الهيئة العامة للإحصاء
General Authority for Statistics

Bulletin of Household Energy Survey 2018

2018

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General Authority for Statistics

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Introduction:

Cabinet decree no. (211) of 13-1-1437H gave the General Authority for Statistics (GASTAT) the right to conduct surveys in the economic, social and population fields on behalf of the kingdom and publishing them periodically. Based on this right, GASTAT has installed programs and surveys that aim to create a statistical database in all fields, including (energy statistics).

In addition to the series of field surveys carried out by GASTAT, the Household Energy Survey was carried out for the first time in 2017 as the first survey provided by GASTAT to the domestic sector in the field of energy statistics, which was carried out on an annual basis.

For the importance of energy statistics in the domestic sector, most countries around the world are interested in providing official statistics on it due to its role in reflecting the situation of infrastructure and provide indicators on the economic situation as well as the standard of living of the household. Hence, the need to provide accurate and comprehensive statistical data covering the needs of decision makers, data users and researchers on the sources, forms, uses and energy patterns of consumption in the domestic sector.

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,

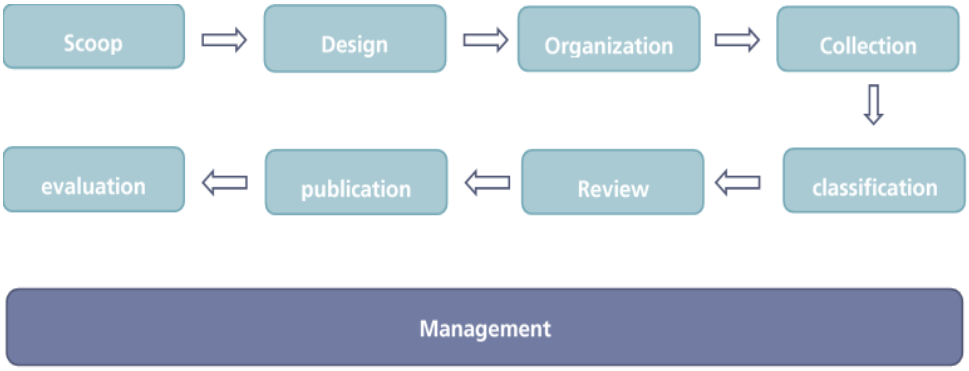
General Authority for Statistics

Energy Statistics

Household Energy Bulletin Methodology:

Based on the mission of GASTAT to Provide comprehensive, reliable, up-to-date statistics and value-added services in line with the international standards and to take the lead in developing a modern statistical sector to support decision making, and in order to achieve its vision to be the most innovative and distinctive statistical reference for Saudi Arabia's socio-economic development, GASTAT has developed all the methodologies of its statistical work in line with the stages of work stipulated in the Manual of the Statistical Procedures of GASTAT which is in line with the procedures adopted by the international organizations related to the development of the statistical methodologies.

The statistical work stages are divided into eight connected stages, in addition to a ninth stage (the comprehensive "management" phase) which are as follows:



The Household Energy Survey bulletin is one of GASTAT products, and its methodology has been developed according to these stages, which will be stated in details in below:

First stage: the scope

In this stage, the statistical needs are understood and confirmed, and possible solutions are identified. GASTAT has held meetings with its partners from government entities related to the Household Energy Survey in Saudi Arabia, which are:

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

This is done in order to take the views of those entities into account to ensure the achievement of all the objectives of the Household Energy Survey Bulletin, which are summarized as follows:

- Providing data on residence characteristics, such as type, components, air-conditioned and heated areas.
- Providing data on household consumption of various fuel types.

- Providing data on energy consumption in the domestic sector to supplement the primary consumption coverage of various energy forms, which contributes to the preparation of energy balance.
- Identifying patterns of energy consumption and the forms of energy used in the domestic sector
- Identifying the community behavior in energy consumption by type and source.
- Creating a statistical database with indicators on energy consumption in the domestic sector across the Kingdom's provinces, including:
    1. Data on household consumption of various petroleum products.
    2. Data on household consumption of electricity.
    3. Data on household consumption of biomass (fuelwood, coal, agricultural waste)
    4. Energy consumption based on type (fuel, electricity, wood, coal, etc.)
    5. Usage of fuel and energy types based on different activities such as (medical, air condoning, lighting, heating, food preservation).
- Identifying key instructional media in electric energy consumption.

Second Stage: the design

The most important steps of this stage are:

First: Determining the statistical community

The targeted statistical community includes all (Saudi and non-Saudi) individuals who live in saudi Arabia.

Second: sources of statistics:

GASTAT collects the data of household energy survey from the statistical community.

Third: Definitions and concepts:

The definitions and concepts are given to unify the methods of work, so that field workers can refer to them any time. Therefore, these definitions must be well understood and taken into consideration.

First: General definitions:

- **Administrative Region:**

  Part of the Kingdom of Saudi Arabia that is administered by a government agency which is directly affiliated with the Ministry of Interior such as Riyadh and Makkah … etc. And each administrative region has a capital city.

- **Governorate**:

  Part of the region, the second-level of the subdivisions and reports directly to region, such as Al-Kharj Governorate of Riyadh Region.

- **Municipality**:

  The administrative entity that reports to a governorate such as al-Dilam municipality of AlKharj Governorate; Others report directly to the Emirate headquarter such as Irqah which reports directly to Riyadh. Some municipalities report to other municipalities like Uyaynah of Halat Ammar in Tabuk region.

- **Populated locality**:

  A static population cluster such as a city, village or a farm, or non-static like cluster around a water source.

- **Village**:

  A clustered human settlement with a commonly recognized name, and a population of no less than 50 thousand, or no less than 10 inhabited dwellings.

- **Covered populated locality:**

  A static human settlement with a population of less than (50) thousand, or no less than (10) inhabited dwellings. This definition covers public and private work locations.

- **City**:

  For census purposes, 'city' refers herein to every locality with a municipality, or whose population exceeds (5,000 persons).

- **District (Neighborhood):**

  Part of a city that includes building, streets and roads, with a commonly recognized name; It is usually surrounded with main streets dividing it from other neighborhoods. Citywide, districts numbering starts with (001) and ends with the number of the last one in a city.

- **Sector**:

  A statistical division used for statistical purposes in cities. It is a geographically clustered area which represents a part of a district, and usually enclosed by main streets. At the district level, sectors serial numbering starts with (01) and ends with the number of the last one in a district.

- **Block**:

  A geographical area surrounded by streets, and comprises a building or a number of contiguous buildings that are not separated by streets. It takes various shapes including a square, rectangle, circle or irregular-shaped space as in old neighborhoods. The block might also be an open space.

At the sector level, blocks numbering starts with (001) and ends with the number of the last one in a sector.

- **Building**:

  Building is every structure; whether permanent or temporary, single or multi-storey, with one or more rooms, and has one or more doors through which to access it. A building might and might not be inhabited; and it could be intended for housing, or for economic, social or religious purposes … etc., such as such as a complex, a palace, a villa, a popular house, a tent, a hut, a shack, a shanty, a government body, a shop, a mosque… etc. Note that annexes to a building or a villa such as a garage or a shop are not counted as separate buildings. Likewise, bridges, power rooms, water pumps are not counted as buildings unless used for residential purposes during census period. In addition, buildings under construction are counted as buildings unless bases, foundations and walls are built.

- **Household**:

  As per the population census, a 'household' refers to a person or a group of persons - with or without kinship binding them to one another - who share residence during the enumeration. The household includes:

  - Saudi and non-Saudi nationals who usually live with the household but they were absent while the survey was conducted for being temporarily away; for example, businessmen, tourists, people who are travel for medication, students on scholarship beyond the borders of the kingdom.
  - Individuals who stay with the household and were absent during conducting the study for the reason of being serving at work night shifts; for example, guards, doctors, nurses, pharmacists, and airport employees, in addition to household members who were at some public dwellings during the researcher's visit to the household.
  - Servants, drivers and the like who are members of the same household.
  - Family members who are on a trip in the Kingdom.

- **Dwelling**:

  It is a single- or multi-room unit which is primarily prepared for one family and has one separate door, whether it was still under construction, occupied or inhabited during the survey and enumeration. The dwelling might accommodate one or more households, one or more businesses, or a household and a business simultaneously. For the purposes of census and field studies, every inhabited building during the numbering period shall be counted as a dwelling,

even if it was not set up for that purpose such as workshops and schools. A villa, house, apartment, tent, shack and formwork are types of dwellings.

- **Head of the family:**

  It refers to the person regarded by the family members as its chief member. Usually, he is responsible for undertaking the responsibility of the household and his age must not be under (15) years old. If the family consists of children and their mother, and they are cared for by a relative who does not live with them, such a relative shall not be deemed as the head of the family, nor shall he be recorded as one of its members, since he shall be recorded with his own family. In this case, the mother shall be deemed as the head of the family.

- **Nationality**:

  It is the individual's legal right of belonging to a particular country. It is usually defined by the passport the person already has, or has the right to obtain.

- **Supervisor's Area of Operation:**

  It consists of an administrative region and covers a number of areas for inspectors and surveyors.

- **Inspector's Area of Operation:**

  It includes a number of counting areas. On average, it includes a sample of (560 – 700) households distributed among (5) surveyors, serialized in the supervisor's area of operation.

- **Surveyor's Area of Operation:**

  It involves a number of counting areas selected for survey from (4 to 5) areas, based on each area's circumstances. Surveyors are serialized within the inspector's area.

- **Enumeration area:**

  It is the smallest statistical division used in census 1431H that is composed of a geographical space and includes a number of buildings, dwellings and an average of (75) households of which a sample has been taken. The number of the sampled households is (25) in every numeration area.

Second: Key terms and definitions:

The most recent international definitions appertaining to energy statistics are used and adopted to go in accordance with United Nations recommendations and other relating scientific resources.

- **Household Energy Consumption**:

  It refers to the energy consumed by the population for domestic affairs only (water heating, warming, air-conditioning, lighting, cooking … etc.).

- **Fuel:**

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

- **Diesel**:
  It is a liquid hydrocarbon fuel that is extracted through crude oil distillation. 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.
- **Kerosene**:
  It is medium oil that distills between 150 - 300 °C. Its specific weight is approximately 8, and its flash point is higher than 38 °C. It is not an aviation fuel.
- **Liquefied Petroleum Gas (LPG)**:
  It 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 of them. 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. It is often marketed in the form of metal cylindrical canisters, or in the form of surface or underground tanks.
- **Electricity**:
  It is the work done to move an electric charge via a connector. Its measuring unit is kilowatt/hour. Electricity consumption = power (kilowatt) x time (hours)
- **Photovoltaic:**
  Photovoltaic cells made up into panels enable sunlight to be converted directly into electrical energy. These panels can be combined into fields for direct connection to the national grid using inverters that convert the solar power into a grid-compatible alternating current. The recommended aim is to have installed sufficient Photovoltaic capacity to be able to generate power.
- **Thermal insulation:**
  The use of materials that prevent or reduce the flow of heat into the building during summer, while works oppositely during winter.
- **Firewood**:
  All types of firewood used as a fuel
- **Charcoal:**
  It is a hard material that mainly contains carbon. It is extracted through firewood destructive distillation while being secluded from air.

- **Agricultural Residues**:

  It is the hard residues from fruit trees such as olive residues after squeezing. It has various benefits as it may be used in generating energy for baking bread in tabun ovens, and it may be used as a fertilizer for trees or as a fodder for animals.

Fourth: Determining the sampling units

Primary sampling units (enumeration areas): they are sampling units that are withdrawn during the first stage.

Final sampling units (households): they are sampling units that are withdrawn during the second stage. Each secondary sampling unit is part of the primary sampling units.

Fifth: determining statistical classifications

Classification is an organized set of related categories used to collect data according to similarity. The classification constitutes the basis for data collection and dissemination in all statistical areas (economic activity, products, expenses, occupations, or health, etc.). This classification classifies data and information into meaningful categories to produce useful statistics, since data collection requires a precise and systematic arrangement according to their common characteristics, so that statistics becomes reliable and comparable.

When collecting data, the Saudi Classificatin for Educational Majors and Levels is used:

Which is a statistical classification that relies on the International Standard Classification of Education (ISCED); a reference that organizes all related educational programs and qualifications by levels and areas of education. This classification covers all educational programs, methods, and degrees. It also covers all educational stages starting from kindergarten to higher education levels. However, this classification is used in the survey to classify individuals (15 years and above) by their educational majors and levels.

Sixth: Survey Form Design

The survey form was prepared and designed by specialists at the Power Survey Department in the General Authority for Statistics (GASTAT). When designing the form, the international recommendations, standards, and definitions were taken into consideration to mirror changes that are taking place in the household sector over years. The resulting form was reviewed by experts of the GCC-STAT and other agencies in concern for their feedback and notes.

The survey forms shall generally include the following sections:

- **Section I:** Geographical details which may be used to depict the household.

- **Section II:** The residence details (including types of house and possession, the estimated aged of the house; components, number and area as per the ventilation and air-conditioned spaces; source of power, solar-energy, cocking fuel, as well as environment data the cover source of drinking water, reservoir, sewage and ways and number of time to get-rid of waste.)
- **Section III:** Information about the household include (nationality, number of members, educational status, employed members and the average working hours.)
- **Section IV:** Usage of diesel (this includes data on
    1. fuel oil, its usages, storage volume for winter and the remaining days of the year as per type of device, number and average of operation hours during the same period.
    2. kerosene, its usages, storage volume for winter and the remaining days of the year as per type of device, number and average of operation hours per week for the same period.
    3. Liquefied Petroleum Gas (LPG), its usages, cylinder and tank types, re-load times per year, cost and number of people sharing the same tank, types of devices, number and average of operation hours per week for the same period.)
- **Section V:** ways of electricity use that included (house supply, type of electricity meters, power stabilizer, consumption for winter and the remaining days of the year as per type of device, number and average of operation hours per week for the same period as well as the other devices.

  Section V also included data on electricity rationalized usage and how much the respondent cares about rationalization.
- **Section VI:** The fuel wood, coal and agricultural waste (this includes the usage and type).
- **Section VII:** Outcome of the household visit.

Seventh: designing the statistical frame and the survey sample:

Designing the plan of statistical frames

1. Designing and documenting the ideal plan for a frame that covers the statistical community.
2. Assigning the units' analytical characteristics, maps, and lists through which data providers can be selected.
3. Using the mutual statistical records and frames as much as possible.
4. Determining the required metadata for the composition of a statistical frame, and composing a test frame that can be used during the current round of the survey.

Designing the plan of sampling:

1. Designing and documenting the ideal plan for selecting the sample units from which data will be collected, with efficient estimates. For this purpose, the survey community has been divided into non-overlapping parts characterized by relative homogeneity in their units. Each part is a strata, and each strata is considered an independant community. A random sample is drawn from each strata independently, and eventually all withdrawn sampling units are combined to form the total sample.
2. Selecting the sampling units from all statistical frames that are designed to cover the targeted statistical community. The process of sampling is done through two stages: in the first stage, the primary sampling units (enumeration ares) are selected, (1100) enumeration areas are selected and distributed on all the strata of all administartive regions by using a method that is proportional with the size through estimating the number of households. However, in the second stage the final sampling units (households) are selected randomly by using the random sampling method with (25) households in each enumeration area; with a total of (27500) households all over Saudi Arabia.
3. Preparing the ideal methodology of sampling units selection to come up with high-quality outputs, while minimizing the burden on data providers by using the methods of rotation and interference control.
4. Dtermining the required metadata to apply the statistical frame and select the sample.
5. Testing ,evaluating, and validating the sample, and approving its use in the current duplication of the project.

Third stage: Organization

There are many procedures in this stage:

1. Preparing the procedures of work to prepare the bulletin which will begin in the next stage (the collection stage) and ends by (the evaluation stage).
2. Organizing all these procedures, and determining its appropriate sequence to come up with a methodology that meets the objectives of this bulletin.
3. Get benefited from the previous household energy bulletins to test and develop the procedures of this bulletin.
4. Describing and documenting these procedures to facilitate the update process in the coming rounds.
5. Testing the statistical work procedures to make sure that they meet the requirements of the household energy survey bulletin.
6. Approving the statistical work procedures, and making an implementation road map.

Stage four: Collection

In this stage: all data are handled according to appropriate ways and the nature of the data

First: Household Energy Survey Data Collection

Sample design:

1. In the process of collection, the sample is selected defined in the step of " the design of sampling plan", where the selection process is at the level of administrative regions as follows:

N. of H.	Adm. Region	N. of H.	Adm. Region	N. of H.	Adm. Region
1350	Najran	1875	Asir	4250	Riyadh
1225	Al-Baha	1500	Tabuk	4975	Makkah
1375	Al-Jouf	1325	Hail	1900	Madinah
27500	Total	1450	North.Bord	1350	Qassim
		1450	Jazan	3475	Easte. Prov

2. Validation of the sample that was selected and approved its use.

Field Work Candidates Training and Evaluation:

The candidates selected to participate in this survey according to criteria related to the nature of the work, where focus was placed on their educational level. Also, it is preferable to choose the candidate who had experience and participated in the field works carried out by GASTAT in prior periods, provided that he must be good conduct and behavior, without disabilities, medically and psychologically fit to work, 20 years old at least, in addition to he must pass the training program of Household Energy Survey.

Then, all candidates, whether they are collaborators from outside the Authority or even the staff of it, have been rehabilitated and trained through special training programs as follows:

- Conduct a training program for the specialized staff of the main center in the Authority.
- Conduct similar training programs for the collaborators of inspectors, monitors and researchers in various regions in Saudi Aribia.

The training programs include lectures with a number of technical, technological, administrative and awareness subjects. The lectures contain an explanation of electronic instruction manual, survey

objectives and the method of data collection as well as the way of using maps. They also provide a detailed explanation of all survey questions and technical as well as administrative tasks of all participants in the survey at their different administrative levels.

In the beginning of the training program, all trainees were provided with tablet devices. Trainees with these tablet devices can do the following:

- Read the instruction manual and identify its contents when specialized trainer explains instructions.
- Check the survey electronic form and try to fill it out when applying that in workshops of the training program.
- Access to " the automated evaluation system of the training program", where the trainee has the right to express his opinion of the training program level evaluation in order to improve the training programs quality in the future. Additionally, this evaluation included many criteria; the most important ones are:(know to what extend the lecturer was knowledgeable of his subject, committed to the time defined in the training schedule and comprehensive of all survey aspects as well as the adequate level of the training hall and some suggestions to improve training program quality).
- Access to "the automated assessment system for trainees " at the end of the training program, in which the trainees' understanding levels of the survey concepts and instructions can be determined.

Finally, the force labor employees are nominated to participate in the survey according to their automatic results from the "automated assessment system for trainees" to ensure speed, accuracy and impartiality when determining candidates and their competencies.

Field Data Collection Method:

The Household Energy Survey is conducted periodically each year, and the data collection process continues for four weeks. Because the household is the core of the research, the method of direct contact with the household was used in the process of completing survey form. The researchers visited households chosen for the survey, introduced themselves, highlighted the official documents that prove they are the staff of GASTAT, clarified the reason of the visit, gave a brief about the survey and its objectives, took the permission to complete the data of the household directly using the E-survey form of labor force. Moreover, the data of the survey form are completed based on specific reference time according to the number of the household members and their demographic, social as well as economic characteristics.

Additionally, field researchers, in various regions in Saudi Arabia, use synchronization available on tablets in order to upload and transform the completed data directly to the database in the main center of the Authority to be stored for reviewing and processing.

Validate Collected Data and Follow Up Data Collectors and Providers:

The collected data are validated by reviewing them through the researcher himself, inspector responsible for him and supervisor of the survey in the supervision area. Further, all areas of work are monitored and reviewed by data quality room in the main center of the Authority. The room also controls and monitors the performance of all filed team in concurrence with the implementation time of data collection process from the first day to the last day. The most important tasks of the data quality room are the following:

- Review the collected data and send feedback to field teams at different levels through an automated desktop system that linked with the tablets of researchers, so they can access the feedback quickly in their place work.
- Call households and ask them some questions from the survey to check researcher data integrity and his compliance with instructions when he visited them, obtain the missing data that have not been received yet as well as thank the head of household for their co-operation.
- Assign a technical team specialized in data quality room to respond to field inquiries either from the employees or heads of households.
- Apply error rules to ensure data consistency, accuracy and logicality.
- Check where the survey was completed by matching its coordinates with the coordinates recorded in the sample file.

Fifth stage: Classification

in this stage, the data (raw data) are classified based on the classification and coding inputs that were made during data collection process whether the classifications and statistical coding guides mentioned in the design stage which are:

Saudi Classification for Disciplines and Educational Levels or other classifications and encodings, such as geographic classification of data (for example, data distribution at administrative regions level). It is worth mentioning that data are usually classified in order to present them in appropriate tables to summarize, understand, comprehend and derive the results from them, compare them with other data as well as obtain statistical significances about the study community. Additionally, it will be easy to refer to the data in the form of tables without the need of looking at the original forms which often have

some private data, such as: names and addresses of individuals that violates the principle of confidentiality of statistical data.

Here are some of the main procedures of this stage:

Data Matching:

With the goal of assuring the quality and accuracy of the bulletin statistics, the data are reviewed and matched to ensure that they are accurate and correct in a way appropriates to the nature of such data. However, data of the current survey are matched with the ones of the previous research to verify the data integrity and logicality for processing, and to extract as well as review the results in the next stages of classifications stage.

keeping Data Confidential:

To keep the data confidential, identifiers are removed from the data set, such as: hiding individual name, address and other identifiers to ensure the protection of individuals' privacy.

Sixth stage: Revision

In this stage, outputs validation and explanation are checked using a number of steps as follows:

Data Output Validation:

In addition to the revision processes of collected data in the fourth stage "collection stage" to verify the collected data integrity and other processes of revision in the fifth stage "the classification stage", the outputs are loaded and stored on the database after calculation and extraction results processes to be reviewed and processed by specialists in Energy Statistics Department using programs prepared for reviewing them through screens designed for that.

Dealing with Confidential Data:

In the General Authority for Statistics (GASTATS), the data are always kept confidential, and are used for statistical purposes only. Under no circumstances can that be allowed to disclose about any individual data of the households or their members. It is noteworthy that what is prepared for publication is aggregated statistical tables at the level of Saudi Arabia, administrative regions and main cities by demographics.

Seventh stage: Publication

In this stage, the product is prepared for publication through a number of steps as follows:

Preparing and Processing Results Designed for Publication:

through:

1. Download data results from the database of Household Energy Survey.
2. Prepare and process publication tables and graphs of the data and indicators.
3. Prepare and process metadata as well as write the methodology of the work.
4. Review the bulletin for publication.

Media Kits Preparation:

After receiving the final version of the bulletin from " Energy Statistics Department ", the media departments in GASTATS prepare a press statement and infographics of the bulletin main results as well as prepare special press reports of them to be sent to some newspapers. Moreover, the media kits are approved in coordination with Energy Statistics Department.

Data Publication:

In this stage, the following steps are carried out:

1. Upload bulletin on the portal of GASTATS.
2. Coordinate with media departments in the partner entities from working organization about the publication date of promotional materials.
3. Send the press statement to (Saudi Press Agency, paper and electronic newspapers, channels and broadcasters as well as International Press Agencies).
4. Publish tweets and infographics on Twitter.
5. Send the bulletin to clients list via the e-mail " President".
6. Monitor what is published on media daily and deal with it according to the material content.

Responding Clients' Inquiries:

Questions and inquiries of the clients about the Household Energy Survey Bulletin and its results received through five available channels (website- e-mail-official letters-call center-direct visits). Additionally, the client's request is responded after coordinating with competent statistics department through an appropriate channel by providing information directly from statistical library available on the website of the Authority or from the Statistical Department itself if necessary.

Published Content Preservation:

To ensure that the contents of the publication are preserved for long periods of time, the documents and archives center in the Authority preserves and archives the published data to be used as a reverence at any time whether for the Authority or for others if necessary.

Stage Eight: Assessment Stage:

In this stage, the statistical process is evaluated from the collection stage to the next stage of data publication for improvement process to obtain high-quality data. The improvement process may include: methodologies, processes and systems, skilled personnel, standards as well as statistical work frameworks by using the following steps:

Measurable Evaluation Inputs Collection:

In this step, the most important comments and notes are collected and documented from their sources in different stages. The three main stages are: Firstly, collocation stage, for example comments and notes given by data collectors and their field supervisors as well as data providers (whether they are from field team or administrative records providers). Secondly, revision stage, such as notes written by specialists responsible for reviewing, auditing and analyzing data collected either from field or administrative records. Finally, post-publication stage, comments and notes collected and documented by data users.

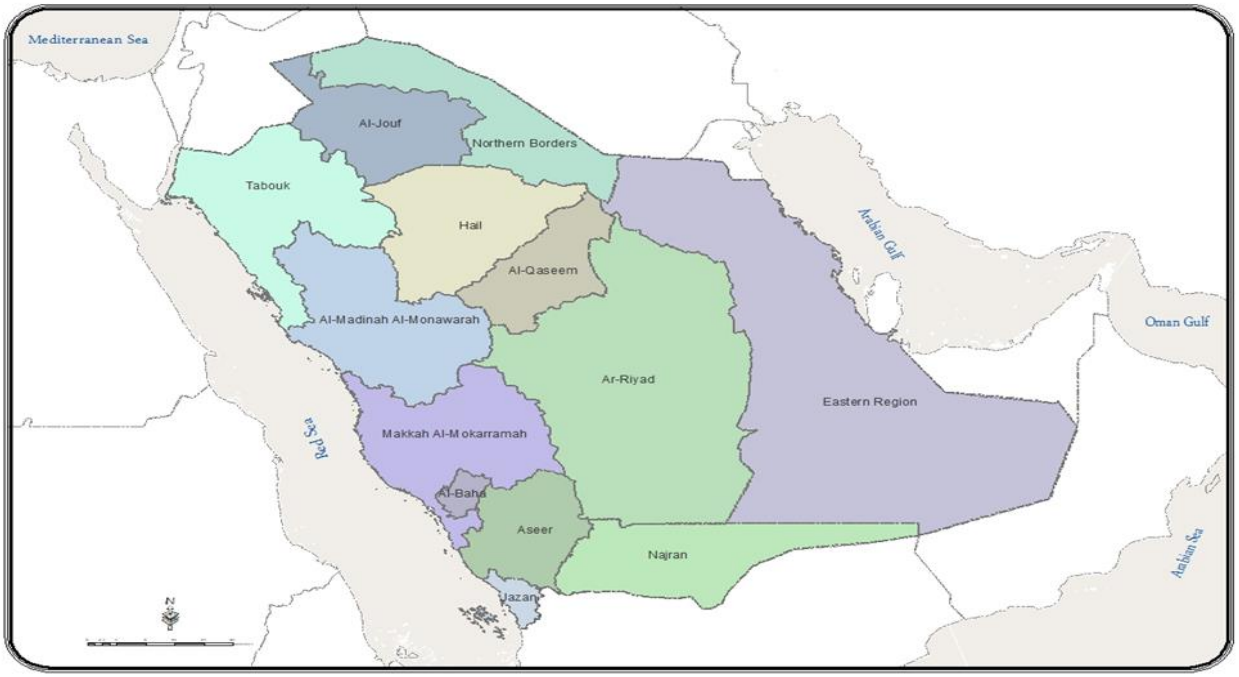
Assessment:

The assessment is conducted by analyzing collected evaluation inputs and comparing the results of this analysis with the results expected previously. Therefore, a number of possible improvements and solutions are identified and discussed with concerned staff in various relevant departments in the Authority, or with their clients of Household Energy Survey Bulletin partners. Further, during this step, clients' performances and satisfaction levels of using Household Energy Survey Bulletin results are measured, in addition to, dissatisfied clients are contacted and provided with clarifications.

It is worth mentioning that based on these procedures, the recommendations for obtaining high quality data for the next survey of the Household Energy Survey Bulletin are agreed upon.

Some statistical indicators from the Household Energy Survey (2018)

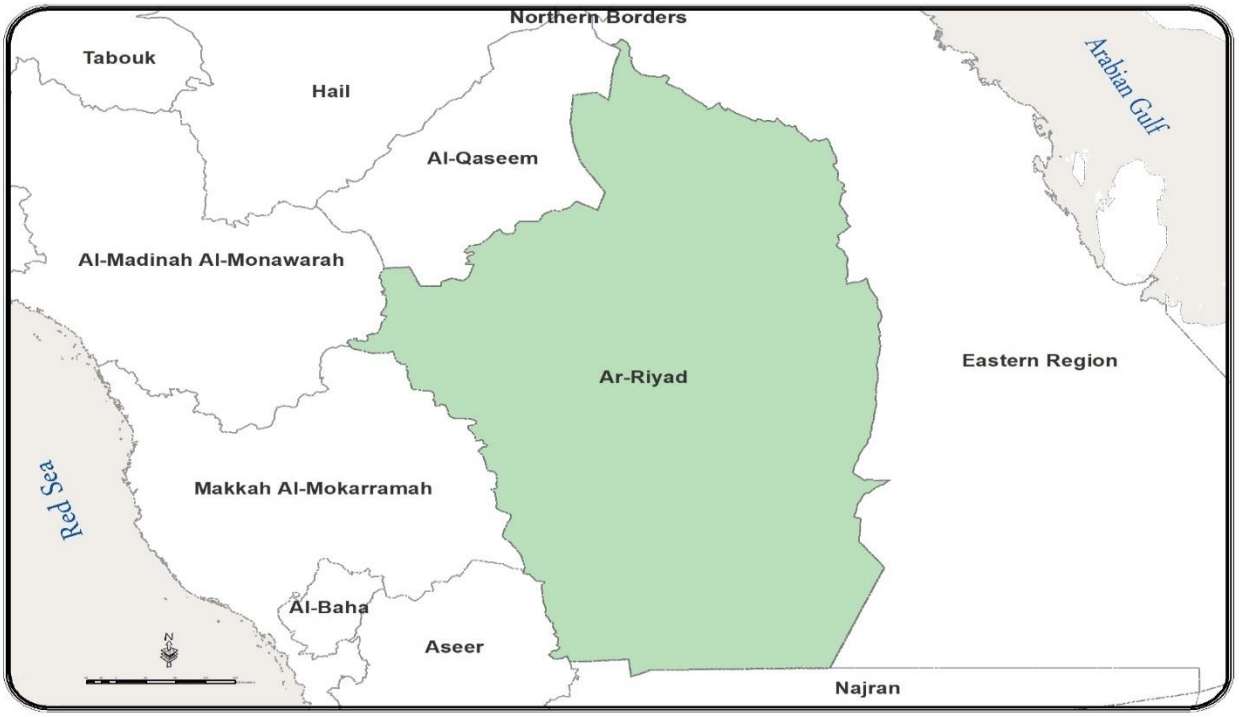
First: General information at the level of the Kingdom and administrative regions:



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

SN	Indicator	%
1	Percentage of households connected to the public electricity network	99.85
2	Percentage of households using solar energy at home	1.45
3	Percentage of households using gas at home	90.72
4	Percentage of households using electricity in cooking process	8.74
5	Percentage of households using biomass products (fuelwood, coal and agricultural waste)	8.22
6	Percentage of households using an independent electric meter at the home	84.33
7	Percentage of households using an electric meter shared with several houses	15.67
8	Percentage of households that have power regulator at home	15.38
9	Percentage of households using electrical power saving devices at home	29.35

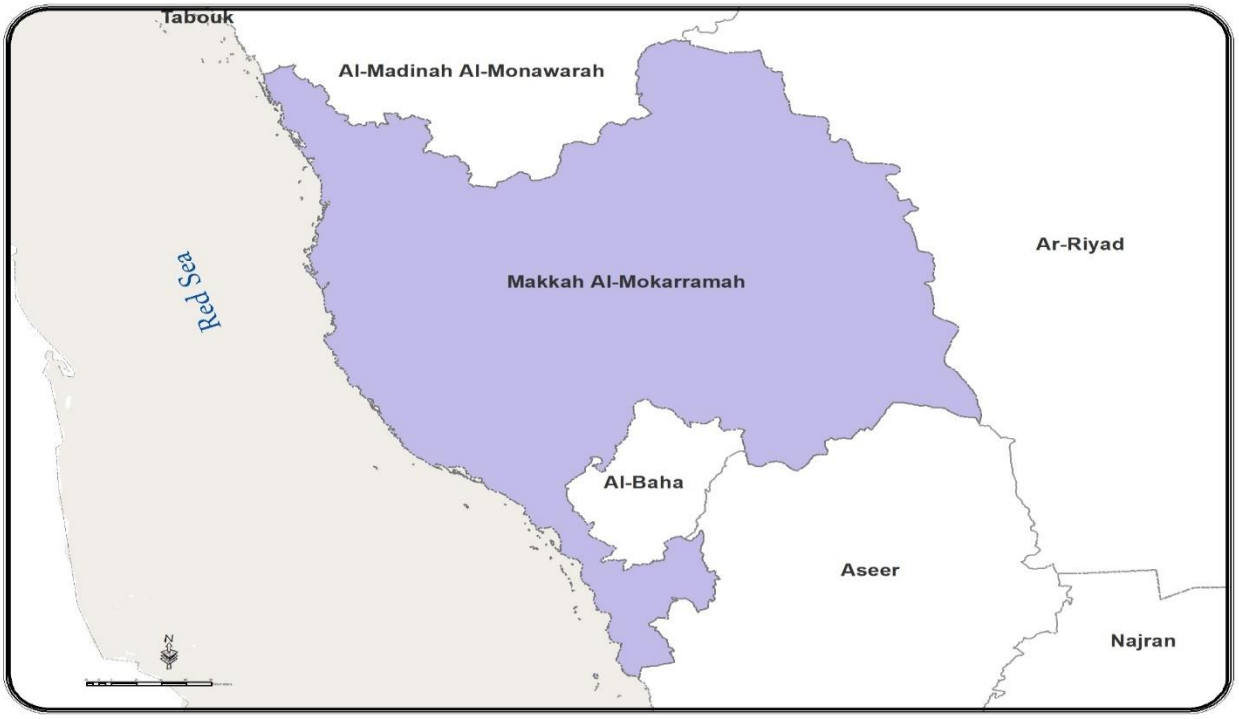
Riyadh Region



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

SN	Indicator	%
1	Percentage of households connected to the public electricity network	99.93
2	Percentage of households using solar energy at home	1.78
3	Percentage of households using gas at home	90.48
4	Percentage of households using electricity in cooking process	9.24
5	Percentage of households using biomass products (fuelwood, coal and agricultural waste)	10.96
6	Percentage of households using an independent electric meter at the home	86.17
7	Percentage of households using an electric meter shared with several houses	13.83
8	Percentage of households that have power regulator at home	14.06
9	Percentage of households using electrical power saving devices at home	28.13

Makkah Region



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

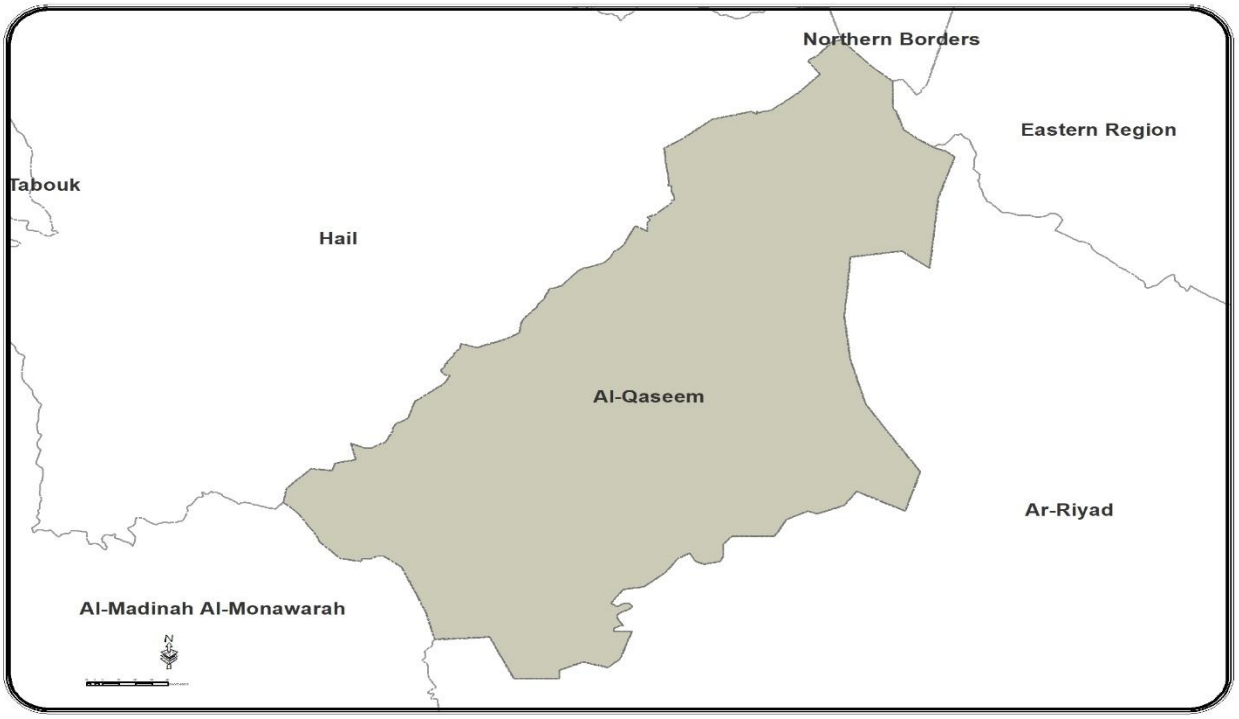
SN	Indicator	%
1	Percentage of households connected to the public electricity network	99.87
2	Percentage of households using solar energy at home	1.18
3	Percentage of households using gas at home	94.19
4	Percentage of households using electricity in cooking process	5.17
5	Percentage of households using biomass products (fuelwood, coal and agricultural waste)	2.98
6	Percentage of households using an independent electric meter at the home	85.25
7	Percentage of households using an electric meter shared with several houses	14.75
8	Percentage of households that have power regulator at home	24.82
9	Percentage of households using electrical power saving devices at home	31.77

Madinah Region

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

SN	Indicator	%
1	Percentage of households connected to the public electricity network	99.88
2	Percentage of households using solar energy at home	1.10
3	Percentage of households using gas at home	91.62
4	Percentage of households using electricity in cooking process	8.08
5	Percentage of households using biomass products (fuelwood, coal and agricultural waste)	2.08
6	Percentage of households using an independent electric meter at the home	85.58
7	Percentage of households using an electric meter shared with several houses	14.42
8	Percentage of households that have power regulator at home	7.31
9	Percentage of households using electrical power saving devices at home	20.74

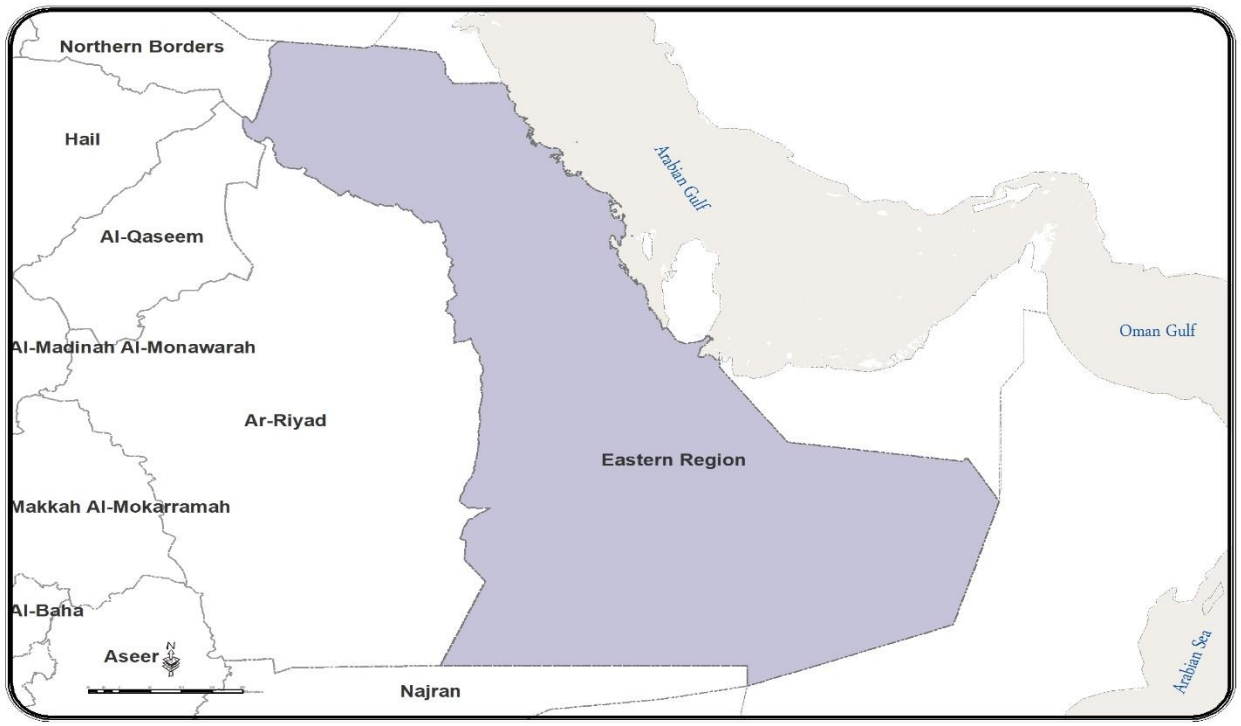
Al-Qassim Region



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

SN	Indicator	%
1	Percentage of households connected to the public electricity network	99.90
2	Percentage of households using solar energy at home	0.98
3	Percentage of households using gas at home	97.06
4	Percentage of households using electricity in cooking process	2.94
5	Percentage of households using biomass products (fuelwood, coal and agricultural waste)	16.37
6	Percentage of households using an independent electric meter at the home	85.79
7	Percentage of households using an electric meter shared with several houses	14.21
8	Percentage of households that have power regulator at home	9.01
9	Percentage of households using electrical power saving devices at home	32.47

Eastern Region



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

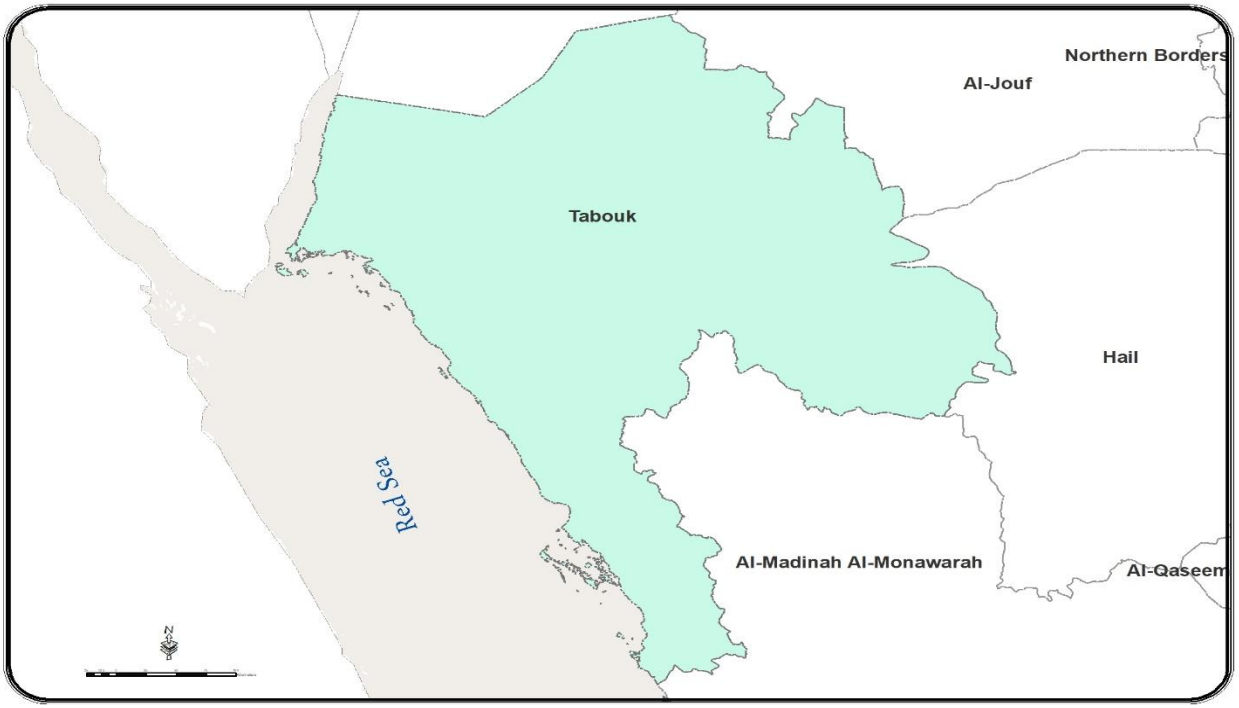
SN	Indicator	%
1	Percentage of households connected to the public electricity network	99.82
2	Percentage of households using solar energy at home	1.95
3	Percentage of households using gas at home	75.18
4	Percentage of households using electricity in cooking process	24.57
5	Percentage of households using biomass products (fuelwood, coal and agricultural waste)	7.00
6	Percentage of households using an independent electric meter at the home	84.76
7	Percentage of households using an electric meter shared with several houses	15.24
8	Percentage of households that have power regulator at home	10.30
9	Percentage of households using electrical power saving devices at home	46.36

Asir Region

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

SN	Indicator	%
1	Percentage of households connected to the public electricity network	99.88
2	Percentage of households using solar energy at home	1.06
3	Percentage of households using gas at home	94.02
4	Percentage of households using electricity in cooking process	5.41
5	Percentage of households using biomass products (fuelwood, coal and agricultural waste)	9.64
6	Percentage of households using an independent electric meter at the home	75.82
7	Percentage of households using an electric meter shared with several houses	24.18
8	Percentage of households that have power regulator at home	12.46
9	Percentage of households using electrical power saving devices at home	17.50

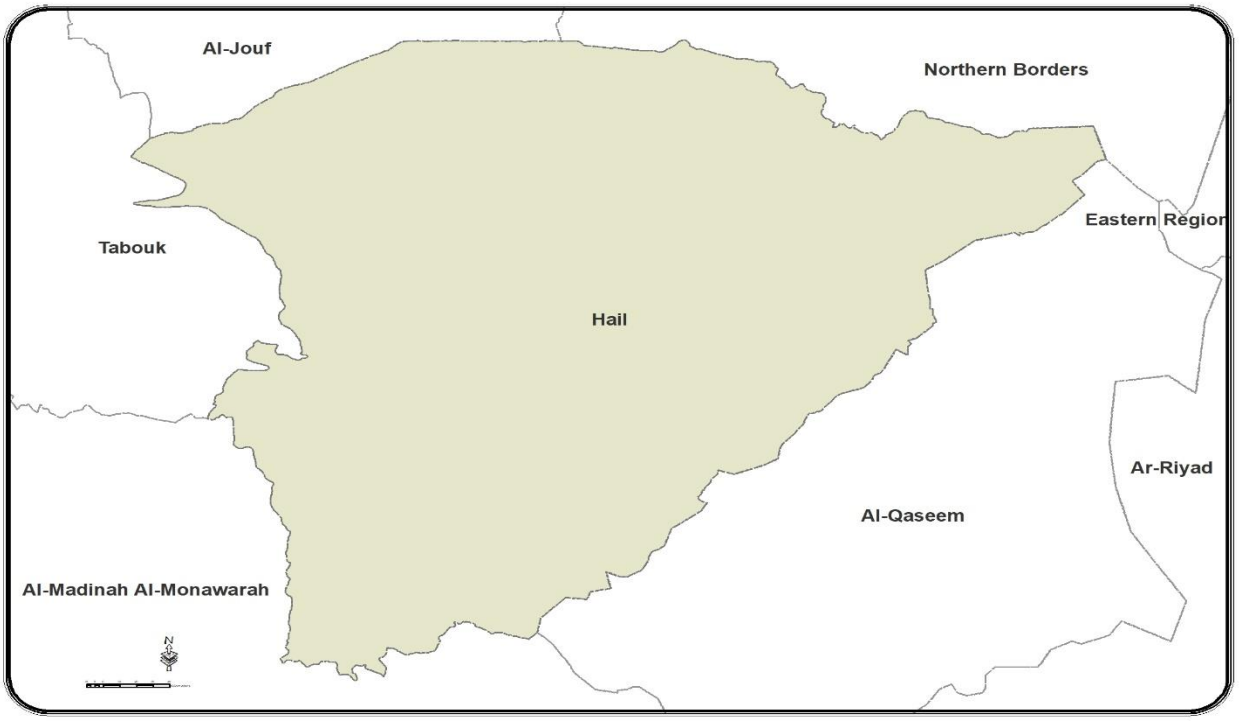
Tabuk Region



- **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	1.10
3	Percentage of households using gas at home	97.40
4	Percentage of households using electricity in cooking process	1.89
5	Percentage of households using biomass products (fuelwood, coal and agricultural waste)	8.96
6	Percentage of households using an independent electric meter at the home	94.77
7	Percentage of households using an electric meter shared with several houses	5.23
8	Percentage of households that have power regulator at home	12.99
9	Percentage of households using electrical power saving devices at home	12.44

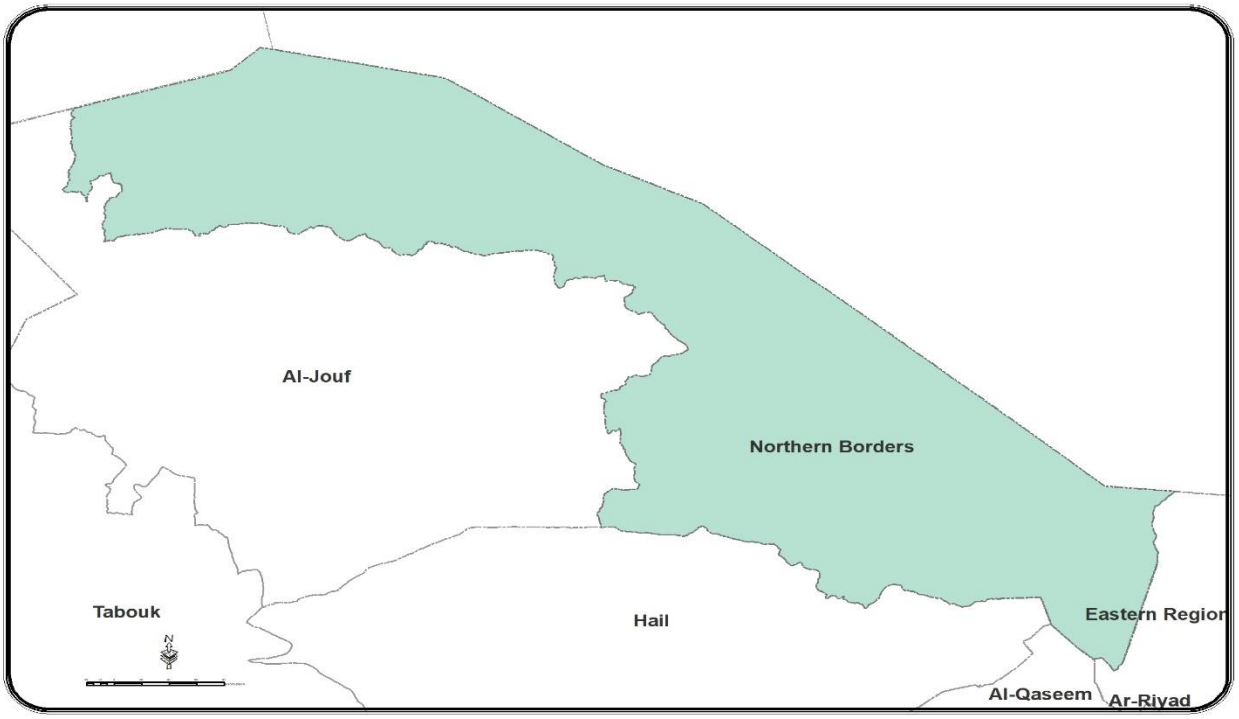
Hail Region



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

SN	Indicator	%
1	Percentage of households connected to the public electricity network	99.88
2	Percentage of households using solar energy at home	2.80
3	Percentage of households using gas at home	94.24
4	Percentage of households using electricity in cooking process	5.32
5	Percentage of households using biomass products (fuelwood, coal and agricultural waste)	12.50
6	Percentage of households using an independent electric meter at the home	87.39
7	Percentage of households using an electric meter shared with several houses	12.61
8	Percentage of households that have power regulator at home	10.13
9	Percentage of households using electrical power saving devices at home	25.90

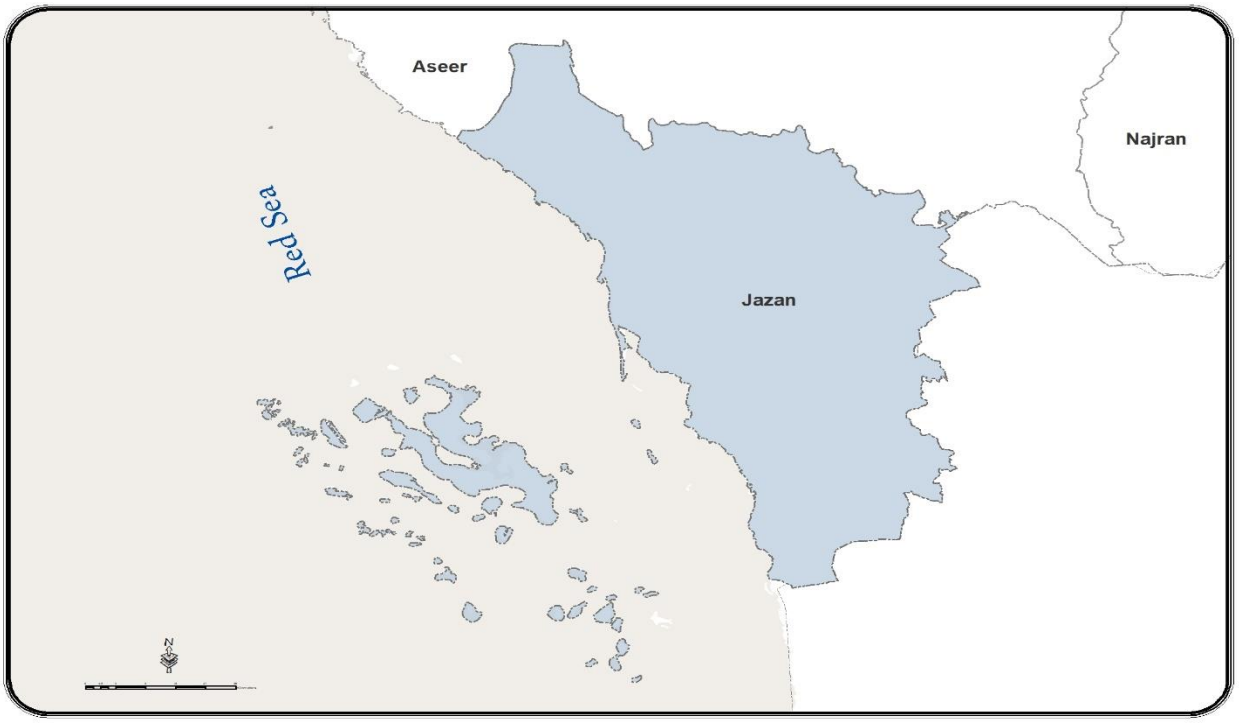
Northern Borders Region



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

SN	Indicator	%
1	Percentage of households connected to the public electricity network	99.73
2	Percentage of households using solar energy at home	1.40
3	Percentage of households using gas at home	97.16
4	Percentage of households using electricity in cooking process	2.54
5	Percentage of households using biomass products (fuelwood, coal and agricultural waste)	9.30
6	Percentage of households using an independent electric meter at the home	90.27
7	Percentage of households using an electric meter shared with several houses	9.73
8	Percentage of households that have power regulator at home	18.08
9	Percentage of households using electrical power saving devices at home	9.34

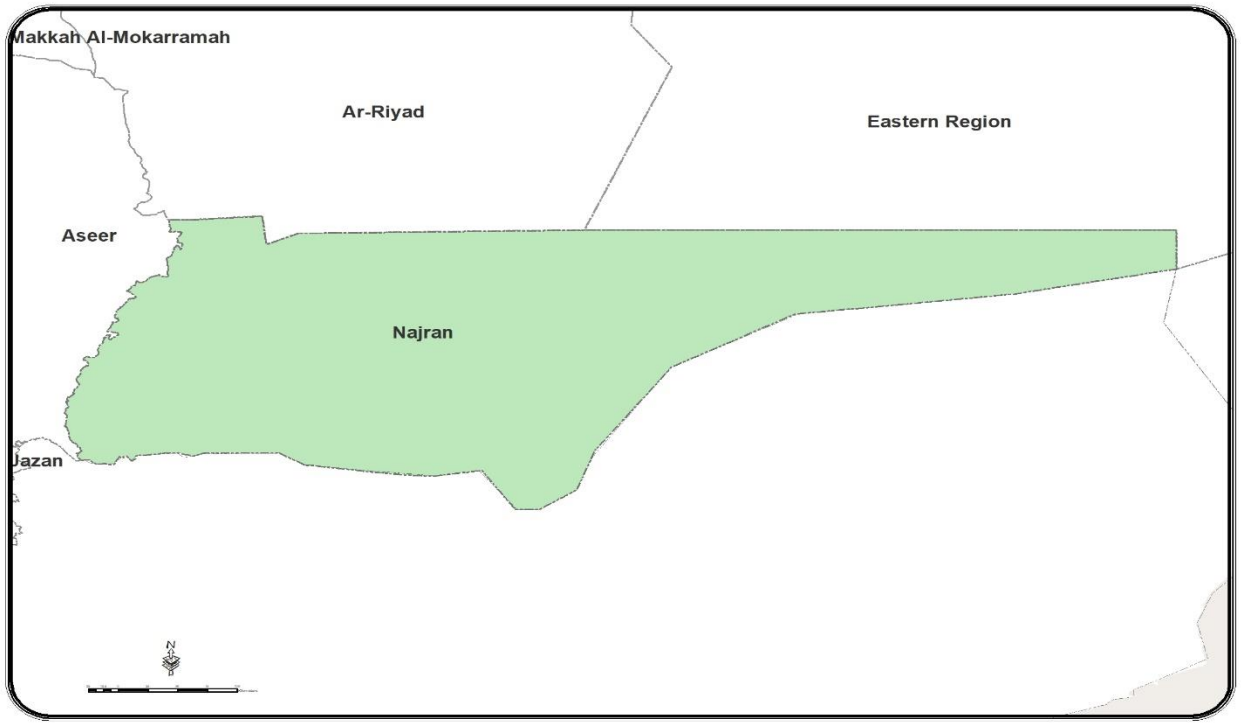
Jazan Region



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

SN	Indicator	%
1	Percentage of households connected to the public electricity network	99.54
2	Percentage of households using solar energy at home	1.24
3	Percentage of households using gas at home	93.80
4	Percentage of households using electricity in cooking process	3.74
5	Percentage of households using biomass products (fuelwood, coal and agricultural waste)	16.66
6	Percentage of households using an independent electric meter at the home	78.70
7	Percentage of households using an electric meter shared with several houses	21.30
8	Percentage of households that have power regulator at home	11.62
9	Percentage of households using electrical power saving devices at home	19.68

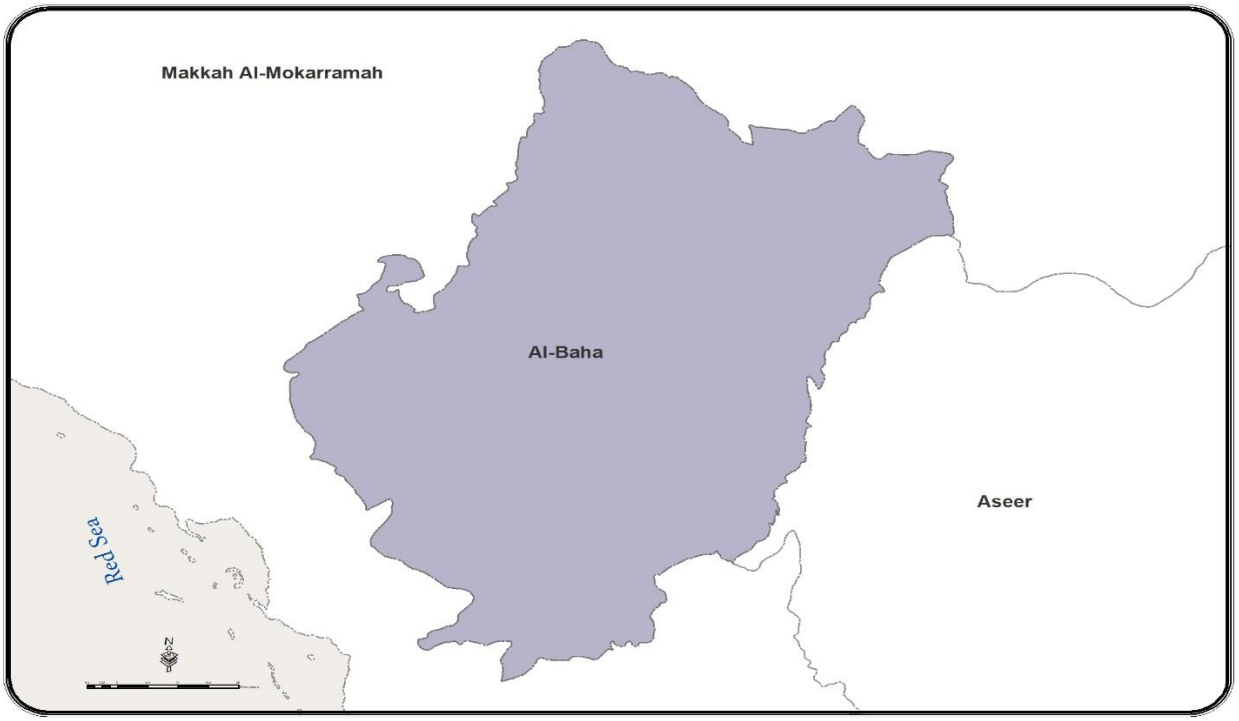
Najran Region



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

SN	Indicator	%
1	Percentage of households connected to the public electricity network	99.75
2	Percentage of households using solar energy at home	1.88
3	Percentage of households using gas at home	93.30
4	Percentage of households using electricity in cooking process	4.77
5	Percentage of households using biomass products (fuelwood, coal and agricultural waste)	23.97
6	Percentage of households using an independent electric meter at the home	67.29
7	Percentage of households using an electric meter shared with several houses	32.71
8	Percentage of households that have power regulator at home	10.08
9	Percentage of households using electrical power saving devices at home	19.48

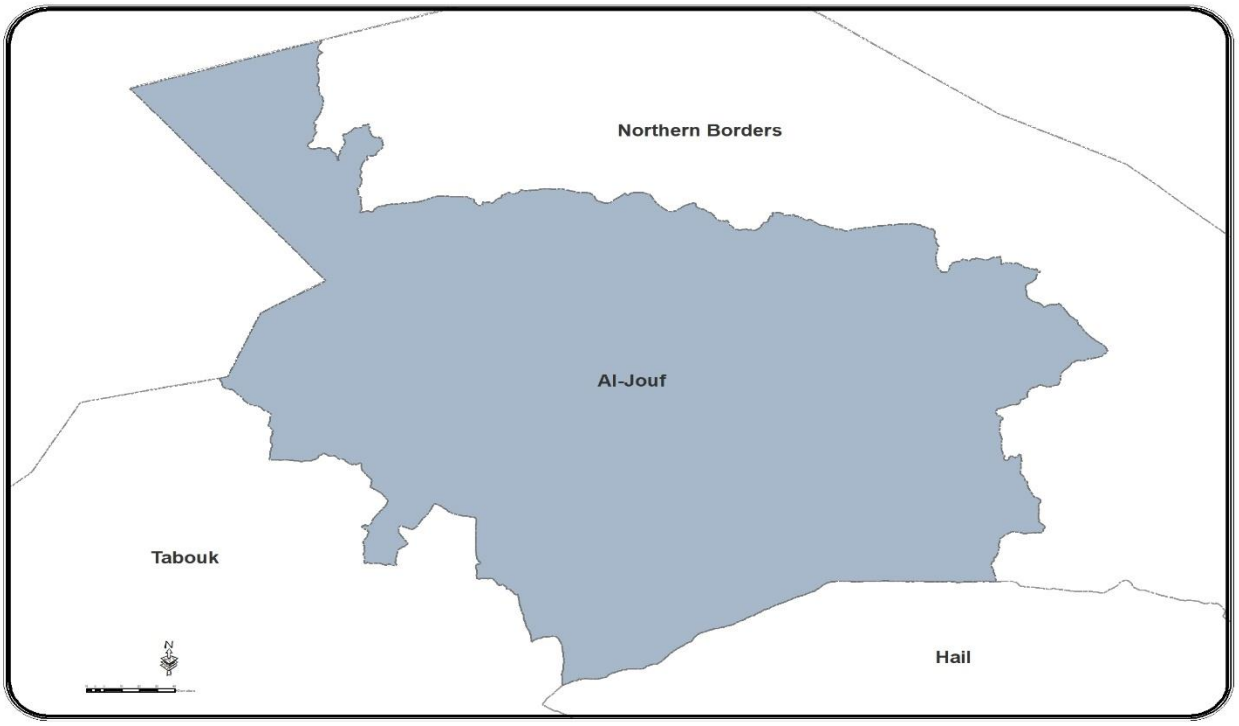
Al-Bahah Region



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

SN	Indicator	%
1	Percentage of households connected to the public electricity network	99.75
2	Percentage of households using solar energy at home	0.59
3	Percentage of households using gas at home	97.33
4	Percentage of households using electricity in cooking process	1.78
5	Percentage of households using biomass products (fuelwood, coal and agricultural waste)	8.79
6	Percentage of households using an independent electric meter at the home	73.60
7	Percentage of households using an electric meter shared with several houses	26.40
8	Percentage of households that have power regulator at home	11.76
9	Percentage of households using electrical power saving devices at home	22.62

Al-Jouf Region



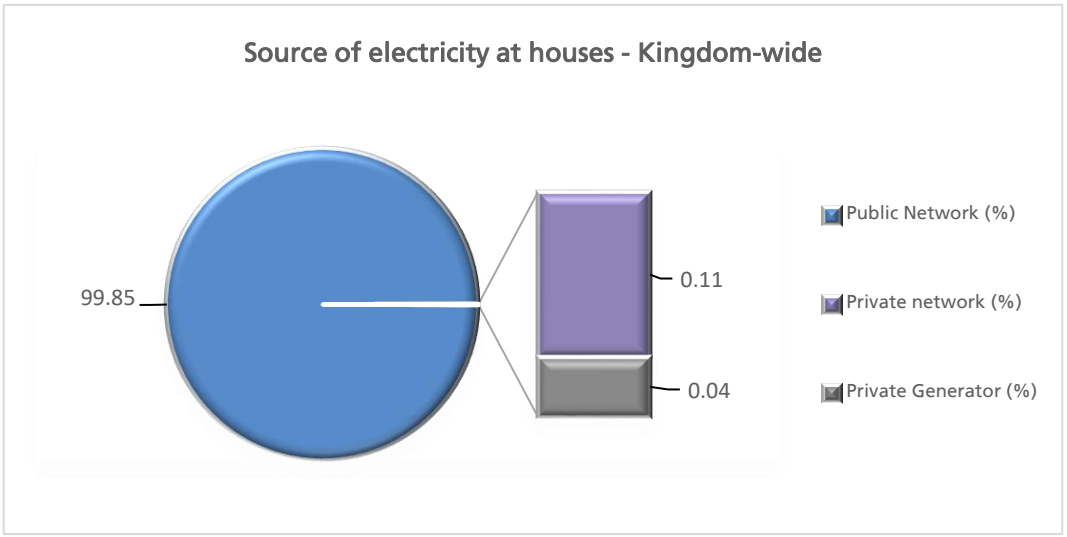
- **Some indicators at the level of Al-Jouf:-**

SN	Indicator	%
1	Percentage of households connected to the public electricity network	98.59
2	Percentage of households using solar energy at home	0.68
3	Percentage of households using gas at home	96.04
4	Percentage of households using electricity in cooking process	2.84
5	Percentage of households using biomass products (fuelwood, coal and agricultural waste)	14.00
6	Percentage of households using an independent electric meter at the home	81.84
7	Percentage of households using an electric meter shared with several houses	18.16
8	Percentage of households that have power regulator at home	13.83
9	Percentage of households using electrical power saving devices at home	27.71

Second: Key results about some forms of energy

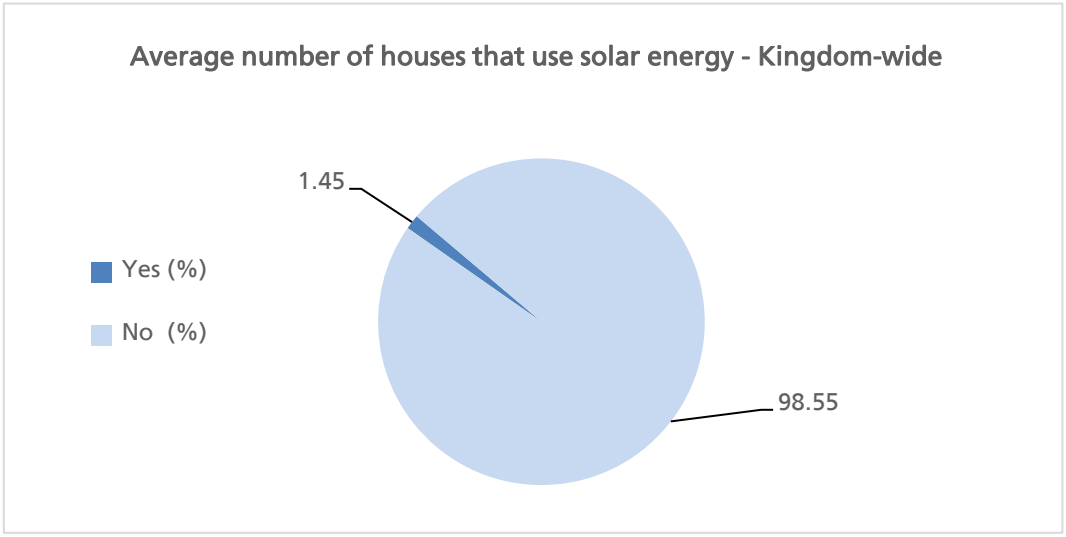
1. The survey results showed that many households in Saudi Arabia use electricity at their houses. About (99.85%) of households have houses connected to the public grid. Only (0.11%) of households dependently use their private source of power while (0.04%) of the households use generators as a source of electricity.

Chart (1)



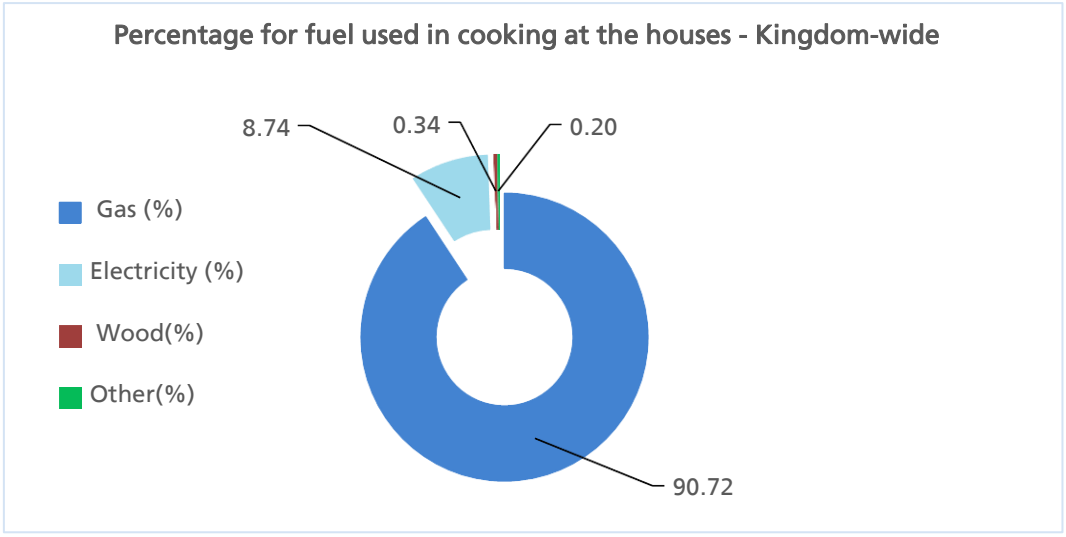
2. The results also showed that about (1.45%) of households all over Saudi Arabia use solar energy at their houses.

Chart (2)



3. It is clear as well that up to (90.72%) of the households use natural gas for cooking while only (8.74%) of households depend on electricity for cooking. Less than one percent (0.34%) of households use firewood for cooking.

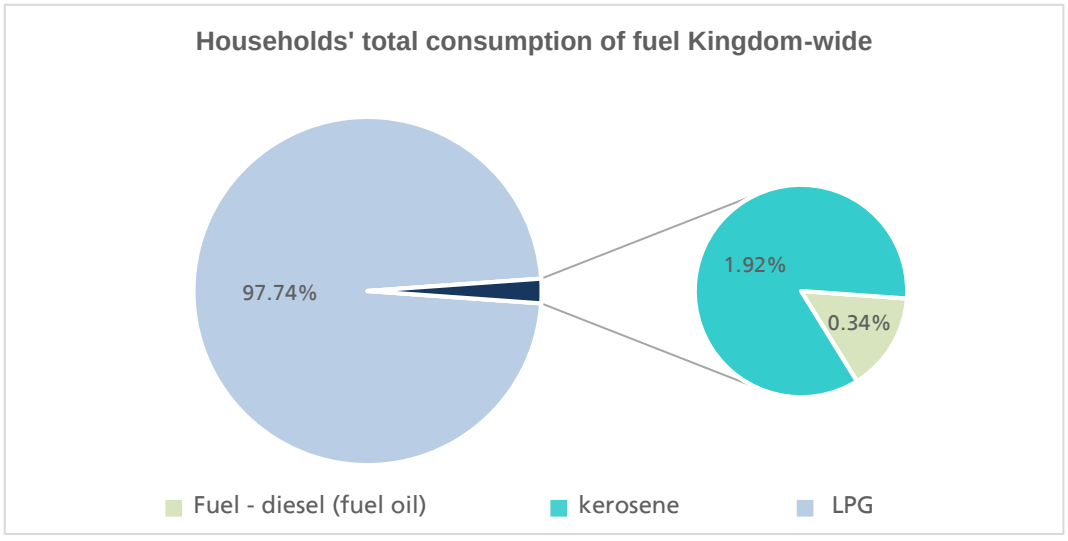
Chart (3)



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 (1,023,585,907) in 2017.
2. The consumption of diesel (fuel oil) was (3,519,261) representing only (0.34%) of the total consumption of fuel in 2017.
3. The consumption of kerosene hit more than nineteen million liters (19,691,996) representing about (1.92%) of the total consumption of fuel in 2017.
4. Meanwhile, the consumption of LPG reached (1,000,374,650) liters representing about (97.74%) of the total consumption of fuel in 2017.

Chart (4)

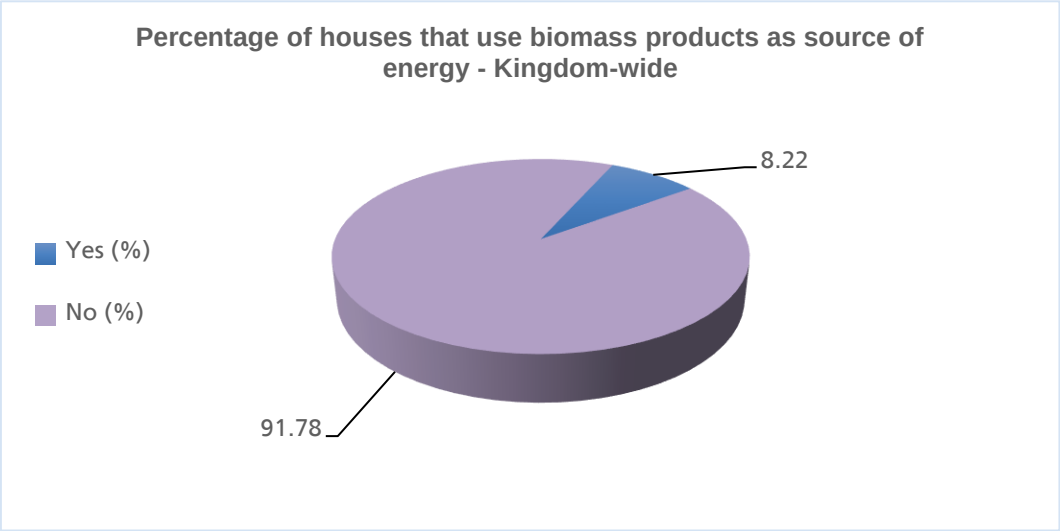


5. The household sector's consumption of electricity in Saudi Arabia reached (263,035.75) Gigawatt/hour.

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

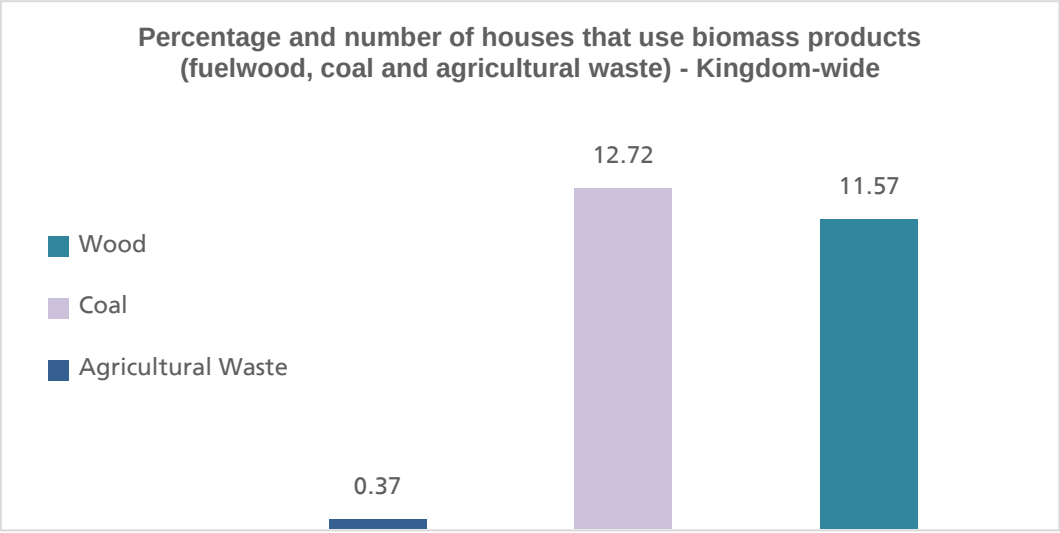
1. According to the study, about (8.22%) of households in the Kingdom use biomasses (fuelwood, coal and agricultural wastes) at their houses.

Chart (5)



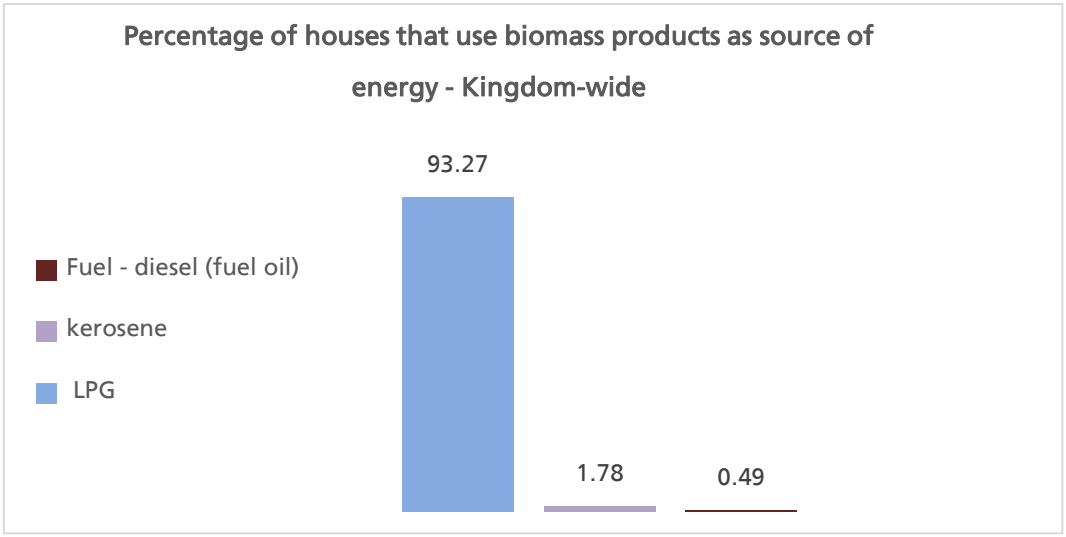
2. Results of the study on the biomass as a source of energy for heating or cooking in the Kingdom revealed that (11.57%) of households use firewood while (12.72%) use coal, and (0.37%) of households use agricultural residues.

Chart (6)



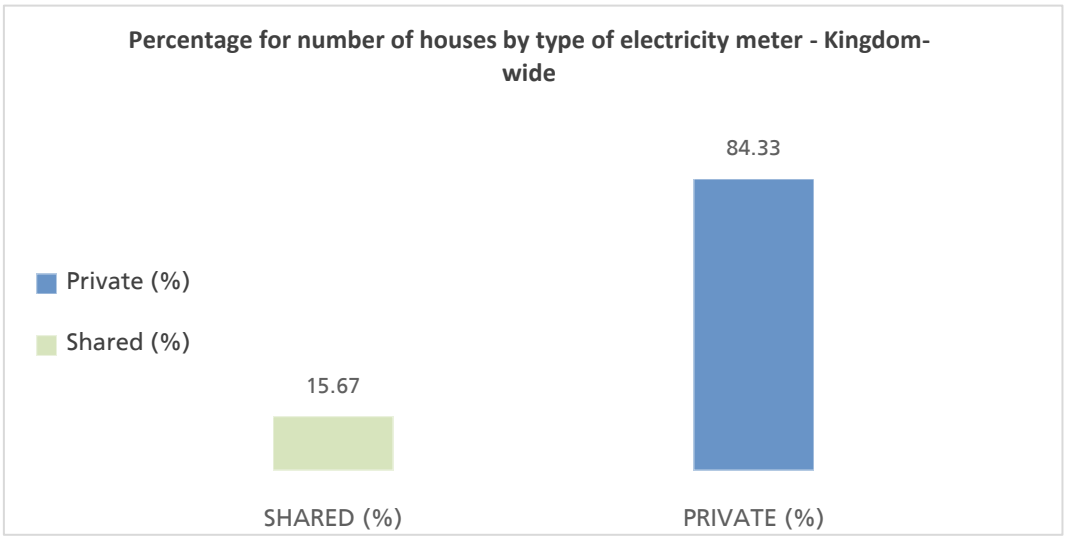
3. With regard to the fuel consumption at houses all over Saudi Arabia, the results revealed that: -
   - Only (0.49%) of households use diesel (fuel oil).
   - About (1.78%) of households use kerosene.
   - Also, about (93.27%) of households use LPG.

Chart (7)



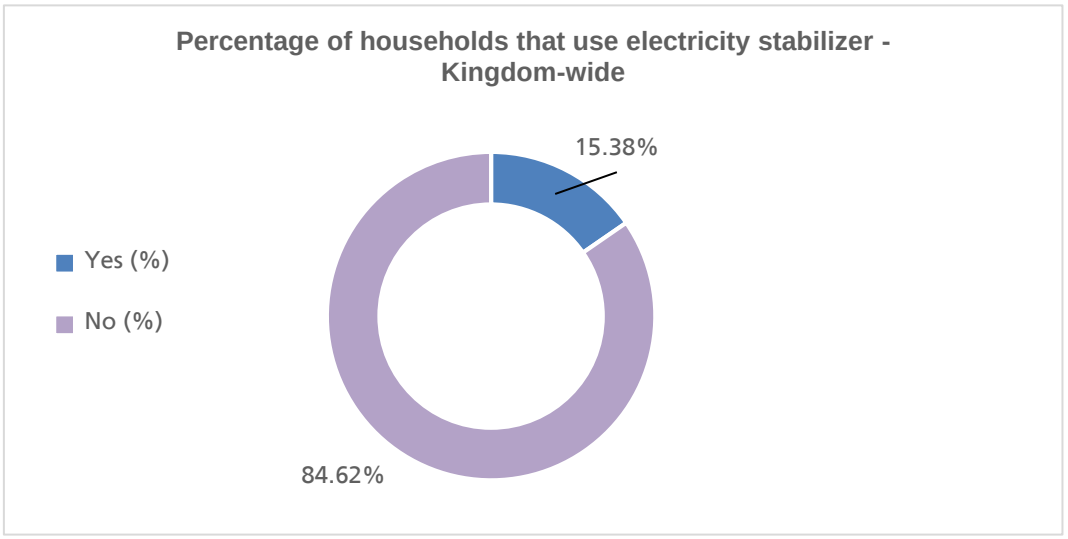
4. According to the results, about (84.33%) of houses have their own electric meters while (15.67%) of houses share electric meters.

Chart (8)



5. The results showed that about (15.38%) of households all over Saudi Arabia depend on power stabilizers at their houses.

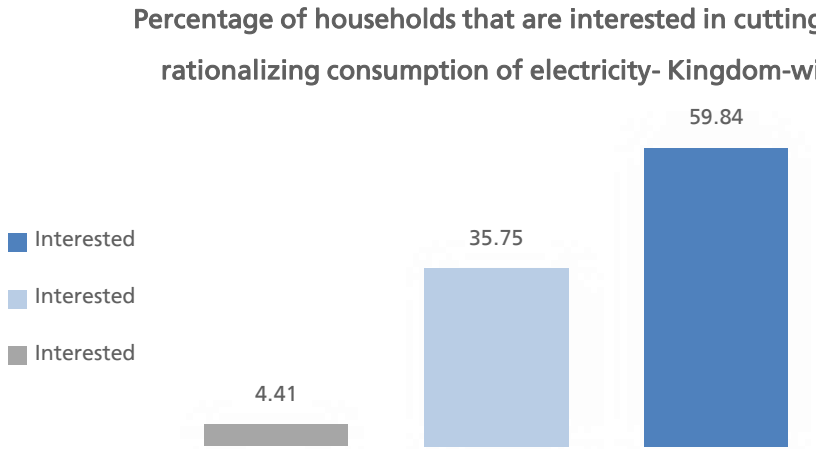
Chart (9)



Fifth: - Key results on rationalization of power consumption

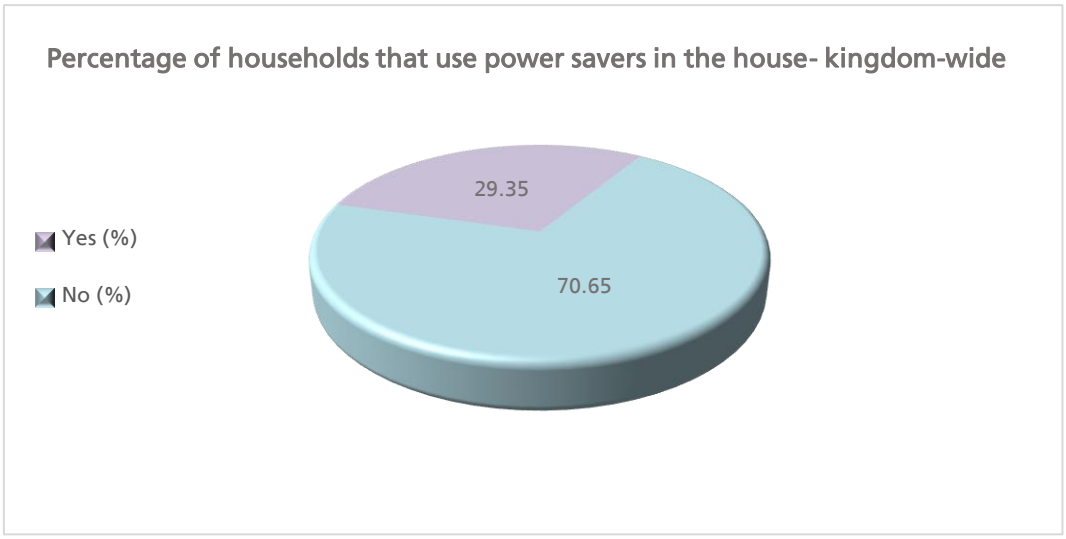
1. The results showed that (59.84%) of households are interested in cutting expenses or rationalization of power consumption. They also showed that (35.75%) of the households are likely interested in power consumption rationalization while only (4.41%) of the households are not interested at all in cutting expenses or rationalizing power consumption.

Chart (10)



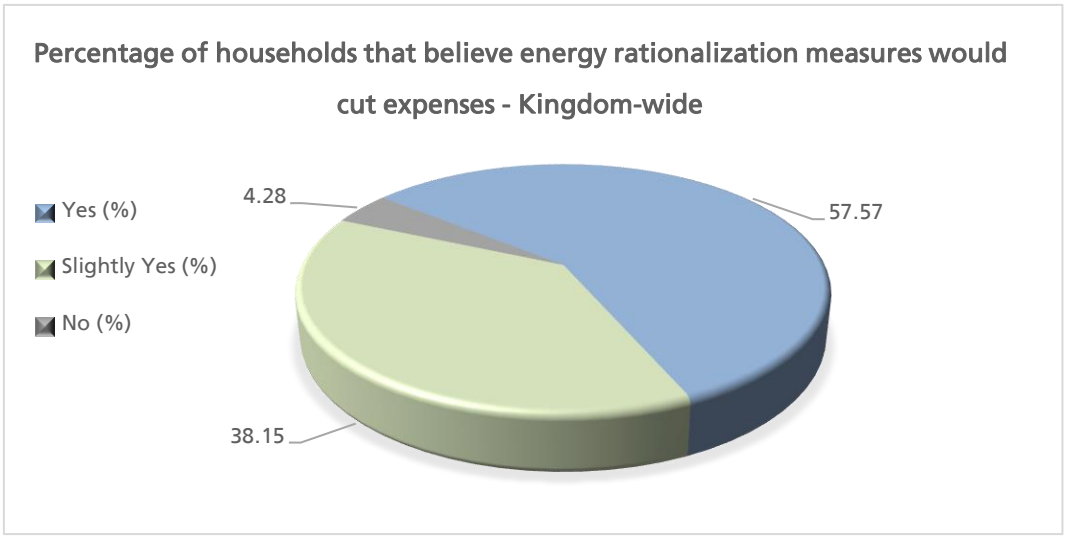
2. The results showed that (29.35%) of the households have power savers at their houses while the majority (70.65%) of households doesn't have power savers to rationalize consumption.

Chart (11)



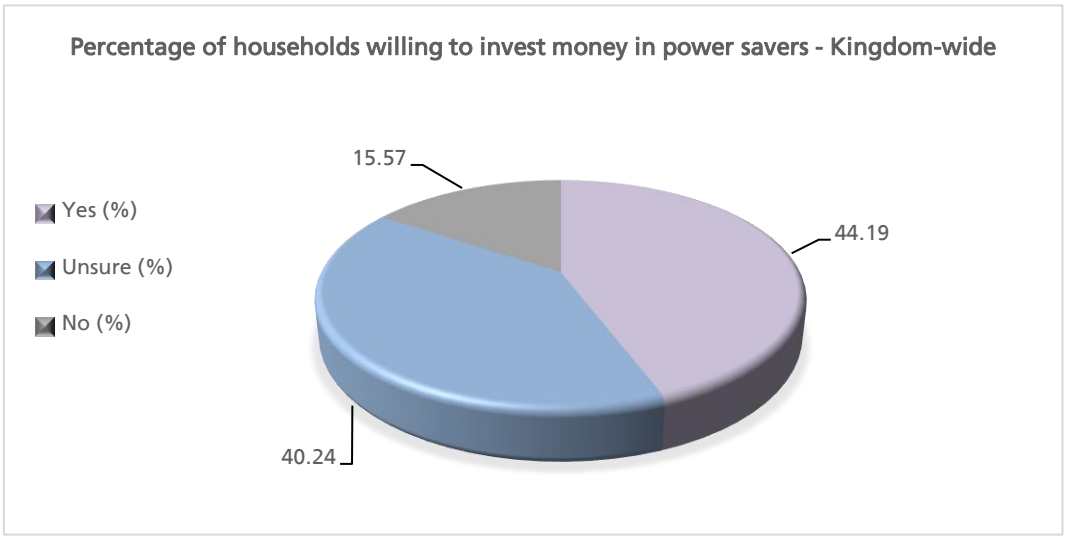
3. According to the census results, about (57.57%) of households in the kingdom have strong belief that the rationalization measures would lead to definite cut in costs. About (38.15%) of the households see that a rationalization plan is somehow cost effective. In the meantime, only (4.28%) of the households think the rationalization measures would save no money.

Chart (12)



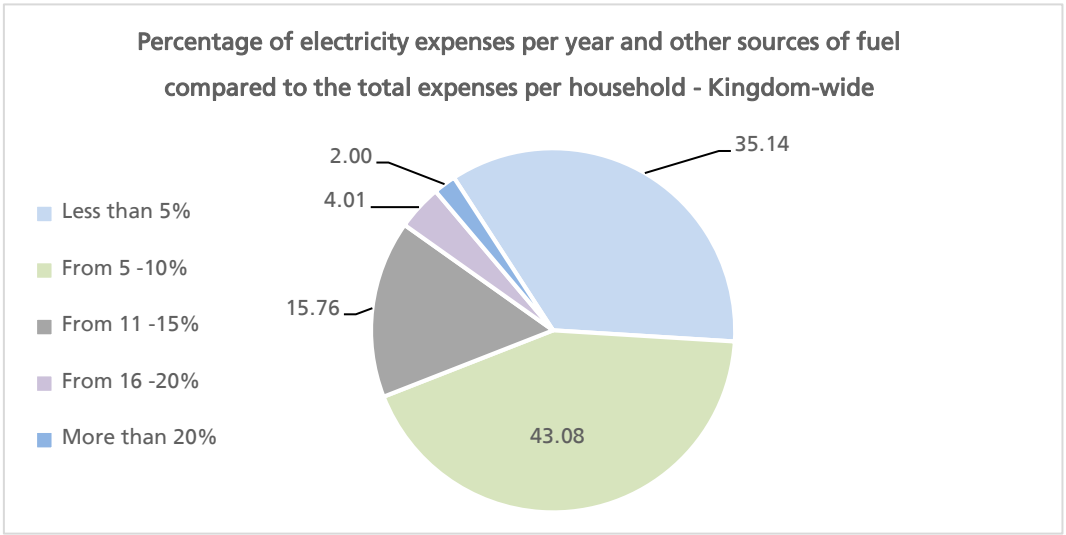
4. The results showed that (44.19%) of the households in Saudi Arabia are willing to invest in power savers while about (40.24%) of the households are not sure about such investments. But, there about (15.57%) of households oppose spending money to buy power savers.

Chart (13)



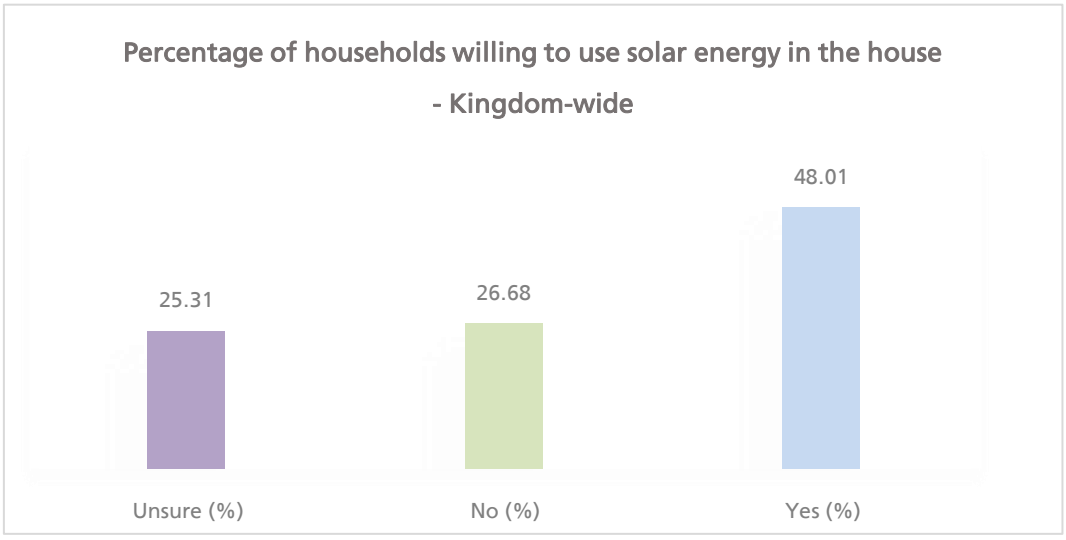
5. The survey results showed that (35.14%) of the households in Saudi Arabia expend less than (5%) of their income on electricity and other fuel sources, and (43.08%) of the households are spending (5 -10%) of their income on electricity and fuel consumption, while (15.76%) of the households spend (11-15%) of their income. In the same time, about (4.01%) of the households are spending (16 – 20%), and (2.00%) of the households are spending more than (20%) of their income respectively on electricity and consumption from other fuel sources.

Chart (14)



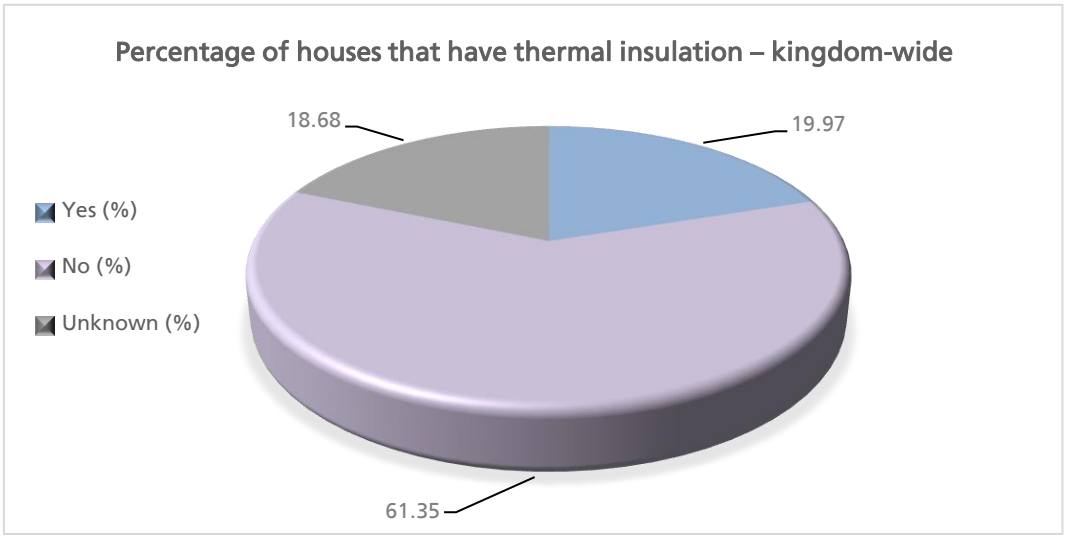
6. the results also showeded that the percentage of households who want to use solar energy at home reached (48.01%), while (26.68%) of household do not want to use such type of energy.

Chart (15)



7. The results revealed that the percentage of houses that have thermal insulation reached (19.97%), whereas the percentage of houses that do not have thermal insulation hit (61.35%). However, the results showed that (18.68%) of households do not have any idea about thermal insulation.

Chart (16)



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	1,587,336	40,568,402	3,738,124	72,487,778	1,267,945	31,187,883	632,714	10,975,966	78,935	1,295,084	396,956	10,243,548
2	Makkah	1,933,181	43,733,470	3,268,610	58,180,434	1,272,643	24,726,537	1,548,173	21,161,845	2,477,593	10,430,407	86,598	3,123,086
3	Madinah	461,819	10,678,960	901,855	17,352,060	341,779	7,913,623	92,553	1,824,110	35,277	345,866	9,073	273,531
4	Al-Qassim	351,104	8,574,778	669,243	13,575,457	258,609	6,288,983	127,340	2,328,067	56,385	550,154	64,081	1,526,360
5	Eastern Region	797,876	18,974,777	1,990,946	37,681,887	747,356	16,962,499	516,336	8,725,480	343,350	1,753,424	73,510	1,928,777
6	Asir	363,636	9,724,789	692,964	14,175,253	161,927	3,304,285	56,160	701,944	3,417	13,864	4,312	64,145
7	Tabuk	154,013	3,731,267	343,182	5,707,680	107,999	2,270,261	105,839	1,800,552	81,540	1,120,355	2,583	110,377
8	Hail	141,048	3,926,025	291,422	5,898,178	92,529	2,458,754	35,414	509,921	38,076	176,180	9,279	318,010
9	Northern Borders	68,967	1,713,041	125,473	2,385,486	46,344	1,204,563	10,849	344,323	19,664	247,932	3,545	80,483
10	Jazan	253,364	6,480,202	522,792	10,429,742	188,057	4,365,661	121,554	2,111,873	163,144	988,010	8,084	113,028
11	Najran	99,101	2,926,860	221,624	4,451,842	63,093	1,544,983	9,840	133,248	5,345	76,756	2,865	32,446
12	Al-Bahah	66,003	1,888,739	121,116	2,324,187	38,713	892,963	28,158	457,329	17,303	120,658	736	19,170
13	Al-Jouf	98,497	1,998,639	192,606	2,934,588	67,323	1,989,503	17,775	403,004	23,173	184,202	3,433	81,648
Total of the Kingdom		6,375,944	154,919,950	13,079,957	247,584,572	4,654,316	105,110,499	3,302,706	51,477,660	3,343,204	17,302,890	665,056	17,914,608

Reference: Household Energy Survey 2018

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	734,360	19,006,936	1,710,497	34,295,334	619,028	14,660,764	199,239	3,491,455	164,285	1,164,460	199,607	5,625,641
2	Makkah	121,368	3,355,543	198,999	3,989,405	74,589	1,788,853	28,174	508,964	25,574	113,971	11,950	506,401
3	Madinah	106,814	2,597,772	158,534	3,219,461	58,480	1,506,304	37,064	662,350	79,054	428,801	1,462	49,515
4	Al-Qassim	251,812	6,365,176	491,142	10,237,380	185,064	4,768,641	81,989	1,553,240	116,715	536,403	48,476	1,191,292
5	Eastern Region	223,668	5,304,145	518,538	9,410,952	289,254	5,894,420	84,896	1,526,798	102,727	446,401	19,825	550,970
6	Asir	275,539	8,120,669	491,749	10,108,438	206,265	4,775,346	166,127	2,815,958	366,828	1,856,089	46,664	1,244,948
7	Tabuk	147,282	3,435,942	266,072	4,801,685	98,476	1,989,422	25,123	380,726	19,102	93,484	6,928	234,257
8	Hail	162,444	4,881,948	311,803	6,503,593	97,290	2,805,549	53,887	1,202,083	119,083	550,052	23,915	768,541
9	Northern Borders	66,264	1,645,074	117,222	2,210,731	46,445	1,214,969	29,751	546,784	43,723	233,405	3,106	72,617
10	Jazan	1,708	42,538	4,855	92,233	1,934	35,987	2,370	29,286	5,313	29,467	474	7,324
11	Najran	61,448	2,211,068	154,800	3,184,611	57,548	1,503,236	38,278	696,480	102,381	570,679	1,491	30,391
12	Al-Bahah	66,366	2,053,606	118,303	2,360,853	52,412	1,362,735	32,385	604,736	44,682	284,835	7,971	275,263
13	Al-Jouf	98,099	3,044,820	192,969	4,095,690	67,295	1,987,672	27,540	552,687	55,557	220,806	10,949	372,829
Total of the Kingdom		2,317,171	62,065,237	4,735,482	94,510,366	1,854,082	44,293,897	806,822	14,571,547	1,245,024	6,528,853	382,818	10,929,990

Reference: Household Energy Survey 2018

Percentage of Electricity Sources Used in Houses in the Administrative Regions

Table 3

S/N	Administrative Region	Source of Elictricity			Total (%)
		Public Network (%)	Private network (%)	Private Generator (%)	
1	Riyadh	99.94	0.06	0.01	100.00
2	Makkah	99.88	0.09	0.04	100.00
3	Madinah	99.88	0.11	0.01	100.00
4	Al-Qassim	99.90	0.09	0.01	100.00
5	Eastern Region	99.82	0.09	0.09	100.00
6	Asir	99.88	0.06	0.06	100.00
7	Tabuk	99.99	0.01	0.01	100.00
8	Hail	99.88	0.11	0.01	100.00
9	Northern Borders	99.73	0.24	0.03	100.00
10	Jazan	99.54	0.22	0.24	100.00
11	Najran	99.75	0.18	0.07	100.00
12	Al-Bahah	99.75	0.25	0.00	100.00
13	Al-Jouf	98.59	1.37	0.04	100.00
Total of the Kingdom		99.85	0.10	0.04	100.00

Reference: Household Energy Survey 2018

Percentage of Electricity Source (Public Network) According to the Type of Houses 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	100.00	99.99	99.89	100.00	99.89	100.00
2	Makkah	99.96	99.37	99.92	98.92	100.00	99.07
3	Madinah	99.97	98.30	100.00	100.00	100.00	100.00
4	Al-Qassim	99.95	99.99	100.00	100.00	99.75	100.00
5	Eastern Region	99.29	99.86	98.69	99.95	99.95	97.75
6	Asir	99.96	99.90	100.00	99.94	99.82	100.00
7	Tabuk	99.98	99.64	100.00	100.00	100.00	0.00
8	Hail	99.98	99.97	100.00	100.00	99.59	100.00
9	Northern Borders	97.66	99.87	100.00	100.00	99.94	100.00
10	Jazan	99.62	99.48	96.37	98.32	99.99	0.00
11	Najran	99.97	99.88	99.96	99.68	99.77	99.04
12	Al-Bahah	100.00	99.96	100.00	100.00	99.99	94.40
13	Al-Jouf	100.00	100.00	100.00	100.00	99.93	75.24
Total of the Kingdom		99.89	99.82	99.60	99.77	99.94	98.80

Reference: Household Energy Survey 2018

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	99.99	99.95	99.58
2	Makkah	99.79	99.96	99.71
3	Madinah	99.87	99.88	100.00
4	Al-Qassim	99.99	99.73	100.00
5	Eastern Region	99.79	99.92	99.28
6	Asir	99.97	99.77	100.00
7	Tabuk	99.98	99.99	100.00
8	Hail	99.98	99.73	100.00
9	Northern Borders	99.48	99.96	100.00
10	Jazan	99.60	99.39	100.00
11	Najran	99.77	99.95	98.69
12	Al-Bahah	99.98	99.35	100.00
13	Al-Jouf	100.00	100.00	81.00
Total of the Kingdom		99.87	99.90	99.39

Reference: Household Energy Survey 2018

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	0.00	0.00	0.00	0.00	0.11	0.00
2	Makkah	0.00	0.49	0.00	1.09	0.00	0.00
3	Madinah	0.00	1.70	0.00	0.00	0.00	0.00
4	Al-Qassim	0.00	0.00	0.00	0.00	0.25	0.00
5	Eastern Region	0.00	0.00	0.42	0.00	0.05	2.25
6	Asir	0.00	0.08	0.00	0.00	0.00	0.00
7	Tabuk	0.02	0.00	0.00	0.00	0.00	0.00
8	Hail	0.00	0.01	0.00	0.00	0.42	0.00
9	Northern Borders	2.34	0.09	0.00	0.00	0.00	0.00
10	Jazan	0.29	0.00	2.40	0.00	0.00	0.00
11	Najran	0.00	0.00	0.00	0.00	0.18	0.96
12	Al-Bahah	0.00	0.00	0.00	0.00	0.02	5.60
13	Al-Jouf	0.00	0.00	0.00	0.00	0.00	24.76
Total for the Kingdom		0.03	0.12	0.19	0.14	0.05	1.04

Reference: Household Energy Survey 2018

Percentage of Electricity Source (Private Network) by Possession Type in the Administrative Regions

Table 7

S/N	Administrative Region	Possession type		
		Owned (%)	Rented (%)	Offered by Employer (%)
1	Riyadh	0.00	0.04	0.42
2	Makkah	0.21	0.01	0.00
3	Madinah	0.12	0.12	0.00
4	Al-Qassim	0.00	0.26	0.00
5	Eastern Region	0.02	0.06	0.63
6	Asir	0.06	0.00	0.00
7	Tabuk	0.00	0.01	0.00
8	Hail	0.01	0.27	0.00
9	Northern Borders	0.47	0.03	0.00
10	Jazan	0.12	0.24	0.00
11	Najran	0.13	0.00	1.31
12	Al-Bahah	0.01	0.65	0.00
13	Al-Jouf	0.00	0.00	18.51
Total for the Kingdom		0.08	0.06	0.52

Reference: Household Energy Survey 2018

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	0.01	0.11	0.00	0.00	0.00
2	Makkah	0.04	0.14	0.08	0.00	0.00	0.93
3	Madinah	0.03	0.00	0.00	0.00	0.00	0.00
4	Al-Qassim	0.06	0.01	0.00	0.00	0.00	0.00
5	Eastern Region	0.71	0.14	0.90	0.05	0.00	0.00
6	Asir	0.04	0.07	0.00	0.06	0.06	0.00
7	Tabuk	0.00	0.36	0.00	0.00	0.00	0.00
8	Hail	0.02	0.02	0.00	0.00	0.00	0.00
9	Northern Borders	0.00	0.04	0.00	0.00	0.06	0.00
10	Jazan	0.13	0.52	1.24	1.10	0.01	0.00
11	Najran	0.03	0.12	0.04	0.32	0.05	0.00
12	Al-Bahah	0.00	0.04	0.00	0.00	0.00	0.00
13	Al-Jouf	0.00	0.00	0.00	0.00	0.07	0.00
Total for the Kingdom		0.08	0.07	0.22	0.07	0.01	0.16

Reference: Household Energy Survey 2018

Percentage of Electricity Source (Private Generator) by Possession Type in the Administrative Regions

Table 9

S/N	Administrative Region	Possession type		
		Owned (%)	Rented (%)	Offered by Employer (%)
1	Riyadh	0.01	0.01	0.00
2	Makkah	0.01	0.03	0.29
3	Madinah	0.02	0.01	0.00
4	Al-Qassim	0.02	0.01	0.00
5	Eastern Region	0.19	0.02	0.09
6	Asir	0.02	0.11	0.00
7	Tabuk	0.02	0.00	0.00
8	Hail	0.02	0.00	0.00
9	Northern Borders	0.05	0.02	0.00
10	Jazan	0.28	0.18	0.00
11	Najran	0.10	0.05	0.00
12	Al-Bahah	0.01	0.00	0.00
13	Al-Jouf	0.00	0.00	0.49
Total for the Kingdom		0.05	0.03	0.09

Reference: Household Energy Survey 2018

Percentage of Housing Units Which Use Solar Energy in the Administrative Region

Table 10

S/N	Administrative Region	Yes (%)	No (%)	Total (%)
1	Riyadh	1.78	98.22	100.00
2	Makkah	1.18	98.82	100.00
3	Madinah	1.10	98.90	100.00
4	Al-Qassim	0.98	99.02	100.00
5	Eastern Region	1.95	98.05	100.00
6	Asir	1.06	98.94	100.00
7	Tabuk	1.10	98.90	100.00
8	Hail	2.80	97.20	100.00
9	Northern Borders	1.40	98.60	100.00
10	Jazan	1.24	98.76	100.00
11	Najran	1.88	98.12	100.00
12	Al-Bahah	0.59	99.41	100.00
13	Al-Jouf	0.68	99.32	100.00
Total for the Kingdom		1.45	98.55	100.00

Reference: Household Energy Survey 2018

Percentage of Fuel Used in the Unit for Cooking in the Administrative Regions

Table 11

S/N	Administrative Region	Fuel Used for Cooking				
		Gas (%)	Electricity (%)	Wood(%)	Other(%)	Total (%)
1	Riyadh	90.48	9.24	0.02	0.26	100.00
2	Makkah	94.19	5.17	0.34	0.30	100.00
3	Madinah	91.62	8.08	0.30	0.00	100.00
4	Al-Qassim	97.06	2.94	0.00	0.00	100.00
5	Eastern Region	75.18	24.57	0.04	0.21	100.00
6	Asir	94.02	5.41	0.49	0.08	100.00
7	Tabuk	97.40	1.89	0.42	0.29	100.00
8	Hail	94.24	5.32	0.35	0.09	100.00
9	Northern Borders	97.16	2.54	0.20	0.10	100.00
10	Jazan	93.80	3.74	2.46	0.00	100.00
11	Najran	93.30	4.77	1.93	0.00	100.00
12	Al-Bahah	97.33	1.78	0.88	0.01	100.00
13	Al-Jouf	96.04	2.84	0.74	0.38	100.00
Total for the Kingdom		90.72	8.74	0.34	0.20	100.00

Reference: Household Energy Survey 2018

Percentage of Fuel Used in the Unit for Cooking (Gas) by Type of 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	99.44	92.06	98.19	92.87	87.55	91.90
2	Makkah	97.16	80.49	98.83	91.29	95.03	85.94
3	Madinah	98.24	44.65	93.70	82.70	93.88	92.85
4	Al-Qassim	98.43	97.26	99.00	96.01	95.92	99.35
5	Eastern Region	93.25	62.78	89.82	76.00	76.97	69.97
6	Asir	96.24	88.42	90.74	93.01	95.92	95.97
7	Tabuk	98.56	95.86	97.05	93.54	97.18	0.00
8	Hail	96.00	94.57	98.13	95.95	90.38	96.82
9	Northern Borders	94.60	95.84	99.24	97.42	97.56	99.67
10	Jazan	93.87	95.16	95.06	92.76	93.65	0.00
11	Najran	92.39	89.94	85.12	93.55	93.92	99.31
12	Al-Bahah	98.34	96.18	98.66	97.14	97.09	99.98
13	Al-Jouf	96.71	97.41	99.47	98.07	97.55	69.60
Total for the Kingdom		96.84	84.56	96.09	91.54	90.35	90.09

Reference: Household Energy Survey 2018

Percentage of Fuel Used in the Unit for Cooking (Gas) by Possession Type in the Administrative Regions

Table 13

S/N	Administrative Region	Possession type		
		Owned (%)	Rented (%)	Offered by Employer (%)
1	Riyadh	91.28	90.36	87.89
2	Makkah	92.76	95.45	91.74
3	Madinah	89.66	93.28	93.97
4	Al-Qassim	97.17	99.08	92.84
5	Eastern Region	72.35	76.42	79.65
6	Asir	91.95	96.21	95.75
7	Tabuk	97.02	97.75	97.23
8	Hail	94.55	97.56	54.16
9	Northern Borders	96.87	97.42	96.91
10	Jazan	94.50	92.54	90.90
11	Najran	90.80	95.25	97.91
12	Al-Bahah	97.36	97.09	99.80
13	Al-Jouf	96.97	97.86	79.84
Total for the Kingdom		90.29	91.31	89.01

Reference: Household Energy Survey 2018

Percentage of Fuel Used in the Unit for Cooking (Electricity) by Type of 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	0.24	7.92	1.81	7.13	12.16	6.19
2	Makkah	1.68	18.88	1.17	8.66	4.62	8.22
3	Madinah	0.61	55.31	6.30	17.30	6.12	7.15
4	Al-Qassim	1.57	2.73	1.00	3.99	4.08	0.65
5	Eastern Region	6.75	37.11	10.18	24.00	22.72	28.90
6	Asir	2.57	11.02	8.12	6.01	3.99	2.11
7	Tabuk	0.81	3.43	2.08	5.29	2.12	0.00
8	Hail	3.25	4.93	1.87	3.99	9.55	2.46
9	Northern Borders	4.82	3.65	0.66	1.83	2.41	0.33
10	Jazan	0.89	3.40	1.08	4.61	5.97	0.00
11	Najran	5.24	8.56	8.18	4.26	4.46	0.59
12	Al-Bahah	0.40	2.63	0.66	0.94	2.38	0.02
13	Al-Jouf	0.74	2.26	0.26	1.34	1.60	24.80
Total for the Kingdom		1.82	15.19	3.25	8.04	9.34	7.83

Reference: Household Energy Survey 2018

Percentage of Fuel Used in the Unit for Cooking (Electricity) by Possession Type in the Administrative Regions

Table 15

S/N	Administrative Region	Possession type		
		Owned (%)	Rented (%)	Offered by Employer (%)
1	Riyadh	8.67	9.22	12.11
2	Makkah	6.39	4.14	6.81
3	Madinah	9.70	6.72	6.03
4	Al-Qassim	2.83	0.93	7.16
5	Eastern Region	27.40	23.29	20.35
6	Asir	7.25	3.45	4.11
7	Tabuk	2.17	1.64	2.00
8	Hail	4.80	2.26	45.84
9	Northern Borders	2.57	2.46	3.09
10	Jazan	2.10	7.04	4.20
11	Najran	6.40	3.47	1.96
12	Al-Bahah	1.26	2.73	0.20
13	Al-Jouf	1.60	1.45	19.19
Total for the Kingdom		8.95	8.32	10.54

Reference: Household Energy Survey 2018

Percentage of Fuel Used in the Unit for Cooking (Wood) by Type of 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	0.02	0.02	0.00	0.00	0.00	0.20
2	Makkah	1.00	0.58	0.00	0.05	0.10	0.25
3	Madinah	1.15	0.00	0.00	0.00	0.00	0.00
4	Al-Qassim	0.00	0.01	0.00	0.00	0.00	0.00
5	Eastern Region	0.00	0.11	0.00	0.00	0.03	0.00
6	Asir	1.19	0.54	1.14	0.93	0.10	0.00
7	Tabuk	0.59	0.71	0.87	1.17	0.18	0.00
8	Hail	0.61	0.34	0.00	0.06	0.07	0.72
9	Northern Borders	0.44	0.40	0.10	0.34	0.01	0.00
10	Jazan	5.24	1.44	3.87	2.62	0.39	0.00
11	Najran	2.37	1.50	6.69	2.20	1.64	0.10
12	Al-Bahah	1.26	1.19	0.68	1.87	0.52	0.00
13	Al-Jouf	2.53	0.33	0.27	0.60	0.27	4.06
Total for the Kingdom		1.24	0.23	0.66	0.40	0.09	0.24

Reference: Household Energy Survey 2018

Percentage of Fuel Used in the Unit for Cooking (Wood) by Possession Type in the Administrative Regions

Table 17

S/N	Administrative Region	Possession type		
		Owned (%)	Rented (%)	Offered by Employer (%)
1	Riyadh	0.04	0.00	0.00
2	Makkah	0.78	0.08	0.00
3	Madinah	0.63	0.00	0.00
4	Al-Qassim	0.01	0.00	0.00
5	Eastern Region	0.06	0.03	0.00
6	Asir	0.77	0.22	0.15
7	Tabuk	0.83	0.16	0.00
8	Hail	0.51	0.16	0.00
9	Northern Borders	0.39	0.03	0.00
10	Jazan	3.41	0.42	4.90
11	Najran	2.81	1.28	0.13
12	Al-Bahah	1.35	0.18	0.00
13	Al-Jouf	1.27	0.14	0.00
Total for the Kingdom		0.70	0.09	0.06

Reference: Household Energy Survey 2018

Percentage of Fuel Used in the Unit for Cooking (Other) by Type of 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	0.30	0.00	0.00	0.00	0.30	2.14
2	Makkah	0.16	0.05	0.00	0.00	0.25	5.59
3	Madinah	0.00	0.00	0.00	0.00	0.00	0.00
4	Al-Qassim	0.00	0.00	0.00	0.00	0.00	0.00
5	Eastern Region	0.00	0.00	0.00	0.00	0.28	1.13
6	Asir	0.00	0.03	0.00	0.01	0.04	1.92
7	Tabuk	0.06	0.00	0.00	0.00	0.52	0.00
8	Hail	0.14	0.17	0.00	0.00	0.00	0.00
9	Northern Borders	0.15	0.12	0.00	0.25	0.02	0.00
10	Jazan	0.00	0.00	0.00	0.00	0.00	0.00
11	Najran	0.00	0.00	0.01	0.00	0.00	0.00
12	Al-Bahah	0.00	0.00	0.00	0.05	0.01	0.00
13	Al-Jouf	0.02	0.00	0.00	0.00	0.58	1.55
Total for the Kingdom		0.10	0.02	0.00	0.01	0.22	2.00

Reference: Household Energy Survey 2018

Percentage of Fuel Used in the Unit for Cooking (Other) by Possession Type in the Administrative Regions

Table 19

S/N	Administrative Region	Possession type		
		Owned (%)	Rented (%)	Offered by Employer (%)
1	Riyadh	0.00	0.46	0.00
2	Makkah	0.08	0.33	1.44
3	Madinah	0.00	0.00	0.00
4	Al-Qassim	0.00	0.00	0.00
5	Eastern Region	0.18	0.26	0.00
6	Asir	0.02	0.16	0.00
7	Tabuk	0.00	0.45	0.78
8	Hail	0.15	0.02	0.00
9	Northern Borders	0.17	0.03	0.00
10	Jazan	0.00	0.00	0.00
11	Najran	0.00	0.00	0.00
12	Al-Bahah	0.02	0.00	0.00
13	Al-Jouf	0.16	0.56	0.97
Total for the Kingdom		0.05	0.29	0.39

Reference: Household Energy Survey 2018

Percentage of Housing Units Which Use Biomass in the Administrative Regions

Table 20

S/N	Administrative Region	Yes (%)	No (%)	Total
1	Riyadh	10.96	89.04	100.00
2	Makkah	2.98	97.02	100.00
3	Madinah	2.08	97.92	100.00
4	Al-Qassim	16.37	83.63	100.00
5	Eastern Region	7.00	93.00	100.00
6	Asir	9.64	90.36	100.00
7	Tabuk	8.96	91.04	100.00
8	Hail	12.50	87.50	100.00
9	Northern Borders	9.30	90.70	100.00
10	Jazan	16.66	83.34	100.00
11	Najran	23.97	76.03	100.00
12	Al-Bahah	8.79	91.21	100.00
13	Al-Jouf	14.00	86.00	100.00
Total of the Kingdom		8.22	91.78	100.00

Reference: Household Energy Survey 2018

*usage of wood, coal and agricultural waste in (2017)

Percentage of Housing Units Which Use Biomass (Wood, Coal and Agricultural Waste) in the Administrative Regions

Table 21

S/N	Administrative Region	Number of Units	Wood		Coal		Agricultural Waste	
			Yes (%)	No (%)	Yes (%)	No (%)	Yes (%)	No (%)
1	Riyadh		15.42	84.58	17.47	82.54	0.00	100.00
2	Makkah		5.21	94.79	3.73	96.28	0.00	100.00
3	Madinah		3.84	96.16	2.40	97.60	0.00	100.00
4	Al-Qassim		28.74	71.26	20.00	80.00	0.36	99.64
5	Eastern Region		2.94	97.06	18.05	81.95	0.00	100.00
6	Asir		17.02	82.98	11.91	88.09	0.00	100.00
7	Tabuk		17.80	82.20	9.07	90.93	0.00	100.00
8	Hail		16.26	83.74	21.25	78.75	0.00	100.00
9	Northern Borders		13.27	86.73	14.62	85.38	0.00	100.00
10	Jazan		17.96	82.04	25.84	74.16	6.18	93.82
11	Najran		42.90	57.11	29.03	70.97	0.00	100.00
12	Al-Bahah		16.28	83.72	9.73	90.27	0.38	99.62
13	Al-Jouf		16.88	83.12	18.60	81.40	6.53	93.47
Total of the Kingdom			11.57	88.44	12.72	87.28	0.37	99.63

Reference: Household Energy Survey 2018

*usage of wood, coal and agricultural waste in (2017)

Percentage of Housing Units Which Use Biomass (Wood, Coal and Agricultural Waste) in the Kingdom

Table 22

	Number of Units	Type of Usage	Biomass Used		
			Wood	Coal	Agricultural Waste
Total of the Kingdom		cooking/ BBQ	12.50	31.90	1.20
		Heating	34.80	14.20	0.40
		Other	0.50	4.50	0.00

Reference: Household Energy Survey 2018

*usage of wood, coal and agricultural waste in (2017)

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	0.40	28.20	0.00
		Heating	45.50	16.80	0.00
		Other	0.60	8.40	0.00

Reference: Household Energy Survey 2018

*usage of wood, coal and agricultural waste in (2017)

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	27.80	24.30	0.00
		Heating	37.00	0.00	0.00
		Other	0.00	10.90	0.00

Reference: Household Energy Survey 2018

*usage of wood, coal and agricultural waste in (2017)

Percentage of Housing Units Which Use Biomass (Wood, Coal and Agricultural Waste) in the Madinah

Table 22-3

S/N	Administrative Region	Type of Usage	Biomass Used		
			Wood	Coal	Agricultural Waste
3	Madinah	cooking/ BBQ	21.00	25.00	0.00
		Heating	29.40	8.60	0.00
		Other	16.10	0.00	0.00

Reference: Household Energy Survey 2018

*usage of wood, coal and agricultural waste in (2017)

Percentage of Housing Units Which Use Biomass (Wood, Coal and Agricultural Waste) in the Al-Qassim

Table 22-4

S/N	Administrative Region	Type of Usage	Biomass Used		
			Wood	Coal	Agricultural Waste
4	Al-Qassim	cooking/ BBQ	0.10	23.70	0.00
		Heating	57.80	17.40	0.70
		Other	0.00	0.10	0.00

Reference: Household Energy Survey 2018

*usage of wood, coal and agricultural waste in (2017)

Percentage of Housing Units Which Use Biomass (Wood, Coal and Agricultural Waste) in the Eastern Region

Table 22-5

S/N	Administrative Region	Type of Usage	Biomass Used		
			Wood	Coal	Agricultural Waste
5	Eastern Region	cooking/ BBQ	1.10	81.20	0.00
		Heating	12.90	3.80	0.00
		Other	0.00	1.10	0.00

Reference: Household Energy Survey 2018

*usage of wood, coal and agricultural waste in (2017)

Percentage of Housing Units Which Use Biomass (Wood, Coal and Agricultural Waste) in the Asir

Table 22-6

S/N	Administrative Region	Type of Usage	Biomass Used		
			Wood	Coal	Agricultural Waste
6	Asir	cooking/ BBQ	17.00	14.70	0.00
		Heating	41.70	26.20	0.00
		Other	0.00	0.30	0.00

Reference: Household Energy Survey 2018

*usage of wood, coal and agricultural waste in (2017)

Percentage of Housing Units Which Use Biomass (Wood, Coal and Agricultural Waste) in the Tabuk

Table 22-7

S/N	Administrative Region	Type of Usage	Biomass Used		
			Wood	Coal	Agricultural Waste
7	Tabuk	cooking/ BBQ	11.00	10.70	0.00
		Heating	52.50	25.80	0.00
		Other	0.00	0.00	0.00

Reference: Household Energy Survey 2018

*usage of wood, coal and agricultural waste in (2017)

Percentage of Housing Units Which Use Biomass (Wood, Coal and Agricultural Waste) in the Hail

Table 22-8

S/N	Administrative Region	Type of Usage	Biomass Used		
			Wood	Coal	Agricultural Waste
8	Hail	cooking/ BBQ	12.70	31.30	0.00
		Heating	24.90	31.00	0.00
		Other	0.00	0.00	0.00

Reference: Household Energy Survey 2018

*usage of wood, coal and agricultural waste in (2017)

Percentage of Housing Units Which Use Biomass (Wood, Coal and Agricultural Waste) in the Northern Borders

Table 22-9

S/N	Administrative Region	Type of Usage	Biomass Used		
			Wood	Coal	Agricultural Waste
9	Northern Borders	cooking/ BBQ	14.20	31.40	0.00
		Heating	31.20	23.20	0.00
		Other	0.00	0.00	0.00

Reference: Household Energy Survey 2018

*usage of wood, coal and agricultural waste in (2017)

Percentage of Housing Units Which Use Biomass (Wood, Coal and Agricultural Waste) in the Jazan

Table 22-10

S/N	Administrative Region	Type of Usage	Biomass Used		
			Wood	Coal	Agricultural Waste
10	Jazan	cooking/ BBQ	35.30	50.80	12.20
		Heating	0.00	1.60	0.00
		Other	0.00	0.00	0.00

Reference: Household Energy Survey 2018

*usage of wood, coal and agricultural waste in (2017)

Percentage of Housing Units Which Use Biomass (Wood, Coal and Agricultural Waste) in the Najran

Table 22-11

S/N	Administrative Region	Type of Usage	Biomass Used		
			Wood	Coal	Agricultural Waste
11	Najran	cooking/ BBQ	26.80	20.90	0.00
		Heating	30.40	20.00	0.00
		Other	0.00	1.90	0.00

Reference: Household Energy Survey 2018

*usage of wood, coal and agricultural waste in (2017)

Percentage of Housing Units Which Use Biomass (Wood, Coal and Agricultural Waste) in the Al-Bahah

Table 22-12

S/N	Administrative Region	Type of Usage	Biomass Used		
			Wood	Coal	Agricultural Waste
12	Al-Bahah	cooking/ BBQ	55.30	17.40	0.00
		Heating	7.30	2.70	1.30
		Other	0.30	15.70	0.00

Reference: Household Energy Survey 2018

*usage of wood, coal and agricultural waste in (2017)

Percentage of Housing Units Which Use Biomass (Wood, Coal and Agricultural Waste) in the Al-Jouf

Table 22-13

S/N	Administrative Region	Type of Usage	Biomass Used		
			Wood	Coal	Agricultural Waste
13	Al-Jouf	cooking/ BBQ	17.10	15.50	8.30
		Heating	23.50	16.30	9.30
		Other	0.00	10.00	0.00

Reference: Household Energy Survey 2018

*usage of wood, coal and agricultural waste in (2017)

Percentage of Households Who Use Diesel (Fuel oil) in the Administrative Regions

Table 23

S/N	Administrative Region	Yes (%)	No (%)	Total (%)
1	Riyadh	0.08	99.92	100.00
2	Makkah	0.21	99.79	100.00
3	Madinah	0.29	99.71	100.00
4	Al-Qassim	0.15	99.85	100.00
5	Eastern Region	1.17	98.83	100.00
6	Asir	0.39	99.61	100.00
7	Tabuk	0.07	99.93	100.00
8	Hail	0.07	99.93	100.00
9	Northern Borders	0.42	99.58	100.00
10	Jazan	3.69	96.31	100.00
11	Najran	1.82	98.18	100.00
12	Al-Bahah	0.09	99.91	100.00
13	Al-Jouf	0.07	99.93	100.00
Total of the Kingdom		0.49	99.51	100.00

Reference: Household Energy Survey 2018

*Fuel usage in (2017)

Consumption of Diesel (Fuel Oil) in Housing Units by Type of Usage in the Administrative Regions

Table 24

S/N	Administrative Region	Type of Usage	Units Using Diesel Percentage	Total Volume Consumed (Litre)	
				Winter	Rest of the Year
1	Riyadh	Electricity	0.08	50,168	45,973
2	Makkah		0.21	115,538	144,563
3	Madinah		0.29	12,473	24,829
4	Al-Qassim		0.15	7,836	14,106
5	Eastern Region		1.17	367,580	773,283
6	Asir		0.39	145,760	163,584
7	Tabuk		0.07	2,348	3,523
8	Hail		0.07	3,679	1,226
9	Northern Borders		0.42	16,981	3,376
10	Jazan		3.69	445,032	803,551
11	Najran		1.82	110,007	254,504
12	Al-Bahah		0.09	1,554	1,766
13	Al-Jouf		0.07	2,581	3,441
Total of the Kingdom			0.49	1,281,537	2,237,724

Reference: Household Energy Survey 2018

*Fuel usage in (2017)

Usage of Diesel (Fuel Oil) in Housing Units 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	1,682	49	60
2	Makkah			5,379	67	45
3	Madinah			492	101	101
4	Al-Qassim			392	35	48
5	Eastern Region			9,822	38	32
6	Asir			3,264	15	17
7	Tabuk			117	10	17
8	Hail			164	76	5
9	Northern Borders			203	75	15
10	Jazan			12,312	32	30
11	Najran			3,311	29	41
12	Al-Bahah			141	7	9
13	Al-Jouf			115	45	59
Total of the Kingdom				37,393	40	36

Reference: Household Energy Survey 2018

*Fuel usage in (2017)

Percentage of Households Who Use Gas (Kerosene) in the Administrative Regions

Table 26

S/N	Administrative Region	Yes (%)	No (%)	Total (%)
1	Riyadh	0.80	99.20	100.00
2	Makkah	0.13	99.87	100.00
3	Madinah	0.60	99.40	100.00
4	Al-Qassim	1.76	98.24	100.00
5	Eastern Region	1.08	98.92	100.00
6	Asir	0.67	99.33	100.00
7	Tabuk	0.35	99.65	100.00
8	Hail	11.46	88.54	100.00
9	Northern Borders	40.98	59.02	100.00
10	Jazan	2.26	97.74	100.00
11	Najran	0.30	99.70	100.00
12	Al-Bahah	0.85	99.15	100.00
13	Al-Jouf	35.15	64.85	100.00
Total of the Kingdom		1.78	98.22	100.00

Reference: Household Energy Survey 2018

*Fuel usage in (2017)

Consumption of Gas (Kerosene) in Housing Units 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	0.80	1,495,005	158,735
2	Makkah	0.13	20,313	67,424
3	Madinah	0.60	54,320	60,379
4	Al-Qassim	1.76	412,393	8,816
5	Eastern Region	1.08	2,153,256	37,075
6	Asir	0.67	166,325	392,184
7	Tabuk	0.35	74,423	42,490
8	Hail	11.46	2,221,544	250,055
9	Northern Borders	40.98	5,834,026	705,214
10	Jazan	2.26	31,183	37,257
11	Najran	0.30	33,184	30,007
12	Al-Bahah	0.85	81,222	78,750
13	Al-Jouf	35.15	4,983,276	263,137
Total of the Kingdom		1.78	17,560,472	2,131,524

Reference: Household Energy Survey 2018

*Fuel usage in (2017)

Usage of Gas (Kerosene) in Housing Units by 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	184,560	49	7
	Water Heating	Gas Babur	0	0	0
	Cooking	Gas Babur	10,143	14	14

Reference: Household Energy Survey 2018

*Fuel usage in (2017)

Usage of Gas (Kerosene) in Housing Units by 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	25,693	43	6
		Water Heating	Gas Babur	0	0	0
		Cooking	Gas Babur	0	0	0

Reference: Household Energy Survey 2018

*Fuel usage in (2017)

Usage of Gas (Kerosene) in Housing Units by 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	553	0	32
		Water Heating	Gas Babur	0	0	0
		Cooking	Gas Babur	2,973	14	13

Reference: Household Energy Survey 2018

*Fuel usage in (2017)

Usage of Gas (Kerosene) in Housing Units by 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	4,387	32	15
		Water Heating	Gas Babur	0	0	0
		Cooking	Gas Babur	209	14	10

Reference: Household Energy Survey 2018

*Fuel usage in (2017)

Usage of Gas (Kerosene) in Housing Units by 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	7,445	39	1
		Water Heating	Gas Babur	0	0	0
		Cooking	Gas Babur	0	0	0

Reference: Household Energy Survey 2018

*Fuel usage in (2017)

Usage of Gas (Kerosene) in Housing Units by 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	17,460	61	2
		Water Heating	Gas Babur	0	0	0
		Cooking	Gas Babur	0	0	0

Reference: Household Energy Survey 2018

*Fuel usage in (2017)

Usage of Gas (Kerosene) in Housing Units by 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	6,103	27	20
		Water Heating	Gas Babur	0	0	0
		Cooking	Gas Babur	443	13	12

Reference: Household Energy Survey 2018

*Fuel usage in (2017)

Usage of Gas (Kerosene) in Housing Units by 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	1,981	35	21
		Water Heating	Gas Babur	0	0	0
		Cooking	Gas Babur	0	0	0

Reference: Household Energy Survey 2018

*Fuel usage in (2017)

Usage of Gas (Kerosene) in Housing Units by the Average of Operation Hours in Hail

Table 28-8

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	36,674	55	8
		Water Heating	Gas Babur	0	0	0
		Cooking	Gas Babur	82	35	30

Reference: Household Energy Survey 2018

*Fuel usage in (2017)

Usage of Gas (Kerosene) in Housing Units by the Average of Operation Hours in Northern Borders

Table 28-9

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	34,494	46	8
		Water Heating	Gas Babur	0	0	0
		Cooking	Gas Babur	305	13	10

Reference: Household Energy Survey 2018

*Fuel usage in (2017)

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	0	0	0
		Water Heating	Gas Babur	0	0	0
		Cooking	Gas Babur	5,247	14	14

Reference: Household Energy Survey 2018

*Fuel usage in (2017)

Usage of Gas (Kerosene) in Housing Units by 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	333	21	12
		Water Heating	Gas Babur	0	0	0
		Cooking	Gas Babur	446	18	17

Reference: Household Energy Survey 2018

*Fuel usage in (2017)

Usage of Gas (Kerosene) in Housing Units by 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	1,978	36	18
		Water Heating	Gas Babur	0	0	0
		Cooking	Gas Babur	353	19	19

Reference: Household Energy Survey 2018

*Fuel usage in (2017)

Usage of Gas (Kerosene) in Housing Units by 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	47,459	55	5
		Water Heating	Gas Babur	0	0	0
		Cooking	Gas Babur	85	15	15

Reference: Household Energy Survey 2018

*Fuel usage in (2017)

Percentage of Households Who Use (LPG) Butane Gas in the Administrative Regions

Table 29

S/N	Administrative Region	Yes (%)	No (%)	Total (%)
1	Riyadh	93.31	6.69	100.00
2	Makkah	96.64	3.36	100.00
3	Madinah	94.38	5.62	100.00
4	Al-Qassim	98.16	1.84	100.00
5	Eastern Region	75.81	24.19	100.00
6	Asir	98.55	1.45	100.00
7	Tabuk	99.59	0.41	100.00
8	Hail	98.12	1.88	100.00
9	Northern Borders	99.79	0.21	100.00
10	Jazan	98.20	1.80	100.00
11	Najran	99.83	0.17	100.00
12	Al-Bahah	98.81	1.19	100.00
13	Al-Jouf	98.05	1.95	100.00
Total of the Kingdom		93.27	6.73	100.00

Reference: Household Energy Survey 2018

*Fuel usage in (2017)

Consumption of (LPG) Butane Gas in Houses According to By Type of Cylinder/Tank in the Administrative Regions

Table 30

S/N	Administrative Region	Percentage of Households Using LPG	Cylinder (Litre)	Tank (Litre)
1	Riyadh	93.31	176,484,505	116,978,202
2	Makkah	96.64	210,709,021	62,503,320
3	Madinah	94.38	51,897,294	8,806,338
4	Al-Qassim	98.16	30,511,679	28,313,523
5	Eastern Region	75.81	82,015,310	14,649,121
6	Asir	98.55	63,391,885	10,350,939
7	Tabuk	99.59	27,493,788	1,862,092
8	Hail	98.12	23,630,137	237,122
9	Northern Borders	99.79	8,862,718	557,926
10	Jazan	98.20	31,732,572	3,868,730
11	Najran	99.83	17,106,947	163,229
12	Al-Bahah	98.81	11,210,150	878,097
13	Al-Jouf	98.05	11,299,903	4,860,103
Total of the Kingdom		93.27	746,345,908	254,028,741

Reference: Household Energy Survey 2018

*Fuel usage in (2017)

Number of Refilling Times of (LPG) Butane Gas in Houses According By Type of Cylinder/Tank in the Administrative Regions

Table 31

S/N	Administrative Region	Percentage of Households Using LPG	Cylinder	Tank
1	Riyadh	93.31	15,065,451	128,420
2	Makkah	96.64	18,426,659	64,556
3	Madinah	94.38	4,598,260	12,207
4	Al-Qassim	98.16	2,613,384	33,323
5	Eastern Region	75.81	7,288,781	15,295
6	Asir	98.55	5,535,922	10,417
7	Tabuk	99.59	2,443,188	1,991
8	Hail	98.12	2,100,457	327
9	Northern Borders	99.79	786,581	710
10	Jazan	98.20	2,820,673	5,445
11	Najran	99.83	1,520,085	200
12	Al-Bahah	98.81	970,942	1,483
13	Al-Jouf	98.05	1,003,159	5,910
Total of the Kingdom		93.27	65,173,542	280,285

Reference: Household Energy Survey 2018

*Fuel usage in (2017)

Total Annual Cost in Saudi Riyal of Refilling (LPG) Butane Gas in Houses 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	93.31	266,687,696	67,406,828
2	Makkah	96.64	318,404,743	36,017,879
3	Madinah	94.38	78,422,577	5,078,921
4	Al-Qassim	98.16	46,106,537	16,317,870
5	Eastern Region	75.81	123,934,246	8,440,945
6	Asir	98.55	95,792,181	5,963,205
7	Tabuk	99.59	41,546,168	1,072,753
8	Hail	98.12	35,707,763	136,713
9	Northern Borders	99.79	13,392,552	321,636
10	Jazan	98.20	47,951,442	2,230,681
11	Najran	99.83	25,850,497	94,073
12	Al-Bahah	98.81	16,939,783	506,663
13	Al-Jouf	98.05	17,075,410	2,800,946
Total of the Kingdom		93.27	1,127,811,595	146,389,113

Reference: Household Energy Survey 2018

*Fuel usage in (2017)

Average Operation Hours per Week of (LPG) Butane Gas Equipments in the Kingdom Houses

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	68,668	27	4
	Cooking	Gas Stove	5,558,761	20	21

Reference: Household Energy Survey 2018

*Fuel usage in (2017)

Average Operation Hours per Week of (LPG) Butane Gas Equipments in Riyadh Houses

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	23,245	26	5
		Cooking	Gas Stove	1,350,507	19	20

Reference: Household Energy Survey 2018

*Fuel usage in (2017)

Average Operation Hours per Week of (LPG) Butane Gas Equipments in Makkah Houses

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	5,602	31	6
		Cooking	Gas Stove	1,580,109	18	21

Reference: Household Energy Survey 2018

*Fuel usage in (2017)

Average Operation Hours per Week of (LPG) Butane Gas Equipments in Madinah Houses

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	13,654	29	3
		Cooking	Gas Stove	388,589	21	23

Reference: Household Energy Survey 2018

*Fuel usage in (2017)

Average Operation Hours per Week of (LPG) Butane Gas Equipments in Al-Qassim Houses

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	5,681	33	6
		Cooking	Gas Stove	279,710	20	20

Reference: Household Energy Survey 2018

*Fuel usage in (2017)

Average Operation Hours per Week of (LPG) Butane Gas Equipments in Eastern Region Houses

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	5,617	26	2
		Cooking	Gas Stove	648,509	24	24

Reference: Household Energy Survey 2018

*Fuel usage in (2017)

Average Operation Hours per Week of (LPG) Butane Gas Equipments in Asir Houses

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	3,990	13	9
		Cooking	Gas Stove	419,425	21	22

Reference: Household Energy Survey 2018

*Fuel usage in (2017)

Average Operation Hours per Week of (LPG) Butane Gas Equipments in Tabuk Houses

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	2,199	11	5
		Cooking	Gas Stove	174,811	21	21

Reference: Household Energy Survey 2018

*Fuel usage in (2017)

Average Operation Hours per Week of (LPG) Butane Gas Equipments in Hail Houses

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	1,626	20	9
		Cooking	Gas Stove	127,154	20	21

Reference: Household Energy Survey 2018

*Fuel usage in (2017)

Average Operation Hours per Week of (LPG) Butane Gas Equipments in Northern Borders Houses

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	2,771	31	6
		Cooking	Gas Stove	58,089	18	18

Reference: Household Energy Survey 2018

*Fuel usage in (2017)

Average Operation Hours per Week of (LPG) Butane Gas Equipments in Jazan Houses

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	251,928	16	17

Reference: Household Energy Survey 2018

*Fuel usage in (2017)

Average Operation Hours per Week of (LPG) Butane Gas Equipments in Najran Houses

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	999	7	3
		Cooking	Gas Stove	113,139	19	20

Reference: Household Energy Survey 2018

*Fuel usage in (2017)

Average Operation Hours per Week of (LPG) Butane Gas Equipments in Al-Bahah Houses

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	1,150	10	4
		Cooking	Gas Stove	84,844	16	20

Reference: Household Energy Survey 2018

*Fuel usage in (2017)

Average Operation Hours per Week of (LPG) Butane Gas Equipments in Al-Jouf Houses

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	2,133	37	7
		Cooking	Gas Stove	81,948	19	19

Reference: Household Energy Survey 2018

*Fuel usage in (2017)

Percentage of Houses 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	100.00	0.00	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	100.00	0.00	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	99.89	0.11	100.00
Total of the Kingdom		99.89	0.11	100.00

Reference: Household Energy Survey 2018

*Fuel usage in (2017)

Percentage of Houses 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	86.17	13.83	100.00
2	Makkah	85.25	14.75	100.00
3	Madinah	85.58	14.42	100.00
4	Al-Qassim	85.79	14.21	100.00
5	Eastern Region	84.76	15.24	100.00
6	Asir	75.82	24.18	100.00
7	Tabuk	94.77	5.23	100.00
8	Hail	87.39	12.61	100.00
9	Northern Borders	90.27	9.73	100.00
10	Jazan	78.70	21.30	100.00
11	Najran	67.29	32.71	100.00
12	Al-Bahah	73.60	26.40	100.00
13	Al-Jouf	81.84	18.16	100.00
Total of the Kingdom		84.33	15.67	100.00

Reference: Household Energy Survey 2018

*Fuel usage in (2017)

Percentage of Houses Supplied with Electricity Regulator in the Administrative Regions

Table 36

S/N	Administrative Region	Electricity Regulator Availability		Total (%)
		Yes (%)	No (%)	
1	Riyadh	14.06	85.94	100.00
2	Makkah	24.82	75.18	100.00
3	Madinah	7.31	92.69	100.00
4	Al-Qassim	9.01	90.99	100.00
5	Eastern Region	10.30	89.70	100.00
6	Asir	12.46	87.54	100.00
7	Tabuk	12.99	87.01	100.00
8	Hail	10.13	89.87	100.00
9	Northern Borders	18.08	81.92	100.00
10	Jazan	11.62	88.38	100.00
11	Najran	10.37	89.63	100.00
12	Al-Bahah	11.76	88.24	100.00
13	Al-Jouf	13.83	86.17	100.00
Total of the Kingdom		15.38	84.62	100.00

Reference: Household Energy Survey 2018

*Fuel usage in (2017)

Houses Total Consumption and Cost of Electricity 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	9,687,768,245	704,968,500	58,643,764,566	6,788,343,838
2	Makkah	10,494,999,897	714,318,115	55,099,747,098	5,583,934,956
3	Madinah	2,476,853,485	160,472,919	13,002,433,159	1,142,518,355
4	Al-Qassim	1,850,955,238	124,437,945	9,086,565,021	797,739,786
5	Eastern Region	5,317,397,646	395,266,313	30,824,335,850	3,099,368,423
6	Asir	4,195,317,852	388,496,914	20,584,881,000	2,808,175,606
7	Tabuk	1,119,707,072	76,501,190	4,777,892,250	408,817,758
8	Hail	1,062,374,669	87,337,222	4,155,945,546	387,834,754
9	Northern Borders	464,963,984	34,654,249	1,751,695,471	160,173,685
10	Jazan	2,356,158,024	209,266,763	12,394,795,178	1,613,227,580
11	Najran	779,758,990	56,837,010	4,049,575,094	406,724,274
12	Al-Bahah	645,193,315	44,982,179	2,569,383,740	216,447,376
13	Al-Jouf	1,064,310,433	117,615,170	4,578,979,658	710,136,919
Total of the Kingdom		41,515,758,849	3,115,154,490	221,519,993,629	24,123,443,309

Reference: Household Energy Survey 2018

*Fuel usage in (2017)

Weekly Operation Hours Average of Electrical Energy Uses 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	6,695,129	48	5
	Water Heating	12,781,294	75	21
	Air Condition	32,646,304	20	56
	Lightening	231,305,019	53	55
	Cooking	3,381,270	9	10
	Food Preservation	8,512,342	167	167
	Total	295,321,358	67	63

Source: Household Energy Survey 2018

(2017) Electricity usage in*

Weekly Operation Hours Average of Electrical Energy Uses 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	1,958,174	50	5
		Water Heating	3,144,359	89	6
		Air Condition	7,571,503	11	60
		Lightening	62,355,717	58	59
		Cooking	745,611	9	9
		Food Preservation	2,292,420	168	167
		Total	78,067,784	71	63

Source: Household Energy Survey 2018

(2017) Electricity usage in*

Weekly Operation Hours Average of Electrical Energy Uses 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	460,403	43	2
		Water Heating	3,135,588	66	29
		Air Condition	9,337,731	30	54
		Lightening	53,854,607	51	55
		Cooking	864,891	8	9
		Food Preservation	2,048,948	168	168
		Total	69,702,168	65	66

Source: Household Energy Survey 2018

(2017) Electricity usage in*

Weekly Operation Hours Average of Electrical Energy Uses 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	363,137	61	5
		Water Heating	849,667	77	10
		Air Condition	2,269,101	16	56
		Lightening	10,682,504	55	57
		Cooking	233,116	11	11
		Food Preservation	541,566	167	167
		Total	14,939,091	68	60

Source: Household Energy Survey 2018

*Electricity usage in (2017)

Weekly Operation Hours Average of Electrical Energy Uses 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	591,979	38	1
		Water Heating	999,902	46	6
		Air Condition	1,589,428	7	42
		Lightening	22,471,393	36	38
		Cooking	204,107	6	6
		Food Preservation	528,306	168	168
		Total	26,385,116	55	51

Source: Household Energy Survey 2018

*Electricity usage in (2017)

Weekly Operation Hours Average of Electrical Energy Uses 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	1,223,776	44	2
		Water Heating	1,886,474	89	18
		Air Condition	4,385,394	5	68
		Lightening	35,435,239	60	60
		Cooking	631,956	12	12
		Food Preservation	1,286,062	168	168
		Total	44,848,901	70	66

Source: Household Energy Survey 2018

*Electricity usage in (2017)

Weekly Operation Hours Average of Electrical Energy Uses 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	844,033	58	20
		Water Heating	1,045,326	95	84
		Air Condition	2,129,468	31	52
		Lightening	17,936,727	52	55
		Cooking	214,369	8	9
		Food Preservation	556,265	168	168
		Total	22,726,188	73	71

Source: Household Energy Survey 2018

*Electricity usage in (2017)

Weekly Operation Hours Average of Electrical Energy Uses 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	315,892	33	3
		Water Heating	454,861	47	15
		Air Condition	1,314,906	11	38
		Lightening	3,883,387	40	45
		Cooking	87,710	7	7
		Food Preservation	252,811	168	168
		Total	6,309,568	54	53

Source: Household Energy Survey 2018

*Electricity usage in (2017)

Weekly Operation Hours Average of Electrical Energy Uses 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	345,663	60	6
		Water Heating	358,074	100	20
		Air Condition	857,900	24	70
		Lightening	5,326,669	55	56
		Cooking	75,680	8	8
		Food Preservation	224,660	161	167
		Total	7,188,646	72	64

Source: Household Energy Survey 2018

*Electricity usage in (2017)

Weekly Operation Hours Average of Electrical Energy Uses 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	115,304	47	5
		Water Heating	114,655	38	8
		Air Condition	318,804	21	57
		Lightening	2,415,693	49	49
		Cooking	48,717	7	7
		Food Preservation	92,321	159	167
		Total	3,105,495	57	56

Source: Household Energy Survey 2018

*Electricity usage in (2017)

Weekly Operation Hours Average of Electrical Energy Uses 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	513	28	9
		Water Heating	117,349	17	12
		Air Condition	1,502,816	45	55
		Lightening	5,880,240	56	62
		Cooking	89,866	8	10
		Food Preservation	307,582	167	167
		Total	7,898,367	74	78

Source: Household Energy Survey 2018

*Electricity usage in (2017)

Weekly Operation Hours Average of Electrical Energy Uses 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	189,337	30	3
		Water Heating	291,605	38	18
		Air Condition	559,538	9	41
		Lightening	4,866,818	31	38
		Cooking	72,800	13	14
		Food Preservation	138,257	162	165
		Total	6,118,354	47	49

Source: Household Energy Survey 2018

*Electricity usage in (2017)

Weekly Operation Hours Average of Electrical Energy Uses 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	141,514	45	13
		Water Heating	237,033	46	42
		Air Condition	398,306	20	35
		Lightening	3,497,004	33	41
		Cooking	56,996	7	8
		Food Preservation	121,096	163	164
		Total	4,451,948	54	55

Source: Household Energy Survey 2018

*Electricity usage in (2017)

Weekly Operation Hours Average of Electrical Energy Uses 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	145,403	54	4
		Water Heating	146,400	81	17
		Air Condition	411,409	26	54
		Lightening	2,699,022	40	43
		Cooking	55,451	7	7
		Food Preservation	122,048	163	168
		Total	3,579,733	65	55

Source: Household Energy Survey 2018

*Electricity usage in (2017)

Weekly Operation Hours Average of Electrical Energy Uses for (Heating) 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	1,929,053	75	17
	Radiant Heaters	2,394,961	38	3
	Oil Heater	2,024,949	49	3
	Fan Heater	346,166	37	4

Source: Household Energy Survey 2018

*Electricity usage in (2017)

Weekly Operation Hours Average of Electrical Energy Uses for (Heating) 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	609,359	92	14
		Radiant Heaters	671,686	37	2
		Oil Heater	489,827	46	2
		Fan Heater	187,303	35	2

Source: Household Energy Survey 2018

*Electricity usage in (2017)

Weekly Operation Hours Average of Electrical Energy Uses for (Heating) 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	81,671	60	21
		Radiant Heaters	132,625	40	2
		Oil Heater	229,884	45	0
		Fan Heater	16,224	34	21

Source: Household Energy Survey 2018

*Electricity usage in (2017)

Weekly Operation Hours Average of Electrical Energy Uses for (Heating) 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	176,464	77	8
		Radiant Heaters	61,875	32	1
		Oil Heater	60,449	57	1
		Fan Heater	64,348	38	9

Source: Household Energy Survey 2018

*Electricity usage in (2017)

Weekly Operation Hours Average of Electrical Energy Uses for (Heating) 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	160,017	43	2
		Radiant Heaters	225,387	22	1
		Oil Heater	197,504	58	1
		Fan Heater	9,071	12	0

Source: Household Energy Survey 2018

*Electricity usage in (2017)

Weekly Operation Hours Average of Electrical Energy Uses for (Heating)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	418,453	78	7
		Radiant Heaters	384,458	37	1
		Oil Heater	401,823	44	1
		Fan Heater	19,043	40	0

Source: Household Energy Survey 2018

*Electricity usage in (2017)

Weekly Operation Hours Average of Electrical Energy Uses for (Heating) 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	261,605	86	61
		Radiant Heaters	205,637	51	6
		Oil Heater	360,742	52	12
		Fan Heater	16,049	46	14

Source: Household Energy Survey 2018

*Electricity usage in (2017)

Weekly Operation Hours Average of Electrical Energy Uses for (Heating) 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	55,237	27	6
		Radiant Heaters	195,677	34	3
		Oil Heater	62,765	31	2
		Fan Heater	2,214	22	2

Source: Household Energy Survey 2018

*Electricity usage in (2017)

Weekly Operation Hours Average of Electrical Energy Uses for (Heating) 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	44,293	70	18
		Radiant Heaters	233,879	50	4
		Oil Heater	60,435	87	2
		Fan Heater	7,056	36	4

Source: Household Energy Survey 2018

*Electricity usage in (2017)

Weekly Operation Hours Average of Electrical Energy Uses for (Heating) 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	30,892	48	9
		Radiant Heaters	64,887	46	3
		Oil Heater	18,985	48	5
		Fan Heater	540	61	1

Source: Household Energy Survey 2018

*Electricity usage in (2017)

Weekly Operation Hours Average of Electrical Energy Uses for (Heating) 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	513	28	9
		Radiant Heaters	0	0	0
		Oil Heater	0	0	0
		Fan Heater	0	0	0

Source: Household Energy Survey 2018

*Electricity usage in (2017)

Weekly Operation Hours Average of Electrical Energy Uses for (Heating) 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	37,750	22	5
		Radiant Heaters	78,637	27	3
		Oil Heater	54,217	35	3
		Fan Heater	18,732	49	1

Source: Household Energy Survey 2018

*Electricity usage in (2017)

Weekly Operation Hours Average of Electrical Energy Uses for (Heating) 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	43,743	60	40
		Radiant Heaters	25,606	37	4
		Oil Heater	66,808	45	5
		Fan Heater	5,357	29	1

Source: Household Energy Survey 2018

*Electricity usage in (2017)

Weekly Operation Hours Average of Electrical Energy Uses for (Heating) 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	9,056	69	30
		Radiant Heaters	114,606	49	4
		Oil Heater	21,511	79	3
		Fan Heater	229	44	7

Source: Household Energy Survey 2018

*Electricity usage in (2017)

Weekly Operation Hours Average of Electrical Energy Uses for (Water Heating) 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	10,066,348	112	28
	Electrical Kettle	2,714,946	10	8

Source: Household Energy Survey 2018

*Electricity usage in (2017)

Weekly Operation Hours Average of Electrical Energy Uses for (Water Heating) 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	2,481,253	126	6
		Electrical Kettle	663,106	11	6

Source: Household Energy Survey 2018

*Electricity usage in (2017)

Weekly Operation Hours Average of Electrical Energy Uses for (Water Heating) 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	2,344,234	105	43
		Electrical Kettle	791,354	8	8

Source: Household Energy Survey 2018

*Electricity usage in (2017)

Weekly Operation Hours Average of Electrical Energy Uses for (Water Heating) 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	667,197	114	10
		Electrical Kettle	182,469	11	8

Source: Household Energy Survey 2018

*Electricity usage in (2017)

Weekly Operation Hours Average of Electrical Energy Uses for (Water Heating) 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	826,777	71	8
		Electrical Kettle	173,125	5	4

Source: Household Energy Survey 2018

*Electricity usage in (2017)

Weekly Operation Hours Average of Electrical Energy Uses for (Water Heating) 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	1,486,559	129	23
		Electrical Kettle	399,915	12	8

Source: Household Energy Survey 2018

*Electricity usage in (2017)

Weekly Operation Hours Average of Electrical Energy Uses for (Water Heating) 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	837,891	149	131
		Electrical Kettle	207,436	15	14

Source: Household Energy Survey 2018

*Electricity usage in (2017)

Weekly Operation Hours Average of Electrical Energy Uses for (Water Heating) 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	382,318	64	19
		Electrical Kettle	72,543	8	6

Source: Household Energy Survey 2018

*Electricity usage in (2017)

Weekly Operation Hours Average of Electrical Energy Uses for (Water Heating) 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	313,944	138	25
		Electrical Kettle	44,131	11	8

Source: Household Energy Survey 2018

*Electricity usage in (2017)

Weekly Operation Hours Average of Electrical Energy Uses for (Water Heating) 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	85,941	58	9
		Electrical Kettle	28,714	8	7

Source: Household Energy Survey 2018

*Electricity usage in (2017)

Weekly Operation Hours Average of Electrical Energy Uses for (Water Heating) 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	74,772	23	12
		Electrical Kettle	42,577	10	12

Source: Household Energy Survey 2018

*Electricity usage in (2017)

Weekly Operation Hours Average of Electrical Energy Uses for (Water Heating) 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	260,005	45	20
		Electrical Kettle	31,600	15	11

Source: Household Energy Survey 2018

*Electricity usage in (2017)

Weekly Operation Hours Average of Electrical Energy Uses for (Water Heating) 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	177,720	74	64
		Electrical Kettle	59,313	16	18

Source: Household Energy Survey 2018

*Electricity usage in (2017)

Weekly Operation Hours Average of Electrical Energy Uses for (Water Heating) 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	127,738	97	19
		Electrical Kettle	18,662	9	7

Source: Household Energy Survey 2018

*Electricity usage in (2017)

Weekly Operation Hours Average of Electrical Energy Uses for (Air Conditioning) 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	6,988,700	24	37
	Window AC	18,095,992	20	63
	Split AC	6,700,084	14	62
	Evaporative Cooler	612,106	13	67
	Central AC	249,422	18	82

Source: Household Energy Survey 2018

*Electricity usage in (2017)

Weekly Operation Hours Average of Electrical Energy Uses for (Air Conditioning) 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	580,986	11	35
		Window AC	4,158,330	12	65
		Split AC	2,559,347	10	64
		Evaporative Cooler	193,080	7	67
		Central AC	79,760	9	72

Source: Household Energy Survey 2018

*Electricity usage in (2017)

Weekly Operation Hours Average of Electrical Energy Uses for (Air Conditioning) 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	2,829,942	33	42
		Window AC	5,325,349	27	64
		Split AC	1,027,446	25	57
		Evaporative Cooler	116,974	32	83
		Central AC	38,020	48	82

Source: Household Energy Survey 2018

*Electricity usage in (2017)

Weekly Operation Hours Average of Electrical Energy Uses for (Air Conditioning) 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	466,071	22	34
		Window AC	1,495,482	14	64
		Split AC	233,196	13	64
		Evaporative Cooler	61,459	6	60
		Central AC	12,893	28	56

Source: Household Energy Survey 2018

*Electricity usage in (2017)

Weekly Operation Hours Average of Electrical Energy Uses for (Air Conditioning) 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	175,755	2	16
		Window AC	917,531	8	38
		Split AC	432,018	7	50
		Evaporative Cooler	58,432	3	94
		Central AC	5,693	13	11

Source: Household Energy Survey 2018

*Electricity usage in (2017)

Weekly Operation Hours Average of Electrical Energy Uses for (Air Conditioning) 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	473,187	5	29
		Window AC	2,153,718	4	72
		Split AC	1,615,740	4	73
		Evaporative Cooler	47,602	23	57
		Central AC	95,147	17	106

Source: Household Energy Survey 2018

*Electricity usage in (2017)

Weekly Operation Hours Average of Electrical Energy Uses for (Air Conditioning) 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	799,004	25	45
		Window AC	998,869	36	61
		Split AC	294,104	29	43
		Evaporative Cooler	32,853	32	43
		Central AC	4,637	36	61

Source: Household Energy Survey 2018

*Electricity usage in (2017)

Weekly Operation Hours Average of Electrical Energy Uses for (Air Conditioning) 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	554,074	11	23
		Window AC	705,537	11	52
		Split AC	49,620	10	51
		Evaporative Cooler	2,798	9	29
		Central AC	2,877	4	55

Source: Household Energy Survey 2018

*Electricity usage in (2017)

Weekly Operation Hours Average of Electrical Energy Uses for (Air Conditioning) 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	215,072	8	29
		Window AC	451,918	29	83
		Split AC	165,414	32	82
		Evaporative Cooler	21,746	6	72
		Central AC	3,749	15	61

Source: Household Energy Survey 2018

*Electricity usage in (2017)

Weekly Operation Hours Average of Electrical Energy Uses for (Air Conditioning) 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	63,333	6	25
		Window AC	186,406	27	68
		Split AC	63,875	24	65
		Evaporative Cooler	4,177	8	49
		Central AC	1,013	35	62

Source: Household Energy Survey 2018

*Electricity usage in (2017)

Weekly Operation Hours Average of Electrical Energy Uses for (Air Conditioning) 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	490,567	35	41
		Window AC	916,774	55	68
		Split AC	61,606	38	40
		Evaporative Cooler	32,845	7	8
		Central AC	1,025	20	41

Source: Household Energy Survey 2018

*Electricity usage in (2017)

Weekly Operation Hours Average of Electrical Energy Uses for (Air Conditioning) 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	147,599	9	25
		Window AC	334,485	11	48
		Split AC	48,779	7	53
		Evaporative Cooler	26,409	7	30
		Central AC	2265	1	61

Source: Household Energy Survey 2018

*Electricity usage in (2017)

Weekly Operation Hours Average of Electrical Energy Uses for (Air Conditioning) 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	110,745	10	23
		Window AC	190,793	25	38
		Split AC	88,242	19	42
		Evaporative Cooler	7,405	49	52
		Central AC	1120	45	48

Source: Household Energy Survey 2018

*Electricity usage in (2017)

Weekly Operation Hours Average of Electrical Energy Uses for (Air Conditioning) 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	82,365	9	36
		Window AC	260,798	31	61
		Split AC	60,696	30	53
		Evaporative Cooler	6,326	10	51
		Central AC	1223	18	85

Source: Household Energy Survey 2018

*Electricity usage in (2017)

Weekly Operation Hours Average of Electrical Energy Uses for (Lightening) 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	124,069,609	59	62
	Energy Saving Lamps	60,514,100	59	60
	Fluorescent Lamps	42,454,231	47	49
	Side Lamps	4,267,080	23	24

Source: Household Energy Survey 2018

*Electricity usage in (2017)

Weekly Operation Hours Average of Electrical Energy Uses for (Lightening) 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	26,363,050	59	61
		Energy Saving Lamps	18,023,616	69	65
		Fluorescent Lamps	16,822,064	59	62
		Side Lamps	1,146,987	30	32

Source: Household Energy Survey 2018

*Electricity usage in (2017)

Weekly Operation Hours Average of Electrical Energy Uses for (Lightening) 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	34,384,733	60	64
		Energy Saving Lamps	14,102,570	57	62
		Fluorescent Lamps	4,583,610	33	35
		Side Lamps	783,693	22	23

Source: Household Energy Survey 2018

*Electricity usage in (2017)

Weekly Operation Hours Average of Electrical Energy Uses for (Lightening) 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	7,904,645	67	69
		Energy Saving Lamps	1,716,593	56	57
		Fluorescent Lamps	764,470	28	28
		Side Lamps	296,796	28	29

Source: Household Energy Survey 2018

*Electricity usage in (2017)

Weekly Operation Hours Average of Electrical Energy Uses for (Lightening) 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	8,982,039	33	39
		Energy Saving Lamps	7,265,914	48	48
		Fluorescent Lamps	5,983,471	36	35
		Side Lamps	239,970	16	17

Source: Household Energy Survey 2018

*Electricity usage in (2017)

Weekly Operation Hours Average of Electrical Energy Uses for (Lightening) 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	20,264,530	64	64
		Energy Saving Lamps	11,210,311	69	70
		Fluorescent Lamps	3,349,411	53	53
		Side Lamps	610,987	18	19

Source: Household Energy Survey 2018

*Electricity usage in (2017)

Weekly Operation Hours Average of Electrical Energy Uses for (Lightening) 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	8,601,077	59	62
		Energy Saving Lamps	3,247,082	45	47
		Fluorescent Lamps	5,617,439	56	59
		Side Lamps	471,129	20	22

Source: Household Energy Survey 2018

*Electricity usage in (2017)

Weekly Operation Hours Average of Electrical Energy Uses for (Lightening) 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	3,222,354	44	49
		Energy Saving Lamps	394,496	33	40
		Fluorescent Lamps	219,186	35	44
		Side Lamps	47,352	9	8

Source: Household Energy Survey 2018

*Electricity usage in (2017)

Weekly Operation Hours Average of Electrical Energy Uses for (Lightening) 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	2,542,787	65	65
		Energy Saving Lamps	877,474	45	42
		Fluorescent Lamps	1,827,995	51	55
		Side Lamps	78,413	25	24

Source: Household Energy Survey 2018

*Electricity usage in (2017)

Weekly Operation Hours Average of Electrical Energy Uses for (Lightening) 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	1,818,288	65	66
		Energy Saving Lamps	409,856	33	30
		Fluorescent Lamps	144,783	42	40
		Side Lamps	42,766	13	13

Source: Household Energy Survey 2018

*Electricity usage in (2017)

Weekly Operation Hours Average of Electrical Energy Uses for (Lightening) 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	3,912,113	71	78
		Energy Saving Lamps	999,215	45	52
		Fluorescent Lamps	731,182	29	33
		Side Lamps	237,729	17	18

Source: Household Energy Survey 2018

*Electricity usage in (2017)

Weekly Operation Hours Average of Electrical Energy Uses for (Lightening) 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	2,255,047	34	44
		Energy Saving Lamps	584,997	24	25
		Fluorescent Lamps	1,854,683	29	31
		Side Lamps	172,091	18	20

Source: Household Energy Survey 2018

*Electricity usage in (2017)

Weekly Operation Hours Average of Electrical Energy Uses for (Lightening) 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	2,209,928	41	50
		Energy Saving Lamps	897,490	40	53
		Fluorescent Lamps	285,985	20	24
		Side Lamps	103,601	14	18

Source: Household Energy Survey 2018

*Electricity usage in (2017)

Weekly Operation Hours Average of Electrical Energy Uses for (Lightening) 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	1,609,018	42	48
		Energy Saving Lamps	784,485	50	50
		Fluorescent Lamps	269,951	30	31
		Side Lamps	35,567	12	13

Source: Household Energy Survey 2018

*Electricity usage in (2017)

Weekly Operation Hours Average of Electrical Energy Uses for (Cooking) 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	1,221,209	14	14
	Microwave	1,960,492	6	6
	Electric Grill	199,570	8	8

Source: Household Energy Survey 2018

*Electricity usage in (2017)

Weekly Operation Hours Average of Electrical Energy Uses for (Cooking) 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	210,051	14	15
		Microwave	493,209	6	7
		Electric Grill	42,351	7	8

Source: Household Energy Survey 2018

*Electricity usage in (2017)

Weekly Operation Hours Average of Electrical Energy Uses for (Cooking) 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	347,694	11	12
		Microwave	458,985	6	7
		Electric Grill	58,211	7	7

Source: Household Energy Survey 2018

*Electricity usage in (2017)

Weekly Operation Hours Average of Electrical Energy Uses for (Cooking) 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	85,394	18	18
		Microwave	139,634	7	7
		Electric Grill	8,088	7	9

Source: Household Energy Survey 2018

*Electricity usage in (2017)

Weekly Operation Hours Average of Electrical Energy Uses for (Cooking) 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	63,681	10	10
		Microwave	126,548	4	4
		Electric Grill	13,878	5	5

Source: Household Energy Survey 2018

*Electricity usage in (2017)

Weekly Operation Hours Average of Electrical Energy Uses for (Cooking) 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	260,056	18	19
		Microwave	324,412	6	6
		Electric Grill	47,488	11	11

Source: Household Energy Survey 2018

*Electricity usage in (2017)

Weekly Operation Hours Average of Electrical Energy Uses for (Cooking) 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	66,696	11	11
		Microwave	137,963	7	8
		Electric Grill	9,709	8	10

Source: Household Energy Survey 2018

*Electricity usage in (2017)

Weekly Operation Hours Average of Electrical Energy Uses for (Cooking) 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	46,210	8	8
		Microwave	39,037	6	6
		Electric Grill	2,463	5	16

Source: Household Energy Survey 2018

*Electricity usage in (2017)

Weekly Operation Hours Average of Electrical Energy Uses for (Cooking) 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	26,596	14	15
		Microwave	46,059	5	5
		Electric Grill	3,025	8	8

Source: Household Energy Survey 2018

*Electricity usage in (2017)

Weekly Operation Hours Average of Electrical Energy Uses for (Cooking) 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	14,537	8	8
		Microwave	32,389	6	6
		Electric Grill	1,790	11	10

Source: Household Energy Survey 2018

*Electricity usage in (2017)

Weekly Operation Hours Average of Electrical Energy Uses for (Cooking) 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	28,398	11	13
		Microwave	57,197	5	7
		Electric Grill	4,271	8	9

Source: Household Energy Survey 2018

*Electricity usage in (2017)

Weekly Operation Hours Average of Electrical Energy Uses for (Cooking) 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	36,069	16	17
		Microwave	32,400	9	10
		Electric Grill	4,331	12	14

Source: Household Energy Survey 2018

*Electricity usage in (2017)

Weekly Operation Hours Average of Electrical Energy Uses for (Cooking) 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	15,255	8	11
		Microwave	39,904	6	7
		Electric Grill	1,836	2	3

Source: Household Energy Survey 2018

*Electricity usage in (2017)

Weekly Operation Hours Average of Electrical Energy Uses for (Cooking) 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	20,572	15	13
		Microwave	32,752	2	3
		Electric Grill	2,127	12	15

Source: Household Energy Survey 2018

*Electricity usage in (2017)

Weekly Operation Hours Average of Electrical Energy Uses for (Food Preservation) 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	6,109,924	167	168
	Freezer	2,402,418	167	167

Reference: Household Energy Survey 2018

Electricity Usage in 2017 *

Weekly Operation Hours Average of Electrical Energy Uses for (Food Preservation) 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	1,578,931	168	167
		Freezer	713,489	168	167

Reference: Household Energy Survey 2018

Electricity Usage in 2017 *

Weekly Operation Hours Average of Electrical Energy Uses for (Food Preservation) 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	1,617,049	168	168
		Freezer	431,899	168	168

Reference: Household Energy Survey 2018

Electricity Usage in 2017 *

Weekly Operation Hours Average of Electrical Energy Uses for (Food Preservation) 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	402,959	167	167
		Freezer	138,608	165	165

Reference: Household Energy Survey 2018

* Electricity Usage in 2017

Weekly Operation Hours Average of Electrical Energy Uses for (Food Preservation) 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	311,538	168	168
		Freezer	216,767	168	168

Reference: Household Energy Survey 2018

* Electricity Usage in 2017

Weekly Operation Hours Average of Electrical Energy Uses for (Food Preservation) 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	887,501	168	168
		Freezer	398,562	168	168

Reference: Household Energy Survey 2018

* Electricity Usage in 2017

Weekly Operation Hours Average of Electrical Energy Uses for (Food Preservation) 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	419,238	168	168
		Freezer	137,028	167	167

Reference: Household Energy Survey 2018

* Electricity Usage in 2017

Weekly Operation Hours Average of Electrical Energy Uses for (Food Preservation) 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	173,600	168	168
		Freezer	79,211	168	168

Reference: Household Energy Survey 2018

* Electricity Usage in 2017

Weekly Operation Hours Average of Electrical Energy Uses for (Food Preservation) 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	139,285	159	167
		Freezer	85,375	163	167

Reference: Household Energy Survey 2018

* Electricity Usage in 2017

Weekly Operation Hours Average of Electrical Energy Uses for (Food Preservation) 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	53,628	159	167
		Freezer	38,694	158	167

Reference: Household Energy Survey 2018

* Electricity Usage in 2017

Weekly Operation Hours Average of Electrical Energy Uses for (Food Preservation) 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	243,159	167	167
		Freezer	64,422	166	166

Reference: Household Energy Survey 2018

* Electricity Usage in 2017

Weekly Operation Hours Average of Electrical Energy Uses for (Food Preservation) 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	110,638	164	167
		Freezer	27,618	154	156

Reference: Household Energy Survey 2018

* Electricity Usage in 2017

Weekly Operation Hours Average of Electrical Energy Uses for (Food Preservation) 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	86,096	163	163
		Freezer	35,000	164	165

Reference: Household Energy Survey 2018

* Electricity Usage in 2017

Weekly Operation Hours Average of Electrical Energy Uses for (Food Preservation) 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	86,303	166	168
		Freezer	35,745	157	168

Reference: Household Energy Survey 2018

* Electricity Usage in 2017

Weekly Operation Hours Average of Electrical Energy Uses for Some Equipments 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	8,412,343	34	37
	Washing Machine	5,602,946	8	9
	Iron	4,457,885	5	6
	Vacuum Cleaner	4,348,269	5	5
	Dishwasher	229,106	8	9
	Water Cooler	2,458,181	69	126
	Water Bump (Dynamo)	3,231,140	9	10
	PC	2,564,539	15	16
	Gaming Devices	1,402,716	17	20
	Other	2,508,762	21	21

Reference: Household Energy Survey 2018

* Electricity Usage in 2017

Weekly Operation Hours Average of Electrical Energy Uses for Some Equipments 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	2,238,375	31	35
		Washing Machine	1,373,298	8	8
		Iron	995,935	5	5
		Vacuum Cleaner	1,033,777	5	5
		Dishwasher	70,483	7	9
		Water Cooler	852,821	51	130
		Water Bump (Dynamo)	699,395	6	6
		PC	692,228	13	14
		Gaming Devices	353,307	16	18
		Other	459,970	27	27

Reference: Household Energy Survey 2018

* Electricity Usage in 2017

Weekly Operation Hours Average of Electrical Energy Uses for Some Equipments 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	2,188,783	35	37
		Washing Machine	1,540,210	7	8
		Iron	1,305,855	5	6
		Vacuum Cleaner	1,169,724	4	5
		Dishwasher	56,499	6	6
		Water Cooler	637,967	107	136
		Water Bump (Dynamo)	785,486	6	7
		PC	665,483	16	19
		Gaming Devices	404,682	16	20
		Other	1,004,883	11	12

Reference: Household Energy Survey 2018

* Electricity Usage in 2017

Weekly Operation Hours Average of Electrical Energy Uses for Some Equipments 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	503,718	31	34
		Washing Machine	385,877	10	11
		Iron	325,429	7	7
		Vacuum Cleaner	322,955	6	6
		Dishwasher	18,907	8	8
		Water Cooler	116,387	76	132
		Water Bump (Dynamo)	181,398	17	17
		PC	160,255	17	18
		Gaming Devices	78,297	20	21
		Other	73,155	13	14

Reference: Household Energy Survey 2018

* Electricity Usage in 2017

Weekly Operation Hours Average of Electrical Energy Uses for Some Equipments 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	382,514	30	30
		Washing Machine	312,932	8	8
		Iron	236,239	5	5
		Vacuum Cleaner	233,566	5	5
		Dishwasher	17,846	8	8
		Water Cooler	140,107	16	79
		Water Bump (Dynamo)	281,082	5	6
		PC	181,002	16	16
		Gaming Devices	102,873	16	16
		Other	28,178	8	9

Reference: Household Energy Survey 2018

* Electricity Usage in 2017

Weekly Operation Hours Average of Electrical Energy Uses for Some Equipments 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	1,338,814	34	34
		Washing Machine	751,666	8	8
		Iron	655,775	5	6
		Vacuum Cleaner	652,810	5	5
		Dishwasher	20,731	10	10
		Water Cooler	372,367	64	131
		Water Bump (Dynamo)	308,831	21	22
		PC	481,388	15	15
		Gaming Devices	205,846	17	17
		Other	113,760	20	21

Reference: Household Energy Survey 2018

* Electricity Usage in 2017

Weekly Operation Hours Average of Electrical Energy Uses for Some Equipments 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	520,040	47	50
		Washing Machine	397,411	8	9
		Iron	328,306	6	6
		Vacuum Cleaner	346,115	6	6
		Dishwasher	19,496	11	11
		Water Cooler	52,451	121	127
		Water Bump (Dynamo)	317,143	12	12
		PC	92,422	18	18
		Gaming Devices	80,150	22	28
		Other	115,441	10	10

Reference: Household Energy Survey 2018

* Electricity Usage in 2017

Weekly Operation Hours Average of Electrical Energy Uses for Some Equipments 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	244,650	26	28
		Washing Machine	170,956	9	9
		Iron	145,201	6	6
		Vacuum Cleaner	137,511	5	6
		Dishwasher	3,638	10	10
		Water Cooler	22,339	36	74
		Water Bump (Dynamo)	163,964	6	7
		PC	30,639	10	10
		Gaming Devices	16,774	13	14
		Other	167,930	9	9

Reference: Household Energy Survey 2018

* Electricity Usage in 2017

Weekly Operation Hours Average of Electrical Energy Uses for Some Equipments 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	200,946	48	49
		Washing Machine	122,988	8	8
		Iron	89,588	5	5
		Vacuum Cleaner	95,750	5	6
		Dishwasher	4,085	5	6
		Water Cooler	66,926	16	158
		Water Bump (Dynamo)	111,943	4	6
		PC	36,257	15	16
		Gaming Devices	29,793	24	25
		Other	11,396	7	7

Reference: Household Energy Survey 2018

* Electricity Usage in 2017

Weekly Operation Hours Average of Electrical Energy Uses for Some Equipments 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	87,578	39	39
		Washing Machine	51,190	7	8
		Iron	44,393	5	6
		Vacuum Cleaner	44,483	5	5
		Dishwasher	1,284	7	7
		Water Cooler	36,691	16	61
		Water Bump (Dynamo)	40,941	6	7
		PC	26,481	19	18
		Gaming Devices	24,260	29	29
		Other	2,749	10	10

Reference: Household Energy Survey 2018

* Electricity Usage in 2017

Weekly Operation Hours Average of Electrical Energy Uses for Some Equipments 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	303,375	39	45
		Washing Machine	223,904	11	13
		Iron	127,239	7	8
		Vacuum Cleaner	91,449	10	11
		Dishwasher	3,929	27	27
		Water Cooler	76,912	114	119
		Water Bump (Dynamo)	114,528	23	25
		PC	106,702	16	19
		Gaming Devices	37,099	22	24
		Other	321,168	61	64

Reference: Household Energy Survey 2018

* Electricity Usage in 2017

Weekly Operation Hours Average of Electrical Energy Uses for Some Equipments 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	156,399	34	36
		Washing Machine	104,867	12	14
		Iron	72,703	7	9
		Vacuum Cleaner	86,048	10	12
		Dishwasher	5,832	12	13
		Water Cooler	17,963	22	30
		Water Bump (Dynamo)	88,226	8	9
		PC	17,722	16	18
		Gaming Devices	18,112	17	21
		Other	201,669	17	19

Reference: Household Energy Survey 2018

* Electricity Usage in 2017

Weekly Operation Hours Average of Electrical Energy Uses for Some Equipments 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	120,905	29	33
		Washing Machine	85,238	8	9
		Iron	71,107	5	6
		Vacuum Cleaner	71,491	5	5
		Dishwasher	5,015	5	5
		Water Cooler	25,455	62	86
		Water Bump (Dynamo)	72,770	5	5
		PC	51,333	9	15
		Gaming Devices	31,519	11	19
		Other	6,215	6	6

Reference: Household Energy Survey 2018

* Electricity Usage in 2017

Weekly Operation Hours Average of Electrical Energy Uses for Some Equipments 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	126,245	33	35
		Washing Machine	82,411	4	5
		Iron	60,116	3	3
		Vacuum Cleaner	62,591	3	3
		Dishwasher	1,361	8	9
		Water Cooler	39,794	38	95
		Water Bump (Dynamo)	65,431	6	17
		PC	22,626	13	13
		Gaming Devices	20,003	23	28
		Other	2,249	5	5

Reference: Household Energy Survey 2018

* Electricity Usage in 2017

Percentage of Air-conditioning Temperature Used Within the House in the Administrative Regions

Table 46

S/N	Administrative Region	Low (%)	Medium (%)	High (%)
1	Riyadh	13.78	71.31	14.91
2	Makkah	13.87	73.89	12.25
3	Madinah	11.97	75.70	12.32
4	Al-Qassim	12.48	83.04	4.48
5	Eastern Region	11.86	72.76	15.37
6	Asir	20.13	69.29	10.58
7	Tabuk	12.79	68.45	18.76
8	Hail	11.93	67.38	20.68
9	Northern Borders	5.46	77.19	17.35
10	Jazan	10.40	73.53	16.08
11	Najran	6.87	70.67	22.46
12	Al-Bahah	24.77	61.59	13.64
13	Al-Jouf	3.23	79.47	17.30
Total of the Kingdom		13.33	72.92	13.75

Reference: Household Energy Survey 2018

Percentage of Heating Temperature Used Within the House in the Administrative Regions

Table 47

S/N	Administrative Region	Low (%)	Medium (%)	High (%)
1	Riyadh	28.96	63.94	7.10
2	Makkah	33.67	62.40	3.93
3	Madinah	40.96	57.02	2.02
4	Al-Qassim	22.94	74.72	2.34
5	Eastern Region	29.94	66.32	3.74
6	Asir	31.40	65.90	2.70
7	Tabuk	23.79	71.38	4.83
8	Hail	20.64	72.81	6.55
9	Northern Borders	15.38	79.50	5.13
10	Jazan	67.41	30.52	2.07
11	Najran	22.30	69.98	7.71
12	Al-Bahah	8.89	82.60	8.52
13	Al-Jouf	8.17	75.21	16.61
Total of the Kingdom		28.6	66.32	5.08

Reference: Household Energy Survey 2018

Percentage of the Number of Households Interested in Reducing and Rationalizing Electricity Consumption in the Administrative Regions

Table 48

S/N	Administrative Region	Interested (%)	Slightly Interested (%)	Not Interested (%)
1	Riyadh	59.32	36.08	4.60
2	Makkah	56.08	38.09	5.83
3	Madinah	65.29	29.69	5.02
4	Al-Qassim	56.98	40.62	2.40
5	Eastern Region	63.29	30.95	5.76
6	Asir	57.08	41.48	1.43
7	Tabuk	54.99	42.89	2.12
8	Hail	72.72	24.86	2.43
9	Northern Borders	34.78	61.77	3.45
10	Jazan	77.72	21.82	0.46
11	Najran	58.25	37.13	4.62
12	Al-Bahah	65.63	32.10	2.27
13	Al-Jouf	57.05	42.01	0.94
Total of the Kingdom		59.84	35.75	4.41

Reference: Household Energy Survey 2018

Percentage of the Number of Households Using Electrical Power Saving Devices in the Administrative Regions

Table 49

S/N	Administrative Region	Yes (%)	No (%)
1	Riyadh	28.13	71.87
2	Makkah	31.77	68.23
3	Madinah	20.74	79.26
4	Al-Qassim	32.47	67.53
5	Eastern Region	46.36	53.64
6	Asir	17.50	82.50
7	Tabuk	12.44	87.56
8	Hail	25.90	74.10
9	Northern Borders	9.34	90.66
10	Jazan	19.68	80.32
11	Najran	19.48	80.52
12	Al-Bahah	22.62	77.38
13	Al-Jouf	27.71	72.18
Total of the Kingdom		29.35	70.65

Reference: Household Energy Survey 2018

Percentage of Households Believing That Energy Conservation Measures Would Reduce their Financial Costs in the Administrative Regions

Table 50

S/N	Administrative Region	Yes (%)	Slightly Yes (%)	No (%)
1	Riyadh	53.55	41.20	5.25
2	Makkah	57.79	38.32	3.89
3	Madinah	57.53	38.72	3.74
4	Al-Qassim	58.58	38.73	2.69
5	Eastern Region	59.29	34.66	6.05
6	Asir	53.21	44.97	1.82
7	Tabuk	44.52	50.28	5.20
8	Hail	63.27	29.31	7.42
9	Northern Borders	55.45	42.52	2.03
10	Jazan	84.97	14.32	0.71
11	Najran	59.88	34.15	5.96
12	Al-Bahah	65.40	32.16	2.44
13	Al-Jouf	56.50	41.42	2.09
Total of the Kingdom		57.57	38.15	4.28

Reference: Household Energy Survey 2018

Percentage of Households Who Are Willing to Spend Some Money on Energy Saving Devices in the Administrative Regions

Table 51

S/N	Administrative Region	Yes (%)	Unsure (%)	No (%)
1	Riyadh	35.99	43.11	20.89
2	Makkah	52.40	37.15	10.45
3	Madinah	49.01	42.56	8.43
4	Al-Qassim	38.94	43.90	17.16
5	Eastern Region	41.97	40.31	17.73
6	Asir	41.05	46.73	12.22
7	Tabuk	43.11	41.29	15.60
8	Hail	42.69	32.05	25.27
9	Northern Borders	38.88	44.11	17.01
10	Jazan	52.02	32.32	15.66
11	Najran	45.87	23.12	31.01
12	Al-Bahah	44.13	47.34	8.52
13	Al-Jouf	43.32	39.15	17.53
Total of the Kingdom		44.19	40.24	15.57

Reference: Household Energy Survey 2018

Percentage of Most Effective Advertising Method Thought for Energy Conservation in the Administrative Regions

Table 52

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	20.50	7.40	6.30	9.40	6.00	6.80	4.10	13.00	17.70	4.00	4.70	0.00
2	Makkah	18.70	7.80	7.70	8.90	6.70	7.10	7.00	11.30	15.00	5.00	4.70	0.00
3	Madinah	20.00	6.90	5.60	7.20	7.90	6.00	5.90	14.70	16.90	6.10	2.90	0.00
4	Al-Qassim	24.10	5.40	6.50	6.70	7.40	5.70	5.60	12.80	19.30	4.10	2.20	0.00
5	Eastern Region	24.70	10.50	8.30	8.30	4.60	5.90	3.60	10.30	19.80	1.80	2.30	0.00
6	Asir	25.60	7.50	7.00	6.10	6.80	7.10	6.90	10.70	18.30	2.80	1.20	0.00
7	Tabuk	20.80	11.00	9.30	7.20	5.20	4.80	3.90	13.20	18.40	4.30	1.90	0.00
8	Hail	25.00	9.50	3.60	6.00	5.30	6.40	4.10	10.70	25.00	2.20	2.10	0.00
9	Northern Borders	22.80	5.90	5.20	8.10	2.90	4.40	4.10	16.40	27.00	1.40	1.70	0.00
10	Jazan	19.00	8.70	9.60	8.20	10.00	7.80	6.90	11.70	10.60	3.30	4.10	0.00
11	Najran	24.00	6.20	7.90	9.00	12.10	5.10	3.90	12.20	13.80	4.40	1.20	0.00
12	Al-Bahah	19.20	7.00	7.80	5.80	6.10	4.90	6.00	17.10	16.40	6.20	3.30	0.10
13	Al-Jouf	15.20	8.40	7.80	7.20	7.50	8.20	6.80	12.80	15.10	6.40	4.70	0.00
Total of the Kingdom		20.80	8.00	7.30	8.40	6.60	6.60	5.60	12.10	16.80	4.20	3.70	0.00

Reference: Household Energy Survey 2018

Percentage of Annual Costs of Electricity and Other Sources of Fuel to Total Annual Household Income Expenditure in the Administrative Region

Table 53

S/N	Administrative Region	Percentage (%)				
		Less than 5%	From 5 -10%	From 11 -15%	From 16 -20%	More than 20%
1	Riyadh	34.84	37.78	21.96	4.02	1.40
2	Makkah	42.69	41.93	11.67	2.83	0.88
3	Madinah	24.30	31.35	29.82	9.64	4.89
4	Al-Qassim	13.63	66.96	15.00	3.61	0.81
5	Eastern Region	36.99	42.79	14.32	3.42	2.48
6	Asir	41.91	37.90	10.34	5.29	4.56
7	Tabuk	37.67	49.96	7.26	3.60	1.52
8	Hail	25.59	49.30	15.81	4.78	4.52
9	Northern Borders	9.98	73.90	10.61	4.11	1.39
10	Jazan	30.06	54.77	10.79	2.25	2.14
11	Najran	19.85	63.08	12.75	3.90	0.42
12	Al-Bahah	30.50	45.27	9.42	8.15	6.66
13	Al-Jouf	31.97	56.02	9.58	0.96	1.47
Total of the Kingdom		35.14	43.08	15.76	4.01	2.00

Reference: Household Energy Survey 2018

Percentage of Households Who Are Willing to Use Solar Energy in Their Houses in the Administrative Regions

Table 54

S/N	Administrative Region	Yes (%)	No (%)	Unsure (%)
1	Riyadh	49.16	23.96	26.88
2	Makkah	41.62	29.53	28.85
3	Madinah	63.83	16.48	19.69
4	Al-Qassim	22.66	55.39	21.96
5	Eastern Region	52.84	22.02	25.14
6	Asir	50.53	26.64	22.83
7	Tabuk	47.69	25.59	26.72
8	Hail	40.71	25.02	34.27
9	Northern Borders	32.62	35.86	31.52
10	Jazan	60.45	24.63	14.92
11	Najran	53.78	33.30	12.92
12	Al-Bahah	63.60	17.67	18.74
13	Al-Jouf	61.74	22.04	16.23
Total of the Kingdom		48.01	26.68	25.31

Reference: Household Energy Survey 2018

Percentage of Thermal Insulation Avalability in Houses in the Administrative Regions

Table 55

S/N	Administrative Region	Yes (%)	No (%)	Unknown (%)
1	Riyadh	23.22	52.19	24.60
2	Makkah	19.65	62.50	17.85
3	Madinah	11.06	71.80	17.14
4	Al-Qassim	19.10	66.38	14.52
5	Eastern Region	36.34	41.89	21.77
6	Asir	4.84	80.09	15.06
7	Tabuk	13.88	70.79	15.33
8	Hail	12.58	75.24	12.18
9	Northern Borders	15.73	70.81	13.46
10	Jazan	8.80	83.54	7.66
11	Najran	10.55	78.70	10.74
12	Al-Bahah	11.32	76.50	12.19
13	Al-Jouf	9.66	80.47	9.87
Total of the Kingdom		19.97	61.35	18.68

Reference: Household Energy Survey 2018

Percentage of Water Source of Houses in the Administrative Regions

Table 56

S/N	Administrative Region	Water Source		
		Public Network (%)	Tank Cars (%)	Well (%)
1	Riyadh	92.91	5.92	1.17
2	Makkah	67.89	32.02	0.08
3	Madinah	79.36	18.82	1.82
4	Al-Qassim	79.39	17.23	3.38
5	Eastern Region	97.10	2.41	0.49
6	Asir	38.68	59.13	2.19
7	Tabuk	77.28	20.38	2.34
8	Hail	78.80	19.38	1.82
9	Northern Borders	96.75	3.25	0.00
10	Jazan	71.94	14.36	13.70
11	Najran	39.11	57.29	3.61
12	Al-Bahah	70.06	25.82	4.11
13	Al-Jouf	81.06	12.68	6.26
Total of the Kingdom		78.04	20.25	1.71

Reference: Household Energy Survey 2018

Percentage of Water Source (Public Network) According to the Type of Houses in the Administrative Regions

Table 57

S/N	Administrative Region	Type of Housing Unit					
		Traditional House (%)	Villa (%)	Storey in a Traditional House (%)	Storey in a Villa (%)	Apartment (%)	Other (%)
1	Riyadh	83.96	95.58	39.51	92.31	97.30	76.86
2	Makkah	36.54	72.71	60.27	60.08	79.81	68.17
3	Madinah	41.32	97.63	77.69	83.48	92.84	85.06
4	Al-Qassim	42.74	88.20	100.00	84.39	84.77	70.78
5	Eastern Region	92.23	99.35	95.42	98.47	97.97	65.16
6	Asir	9.11	26.13	37.70	29.75	57.18	3.83
7	Tabuk	57.46	100.00	63.64	90.43	89.08	0.00
8	Hail	56.89	91.58	82.71	94.76	93.89	49.85
9	Northern Borders	95.58	94.85	100.00	96.69	97.36	33.33
10	Jazan	57.59	51.14	81.44	62.52	88.09	0.00
11	Najran	40.56	24.90	64.51	34.76	47.93	14.40
12	Al-Bahah	25.52	67.62	63.23	72.83	77.40	80.53
13	Al-Jouf	62.50	89.89	82.58	91.84	81.26	53.97
Total of the Kingdom		47.08	84.94	62.87	76.01	86.97	63.26

Reference: Household Energy Survey 2018

Percentage of Water Source (Public Network) According to the Type of Possession in the Administrative Regions

Table 58

S/N	Administrative Region	Possession Type		
		Owned (%)	Rented (%)	Offered by Employer (%)
1	Riyadh	86.52	98.50	81.00
2	Makkah	49.91	81.16	60.04
3	Madinah	68.02	93.43	52.33
4	Al-Qassim	74.85	91.33	68.76
5	Eastern Region	97.89	97.20	93.02
6	Asir	27.83	54.74	10.29
7	Tabuk	64.93	95.47	32.58
8	Hail	71.02	89.97	78.09
9	Northern Borders	95.81	97.36	100.00
10	Jazan	62.43	92.68	44.78
11	Najran	39.78	40.30	29.45
12	Al-Bahah	65.46	78.41	57.81
13	Al-Jouf	79.61	88.99	50.51
Total of the Kingdom		67.47	88.22	67.33

Reference: Household Energy Survey 2018

Percentage of Water Source (Tank Cars) According to the Type of Houses in the Administrative Regions

Table 59

S/N	Administrative Region	Type of Housing Unit					
		Traditional House (%)	Villa (%)	Storey in a Traditional House (%)	Storey in a Villa (%)	Apartment (%)	Other (%)
1	Riyadh	11.85	3.56	58.23	7.22	2.56	11.08
2	Makkah	63.29	27.29	39.52	39.92	20.15	30.90
3	Madinah	51.72	2.37	22.31	16.52	7.13	14.94
4	Al-Qassim	55.61	11.41	0.00	15.61	8.63	20.87
5	Eastern Region	7.22	0.34	4.58	1.53	2.03	18.29
6	Asir	87.32	71.78	61.76	65.46	41.85	96.17
7	Tabuk	40.59	0.00	36.37	9.57	7.77	0.00
8	Hail	39.15	7.90	17.29	5.24	5.27	47.11
9	Northern Borders	4.42	5.15	0.00	3.31	2.64	66.67
10	Jazan	20.49	45.62	7.84	15.19	4.36	0.00
11	Najran	55.44	73.31	32.29	59.92	49.69	78.89
12	Al-Bahah	70.37	26.00	28.79	23.35	19.36	11.07
13	Al-Jouf	23.45	6.19	14.72	5.88	14.02	19.33
Total of the Kingdom		48.93	14.24	35.3	21.87	12.22	27.97

Reference: Household Energy Survey 2018

Percentage of Water Source (Tank Cars) According to the Type of Possession in the Administrative Regions

Table 60

S/N	Administrative Region	Possession Type		
		Owned (%)	Rented (%)	Offered by Employer (%)
1	Riyadh	11.98	1.36	11.60
2	Makkah	50.08	18.79	39.07
3	Madinah	28.52	6.54	44.12
4	Al-Qassim	24.44	6.05	19.08
5	Eastern Region	1.95	2.51	3.84
6	Asir	68.89	44.05	89.71
7	Tabuk	34.57	4.39	43.82
8	Hail	26.52	9.49	16.20
9	Northern Borders	4.19	2.64	0.00
10	Jazan	18.13	5.32	40.90
11	Najran	57.10	56.40	62.71
12	Al-Bahah	28.97	19.84	37.97
13	Al-Jouf	12.75	9.25	30.01
Total of the Kingdom		29.95	11.36	26.81

Reference: Household Energy Survey 2018

Percentage of Water Source (Well) According to the Type of Houses in the Administrative Regions

Table 61

S/N	Administrative Region	Type of Housing Unit					
		Traditional House (%)	Villa (%)	Storey in a Traditional House (%)	Storey in a Villa (%)	Apartment (%)	Other (%)
1	Riyadh	4.19	0.86	2.26	0.47	0.15	12.06
2	Makkah	0.16	0.00	0.21	0.00	0.04	0.93
3	Madinah	6.97	0.00	0.00	0.00	0.03	0.00
4	Al-Qassim	1.65	0.39	0.00	0.00	6.60	8.35
5	Eastern Region	0.56	0.31	0.00	0.00	0.00	16.55
6	Asir	3.57	2.09	0.55	4.79	0.96	0.00
7	Tabuk	1.95	0.00	0.00	0.00	3.16	0.00
8	Hail	3.96	0.52	0.00	0.00	0.84	3.04
9	Northern Borders	0.00	0.00	0.00	0.00	0.00	0.00
10	Jazan	21.93	3.24	10.72	22.29	7.56	0.00
11	Najran	4.00	1.79	3.20	5.32	2.38	6.72
12	Al-Bahah	4.10	6.38	7.98	3.82	3.24	8.40
13	Al-Jouf	14.05	3.92	2.70	2.28	4.73	26.69
Total of the Kingdom		3.98	0.82	1.83	2.12	0.81	8.77

Reference: Household Energy Survey 2018

Percentage of Water Source (Well) According to the Type of Possession in the Administrative Regions

Table 62

S/N	Administrative Region	Possession Type		
		Owned (%)	Rented (%)	Offered by Employer (%)
1	Riyadh	1.50	0.14	7.41
2	Makkah	0.01	0.04	0.89
3	Madinah	3.46	0.03	3.55
4	Al-Qassim	0.71	2.62	12.17
5	Eastern Region	0.16	0.29	3.14
6	Asir	3.29	1.21	0.00
7	Tabuk	0.50	0.14	23.60
8	Hail	2.47	0.54	5.71
9	Northern Borders	0.00	0.00	0.00
10	Jazan	19.44	2.00	14.31
11	Najran	3.12	3.31	7.84
12	Al-Bahah	5.57	1.76	4.22
13	Al-Jouf	7.65	1.76	19.49
Total of the Kingdom		2.58	0.41	5.86

Reference: Household Energy Survey 2018

Percentage of Drinking-Water Source Within Houses in the Administrative Regions

Table 63

S/N	Administrative Region	Drinking Water Source				
		Public Network (%)	Tank Cars (%)	Well (%)	Water Bottles (%)	Other (%)
1	Riyadh	18.13	16.62	0.54	64.34	0.37
2	Makkah	14.36	10.48	0.10	74.95	0.11
3	Madinah	32.30	15.22	0.70	51.79	0.00
4	Al-Qassim	36.25	29.37	0.73	33.18	0.47
5	Eastern Region	14.37	24.80	0.29	60.42	0.13
6	Asir	12.06	33.26	0.34	54.35	0.00
7	Tabuk	40.70	17.85	1.14	40.31	0.00
8	Hail	32.87	35.76	1.33	29.90	0.14
9	Northern Borders	15.68	67.65	0.16	16.51	0.00
10	Jazan	6.17	5.04	0.67	88.12	0.00
11	Najran	14.26	40.50	0.82	44.42	0.00
12	Al-Bahah	10.96	1.95	1.85	85.15	0.09
13	Al-Jouf	18.20	41.00	1.08	39.62	0.11
Total of the Kingdom		18.29	18.78	0.46	62.31	0.17

Reference: Household Energy Survey 2018

Percentage of Drinking-Water Source (Public Network) According to the Type of Houses in the Administrative Regions

Table 64

S/N	Administrative Region	Type of Housing Unit					
		Traditional House (%)	Villa (%)	Storey in a Traditional House (%)	Storey in a Villa (%)	Apartment (%)	Other (%)
1	Riyadh	13.45	24.38	5.30	22.04	16.07	8.25
2	Makkah	5.22	15.40	31.73	19.09	17.07	12.34
3	Madinah	16.19	50.28	52.39	23.75	37.30	11.95
4	Al-Qassim	17.97	49.41	61.92	30.35	29.51	42.27
5	Eastern Region	7.66	20.67	4.16	23.34	13.05	0.00
6	Asir	3.28	4.05	3.00	7.08	20.57	0.00
7	Tabuk	24.89	57.50	22.44	57.02	50.00	0.00
8	Hail	28.16	44.31	17.07	43.72	27.40	20.29
9	Northern Borders	21.98	26.34	2.73	15.15	13.43	0.00
10	Jazan	7.56	1.91	0.00	3.44	6.92	0.00
11	Najran	25.91	9.49	1.84	10.81	13.19	2.12
12	Al-Bahah	6.35	13.91	41.04	11.94	9.19	8.40
13	Al-Jouf	11.39	25.71	32.86	19.05	15.30	16.86
Total of the Kingdom		11.03	24.43	16.13	19.47	18.92	12.12

Reference: Household Energy Survey 2018

Percentage of Drinking-Water Source (Public Network) According to the Possession of Houses in the Administrative Regions

Table 65

S/N	Administrative Region	Possession Type		
		Owned (%)	Rented (%)	Offered by Employer (%)
1	Riyadh	21.79	16.60	12.33
2	Makkah	12.93	15.93	9.30
3	Madinah	30.29	36.43	12.60
4	Al-Qassim	38.86	37.71	26.27
5	Eastern Region	13.17	15.81	10.54
6	Asir	6.09	20.18	2.06
7	Tabuk	36.56	49.99	7.57
8	Hail	39.21	25.45	15.70
9	Northern Borders	19.27	11.87	18.28
10	Jazan	6.97	4.26	11.20
11	Najran	16.53	13.93	3.14
12	Al-Bahah	14.52	5.54	7.18
13	Al-Jouf	20.94	15.01	14.70
Total of the Kingdom		18.42	19.06	12.07

Reference: Household Energy Survey 2018

Percentage of Drinking-Water Source (Tank Cars) According to the Type of Houses in the Administrative Regions

Table 66

S/N	Administrative Region	Type of Housing Unit					
		Traditional House (%)	Villa (%)	Storey in a Traditional House (%)	Storey in a Villa (%)	Apartment (%)	Other (%)
1	Riyadh	33.91	25.90	60.51	14.21	8.91	14.80
2	Makkah	23.44	7.59	18.82	17.11	5.25	12.11
3	Madinah	42.77	7.12	38.30	30.84	4.01	9.56
4	Al-Qassim	51.22	31.74	11.59	51.85	14.32	30.44
5	Eastern Region	66.75	18.27	63.04	44.27	19.33	46.09
6	Asir	55.02	42.11	37.50	40.31	22.25	12.54
7	Tabuk	30.81	0.00	32.38	10.16	9.70	0.00
8	Hail	51.29	44.04	17.29	28.23	10.97	26.52
9	Northern Borders	75.67	64.22	91.31	69.61	60.63	83.33
10	Jazan	10.20	6.67	5.51	1.89	1.48	0.00
11	Najran	53.93	68.38	59.48	57.79	12.24	51.36
12	Al-Bahah	2.03	2.86	0.00	2.20	0.68	16.81
13	Al-Jouf	67.27	46.02	43.54	44.61	35.00	23.20
Total of the Kingdom		33.66	24.72	42.84	24.89	10.50	22.64

Reference: Household Energy Survey 2018

Percentage of Drinking-Water Source (Tank Cars) According to the Possession of Houses in the Administrative Regions

Table 67

S/N	Administrative Region	Possession Type		
		Owned (%)	Rented (%)	Offered by Employer (%)
1	Riyadh	28.44	9.64	13.28
2	Makkah	19.49	4.34	9.95
3	Madinah	27.29	2.95	19.17
4	Al-Qassim	40.34	15.53	26.04
5	Eastern Region	33.32	20.18	16.89
6	Asir	41.52	22.85	40.43
7	Tabuk	28.69	3.22	49.40
8	Hail	51.87	14.17	20.98
9	Northern Borders	70.42	65.45	62.01
10	Jazan	6.00	1.98	26.56
11	Najran	57.46	20.70	42.12
12	Al-Bahah	1.42	2.96	0.00
13	Al-Jouf	49.73	27.73	46.13
Total of the Kingdom		28.62	10.64	19.30

Reference: Household Energy Survey 2018

Percentage of Drinking-Water Source (Well) According to the Type of Houses in the Administrative Regions

Table 68

S/N	Administrative Region	Type of Housing Unit					
		Traditional House (%)	Villa (%)	Storey in a Traditional House (%)	Storey in a Villa (%)	Apartment (%)	Other (%)
1	Riyadh	1.93	0.25	1.13	0.67	0.46	0.56
2	Makkah	0.17	0.00	0.00	0.00	0.07	0.93
3	Madinah	1.69	0.00	0.00	0.00	0.41	0.00
4	Al-Qassim	1.65	0.64	0.00	0.42	0.25	2.09
5	Eastern Region	0.56	0.26	0.00	1.09	0.21	0.00
6	Asir	0.27	0.73	1.50	0.46	0.01	1.92
7	Tabuk	0.76	0.00	0.00	0.05	1.66	0.00
8	Hail	1.57	0.90	0.00	0.00	2.09	0.00
9	Northern Borders	0.00	0.09	0.00	0.00	0.34	0.00
10	Jazan	1.75	0.00	0.00	0.76	0.00	0.00
11	Najran	1.31	1.11	1.36	0.00	0.48	0.96
12	Al-Bahah	1.01	3.81	0.00	1.62	0.92	14.01
13	Al-Jouf	2.34	0.56	0.00	0.00	1.52	0.00
Total of the Kingdom		0.86	0.35	0.52	0.54	0.31	1.11

Reference: Household Energy Survey 2018

Percentage of Drinking-Water Source (Well) According to the Possession of Houses in the Administrative Regions

Table 69

S/N	Administrative Region	Possession Type		
		Owned (%)	Rented (%)	Offered by Employer (%)
1	Riyadh	0.88	0.29	0.79
2	Makkah	0.09	0.06	0.52
3	Madinah	1.05	0.43	0.00
4	Al-Qassim	0.80	0.48	1.01
5	Eastern Region	0.40	0.26	0.00
6	Asir	0.41	0.17	0.98
7	Tabuk	0.26	0.16	10.89
8	Hail	1.40	1.34	0.00
9	Northern Borders	0.00	0.33	0.00
10	Jazan	0.73	0.42	3.50
11	Najran	0.98	0.53	1.31
12	Al-Bahah	1.79	2.08	0.00
13	Al-Jouf	1.19	0.94	0.97
Total of the Kingdom		0.60	0.27	0.99

Reference: Household Energy Survey 2018

Percentage of Drinking-Water Source (Water Bottles) According to the Type of Houses in the Administrative Regions

Table 70

S/N	Administrative Region	Type of Housing Unit					
		Traditional House (%)	Villa (%)	Storey in a Traditional House (%)	Storey in a Villa (%)	Apartment (%)	Other (%)
1	Riyadh	50.71	48.36	33.07	62.88	74.43	75.95
2	Makkah	71.18	77.01	49.45	63.79	77.44	74.62
3	Madinah	39.35	42.61	9.31	45.41	58.29	78.49
4	Al-Qassim	29.16	17.19	26.48	16.54	55.70	25.20
5	Eastern Region	25.05	60.49	32.80	31.31	67.30	53.91
6	Asir	41.43	53.11	58.01	52.16	57.17	85.54
7	Tabuk	43.54	42.50	45.18	32.77	38.65	0.00
8	Hail	18.67	10.74	65.64	28.05	59.40	53.19
9	Northern Borders	2.36	9.36	5.96	15.24	25.61	16.67
10	Jazan	80.50	91.43	94.49	93.92	91.60	0.00
11	Najran	18.84	21.02	37.32	31.40	74.10	45.56
12	Al-Bahah	90.61	79.43	58.96	83.77	89.21	60.79
13	Al-Jouf	19.00	27.71	23.60	36.34	47.96	59.94
Total of the Kingdom		54.43	49.92	40.52	54.96	70.16	63.97

Reference: Household Energy Survey 2018

Percentage of Drinking-Water Source (Water Bottles) According to the Possession of Houses in the Administrative Regions

Table 71

S/N	Administrative Region	Possession Type		
		Owned (%)	Rented (%)	Offered by Employer (%)
1	Riyadh	48.07	73.36	73.34
2	Makkah	67.43	79.56	80.00
3	Madinah	41.37	60.19	68.23
4	Al-Qassim	19.33	45.86	46.68
5	Eastern Region	52.96	63.63	72.57
6	Asir	51.98	56.80	56.54
7	Tabuk	34.49	46.62	32.14
8	Hail	7.52	58.68	63.31
9	Northern Borders	10.31	22.36	19.71
10	Jazan	86.31	93.35	58.75
11	Najran	25.03	64.84	53.44
12	Al-Bahah	82.14	89.41	92.83
13	Al-Jouf	27.95	56.33	38.21
Total of the Kingdom		52.12	69.94	67.52

Reference: Household Energy Survey 2018

Percentage of Drinking-Water Source (Other) According to the Type of Houses in the Administrative Regions

Table 72

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	1.11	0.00	0.20	0.13	0.43
2	Makkah	0.00	0.00	0.00	0.00	0.18	0.00
3	Madinah	0.00	0.00	0.00	0.00	0.00	0.00
4	Al-Qassim	0.00	1.01	0.00	0.84	0.21	0.00
5	Eastern Region	0.00	0.31	0.00	0.00	0.10	0.00
6	Asir	0.00	0.00	0.00	0.00	0.00	0.00
7	Tabuk	0.00	0.00	0.00	0.00	0.00	0.00
8	Hail	0.31	0.00	0.00	0.00	0.14	0.00
9	Northern Borders	0.00	0.00	0.00	0.00	0.00	0.00
10	Jazan	0.00	0.00	0.00	0.00	0.00	0.00
11	Najran	0.00	0.00	0.00	0.00	0.00	0.00
12	Al-Bahah	0.00	0.00	0.00	0.48	0.00	0.00
13	Al-Jouf	0.00	0.00	0.00	0.00	0.22	0.00
Total of the Kingdom		0.01	0.58	0	0.13	0.11	0.16

Reference: Household Energy Survey 2018

Percentage of Drinking-Water Source (Other) According to the Possession of Houses in the Administrative Regions

Table 73

S/N	Administrative Region	Possession Type		
		Owned (%)	Rented (%)	Offered by Employer (%)
1	Riyadh	0.81	0.11	0.26
2	Makkah	0.07	0.12	0.23
3	Madinah	0.00	0.00	0.00
4	Al-Qassim	0.67	0.43	0.00
5	Eastern Region	0.16	0.12	0.00
6	Asir	0.00	0.00	0.00
7	Tabuk	0.00	0.00	0.00
8	Hail	0.00	0.36	0.00
9	Northern Borders	0.00	0.00	0.00
10	Jazan	0.00	0.00	0.00
11	Najran	0.00	0.00	0.00
12	Al-Bahah	0.14	0.00	0.00
13	Al-Jouf	0.20	0.00	0.00
Total of the Kingdom		0.25	0.11	0.13

Reference: Household Energy Survey 2018

Percentage of Drinking-Water Source (Other) According to the Possession of Houses in the Administrative Regions

Table 74

S/N	Administrative Region	Water Storage			
		Cement Reservoir (%)	Tin Reservoir (%)	Fiberglass Reservoir (%)	N/A (%)
1	Riyadh	75.82	0.93	23.26	0.00
2	Makkah	90.97	0.88	8.16	0.00
3	Madinah	89.00	0.15	10.85	0.00
4	Al-Qassim	94.49	0.09	5.42	0.00
5	Eastern Region	21.95	0.45	77.45	0.00
6	Asir	95.84	1.88	2.29	0.00
7	Tabuk	84.73	0.97	14.30	0.00
8	Hail	90.31	1.63	8.06	0.00
9	Northern Borders	56.44	10.13	33.44	0.00
10	Jazan	29.23	9.95	60.83	0.00
11	Najran	70.78	25.38	3.84	0.00
12	Al-Bahah	92.46	5.45	2.09	0.00
13	Al-Jouf	31.39	35.05	33.56	0.00
Total of the Kingdom		73.67	2.32	23.99	0.00

Reference: Household Energy Survey 2018

Percentage of Water Storage (Cement Reservoir) According to the Type of Houses in the Administrative Regions

Table 75

S/N	Administrative Region	Type of Housing Unit					
		Traditional House (%)	Villa (%)	Storey in a Traditional House (%)	Storey in a Villa (%)	Apartment (%)	Other (%)
1	Riyadh	66.51	75.21	77.51	74.92	78.02	67.38
2	Makkah	90.85	81.71	93.60	87.87	92.54	81.88
3	Madinah	80.67	58.84	88.84	82.09	95.71	86.86
4	Al-Qassim	92.50	99.47	99.24	99.16	95.27	69.74
5	Eastern Region	12.50	32.00	18.75	52.54	17.05	21.35
6	Asir	92.62	95.54	98.40	97.43	97.35	74.12
7	Tabuk	80.73	84.46	87.05	80.37	87.77	0.00
8	Hail	86.40	90.47	100.00	93.40	92.43	99.34
9	Northern Borders	3.97	62.34	21.42	75.87	63.71	80.00
10	Jazan	35.29	29.38	27.00	47.65	20.56	0.00
11	Najran	71.74	57.38	68.27	72.02	84.15	38.43
12	Al-Bahah	72.59	98.76	96.81	98.76	96.92	39.50
13	Al-Jouf	15.02	40.09	26.49	47.10	30.08	8.13
Total of the Kingdom		76.21	70.77	71.55	78.37	73.65	62.77

Reference: Household Energy Survey 2018

Percentage of Water Storage (Cement Reservoir) According to the Type of Possession in the Administrative Regions

Table 76

S/N	Administrative Region	Possession Type		
		Owned (%)	Rented (%)	Offered by Employer (%)
1	Riyadh	75.19	76.18	76.06
2	Makkah	89.37	92.95	83.20
3	Madinah	88.64	93.12	54.63
4	Al-Qassim	98.94	92.40	86.31
5	Eastern Region	21.74	20.73	30.52
6	Asir	96.91	96.29	82.46
7	Tabuk	85.51	83.97	85.31
8	Hail	88.54	92.86	90.01
9	Northern Borders	48.96	60.13	94.54
10	Jazan	38.45	11.15	16.09
11	Najran	72.01	76.10	37.76
12	Al-Bahah	95.85	88.63	71.31
13	Al-Jouf	34.79	31.05	8.30
Total of the Kingdom		73.98	74.11	68.71

Reference: Household Energy Survey 2018

Percentage of Water Storage (Tin Reservoir) According to the Type of Houses in the Administrative Regions

Table 77

S/N	Administrative Region	Type of Housing Unit					
		Traditional House (%)	Villa (%)	Storey in a Traditional House (%)	Storey in a Villa (%)	Apartment (%)	Other (%)
1	Riyadh	4.03	0.59	1.12	0.45	0.82	1.97
2	Makkah	2.06	0.14	1.97	0.98	0.46	1.68
3	Madinah	0.58	0.00	0.00	0.00	0.00	0.00
4	Al-Qassim	0.00	0.00	0.00	0.00	0.25	0.00
5	Eastern Region	1.11	0.17	0.00	0.00	0.37	4.51
6	Asir	5.61	2.24	1.08	0.09	0.41	20.13
7	Tabuk	1.99	0.00	0.00	0.00	0.52	0.00
8	Hail	3.60	1.05	0.00	1.25	0.00	0.66
9	Northern Borders	69.60	2.13	5.12	0.62	5.90	0.00
10	Jazan	20.64	9.62	8.38	6.95	2.61	0.00
11	Najran	27.61	40.12	29.08	21.24	11.45	52.90
12	Al-Bahah	24.52	0.00	2.74	0.19	0.48	59.38
13	Al-Jouf	58.32	16.69	28.30	24.48	37.43	67.59
Total of the Kingdom		5.71	1.52	3.41	1.56	1.22	9.54

Reference: Household Energy Survey 2018

Percentage of Water Storage (Tin Reservoir) According to the Type of Possession in the Administrative Regions

Table 78

S/N	Administrative Region	Possession Type		
		Owned (%)	Rented (%)	Offered by Employer (%)
1	Riyadh	0.65	0.89	2.53
2	Makkah	1.17	0.70	0.66
3	Madinah	0.00	0.16	1.42
4	Al-Qassim	0.00	0.00	0.51
5	Eastern Region	0.27	0.20	2.83
6	Asir	0.88	2.20	8.43
7	Tabuk	0.70	1.10	1.55
8	Hail	1.64	1.36	4.28
9	Northern Borders	11.60	9.65	0.00
10	Jazan	11.22	4.92	56.68
11	Najran	25.62	18.69	56.89
12	Al-Bahah	3.01	8.18	21.10
13	Al-Jouf	30.40	40.43	41.16
Total of the Kingdom		2.65	1.72	4.61

Reference: Household Energy Survey 2018

Percentage of Water Storage (Fiberglass Reservoir) According to the Type of Houses in the Administrative Regions

Table 79

S/N	Administrative Region	Type of Housing Unit					
		Traditional House (%)	Villa (%)	Storey in a Traditional House (%)	Storey in a Villa (%)	Apartment (%)	Other (%)
1	Riyadh	29.46	24.20	21.37	24.64	21.16	30.65
2	Makkah	7.09	18.15	4.43	11.15	7.00	16.45
3	Madinah	18.76	41.17	11.16	17.91	4.29	13.14
4	Al-Qassim	7.50	0.53	0.76	0.84	4.48	30.27
5	Eastern Region	86.39	67.49	81.25	47.46	82.44	74.14
6	Asir	1.77	2.22	0.52	2.49	2.24	5.75
7	Tabuk	17.28	15.54	12.95	19.63	11.71	0.00
8	Hail	10.00	8.48	0.00	5.35	7.57	0.00
9	Northern Borders	26.43	35.53	73.46	23.51	30.39	20.00
10	Jazan	44.08	61.00	64.61	45.40	76.83	0.00
11	Najran	0.66	2.50	2.66	6.74	4.40	8.67
12	Al-Bahah	2.89	1.24	0.46	1.05	2.61	1.12
13	Al-Jouf	26.66	43.22	45.21	28.42	32.49	24.27
Total of the Kingdom		18.08	27.65	25.03	20.07	25.11	27.69

Reference: Household Energy Survey 2018

Percentage of Water Storage (Fiberglass Reservoir) According to the Type of Possession in the Administrative Regions

Table 80

S/N	Administrative Region	Possession Type		
		Owned (%)	Rented (%)	Offered by Employer (%)
1	Riyadh	24.17	22.93	21.41
2	Makkah	9.46	6.35	16.14
3	Madinah	11.37	6.73	43.95
4	Al-Qassim	1.06	7.60	13.18
5	Eastern Region	77.82	78.90	66.65
6	Asir	2.21	1.52	9.11
7	Tabuk	13.79	14.93	13.14
8	Hail	9.82	5.78	5.71
9	Northern Borders	39.43	30.22	5.46
10	Jazan	50.33	83.93	27.23
11	Najran	2.37	5.22	5.36
12	Al-Bahah	1.15	3.18	7.60
13	Al-Jouf	34.81	28.52	50.54
Total of the Kingdom		23.35	24.14	26.68

Reference: Household Energy Survey 2018

Percentage of Houses Sanitation Type in the Administrative Regions

Table 81

S/N	Administrative Region	Type of Sanitation			
		Public Network (%)	Private Network (%)	Manhole (%)	N/A (%)
1	Riyadh	73.24	0.06	26.64	0.06
2	Makkah	61.31	1.14	37.54	0.02
3	Madinah	51.57	0.00	48.43	0.00
4	Al-Qassim	64.65	0.32	34.93	0.09
5	Eastern Region	85.70	0.42	13.89	0.00
6	Asir	51.09	0.05	48.69	0.16
7	Tabuk	58.66	0.07	41.27	0.00
8	Hail	37.68	0.82	61.50	0.00
9	Northern Borders	50.33	0.07	49.60	0.00
10	Jazan	8.39	0.71	90.90	0.00
11	Najran	6.62	0.42	91.27	1.70
12	Al-Bahah	1.99	0.09	97.93	0.00
13	Al-Jouf	48.63	0.00	51.26	0.11
Total of the Kingdom		61.51	0.46	37.96	0.07

Reference: Household Energy Survey 2018

Percentage of Sanitation Type (Public Network) According to the Type of Houses in the Administrative Regions

Table 82

S/N	Administrative Region	Type of Housing Unit					
		Traditional House (%)	Villa (%)	Storey in a Traditional House (%)	Storey in a Villa (%)	Apartment (%)	Other (%)
1	Riyadh	31.48	68.72	37.91	77.92	81.34	60.22
2	Makkah	29.06	42.98	73.07	51.47	76.53	44.72
3	Madinah	16.59	64.02	16.35	34.14	65.13	83.66
4	Al-Qassim	35.27	66.01	74.46	61.85	80.45	40.52
5	Eastern Region	75.22	92.98	77.51	62.79	88.49	41.24
6	Asir	24.27	36.25	42.93	40.82	70.27	21.25
7	Tabuk	40.93	75.00	36.25	74.47	69.64	0.00
8	Hail	14.29	52.52	62.65	51.10	50.22	15.28
9	Northern Borders	7.97	68.94	8.02	59.09	58.03	0.00
10	Jazan	2.58	1.91	4.80	5.12	15.00	0.00
11	Najran	4.51	3.70	1.37	13.62	9.89	0.00
12	Al-Bahah	0.00	5.72	0.00	2.39	1.91	0.00
13	Al-Jouf	24.79	59.63	25.22	55.68	49.30	44.94
Total of the Kingdom		26.84	63.27	43.21	58.48	73.43	44.12

Reference: Household Energy Survey 2018

Percentage of Sanitation Type (Public Network) According to the Type of Possession in the Administrative Regions

Table 83

S/N	Administrative Region	Possession Type		
		Owned (%)	Rented (%)	Offered by Employer (%)
1	Riyadh	59.34	84.09	57.19
2	Makkah	39.99	78.31	40.79
3	Madinah	36.37	66.75	48.88
4	Al-Qassim	55.25	85.78	49.58
5	Eastern Region	87.65	84.99	81.72
6	Asir	37.94	69.45	25.48
7	Tabuk	46.16	73.84	31.80
8	Hail	31.34	45.25	53.32
9	Northern Borders	40.41	57.53	77.26
10	Jazan	5.26	15.20	0.00
11	Najran	5.89	7.06	8.55
12	Al-Bahah	2.27	1.47	2.97
13	Al-Jouf	46.25	53.36	41.54
Total of the Kingdom		46.69	75.12	51.18

Reference: Household Energy Survey 2018

Percentage of Sanitation Type (Private Network) According to the Type of Houses in the Administrative Regions

Table 84

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	0.13	0.08	0.00
2	Makkah	0.57	3.44	1.54	4.34	0.88	0.00
3	Madinah	0.00	0.00	0.00	0.00	0.00	0.00
4	Al-Qassim	0.55	0.23	0.00	0.00	0.51	0.00
5	Eastern Region	0.55	0.00	0.00	0.00	0.04	14.91
6	Asir	0.00	0.00	0.00	0.00	0.12	0.00
7	Tabuk	0.00	0.00	0.00	0.00	0.13	0.00
8	Hail	0.31	0.26	0.00	0.00	2.49	0.00
9	Northern Borders	0.00	0.43	0.00	0.00	0.00	0.00
10	Jazan	0.00	0.00	0.00	0.00	1.59	0.00
11	Najran	0.00	0.00	0.00	1.24	0.81	0.00
12	Al-Bahah	0.84	0.00	0.00	0.00	0.00	0.00
13	Al-Jouf	0.00	0.00	0.00	0.00	0.00	0.00
Total of the Kingdom		0.31	0.48	0.23	0.65	0.42	1.58

Reference: Household Energy Survey 2018

Percentage of Sanitation Type (Private Network) According to the Type of Possession in the Administrative Regions

Table 85

S/N	Administrative Region	Possession Type		
		Owned (%)	Rented (%)	Offered by Employer (%)
1	Riyadh	0.06	0.03	0.26
2	Makkah	2.05	0.64	0.00
3	Madinah	0.00	0.00	0.00
4	Al-Qassim	0.30	0.52	0.00
5	Eastern Region	0.09	0.10	3.84
6	Asir	0.00	0.00	0.98
7	Tabuk	0.00	0.14	0.00
8	Hail	0.13	1.61	2.85
9	Northern Borders	0.00	0.15	0.00
10	Jazan	0.23	1.72	0.00
11	Najran	0.25	0.70	0.00
12	Al-Bahah	0.14	0.00	0.00
13	Al-Jouf	0.00	0.00	0.00
Total of the Kingdom		0.58	0.32	0.8

Reference: Household Energy Survey 2018

Percentage of Sanitation Type (Manhole) According to the Type of Houses in the Administrative Regions

Table 86

S/N	Administrative Region	Type of Housing Unit					
		Traditional House (%)	Villa (%)	Storey in a Traditional House (%)	Storey in a Villa (%)	Apartment (%)	Other (%)
1	Riyadh	68.52	31.28	62.09	21.95	18.58	38.49
2	Makkah	70.36	53.58	25.39	44.20	22.59	54.35
3	Madinah	83.41	35.98	83.67	65.86	34.87	16.36
4	Al-Qassim	64.18	33.76	25.54	38.15	19.04	58.44
5	Eastern Region	24.23	7.02	22.49	37.21	11.47	43.85
6	Asir	75.73	63.75	57.07	59.18	29.62	73.00
7	Tabuk	59.07	25.00	63.74	25.53	30.23	0.00
8	Hail	85.40	47.22	37.35	48.90	47.29	84.72
9	Northern Borders	92.03	30.64	91.98	40.90	41.97	100.00
10	Jazan	97.42	98.09	95.22	94.88	83.41	0.00
11	Najran	95.49	96.31	98.65	85.16	89.30	85.61
12	Al-Bahah	99.16	94.28	100.00	97.61	98.09	100.00
13	Al-Jouf	75.21	40.37	74.78	44.32	50.70	53.12
Total of the Kingdom		72.85	36.25	56.56	40.87	26.15	52.08

Reference: Household Energy Survey 2018

Percentage of Sanitation Type (Manhole) According to the Type of Possession in the Administrative Regions

Table 87

S/N	Administrative Region	Possession Type		
		Owned (%)	Rented (%)	Offered by Employer (%)
1	Riyadh	40.60	15.84	42.02
2	Makkah	57.96	21.05	58.92
3	Madinah	63.63	33.25	51.12
4	Al-Qassim	44.45	13.69	49.91
5	Eastern Region	12.26	14.91	14.44
6	Asir	62.06	30.30	72.56
7	Tabuk	53.84	26.02	68.20
8	Hail	68.53	53.13	43.83
9	Northern Borders	59.59	42.33	22.74
10	Jazan	94.51	83.08	100.00
11	Najran	93.86	92.25	71.85
12	Al-Bahah	97.59	98.53	97.03
13	Al-Jouf	53.56	46.64	58.46
Total of the Kingdom		52.72	24.53	47.24

Reference: Household Energy Survey 2018

Percentage of Sanitation Type (N/A) According to the Type of Houses in the Administrative Regions

Table 88

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	1.28
2	Makkah	0.00	0.00	0.00	0.00	0.00	0.93
3	Madinah	0.00	0.00	0.00	0.00	0.00	0.00
4	Al-Qassim	0.00	0.00	0.00	0.00	0.00	1.04
5	Eastern Region	0.00	0.00	0.00	0.00	0.00	0.00
6	Asir	0.00	0.00	0.00	0.00	0.00	5.75
7	Tabuk	0.00	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	0.00	0.00	0.00	0.00
10	Jazan	0.00	0.00	0.00	0.00	0.00	0.00
11	Najran	0.00	0.00	0.00	0.00	0.00	14.39
12	Al-Bahah	0.00	0.00	0.00	0.00	0.00	0.00
13	Al-Jouf	0.00	0.00	0.00	0.00	0.00	1.93
Total of the Kingdom		0.00	0.00	0.00	0.00	0.00	2.22

Reference: Household Energy Survey 2018

Percentage of Sanitation Type (N/A) According to the Type of Possession in the Administrative Regions

Table 89

S/N	Administrative Region	Possession Type		
		Owned (%)	Rented (%)	Offered by Employer (%)
1	Riyadh	0.00	0.03	0.53
2	Makkah	0.00	0.00	0.29
3	Madinah	0.00	0.00	0.00
4	Al-Qassim	0.00	0.00	0.51
5	Eastern Region	0.00	0.00	0.00
6	Asir	0.00	0.25	0.98
7	Tabuk	0.00	0.00	0.00
8	Hail	0.00	0.00	0.00
9	Northern Borders	0.00	0.00	0.00
10	Jazan	0.00	0.00	0.00
11	Najran	0.00	0.00	19.60
12	Al-Bahah	0.00	0.00	0.00
13	Al-Jouf	0.20	0.00	0.00
Total of the Kingdom		0.00	0.02	0.78

Reference: Household Energy Survey 2018

Percentage of Houses Waste Disposal Methods in the Administrative Regions

Table 90

S/N	Administrative Region	Waste Disposal Method		
		Public waste Container	combustion	Burial
1	Riyadh	99.96	0.04	0.00
2	Makkah	97.96	1.37	0.66
3	Madinah	99.93	0.07	0.00
4	Al-Qassim	99.72	0.28	0.00
5	Eastern Region	99.86	0.11	0.03
6	Asir	99.77	0.23	0.00
7	Tabuk	99.82	0.18	0.00
8	Hail	99.93	0.00	0.07
9	Northern Borders	100.00	0.00	0.00
10	Jazan	99.86	0.14	0.00
11	Najran	97.90	1.98	0.11
12	Al-Bahah	98.89	1.12	0.00
13	Al-Jouf	100.00	0.01	0.00
Total of the Kingdom		99.31	0.50	0.19

Reference: Household Energy Survey 2018

Percentage Waste Disposal Method (Public waste Container) According to the Type of Houses in the Administrative Regions

Table 91

S/N	Administrative Region	Type of Housing Unit					
		Traditional House (%)	Villa (%)	Storey in a Traditional House (%)	Storey in a Villa (%)	Apartment (%)	Other (%)
1	Riyadh	100.00	100.00	100.00	100.00	100.00	99.14
2	Makkah	93.48	93.47	97.92	100.00	99.95	100.00
3	Madinah	99.75	100.00	100.00	100.00	100.00	100.00
4	Al-Qassim	99.95	100.00	100.00	99.92	99.75	97.91
5	Eastern Region	100.00	99.95	100.00	100.00	99.86	98.20
6	Asir	98.21	100.00	100.00	100.00	100.00	100.00
7	Tabuk	99.51	100.00	100.00	100.00	99.99	0.00
8	Hail	99.79	100.00	100.00	100.00	100.00	100.00
9	Northern Borders	100.00	100.00	100.00	100.00	100.00	100.00
10	Jazan	99.62	100.00	100.00	100.00	99.98	0.00
11	Najran	99.78	100.00	100.00	100.00	100.00	82.73
12	Al-Bahah	90.38	99.91	100.00	99.76	99.84	100.00
13	Al-Jouf	99.94	100.00	100.00	100.00	100.00	100.00
Total of the Kingdom		97.05	99.15	99.69	99.99	99.95	97.97

Reference: Household Energy Survey 2018

Percentage Waste Disposal Method (Public waste Container) According to the Type of Possession in the Administrative Regions

Table 92

S/N	Administrative Region	Possession Type		
		Owned (%)	Rented (%)	Offered by Employer (%)
1	Riyadh	100.00	100.00	99.47
2	Makkah	95.06	99.74	100.00
3	Madinah	99.86	100.00	100.00
4	Al-Qassim	99.99	99.98	98.48
5	Eastern Region	99.89	99.90	99.50
6	Asir	99.55	100.00	100.00
7	Tabuk	99.59	99.99	100.00
8	Hail	99.87	100.00	100.00
9	Northern Borders	100.00	100.00	100.00
10	Jazan	99.99	100.00	92.30
11	Najran	99.88	100.00	76.48
12	Al-Bahah	98.90	99.42	91.56
13	Al-Jouf	99.99	100.00	100.00
Total of the Kingdom		98.65	99.9	98.92

Reference: Household Energy Survey 2018

Percentage Waste Disposal Method (Combustion) According to the Type of Houses in the Administrative Regions

Table 93

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	0.86
2	Makkah	4.50	3.88	2.08	0.00	0.04	0.00
3	Madinah	0.25	0.00	0.00	0.00	0.00	0.00
4	Al-Qassim	0.06	0.00	0.00	0.08	0.25	2.09
5	Eastern Region	0.00	0.05	0.00	0.00	0.09	1.80
6	Asir	1.80	0.00	0.00	0.00	0.00	0.00
7	Tabuk	0.49	0.00	0.00	0.00	0.01	0.00
8	Hail	0.00	0.00	0.00	0.00	0.00	0.00
9	Northern Borders	0.00	0.00	0.00	0.00	0.00	0.00
10	Jazan	0.38	0.00	0.00	0.00	0.02	0.00
11	Najran	0.22	0.00	0.00	0.00	0.00	16.31
12	Al-Bahah	9.62	0.10	0.00	0.24	0.16	0.00
13	Al-Jouf	0.06	0.00	0.00	0.00	0.00	0.00
Total of the Kingdom		2.12	0.51	0.31	0.01	0.04	1.96

Reference: Household Energy Survey 2018

Percentage Waste Disposal Method (Combustion) According to the Type of Possession in the Administrative Regions

Table 94

S/N	Administrative Region	Possession Type		
		Owned (%)	Rented (%)	Offered by Employer (%)
1	Riyadh	0.00	0.00	0.53
2	Makkah	3.21	0.27	0.00
3	Madinah	0.14	0.00	0.00
4	Al-Qassim	0.02	0.02	1.52
5	Eastern Region	0.03	0.10	0.50
6	Asir	0.45	0.00	0.00
7	Tabuk	0.41	0.01	0.00
8	Hail	0.00	0.00	0.00
9	Northern Borders	0.00	0.00	0.00
10	Jazan	0.01	0.00	7.70
11	Najran	0.13	0.00	22.21
12	Al-Bahah	1.10	0.58	8.44
13	Al-Jouf	0.01	0.00	0.00
Total of the Kingdom		0.9	0.1	1.05

Reference: Household Energy Survey 2018

Percentage Waste Disposal Method (Burial) According to the Type of Houses in the Administrative Regions

Table 95

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	0.00
2	Makkah	2.02	2.65	0.00	0.00	0.01	0.00
3	Madinah	0.00	0.00	0.00	0.00	0.00	0.00
4	Al-Qassim	0.00	0.00	0.00	0.00	0.00	0.00
5	Eastern Region	0.00	0.00	0.00	0.00	0.05	0.00
6	Asir	0.00	0.00	0.00	0.00	0.00	0.00
7	Tabuk	0.00	0.00	0.00	0.00	0.00	0.00
8	Hail	0.21	0.00	0.00	0.00	0.00	0.00
9	Northern Borders	0.00	0.00	0.00	0.00	0.00	0.00
10	Jazan	0.00	0.00	0.00	0.00	0.00	0.00
11	Najran	0.00	0.00	0.00	0.00	0.00	0.96
12	Al-Bahah	0.00	0.00	0.00	0.00	0.00	0.00
13	Al-Jouf	0.00	0.00	0.00	0.00	0.00	0.00
Total of the Kingdom		0.83	0.34	0.00	0.00	0.01	0.07

Reference: Household Energy Survey 2018

Percentage Waste Disposal Method (Burial) According to the Type of Possession in the Administrative Regions

Table 96

S/N	Administrative Region	Possession Type		
		Owned (%)	Rented (%)	Offered by Employer (%)
1	Riyadh	0.00	0.00	0.00
2	Makkah	1.74	0.00	0.00
3	Madinah	0.00	0.00	0.00
4	Al-Qassim	0.00	0.00	0.00
5	Eastern Region	0.09	0.00	0.00
6	Asir	0.00	0.00	0.00
7	Tabuk	0.00	0.00	0.00
8	Hail	0.13	0.00	0.00
9	Northern Borders	0.00	0.00	0.00
10	Jazan	0.00	0.00	0.00
11	Najran	0.00	0.00	1.31
12	Al-Bahah	0.00	0.00	0.00
13	Al-Jouf	0.00	0.00	0.00
Total of the Kingdom		0.45	0.00	0.03

Reference: Household Energy Survey 2018

Percentage of Houses Waste Disposal Frequency in the Administrative Regions

Table 97

S/N	Administrative Region	Waste Disposal number of times		
		Daily (%)	More Than Once a Week (%)	Once a Week (%)
1	Riyadh	55.87	40.46	3.66
2	Makkah	50.91	45.56	3.53
3	Madinah	35.45	57.45	7.10
4	Al-Qassim	51.83	40.85	7.32
5	Eastern Region	70.54	28.29	1.17
6	Asir	42.01	51.62	6.37
7	Tabuk	56.48	40.37	3.15
8	Hail	54.86	41.81	3.32
9	Northern Borders	86.05	12.96	0.99
10	Jazan	42.63	47.30	10.07
11	Najran	36.75	52.54	10.70
12	Al-Bahah	35.19	51.68	13.12
13	Al-Jouf	65.56	28.26	6.18
Total of the Kingdom		53.17	42.42	4.41

Reference: Household Energy Survey 2018

Percentage of Waste Disposal Frequency (Daily) According to the Type of Houses in the Administrative Regions

Table 98

S/N	Administrative Region	Type of Housing Unit					
		Traditional House (%)	Villa (%)	Storey in a Traditional House (%)	Storey in a Villa (%)	Apartment (%)	Other (%)
1	Riyadh	43.11	59.01	48.50	57.16	58.00	31.47
2	Makkah	43.02	72.96	44.39	54.90	52.03	23.61
3	Madinah	29.09	63.17	74.86	63.87	33.91	22.33
4	Al-Qassim	39.31	52.46	33.78	55.95	61.23	31.12
5	Eastern Region	96.11	81.50	90.37	72.68	64.52	62.91
6	Asir	26.74	43.76	37.70	43.42	44.29	55.75
7	Tabuk	61.60	96.41	51.84	74.47	49.71	0.00
8	Hail	56.34	65.38	14.41	62.48	45.40	41.65
9	Northern Borders	99.27	85.11	97.06	93.09	77.43	33.66
10	Jazan	30.59	56.19	68.63	70.53	41.26	0.00
11	Najran	34.87	79.85	23.17	30.27	28.24	41.77
12	Al-Bahah	50.83	38.09	53.44	41.55	30.89	5.61
13	Al-Jouf	75.22	83.89	54.98	84.66	59.05	7.82
Total of the Kingdom		44.33	64.18	53.46	57.56	52.96	34.58

Reference: Household Energy Survey 2018

Percentage of Waste Disposal Frequency (Daily) According to the Type of Possession in the Administrative Regions

Table 99

S/N	Administrative Region	Possession Type		
		Owned (%)	Rented (%)	Offered by Employer (%)
1	Riyadh	54.57	57.51	49.70
2	Makkah	54.33	48.29	53.21
3	Madinah	35.03	38.50	11.29
4	Al-Qassim	47.48	61.04	45.95
5	Eastern Region	83.38	65.80	44.67
6	Asir	43.87	41.34	30.38
7	Tabuk	70.00	50.34	27.14
8	Hail	63.06	40.98	78.09
9	Northern Borders	92.39	80.19	81.84
10	Jazan	42.53	43.97	21.00
11	Najran	45.23	29.19	26.13
12	Al-Bahah	43.09	21.39	49.37
13	Al-Jouf	72.93	57.63	52.80
Total of the Kingdom		55.50	52.39	45.13

Reference: Household Energy Survey 2018

Percentage of Waste Disposal Frequency (More Than Once a Week) According to the Type of Houses in the Administrative Regions

Table 100

S/N	Administrative Region	Type of Housing Unit					
		Traditional House (%)	Villa (%)	Storey in a Traditional House (%)	Storey in a Villa (%)	Apartment (%)	Other (%)
1	Riyadh	52.37	39.95	45.97	41.09	38.37	46.98
2	Makkah	51.11	22.92	49.92	43.07	45.57	64.88
3	Madinah	57.59	34.83	25.16	36.12	61.35	35.84
4	Al-Qassim	53.86	44.78	66.22	41.52	32.06	34.44
5	Eastern Region	2.78	18.50	9.63	27.32	33.77	37.09
6	Asir	59.13	55.56	29.74	49.40	51.24	32.75
7	Tabuk	32.74	3.56	48.16	25.53	48.08	0.00
8	Hail	41.59	33.84	64.13	32.40	49.30	53.26
9	Northern Borders	0.75	14.90	2.94	6.27	20.56	67.33
10	Jazan	50.74	34.28	29.52	28.72	52.47	0.00
11	Najran	51.10	19.53	66.56	61.07	65.59	30.86
12	Al-Bahah	24.05	56.19	28.35	48.43	56.85	74.78
13	Al-Jouf	23.61	16.11	31.50	15.34	34.76	47.38
Total of the Kingdom		47.49	34.23	39.88	39.71	43.63	45.68

Reference: Household Energy Survey 2018

Percentage of Waste Disposal Frequency (More Than Once a Week) According to the Type of Possession in the Administrative Regions

Table 101

S/N	Administrative Region	Possession Type		
		Owned (%)	Rented (%)	Offered by Employer (%)
1	Riyadh	43.42	39.43	34.22
2	Makkah	41.25	48.81	43.04
3	Madinah	57.56	57.60	55.01
4	Al-Qassim	48.88	33.65	32.76
5	Eastern Region	15.91	32.78	53.76
6	Asir	49.32	53.48	57.86
7	Tabuk	27.50	46.65	65.88
8	Hail	35.03	53.63	19.06
9	Northern Borders	7.47	17.89	18.16
10	Jazan	46.52	48.79	48.98
11	Najran	49.67	64.25	11.16
12	Al-Bahah	45.65	62.78	33.77
13	Al-Jouf	23.52	32.62	40.38
Total of the Kingdom		40.28	44.18	42.40

Reference: Household Energy Survey 2018

Percentage of Waste Disposal Frequency (Once a Week) According to the Type of Houses in the Administrative Regions

Table 102

S/N	Administrative Region	Type of Housing Unit					
		Traditional House (%)	Villa (%)	Storey in a Traditional House (%)	Storey in a Villa (%)	Apartment (%)	Other (%)
1	Riyadh	4.52	1.04	5.53	1.75	3.63	21.55
2	Makkah	5.88	4.12	5.69	2.03	2.40	11.50
3	Madinah	13.33	2.00	0.00	0.00	4.74	41.83
4	Al-Qassim	6.84	2.76	0.00	2.53	6.71	34.44
5	Eastern Region	1.11	0.00	0.00	0.00	1.70	0.00
6	Asir	14.14	0.68	32.56	7.19	4.47	11.50
7	Tabuk	5.66	0.00	0.00	0.00	2.21	0.00
8	Hail	2.08	0.78	21.46	5.10	5.30	5.09
9	Northern Borders	0.00	0.00	0.00	0.64	2.01	0.00
10	Jazan	18.67	9.52	1.85	0.76	6.27	0.00
11	Najran	14.03	0.62	10.27	8.67	6.17	27.38
12	Al-Bahah	25.11	5.72	18.24	10.03	12.25	19.61
13	Al-Jouf	1.16	0.00	13.48	0.00	6.19	44.81
Total of the Kingdom		8.19	1.60	6.67	2.73	3.41	19.74

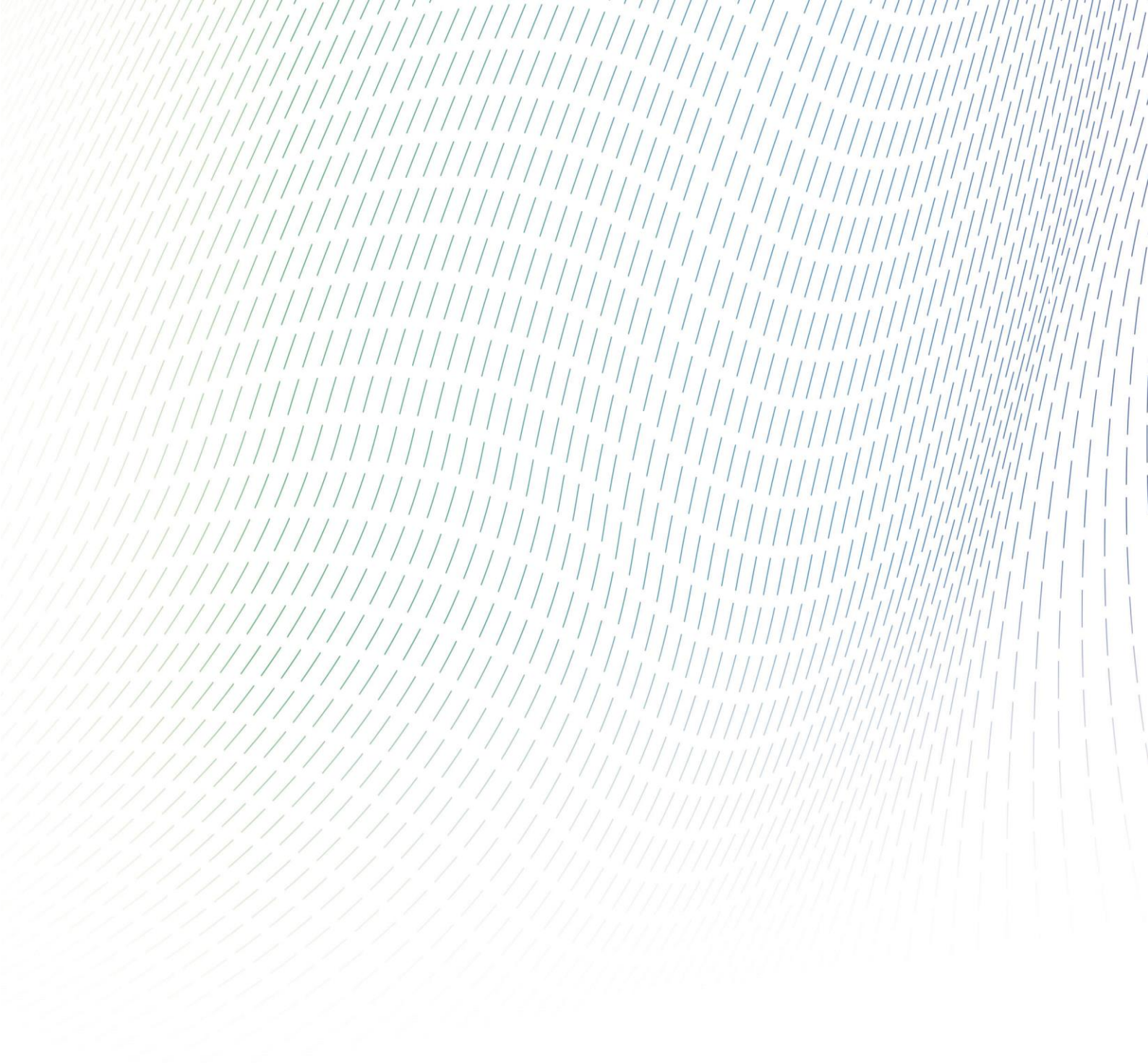
Reference: Household Energy Survey 2018

Percentage of Waste Disposal Frequency (Once a Week) According to the Type of Possession in the Administrative Regions

Table 103

S/N	Administrative Region	Possession Type		
		Owned (%)	Rented (%)	Offered by Employer (%)
1	Riyadh	2.00	3.06	16.09
2	Makkah	4.42	2.90	3.75
3	Madinah	7.41	3.89	33.71
4	Al-Qassim	3.64	5.31	21.29
5	Eastern Region	0.71	1.42	1.57
6	Asir	6.81	5.18	11.76
7	Tabuk	2.50	3.01	6.98
8	Hail	1.91	5.39	2.85
9	Northern Borders	0.15	1.92	0.00
10	Jazan	10.95	7.24	30.02
11	Najran	5.10	6.56	62.71
12	Al-Bahah	11.26	15.83	16.86
13	Al-Jouf	3.56	9.75	6.81
Total of the Kingdom		4.23	3.43	12.47

Reference: Household Energy Survey 2018



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