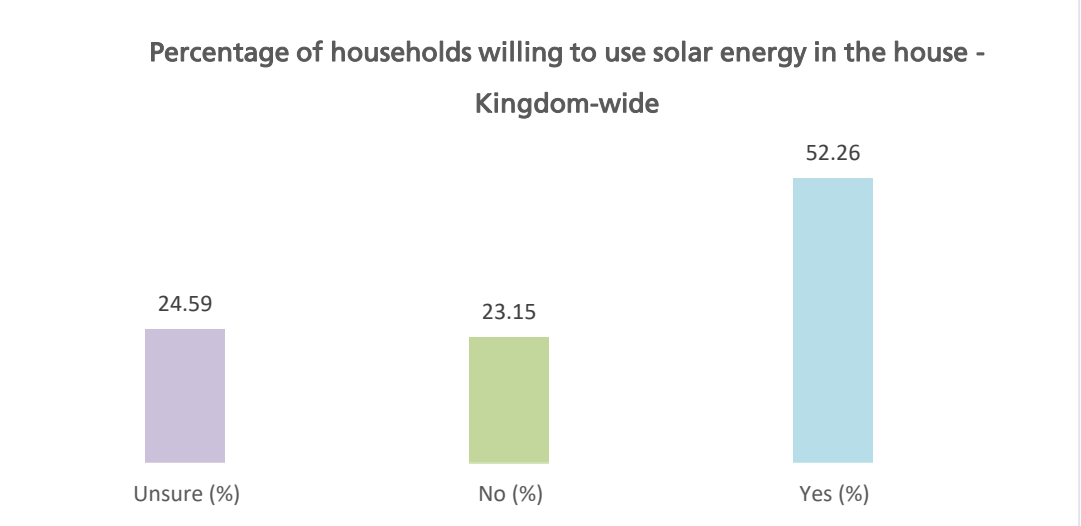
5. The survey results showed that (22.15%) of the households in Saudi Arabia expend less than (5%) of their income on electricity and other fuel sources, and (34.49%) of the households are spending (5 -10%) of their income on electricity and fuel consumption, while (22.53%) of the households spend (11-15%) of their income. In the same time, about (13.62%) of the households are spending (16 – 20%), and (7.21%) of the households are spending more than (20%) of their income respectively on electricity and consumption from other fuel sources.

Chart (14)



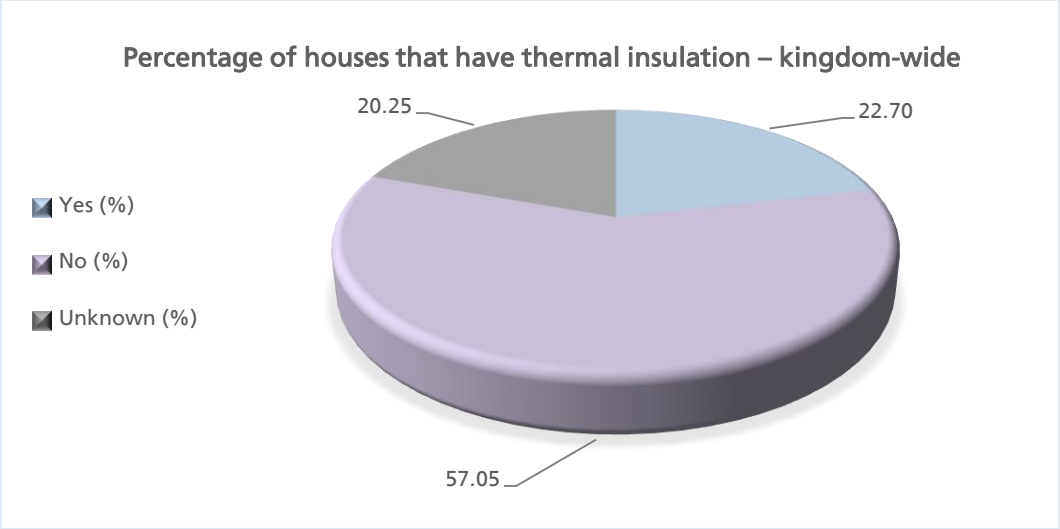
6. The results also showed that the percentage of households who want to use solar energy at home reached (52.26%), while (23.15%) of household do not want to use such type of energy.

Chart (15)



7. The results revealed that the percentage of houses that have thermal insulation reached (22.70%), whereas the percentage of houses that do not have thermal insulation hit (57.05%). However, the results showed that (20.25%) of households do not have any idea about thermal insulation.

Chart (16)



2019

Publishing tables:

Total Number And Area Of (Cooled) House Components In The Administrative Regions

Table 1

S/N	Administrative Region	House Components											
		Guests Living Room		Bedrooms		Living Rooms		Kitchens		Bathrooms		Annexes	
		Total number	Area (m^2)	Total number	Area (m^2)	Total number	Area (m^2)	Total number	Area (m^2)	Total number	Area (m^2)	Total number	Area (m^2)
1	Riyadh	1,639,868	39,170,747	3,610,624	69,390,711	1,278,181	28,631,618	1,398,747	21,191,414	2,980,432	15,046,532	456,002	10,960,613
2	Makkah	2,049,086	49,861,086	3,399,777	63,578,041	1,592,329	32,062,734	1,634,790	24,555,929	3,335,222	16,259,596	112,567	4,616,431
3	Madinah	472,909	**10,269,417**	803,755	15,373,516	322,376	7,089,132	387,144	5,783,431	602,811	2,870,909	33,680	1,043,888
4	Al-Qassim	292,664	7,086,912	705,291	14,125,308	233,014	5,885,194	254,957	4,177,004	492,266	2,179,457	103,363	2,649,663
5	Eastern Region	979,097	23,468,668	2,127,650	40,163,529	806,655	19,150,749	821,261	13,157,186	1,522,275	8,165,438	144,652	3,036,519
6	Asir	696,298	20,430,166	967,032	19,555,008	365,429	8,974,047	446,458	8,385,914	1,112,144	5,587,043	196,067	6,889,200
7	Tabuk	167,748	4,183,630	329,713	6,810,087	134,990	3,269,814	152,219	2,335,771	318,107	1,422,262	28,950	796,779
8	Hail	146,148	4,679,600	364,311	7,754,441	116,561	3,394,643	115,639	2,473,395	331,842	1,654,751	40,042	1,007,464
9	Northern Borders	77,153	2,282,752	134,149	2,763,485	45,471	1,172,996	46,170	898,533	59,728	344,948	9,588	255,772
10	Jazan	361,893	8,762,887	544,888	11,324,447	239,218	5,690,700	258,224	3,772,428	468,145	2,692,794	86,592	1,916,392
11	Najran	121,769	3,306,984	243,214	4,714,321	80,457	1,664,559	94,293	1,443,147	206,431	847,686	14,135	307,915
12	Al-Bahah	114,661	3,210,625	202,305	4,323,798	92,899	2,241,672	93,228	1,649,842	196,944	933,817	18,581	340,079
13	Al-Jouf	128,650	3,495,471	243,648	5,015,895	94,177	2,302,760	82,908	1,582,249	101,020	590,801	31,353	1,152,301
Total of the Kingdom		7,247,944	180,208,943	13,676,357	264,892,588	5,401,758	121,530,619	5,786,038	91,406,243	11,727,368	58,596,035	1,275,572	34,973,015

Reference: Household Energy Survey 2019

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Total Number And Area Of (Heated) House Components In The Administrative Regions

Table 2

S/N	Administrative Region	House Components											
		Guests Living Room		Bedrooms		Living Rooms		Kitchens		Bathrooms		Annexes	
		Total number	Area (m^2)	Total number	Area (m^2)	Total number	Area (m^2)	Total number	Area (m^2)	Total number	Area (m^2)	Total number	Area (m^2)
1	Riyadh	693,902	18,128,304	1,555,286	31,188,092	663,842	15,878,221	483,723	8,084,722	907,881	4,466,399	306,034	7,874,430
2	Makkah	45,631	1,083,844	192,366	3,902,749	94,671	2,091,920	30,254	534,616	74,924	410,310	13,204	418,487
3	Madinah	98,169	**2,197,034**	83,965	1,618,296	49,259	1,192,104	30,120	460,645	51,669	323,086	14,597	425,007
4	Al-Qassim	167,355	4,008,684	423,914	8,490,132	141,696	3,618,904	78,305	1,361,167	184,980	833,340	57,787	1,528,375
5	Eastern Region	216,793	5,207,761	432,134	8,454,686	304,981	7,824,958	62,836	1,130,663	138,951	686,357	24,706	744,611
6	Asir	199,198	6,147,746	423,317	9,021,774	215,519	5,744,101	65,054	1,166,214	169,402	755,832	60,949	2,844,619
7	Tabuk	84,228	2,221,524	213,628	4,641,973	81,154	2,030,066	14,001	307,774	26,273	142,120	18,472	526,288
8	Hail	129,319	4,173,370	330,350	7,030,205	95,095	2,801,547	12,343	254,143	11,165	50,728	14,394	417,622
9	Northern Borders	74,615	2,222,768	126,666	2,618,455	45,524	1,170,934	38,594	771,170	25,791	173,402	8,389	226,030
10	Jazan	2,704	62,203	5,081	127,032	4,537	111,200	4,764	72,061	47,485	143,013	426	5,330
11	Najran	2,816	72,030	20,525	422,300	56,040	1,229,191	19,308	305,807	59,572	226,757	1,560	38,467
12	Al-Bahah	58,312	1,767,674	119,285	2,531,928	61,658	1,482,269	26,991	477,625	37,913	193,104	6,830	143,157
13	Al-Jouf	114,683	3,042,347	234,505	4,845,180	78,824	1,835,703	63,194	1,174,411	157,617	963,760	34,755	1,223,146
Total of the Kingdom		1,887,724	50,335,288	4,161,022	84,892,800	1,892,801	47,011,119	929,489	16,101,019	1,893,624	9,368,208	562,103	16,415,568

Reference: Household Energy Survey 2019

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Percentage Of Electricity Sources Which Use In Housing Unit In The Administrative Regions

Table 3

S/N	Administrative Region	Source of Elictricity			Total (%)
		Public Network (%)	Private network (%)	Private Generator (%)	
1	Riyadh	99.82	0.03	0.15	100.00
2	Makkah	98.77	1.18	0.05	100.00
3	Madinah	99.93	0.01	0.06	100.00
4	Al-Qassim	99.09	0.85	0.06	100.00
5	Eastern Region	99.72	0.01	0.27	100.00
6	Asir	99.99	0.00	0.01	100.00
7	Tabuk	99.98	0.01	0.01	100.00
8	Hail	99.99	0.00	0.01	100.00
9	Northern Borders	98.96	0.01	1.03	100.00
10	Jazan	99.77	0.09	0.14	100.00
11	Najran	99.96	0.00	0.04	100.00
12	Al-Bahah	99.98	0.01	0.01	100.00
13	Al-Jouf	99.56	0.01	0.43	100.00
Total of the Kingdom		99.50	0.38	0.12	100.00

Reference: Household Energy Survey 2019

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Percentage Of Electricity Source (Public Network) According ToThe Type Of Housing Unit In The Administrative Regions

Table 4

S/N	Administrative Region	Type of Housing Unit					
		Traditional House (%)	Villa (%)	Storey in a Traditional House (%)	Storey in a Villa (%)	Apartment (%)	Other (%)
1	Riyadh	99.36	100.00	100.00	99.99	99.99	98.42
2	Makkah	95.24	99.98	99.82	100.00	99.15	98.79
3	Madinah	99.71	100.00	100.00	100.00	99.99	100.00
4	Al-Qassim	93.83	99.82	100.00	100.00	99.98	100.00
5	Eastern Region	100.00	100.00	100.00	100.00	99.52	100.00
6	Asir	100.00	100.00	99.98	100.00	99.97	99.89
7	Tabuk	99.93	99.95	100.00	100.00	100.00	0.00
8	Hail	99.97	100.00	100.00	100.00	100.00	100.00
9	Northern Borders	100.00	100.00	99.94	100.00	97.85	0.00
10	Jazan	99.80	99.66	99.26	99.37	99.87	0.00
11	Najran	99.91	100.00	100.00	100.00	99.95	100.00
12	Al-Bahah	100.00	100.00	99.84	100.00	99.98	100.00
13	Al-Jouf	100.00	100.00	100.00	100.00	99.16	0.00
Total of the Kingdom		98.47	99.97	99.90	99.98	99.57	99.04

Reference: Household Energy Survey 2019

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Percentage Of Electricity Source (Public Network) According To Possession Type In The Administrative Regions

Table 5

S/N	Administrative Region	Possession type		
		Owned (%)	Rented (%)	Offered by Employer (%)
1	Riyadh	100.00	99.99	98.93
2	Makkah	96.90	99.59	99.79
3	Madinah	99.84	99.98	100.00
4	Al-Qassim	99.88	**99.98**	92.58
5	Eastern Region	100.00	99.99	96.56
6	Asir	99.99	99.97	100.00
7	Tabuk	99.99	99.98	100.00
8	Hail	99.98	100.00	100.00
9	Northern Borders	99.99	99.98	64.37
10	Jazan	99.73	99.96	99.38
11	Najran	99.96	99.95	99.98
12	Al-Bahah	99.99	99.96	100.00
13	Al-Jouf	100.00	99.97	92.07
Total of the Kingdom		99.29	99.85	98.52

Reference: Household Energy Survey 2019

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Percentage Of Electricity Source (Private Network) By Type Of Housing Unit In The Administrative Regions

Table 6

S/N	Administrative Region	Type of Housing Unit					
		Traditional House (%)	Villa (%)	Storey in a Traditional House (%)	Storey in a Villa (%)	Apartment (%)	Other (%)
1	Riyadh	0.64	0.00	0.00	0.01	0.01	0.00
2	Makkah	4.76	0.02	0.18	0.00	0.81	0.00
3	Madinah	0.00	0.00	0.00	0.00	0.01	0.00
4	Al-Qassim	6.17	0.03	0.00	0.00	0.00	0.00
5	Eastern Region	0.00	0.00	0.00	0.00	0.01	0.00
6	Asir	0.00	0.00	0.02	0.00	0.00	0.00
7	Tabuk	0.07	0.00	0.00	0.00	0.00	0.00
8	Hail	0.00	0.00	0.00	0.00	0.00	0.00
9	Northern Borders	0.00	0.00	0.06	0.00	0.01	0.00
10	Jazan	0.16	0.13	0.00	0.00	0.00	0.00
11	Najran	0.00	0.00	0.00	0.00	0.01	0.00
12	Al-Bahah	0.00	0.00	0.16	0.00	0.00	0.00
13	Al-Jouf	0.00	0.00	0.00	0.00	0.03	0.00
Total for the Kingdom		1.49	0.01	0.05	0.00	0.32	0.00

Reference: Household Energy Survey 2019

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Percentage Of Electricity Source (Private Network) According To Possession Type In The Administrative Regions

Table 7

S/N	Administrative Region	Possession type		
		Owned (%)	Rented (%)	Offered by Employer (%)
1	Riyadh	0.00	0.01	0.19
2	Makkah	3.03	0.39	0.00
3	Madinah	0.00	0.02	0.00
4	Al-Qassim	0.02	0.00	7.42
5	Eastern Region	0.00	0.01	0.00
6	Asir	0.00	0.00	0.00
7	Tabuk	0.00	0.02	0.00
8	Hail	0.00	0.00	0.00
9	Northern Borders	0.01	0.02	0.00
10	Jazan	0.12	0.00	0.00
11	Najran	0.00	0.01	0.00
12	Al-Bahah	0.01	0.00	0.00
13	Al-Jouf	0.00	0.03	0.00
Total for the Kingdom		0.66	0.14	0.48

Reference: Household Energy Survey 2019

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Percentage Of Electricity Source (Private Generator) By Type Of Housing Unit In The Administrative Regions

Table 8

S/N	Administrative Region	Type of Housing Unit					
		Traditional House (%)	Villa (%)	Storey in a Traditional House (%)	Storey in a Villa (%)	Apartment (%)	Other (%)
1	Riyadh	0.00	0.00	0.00	0.00	0.00	1.58
2	Makkah	0.00	0.00	0.00	0.00	0.04	1.21
3	Madinah	0.29	0.00	0.00	0.00	0.00	0.00
4	Al-Qassim	0.00	**0.15**	0.00	0.00	0.02	0.00
5	Eastern Region	0.00	0.00	0.00	**0.00**	0.47	0.00
6	Asir	0.00	0.00	0.00	0.00	0.03	0.11
7	Tabuk	0.00	0.05	0.00	0.00	0.00	0.00
8	Hail	0.03	0.00	0.00	0.00	0.00	0.00
9	Northern Borders	0.00	0.00	0.00	0.00	2.14	100.00
10	Jazan	0.04	0.21	0.74	0.63	0.13	0.00
11	Najran	0.09	0.00	0.00	0.00	0.04	0.00
12	Al-Bahah	0.00	0.00	0.00	0.00	0.02	0.00
13	Al-Jouf	0.00	0.00	0.00	0.00	0.81	0.00
Total for the Kingdom		0.04	0.02	0.05	0.02	0.11	0.96

Reference: Household Energy Survey 2019

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Percentage Of Electricity Source (Private Generator) According To Possession Type In The Administrative Regions

Table 9

S/N	Administrative Region	Possession type		
		Owned (%)	Rented (%)	Offered by Employer (%)
1	Riyadh	0.00	0.00	0.88
2	Makkah	0.07	0.02	0.21
3	Madinah	0.16	0.00	0.00
4	Al-Qassim	0.10	0.02	0.00
5	Eastern Region	0.00	0.00	3.44
6	Asir	0.01	0.03	0.00
7	Tabuk	0.01	0.00	0.00
8	Hail	0.02	0.00	0.00
9	Northern Borders	0.00	0.00	35.63
10	Jazan	0.15	0.04	0.62
11	Najran	0.04	0.04	0.02
12	Al-Bahah	0.00	0.04	0.00
13	Al-Jouf	0.00	0.00	7.93
Total for the Kingdom		0.05	0.01	1.00

Reference: Household Energy Survey 2019

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Percentage Of Housing Units Which Use Solar Energy In The Administrative Regions

Table 10

S/N	Administrative Region	Yes (%)	No (%)	Total (%)
1	Riyadh	1.82	98.18	100.00
2	Makkah	1.50	98.50	100.00
3	Madinah	1.36	98.64	100.00
4	Al-Qassim	1.27	98.73	100.00
5	Eastern Region	2.07	97.93	100.00
6	Asir	1.14	98.86	100.00
7	Tabuk	1.27	98.73	100.00
8	Hail	2.30	97.70	100.00
9	Northern Borders	1.57	98.43	100.00
10	Jazan	1.45	98.55	100.00
11	Najran	1.85	98.15	100.00
12	Al-Bahah	0.79	99.21	100.00
13	Al-Jouf	0.93	99.07	100.00
Total for the Kingdom		1.60	98.40	100.00

Reference: Household Energy Survey 2019

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Percentage Of Fuel Used In Housing Unit For Cooking In The Administrative Regions

Table 11

S/N	Administrative Region	Fuel Used for Cooking in the unit				
		Gas (%)	Electricity (%)	Wood(%)	Other(%)	Total (%)
1	Riyadh	89.89	9.63	0.17	0.31	100.00
2	Makkah	91.20	8.67	0.10	0.03	100.00
3	Madinah	92.02	7.26	0.24	0.48	100.00
4	Al-Qassim	94.24	5.69	0.07	0.00	100.00
5	Eastern Region	75.85	23.80	0.12	0.23	100.00
6	Asir	91.71	6.93	1.23	0.13	100.00
7	Tabuk	95.13	4.62	0.25	0.00	100.00
8	Hail	92.96	6.08	0.96	0.00	100.00
9	Northern Borders	95.35	4.22	0.15	0.28	100.00
10	Jazan	91.21	7.21	1.34	0.24	100.00
11	Najran	94.16	4.71	0.92	0.21	100.00
12	Al-Bahah	95.28	4.40	0.24	0.08	100.00
13	Al-Jouf	96.18	3.68	0.06	0.08	100.00
Total for the Kingdom		89.34	10.18	0.30	0.18	100.00

Reference: Household Energy Survey 2019

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Percentage Of Fuel Used For Cooking (Gas) By Type Of Housing Unit In The Administrative Regions

Table 12

S/N	Administrative Region	Type of Housing Unit					
		Traditional House (%)	Villa (%)	Storey in a Traditional House (%)	Storey in a Villa (%)	Apartment (%)	Other (%)
1	Riyadh	97.85	84.66	98.04	90.95	91.32	86.94
2	Makkah	96.32	82.53	96.86	90.59	91.09	86.42
3	Madinah	95.31	81.71	89.61	88.07	91.87	88.72
4	Al-Qassim	96.72	92.86	95.45	94.17	92.63	98.81
5	Eastern Region	90.76	57.58	88.38	82.78	77.69	97.61
6	Asir	93.83	89.27	92.16	92.56	90.23	98.67
7	Tabuk	96.22	93.03	98.35	94.98	95.03	0.00
8	Hail	92.54	91.15	99.45	95.73	96.17	98.20
9	Northern Borders	95.13	88.83	97.64	93.48	96.50	100.00
10	Jazan	92.07	88.71	97.08	84.90	91.14	0.00
11	Najran	92.17	88.88	94.05	93.61	96.22	98.78
12	Al-Bahah	95.24	95.86	94.95	94.69	95.28	98.33
13	Al-Jouf	95.67	93.37	97.89	93.55	97.59	0.00
Total for the Kingdom		94.63	81.73	94.85	90.15	89.72	90.65

Reference: Household Energy Survey 2019

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Percentage Of Fuel Used In Housing Unit For Cooking (Gas) According To Possession Type In The Administrative Regions

Table 13

S/N	Administrative Region	Possession type		
		Owned (%)	Rented (%)	Offered by Employer (%)
1	Riyadh	90.81	92.10	81.07
2	Makkah	88.71	92.67	88.60
3	Madinah	90.73	93.25	91.46
4	Al-Qassim	93.95	95.02	93.05
5	Eastern Region	67.17	83.67	73.70
6	Asir	91.39	91.03	99.18
7	Tabuk	94.68	95.04	96.55
8	Hail	90.90	96.58	97.40
9	Northern Borders	94.34	96.44	97.78
10	Jazan	90.28	94.57	91.44
11	Najran	91.79	95.85	98.62
12	Al-Bahah	95.02	95.68	98.18
13	Al-Jouf	94.57	97.43	99.60
Total for the Kingdom		87.45	91.65	85.25

Reference: Household Energy Survey 2019

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Percentage Of Fuel Used For Cooking (Electricity) By Type Of Housing Unit In The Administrative Regions

Table 14

S/N	Administrative Region	Type of Housing Unit					
		Traditional House (%)	Villa (%)	Storey in a Traditional House (%)	Storey in a Villa (%)	Apartment (%)	Other (%)
1	Riyadh	1.65	14.76	1.54	8.49	8.42	11.80
2	Makkah	3.12	16.85	3.00	9.28	8.89	13.58
3	Madinah	3.74	18.14	8.92	11.65	7.96	5.16
4	Al-Qassim	3.04	7.04	4.55	5.83	7.37	1.17
5	Eastern Region	8.67	41.80	10.86	16.55	22.17	1.98
6	Asir	3.89	9.06	6.28	6.28	9.01	1.33
7	Tabuk	2.59	6.57	1.04	4.87	4.93	0.00
8	Hail	6.14	7.69	0.55	3.90	3.83	1.80
9	Northern Borders	4.42	10.56	2.24	6.19	2.98	0.00
10	Jazan	5.76	10.74	2.90	14.99	7.32	0.00
11	Najran	6.38	9.96	3.68	5.18	2.81	0.54
12	Al-Bahah	4.56	3.87	4.72	5.03	4.33	1.52
13	Al-Jouf	4.15	6.39	2.11	6.31	2.32	0.00
Total for the Kingdom		4.30	17.58	4.66	9.30	10.09	8.08

Reference: Household Energy Survey 2019

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Percentage Of Fuel Used In Housing Unit For Cooking (Electricity) According To Possession Type In The Administrative Regions

Table 15

S/N	Administrative Region	Possession type		
		Owned (%)	Rented (%)	Offered by Employer (%)
1	Riyadh	8.60	7.60	18.10
2	Makkah	10.93	7.30	11.39
3	Madinah	8.64	6.64	4.59
4	Al-Qassim	5.95	4.98	6.82
5	Eastern Region	32.28	16.11	26.26
6	Asir	6.82	8.32	0.82
7	Tabuk	4.69	4.90	3.41
8	Hail	7.75	3.12	2.54
9	Northern Borders	5.26	3.18	0.53
10	Jazan	7.82	5.12	6.09
11	Najran	6.95	3.09	0.51
12	Al-Bahah	4.68	3.92	1.60
13	Al-Jouf	5.24	2.47	0.26
Total for the Kingdom		11.78	8.16	14.03

Reference: Household Energy Survey 2019

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Percentage Of Fuel Used For Cooking (Wood) ByType Of Housing Unit In The Administrative Regions

Table 16

S/N	Administrative Region	Type of Housing Unit					
		Traditional House (%)	Villa (%)	Storey in a Traditional House (%)	Storey in a Villa (%)	Apartment (%)	Other (%)
1	Riyadh	0.31	0.33	0.30	0.28	0.07	0.04
2	Makkah	0.56	0.18	0.14	0.13	0.02	0.00
3	Madinah	0.84	0.00	1.23	0.10	0.05	0.00
4	Al-Qassim	0.24	0.10	0.00	0.00	0.00	0.02
5	Eastern Region	0.45	0.16	0.37	0.19	0.03	0.00
6	Asir	2.06	1.53	1.37	1.04	0.67	0.00
7	Tabuk	1.19	0.35	0.61	0.15	0.04	0.00
8	Hail	1.32	1.15	0.00	0.37	0.00	0.00
9	Northern Borders	0.18	0.12	0.07	0.04	0.20	0.00
10	Jazan	1.93	0.27	0.00	0.00	1.27	0.00
11	Najran	1.00	0.84	2.27	0.99	0.89	0.68
12	Al-Bahah	0.19	0.18	0.31	0.17	0.29	0.10
13	Al-Jouf	0.14	0.11	0.00	0.00	0.01	0.00
Total for the Kingdom		0.95	0.43	0.36	0.33	0.11	0.03

Reference: Household Energy Survey 2019

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Percentage Of Fuel Used In Housing Unit For Cooking (Wood) According To Possession Type In The Administrative Regions

Table 17

S/N	Administrative Region	Possession type		
		Owned (%)	Rented (%)	Offered by Employer (%)
1	Riyadh	0.31	0.11	0.07
2	Makkah	0.27	0.03	0.01
3	Madinah	0.50	0.01	0.27
4	Al-Qassim	0.10	0.00	0.13
5	Eastern Region	0.15	0.10	0.02
6	Asir	1.63	0.55	0.00
7	Tabuk	0.62	0.06	0.04
8	Hail	1.35	0.30	0.06
9	Northern Borders	0.15	0.05	1.61
10	Jazan	1.66	0.04	2.47
11	Najran	0.90	0.98	0.78
12	Al-Bahah	0.22	0.33	0.15
13	Al-Jouf	0.11	0.00	0.14
Total for the Kingdom		0.58	0.10	0.11

Reference: Household Energy Survey 2019

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Percentage Of Fuel Used For Cooking (Other) ByType Of Housing Unit In The Administrative Regions

Table 18

S/N	Administrative Region	Type of Housing Unit					
		Traditional House (%)	Villa (%)	Storey in a Traditional House (%)	Storey in a Villa (%)	Apartment (%)	Other (%)
1	Riyadh	0.19	0.25	0.12	0.28	0.19	1.22
2	Makkah	0.00	0.44	0.00	0.00	0.00	0.00
3	Madinah	0.11	0.15	0.24	0.18	0.12	6.12
4	Al-Qassim	0.00	0.00	0.00	0.00	0.00	0.00
5	Eastern Region	0.12	0.46	0.39	0.48	0.11	0.41
6	Asir	0.22	0.14	0.19	0.12	0.09	0.00
7	Tabuk	0.00	0.05	0.00	0.00	0.00	0.00
8	Hail	0.00	0.01	0.00	0.00	0.00	0.00
9	Northern Borders	0.27	0.49	0.05	0.29	0.32	0.00
10	Jazan	0.24	0.28	0.02	0.11	0.27	0.00
11	Najran	0.45	0.32	0.00	0.22	0.08	0.00
12	Al-Bahah	0.01	0.09	0.02	0.11	0.10	0.05
13	Al-Jouf	0.04	0.13	0.00	0.14	0.08	0.00
Total for the Kingdom		0.12	0.26	0.13	0.22	0.08	1.24

Reference: Household Energy Survey 2019

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Percentage Of Fuel Used In Housing Unit For Cooking (Other) According To Possession Type In The Administrative Regions

Table 19

S/N	Administrative Region	Possession type		
		Owned (%)	Rented (%)	Offered by Employer (%)
1	Riyadh	0.28	0.19	0.76
2	Makkah	0.09	0.00	0.00
3	Madinah	0.13	0.10	3.68
4	Al-Qassim	0.00	0.00	0.00
5	Eastern Region	0.40	0.12	0.02
6	Asir	0.16	0.10	0.00
7	Tabuk	0.01	0.00	0.00
8	Hail	0.00	0.00	0.00
9	Northern Borders	0.25	0.33	0.08
10	Jazan	0.24	0.27	0.00
11	Najran	0.36	0.08	0.09
12	Al-Bahah	0.08	0.07	0.07
13	Al-Jouf	0.08	0.10	0.00
Total for the Kingdom		0.19	0.09	0.61

Reference: Household Energy Survey 2019

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Percentage Of Housing Units Which Use Biomass In The Administrative Regions

Table 20

S/N	Administrative Region	Yes (%)	No (%)	Total (%)
1	Riyadh	9.99	90.01	100.00
2	Makkah	5.56	94.44	100.00
3	Madinah	6.68	93.32	100.00
4	Al-Qassim	10.82	89.18	100.00
5	Eastern Region	6.80	93.20	100.00
6	Asir	13.02	86.98	100.00
7	Tabuk	6.28	93.72	100.00
8	Hail	15.61	84.39	100.00
9	Northern Borders	10.72	89.28	100.00
10	Jazan	13.63	86.37	100.00
11	Najran	20.08	79.92	100.00
12	Al-Bahah	7.42	92.58	100.00
13	Al-Jouf	10.72	89.28	100.00
Total of the Kingdom		8.64	91.36	100.00

Reference: Household Energy Survey 2019

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*usage of wood, coal and agricultural waste in (2018)

Percentage Of Housing Units Which Use Biomass (Wood, Coal and Agricultural Waste) In The Administrative Regions

Table 21

S/N	Administrative Region	Wood		Coal		Agricultural Waste	
		Yes (%)	No (%)	Yes (%)	No (%)	Yes (%)	No (%)
1	Riyadh	18.42	81.58	11.25	88.75	0.29	99.71
2	Makkah	3.47	96.53	12.35	87.65	0.87	99.13
3	Madinah	6.53	93.47	11.32	88.68	2.18	97.82
4	Al-Qassim	26.91	73.09	5.07	94.93	0.49	99.51
5	Eastern Region	4.56	95.44	15.50	84.50	0.34	99.66
6	Asir	24.93	75.07	12.58	87.42	1.56	98.44
7	Tabuk	13.68	86.32	5.07	94.93	0.07	99.93
8	Hail	26.62	73.38	15.49	84.51	4.72	95.28
9	Northern Borders	9.95	90.05	20.90	79.10	1.32	98.68
10	Jazan	19.47	80.53	16.53	83.47	4.89	95.11
11	Najran	48.42	51.58	10.08	89.92	1.73	98.27
12	Al-Bahah	14.61	85.39	7.59	92.41	0.06	99.94
13	Al-Jouf	15.34	84.66	16.50	83.50	0.33	99.67
Total of the Kingdom		12.73	87.27	12.21	87.79	0.99	99.01

Reference: Household Energy Survey 2019

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*usage of wood, coal and agricultural waste in (2018)

Percentage Of Housing Units Which Use Biomass (Wood, Coal and Agricultural Waste) In The Kingdom

Table 22

	Type of Usage	Biomass Used		
		Wood (%)	Coal (%)	Agricultural Waste (%)
Total of the Kingdom	cooking/ BBQ	24.82	20.39	0.36
	Heating	26.73	9.35	3.43
	Other	0.10	14.63	0.19

Reference: Household Energy Survey 2019

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*usage of wood, coal and agricultural waste in (2018)

Percentage Of Housing Units Which Use Biomass (Wood, Coal and Agricultural Waste) In Riyadh

Table 22-1

S/N	Administrative Region	Type of Usage	Biomass Used		
			Wood (%)	Coal (%)	Agricultural Waste (%)
1	Riyadh	cooking/ BBQ	23.98	24.40	0.00
		Heating	39.81	9.78	0.89
		Other	0.00	1.14	0.00

Reference: Household Energy Survey 2019

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*usage of wood, coal and agricultural waste in (2018)

Percentage Of Housing Units Which Use Biomass (Wood, Coal and Agricultural Waste) In Makkah

Table 22-2

S/N	Administrative Region	Type of Usage	Biomass Used		
			Wood (%)	Coal (%)	Agricultural Waste (%)
2	Makkah	cooking/ BBQ	17.94	3.30	0.00
		Heating	3.02	0.00	5.18
		Other	0.00	70.56	0.00

Reference: Household Energy Survey 2019

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*usage of wood, coal and agricultural waste in (2018)

Percentage Of Housing Units Which Use Biomass (Wood, Coal and Agricultural Waste) In Al-Madinah

Table 22-3

S/N	Administrative Region	Type of Usage	Biomass Used		
			Wood (%)	Coal (%)	Agricultural Waste (%)
3	Madinah	cooking/ BBQ	8.03	38.96	0.00
		Heating	28.54	13.41	11.06
		Other	0.00	0.00	0.00

Reference: Household Energy Survey 2019

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*usage of wood, coal and agricultural waste in (2018)

Percentage Of Housing Units Which Use Biomass (Wood, Coal and Agricultural Waste) In Al-Qassim

Table 22-4

S/N	Administrative Region	Type of Usage	Biomass Used		
			Wood (%)	Coal (%)	Agricultural Waste (%)
4	Al-Qassim	cooking/ BBQ	4.94	0.33	0.00
		Heating	78.54	14.74	1.45
		Other	0.00	0.00	0.00

Reference: Household Energy Survey 2019

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*usage of wood, coal and agricultural waste in (2018)

Percentage Of Housing Units Which Use Biomass (Wood, Coal and Agricultural Waste) In Eastern Region

Table 22-5

S/N	Administrative Region	Type of Usage	Biomass Used		
			Wood (%)	Coal (%)	Agricultural Waste (%)
5	Eastern Region	cooking/ BBQ	7.61	48.91	0.67
		Heating	17.54	20.63	1.13
		Other	0.00	3.51	0.00

Reference: Household Energy Survey 2019

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*usage of wood, coal and agricultural waste in (2018)

Percentage Of Housing Units Which Use Biomass (Wood, Coal and Agricultural Waste) In Asir

Table 22-6

S/N	Administrative Region	Type of Usage	Biomass Used		
			Wood (%)	Coal (%)	Agricultural Waste (%)
6	Asir	cooking/ BBQ	44.12	11.86	0.00
		Heating	23.75	2.06	3.41
		Other	0.00	14.80	0.00

Reference: Household Energy Survey 2019

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*usage of wood, coal and agricultural waste in (2018)

Percentage Of Housing Units Which Use Biomass (Wood, Coal and Agricultural Waste) In Tabuk

Table 22-7

S/N	Administrative Region	Type of Usage	Biomass Used		
			Wood (%)	Coal (%)	Agricultural Waste (%)
7	Tabuk	cooking/ BBQ	14.66	0.34	0.00
		Heating	59.79	11.59	0.33
		Other	0.46	12.83	0.00

Reference: Household Energy Survey 2019

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*usage of wood, coal and agricultural waste in (2018)

Percentage Of Housing Units Which Use Biomass (Wood, Coal and Agricultural Waste) In Hail

Table 22-8

S/N	Administrative Region	Type of Usage	Biomass Used		
			Wood (%)	Coal (%)	Agricultural Waste (%)
8	Hail	cooking/ BBQ	23.26	0.14	6.47
		Heating	38.11	24.51	7.51
		Other	0.00	0.00	0.00

Reference: Household Energy Survey 2019

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*usage of wood, coal and agricultural waste in (2018)

Percentage Of Housing Units Which Use Biomass (Wood, Coal and Agricultural Waste) In Northern Borders

Table 22-9

S/N	Administrative Region	Type of Usage	Biomass Used		
			Wood (%)	Coal (%)	Agricultural Waste (%)
9	Northern Borders	cooking/ BBQ	7.50	29.41	0.00
		Heating	25.40	34.05	3.64
		Other	0.00	0.00	0.00

Reference: Household Energy Survey 2019

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*usage of wood, coal and agricultural waste in (2018)

Percentage Of Housing Units Which Use Biomass (Wood, Coal and Agricultural Waste) In Jazan

Table 22-10

S/N	Administrative Region	Type of Usage	Biomass Used		
			Wood (%)	Coal (%)	Agricultural Waste (%)
10	Jazan	cooking/ BBQ	46.71	35.64	0.00
		Heating	0.00	4.63	10.02
		Other	0.00	0.00	3.00

Reference: Household Energy Survey 2019

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*usage of wood, coal and agricultural waste in (2018)

Percentage Of Housing Units Which Use Biomass (Wood, Coal and Agricultural Waste) In Najran

Table 22-11

S/N	Administrative Region	Type of Usage	Biomass Used		
			Wood (%)	Coal (%)	Agricultural Waste (%)
11	Najran	cooking/ BBQ	73.45	14.24	0.00
		Heating	8.22	1.17	2.66
		Other	0.00	0.26	0.00

Reference: Household Energy Survey 2019

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*usage of wood, coal and agricultural waste in (2018)

Percentage Of Housing Units Which Use Biomass (Wood, Coal and Agricultural Waste) In Al-Bahah

Table 22-12

S/N	Administrative Region	Type of Usage	Biomass Used		
			Wood (%)	Coal (%)	Agricultural Waste (%)
12	Al-Bahah	cooking/ BBQ	64.72	27.59	0.26
		Heating	1.25	5.77	0.00
		Other	0.00	0.41	0.00

Reference: Household Energy Survey 2019

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*usage of wood, coal and agricultural waste in (2018)

Percentage Of Housing Units Which Use Biomass (Wood, Coal and Agricultural Waste) In Al-Jouf

Table 22-13

S/N	Administrative Region	Type of Usage	Biomass Used		
			Wood (%)	Coal (%)	Agricultural Waste (%)
13	Al-Jouf	cooking/ BBQ	2.21	24.64	0.49
		Heating	41.11	24.19	0.50
		Other	4.80	2.06	0.00

Reference: Household Energy Survey 2019

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*usage of wood, coal and agricultural waste in (2018)

Percentage Of Housing Units which Use Diesel (Fuel oil) In The Administrative Regions

Table 23

S/N	Administrative Region	Yes (%)	No (%)	Total (%)
1	Riyadh	0.15	99.85	100.00
2	Makkah	0.42	99.58	100.00
3	Madinah	0.07	99.93	100.00
4	Al-Qassim	0.20	99.80	100.00
5	Eastern Region	0.57	99.43	100.00
6	Asir	0.43	99.57	100.00
7	Tabuk	0.14	99.86	100.00
8	Hail	0.13	99.87	100.00
9	Northern Borders	1.18	98.82	100.00
10	Jazan	3.17	96.83	100.00
11	Najran	1.28	98.72	100.00
12	Al-Bahah	0.19	99.81	100.00
13	Al-Jouf	0.57	99.43	100.00
Total of the Kingdom		0.46	99.54	100.00

Reference: Household Energy Survey 2019

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*Fuel usage in (2018)

Consumption Of Diesel (Fuel Oil) In Housing Unit By Type Of Usage In The Administrative Regions

Table 24

S/N	Administrative Region	Type of Usage	Units Using Diesel Percentage (%)	Total Volume Consumed (Liter)	
				Winter	Rest of the Year
1	Riyadh	Electricity	0.15	89,260	91,901
2	Makkah		0.42	214,602	285,056
3	Madinah		0.07	23,124	25,693
4	Al-Qassim		0.20	13,632	23,630
5	Eastern Region		0.57	343,932	773,338
6	Asir		0.43	199,174	223,421
7	Tabuk		0.14	4,868	7,031
8	Hail		0.13	3,528	2,823
9	Northern Borders		1.18	17,889	5,009
10	Jazan		3.17	559,750	924,479
11	Najran		1.28	131,949	266,791
12	Al-Bahah		0.19	3,064	3,404
13	Al-Jouf		0.57	3,818	5,398
Total of the Kingdom			0.46	1,608,590	2,637,974

Reference: Household Energy Survey 2019

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*Fuel usage in (2018)

Usage Of Diesel (Fuel Oil) In Housing Unit By Type Of Used Equipment And Weekly Average Operation Hours In The Administrative Regions

Table 25

S/N	Administrative Region	Type of Usage	Equipment Used	Total Number of Equipment	Weekly Average of Operation hours	
					Winter	Rest of the Year
1	Riyadh	Electricity	Private Generator	2,113	37	43
2	Makkah			6,726	48	49
3	Madinah			514	88	90
4	Al-Qassim			500	34	55
5	Eastern Region			10,175	27	29
6	Asir			3,464	13	16
7	Tabuk			216	10	16
8	Hail			282	78	6
9	Northern Borders			501	76	15
10	Jazan			12,717	28	31
11	Najran			2,648	29	40
12	Al-Bahah			170	7	9
13	Al-Jouf			395	47	48
Total of the Kingdom				40,422	35	36

Reference: Household Energy Survey 2019

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*Fuel usage in (2018)

Percentage Of Housing Units which Use Gas (Kerosene) In The Administrative Regions

Table 26

S/N	Administrative Region	Yes (%)	No (%)	Total (%)
1	Riyadh	0.60	99.40	100.00
2	Makkah	0.18	99.82	100.00
3	Madinah	0.91	99.09	100.00
4	Al-Qassim	1.17	98.83	100.00
5	Eastern Region	0.82	99.18	100.00
6	Asir	0.50	99.50	100.00
7	Tabuk	1.27	98.73	100.00
8	Hail	20.96	79.04	100.00
9	Northern Borders	25.04	74.96	100.00
10	Jazan	0.49	99.51	100.00
11	Najran	0.34	99.66	100.00
12	Al-Bahah	0.83	99.17	100.00
13	Al-Jouf	23.90	76.10	100.00
Total of the Kingdom		1.54	98.46	100.00

Reference: Household Energy Survey 2019

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*Fuel usage in (2018)

Consumption Of Gas (Kerosene) In Housing Unit In The Administrative Regions

Table 27

S/N	Administrative Region	Percentage of Units Using Diesel (%)	Total Volume Consumed (Litre)	
			Winter	Rest of the Year
1	Riyadh	0.60	1,903,587	291,254
2	Makkah	0.18	47,223	86,122
3	Madinah	0.91	123,103	132,609
4	Al-Qassim	1.17	447,751	91,007
5	Eastern Region	0.82	1,962,493	190,936
6	Asir	0.50	170,384	392,994
7	Tabuk	1.27	84,187	52,709
8	Hail	20.96	2,788,113	247,734
9	Northern Borders	25.04	2,955,880	706,976
10	Jazan	0.49	40,443	58,988
11	Najran	0.34	44,683	69,791
12	Al-Bahah	0.83	85,144	94,696
13	Al-Jouf	23.90	6,258,751	212,415
Total of the Kingdom		1.54	16,911,744	2,628,232

Reference: Household Energy Survey 2019

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*Fuel usage in (2018)

Usage Of Gas (Kerosene) In Housing Units By Type Of Used Equipment And The Average Of Operation Hours In The Kingdom

Table 28

	Usage Type	Used Equipment Type	Number of Used Equipment	Weekly Average of Operation hours	
				Winter	Rest of the Year
Total of the Kingdom	Heating	Portable Gas Heater	157,336	41	3
	Water Heating	Gas Babur	3,191	3	3
	Cooking	Gas Babur	13,225	7	8

Reference: Household Energy Survey 2019

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*Fuel usage in (2018)

Usage Of Gas (Kerosene) In Housing Units By Type Of Used Equipment And The Average Of Operation Hours In Riyadh

Table 28-1

S/N	Administrative Region	Usage Type	Used Equipment Type	Number of Used Equipment	Weekly Average of Operation hours	
					Winter	Rest of the Year
1	Riyadh	Heating	Portable Gas Heater	21,604	37	0
		Water Heating	Gas Babur	596	1	0
		Cooking	Gas Babur	807	23	23

Reference: Household Energy Survey 2019

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*Fuel usage in (2018)

Usage Of Gas (Kerosene) In Housing Units By Type Of Used Equipment And The Average Of Operation Hours In Makkah

Table 28-2

S/N	Administrative Region	Usage Type	Used Equipment Type	Number of Used Equipment	Weekly Average of Operation hours	
					Winter	Rest of the Year
2	Makkah	Heating	Portable Gas Heater	3,296	7	2
		Water Heating	Gas Babur	377	5	5
		Cooking	Gas Babur	2,919	5	7

Reference: Household Energy Survey 2019

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*Fuel usage in (2018)

Usage Of Gas (Kerosene) In Housing Units By Type Of Used Equipment And The Average Of Operation Hours In Madinah

Table 28-3

S/N	Administrative Region	Usage Type	Used Equipment Type	Number of Used Equipment	Weekly Average of Operation hours	
					Winter	Rest of the Year
3	Madinah	Heating	Portable Gas Heater	6,750	20	7
		Water Heating	Gas Babur	333	5	5
		Cooking	Gas Babur	2,819	7	11

Reference: Household Energy Survey 2019

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*Fuel usage in (2018)

Usage Of Gas (Kerosene) In Housing Units By Type Of Used Equipment And The Average Of Operation Hours In Al-Qassim

Table 28-4

S/N	Administrative Region	Usage Type	Used Equipment Type	Number of Used Equipment	Weekly Average of Operation hours	
					Winter	Rest of the Year
4	Al-Qassim	Heating	Portable Gas Heater	6,744	35	10
		Water Heating	Gas Babur	183	3	4
		Cooking	Gas Babur	794	3	4

Reference: Household Energy Survey 2019

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*Fuel usage in (2018)

Usage Of Gas (Kerosene) In Housing Units By Type Of Used Equipment And The Average Of Operation Hours In Eastern Region

Table 28-5

S/N	Administrative Region	Usage Type	Used Equipment Type	Number of Used Equipment	Weekly Average of Operation hours	
					Winter	Rest of the Year
5	Eastern Region	Heating	Portable Gas Heater	11,417	39	2
		Water Heating	Gas Babur	293	2	4
		Cooking	Gas Babur	2,293	8	7

Reference: Household Energy Survey 2019

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*Fuel usage in (2018)

Usage Of Gas (Kerosene) In Housing Units By Type Of Used Equipment And The Average Of Operation Hours In Asir

Table 28-6

S/N	Administrative Region	Usage Type	Used Equipment Type	Number of Used Equipment	Weekly Average of Operation hours	
					Winter	Rest of the Year
6	Asir	Heating	Portable Gas Heater	6,239	18	9
		Water Heating	Gas Babur	495	2	4
		Cooking	Gas Babur	247	4	4

Reference: Household Energy Survey 2019

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*Fuel usage in (2018)

Usage Of Gas (Kerosene) In Housing Units By Type Of Used Equipment And The Average Of Operation Hours In Tabuk

Table 28-7

S/N	Administrative Region	Usage Type	Used Equipment Type	Number of Used Equipment	Weekly Average of Operation hours	
					Winter	Rest of the Year
7	Tabuk	Heating	Portable Gas Heater	2,343	20	10
		Water Heating	Gas Babur	146	2	4
		Cooking	Gas Babur	293	6	4

Reference: Household Energy Survey 2019

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*Fuel usage in (2018)

Usage Of Gas (Kerosene) In Housing Units By Type Of Used Equipment And The Average Of Operation Hours In Hail

Table28-8

S/N	Administrative Region	Usage Type	Used Equipment Type	Number of Used Equipment	Weekly Average of Operation hours	
					Winter	Rest of the Year
8	Hail	Heating	Portable Gas Heater	36,966	41	2
		Water Heating	Gas Babur	185	2	3
		Cooking	Gas Babur	140	4	4

Reference: Household Energy Survey 2019

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*Fuel usage in (2018)

Usage Of Gas (Kerosene) In Housing Units By The Average Of Operation Hours In Northern Borders

Table28-9

S/N	Administrative Region	Usage Type	Used Equipment Type	Number of Used Equipment	Weekly Average of Operation hours	
					Winter	Rest of the Year
9	Northern Borders	Heating	Portable Gas Heater	20,184	49	3
		Water Heating	Gas Babur	59	7	3
		Cooking	Gas Babur	259	13	14

Reference: Household Energy Survey 2019

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*Fuel usage in (2018)

Usage Of Gas (Kerosene) In Housing Units By The Average Of Operation Hours In Jazan

Table 28-10

S/N	Administrative Region	Usage Type	Used Equipment Type	Number of Used Equipment	Weekly Average of Operation hours	
					Winter	Rest of the Year
10	Jazan	Heating	Portable Gas Heater	3,838	19	5
		Water Heating	Gas Babur	213	2	2
		Cooking	Gas Babur	297	15	19

Reference: Household Energy Survey 2019

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*Fuel usage in (2018)

Usage Of Gas (Kerosene) In Housing Units By Type Of Used Equipment And The Average Of Operation Hours In Najran

Table 28-11

S/N	Administrative Region	Usage Type	Used Equipment Type	Number of Used Equipment	Weekly Average of Operation hours	
					Winter	Rest of the Year
11	Najran	Heating	Portable Gas Heater	255	30	0
		Water Heating	Gas Babur	85	3	3
		Cooking	Gas Babur	596	12	9

Reference: Household Energy Survey 2019

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*Fuel usage in (2018)

Usage Of Gas (Kerosene) In Housing Units By Type Of Used Equipment And The Average Of Operation Hours In Al-Bahah

Table 28-12

S/N	Administrative Region	Usage Type	Used Equipment Type	Number of Used Equipment	Weekly Average of Operation hours	
					Winter	Rest of the Year
12	Al-Bahah	Heating	Portable Gas Heater	415	13	9
		Water Heating	Gas Babur	83	2	2
		Cooking	Gas Babur	1,329	5	5

Reference: Household Energy Survey 2019

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*Fuel usage in (2018)

Usage Of Gas (Kerosene) In Housing Units By Type Of Used Equipment And The Average Of Operation Hours In Al-Jouf

Table 28-13

S/N	Administrative Region	Usage Type	Used Equipment Type	Number of Used Equipment	Weekly Average of Operation hours	
					Winter	Rest of the Year
13	Al-Jouf	Heating	Portable Gas Heater	37,285	54	1
		Water Heating	Gas Babur	144	2	2
		Cooking	Gas Babur	431	9	7

Reference: Household Energy Survey 2019

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*Fuel usage in (2018)

Percentage Of Housing Units Which Use (LPG) Butane Gas In The Administrative Regions

Table 29

S/N	Administrative Region	Yes (%)	No (%)	Total (%)
1	Riyadh	94.36	5.64	100.00
2	Makkah	95.99	4.01	100.00
3	Madinah	97.86	2.14	100.00
4	Al-Qassim	97.88	2.12	100.00
5	Eastern Region	82.45	17.55	100.00
6	Asir	99.00	1.00	100.00
7	Tabuk	99.08	0.92	100.00
8	Hail	99.82	0.18	100.00
9	Northern Borders	99.63	0.37	100.00
10	Jazan	99.73	0.27	100.00
11	Najran	99.50	0.50	100.00
12	Al-Bahah	99.90	0.10	100.00
13	Al-Jouf	99.92	0.08	100.00
Total of the Kingdom		94.67	5.33	100.00

Reference: Household Energy Survey 2019

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*Fuel usage in (2018)

Consumption Of (LPG) Butane Gas In Housing Unit According To Type of Cylinder/Tank In The Administrative Regions

Table 30

S/N	Administrative Region	Percentage of Households Using LPG (%)	Cylinder(liter)	Tank(liter)
1	Riyadh	94.36	180,987,831	115,276,035
2	Makkah	95.99	212,398,569	62,699,522
3	Madinah	97.86	53,426,767	9,845,369
4	Al-Qassim	97.88	32,385,772	30,810,596
5	Eastern Region	82.45	**85,540,318**	12,400,153
6	Asir	99.00	68,415,411	10,709,587
7	Tabuk	99.08	27,961,823	1,713,031
8	Hail	99.82	23,848,074	453,744
9	Northern Borders	99.63	9,984,640	867,213
10	Jazan	99.73	32,421,125	3,180,438
11	Najran	99.50	20,068,574	252,179
12	Al-Bahah	99.90	12,233,166	305,477
13	Al-Jouf	99.92	12,864,281	4,784,280
Total of the Kingdom		94.67	772,536,351	253,297,623

Reference: Household Energy Survey 2019

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*Fuel usage in (2018)

Number of Refilling Times of (LPG) Butane Gas in Housing Unit According To Type of Cylinder/Tank In The Administrative Regions

Table 31

S/N	Administrative Region	Percentage of Households Using LPG (%)	Cylinder	Tank
1	Riyadh	94.36	15,959,390	99,599
2	Makkah	95.99	18,681,593	64,415
3	Madinah	97.86	4,728,112	15,894
4	Al-Qassim	97.88	**2,878,735**	33,939
5	Eastern Region	82.45	7,602,460	16,243
6	Asir	99.00	5,761,495	19,345
7	Tabuk	99.08	2,485,495	3,807
8	Hail	99.82	2,119,829	1,008
9	Northern Borders	99.63	887,524	1,641
10	Jazan	99.73	2,844,687	6,128
11	Najran	99.50	1,782,513	560
12	Al-Bahah	99.90	1,087,393	452
13	Al-Jouf	99.92	1,140,573	6,450
Total of the Kingdom		94.67	67,959,799	269,481

Reference: Household Energy Survey 2019

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*Fuel usage in (2018)

Total Annual Cost In Saudi Riyal Of Refilling (LPG) Butane Gas In Housing Unit According By Type Of Cylinder/Tank In The Administrative Regions

Table 32

S/N	Administrative Region	Percentage of Houses Using LPG (%)	Total Cost in Saudi Riyal According to the Type of Cylinder/Tank	
			Cylinder	Tank
1	Riyadh	94.36	273,492,722	66,413,735
2	Makkah	95.99	320,957,837	36,125,109
3	Madinah	97.86	80,733,781	5,679,730
4	Al-Qassim	97.88	48,938,500	17,754,484
5	Eastern Region	82.45	129,260,925	7,148,575
6	Asir	99.00	103,383,288	6,181,283
7	Tabuk	99.08	42,253,421	989,751
8	Hail	99.82	36,037,089	262,163
9	Northern Borders	99.63	15,087,900	500,640
10	Jazan	99.73	48,991,922	1,836,219
11	Najran	99.50	30,325,846	145,703
12	Al-Bahah	99.90	18,485,673	176,167
13	Al-Jouf	99.92	19,439,359	2,758,168
Total of the Kingdom		94.67	1,167,388,264	145,971,728

Reference: Household Energy Survey 2019

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*Fuel usage in (2018)

Usage Of Butane Gas (LPG) In Housing Units According To Butane Gas Equipments And Average Of Operation Hours In The Kingdom

Table 33

Total of The Kingdom	Type of Use	Type of Equipment Used	total Number of Equipments Used	Average Operation Hours / Week	
				Winter	Rest of the Year
	Heating	Gas Heater	47,596	21	1
	Cooking	Gas Stove	5,815,029	17	18

Reference: Household Energy Survey 2019

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*Fuel usage in (2018)

Usage Of Butane Gas (LPG) In Housing Units According To Butane Gas Equipments And Average Of Operation Hours In Riyadh

Table 33-1

S/N	Administrative Region	Type of Use	Type of Equipment Used	total Number of Equipments Used	Average Operation Hours / Week	
					Winter	Rest of the Year
1	Riyadh	Heating	Gas Heater	8,238	21	2
		Cooking	Gas Stove	1,386,043	18	19

Reference: Household Energy Survey 2019

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*Fuel usage in (2018)

Usage Of Butane Gas (LPG) In Housing Units According To Butane Gas Equipments And Average Of Operation Hours In Makkah

Table 33-2

S/N	Administrative Region	Type of Use	Type of Equipment Used	total Number of Equipments Used	Average Operation Hours / Week	
					Winter	Rest of the Year
2	Makkah	Heating	Gas Heater	447	7	0
		Cooking	Gas Stove	1,673,924	14	14

Reference: Household Energy Survey 2019

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*Fuel usage in (2018)

Usage Of Butane Gas (LPG) In Housing Units According To Butane Gas Equipments And Average Of Operation Hours In Madinah

Table 33-3

S/N	Administrative Region	Type of Use	Type of Equipment Used	total Number of Equipments Used	Average Operation Hours / Week	
					Winter	Rest of the Year
3	Madinah	Heating	Gas Heater	1,166	27	0
		Cooking	Gas Stove	487,537	18	18

Reference: Household Energy Survey 2019

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*Fuel usage in (2018)

Usage Of Butane Gas (LPG) In Housing Units According To Butane Gas Equipments And Average Of Operation Hours In Al-Qassim

Table 33-4

S/N	Administrative Region	Type of Use	Type of Equipment Used	total Number of Equipments Used	Average Operation Hours / Week	
					Winter	Rest of the Year
4	Al-Qassim	Heating	Gas Heater	6,892	23	2
		Cooking	Gas Stove	268,957	17	18

Reference: Household Energy Survey 2019

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*Fuel usage in (2018)

Usage Of Butane Gas (LPG) In Housing Units According To Butane Gas Equipments And Average Of Operation Hours In Eastern Region

Table 33-5

S/N	Administrative Region	Type of Use	Type of Equipment Used	total Number of Equipments Used	Average Operation Hours / Week	
					Winter	Rest of the Year
5	Eastern Region	Heating	Gas Heater	8,402	22	2
		Cooking	Gas Stove	672,828	19	20

Reference: Household Energy Survey 2019

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*Fuel usage in (2018)

Usage Of Butane Gas (LPG) In Housing Units According To Butane Gas Equipments And Average Of Operation Hours In Asir

Table 33-6

S/N	Administrative Region	Type of Use	Type of Equipment Used	total Number of Equipments Used	Average Operation Hours / Week	
					Winter	Rest of the Year
6	Asir	Heating	Gas Heater	699	14	0
		Cooking	Gas Stove	448,187	18	20

Reference: Household Energy Survey 2019

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*Fuel usage in (2018)

Usage Of Butane Gas (LPG) In Housing Units According To Butane Gas Equipments And Average Of Operation Hours In Tabuk

Table 33-7

S/N	Administrative Region	Type of Use	Type of Equipment Used	total Number of Equipments Used	Average Operation Hours / Week	
					Winter	Rest of the Year
7	Tabuk	Heating	Gas Heater	3,100	13	0
		Cooking	Gas Stove	153,210	17	17

Reference: Household Energy Survey 2019

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*Fuel usage in (2018)

Usage Of Butane Gas (LPG) In Housing Units According To Butane Gas Equipments And Average Of Operation Hours In Hail

Table 33-8

S/N	Administrative Region	Type of Use	Type of Equipment Used	total Number of Equipments Used	Average Operation Hours / Week	
					Winter	Rest of the Year
8	Hail	Heating	Gas Heater	17,466	23	0
		Cooking	Gas Stove	122,921	19	19

Reference: Household Energy Survey 2019

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*Fuel usage in (2018)

Usage Of Butane Gas (LPG) In Housing Units According To Butane Gas Equipments And Average Of Operation Hours In Northern Borders

Table 33-9

S/N	Administrative Region	Type of Use	Type of Equipment Used	total Number of Equipments Used	Average Operation Hours / Week	
					Winter	Rest of the Year
9	Northern Borders	Heating	Gas Heater	383	27	0
		Cooking	Gas Stove	53,683	15	15

Reference: Household Energy Survey 2019

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*Fuel usage in (2018)

Usage Of Butane Gas (LPG) In Housing Units According To Butane Gas Equipments And Average Of Operation Hours In Jazan

Table 33-10

S/N	Administrative Region	Type of Use	Type of Equipment Used	total Number of Equipments Used	Average Operation Hours / Week	
					Winter	Rest of the Year
10	Jazan	Heating	Gas Heater	0	0	0
		Cooking	Gas Stove	251,692	18	21

Reference: Household Energy Survey 2019

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*Fuel usage in (2018)

Usage Of Butane Gas (LPG) In Housing Units According To Butane Gas Equipments And Average Of Operation Hours In Najran

Table 33-11

S/N	Administrative Region	Type of Use	Type of Equipment Used	total Number of Equipments Used	Average Operation Hours / Week	
					Winter	Rest of the Year
11	Najran	Heating	Gas Heater	0	0	0
		Cooking	Gas Stove	105,388	20	20

Reference: Household Energy Survey 2019

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*Fuel usage in (2018)

Usage Of Butane Gas (LPG) In Housing Units According To Butane Gas Equipments And Average Of Operation Hours In Al-Bahah

Table 33-12

S/N	Administrative Region	Type of Use	Type of Equipment Used	total Number of Equipments Used	Average Operation Hours / Week	
					Winter	Rest of the Year
12	Al-Bahah	Heating	Gas Heater	236	40	0
		Cooking	Gas Stove	91,016	17	22

Reference: Household Energy Survey 2019

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*Fuel usage in (2018)

Usage Of Butane Gas (LPG) In Housing Units According To Butane Gas Equipments And Average Of Operation Hours In Al-Jouf

Table 33-13

S/N	Administrative Region	Type of Use	Type of Equipment Used	total Number of Equipments Used	Average Operation Hours / Week	
					Winter	Rest of the Year
13	Al-Jouf	Heating	Gas Heater	568	19	4
		Cooking	Gas Stove	99,644	18	19

Reference: Household Energy Survey 2019

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*Fuel usage in (2018)

Percentage Of Housing Units Supplied With Electricity In The Administrative Regions

Table 34

S/N	Administrative Region	Electricity Availability		Total (%)
		Yes (%)	No (%)	
1	Riyadh	100.00	0.00	100.00
2	Makkah	100.00	0.00	100.00
3	Madinah	99.93	0.07	100.00
4	Al-Qassim	100.00	0.00	100.00
5	Eastern Region	100.00	0.00	100.00
6	Asir	100.00	0.00	100.00
7	Tabuk	100.00	0.00	100.00
8	Hail	100.00	0.00	100.00
9	Northern Borders	99.85	0.15	100.00
10	Jazan	100.00	0.00	100.00
11	Najran	100.00	0.00	100.00
12	Al-Bahah	100.00	0.00	100.00
13	Al-Jouf	99.86	0.14	100.00
Total of the Kingdom		99.99	0.01	100.00

Reference: Household Energy Survey 2019

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*Fuel usage in (2018)

Percentage Of Housing Units According To The Type Of Electricity Meter In The Administrative Regions

Table 35

S/N	Administrative Region	Type of Electricity Meter		Total (%)
		Private (%)	Shared (%)	
1	Riyadh	82.97	17.03	100.00
2	Makkah	85.50	14.50	100.00
3	Madinah	82.18	17.82	100.00
4	Al-Qassim	80.48	19.52	100.00
5	Eastern Region	87.78	12.22	100.00
6	Asir	84.80	15.20	100.00
7	Tabuk	93.56	6.44	100.00
8	Hail	94.19	5.81	100.00
9	Northern Borders	92.76	7.24	100.00
10	Jazan	87.78	12.22	100.00
11	Najran	82.33	17.67	100.00
12	Al-Bahah	86.61	13.39	100.00
13	Al-Jouf	92.14	7.86	100.00
Total of the Kingdom		85.29	14.71	100.00

Reference: Household Energy Survey 2019

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*Fuel usage in (2018)

Percentage Of Housing Units Which Use Electricity Regulator In The Administrative Regions

Table 36

S/N	Administrative Region	Electricity Regulator Availability		Total (%)
		Yes (%)	No (%)	
1	Riyadh	13.46	86.54	100.00
2	Makkah	31.06	68.94	100.00
3	Madinah	8.20	91.80	100.00
4	Al-Qassim	14.29	85.71	100.00
5	Eastern Region	9.82	90.18	100.00
6	Asir	14.43	85.57	100.00
7	Tabuk	10.15	89.85	100.00
8	Hail	22.76	77.24	100.00
9	Northern Borders	19.05	80.95	100.00
10	Jazan	19.54	80.46	100.00
11	Najran	10.03	89.97	100.00
12	Al-Bahah	8.92	91.08	100.00
13	Al-Jouf	19.17	80.83	100.00
Total of the Kingdom		18.01	81.99	100.00

Reference: Household Energy Survey 2019

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*Fuel usage in (2018)

Total Consumption And Cost Of Electricity Of Housing Unit In The Administrative Regions

Table 37

S/N	Administrative Region	Winter		Rest of the Year	
		Consumption (KWh)	Cost (Saudi Riyal)	Consumption (KWh)	Cost (Saudi Riyal)
1	Riyadh	8,929,603,334	1,952,659,947	31,818,999,925	9,479,283,407
2	Makkah	9,811,340,713	2,019,019,112	39,835,650,154	10,470,931,097
3	Madinah	2,896,966,402	619,823,275	10,426,896,795	2,932,372,309
4	Al-Qassim	1,937,898,085	566,546,168	6,354,815,303	1,851,621,754
5	Eastern Region	4,294,128,877	952,025,741	28,190,346,286	10,377,046,409
6	Asir	2,996,611,212	675,309,400	10,629,137,186	3,494,972,760
7	Tabuk	1,149,529,403	234,601,401	3,745,827,308	743,893,993
8	Hail	931,962,566	236,304,535	2,929,853,057	652,352,964
9	Northern Borders	476,021,255	142,002,715	1,370,924,095	298,024,935
10	Jazan	2,287,978,519	583,000,149	7,109,585,707	1,840,470,440
11	Najran	743,954,708	168,123,136	2,567,696,293	620,378,720
12	Al-Bahah	583,781,957	153,285,758	2,205,899,137	683,330,764
13	Al-Jouf	700,853,935	178,038,911	2,565,128,025	944,422,326
Total of the Kingdom		37,740,630,965	8,480,740,247	149,750,759,270	44,389,101,876

Reference: Household Energy Survey 2019

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*Fuel usage in (2018)

Usage of Electrical Energy In Housing Units According To Type Of Use And Average Of Operation Hours In The Kingdom

Table 38

	Use Type	Number of Equipment Used	Average Operation Hours / Week	
			Winter	Rest of the Year
Total of the Kingdom	Heating	5,428,875	38	4
	Water Heating	15,145,559	71	18
	Air Condition	45,634,022	39	67
	Lightening	248,549,376	53	55
	Cooking	4,080,883	7	8
	Food Preservation	9,125,641	166	166
	Total	327,964,357	66	64

Source: Household Energy Survey 2019

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*Electricity usage in(2018)

Usage Of Electrical Energy In Housing Units According To Type Of Use And Average Of Operation Hours In Riyadh

Table 38-1

S/N	Administrative Region	Use Type	Number of Equipment Used	Average Operation Hours / Week	
				Winter	Rest of the Year
1	Riyadh	Heating	1,652,843	32	2
		Water Heating	4,347,917	98	8
		Air Condition	11,416,673	33	66
		Lightening	**61,855,294**	56	57
		Cooking	742,828	6	6
		Food Preservation	2,380,198	164	163
		Total	82,395,754	69	62

Source: Household Energy Survey 2019

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*Electricity usage in(2018)

Usage Of Electrical Energy In Housing Units According To Type Of Use And Average Of Operation Hours In Makkah

Table 38-2

S/N	Administrative Region	Use Type	Number of Equipment Used	Average Operation Hours / Week	
				Winter	Rest of the Year
2	Makkah	Heating	286,782	44	1
		Water Heating	3,470,517	39	17
		Air Condition	12,390,360	45	67
		Lightening	**59,654,120**	52	54
		Cooking	1,232,977	6	6
		Food Preservation	2,281,074	168	168
		Total	79,315,831	63	66

Source: Household Energy Survey 2019

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*Electricity usage in(2018)

Usage Of Electrical Energy In Housing Units According To Type Of Use And Average Of Operation Hours In Madinah

Table 38-3

S/N	Administrative Region	Use Type	Number of Equipment Used	Average Operation Hours / Week	
				Winter	Rest of the Year
3	Madinah	Heating	131,847	38	3
		Water Heating	818,559	83	11
		Air Condition	2,962,430	35	70
		Lightening	10,691,150	60	60
		Cooking	179,528	8	8
		Food Preservation	537,888	168	168
		Total	15,321,402	70	69

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units According To Type Of Use And Average Of Operation Hours In Al-Qassim

Table 38-4

S/N	Administrative Region	Use Type	Number of Equipment Used	Average Operation Hours / Week	
				Winter	Rest of the Year
4	Al-Qassim	Heating	502,111	32	2
		Water Heating	949,166	64	5
		Air Condition	2,148,218	23	63
		Lightening	17,832,648	54	55
		Cooking	182,964	5	5
		Food Preservation	530,439	167	167
		Total	22,145,546	60	58

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units According To Type Of Use And Average Of Operation Hours In Eastern Region

Table 38-5

S/N	Administrative Region	Use Type	Number of Equipment Used	Average Operation Hours / Week	
				Winter	Rest of the Year
5	Eastern Region	Heating	865,654	39	1
		Water Heating	2,225,776	86	11
		Air Condition	6,470,245	14	53
		Lightening	**35,272,187**	53	55
		Cooking	712,857	8	8
		Food Preservation	1,440,347	167	167
		Total	46,987,067	63	58

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units According To Type Of Use And Average Of Operation Hours In Asir

Table 38-6

S/N	Administrative Region	Use Type	Number of Equipment Used	Average Operation Hours / Week	
				Winter	Rest of the Year
6	Asir	Heating	614,144	48	9
		Water Heating	1,185,712	88	72
		Air Condition	3,220,927	54	71
		Lightening	**30,150,877**	40	44
		Cooking	353,595	8	8
		Food Preservation	650,650	167	167
		Total	36,175,906	69	69

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units According To Type Of Use And Average Of Operation Hours In Tabuk

Table 38-7

S/N	Administrative Region	Use Type	Number of Equipment Used	Average Operation Hours / Week	
				Winter	Rest of the Year
7	Tabuk	Heating	302,998	29	3
		Water Heating	507,101	35	12
		Air Condition	1,258,890	28	51
		Lightening	6,120,052	46	45
		Cooking	113,549	8	8
		Food Preservation	226,067	164	165
		Total	8,528,658	51	50

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units According To Type Of Use And Average Of Operation Hours In Hail

Table 38-8

S/N	Administrative Region	Use Type	Number of Equipment Used	Average Operation Hours / Week	
				Winter	Rest of the Year
8	Hail	Heating	378,180	49	0
		Water Heating	478,845	99	27
		Air Condition	1,210,440	62	86
		Lightening	8,184,672	49	49
		Cooking	102,542	8	8
		Food Preservation	219,447	168	168
		Total	10,574,127	75	64

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage of Electrical Energy In Housing Units According To Type Of Use And Average Of Operation Hours In Northern Borders

Table 38-9

S/N	Administrative Region	Use Type	Number of Equipment Used	Average Operation Hours / Week	
				Winter	Rest of the Year
9	Northern Borders	Heating	102,001	53	2
		Water Heating	142,382	59	4
		Air Condition	398,049	27	51
		Lightening	2,194,189	54	56
		Cooking	34,205	5	5
		Food Preservation	90,692	166	166
		Total	2,961,517	64	56

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units According To Type Of Use And Average Of Operation Hours In Jazan

Table 38-10

S/N	Administrative Region	Use Type	Number of Equipment Used	Average Operation Hours / Week	
				Winter	Rest of the Year
10	Jazan	Heating	164,864	83	68
		Water Heating	180,915	24	12
		Air Condition	2,093,522	83	97
		Lightening	5,716,367	73	83
		Cooking	201,545	11	14
		Food Preservation	341,825	166	166
		Total	8,699,038	82	89

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage of Electrical Energy In Housing Units According To Type of use And Average Of Operation Hours In Najran

Table 38-11

S/N	Administrative Region	Use Type	Number of Equipment Used	Average Operation Hours / Week	
				Winter	Rest of the Year
11	Najran	Heating	127,626	36	7
		Water Heating	314,981	71	48
		Air Condition	811,156	57	81
		Lightening	3,760,744	52	55
		Cooking	87,747	9	9
		Food Preservation	144,739	168	168
		Total	5,246,992	68	70

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units According To Type Of Use And Average Of Operation Hours In Al-Bahah

Table 38-12

S/N	Administrative Region	Use Type	Number of Equipment Used	Average Operation Hours / Week	
				Winter	Rest of the Year
12	Al-Bahah	Heating	117,915	25	7
		Water Heating	300,778	57	57
		Air Condition	636,526	37	44
		Lightening	4,344,750	43	50
		Cooking	101,457	15	19
		Food Preservation	136,385	148	150
		Total	5,637,812	55	57

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units According To Type Of Use And Average Of Operation Hours In Al-Jouf

Table 38-13

S/N	Administrative Region	Use Type	Number of Equipment Used	Average Operation Hours / Week	
				Winter	Rest of the Year
13	Al-Jouf	Heating	181,354	51	1
		Water Heating	222,909	100	20
		Air Condition	618,383	36	71
		Lightening	2,777,463	53	55
		Cooking	35,090	4	4
		Food Preservation	146,147	157	163
		Total	3,981,346	72	65

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units According To Heating Equipments And Average Of Operation Hours In The Kingdom

Table 39

	Heating Equipment	Number of Equipment Used	Average Operation hours / week	
			Winter	Rest of the Year
Total of the Kingdom	Heater	959,403	36	7
	Radiant Heaters	2,206,898	35	1
	Oil Heater	1,819,305	43	3
	Fan Heater	**443,268**	42	19

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units According To Heating Equipments And Average Of Operation Hours In Riyadh

Table 39-1

S/N	Administrative Region	Heating Equipment	Number of Equipment Used	Average Operation hours / week	
				Winter	Rest of the Year
1	Riyadh	Heater	525,054	28	3
		Radiant Heaters	458,962	28	1
		Oil Heater	493,914	41	3
		Fan Heater	174,913	28	1

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units According To Heating Equipments And Average Of Operation Hours In Makkah

Table 39-2

S/N	Administrative Region	Heating Equipment	Number of Equipment Used	Average Operation hours / week	
				Winter	Rest of the Year
2	Makkah	Heater	12,974	44	10
		Radiant Heaters	75,384	60	0
		Oil Heater	185,588	38	1
		Fan Heater	12,837	29	3

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units According To Heating Equipments And Average Of Operation Hours In Madinah

Table 39-3

S/N	Administrative Region	Heating Equipment	Number of Equipment Used	Average Operation hours / week	
				Winter	Rest of the Year
3	Madinah	Heater	14,474	46	7
		Radiant Heaters	76,757	38	4
		Oil Heater	32,907	42	1
		Fan Heater	7,709	12	1

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units According To Heating Equipments And Average Of Operation Hours In Al-Qassim

Table 39-4

S/N	Administrative Region	Heating Equipment	Number of Equipment Used	Average Operation hours / week	
				Winter	Rest of the Year
4	Al-Qassim	Heater	10,686	30	2
		Radiant Heaters	338,286	29	2
		Oil Heater	151,214	40	2
		Fan Heater	1,925	18	12

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units According To Heating Equipments And Average Of Operation Hours In Eastern Region

Table 39-5

S/N	Administrative Region	Heating Equipment	Number of Equipment Used	Average Operation hours / week	
				Winter	Rest of the Year
5	Eastern Region	Heater	88,266	55	5
		Radiant Heaters	452,354	33	1
		Oil Heater	303,965	44	1
		Fan Heater	21,069	31	1

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units According To Heating Equipments And Average Of Operation Hours In Asir

Table 39-6

S/N	Administrative Region	Heating Equipment	Number of Equipment Used	Average Operation hours / week	
				Winter	Rest of the Year
6	Asir	Heater	185,156	61	34
		Radiant Heaters	134,568	39	4
		Oil Heater	283,872	48	4
		Fan Heater	10,548	39	2

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units According To Heating Equipments And Average Of Operation Hours In Tabuk

Table 39-7

S/N	Administrative Region	Heating Equipment	Number of Equipment Used	Average Operation hours / week	
				Winter	Rest of the Year
7	Tabuk	Heater	40,880	27	2
		Radiant Heaters	155,200	30	2
		Oil Heater	85,607	30	6
		Fan Heater	21,311	15	0

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units According To Heating Equipments And Average Of Operation Hours In Hail

Table 39-8

S/N	Administrative Region	Heating Equipment	Number of Equipment Used	Average Operation hours / week	
				Winter	Rest of the Year
8	Hail	Heater	16,796	41	0
		Radiant Heaters	203,442	40	1
		Oil Heater	144,782	66	0
		Fan Heater	13,161	31	1

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units According To Heating Equipments And Average Of Operation Hours In Northern Borders

Table 39-9

S/N	Administrative Region	Heating Equipment	Number of Equipment Used	Average Operation hours / week	
				Winter	Rest of the Year
9	Northern Borders	Heater	15,080	88	2
		Radiant Heaters	76,600	45	2
		Oil Heater	10,156	64	0
		Fan Heater	165	23	2

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units According To Heating Equipments And Average Of Operation Hours In Jazan

Table 39-10

S/N	Administrative Region	Heating Equipment	Number of Equipment Used	Average Operation hours / week	
				Winter	Rest of the Year
10	Jazan	Heater	3,625	9	3
		Radiant Heaters	1172	7	3
		Oil Heater	2,775	88	86
		Fan Heater	157,847	87	72

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units According To Heating Equipments And Average Of Operation Hours In Najran

Table 39-11

S/N	Administrative Region	Heating Equipment	Number of Equipment Used	Average Operation hours / week	
				Winter	Rest of the Year
11	Najran	Heater	26,782	31	4
		Radiant Heaters	52,657	38	1
		Oil Heater	46,223	38	17
		Fan Heater	1,964	37	7

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units According To Heating Equipments And Average Of Operation Hours In Al-Bahah

Table 39-12

S/N	Administrative Region	Heating Equipment	Number of Equipment Used	Average Operation hours / week	
				Winter	Rest of the Year
12	Al-Bahah	Heater	9,844	20	13
		Radiant Heaters	38,062	17	1
		Oil Heater	67,105	30	9
		Fan Heater	2,904	33	14

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units According To Heating Equipments And Average Of Operation Hours In Al-Jouf

Table 39-13

S/N	Administrative Region	Heating Equipment	Number of Equipment Used	Average Operation hours / week	
				Winter	Rest of the Year
13	Al-Jouf	Heater	9,786	50	17
		Radiant Heaters	143,455	57	1
		Oil Heater	11,197	33	0
		Fan Heater	16,916	30	0

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units According To (Water Heating) Equipments And Average Of Operation Hours In the Kingdom

Table 40

	Used Equipment for Water Heating	Number of Used Equipment	Average Operation Hours / Week	
			Winter	Rest of the Year
Total of the Kingdom	Electrical Heater	12,238,357	107	24
	Electrical Kettle	2,907,334	6	6

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units According To (Water Heating) Equipments And Average Of Operation Hours In Riyadh

Table 40-1

S/N	Administrative Region	Used Equipment for Water Heating	Number of Used Equipment	Average Operation Hours / Week	
				Winter	Rest of the Year
1	Riyadh	Electrical Heater	3,777,083	135	9
		Electrical Kettle	570,834	5	5

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units According To (Water Heating) Equipments And Average Of Operation Hours In Makkah

Table 40-2

S/N	Administrative Region	Used Equipment for Water Heating	Number of Used Equipment	Average Operation Hours / Week	
				Winter	Rest of the Year
2	Makkah	Electrical Heater	2,533,356	62	24
		Electrical Kettle	937,161	6	6

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units According To (Water Heating) Equipments And Average Of Operation Hours In Madinah

Table 40-3

S/N	Administrative Region	Used Equipment for Water Heating	Number of Used Equipment	Average Operation Hours / Week	
				Winter	Rest of the Year
3	Madinah	Electrical Heater	660,391	118	12
		Electrical Kettle	158,168	10	10

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units According To (Water Heating) Equipments And Average Of Operation Hours In Al-Qassim

Table 40-4

S/N	Administrative Region	Used Equipment for Water Heating	Number of Used Equipment	Average Operation Hours / Week	
				Winter	Rest of the Year
4	Al-Qassim	Electrical Heater	805,119	94	5
		Electrical Kettle	144,048	5	5

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units According To (Water Heating) Equipments And Average Of Operation Hours In Eastern Region

Table 40-5

S/N	Administrative Region	Used Equipment for Water Heating	Number of Used Equipment	Average Operation Hours / Week	
				Winter	Rest of the Year
5	Eastern Region	Electrical Heater	1,743,984	134	14
		Electrical Kettle	481,793	5	5

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units According To (Water Heating) Equipments And Average Of Operation Hours In Asir

Table 40-6

S/N	Administrative Region	Used Equipment for Water Heating	Number of Used Equipment	Average Operation Hours / Week	
				Winter	Rest of the Year
6	Asir	Electrical Heater	963,414	142	115
		Electrical Kettle	222,298	7	8

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units According To (Water Heating) Equipments And Average Of Operation Hours In Tabuk

Table 40-7

S/N	Administrative Region	Used Equipment for Water Heating	Number of Used Equipment	Average Operation Hours / Week	
				Winter	Rest of the Year
7	Tabuk	Electrical Heater	411,284	52	15
		Electrical Kettle	95,817	8	8

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units According To (Water Heating) Equipments And Average Of Operation Hours In Hail

Table 40-8

S/N	Administrative Region	Used Equipment for Water Heating	Number of Used Equipment	Average Operation Hours / Week	
				Winter	Rest of the Year
8	Hail	Electrical Heater	394,184	158	40
		Electrical Kettle	84,661	8	8

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units According To (Water Heating) Equipments And Average Of Operation Hours In Northern Borders

Table 40-9

S/N	Administrative Region	Used Equipment for Water Heating	Number of Used Equipment	Average Operation Hours / Week	
				Winter	Rest of the Year
9	Northern Borders	Electrical Heater	115,362	87	4
		Electrical Kettle	27,020	5	5

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units According To (Water Heating) Equipments And Average Of Operation Hours In Jazan

Table 40-10

S/N	Administrative Region	Used Equipment for Water Heating	Number of Used Equipment	Average Operation Hours / Week	
				Winter	Rest of the Year
10	Jazan	Electrical Heater	121,867	35	11
		Electrical Kettle	59,048	11	12

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units According To (Water Heating) Equipments And Average Of Operation Hours In Najran

Table 40-11

S/N	Administrative Region	Used Equipment for Water Heating	Number of Used Equipment	Average Operation Hours / Week	
				Winter	Rest of the Year
11	Najran	Electrical Heater	277,494	93	61
		Electrical Kettle	37,487	11	9

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units According To (Water Heating) Equipments And Average Of Operation Hours In Al-Bahah

Table 40-12

S/N	Administrative Region	Used Equipment for Water Heating	Number of Used Equipment	Average Operation Hours / Week	
				Winter	Rest of the Year
12	Al-Bahah	Electrical Heater	231,392	97	92
		Electrical Kettle	69,387	10	14

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units According To (Water Heating) Equipments And Average Of Operation Hours In Al-Jouf

Table 40-13

S/N	Administrative Region	Used Equipment for Water Heating	Number of Used Equipment	Average Operation Hours / Week	
				Winter	Rest of the Year
13	Al-Jouf	Electrical Heater	203,295	121	23
		Electrical Kettle	19,613	5	5

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units According To (Air Conditioning) Equipments And Average Of Operation Hours In the Kingdom

Table 41

	Used Equipment for Air Conditioning	Number of Used Equipment	Average Operation Hours / Week	
			Winter	Rest of the Year
Total of the Kingdom	Fan	4,125,145	23	39
	Window AC	18,359,820	23	70
	Split AC	6,654,878	18	65
	Evaporative Cooler	450,871	10	71
	Central AC	294,151	26	94
	Suction Fan	15,749,157	69	73

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units According To (Air Conditioning) Equipments And Average Of Operation Hours In Riyadh

Table 41-1

S/N	Administrative Region	Used Equipment for Air Conditioning	Number of Used Equipment	Average Operation Hours / Week	
				Winter	Rest of the Year
1	Riyadh	Fan	540,348	6	33
		Window AC	4,485,296	10	66
		Split AC	2,122,075	16	67
		Evaporative Cooler	90,657	2	89
		Central AC	78,397	42	116
		Suction Fan	4,099,900	69	71

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units According To (Air Conditioning) Equipments And Average Of Operation Hours In Makkah

Table 41-2

S/N	Administrative Region	Used Equipment for Air Conditioning	Number of Used Equipment	Average Operation Hours / Week	
				Winter	Rest of the Year
2	Makkah	Fan	1,360,444	35	48
		Window AC	5,397,884	33	71
		Split AC	1,214,344	31	71
		Evaporative Cooler	51,504	29	77
		Central AC	56,505	54	111
		Suction Fan	4,309,680	65	72

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units According To (Air Conditioning) Equipments And Average Of Operation Hours In Madinah

Table 41-3

S/N	Administrative Region	Used Equipment for Air Conditioning	Number of Used Equipment	Average Operation Hours / Week	
				Winter	Rest of the Year
3	Madinah	Fan	384,159	11	28
		Window AC	1,384,054	13	78
		Split AC	242,119	9	70
		Evaporative Cooler	81,252	6	60
		Central AC	23,690	25	55
		Suction Fan	845,358	81	83

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units According To (Air Conditioning) Equipments And Average Of Operation Hours In Al-Qassim

Table 41-4

S/N	Administrative Region	Used Equipment for Air Conditioning	Number of Used Equipment	Average Operation Hours / Week	
				Winter	Rest of the Year
4	Al-Qassim	Fan	95,602	18	38
		Window AC	781,533	8	66
		Split AC	466,771	8	67
		Evaporative Cooler	52,144	6	98
		Central AC	7,705	14	88
		Suction Fan	744,466	49	57

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units According To (Air Conditioning) Equipments And Average Of Operation Hours In Eastern Region

Table 41-5

S/N	Administrative Region	Used Equipment for Air Conditioning	Number of Used Equipment	Average Operation Hours / Week	
				Winter	Rest of the Year
5	Eastern Region	Fan	226,067	5	23
		Window AC	2,276,580	3	67
		Split AC	1,672,147	3	66
		Evaporative Cooler	53,861	25	52
		Central AC	100,946	10	100
		Suction Fan	2,140,643	34	35

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units According To (Air Conditioning) Equipments And Average Of Operation Hours In Asir

Table 41-6

S/N	Administrative Region	Used Equipment for Air Conditioning	Number of Used Equipment	Average Operation Hours / Week	
				Winter	Rest of the Year
6	Asir	Fan	512,646	13	30
		Window AC	1,106,869	35	65
		Split AC	326,938	32	48
		Evaporative Cooler	39,542	28	40
		Central AC	9,655	40	43
		Suction Fan	1,225,277	97	104

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units According To (Air Conditioning) Equipments And Average Of Operation Hours In Tabuk

Table 41-7

S/N	Administrative Region	Used Equipment for Air Conditioning	Number of Used Equipment	Average Operation Hours / Week	
				Winter	Rest of the Year
7	Tabuk	Fan	176,757	18	35
		Window AC	525,052	19	58
		Split AC	93,142	26	54
		Evaporative Cooler	1,898	7	52
		Central AC	3,075	5	62
		Suction Fan	458,967	43	49

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units According To (Air Conditioning) Equipments And Average Of Operation Hours In Hail

Table 41-8

S/N	Administrative Region	Used Equipment for Air Conditioning	Number of Used Equipment	Average Operation Hours / Week	
				Winter	Rest of the Year
8	Hail	Fan	97,638	5	32
		Window AC	451,354	20	59
		Split AC	197,589	19	52
		Evaporative Cooler	14,169	4	65
		Central AC	3,793	16	65
		Suction Fan	445,897	150	151

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units According To (Air Conditioning) Equipments And Average Of Operation Hours In Northern Borders

Table 41-9

S/N	Administrative Region	Used Equipment for Air Conditioning	Number of Used Equipment	Average Operation Hours / Week	
				Winter	Rest of the Year
9	Northern Borders	Fan	44,069	2	20
		Window AC	158,202	35	71
		Split AC	68,895	40	75
		Evaporative Cooler	1,558	4	31
		Central AC	1,113	78	105
		Suction Fan	124,212	20	27

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units According To (Air Conditioning) Equipments And Average Of Operation Hours In Jazan

Table 41-10

S/N	Administrative Region	Used Equipment for Air Conditioning	Number of Used Equipment	Average Operation Hours / Week	
				Winter	Rest of the Year
10	Jazan	Fan	475,796	38	45
		Window AC	905,051	78	104
		Split AC	60,530	55	73
		Evaporative Cooler	37,780	14	18
		Central AC	3,353	53	69
		Suction Fan	611,012	132	139

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units According To (Air Conditioning) Equipments And Average Of Operation Hours In Najran

Table 41-11

S/N	Administrative Region	Used Equipment for Air Conditioning	Number of Used Equipment	Average Operation Hours / Week	
				Winter	Rest of the Year
11	Najran	Fan	107,321	26	42
		Window AC	347,614	21	63
		Split AC	60,712	16	60
		Evaporative Cooler	16,860	14	43
		Central AC	2,710	2	59
		Suction Fan	275,938	132	132

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units According To (Air Conditioning) Equipments And Average Of Operation Hours In Al-Bahah

Table 41-12

S/N	Administrative Region	Used Equipment for Air Conditioning	Number of Used Equipment	Average Operation Hours / Week	
				Winter	Rest of the Year
12	Al-Bahah	Fan	60,212	18	28
		Window AC	237,355	37	49
		Split AC	68,909	30	33
		Evaporative Cooler	4,542	42	48
		Central AC	962	43	49
		Suction Fan	264,547	46	51

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units According To (Air Conditioning) Equipments And Average Of Operation Hours In Al-Jouf

Table 41-13

S/N	Administrative Region	Used Equipment for Air Conditioning	Number of Used Equipment	Average Operation Hours / Week	
				Winter	Rest of the Year
13	Al-Jouf	Fan	44,086	4	33
		Window AC	302,977	36	77
		Split AC	60,707	36	73
		Evaporative Cooler	5,106	1	50
		Central AC	2,247	17	80
		Suction Fan	203,261	47	73

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units According To (Lightening) Equipments And Average Of Operation Hours In the Kingdom

Table 42

	Used Equipment for the Lightening	Number of Used Equipment	Average Operation Hours / Week	
			Winter	Rest of the Year
Total of the Kingdom	Regular Lamps	121,079,004	62	64
	Energy Saving Lamps	87,228,337	60	62
	Fluorescent Lamps	35,963,334	45	47
	Side Lamps	4,278,701	15	15

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units According To (Lightening) Equipments And Average Of Operation Hours In Riyadh

Table 42-1

S/N	Administrative Region	Used Equipment for the Lightening	Number of Used Equipment	Average Operation Hours / Week	
				Winter	Rest of the Year
1	Riyadh	Regular Lamps	27,663,992	54	55
		Energy Saving Lamps	18,208,427	61	62
		Fluorescent Lamps	14,740,531	62	63
		Side Lamps	1,242,345	17	18

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units According To (Lightening) Equipments And Average Of Operation Hours In Makkah

Table 42-2

S/N	Administrative Region	Used Equipment for the Lightening	Number of Used Equipment	Average Operation Hours / Week	
				Winter	Rest of the Year
2	Makkah	Regular Lamps	33,782,009	67	69
		Energy Saving Lamps	22,537,353	59	61
		Fluorescent Lamps	2,687,632	18	19
		Side Lamps	647,127	14	14

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units According To (Lightening) Equipments And Average Of Operation Hours In Madinah

Table 42-3

S/N	Administrative Region	Used Equipment for the Lightening	Number of Used Equipment	Average Operation Hours / Week	
				Winter	Rest of the Year
3	Madinah	Regular Lamps	6,120,838	72	72
		Energy Saving Lamps	3,806,251	69	69
		Fluorescent Lamps	637,746	16	16
		Side Lamps	121,176	20	20

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units According To (Lightening) Equipments And Average Of Operation Hours In Al-Qassim

Table 42-4

S/N	Administrative Region	Used Equipment for the Lightening	Number of Used Equipment	Average Operation Hours / Week	
				Winter	Rest of the Year
4	Al-Qassim	Regular Lamps	7,672,577	49	53
		Energy Saving Lamps	6,678,120	61	60
		Fluorescent Lamps	3,204,912	55	56
		Side Lamps	277,040	15	14

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units According To (Lightening) Equipments And Average Of Operation Hours In Eastern Region

Table 42-5

S/N	Administrative Region	Used Equipment for the Lightening	Number of Used Equipment	Average Operation Hours / Week	
				Winter	Rest of the Year
5	Eastern Region	Regular Lamps	9,825,278	58	59
		Energy Saving Lamps	19,845,478	68	69
		Fluorescent Lamps	4,810,083	51	52
		Side Lamps	791,348	13	13

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units According To (Lightening) Equipments And Average Of Operation Hours In Asir

Table 42-6

S/N	Administrative Region	Used Equipment for the Lightening	Number of Used Equipment	Average Operation Hours / Week	
				Winter	Rest of the Year
6	Asir	Regular Lamps	15,512,469	49	51
		Energy Saving Lamps	8,050,127	41	45
		Fluorescent Lamps	6,193,578	40	43
		Side Lamps	394,703	12	15

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units According To (Lightening) Equipments And Average Of Operation Hours In Tabuk

Table 42-7

S/N	Administrative Region	Used Equipment for the Lightening	Number of Used Equipment	Average Operation Hours / Week	
				Winter	Rest of the Year
7	Tabuk	Regular Lamps	4,491,365	59	57
		Energy Saving Lamps	1,295,266	57	55
		Fluorescent Lamps	223,009	18	18
		Side Lamps	110,413	16	16

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units According To (Lightening) Equipments And Average Of Operation Hours In Hail

Table 42-8

S/N	Administrative Region	Used Equipment for the Lightening	Number of Used Equipment	Average Operation Hours / Week	
				Winter	Rest of the Year
8	Hail	Regular Lamps	4,733,981	52	53
		Energy Saving Lamps	2,435,774	55	55
		Fluorescent Lamps	927,182	55	55
		Side Lamps	87,735	8	8

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units According To (Lightening) Equipments And Average Of Operation Hours In Northern Borders

Table 42-9

S/N	Administrative Region	Used Equipment for the Lightening	Number of Used Equipment	Average Operation Hours / Week	
				Winter	Rest of the Year
9	Northern Borders	Regular Lamps	1,331,877	62	62
		Energy Saving Lamps	706,900	53	56
		Fluorescent Lamps	111,596	41	44
		Side Lamps	43,816	11	11

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units According To (Lightening) Equipments And Average Of Operation Hours In Jazan

Table 42-10

S/N	Administrative Region	Used Equipment for the Lightening	Number of Used Equipment	Average Operation Hours / Week	
				Winter	Rest of the Year
10	Jazan	Regular Lamps	4,423,933	89	102
		Energy Saving Lamps	826,908	63	70
		Fluorescent Lamps	235,012	21	26
		Side Lamps	230,514	26	30

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units According To (Lightening) Equipments And Average Of Operation Hours In Najran

Table 42-11

S/N	Administrative Region	Used Equipment for the Lightening	Number of Used Equipment	Average Operation Hours / Week	
				Winter	Rest of the Year
11	Najran	Regular Lamps	1,706,893	62	66
		Energy Saving Lamps	548,060	59	60
		Fluorescent Lamps	1,323,319	50	52
		Side Lamps	182,471	17	18

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units According To (Lightening) Equipments And Average Of Operation Hours In Al-Bahah

Table 42-12

S/N	Administrative Region	Used Equipment for the Lightening	Number of Used Equipment	Average Operation Hours / Week	
				Winter	Rest of the Year
12	Al-Bahah	Regular Lamps	2,619,243	57	64
		Energy Saving Lamps	1,419,544	55	63
		Fluorescent Lamps	177,971	10	16
		Side Lamps	127,992	10	11

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units According To (Lightening) Equipments And Average Of Operation Hours In Al-Jouf

Table 42-13

S/N	Administrative Region	Used Equipment for the Lightening	Number of Used Equipment	Average Operation Hours / Week	
				Winter	Rest of the Year
13	Al-Jouf	Regular Lamps	1,194,551	61	63
		Energy Saving Lamps	870,129	54	56
		Fluorescent Lamps	690,761	43	42
		Side Lamps	22,022	15	15

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units According To (Cooking) Equipments And Average Of Operation Hours In the Kingdom

Table 43

	Used Equipment for the Cooking	Number of Used Equipment	Average Operation Hours / Week	
			Winter	Rest of the Year
Total of the Kingdom	Electric Stove	1,299,453	11	12
	Microwave	2,550,089	5	6
	Electric Grill	231,342	6	6

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units According To (Cooking) Equipments And Average Of Operation Hours In Riyadh

Table 43-1

S/N	Administrative Region	Used Equipment for the Cooking	Number of Used Equipment	Average Operation Hours / Week	
				Winter	Rest of the Year
1	Riyadh	Electric Stove	187,417	14	14
		Microwave	514,890	3	4
		Electric Grill	40,521	4	4

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units According To (Cooking) Equipments And Average Of Operation Hours In Makkah

Table 43-2

S/N	Administrative Region	Used Equipment for the Cooking	Number of Used Equipment	Average Operation Hours / Week	
				Winter	Rest of the Year
2	Makkah	Electric Stove	432,955	8	8
		Microwave	759,423	5	5
		Electric Grill	40,599	5	5

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units According To (Cooking) Equipments And Average Of Operation Hours In Madinah

Table 43-3

S/N	Administrative Region	Used Equipment for the Cooking	Number of Used Equipment	Average Operation Hours / Week	
				Winter	Rest of the Year
3	Madinah	Electric Stove	54,019	11	11
		Microwave	119,297	7	7
		Electric Grill	6,212	8	8

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units According To (Cooking) Equipments And Average Of Operation Hours In Al-Qassim

Table 43-4

S/N	Administrative Region	Used Equipment for the Cooking	Number of Used Equipment	Average Operation Hours / Week	
				Winter	Rest of the Year
4	Al-Qassim	Electric Stove	43,550	7	7
		Microwave	122,909	5	5
		Electric Grill	16,505	5	5

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units According To (Cooking) Equipments And Average Of Operation Hours In Eastern Region

Table 43-5

S/N	Administrative Region	Used Equipment for the Cooking	Number of Used Equipment	Average Operation Hours / Week	
				Winter	Rest of the Year
5	Eastern Region	Electric Stove	236,584	15	16
		Microwave	404,530	4	4
		Electric Grill	71,743	6	6

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units According To (Cooking) Equipments And Average Of Operation Hours In Asir

Table 43-6

S/N	Administrative Region	Used Equipment for the Cooking	Number of Used Equipment	Average Operation Hours / Week	
				Winter	Rest of the Year
6	Asir	Electric Stove	101,177	10	10
		Microwave	236,419	7	7
		Electric Grill	15,999	11	11

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units According To (Cooking) Equipments And Average Of Operation Hours In Tabuk

Table 43-7

S/N	Administrative Region	Used Equipment for the Cooking	Number of Used Equipment	Average Operation Hours / Week	
				Winter	Rest of the Year
7	Tabuk	Electric Stove	42,222	10	10
		Microwave	65,505	7	7
		Electric Grill	5,822	8	8

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units According To (Cooking) Equipments And Average Of Operation Hours In Hail

Table 43-8

S/N	Administrative Region	Used Equipment for the Cooking	Number of Used Equipment	Average Operation Hours / Week	
				Winter	Rest of the Year
8	Hail	Electric Stove	31,718	9	10
		Microwave	67,340	7	7
		Electric Grill	3,484	12	12

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units According To (Cooking) Equipments And Average Of Operation Hours In Northern Borders

Table 43-9

S/N	Administrative Region	Used Equipment for the Cooking	Number of Used Equipment	Average Operation Hours / Week	
				Winter	Rest of the Year
9	Northern Borders	Electric Stove	5,863	7	7
		Microwave	24,949	4	4
		Electric Grill	3,393	5	5

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units According To (Cooking) Equipments And Average Of Operation Hours In Jazan

Table 43-10

S/N	Administrative Region	Used Equipment for the Cooking	Number of Used Equipment	Average Operation Hours / Week	
				Winter	Rest of the Year
10	Jazan	Electric Stove	90,915	11	14
		Microwave	96,106	12	14
		Electric Grill	14,524	5	6

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units According To (Cooking) Equipments And Average Of Operation Hours In Najran

Table 43-11

S/N	Administrative Region	Used Equipment for the Cooking	Number of Used Equipment	Average Operation Hours / Week	
				Winter	Rest of the Year
11	Najran	Electric Stove	30,606	9	9
		Microwave	52,134	8	9
		Electric Grill	5,007	11	10

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units According To (Cooking) Equipments And Average Of Operation Hours In Al-Bahah

Table 43-12

S/N	Administrative Region	Used Equipment for the Cooking	Number of Used Equipment	Average Operation Hours / Week	
				Winter	Rest of the Year
12	Al-Bahah	Electric Stove	36,915	20	25
		Microwave	57,988	12	17
		Electric Grill	6,554	8	9

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units According To (Cooking) Equipments And Average Of Operation Hours In Al-Jouf

Table 43-13

S/N	Administrative Region	Used Equipment for the Cooking	Number of Used Equipment	Average Operation Hours / Week	
				Winter	Rest of the Year
13	Al-Jouf	Electric Stove	5,513	4	5
		Microwave	28,598	4	4
		Electric Grill	979	4	4

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units According To (Food Preservation) Equipments And Average Of Operation Hours In the Kingdom

Table 44

	Used Equipment in Food Preservation	Number of Used Equipment	Average Operation Hours / Week	
			Winter	Rest of the Year
Total of the Kingdom	Fridge	6,428,359	166	166
	Freezer	2,697,282	166	166

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units According To (Food Preservation) Equipments And Average Of Operation Hours In Riyadh

Table 44-1

S/N	Administrative Region	Used Equipment in Food Preservation	Number of Used Equipment	Average Operation Hours / Week	
				Winter	Rest of the Year
1	Riyadh	Fridge	1,661,604	164	164
		Freezer	718,594	163	162

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units According To (Food Preservation) Equipments And Average Of Operation Hours In Makkah

Table 44-2

S/N	Administrative Region	Used Equipment in Food Preservation	Number of Used Equipment	Average Operation Hours / Week	
				Winter	Rest of the Year
2	Makkah	Fridge	1,698,065	168	168
		Freezer	583,009	168	168

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units According To (Food Preservation) Equipments And Average Of Operation Hours In Madinah

Table 44-3

S/N	Administrative Region	Used Equipment in Food Preservation	Number of Used Equipment	Average Operation Hours / Week	
				Winter	Rest of the Year
3	Madinah	Fridge	403,503	168	168
		Freezer	134,128	167	168

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units According To (Food Preservation) Equipments And Average Of Operation Hours In Al-Qassim

Table 44-4

S/N	Administrative Region	Used Equipment in Food Preservation	Number of Used Equipment	Average Operation Hours / Week	
				Winter	Rest of the Year
4	Al-Qassim	Fridge	321,977	167	167
		Freezer	208,462	167	168

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units According To (Food Preservation) Equipments And Average Of Operation Hours In Eastern Region

Table 44-5

S/N	Administrative Region	Used Equipment in Food Preservation	Number of Used Equipment	Average Operation Hours / Week	
				Winter	Rest of the Year
5	Eastern Region	Fridge	952,271	167	167
		Freezer	488,077	167	168

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units According To (Food Preservation) Equipments And Average Of Operation Hours In Asir

Table 44-6

S/N	Administrative Region	Used Equipment in Food Preservation	Number of Used Equipment	Average Operation Hours / Week	
				Winter	Rest of the Year
6	Asir	Fridge	455,841	167	167
		Freezer	194,808	168	167

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units According To (Food Preservation) Equipments And Average Of Operation Hours In Tabuk

Table 44-7

S/N	Administrative Region	Used Equipment in Food Preservation	Number of Used Equipment	Average Operation Hours / Week	
				Winter	Rest of the Year
7	Tabuk	Fridge	164,244	167	167
		Freezer	61,823	156	159

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units According To (Food Preservation) Equipments And Average Of Operation Hours In Hail

Table 44-8

S/N	Administrative Region	Used Equipment in Food Preservation	Number of Used Equipment	Average Operation Hours / Week	
				Winter	Rest of the Year
8	Hail	Fridge	132,766	168	168
		Freezer	86,681	168	168

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units According To (Food Preservation) Equipments And Average Of Operation Hours In Northern Borders

Table 44-9

S/N	Administrative Region	Used Equipment in Food Preservation	Number of Used Equipment	Average Operation Hours / Week	
				Winter	Rest of the Year
9	Northern Borders	Fridge	54,143	165	166
		Freezer	36,549	167	168

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units According To (Food Preservation) Equipments And Average Of Operation Hours In Jazan

Table 44-10

S/N	Administrative Region	Used Equipment in Food Preservation	Number of Used Equipment	Average Operation Hours / Week	
				Winter	Rest of the Year
10	Jazan	Fridge	276,430	166	166
		Freezer	65,395	166	167

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units According To (Food Preservation) Equipments And Average Of Operation Hours In Najran

Table 44-11

S/N	Administrative Region	Used Equipment in Food Preservation	Number of Used Equipment	Average Operation Hours / Week	
				Winter	Rest of the Year
11	Najran	Fridge	108,538	168	168
		Freezer	36,201	168	168

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units According To (Food Preservation) Equipments And Average Of Operation Hours In Al-Bahah

Table 44-12

S/N	Administrative Region	Used Equipment in Food Preservation	Number of Used Equipment	Average Operation Hours / Week	
				Winter	Rest of the Year
12	Al-Bahah	Fridge	94,343	140	144
		Freezer	42,042	163	164

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units According To (Food Preservation) Equipments And Average Of Operation Hours In Al-Jouf

Table 44-13

S/N	Administrative Region	Used Equipment in Food Preservation	Number of Used Equipment	Average Operation Hours / Week	
				Winter	Rest of the Year
13	Al-Jouf	Fridge	104,634	160	161
		Freezer	41,513	150	167

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units For Equipments used And Average Of Operation Hours In The Kingdom

Table 45

	Used Equipment	Number of Used Equipment	Average Operation Hours / Week	
			Winter	Rest of the Year
Total for the Kingdom	TV	8,210,394	41	43
	Washing Machine	5,768,830	7	8
	Iron	4,708,108	5	5
	Vacuum Cleaner	4,431,804	5	5
	Dishwasher	243,380	9	9
	Water Cooler	2,370,912	95	152
	Water Bump (Dynamo)	3,717,490	11	12
	PC	2,782,808	14	15
	Gaming Devices	1,886,698	22	24
	Other	9,366,324	17	18

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units For Equipments used And Average Of Operation Hours In Riyadh

Table 45-1

S/N	Administrative Region	Used Equipment	Number of Used Equipment	Average Operation Hours / Week	
				Winter	Rest of the Year
1	Riyadh	TV	1,958,461	42	43
		Washing Machine	1,363,112	7	7
		Iron	1,077,039	4	4
		Vacuum Cleaner	1,051,889	4	5
		Dishwasher	44,377	8	9
		Water Cooler	709,074	68	158
		Water Bump (Dynamo)	796,231	7	7
		PC	613,312	13	13
		Gaming Devices	406,938	24	25
		Other	3,475,530	15	16

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units For Equipments used And Average Of Operation Hours In Makkah

Table 45-2

S/N	Administrative Region	Used Equipment	Number of Used Equipment	Average Operation Hours / Week	
				Winter	Rest of the Year
2	Makkah	TV	2,186,228	44	46
		Washing Machine	1,606,016	6	6
		Iron	1,433,215	4	5
		Vacuum Cleaner	1,251,882	5	5
		Dishwasher	80,625	10	10
		Water Cooler	660,422	143	158
		Water Bump (Dynamo)	986,523	17	18
		PC	947,523	17	18
		Gaming Devices	681,075	18	20
		Other	3,790,673	16	17

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units For Equipments used And Average Of Operation Hours In Madinah

Table 45-3

S/N	Administrative Region	Used Equipment	Number of Used Equipment	Average Operation Hours / Week	
				Winter	Rest of the Year
3	Madinah	TV	472,604	40	40
		Washing Machine	379,456	9	10
		Iron	299,605	6	6
		Vacuum Cleaner	283,648	6	6
		Dishwasher	12,585	9	9
		Water Cooler	112,599	69	149
		Water Bump (Dynamo)	221,984	7	8
		PC	130,482	15	15
		Gaming Devices	82,009	23	25
		Other	222,267	37	37

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units For Equipments used And Average Of Operation Hours In Al-Qassim

Table 45-4

S/N	Administrative Region	Used Equipment	Number of Used Equipment	Average Operation Hours / Week	
				Winter	Rest of the Year
4	Al-Qassim	TV	356,306	26	28
		Washing Machine	285,716	6	7
		Iron	194,672	4	4
		Vacuum Cleaner	207,781	4	4
		Dishwasher	18,195	6	6
		Water Cooler	105,244	39	134
		Water Bump (Dynamo)	210,926	5	6
		PC	132,383	11	11
		Gaming Devices	68,763	20	23
		Other	104,153	7	8

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units For Equipments used And Average Of Operation Hours In Eastern Region

Table 45-5

S/N	Administrative Region	Used Equipment	Number of Used Equipment	Average Operation Hours / Week	
				Winter	Rest of the Year
5	Eastern Region	TV	1,309,997	36	39
		Washing Machine	824,803	7	8
		Iron	693,869	4	5
		Vacuum Cleaner	631,710	4	4
		Dishwasher	28,610	8	8
		Water Cooler	367,901	83	148
		Water Bump (Dynamo)	369,697	12	12
		PC	518,696	14	14
		Gaming Devices	287,802	23	25
		Other	951,820	30	31

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units For Equipments used And Average Of Operation Hours In Asir

Table 45-6

S/N	Administrative Region	Used Equipment	Number of Used Equipment	Average Operation Hours / Week	
				Winter	Rest of the Year
6	Asir	TV	586,488	35	40
		Washing Machine	432,943	8	9
		Iron	354,261	5	6
		Vacuum Cleaner	368,179	6	6
		Dishwasher	25,035	9	9
		Water Cooler	66,916	88	116
		Water Bump (Dynamo)	386,860	11	11
		PC	143,422	13	14
		Gaming Devices	105,045	21	28
		Other	147,447	11	14

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units For Equipments used And Average Of Operation Hours In Tabuk

Table 45-7

S/N	Administrative Region	Used Equipment	Number of Used Equipment	Average Operation Hours / Week	
				Winter	Rest of the Year
7	Tabuk	TV	253,005	40	40
		Washing Machine	151,792	9	10
		Iron	120,883	7	8
		Vacuum Cleaner	121,638	7	7
		Dishwasher	15,589	9	8
		Water Cooler	44,455	32	89
		Water Bump (Dynamo)	146,459	7	8
		PC	76,872	14	15
		Gaming Devices	68,952	25	25
		Other	345,875	14	13

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units For Equipments used And Average Of Operation Hours In Hail

Table 45-8

S/N	Administrative Region	Used Equipment	Number of Used Equipment	Average Operation Hours / Week	
				Winter	Rest of the Year
8	Hail	TV	196,805	36	36
		Washing Machine	116,921	10	11
		Iron	100,292	8	9
		Vacuum Cleaner	101,163	8	8
		Dishwasher	3,504	8	7
		Water Cooler	82,662	57	157
		Water Bump (Dynamo)	107,668	6	8
		PC	43,941	15	16
		Gaming Devices	40,949	26	26
		Other	22,237	10	10

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units For Equipments used And Average Of Operation Hours In Northern Borders

Table 45-9

S/N	Administrative Region	Used Equipment	Number of Used Equipment	Average Operation Hours / Week	
				Winter	Rest of the Year
9	Northern Borders	TV	86,770	44	47
		Washing Machine	51,335	7	8
		Iron	34,064	5	5
		Vacuum Cleaner	42,197	5	6
		Dishwasher	1,125	6	6
		Water Cooler	20,551	26	128
		Water Bump (Dynamo)	43,552	5	7
		PC	11,873	10	11
		Gaming Devices	15,581	29	32
		Other	84,530	13	13

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units For Equipments used And Average Of Operation Hours In Jazan

Table 45-10

S/N	Administrative Region	Used Equipment	Number of Used Equipment	Average Operation Hours / Week	
				Winter	Rest of the Year
10	Jazan	TV	346,304	43	51
		Washing Machine	256,036	12	15
		Iron	146,228	7	10
		Vacuum Cleaner	120,998	7	9
		Dishwasher	5,290	8	9
		Water Cooler	112,817	160	161
		Water Bump (Dynamo)	191,647	9	11
		PC	83,829	10	13
		Gaming Devices	56,885	33	37
		Other	147,864	28	28

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units For Equipments used And Average Of Operation Hours In Najran

Table 45-11

S/N	Administrative Region	Used Equipment	Number of Used Equipment	Average Operation Hours / Week	
				Winter	Rest of the Year
11	Najran	TV	151,818	47	50
		Washing Machine	106,801	10	11
		Iron	86,584	7	8
		Vacuum Cleaner	88,630	8	10
		Dishwasher	1,862	10	10
		Water Cooler	17,755	115	158
		Water Bump (Dynamo)	93,395	7	9
		PC	19,856	17	18
		Gaming Devices	24,773	28	31
		Other	28,407	32	35

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units For Equipments used And Average Of Operation Hours In Al-Bahah

Table 45-12

S/N	Administrative Region	Used Equipment	Number of Used Equipment	Average Operation Hours / Week	
				Winter	Rest of the Year
12	Al-Bahah	TV	138,580	40	47
		Washing Machine	98,772	11	15
		Iron	85,313	6	9
		Vacuum Cleaner	83,518	9	12
		Dishwasher	6,200	13	14
		Water Cooler	28,443	126	150
		Water Bump (Dynamo)	77,879	11	17
		PC	30,931	13	16
		Gaming Devices	24,907	16	25
		Other	34,765	10	12

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Usage Of Electrical Energy In Housing Units For Equipments used And Average Of Operation Hours In Al-Jouf

Table 45-13

S/N	Administrative Region	Used Equipment	Number of Used Equipment	Average Operation Hours / Week	
				Winter	Rest of the Year
13	Al-Jouf	TV	167,098	46	50
		Washing Machine	95,200	7	8
		Iron	82,082	3	4
		Vacuum Cleaner	78,573	4	4
		Dishwasher	383	18	18
		Water Cooler	42,073	12	150
		Water Bump (Dynamo)	84,668	4	6
		PC	29,689	16	19
		Gaming Devices	23,018	27	35
		Other	10,757	6	7

Source: Household Energy Survey 2019

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*Electricity usage in (2018)

Percentage Of Air-conditioning Temperature Used In Housing Unit In The Administrative Regions

Table 46

S/N	Administrative Region	Low (%)	Medium (%)	High (%)
1	Riyadh	8.82	79.65	11.53
2	Makkah	10.77	72.84	16.39
3	Madinah	14.56	67.96	17.48
4	Al-Qassim	10.02	81.96	8.02
5	Eastern Region	5.84	67.54	26.62
6	Asir	29.47	57.43	13.10
7	Tabuk	7.88	72.67	19.45
8	Hail	10.27	75.33	14.40
9	Northern Borders	3.66	68.96	27.38
10	Jazan	5.96	81.91	12.13
11	Najran	6.25	66.84	26.91
12	Al-Bahah	11.63	82.06	6.31
13	Al-Jouf	9.26	72.44	18.30
Total of the Kingdom		10.71	73.21	16.08

Reference: Household Energy Survey 2019

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Percentage Of Heating Temperature Used In Housing Unit In The Administrative Regions

Table 47

S/N	Administrative Region	Low (%)	Medium (%)	High (%)
1	Riyadh	29.99	66.39	3.62
2	Makkah	43.28	49.01	7.71
3	Madinah	38.88	58.81	2.31
4	Al-Qassim	38.67	54.74	6.59
5	Eastern Region	37.85	58.92	3.23
6	Asir	28.30	54.91	16.79
7	Tabuk	16.58	77.70	5.72
8	Hail	19.65	72.22	8.13
9	Northern Borders	10.41	72.20	17.39
10	Jazan	54.97	36.46	8.57
11	Najran	33.33	57.19	9.48
12	Al-Bahah	23.83	63.82	12.35
13	Al-Jouf	17.86	69.54	12.60
Total of the Kingdom		31.12	62.02	6.86

Reference: Household Energy Survey 2019

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Percentage Of Annual Costs Of Electricity And Other Sources Of Fuel To Total Annual Household Income Expenditure In The Administrative Region

Table 48

S/N	Administrative Region	Percentage (%)				
		Less than 5%	From 5 -10%	From 11 -15%	From 16 -20%	More than 20%
1	Riyadh	29.19	33.99	17.17	10.92	8.73
2	Makkah	19.35	38.52	23.49	12.35	6.29
3	Madinah	29.37	22.31	22.24	18.24	7.84
4	Al-Qassim	24.78	31.81	23.40	15.56	4.45
5	Eastern Region	20.57	31.90	23.77	15.52	8.24
6	Asir	19.55	28.49	28.64	18.27	5.05
7	Tabuk	13.22	38.53	26.32	12.26	9.67
8	Hail	11.78	39.88	29.02	14.02	5.30
9	Northern Borders	16.95	21.87	30.39	20.44	10.35
10	Jazan	10.31	51.68	23.77	8.93	5.31
11	Najran	21.27	29.97	24.88	13.35	10.53
12	Al-Bahah	21.62	42.80	12.70	15.65	7.23
13	Al-Jouf	11.96	25.20	35.07	24.57	3.20
Total of the Kingdom		22.15	34.49	22.53	13.62	7.21

Reference: Household Energy Survey 2019

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Percentage Of The Number Of Households Interested In Reducing And Rationalizing Electricity Consumption In The Administrative Regions

Table 49

S/N	Administrative Region	Interested (%)	Slightly Interested (%)	Not Interested (%)
1	Riyadh	45.51	44.45	10.04
2	Makkah	63.27	28.95	7.78
3	Madinah	51.88	39.33	8.79
4	Al-Qassim	49.80	44.84	5.36
5	Eastern Region	62.45	31.86	5.69
6	Asir	59.75	38.59	1.66
7	Tabuk	58.66	36.01	5.33
8	Hail	40.53	57.19	2.28
9	Northern Borders	43.30	46.82	9.88
10	Jazan	61.90	37.54	0.56
11	Najran	39.76	57.83	2.41
12	Al-Bahah	49.06	40.59	10.35
13	Al-Jouf	39.08	55.58	5.34
Total of the Kingdom		55.29	37.69	7.02

Reference: Household Energy Survey 2019

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Percentage Of The Number Of Households Using Electrical Power Saving Devices In The Administrative Regions

Table 50

S/N	Administrative Region	Yes (%)	No (%)
1	Riyadh	37.72	62.28
2	Makkah	41.52	58.48
3	Madinah	28.49	71.51
4	Al-Qassim	35.27	64.73
5	Eastern Region	49.70	50.30
6	Asir	18.01	81.99
7	Tabuk	20.01	79.99
8	Hail	37.66	62.34
9	Northern Borders	11.74	88.26
10	Jazan	21.47	78.53
11	Najran	19.44	80.56
12	Al-Bahah	28.47	71.53
13	Al-Jouf	28.61	71.39
Total of the Kingdom		36.30	63.70

Reference: Household Energy Survey 2019

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Percentage Of Households Believing That Energy Conservation Measures Would Reduce their Financial Costs In The Administrative Regions

Table 51

S/N	Administrative Region	Yes (%)	Slightly Yes (%)	No (%)
1	Riyadh	45.31	47.03	7.66
2	Makkah	59.07	34.56	6.37
3	Madinah	43.66	45.21	11.13
4	Al-Qassim	47.76	46.98	5.26
5	Eastern Region	63.12	31.87	5.01
6	Asir	49.10	45.36	5.54
7	Tabuk	54.91	40.60	4.49
8	Hail	41.13	55.56	3.31
9	Northern Borders	31.27	48.99	19.74
10	Jazan	58.28	37.61	4.11
11	Najran	38.99	58.02	2.99
12	Al-Bahah	45.12	41.78	13.10
13	Al-Jouf	44.05	52.85	3.10
Total of the Kingdom		52.39	40.98	6.63

Reference: Household Energy Survey 2019

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Percentage Of Households Who Are Willing To Spend Some Money On Energy Saving Devices In The Administrative Regions

Table 52

S/N	Administrative Region	Yes (%)	Unsure (%)	No (%)
1	Riyadh	45.72	38.31	15.97
2	Makkah	50.35	32.25	17.40
3	Madinah	41.49	35.39	23.12
4	Al-Qassim	47.85	40.92	11.23
5	Eastern Region	54.10	32.30	13.60
6	Asir	34.32	51.01	14.67
7	Tabuk	41.75	47.17	11.08
8	Hail	43.47	46.27	10.26
9	Northern Borders	28.20	36.72	35.08
10	Jazan	48.86	36.59	14.55
11	Najran	32.55	57.03	10.42
12	Al-Bahah	26.76	52.87	20.37
13	Al-Jouf	36.54	48.83	14.63
Total of the Kingdom		46.33	37.62	16.05

Reference: Household Energy Survey 2019

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Percentage Of Households Who Are Willing To Use Solar Energy In Their Houses In The Administrative Regions

Table 53

S/N	Administrative Region	Yes (%)	No (%)	Unsure (%)
1	Riyadh	49.14	24.15	26.71
2	Makkah	49.09	24.24	26.67
3	Madinah	67.00	17.14	15.86
4	Al-Qassim	35.91	37.04	27.05
5	Eastern Region	57.04	19.72	23.24
6	Asir	53.86	15.97	30.17
7	Tabuk	59.68	14.35	25.97
8	Hail	43.21	29.13	27.66
9	Northern Borders	33.69	34.61	31.70
10	Jazan	61.38	27.32	11.30
11	Najran	53.23	32.81	13.96
12	Al-Bahah	62.98	16.51	20.51
13	Al-Jouf	61.92	23.66	14.42
Total of the Kingdom		52.26	23.15	24.59

Reference: Household Energy Survey 2019

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Percentage Of Housing Units Which Use Thermal Insulation In The Administrative Regions

Table 54

S/N	Administrative Region	Yes (%)	No (%)	Unknown (%)
1	Riyadh	24.55	52.63	22.82
2	Makkah	25.46	52.12	22.42
3	Madinah	13.01	61.38	25.61
4	Al-Qassim	23.68	55.48	20.84
5	Eastern Region	34.48	47.29	18.23
6	Asir	4.80	84.33	10.87
7	Tabuk	18.01	50.24	31.75
8	Hail	18.75	55.52	25.73
9	Northern Borders	22.33	64.70	12.97
10	Jazan	17.12	79.90	2.98
11	Najran	10.99	75.69	13.32
12	Al-Bahah	13.10	73.04	13.86
13	Al-Jouf	11.57	72.66	15.77
Total of the Kingdom		22.70	57.05	20.25

Reference: Household Energy Survey 2019

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Percentage of the appropriate advertising method for Rationalizing and Consumption Energey in the Administrative Regions

Table 55

S/N	Administrative Region	TV (%)	Newspapers and Magazines (%)	Radio (%)	Billboards (%)	Electricity Bills (%)	Schools (%)	Mosques (%)	SMSs (%)	Social Media (%)	Phone Bills (%)	Awareness at Sports Stadiums (%)	Other (%)
1	Riyadh	21.73	5.88	6.13	7.58	4.34	4.97	4.00	20.80	20.57	1.78	2.11	0.11
2	Makkah	20.72	7.25	5.91	7.82	5.75	5.22	4.46	14.99	20.21	4.02	3.48	0.17
3	Madinah	27.48	7.71	4.05	6.38	4.73	5.68	4.96	12.77	22.19	1.63	2.37	0.05
4	Al-Qassim	22.94	3.26	3.51	3.64	4.87	6.91	6.13	16.15	28.19	3.50	0.71	0.19
5	Eastern Region	20.48	5.68	4.74	7.66	6.93	5.01	3.72	14.55	24.65	4.31	2.17	0.10
6	Asir	24.47	5.83	7.58	6.17	4.81	7.94	6.50	13.43	19.35	2.02	1.87	0.03
7	Tabuk	23.05	4.40	3.04	6.81	6.22	6.22	5.19	16.09	23.95	1.93	3.10	0.00
8	Hail	24.39	6.07	4.02	8.27	8.45	6.31	5.84	13.30	17.79	3.41	1.85	0.30
9	Northern Borders	20.95	6.82	6.25	7.90	6.98	6.67	6.80	14.80	15.40	2.84	4.51	0.08
10	Jazan	24.17	7.01	7.78	5.58	7.90	7.46	6.18	12.62	14.85	2.85	3.58	0.02
11	Najran	26.75	2.97	4.26	6.53	5.13	5.07	5.33	13.80	27.63	1.12	1.41	0.00
12	Al-Bahah	25.18	8.92	8.48	8.13	4.85	1.70	1.01	15.62	18.79	4.65	2.65	0.02
13	Al-Jouf	22.35	4.32	5.21	7.07	3.70	6.95	7.36	17.78	22.35	1.44	1.47	0.00
Total of the Kingdom		22.19	6.30	5.71	7.19	5.53	5.59	4.69	15.98	21.10	3.01	2.60	0.11

Reference: Household Energy Survey 2019

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